The appendix is a puzzling piece of human anatomy, or additional matter at the end of a book. The Jitney Years appendix grew in the *Operations Manual* until it threatened to burst the ability to bind the *Manual* together. Editor Jitney Jr. removed it and created a stand-alone *Appendix* because, like its human counterpart, he believed it contained good stuff necessary for understanding the story of the Mount Washington Cog Railway and its workers.

Here readers will find the Jitneys' take on "the usual" Cog stories about the first engine, *Peppersass* and slideboards, the first alpine slide providing a quick end to a long workday (or life) on the mountain. This *Appendix* contains accident reports, inspection documents & Coggers' stories of their time on the Mountain; Military adventures at the Summit, and abroad; As well as some never before published items and episodes.

While Jitney Jr. believes this particular *Appendix* is critical for a holistic understanding of the Mount Washington Railway's history & people, others may agree with the side of the debate over an appendix's function in our abdomen — that the *Appendix* is just a useless remnant from the Cog's evolutionary past. You decide.

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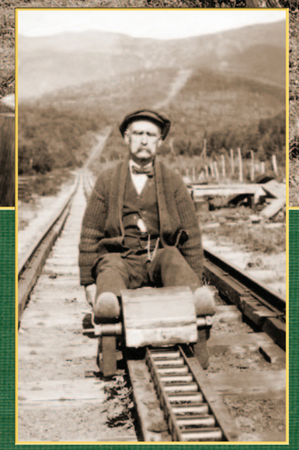
SUNSET EDITION

Mt. Washington Cog Railway
The Jitney Years Appendix

Heroes, Calamity, Conflict & the First Alpine Slide



The Jitney Years Appendix

To the illustrated Handbook & Crowd-Sourced Memoir
of the Mount Washington Cog Railway

Heroes, Calamity, Conflict & The First Alpine Slide

Volume 4

Edited by Tim "Jitney Jr." Lewis

Ex Libris

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This manuscript is for the enjoyment of those who participated, or are interested in steam train operations on Mount Washington in New Hampshire in the mid-20th Century. It is a collective scrapbook and gathering of memories from those times *(1950-1967)* and additional stories found during research. Best efforts have been made to ensure accuracy in those memories. Discrepancies do exist among the various recollections of the events and activities that occurred.

Cover: Photo collage by Keith Chamberlin - FLEK, Inc.

Foreword

The crowd-sourced *Jitney Years* project designed to complete a long-overdue locomotive operating manual, update the status of known Cog employees from 1966-67, and track down unknown railway workers, generated stories that added to the legacy and history of the Mount Washington Railroad. But many of those stories didn't quite seem to fit within the editor's goals of telling the "unusual" history focusing on the work *(Operating Manual)*, and the people who engaged in that work *(Roster)*.

An appendix was created to give interested readers the opportunity to delve deeper into the background of those Cog heroes, the road's calamities & official reports that followed, the conflicts - legal and otherwise that periodically surfaced along the *Aggregated Timeline*, as well as take new look at the "usual" Cog stories involving the very first locomotive, and a device designed to get workers quickly down the mountain at the end of the work day. This is that *Appendix*.

A Note About Style

The *Jitney Years Collection* is a crowd-sourced manuscript and thus follows no standard academic stylistic formula. *Volume 4 Appendix* is primarily the work of editor Jitney Jr., who transcribed background material discovered about Coggers and incidents on the Mountain from various sources. Material within this volume provides additional context to events and people outlined in Volumes 1 through 3. Some sections are an attempt at a "new take" on a usual Cog story. Some are transcribed source documents and reports. Some involves new reporting based on material discovered during the research for the first three volumes.

Attribution of other voices/sources has been placed as close to the material quoted/used as is possible according to broadcast style when writing for the ear. There are no endnotes - readers should be able to find sourcing without a search.

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Work In Progress
** Not Final ***

Military History: Col. Arthur S. Teague

Arthur S. Teague

Commanding Officer 22nd Infantry
4th Infantry Division
February 20, 1946 to
Deactivation of 22nd Infantry
March 1946

Arthur S. Teague as a newly minted captain while training in North Carolina (~1941)
- Teague Family Scrapbook

No information for Arthur S. Teague could be found in the Official Army Registers of the period.

From other sources we know that he accepted appointment as 2nd Lt. Infantry in the Officers' Reserve Corps on May 28, 1932. He went on active duty for training from July 17 to July 30, 1932; from November 6 to April 25, 1936 and from March 2 to March 29, 1940 as a Lieutenant in Company G of the 22nd Infantry. He went back on active duty on March 18, 1941 and was a captain by April 8, 1942. Less than a week later, he was transferred from Company G to Regimental Headquarters as an Assistant S-3 - helping with operations and training.

By D-Day, June 6, 1944 he had risen in promotion to Lt Colonel, and was in command of 3rd Battalion 22nd Infantry at age 34. He led the Battalion ashore on Utah beach on D-Day.

He was wounded in action on November 17, 1944, during the battles of the Hürtgen Forest.

He was awarded the Distinguished Service Cross and the Silver Star Medal. He was also recommended for the British Distinguished Service Order.

Teague took command of the 22nd Infantry just long enough to preside over the deactivation of the Regiment in 1946. His time of command was approximately one month.

From *"Paschendale with Treebursts"* by Robert S. Rush, we have a glimpse of what kind of Soldier Teague was, going into the Hürtgen Forest battles:

Sec. 1 - Col. Arthur Teague

"The longest surviving battalion commander of the 4th Division commanded the 3d Battalion.

"Lieutenant Colonel Arthur Teague, a native of South Carolina, was called by Col. Charles T. Lanham 'the most competent leader in battle I have ever known.' He had joined the 3d Battalion in 1940 as a 2d Lieutenant and had never left, rising in rank from platoon leader to battalion commander. Teague had landed with his battalion in the first wave on Utah Beach and was one of the few officers who had never been wounded. A topographical engineer by profession, Teague would look at the map from every angle for about fifteen minutes and then issue very precise orders.

"Both his executive officer, Major James Kemp, also a native of South Carolina, and Captain Oscar Willingham, the battalion operations officer, were products of the pre D-Day regiment and ROTC graduates."

May 5, 1944

My Dear Darling,

Here are a couple of more letters I found that I have not answered. They are dated April 4 and 6. You see I read the letters for the 2 or 3 time and then destroy them - I can't take with me so I just figure the best thing to do is to destroy them. We have had some beautiful weather over here - nice warm days but cold nights. All the spring flowers are in bloom. Tonite however, it is cold and raining - I have a fire in the stove. I wouldn't mind if I had a little bunch of arbutus right now - but I had rather be in your arms darling. Have you had the ring fixed? I bought you a bracelet the other day. It is gold band, has hinge and lock with a little chain to keep from losing when catch comes undone. It has onyx and pearls set in it - rather odd. I liked another one I found with 3 rubies and two little diamonds - but not as well as I did this one and I was afraid it would be too small - Hope you like it Darling.

I sure would like some chicken livers - we do get chicken, sometimes. Food has been real good and plentiful. I see by the nights paper that the ration on all except beef meat is taken off. Darling it is getting late so I better quit and go to sleep. Enclosed is a clipping out of the Stars & Stripes.

Love, Arthur

D-Day

The Third Battalion commanded by Lt. Colonel Arthur S. Teague, made the initial assault on Utah Beach, attached to the Eighth Infantry Regiment. Joseph Balkoski's book, *Utah Beach: The Amphibious Landing and Airborne Operations* on D-Day describes Teague's battalion's role. "Teague's outfit... had been the only 4th Division assault unit to be conveyed across the Channel on a British Troopship, the *SS Empire Gauntlet*. Although this was a merchant navy vessel, the LSA landing craft slung on its davits were manned by experienced Royal Navy boat crews, who held responsibility for transporting the Yanks from *Empire Gauntlet* to Utah Beach, more than eleven miles away. British LCA's were vastly different from American LSVPs, and in truth, many American infantrymen preferred the British type, because its armor could stop rifle and machine-gun bullets, and it featured some measure of overhead protection from bursting shells. Unlike Van Fleet's 8th Infantry, which had orders to push inland with all possible speed, Teague's battalion would stay close to

the sea throughout D-Day. As soon as it landed, the 3rd Battalion turned to its right, or north, and proceeded straight up the shoreline, aiming to eliminate as many German coastal strong-points as possible. This would be a thankless and costly task, for as soon as one enemy resistance nest was wiped out, there would always be another to deal with less than a mile up the coast." Balkoski goes on to quote Teague from an after action report he made on July 3, 1944. *"The [enemy] positions were all mutually supported along narrow strips of land between the high water mark and the inundation,"* Teague recalled less than a month after the attack. *"At intervals there were minefields. The method of attack followed in general the procedure taught at the Assault Training Center [the U.S. Army amphibious warfare school in England]. The ATC taught that one could reconnoiter and get observation on a fortification, which was impossible here because of numerous hedges. [Instead] it was necessary to approach within 75-100 yards with tanks and, combined with flamethrowers, assault the positions [directly], using demolitions and pole charges. We had naval fire and 4.2-inch mortars to replace our artillery, and the successive enemy positions were shelled by the navy before being assaulted. The tanks would be brought up for point-blank fire while the infantry maneuvered inland around the rear of the pillbox. As the (3rd) battalion progressed up the coast, the maneuver of the infantry became more difficult since the neck of land between the beach and the inundation narrowed until the men had to wade waist-deep in order to get behind the fortifications. The enemy would let men wade up without firing a shot until they were right up to the pillbox, and then open up point-blank with machine gun fire and cut them down,"* concluded Teague.

Balkoski writes "Assaulting a seemingly endless series of concrete pillboxes filled with German troops was not an easy assignment for GIs who had never seen combat, so Teague's battalion was specially reinforced for this mission by five Sherman tanks from Company A, 746th Tank Battalion. However, the tankers, who also were new to combat, quickly learned that the sandy, flat coastal terrain, which was littered with mines, was hardly suitable for their thirty-three ton tanks. Even worse, the Germans had plenty of antitank weapons, and there were no spots for the Shermans to take cover. Accordingly, movement of any kind within view of a German pillbox immediately drew fire." Balkoski reports Teague's company commanders the morning of June 6th were captains Joseph Samuels (Co. I), Charles Earnest (Co. K), and Edward Gatto (Co. L). Balkoski could not determine who was in command of Company M. Rick Mommers' *Heroes Forever* website says Earnest's Company K included Private First Class George H. Emel from Bellefonte, Pennsylvania. Emel had joined the ranks of the 3rd Battalion in late April prior to D-Day in time for "special instruction in amphibious assault techniques at Braunton, England."

The following is a blend of the Third Battalion's role in the battle taken from the dairy of the Battalion Surgeon, Capt. Walter E. Marchand (**DrM**), a War Department's historical study entitled *Utah Beach to Cherbourg* (**WD**), Mommer's profile of Pfc. George H. Emel (**RM**), and the *italicized narration* from a written report by Lt. Colonel Teague on the assault landing of the Third Battalion, June 6-8, 1944. Teague's words (**AST**) are contained in Chaplain Bill Boice's history of the 22nd in WW2. Thanks to the generosity of his daughter, Anne, transcriptions of some of Teague's letters to his wife, Ellen, will also appear chronologically in *italics*.

Sec. 1 - Col. Arthur Teague

RM: "On May 15, 1944, Pfc. Emel, K Company and the rest of the men of the 3rd Battalion went into a Marshaling area at Torquay, England and remained there until June 4, 1944. In those Marshaling areas no unauthorized person could enter and no one was allowed to go. At long last, orders were issued to all men and the entire plan was laid out to those in whose hands the success of the operation now rested. Invasion currency was issued, ammunition was checked, rations were distributed, and troops departed during the night for the various ports from which the operation would be mounted. On June 4, the men boarded their D-day ships and left England."

DrM: 5 June - "After supper which I ate rather nervously, I laid myself down to sleep – but couldn't, but I rested. Hyperkinesia is evident – all very talkative. All remains quiet on board and around us except the splash of water over the bow and the wind thru the masts. The captain of the ship reads a message from President Roosevelt, General Eisenhower. The Captain himself gives us a message of hope and a prayer of safety and he was followed by Lt. Col. Teague, our Battalion Commanding Officer, and the Chaplain. I gave a brief last minute message to the troops, telling them again of the various emergency First Aid measures to be taken if they became casualties. All then was quiet on board as midnight passed."

War Dept: "Almost exactly at H Hour (0630) the assault craft lowered their ramps and six hundred men walked into waist-deep water to wade the last 100 or more yards to the beach. The actual touchdown on the beach was therefore a few minutes late, but the delay was negligible and had no effect on the phasing of the succeeding waves. The morale of the assault troops was excellent. The men waved their rifles as they reached the dry beach, some of them shouting, "Goddam, we're on French soil." The entire beach was cleared in an hour, and by that time elements of the 87th Chemical Mortar Battalion, the 3d Battalion of the 8th Infantry, and (Teague's) 3d Battalion of the 22d infantry were moving across the beaches, while engineer units were arriving to organize the beach operation. At approximately 0745 (H plus 75 minutes) the 3d Battalion, 22d Infantry (initially attached to the 8th Infantry), touched down on Green Beach and moved north along the coast to reduce beach strong points.

AST: *"From landing craft we came ashore on LCM's (Landing Craft Mechanized) - three of them - operated by Navy enlisted men. The enlisted men on our LCM remarked that this was the third landing in which he had participated and that he didn't mind the initial landing so much as he did the ones afterwards because he would have to keep bringing in supplies.*

"Just as we were coming in to the shore I saw a shell that was fired from up the beach, and I knew some of us were going to be hit. I could see the spurts of water coming up. I saw one small landing craft hit, and thinking the same might happen to us, I told the Navy man to ram the beach as hard as possible. He said he would, and after holding it wide open for about two hundred yards, we hit the beach and stepped off on dry soil. A couple of boats behind us - about seventy-five yards back in the water - were hit, and then I saw a number of casualties. Many were killed and quite a few wounded.

"I started up by the sea wall on the sand dunes and stopped for a moment, and it was then that I heard someone call me. It was General Roosevelt. He called me over and told me we had landed way to the left of where we were

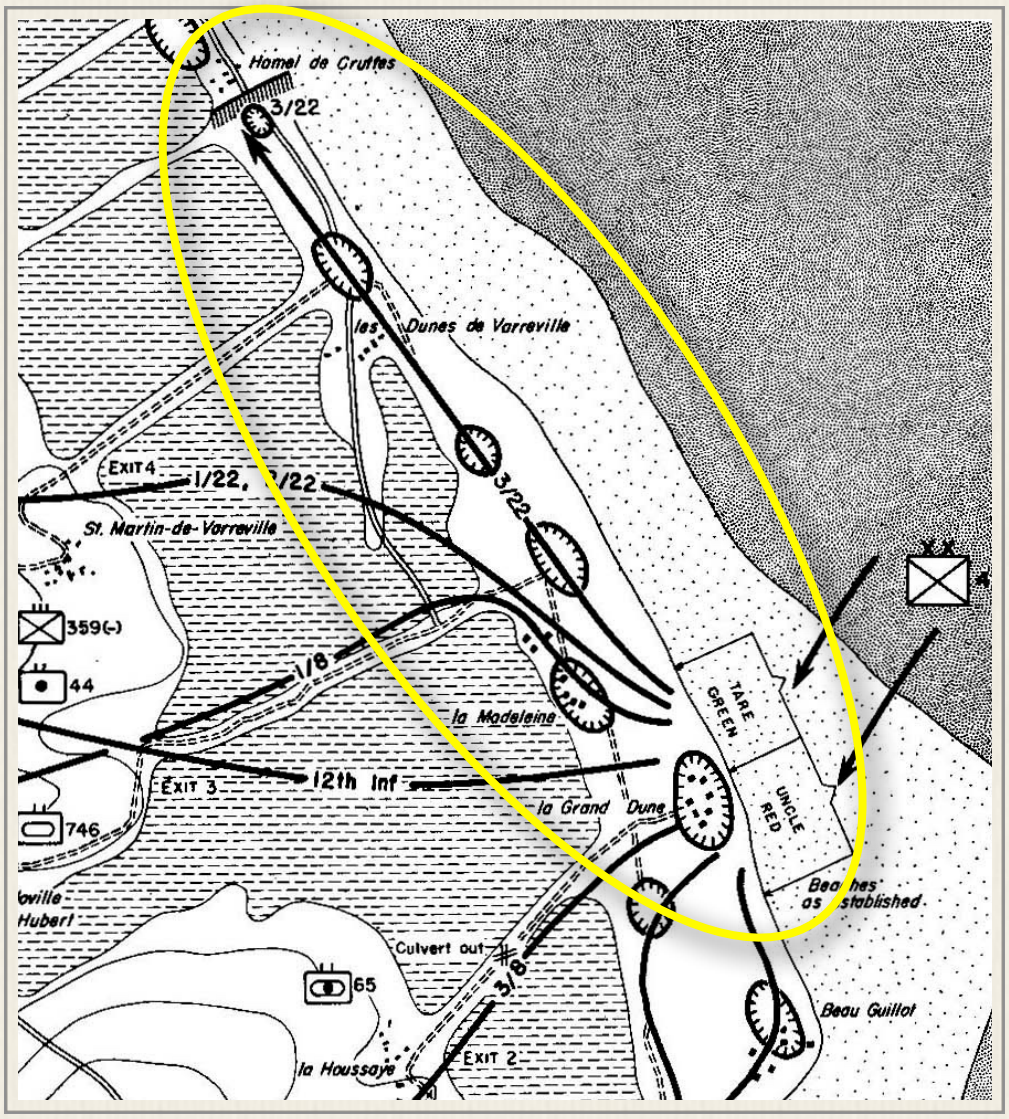
supposed to have landed, and that he wanted us to get this part of the beach cleared as soon as possible. He wanted action from my men immediately after landing, and asked me to get them down the beach as soon as I could. This was about 0930.

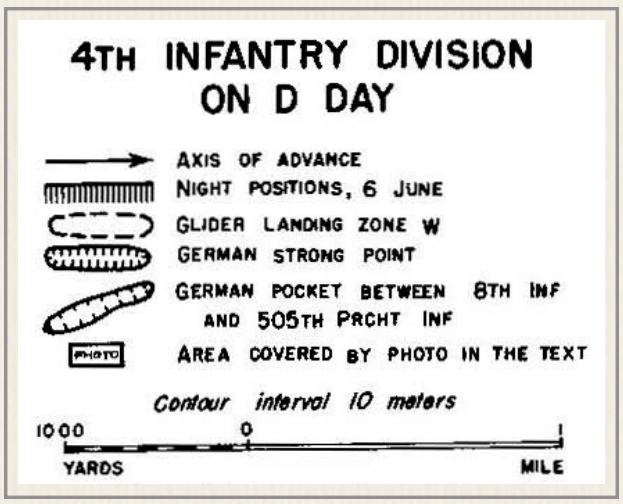
"At this time we were getting quite a bit of artillery fire from the inland side of the beach. It was not very heavy, but spasmodic. I went on over and called a couple of officers on the staff and got behind the sea wall and suggested that we figure out what we had to do. We talked it over and thought about what could happen and decided the best thing to do was to find Captain Samuels, the Company Commander, and see what troops were already on the beach so that we could take stock of them."

WD: "On the extreme right flank of the 22d Infantry, separated from the rest of the regiment by the inundations, (Teague's) 3d Battalion meanwhile proceeded against the string of beach fortifications which extended all the way up the coast. Those which posed an immediate danger to the Utah landings lay between les Dunes de Varreville and Quineville, on the strip of land between the sea and the inundations, and could be approached only by movement along the sea wall. The strong points were reinforced concrete blockhouses, armed with artillery pieces and turreted ma- chine guns. Most of them had the additional protection of wire, ditches, mines, and outlying infantry pillboxes and had communication with supporting inland batteries by underground telephone cable.

"The 3d Battalion (Lt. Col. Arthur S. Teague) had been constituted as a task force with the mission of reducing these beach fortifications. The method of attack followed the pattern taught at the Assault Training Center in England. Naval gunfire adjusted by the Naval Shore Fire Control Party laid down a preparation. Then tanks and 57-mm. anti-tank guns approached within 75 to 100 yards of the fort to fire point-blank, while infantrymen moved, often through waist-deep water, to the rear of the strong point under the cover of mortar fire. The enemy, however, would

allow the men to come near the fort before opening up with small-arms fire, and in addition subjected the assaulting troops to artillery fire from inland batteries. The reduction of the forts thus turned out to be slow and costly.





AST: *"A couple of tanks were on the beach and I yelled to one and crawled up on it. I asked the enlisted men about firing on the beach on the troops we could see. He stated that he had strict orders to just sit there and protect the troops coming ashore, and that was all. I told him for God's sake to start fire so we could reduce the troops waiting for us. He said he had orders to defend until the troops went through.*

"We started up the beach and I hollered back to everybody and got them dissembled because I saw two men who were lost on mines. I stayed on the sand dunes to see if I could identify my location on the map. Standing with my back to the water, looking inland, a little bit to my right front was the little round windmill or silo standing up which I had observed on aerial photographs and panoramic views of the beach before, which gave me the immediate location of where we were. I tried to get higher on the sand dunes, but someone yelled at me that snipers were firing and for me to come down.

"I started on up the beach wall and ran into more troops and they said Lt. Tolles had been shot. On my way there, I passed along a number of baby tanks which had electrical wiring and were loaded with TNT. Some troops wanted to fire into one and I told them to stop that action, and I posted guards on it. I went on around this little firing trench marked by barbed wire and sandy beach grass. Near this firing trench I went behind a sand dune into an open place and found Lt. Tolles lying on his side near another wounded man. I asked him what happened and he said he saw a white flag and he tried to get them to surrender and someone had fired on him. I immediately sent someone back to notify a doctor to move him out of the place. I went further up and ran into members of his platoon who had stopped and were having quite a little rifle fire back and forth. I saw what was happening as they moved along. My German interpreter was with me. We ran and hollered to them and he yelled to the enemy in German. I ran on top of the sand dune. There I picked up an M-1 rifle and called to our men to get going. We went forward and suddenly encountered direct fire. I saw two Germans wounded. About seventeen of them raised up from different places around and started running across the beach. Pvt. Meis yelled at them

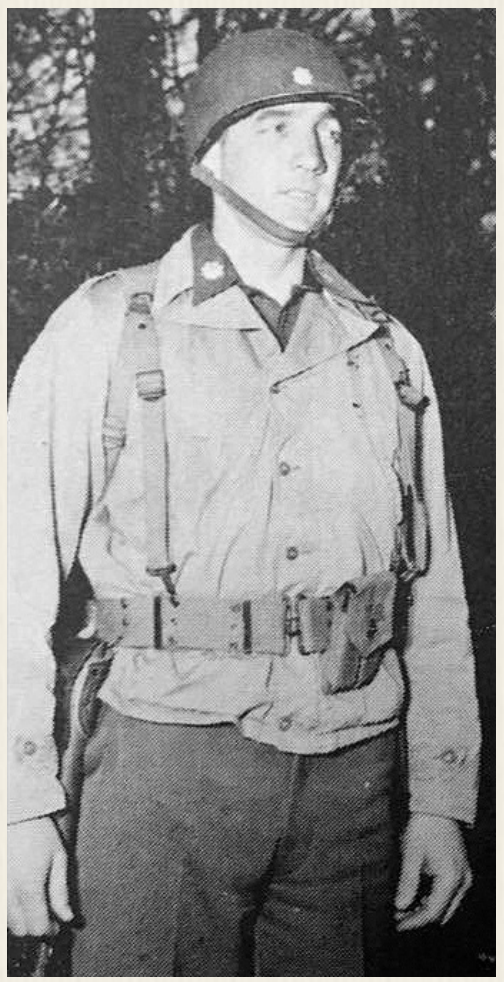
in German. I questioned them and asked them where their mines were and about the number of Germans. They said they didn't know - that they had come only the night before. I told them they did know and that they would go with us.

"I then started a skirmish line up the beach. They went about fifty yards up the beach and yelled "Mine!" They started showing paths we could take to get out of there. I had seen Lt. Burton and Sgt. McGee wounded by mines along the beach. We moved on down the beach and picked up about 40 more Germans. Where they came from I do not know; evidently troops ran them out. They came with their hands up and ran down the beach. We got on up a little farther and ran into a steel gate which I thought was a T-7 entrance but now believe it to have been an entrance to U-5 causeway. I got hold of Lt. Ramano, Engineer Platoon Leader, and told him to open up the gate and while he was doing it, to have his engineers go up ahead and to lift out any mines.

"I had gone up the beach a little farther and heard that my tanks were ashore so I sent someone down there to get ahold of the tanks and to tell them to come on down the beach. Then A Platoon, under command of a lieutenant from Alabama - I've forgotten his name - came up the beach about this time and we ran across from the little fortification on the beach wall. The Germans were firing down the beach a little and I could see these shots were hitting in the water. Some skimmed the tops of our heads and some hit small boats. One of our tanks came up and got fired on and hit by small caliber guns. It was then that we noticed a small steel turret mounted on top of a pillbox, and was moving along behind the beach wall. Our tank was about twenty-five yards away, but it immediately elevated its guns and opened fire, knocking the turret completely off the little fortification. Here we got quite a few more prisoners.

"In the meantime, our men were having a pretty good fight inland near an old French fort where they had taken about a hundred prisoners. As we pushed on up the beach our tanks were firing along the whole time. We found another steel gate of the Belgian type near the beach. It had been used quite a bit by vehicles before we landed. I positively identified it myself as being near T-7. I told Lt. Manor to get that out of the way. I had a tank. I pointed the gates out and he opened that entrance. I waited until he finished the job.

"I continued on up the beach right in behind several units of our company and ran into Captain Samuels. Captain Samuels talked about one of the little tanks which had pushed around the entrance to T-7 and had stopped and been fired upon about three times by guns. The shots ricocheted off the tank and the Lieutenant fired the first shot, which went through the pillbox, which was the fortification we were supposed to have landed in front of. About twenty-five Germans ran across the beach with their hands up. The companies pushed on to the fortification, and there I was with Captain Samuels, Captain Walker, and almost all the battalion staff. Major Goforth joined us and had I Company to hold up this point and L Company to attack normal buildings and the entrance to Causeway S-9. The attack was supplementary. At the time we were getting mortar fire, so we three officers, plus Pvt. Buchavellis, decided



Newspaper photo of Col. Teague in battle-dress posted on Facebook May 30, 2016 Memorial Day by his daughter Anne Teague Koop. "I was just 18 when he died. How I would have loved to have known him as an adult as he was a fortress to me as a child," she wrote.

Sec. 1 - Col. Arthur Teague

we would dig into the sand dunes on Tare Green Beach. We dug about two feet in the sand and finally I remarked that that wasn't going to do any good because we weren't getting any of the other fortifications.

"We kept noticing the gunfire that was coming down the beach so I took the platoon leader, and he and I crawled down the beach to see if we could observe where they were firing from. While we were lying there the Germans saw us and fired two shots. One went over our heads and hit the water. The next one ricocheted off the tank which was close to us. We called for another tank. Firing continued from the S-9 fortification causing quite a few casualties. Our tank fired a few rounds at it and finally destroyed it.

"The mortar fire had let up a little by this time, which had been coming down from up the beach. I had just learned that one of our men with a flamethrower ran about twenty-five Germans out of a pillbox. He had taken two American paratroopers from that same pillbox.

"I started out from this fortification straight across the minefield. I saw a house on fire. Behind me was Captain Walker and Captain Williams and quite a string of men. As we walked across this area, which had been dry at the time the mines had been placed in the ground, we could see several places which we knew mines were in, because we could see where rocks had been prized up. I took out some white engineer's tape which we all carried, and we marked them as we went. I told them to step in the same tracks that I had made. As we walked I heard one explode behind me. Captain Williams hit it and he got it through the cheek of the buttocks.

"We went on across the mine field and found L Company. Here we met Captain Blazzard, who had machine guns set up and had been firing. I ordered them to assault the house and the S-9 nest simultaneously. This was a matter of about thirty minutes. I yelled for Captain Earnest to get him to hold L Company because I wanted to send K Company into attack.

"All this time there was a gun still firing up the beach. It later developed that we could see where two or three shots hit the embrasures, but the Germans had destroyed it themselves.

"About this time I told Captain Earnest we could make an attack on the water's edge. We went out on the S-9 fortification about two hundred yards. The roads seemed to be in excellent shape, showing they had been used. We found a French civilian in one of the houses, so we asked him where the mines were. He pointed out that the road from S-9 up the beach was mined. In fact, he showed me about eight or ten mines. You could see where the mines had been put under the rocks. He said that the road hadn't been used for about four months. He said the other road was being used, and, to the best of his knowledge, was not mined.

"We pushed around for a short time and K Company jumped off and made a flank attack. I went with a battalion staff behind K Company. I started wading in water up to my waist, and in some places, up to my armpits. A long column of men was wading through the water. A sniper got a man just ahead of me. He lay for most of the whole night because he couldn't be evacuated.

"I followed K Company on up and encountered Lt. Pruzinski. He talked to Captain Earnest and told him that there was supposed to be a flame thrower behind the house, so I sent the Lieutenant out.

"Then we went on up the beach and hit the causeway. We were getting quite a bit of fire and also quite a bit of mortar. Finally K Company was able to take the approach to the causeway. Lt. Pruzinski had two tanks and he captured that point.

"K Company cleared out the causeway and a few buildings at the end of it, and as it got late at night, I told Captain Earnest that we couldn't make much more distance, and we made preparations for the night.

"There was a house there which we were afraid might be a booby trap. The men began digging into the place, but it was flooded with water. We were getting machine gun fire from the fortification ahead of us, so I told Captain Earnest that since we couldn't dig in, we would sleep along the road and I would stay with the group. We lay down sometime around 12:30 at night, although it was hardly dark. We stayed there for the night. Captain Ernest, Captain Walker and Major Goforth were with me. I told Earnest to tell the men we could sleep there tonight and that we weren't going to give up an inch of ground.

"We put two machine guns on the causeway, and there was water all around us. It was about 1:00 A. M. before all was quiet. Then we began to make plans for an attack at 4:30. We worked out the plans on the map."

Award of DSC to "Captain Charles A. Earnest, III, 0412833, Infantry, United States Army, for extraordinary heroism in action against the enemy on 6 June 1944, in France. One platoon of Captain Earnest's company was given a mission of making a flank movement through the inundated area in order to attach the rear of Fort de Foucarville. When the platoon came within sight of their objective, they were subjected to heavy enemy machine gun-fire from a revolving turret within the fort. The enemy fire had pinned the platoon to the ground and was inflicting heavy casualties. Captain Earnest immediately organized a patrol of four men with himself in command and moved forward with the purpose of relieving the platoon from their precarious position. Approaching the fort from the opposite direction, Captain Earnest, with complete disregard for his own safety, moved to a position within the range of the enemy machine guns and deliberately exposed himself and his patrol to draw the enemy fire away from the platoon. The enemy turned their fire on this patrols and the platoon was able to withdraw to safety. In effecting the withdrawal of the patrol, the four men became casualties and Captain Earnest was forced to swim to safety through the inundated area. The outstanding courage and aggressive leadership displayed by Captain Earnest reflects great credit on himself and was in keeping with the highest traditions of the Armed Forces." Lt. Col. Teague proudly wrote *"My Boy"* in the margin of a copy of the 12 July 1944 General Headquarters memo outlining the award that he sent home to wife, Ellen. Two more Teague "boys" of the 3rd Battalion would join Teague and Earnest in winning the Distinguished Service Cross for actions a week later in the campaign.

Joseph Balkoski's *Utah Beach* says the 22nd Infantry Regiment (of which Teague's battalion was a part) suffered 51 casualties on June 6th - 13 killed, 34 wounded and 4 men had gone missing.

WD: The 3d Battalion, 22d Infantry, as already noted, was assigned the task of reducing enemy beach strong points. The battalion moved north past les Dunes de Varreville and the Exit 4 road and reached the southern edge of Hamel de Cruttes by nightfall. On D Day the 3d Battalion

had advanced 2,000 yards beyond Exit 3 and destroyed one fort. There was no front line at the end of D Day. Most of the actions on D plus 1 were aimed at the destruction of scattered enemy groups which still held positions within the perimeter of the beachhead. On the beach the 3d Battalion, 22d Infantry, continued the methodical destruction of beach defenses. On D plus 1 it advanced another 2,000 yards and captured two more (forts.)

AST: *"We continued the K Company attack the next day (June 7th). We had the engineer platoon start moving mines from S-9 along the beach road. He worked all night. A machine gun kept him from removing them as fast as he could have otherwise. He had to work on his stomach all the while, but before daylight he got the road pretty well cleared. After daylight he had all the mines out.*

"Two 57mm. guns were brought down the road from a house to the front lines to the little embankment which we had slept behind. All during the night a machine gun had been firing at the embankment, about two feet over our heads. There were about two hundred and fifty men along that road during the night. We got these 57's up, and I took Lt. Etta and showed him where the two guns were to go - one on the causeway and one behind the embankment. I pointed out the fortifications and told him I wanted the guns to be able to fire on them direct. I also got a tank. The larger guns had been knocked out during the night.

"Here we tried to make an attack on them the next morning. We got off about 9:00 A. M. K Company tried to make a flanking attack sometime during the morning. It went through the water and set up a platoon. They were up to their necks in water. They were slaughtered in the water by machine gun fire. Captain Earnest said something had to be done about it. He grabbed a patrol and jumped into the water and yelled at them. He actually took the fire of machine guns from these men, because the Germans fired on him instead. (Ed Note: Captain Earnest would be awarded a Distinguished Service Cross for his actions - details of award follows Teague's narrative)

"I ran down the road toward the 57mm. gun. It had ceased firing. Sgt. Thomas was behind the gun. I stuck one or two rounds in the 57 and let go with it. As soon as I fired, back came machine gun fire. Then we got some smoke from 4.2 from Captain Williams and got K Company out of the water - what was left of K Company.

"By that time we had cleaned out two or three houses on the beach. It was approximately forty yards of dry beach. We got two machine guns in the houses. They began firing on the fortification about three hundred yards away. I sent a tank up the beach wall and got the bridge reinforced. We did everything possible to get the fortification to surrender, but it did not.

"We fought a good part of the day, and in the afternoon when we had practically given up getting it to surrender, there was a fortification near Ravenoville where the Navy claimed they had seen a couple of white flags. We got permission from the regiment, left one company, about half of the mortars, and made a flanking attack with I and L Companies. We went out on the beach and started to Ravenoville."

WD: As (the 3d Battalion) faced the fort at Hamel de Cruttes on the evening of 7 June, it received orders to move inland as regimental reserve, since a counterattack was feared against the shattered 1st and 2d Battalions of the 22d Infantry. Colonel Teague left Company K, supported by the chemical mortar company, a machine gun platoon, an antitank platoon, and one-half of

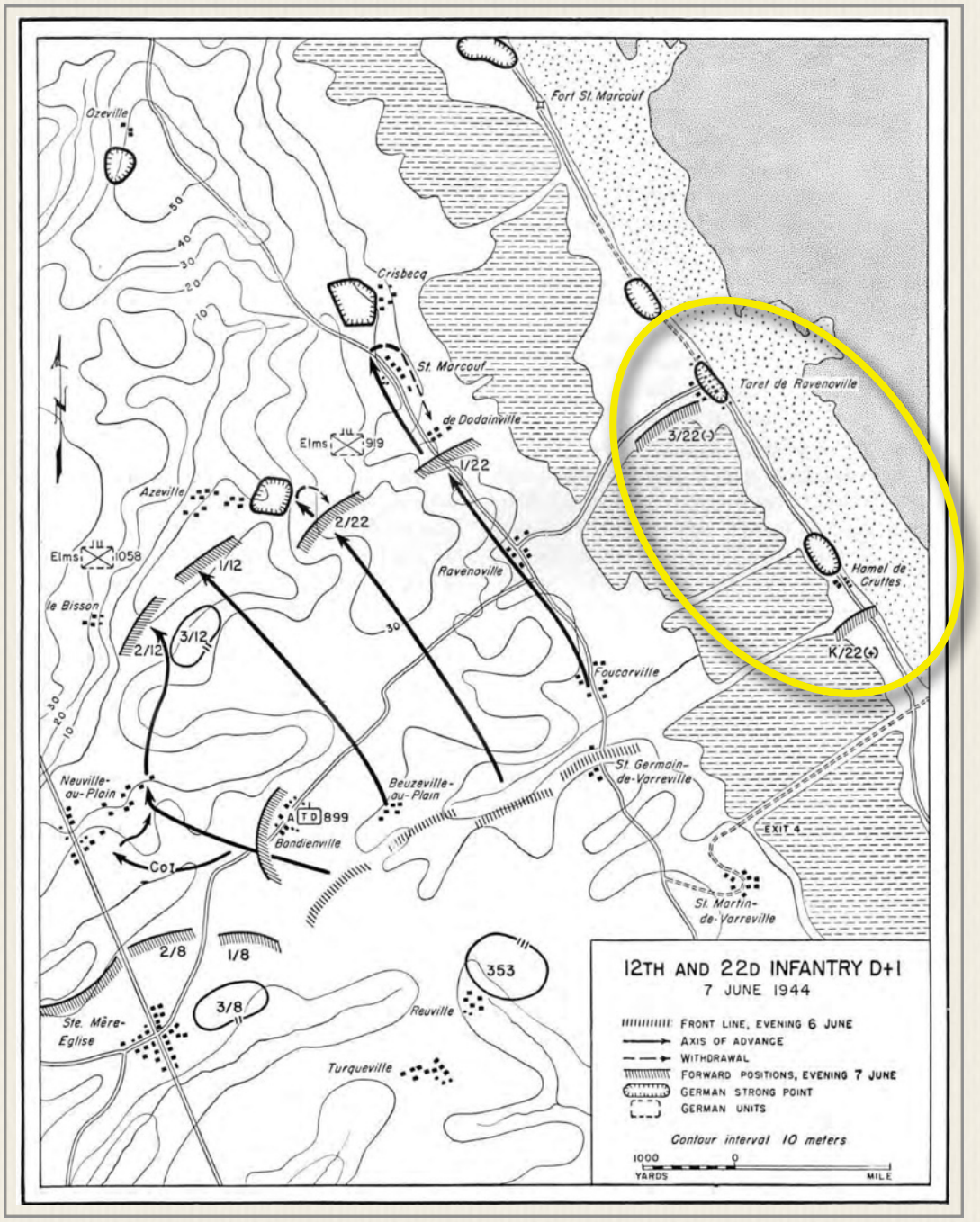
the NSFCP, to contain the strong point, and moved the remainder of the battalion inland to the vicinity of Ravenoville.

AST: *"Coming off this area from the water side from our position there, we had captured about twenty prisoners. Pvt. Meis, in talking to the German staff sergeant and private, found out that they had come from the fortification, which was the one we wanted to take. He stated that some men and two officers had been killed and that they would surrender if we could get to them, provided that one of the officers hadn't taken command. They further said that when the men wanted to surrender the fortification earlier that day and had tried to put up white flags, that the officers had fired on them and that they had fired back.*

"We kept this German Sergeant and private and made the flanking attack about two miles down the road. Going down the road together were Captain Gatto, Captain Walker, and myself. It was about dusk when we got there. We decided we would send this German private in. We went further and saw a mob of men and so we dropped some smoke and he marched in. About eighty enemy surrendered at this fortification. We got them lined up and singled the one out who knew about mines on the beaches, another who knew about fortifications, and still another who knew about supplies. We left a medic to take care of the wounded. We marched the other men to the Regimental Command Post.

"That night, we had the engineer platoon come in and put in a one span bridge over a bomb crater, which had been blown up so that water would flow across the road. During the night we got tanks to come down to our place on the beach. Staying with me that night were Captain Bridgeman, Captain Gatto, Captain Walker, and Captain Huck.

"K Company was on the opposite side from us, about a mile away. In between us we had this German fortification from which we had captured prisoners. but which did not surrender. We slept in a blown-up place on the beach wall."



WD: That same evening (June 7), in the one gain of the day for the 22d Infantry, the battalion recrossed the inundation to capture the beach fort at Taret de Ravenoville. The fort had been shelled by the Navy, and a number of Germans had slipped out to surrender.

One of them reported that many of the Germans still inside the fort wished to surrender but until this time had been prevented from doing so by their officers. *(**AST:** "The (German) commanding officer had lined up 18 of (his men) and threatened to shoot them. Prisoners also stated that this officer had now been transferred and the officer commanding Taret de Ravenoville had been killed by naval bombardment, leaving no officer in that fort.)* On the strength of this information Colonel Teague obtained permission to move the bulk of his battalion from Ravenoville northeast across the inundated area and close in on the rear of the fort *(right)*. A prisoner who was sent ahead returned with the entire garrison of eighty-two Germans. Colonel Teague and his men billeted themselves in the fort for the night. *(**AST:** "The phone rang repeatedly as the Germans tried to contact their garrison. Evidently realizing finally that this fort had fallen they began shelling it and kept that up all night. The men inside the bunkers had no losses from this fire. Teague's sleep was undisturbed.)*

Between Taret de Ravenoville and Company K to the south three enemy strong points still held out. One of these surrendered the following day.

AST: *During the night our C-47's were bringing gliders in. Ack-ack went up from the fortification. We fired mortars and silenced them from firing the ack-ack, Next morning (June 8) we were making plans to assault the place from both sides of the beach. We were ready to begin the assault when I was ordered to report to another place to help ward off an attack. Arrangements were made that the engineers would blow up the pillboxes and houses full of Germans. There were about twenty-five houses there. This was off the causeway from Ravenoville. I started out with the company in formation. I got a few men across the causeway and this fortification opened up with machine guns and fired 20 mm, ack-ack also. We had some casualties. Our machine guns fired at them, but we couldn't get it stopped. I jumped on the side of the platoon sergeant's tank of the 776th Battalion, and told him I was going on the causeway, and I went and lay down and observed where the machine gun fire was coming from. I told him to come along beside me in the tank and adjust his firing. He did so and they directed a great deal of fire. It was hit on all sides. We got off about eight or ten shots from the tank and hit the back door of the fortification. We tried to shoot the entrance. About fifteen Germans ran out and across the field but were stopped after about fifty yards when the tank fired two rounds at them.*

Then a fortification, which was so well camouflaged that we hadn't seen it, began to fire. We changed positions and fired at the second fortification. We got off about ten rounds more before they ceased their fire.

I had the tank placed so it could catch any fire, and after I got the men across I jumped on the tank and we got through O.K. Going out we stopped and fired at pillboxes alongside the road."

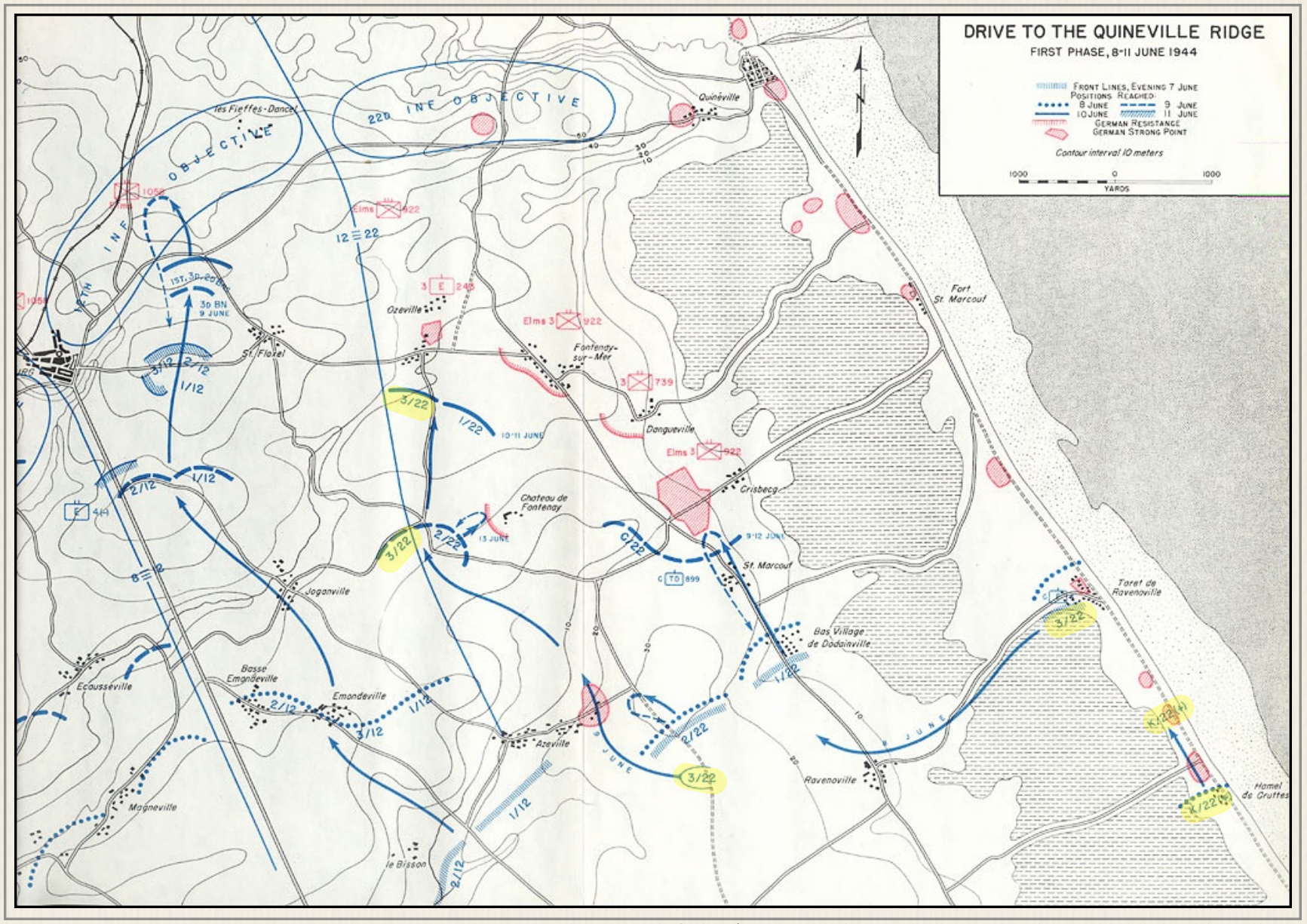
Teague's narrative in the *History of the Twenty-Second United States Infantry in World War II* - compiled and edited by Dr. William Boice and found online in 2016 stops here on June 8, 1944. Lt. Col. Arthur Teague would receive his highest awards for valor from both the British and U.S. military for actions he would take on June 9 and June 14. Like many soldiers, he did not talk about it. Here is the War Department's history of that particular action involving Teague's 3d Battalion of the 22d Infantry during that period.

9 June 1944

WD: "Progress had been especially difficult in the 22d Infantry sector. There, along the beach and at the headland fortifications, the enemy offered stubborn resistance. After the costly failure of the attacks on Crisbecq and Azeville on 7 June, the regimental commander, Col. Hervey A. Tribolet, waited for the 3d Battalion (Teague's minus Company K) to assemble west of the inundated area near Ravenoville as a reserve force, before he renewed the push northward. During the night, however, (Teague's) 3d Battalion moved across the inundation to accept the surrender of Taret de Ravenoville. Company K, reinforced by 4.2-inch mortars, antitank guns, heavy machine guns, and part of a NSFCP, continued to attack the beach fortifications farther to the south. On 8 June at Azeville, the 2d Battalion repeated its experience of 7 June when it had been driven back by a counterattack. On 9 June the Azeville mission was assigned to (Teague's) 3d Battalion (less Company K), which had again moved inland from Taret de Ravenoville. The fort at Azeville, roughly circular, encompassed the east edge of the village. It consisted of four large concrete blockhouses camouflaged as buildings *(above)*, which were armed with 150-mm. guns and turreted machine guns, and interconnected by covered trenches. The southern approach was protected by small outlying pillboxes and mine fields, and the entire area was surrounded by varying widths of barbed wire entanglements. The roads in the vicinity were blocked.

"(Lt. Col. Teague's) 3d Battalion assembled about 1,000 yards southeast of Azeville, and at 1100 it crossed to the draw southwest of the village." Review of the 22nd Infantry archives in 2019 found a July 1944 interview with Teague about the battle. **AST:** *"The Germans offered some resistance in the village and 40 prisoners were taken there. Most of the enemy, however, withdrew into the fortifications east of the village."*

Sec. 1 - Col. Arthur Teague



- Elements of Col. Teague's 3rd Battalion 22nd Infantry highlighted in yellow

WD: "Company L moved farther west in a wide arc in order to enter the village from the west and capture any reserves the enemy might have to the rear of the fort. Company I organized into five assault sections, moved north inside the arc of Company L, and advanced up the draw and through the fields to approach the fort from its right rear. The 44th Field Artillery Battalion fired 1,500 rounds in preparation for the attack. The company starred out with the support of tanks, but mines held up all except one of them. At noon Company I came in sight of the first outlying pillbox. The men did not attempt to lift the mines, but after cutting the wire they picked their way through the fields and orchards. They buttoned up pillboxes with rifle fire and then blew them. Enemy return fire was not heavy. The Germans had neglected to clear good fields of fire and to cover the approach from the southwest.

"Company I concentrated on the nearest blockhouse. First bazookas and the lone tank opened fire from behind a hedgerow, but accomplished little more than to chip the concrete. An assault team was then sent in to blow the rear entrance, which was recessed in the blockhouse and out of reach of direct fire.

"The team worked its way to its objective, emptied its flame thrower, and set off a pack charge. But this had no effect, nor did a second attempt, nor a third with a still heavier satchel charge. In a last effort Capt. Joseph T. Samuels, commanding Company I, sent Pvt. Ralph G.

Riley to the blockhouse with the last flame thrower to "give it a few more squirts." With the flame thrower on his back, Private Riley ran seventy-five yards under fire and dropped into a shell hole for cover. The flame thrower would not work, and he tried to think of the proper "immediate action." He opened the valve, held a lighted match to the nozzle, and trained the stream of fire on the base of the door. At just this time enemy artillery fire from Crisbecq began to come in and Captain Samuels thought the attack had failed. Suddenly Private Riley heard a popping sound, different from the sound of the rifle fire around him. It was soon followed by explosions within the blockhouse. The enemy's ammunition had been fired by those "few more squirts" of the flame thrower. Soon a white flag was raised and, after the firing had ceased, the rear door of the blockhouse swung open to let out an American parachute officer followed by two Germans. The German commander surrendered all 4 forts with their garrison of 169 men.

AST: *"All the fortifications were connected by underground cables and it was a practice of the Germans when one fort was assaulted for them to call for fire from supporting forts which they directed with a great deal of accuracy on troops just outside their own walls. As soon as these forts were sufficiently isolated our troops dug up and cut the cables. The Azeville - Crisbecq cable was cut by tanks and two bulldozers of the 746th Tank Battalion. It was buried eight feet underground."*

Later that afternoon, the battalion advanced northwest to the western portion of Chau de Fontenay, where again they came up on a strong enemy position. Still operating with only two rifle companies, Col. Teague had "I" company on the right and "L" on the left. Company L moved around the west of the enemy positions, and reached a point northwest of the road junction. "I" Company was stopped by the high wall of the chateau grounds which were still defended. **AST:** *"L Company was now isolated and surrounded by Germans and was being shot to hell. There was a wide gap between the 22nd and 12th Infantry Regiments, while on the right of the 3rd Battalion, the 1st and 2nd Battalions were further to the rear. The Germans in Fontenay Sur Mer and from other positions to the east thereof and from Ozeville to the north pounded "L" Company's positions while enemy units to the right rear of the 12th Infantry were firing on them from the west."*

After dark, L Company was withdrawn on a line with Company I.

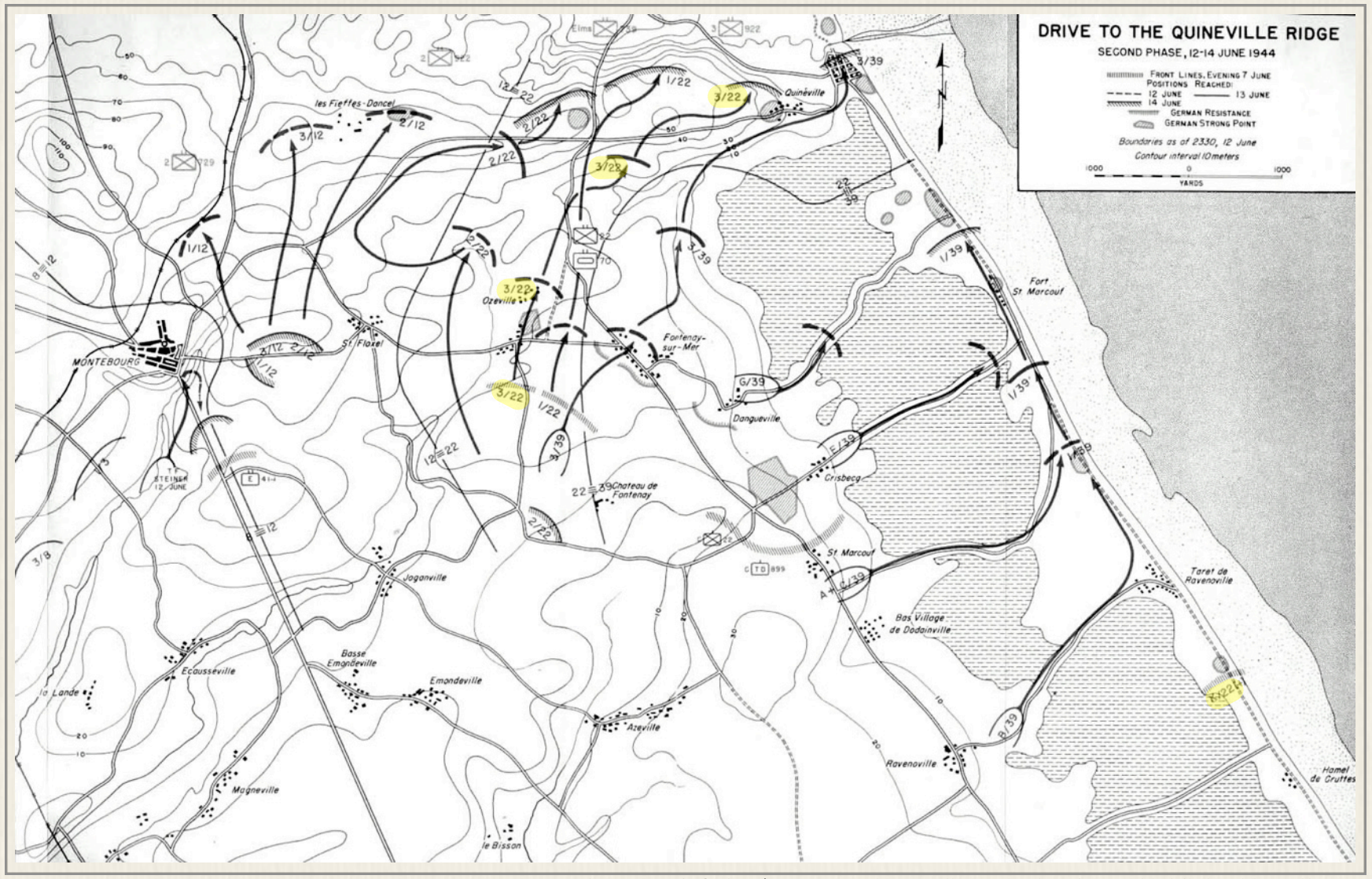
Lt. Col. Arthur S. Teague received a DSO from the British for actions taken on June 9th, 1944 while attacking the fort at Azeville. The Distinguished Service Order (DSO) is a military decoration of the United Kingdom, and formerly of other parts of the Commonwealth of Nations and British Empire, awarded for meritorious or distinguished service by officers of the armed forces during wartime, typically in actual combat. After 1 January 1917, commanders in the field were instructed to recommend this award only for those serving under fire. Prior to 1943, the order could be given only to someone mentioned in dispatches. The order is generally given to officers in command, above the rank of captain. Here is the citation as recorded in The National Archive in London:

Sec. 1 - Col. Arthur Teague

"Lieutenant Colonel Arthur S. Teague, 0292659, 22d Infantry, United States Army. For gallantry in action against the enemy on 9 June 1941, in France. Lieutenant Colonel Teague was moving with his battalion to an assembly area in preparation to attack the next morning, when his leading company was pinned down by heavy machine gun and sniper fire and the entire battalion received a terrific artillery pounding. Realizing the precarious situation confronting his battalion and the possibilities of severe losses, he immediately located an artillery radioman from a forward observer party, and, with utter disregard for his personal safety, moved through the fierce enemy artillery, machine gun and sniper fire to a position well to the front in order to direct artillery fire on the enemy machine gun positions. He remained at the front personally directing the artillery fire, and he reorganized, reassured. and inspired his men to the point that they were able to withdraw successfully and avert the catastrophe which was imminent. His quick, thorough actions provided the necessary impetus for his unit to accomplish their assigned mission. Lieutenant Colonel Teague's utter disregard for his own personal safety and complete devotion to duty under the most hazardous conditions are in keeping with the highest traditions of the military service. Entered military service from South Carolina."

General Order No. 83
War Department
Battle Honors - Unit Citation
3 November 1944

"The *3rd Battalion, 22nd Infantry Regiment*, is cited for outstanding performance of duty in action against the enemy on 6-9 June 1944 during the invasion of the Continent. The battalion landed in assault waves on the beaches of the Cotentin Peninsula, France, 8 miles northwest of the town of Carentan in the face of artillery, machine-gun, mortar, and small-arms fire from organized positions. After making a successful landing, the battalion then advanced northwest on the beach and high ground between the beach and inundated area to the west. This area was isolated from the remainder of the attaching forces and contained barbed wire, mine obstacles, and successive strongpoints of reinforced pill boxes and other fortifications, each of which was desperately defended, but by skillful, tactical employment of all organic and supporting weapons and with dauntless bravery, and utter disregard for personal safety they reduced the enemy positions to ruins and advanced the distance of 4 miles. The courage and devotion to duty shown by member of the *3rd Battalion, 22nd Infantry Regiment*, in the face of overwhelming odds are worth of emulation and reflect the highest traditions of the Army of the United States."



- Elements of Col. Teague's 3rd Battalion 22nd Infantry highlighted in yellow

10-11 June 1944

WD: "On 10 June (Teague's) 3d Battalion, supported by tanks, launched two frontal attacks on Ozeville which carried it up the rising ground to within a few hundred yards of the enemy entrenchments. But the battalion, consisting of only two companies, was too weak to gain the objective. Company K was still on the beach and Company L had lost 159 men since D Day.

AST: *"(The) morning of 10 June 44, Chau de Fontenay was taken and the battalion moved forward to the road junction. The night of June 10th was spent in this position. There, the battalion had both flanks wide open and was under heavy fire from three sides."*

WD: "On 11 June, General Barber planned to send the 1st and (Teague's) 3rd Battalions into Ozeville from the west, after an air mission had softened the enemy positions. But he was forced to divert the 1st Battalion to the right to contain the enemy positions at Fontenay-sur-Mer and Dangueville. (Teague's) 3d Battalion therefore attacked Ozeville alone, but again failed.

AST: *"June 11 - the attack was launched against the Ozeville Fortifications, L Company out front came under terrific fire then received a counterattack. Here all officers of the Co "L", except one, first sergeant and all platoon sergeants were killed. Company L was withdrawn, the battalion returned to the position of June 10th. (Company L) had only one officer and three NCO's. The company was placed under the command of the Heavy Weapons Company Commander."*

Sec. 1 - Col. Arthur Teague

WD: The only real progress during these days was made on the beach by Company K *(Pfc. Emel's outfit)*, which on 11 June captured two more strong points. For two days it had hammered at these positions. At last it learned from prisoners that the only effect of heavy American fire on the forts had been to force the garrison to shuttle through a tunnel from one part to the other. Company K therefore fired fifty rounds of 57-mm. on the first fort and then switched suddenly to put eighty rounds into the adjacent stronghold. Resistance ended in both forts, and ninety-three prisoners were taken.

AST: *"One half of the Germans had been killed. One of the German officers, (a) Lieutenant, refused to reveal the location of mines surrounding the fort whereupon Captain Earnest forced him to march through the water-filled tank ditch. On the night of June 11th, K Company rejoined the battalion. On June 12, a new attack was made on Ozeville with "K" Co in the center, "I" to the left of the fortifications and "L" to the right."*

12-13 June 1944

WD: "The 22d Infantry was now free to make a concerted attack on Ozeville. It was to jump off at noon of 12 June. The air force was to bomb Ozeville at 1100, and the artillery (44th and 20th Field Artillery Battalions) was to fire on known enemy positions south of Ozeville from 1115 to 1130, then lift to Ozeville until 1200, after which fire was to be available on call. In addition to the organic weapons of the 22d Infantry; the attack was to be supported by two platoons of 81-mm. mortars and the Cannon Company of the 12th Infantry. The 2d Battalion, 22d Infantry, on the left flank was to place mortar and antitank fire on the strong point from 1115 until 1200; and the 1st Battalion on the right flank was to support the attack with its tanks and cannon. Colonel Teague's 3d Battalion in the center, which was to lead the attack, was to be supported by one company of chemical mortars (87th Chemical Mortar Battalion), a platoon of tanks (Company C, 70th Tank Battalion), and an extra platoon of antitank guns.

"At 1005 General Barber notified Colonel Teague that the air mission was cancelled, but that heavy artillery fire would be substituted. The preparatory fires were delivered and the attack jumped off on time. With the 2d Battalion covering the gap on the left flank and the 1st Battalion becoming heavily engaged in the vicinity of Fontenay-sur-Mer, the main assault was made by (Teague's) 3d Battalion alone toward the southwest corner of the strong point.

AST: *"2,000 rounds of 81mm mortar ammunition were fired in three hours."*

WD: "The troops advanced behind overwhelming fire power. Even naval support was available, particularly on Quineville where German guns had opened up. Covered by Companies I and L on either side, two assault sections of *(Pfc. Emel's)* Company K closed in on the Ozeville defenses. After a short but violent fight a white flag appeared on one of the positions. But as Lieutenant Dewhurst, a platoon leader, climbed up on a pillbox to stop the firing, he was cut down by German fire. The men of Company K suddenly fought with greater fury; they rushed into the emplacements with bayonets and grenades and wiped out a large part of the garrison.

AST: *"The company went mad. The men now rushed in with grenades, bayonets, killing every German that they found. There was a great deal of hand-to-hand fighting. Captain Earnest's runner grabbed the Captain's carbine and broke it on the head of a German."*

Award of DSC to "Staff Sergeant Donald L. Chase, 32293631, Infantry, United States Army, for extraordinary heroism in action against the enemy on 12 June 1944, in France. Staff Sergeant Chase was moving his squad forward with a mission to reduce an enemy pillbox, when, as the squad neared its objective, heavy enemy machine gun fire pinned it to the ground and inflicted heavy casualties. Fearlessly and with complete disregard for his own safety, Staff Sergeant Chase immediately charged forward toward the enemy pillbox. He paused only long enough to throw two hand grenades through the embrasure, and then rushing in, he overcame the numerically superior enemy forces, killing at least four of the enemy and taking several prisoners. The gallantry, initiative and determined leadership of Staff Sergeant Chase reflects great credit on himself and was in keeping with the highest traditions of the Armed Forces." Chase was one of Teague's "boys."

WD: "Ozeville was captured and the last major barrier to an attack on Quineville was removed. Enemy possession of Montebourg technically exposed the left flank of the 22d Infantry's attack toward Quineville. But the danger was not too great and General Barton hoped to gain Quineville and the ridge to the west on 13 June. However, neither the 39th Infantry nor the 22d Infantry was able to make sufficient progress. The 22d Infantry reached the ridge but was unable to secure it or attack eastward to Quineville. (Teague's) 3d Battalion moved north to the forward slope of the ridge and then was ordered to sideslip to the east in preparation for an attack in column down the ridge on Quineville. Colonel Teague extended one company to the right, passed the second across its rear farther to the right, and then passed the third behind the other two. This maneuver, made across ground dominated by the enemy positions on the ridge and harassed by heavy Nebelwerfer and artillery fire, resulted in a number of casualties.

Award of DSC to "Technical Sergeant Erwin F. Mitman, 7032690, Infantry, United States Army, for extraordinary heroism in action against the enemy on 13 June 1944, in France. An assault section led by Technical Sergeant Mitman moved forward with the mission of reducing a portion of the enemy strongpoint south of Ozeville. The enemy had an excellent field of fire and the section was soon pinned to the ground by devastating small arms, artillery and rocket fire. Completely disregarding his own safety, Technical Sergeant Mitman moved from man to man and prepared them for the assault. He then led them through the intense enemy fire, closed with the enemy and overran their position. The personal bravery and courageous leadership exhibited by Technical Sergeant Mitman reflects great credit on himself and was in keeping with the highest traditions of the Armed Forces." Teague would join "his boys" as a recipient of the DSC for actions he took the next day.

Sec. 1 - Col. Arthur Teague

14 June 1944

WD: "In ordering the attack of 14 June, Regiment directed all three battalions of the 22d Infantry to secure the ridge and the two hills to the east as necessary preliminaries to the attack on Quineville. (Lt. Col. Teague's) 3d Battalion, aided by a company of chemical mortars (Company A, 87th Chemical Mortar Battalion), was to capture Hill 54B, the easternmost hill, and was then to turn right and attack Quineville. Preparatory fires were to be delivered for fifteen minutes on the fortified nose of the ridge, the two heights to the east, and a coastal battery farther east.

"At 0915 on 14 June the 4th Division artillery began to fire concentrations on the four ridge targets. At 0930 a round of green smoke signaled the lifting of fires and the three battalions of the 22d Infantry jumped off. The fight lasted for over three hours. By 1300 the nose of the ridge and the two hills were occupied.

"The fight for Quineville ended at 2130 Hours. Thus, by the capture of Quineville by the 39th Infantry Regiment and the ridge by the 22nd Infantry Regiment on14 June, the enemy's main line in the north was broken, depriving him of his best natural defense against the advancing northern flank."

General Order No. 32
HQ First Army
12 July 1944

Award of Distinguished Service Cross – Under the provisions of AR 600-45, 22 September 1943, and pursuant to authority contained in paragraph 3c, Section I, Circular No. 32, Hx ETOUSA, 20 March 1944, the Distinguished Service Cross is awarded to the following officers and enlisted men *(including)*

Lieutenant Colonel ***Arthur S. Teague***, 0292659, Infantry, United States Army, for extraordinary heroism in action against the enemy on 14 June 1944, in France. In an attempt to capture the high ground in the vicinity of *(Quinneville)* Lieutenant Colonel Teague's battalion was pinned down by a heavy barrage of artillery shell fire. With the advance halted, the enemy immediately opened up with intense machine gun and mortar fire. Under this devastating enemy fire, disorganization was beginning to set in. At this point Lieutenant Colonel Teague fearlessly and without regard for his own personal safety moved forward and personally effected the movement of his troops by leading them at double time through a draw to a more covered position. The reorganization was accomplished and the battalion was immediately able to continue on its mission. The courage and superior leadership displayed by Lieutenant Colonel Teague reflects great credit upon himself and was in keeping with the highest traditions of the armed Forces. 4th Division Headquarters put it this way: "The President of the United States takes pleasure in presenting the Distinguished Service Cross to Arthur S. T. Teague, Lieutenant Colonel, U.S. Army, for extraordinary hero-

ism in connection with military operations against an armed enemy while service with the 22nd Infantry Division, in action against enemy forces on 14 June 1944. Lieutenant Colonel Teague's intrepid actions, personal bravery and zealous devotion to duty exemplify the highest traditions of the military forces of the United States and reflect great credit upon himself, the 4th Infantry Division, and the United States Army - Headquarters, First U.S. Army, General Orders No. 32 (1944)"

The Drive on Cherbourg

WD: "During the four days prior to the jump-off for Cherbourg on 19 June the enemy opposite the 4th Division had had time to prepare defenses, especially in the Montebourg area. After the capture of Quineville on 14 June the only American activity was patrolling and reorganization. Teague's July 1944 debriefing indicated those patrols could get hot quickly, and that German patrols were also probing American lines.

AST: *"Company L crossed the Sinope river to take an enemy fortification on the coast north of the river. A patrol was sent north along the coast... As they came around the corner they were subjected to sudden violent fire from the enemy's strongly entrenched position along the road to the north. When the patrol made a hasty withdrawal they returned with five men missing, whom they said had been killed. That night, a search party was sent to the point (of the firefight) but found no trace of the missing men. About the 1st of July, four of these men returned to the battalion, having been captured by the Germans and released after the fall of Cherbourg. The Germans sent patrols down the beach nightly and every night for four nights the (German) patrol of 10 men was captured. Each night 10 Germans walked in to the captured fortification on the north bank of the Sinope River and each night they were captured. Always exactly ten. They stated that their mission was to re-man the fort."*

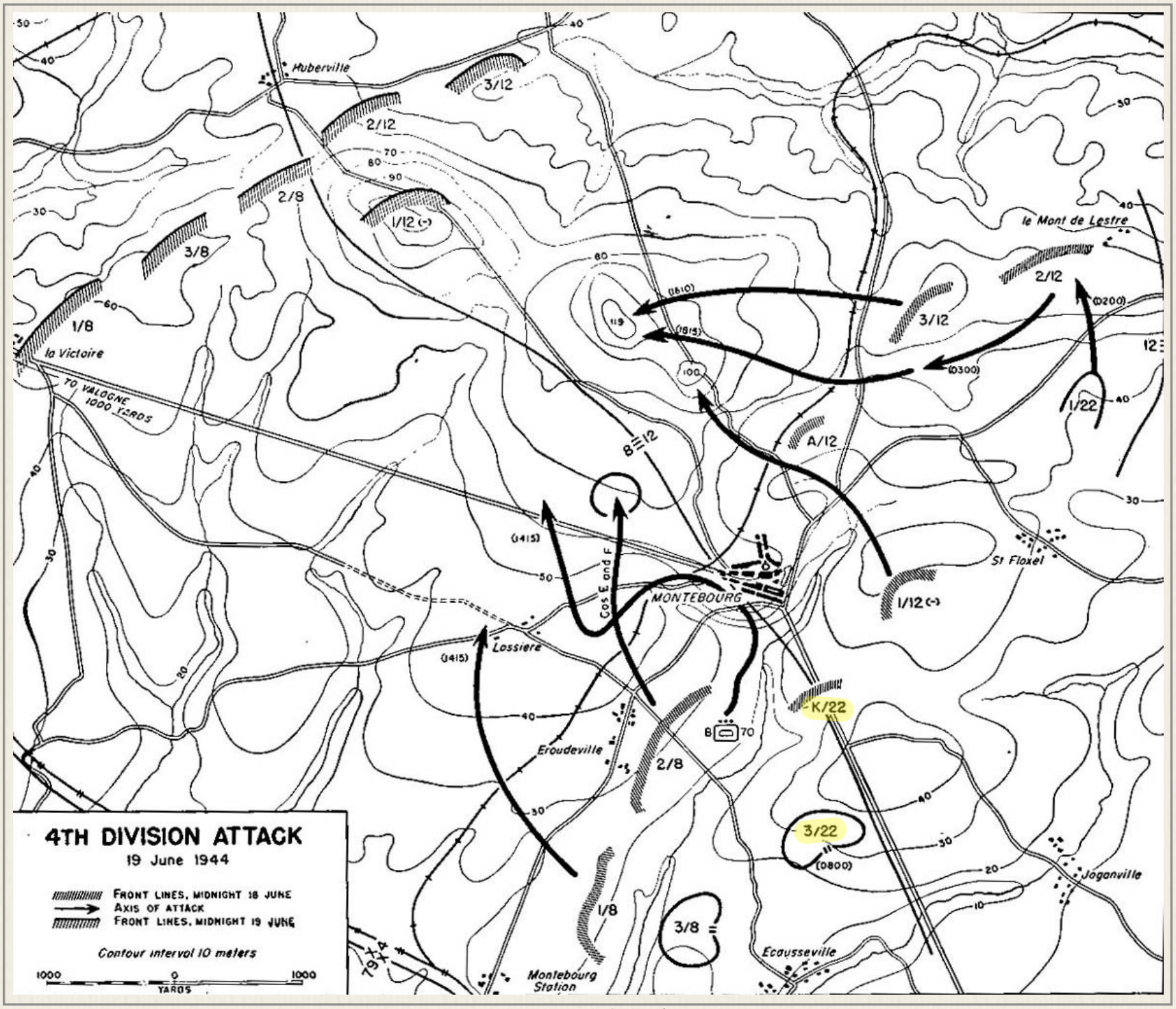
19 June 1944

The First Day - "For the attack of 19 June, General Barton planned to use the 8th and 12th Infantry Regiments abreast, one on either side of Montebourg. The attack was to begin at 0300, without artillery, and bypass the town. Beginning at 1000, (Teague's) 3d Battalion, 22d Infantry, was to enter Montebourg from the west and capture it."

DrM: "Advance in approach-march on Montebourg – as we get close meet up with a lot of artillery – it is raining hard all day. Col. Teague is told to take the town in A.M. – but sees no need to since he feels Jerries will "beat it" when 8th and 12th reach objectives – and so it proves to be. We sit outside of Montebourg all day – getting a lot of artillery, and as darkness falls we get the word to move – we surge thru blazing Montebourg – and make for the outskirts – we are to bivouac in a field with mines in it – have to test the ground myself before letting the boys come in – (the lot of an officer is tough – he has to lead the way). Start digging in – almost finish my slit trench when we get orders to move. Many mines encountered – several Jeeps blown."

WD: "Due to the prolonged delay of the 8th and 12th Regiments in pushing past Montebourg, (Teague's) 3d Battalion of the 22d Infantry, which was to have occupied the town at 1000, did not move in until 1800."

Sec. 1 - Col. Arthur Teague



- Elements of Col. Teague's 3rd Battalion 22nd Infantry highlighted in yellow

Battalion Surgeon Capt. Walter E. Marchand's *D-Day Diary* explains what a soldier does while waiting to advance. **DrM:** "A beautiful day today – perfect flying weather – and at 10:40 a terrific bombardment on Cherbourg takes place – we watch wave after wave of mediums come over – but a lot of P47's also come over and since we are so close to the Jerries, they strafe us time and time again – and it's hell being blasted by your own planes – as we later find out. Regimental Service Company – back further, got strafed and bombed too."

Repeatedly shelled for a week, Col. Teague's 3rd Battalion finds Montebourg abandoned *(next page)* by the Germans.

AST: *"The place was abandoned by the Germans in their withdrawal and was occupied without a shot being fired. When the 3d Bn first moved in (Teague) thought there wasn't a living person in the town. 30 Germans were found hiding in the cellars, several in civilian clothes, 7 American wounded from Crisbecq. They French civilians began coming up out of the cellars. Approximately 300 of the population were still alive, having survived in the cel-*

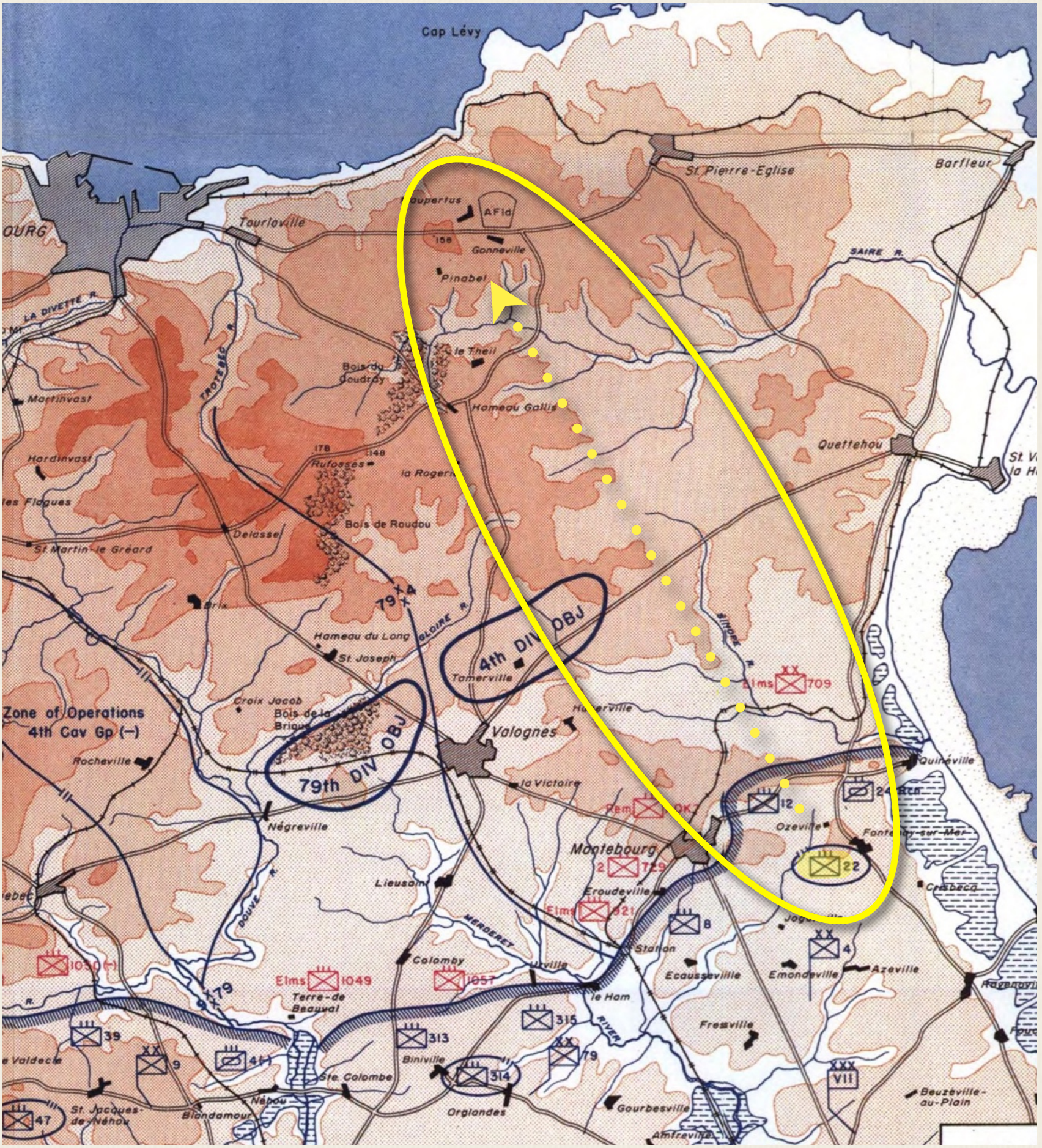
lars of the completely demolished buildings during the tend days of siege... the repeatedly terrific artillery and mortar bombardments."

WD: "Later in the evening the bulk of the 22d Infantry was concentrated on the right flank of the division intent on pushing the attack again early the next day.

DrM: "The companies are getting into position – we attack tomorrow – and it is not going to be easy for we have to pass thru a draw and the Jerries have it zeroed in. The objective is the high ground to the west of the airport 4 miles above Le Thiel."

20 June 1944

WD: "The 22d Infantry was ordered to advance straight north and seize Hill 158 *(next page)*, a critical terrain point which dominated the surrounding countryside, including the heavily defended Maupertus airport to the east. The main east-west highway into Cherbourg ran across the hill, and the main purpose of the 22d's mission was to cut this highway. Possession of Hill 158 was



a vital factor in the plan of isolating Cherbourg from the east; both the division and Corps commanders therefore attached great importance to the winning of this objective."

RM: "The 4th Infantry Division's experience on June 20 was similar to the 9th's on the preceding day. When the attacks began it was found that the Germans had broken contact and retired northward. Pfc. Emel's 22nd Infantry Regiment moved cautiously, unwilling to believe that the Germans had withdrawn. At 0915 Hours, Col. R. T. Foster, now commanding the 22nd Infantry Regiment, was told that his battalions were not moving fast enough. About noon Colonel Van

Fleet (8th Infantry Regiment) ordered his battalions to get on the roads and move rapidly. The 22nd Infantry Regiment also took a route march formation and moved northward. The 22nd Infantry Regiment stopped short of le Theil, part of the regiment going into position south of the Saire River. There it was under direct observation and heavy fire from the high ground to the north which caused considerable casualties in the 1st Battalion."

WD: "In the advance from Le Theil, the 1st and (Teague's) 3d Battalion, supported by Company B, 70th Tank Battalion, moved out abreast at 1600 behind an artillery preparation. Four hours later they were ordered to dig in on favorable ground north of Pinabel. But since the 3d Battalion began to receive fire from enemy antiaircraft guns, both battalions were ordered to keep moving. The 1st Battalion could not advance in the face of heavy artillery fire, but the 3d pushed forward 500 yards to reach the objective. The battalions had hardly reached their new positions when large but apparently unorganized German forces began to infiltrate across their rear from defensive positions around Gonneville. For the next four days and nights the enemy interrupted communications and supply. All resupply convoys had to be escorted by tanks to get through. Even then it was touch and go."

AST: *"(The hill just south of Brette Fey) was a strongly fortified position, containing a radio tower, which was the center of communication throughout the elaborate fortified area to the west and northwest. These two (2nd & 3rd) battalions were far out in front and were completely surrounded for one day, partially surrounded for three more. The German forces were continually infiltrating across (our) rear and supply columns were ambushed unless escorted by tanks. On one occasion, the tank commander took the wrong road and the column was ambushed on a narrow trail between high hedges, losing two light tanks, three 55mm guns, three half-tracks and several jeeps. After the campaign, these vehicles were recovered. The 57's had been blown. The Germans had apparently fired 57mm shells through he body of the halftrack. Motors were undamaged."*

DrM: "Attack starts – casualties terrific right from the start – especially from 2nd Battalion. The litter bearers get pinned down for hours at a time and can't function in or near the draw. (Teague's) third Battalion pushes ahead rapidly, the 2nd is held up and the 12th Regiment to our left doesn't move at all. It finally turns out that (Teague's) 3rd Battalion reaches its objective and there is cut off, we have only radio communication now – our litter bearers couldn't keep up with them however, being busy evacuating the patients from the "draw" and there are many and it is difficult with all the Germans around and the artillery. Towards night I'm really sweating it out – how can I get up to the Battalion? I'm back with the Battalion rear Command Post and only have radio communication with Col. Teague. The Jerries have cut all roads up to the hill and it's suicide to go to reach them – attempts are made but the vehicles are cut to pieces and men all shot up – finally we get some tanks and they perform a suicide mission to bring up Ammo to (Teague's) cut off Battalion. We are busy most of the night with casualties."

June 20 Journal: "23:00 - Hard to keep up with situation. No communication between us and Division. Gen. Barton was very perturbed at the fact that he didn't know where the units were. The only CP he knew was ours. There seems to be things going on but I can't seem to get

in on it. The 1st Bn is out on a recon to the front in force. The other two stopped about 1800 and dug in for the night. It is contemplated that another order of attack will be in about 0400 in the morning On the trip up to here it seemed more like what the papers said. (Civilians) were all out along the road waving to us and lots of them had bottles of cider giving it to us when we stopped. Some of them yelled "Vive La France" and few tricolors also were displayed along the road. Maybe we are liberating France after all."

21 June 1944

June 21 Journal: "00:30 - S2 from 3rd Bn gave report on his patrols as to where the enemy was located. They were fired on by MG's and mortars and snipers. 09:30 - Gen Barton is going to visit CP soon - he wants Foster & Dowdy present. 10:25 - Gen Barton visited CP to get situation. He told us what he wanted. We attack 14:30 - we get chemical mortars - get medium tanks - lose light. The Gen wasn't satisfied with the lack of information patrols brought back last night. The way it is now we are attacking blindly - so we have to attack in force - wants better Patrol work - Told Foster to throw ten rounds of ART at every shot fired by the enemy. Gen also wants us to be more aggressive."

RM: "(The) 22nd Infantry Regiment was ordered to advance straight north and seize Hill 158, a critical terrain point which dominated the surrounding countryside, including the heavily defended Maupertus airport to the east. The main east-west highway into Cherbourg ran across the hill, and the main purpose of the 22nd Infantry Regiment's mission was to cut this highway. Possession of Hill 158 was a vital factor in the plan of isolating Cherbourg from the east; both the division and Corps commanders therefore attached great importance to the winning of this objective. In the advance from le Theil, the 1st and 3rd Battalions, supported by Company B, 70th Tank Battalion, move out abreast at 16:00 Hours behind an artillery preparation."

June 21 Journal: "15:35 - Col Foster left for 1st Bn. 15:45 - Gen Barber visited CP looked over situation. 17:30 - Goforth gave location and reported with a few swear words that 1st Bn were by-passing enemy machine guns. 17:45 - Gen Barber visited CP - He just came back from 1st Bn - he is satisfied with the way things are going - Gen Roosevelt came in a few minutes later. 18:10 - Col Watson has a mind reading crew - like a absent minded professor. He gave the firing points to the operator instead of asking for Can-Can while trying to get the mix up strait his ART started firing on the points he gave the operator. 18:35 - Gen Barton says attack to go along but stop for the night on the most valuable ground we take today. Plan for tomorrow depends on our position tonight. General has had favorable reports from us today and is very pleased."

RM: "Four hours later (the 1st & 3rd Battalions) were ordered to dig in on favorable ground north of Pinabel. But since Pfc. Emel's 3rd Battalion began to receive fire from German antiaircraft guns, both battalions were ordered to keep moving. The 1st Battalion could not advance in the face of heavy artillery fire, but (Teague's) 3rd Battalion pushed forward 500 yards to reach the objective. The battalions had hardly reached their new positions when large but apparently unorganized German forces began to infiltrate across their rear from defensive positions around

Gonneville. For the next 4 days and nights the Germans interrupted communications and supply. All resupply convoys had to be escorted by tanks to get through. Even then it was touch and go."

June 21 Journal: "20:20 - Gen approved plan of taking high ground. Also said 2nd Bn has been released to aid 1st & 3rd Battalions. 20:30 - notified 1st & 3rd Bns. to continue to objective tonight. 20:50 - 1st Bn CP practically wiped out. 21:50 - Mobile reserve going in on left of 3rd Bn. 22:15 - Division wants to know if one of our pureblooded German prisoners will volunteer to go into Cherbourg tonight. 22:47 - Lt. Henry is going to get four light tanks from 24th Cavalry in order to carry ammunition to 3rd Bn - 3rd Bn have snipers in their rear. 22:47 - By Radio - 1st Bn 500 yards from objective - 3rd Bn on objective. 23:30 - Lt. Bolyard wanted instruction on exactly what to do because he is cut off from the rest of the outfit. Told him where he was. Said to stand fast and he would try to get a patrol to lead them back. Said that the shelling has been rough as hell up there. Talked of sending up tanks with supplies."

DrM: "The 3rd Battalion is still cut off – the situation is becoming critical from a medical point of view – the casualties on the hill can't be evacuated. By noon it doesn't look as if contact with the Battalion can be established – Radio tells me about 60 casualties are up on the hill. I ask Goforth to let me go up – by tank since tanks got thru before – only 2 tanks are available right then – so I am allowed to take one man with me. I ask for a volunteer from one of my boys – and Calvin Gross is the one – a splendid young man, with unsurpassed courage. We get stuff together – lots of plasma and compresses, etc. We are to meet the tanks at Le Thiel – so we move by Jeep to Le Thiel with the equipment. While there at the roadside we get peppered with sniper fire, and a few rounds of artillery come over. Our tanks are the ones that went up the hill with Ammo on the first trip yesterday, and they are the ones that we are waiting to return from their second run this morning. When after hours they don't show up we fear that they have been hit, Lt. Herring then tries to run up by Jeep and trailer – he goes about a quarter of a mile and then comes running back – the Germans still have the road successfully cut and he was fired on but got out of it alright. At 5 P.M. we see the tanks come down the road around the bend. They made it back safely after all. We stop them and tell them what we want – and their answer is O.K.

"Gross gets in the 2nd tank, replacing the turret gunner, gets four 60mm. cartons of medical supplies in it and ½ doz. plasma units. I get in 1st tank with like supplies, and the outside of the tank is loaded with AMMO. I get the machine gunner's place next to the driver and it feels comforting to have a machine gun in my hands. It is a light Tank – we are going to depend on speed to prevent getting hit by 88's. We button up the tank – and look out thru our periscopes and we start off – getting into high gear and literally tearing up the road – it's a mad ride – wondering whether we are going to get hit or not. At one point the Jerries let us have it and the bullets rattled against the side of the tank – but that armor sure makes one feel good – a false sense of security except against small arms fire – and I thought we'd never get there – it was the longest 4 miles in my life I think although we were doing about 30 MPH all the way.

Sec. 1 - Col. Arthur Teague

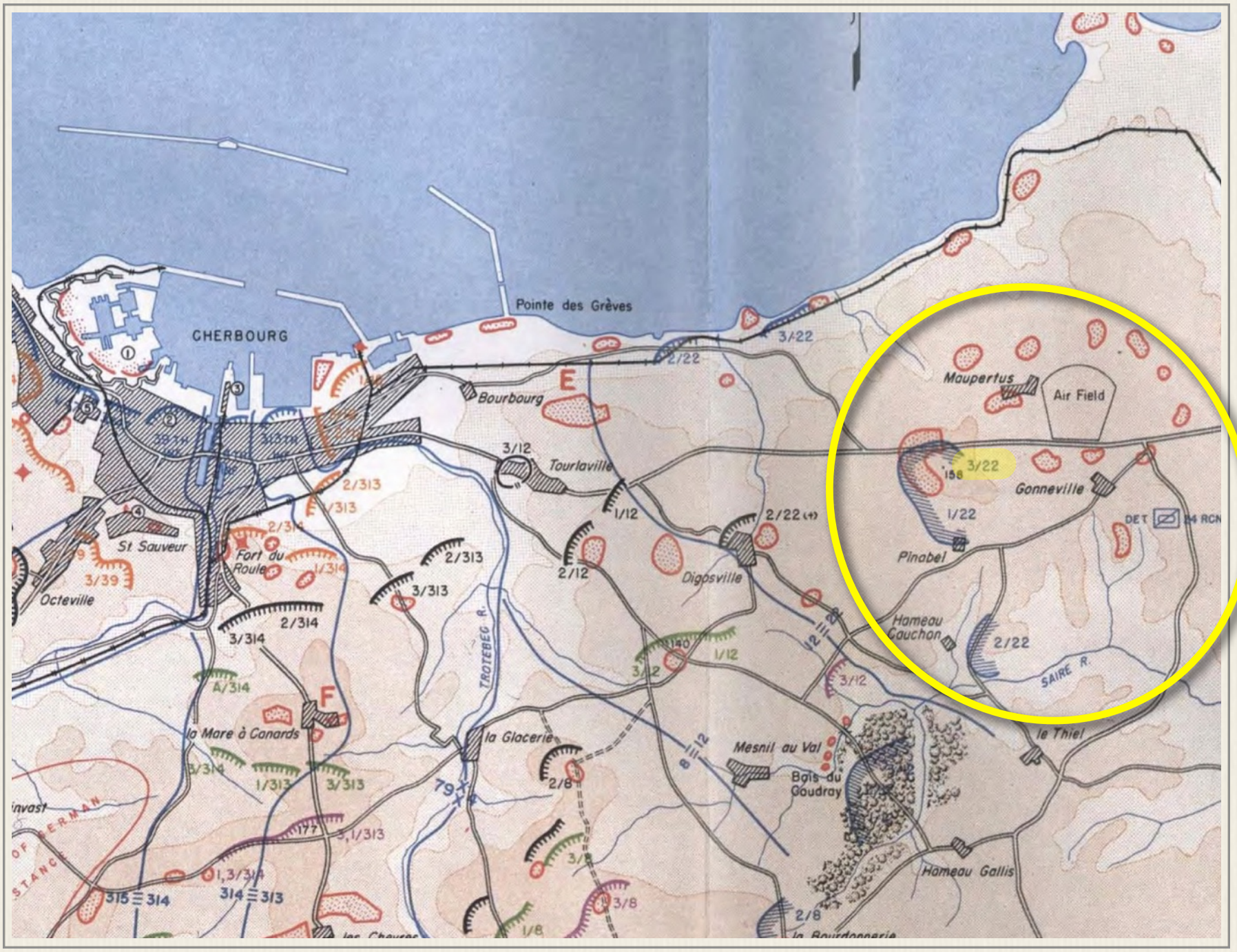
"Finally the tank came to a stop and I opened the hatch above me – then "ping" and my hand "stung" – a bullet had hit the hatch cover. Then I scrambled out fast, got the equipment out and made for the forward O.P. where Col. Teague was, Gross right behind me now, to get the "poop" but it wasn't necessary – it was self evident in what I saw. 67 wounded in 3 adjoining fields! – some in slit trenches, others just lying about. I found one of my Aid men with them +2 German aid men, and they did a good job on them, fixing them up as best as possible. Then we got to work – starting with the most serious in each field and seeing each one of them – re-bandaged all of them, applied splints, amputated a hand and plugged a few bleeding chest cases – and gave plasma where needed. Some were in bad shape, but we did the best we could for each and all of them. And shortly after I got there, the Germans threw an evening counter-attack – the bullets whistled over us constantly and we had to do most of our work in a prone or squatting position – and artillery started – a few shells landing right on the other side of the hedgerow we were on – and we had no slit trenches to run into for they were occupied by the many wounded – so all that was left was hope and prayer. Gross, Bud Lucas, and the 2 German aid men and I worked until dark (2300), finishing with the last patient just at about dark. In Field (A) we had to work on our bellies – bullets hitting on occasions only a few feet away – in fact the bullets were flying about us so freely that we hardly dared put plasma bottles on rifles lest a bullet smash the bottle – and on that evening plasma was of much value."

"But when we were finished with the patients, our work was only half done, for the patients, many of them seriously wounded, had to be evacuated! -- and with the road cut by the Germans how could we risk it? -- I worked up the following plan: In darkness a Jeep is likely to make it up the road, so I radioed the Battalion Rear Command Post to get a Jeep ambulance to work its way up to the hill if possible, and should he get thru under cover of darkness he would take 1 load down and then contact Capt. Harwood at Collecting Co. and get 2 ambulances and with our 2nd Jeep to come up. And the plan worked! – the Jeep came at 0400 with Hetrick driving – Oh, what a fine lot of men I have in the Medical Section – each and every one is a hero twice over since landing on D Day. Hetrick had made his way up and he wasn't fired at. Now he took 2 litter patients back with the message to Capt. Harwood for two ambulances and to rush them up while it was still dark – also the other Jeep. Both came about 0600 – and we loaded them and shipped them back – and then later another load – until we had all the wounded evacuated."

AST: *"In this position and in the subsequent attack on the airport, the battalion suffered severely from fires of enemy 40mm AA guns. These were being emplaced behind cover and elevated to fire the quick fuse shells, detonating on striking the slightest foliage. When the shells passed over the top of a hedgerow they would burst causing heavy casualties among men in the shelter of the hedgerow."*

22 June 1944

WD: "(Teague's) 3d Battalion was to have led the attack on 22 June from its position on Hill 158 *(next page)*, west of Gonneville, while the 1st Battalion held the hill and the 2d Battalion, in position to the south, prepared to come up later on the 3d Battalion's left. Before the attack could start, however, the enemy enveloped Hill 158 and the 2d Battalion had to be committed in a mis-



sion to clear the Germans from the rear of (Teague's) 3d Battalion. It was late afternoon by the time this task was completed. All three battalions were dug in on the hill for the night.

June 22 Journal: "05:30 - Lt. Bolyard returned from attempt to supply 3rd Battalion with ammo & food. Enemy stopped armored supply trucks & light tanks with AT (anti-tank) gun. It is reported heavy tanks succeeded in taking some supplies. Don't know how much. 05:50 - Col Fosters is given permission to alert tanks and use them if necessary. 08:39 - 3rd Bn reports "Enemy troops infiltrating behind 1st Bn through 3rd Bn lines - Teague wants tanks bad - afraid he might be kicked out - We are sending two platoons of medium tanks to help him. 08:50 - "One of Edwards' 2nd Bn company's is receiving a counterattack. These tanks will help Edwards on the way to Teague. 10:05 - Teague is in contact with a fairly strong force. The enemy is firing anti-aircraft guns at them - Kenan told Teague the tanks were on the road. 10:07 - Edwards (2nd Bn) is receiving ART from his left. 12:40 - Lt. Bolyard and Lt. Willis returned from trying to get supplies to the 1st Bn. They had tanks as an escort. When they were fired on the tanks turned around and came back. They lost a jeep and 2½-ton truck. Said that they were followed up the road by artillery fire and just outside the village they were fired on extensively by machine guns. / Put out yel-

low smoke and panels for identification (of front lines for air strike) - Planes are now bombing the enemy and it was reported that we were firing on them. General said if a plane hit us it didn't count. 13:30 - Had to leave (CP) and take cover. Our planes bombing and strafing the hell out of us. Something wrong someplace. 14:00 - Bombers passing over. Foster to Edwards - Getting a lot of shelling and strafing from our planes. Said he wanted to jump off at 14:30. CO said to jump off as soon as he could. - #rd Bn got strafed. Col. Teague is being surrounded but in what force it is not known. 14:10 - Foster tells Gen. Barton about Teague. Told him also about Edwards situation. It is going to be very difficult to move forward. Gen told Foster to clear up the resistance and go on with the attack. Keep Barton informed on what progress we make. Foster sent orders to Edwards to attack in a different direction and clean out resistance in Teague's rear. he then called G-3 and told him what we are doing. Communications not so good. Wire keeps going out. 14:25 - Foster tells Edwards (the 2nd Bn) should attack from your position in a direction north of west and clean out stuff between you and Teague. Told him to use his tanks. Said he wanted to drive north until he reached crossroad and then cut over towards Teague. 14:45 - Gen. Barber arrived at CP. He said Gen Barton said we were relieved of guarding Division rear. to take care of our own. Discussed situation. Gen Barber said Div CP and Casps CP were also strafed. 15:50 - When Teague calls for ART on points 8 & 9 give it to him. He wants delayed action fuse - he is moving in as soon as it is layed down. Teague is sending 80 prisoners back with two tanks. Kenan notified Edwards. Jumped off at 16:00. 16:50 - Gen Barber arrived t CP again. Said Gen. Barton was pleased with plan and said Teague must hold high ground. Use two battalions if necessary. 17:00 - Lt. Boyard will take tanks loaded with supplies to 1st Bn. Tanks loading up now. 18:15 - Edwards has an 88 zeroed in on him - sending up plane. 18:25 - Gen Garton visited CP - said 22nd Inf was doing a good job. We are using tanks to convoy supplies to the front - Foster said keep sending up supplies. 18:45 - Col Teague just below main road facing north. Dowdy on his right. 2nd Bn on Teague's left flank facing west. They did not know if the 88 was definitely spotted or not. All advance will stop at 2100 and consolidate and have S-4 do everything possible to supply and evacuate. Bolyard then talked to Major Kent and told him just what he needed for the Battalion - BAR's, MG's Radios, etc. 21:15 - Still having difficulty supplying forward elements with supplies. Using tanks to escort trucks. Have arrived at conclusion that using tanks with trailers is best. Switchboard operator came to CP reporting that artillery barrage knocked out 2nd Bn rear CP and caught E Company. 23:05 Division disapproved sending a tank escort for supplies to Bn's tonight. Col Teage asks for some anti-tank guns tonight - disapproved by higher HR. until tomorrow.

23 June 1944

RM: "The situation in the 22nd Infantry Regiment's sector remained extremely fluid during June 23. It had been planned that the 22nd Infantry Regiment would assist the 12th Infantry Regiment in the advance on Tourlaville by clearing the fortified Digosville area on the latter's right flank. But the 22nd Infantry Regiment was so harassed from Maupertus and Gonneville that its combat strength was devoted mostly to dealing with German infiltrations and keeping its supply route open. In a situation that precluded bold plans, it was decided that on June 23 the 1st

and 3rd Battalion (with Pfc. Emel), 22nd Infantry Regiment, should completely clear and consolidate the high ground before any further missions were undertaken. Beginning at about 0900 Hours the 1st and Col. Teague's 3rd Battalions began to carry out this task, while the 2nd Battalion sent a combat patrol south to clean up resistance north of Hameau Cauchon. To cover the mop-up operation, heavy artillery and mortar fire pounded the German line from Maupertus to Gonneville."

WD: "It was decided that on 23 June the 1st and (Teague's) 3d Battalion, 22d Infantry, should completely clear and consolidate the high ground before any further missions were undertaken. Beginning at about 0900 the 1st and 3d Battalions began to carry out this task, while the 2d Battalion sent a combat patrol south to clean up resistance north of Hameau Cauchon. To cover the mop-up operation, heavy artillery and mortar fire pounded the enemy line from Maupertus to GonnevilJe. Late in the day the consolidation of this ground had progressed far enough to free the 2d Battalion for an attack westward."

24 June 1944

WD: "On 24 June the 22d Infantry, with the exception of the 2d Battalion, protected the right flank of the Corps by containing the enemy cut off in the Maupertus-Gonneville area. Fragmentary German forces continued to infiltrate to the south of Hill 158 throughout this period. A complete mopping up of the airport region was indicated, but this was postponed for the present. General Barton limited the 22d Infantry to "policing" its positions and whatever action was necessary to maintain the security of the main supply route south to Le Theil."

AST: *"An expedition was made to the south and southeast to clear out the Germans on the supply route. Company I was left in the vicinity of Pinobel to protect the line of communications."*

25 June 1944

DrM: - "A quiet day – go out on top of hill with Col. Teague and Gen. Roosevelt to watch the dive bombing of Cherbourg – a spectacular sight – rest the rest of the day – a few minor injuries only having to be treated. All feel good and rather cocky although Walter Hill was killed yesterday – I found his body in a German truck with a dead German beside him – I wonder what happened? – he was a fine brave lad that just didn't know what it was to be afraid – he would go help anyone that needed help no matter how much danger was involved to do so. We all say a silent prayer for Walter E. Hill, a brave man, a splendid soldier. We are all proud to have known such a splendid, fine upright and courageous man."

AST: *"Advanced to Pont du Heu; encountered no resistance and captured a number of Germans hiding in the houses. It was necessary to continue a house-to-house search to find them all."*

Somewhere France
12 Noon
June 25, 1944

My Dear Darling,

I am feeling fine and getting along in great shape. Enclosed is a clipping out of Stars & Stripes whixh I hope Little Jane will like. Carrol, George, Earnest are all fine. Sitting on side of a foxhole on a high hill.

Love, Arthur

26-27 June 1944

WD: On 26-27 June, while the final fighting was taking place in the city, the 22d Infantry pushed eastward and captured the last enemy strongholds in Cap Levy. What still remained was to clear the enemy from outlying forts and the cape west of Cherbourg, and to put the great port into working order. The 22d Infantry opened the attack on the Maupertus airport at 1100 on 26 June with three battalions abreast and a troop of cavalry protecting each flank. Heavy fire from enemy antiaircraft guns held up all three battalions for several hours, but, with the aid of supporting fires from the 44th Field Artillery Battalion, the 1st Battalion took a series of positions south of the airport and captured Gonneville; the 2d Battalion occupied the western edge of the field; (Teague's) 3d Battalion captured Maupertus and the defenses along the northern side of the field. The enemy, however, continued to offer determined resistance and not until the following day was the airport finally taken. After clearing the airport positions, the 1st and 3d Battalions pivoted northward against other fortifications. Despite strong resistance, all the gun positions were overrun and late in the day the last strong point was silenced by howitzers of the 44th Field Artillery Battalion. When the commander of the position, Major Kauppers, surrendered the 990 troops under his control before midnight on 27 June, all resistance in the northeast of the peninsula was ended.

Chek NICOM Intvs: *"(The 3rd Battalion) occupied Mauperts, captured a battery of 40mm's and cleaned up all the defenses along the northern edge of the airport, then turned north along the high ridge. This was the most highly fortified area encountered in the whole peninsula. The position around the 200-foot radar tower contained 20 bunkers, each of which had 3-4 rooms. There was a large underground mess hall which accommodated 500 men, elaborate periscopes covered all that position of the peninsula to the coast and permitted the numbers to be read on ships at sea. They were elaborate, extremely efficient fire control devices. While the battalion was attacking this position (we) were under fire from a battery of guns on Cap Levy. Captain Blassard of L Company climbed out on the point of the nose and spotted the smoke rings. He radioed to Colonel Teague, "I can see the guns." Coordinates were radioed to the artillery observer and within a few minutes the 44th Field Artillery Battalion had silenced the batter. Captain Blassard went to the underground fortifications and the commanding major asked to see the Commanding Officer of the battalion. Colonel Teague received the Major's surrender at 23:30 June 27 and ordered the major to order his 290 men out of the pillboxes and to show him on the map where his lines were. Fort Hamburg was still firing on the airport so it was decided to keep the men on the hill in the bunkers during the night. The prisoners requested that they be allowed to return to their bunkers for their blankets. Colonel Teague refused*

them to return but allowed them to go to the mess hall and remain there for the night, unguarded. Major Kaupers was a "decent Joe." He entertained the American officers with beer and cheese. Col. Teague said he wanted to be nice to those guys because "I wanted to be sure that the rest of the fortifications stayed surrendered and didn't start raising hell again" He asked the major, "Why did you surrender?" He replied, "(American) Panzers on the right, panzers on the left, panzers in front, troops everywhere." Next morning, Major Kauppers ordered all German troops in the entire area to march in and surrender and at Col. Teague's demand had German soldiers lift the mines on the roads. Total prisoners: 990."

DrM: "Full scale attack on (Cherbourg) fortress and Radar Station – casualties fairly light – difficult to evacuate since this is flat ground, and scorched by the Nazis so they can see everything for miles around this fortress area. Capt. Blazzard pulls a "fast-one" – gets a German Adjutant to bring him to his officers and so surrender the whole peninsula – and it works. Col. Teague goes up forward then and talks peace terms – and they give up en masse – 1090 of them! – bluffed them into giving up by saying we have tanks, Air, etc. See the set-up – underground fortress, mess hall seating 500 – what a layout! – they could hold out against us for weeks if they wanted to. Make our way thru minefields and finally get there – a splendid underground hospital – could hold 20-40 wounded – an operating room ±3 sets of lights (2 emergency). The German Capt. gets out cognac – we drink a toast to "Victory" – he gives me all his surgical instruments – a bottle of cognac and 40,000 francs (I think it is souvenir money so give it away at will) – have 29,800 francs left, stuff it in a box and forget about it. Evacuate the wounded – The German Capt. and his orderly – one wounded is almost dead. This ends the Cherbourg Campaign – Fighting stops."

RM: "On June 28, the 22nd Infantry Regiment moved to an assembly area in the south of the Cherbourg Peninsula, where the troops relaxed to the luxuries of baths, shaves, and clean clothes, plus hot food. The Regiment had definitely been blooded in battle; "D-day in Normandy" was a phrase to remember, and for its assault on June 27, Pfc. Emel's 3rd Battalion had won the Distinguished Unit Citation."

WD: "The conquest of the Cotentin Peninsula did not immediately break German defenses in the west or irrevocably insure a quick Allied victory. A month of hard fighting in the same type of difficult Normandy terrain lay ahead. Until the end of July the enemy continued to contest bitterly nearly every Norman field; he launched strong counterattacks in the hope of containing Allied forces in their narrow beachhead. Nevertheless, the end of June saw the disappearance of the last slim chance the enemy may have had to dislodge the Allied foothold on France."

Sec. 1 - Col. Arthur Teague

After Action Reports - 22nd Infantry

(tomawski.net/category/1944/july/july-1944-after-action-reports)

John R. Tomawaski has plotted map coordinates of the 22nd Infantry on Google Maps - Find symbol to track movement of Teague's 3rd Battalion along a blue line at https://www.google.com/maps/d/edit?mid=zuphDgTIV6AU.kMUckx3e2eKA

During the period 1 July 44 to 6 July 44, the 22nd Infantry Regiment, 4th Infantry Division, was located in an assembly area near Amfreville, Normandy, France. The time was used to train, to clean equipment, and to prepare for future operations on 6 July 1944. The Regiment moved to a forward assembly area west of Carentan in preparation for an attack south along the Carentan-Periers road. Throughout 7 July, the Regiment was on a two hour alert status but was not called upon for movement.

From 22nd Infantry Journal:

July 1 Journal: "Still in rest area near Amphreville. Nothing Unusual occurring during the day. No laundry available so the entire Division will have to wash their own clothes"

July 3 Journal: "Regt will move any two hours after 12:00 by foot and motor. Foot elements to lead; motors to follow. Our corps now consists of 4th Div, 83rd Div, 9th Div,, 3rd Armd Div. 14:45 - There will be no movement today. Regiment will move tomorrow (July 4) depending on developments now in progress."

July 4 Journal: "11:55 - G1 wanted information on Col. Teague in connection with his decorations. Need information for Army. Henry referred him to Col. Teague for details.

July 5 Journal: "13:00 – Regimental Command Post meeting – Col. Foster briefs: We will have seven battalions of artillery in support of us. Will be attacking in very flat ground. Flat trajectory weapons can be sued quite extensively. At least two river crossings will have to be made. Reconnaissance will have to be made at night and in secrecy as to not disclose our direction of attack. Ammunition supply will be difficult so carry maximum. Resupply will be made after dark. March discipline of new men will have to be stressed. Can't say just when we will move but remain on two hour alert. Maps are scarcer than heretofor. Study maps and look for likely 88mm emplacements."

July 6 Journal: "11:50 Forward echelon arrived at new CP. Roads very congested with military traffic. Third Bn closed at 13:50. 23:35 – Note: Report elements of 6th paratroopers (German) in Division sector."

July 7, 1944
France

My Dear Darling,

It rained again last night and the sun is only about half shining to-day. We had beautiful weather at first and I hope it returns again. Things are about the same - just read two letters from my officers in England. George Bridgeman is doing fine and will be back before long. Carrol had a letter from Virginia and said she saw in the paper where the Nealey's had received word. I am feeling fine and still at the game of War. Your guessing was pretty good.

The second is the best now. Enjoyed the clipping and the first word in the book is the word. Col sent me clipping of New York Tribune. We eat the same chow everyday so I could use a box of canned nuts, candy, etc. Please send one.

Heaps of Love, Art

July 7 Journal: "23:00 – All Bn's – will move out 04:00 8 July 1944."

RM: "On July 7, having been moved to an assembly area south and west of Carentan, the 22nd Infantry Regiment attacked, thereby beginning one of its bloodiest engagements of the entire war; the Carentan-Periers operation (otherwise known as "The Battle of the Hedgerows"). The objective of the operation was the seizure of Periers, a necessary preliminary to the forthcoming breakout from the peninsula. For 10 days, the 4th Infantry Division experienced hedgerow fighting at its worst. A hundred yard gain on a 300-yard front often meant a full day's work for a battalion. Germans lurked behind every hedgerow. German gunners were dug in every few yards. Forward movement brought certain fire. The attack moved with extreme slowness. Opposing forces were the 12th SS Panzer Division and 6th Parachute Regiment, which delivered stubborn resistance. And the ground was given up to the advance of 22nd Infantry Regiment yard by yard, and foot by foot. The nature of the terrain, hedgerows with some sections of dense woods, made the effective use of armor virtually impossible. Counterattacks were repeatedly launched; infiltration was incessant; the determination of the Germans was a fact."

July 8 Journal: "03:05 – No change except line of departure time; 09:30 – Col Ruggles called Div and asked if bombing schedule would be adhered to. Yes it would. / Hear planes overhead. Bombing underway. 09:45 – Reported to Col Ruggles air mission completed. (Said some bombs fell short of targets) Col Ruggles called 1st Bn and notified Keenan. 1st and 2nd Bn jumped off at 09:45. 10:53 – Leading Bn is 2nd – 2nd has crossed barrier. Casualties from S mines – no other resistance. Will send position of 1 & 3 Bns upon receipt of same. 19:00 – Forward echelon moving forward to new CP; 19:40 – arrived new CP; 20:02 – General Roosevelt arrives at new CP for visit. 20:07 General Roosevelt left after a short conversation with Col. Foster. 21:08 – Foster wishes to make a complaint about the German dead left by the 83rd Division. Maj DeYoung advises that Maj Kent must gather up these dead and let DeYoung known how many he turns over to the Quartermaster."

After Action Rpt:

On the morning of 8 July, the 22nd Infantry with its attachments passed through elements of the 83rd Division and attacked to the southwest in the order; 2nd Battalion, 1st Battalion, with the 3rd Battalion in reserve in the vicinity of La Varimesnil. The 2nd Battalion had as its mission, the breaching of the enemy line southwest of Culot and continuation of the attack to seize La Maugerie. The 1st Battalion had as its mission the capture of high ground in the vicinity of Neuville. At 20:30 was on its objective. One hour later a German counterattack by infantry and tanks commenced. Ninety minutes later "the situation was under control."

July 9 Journal: "02:05 – Col Foster discussed day's events to Maj Goforth. Had a few casualties caused by heavy arty while moving up to 2n Bn. Col Foster told him to continue attack in

morning and keep pushing. Maj Goforth told the Col slow progress was due to not being able to call for arty because of friendly troops in front. 08:00 – "Cactus 6" tells Lanham - The ground lost yesterday was invaluable it must be reclaimed. The 1st Bn's failure must be investigated but this is not paramount. We must keep a net with Cactus 6 today at all times. Col. Foster has been relieved of Command. Col. Lanham to take command. Col. Foster to remain as assistant to Col Lanham; 08:10 – Col Lanham tells Maj Edwards that the attack must be reclaimed and that the fall back was responsible for the Regiment's failure yesterday. Try to outflank the enemy who has moved into the lost ground. Use artillery all possible (Line went dead); 08:25 – Col. Lanham tells Capt Latimer that 1st Bn must take back the lost ground. Nothing to stop them under any circumstances. Tells the Capt to inform Maj Goforth that he was largely responsible for Col Foster losing command. 1st Bn jumped off at 08:30; 09:34 – Col Lanham wants Col Teague to report to CP for a conference; 12:50 – 3rd bn informs CP 83rd Civ dead in our area – will notify 83rd Div. 13:52 – General Roosevelt visited CP"

After Action Rpt:

The attack was resumed on 9 July with two Battalions abreast, 1st Battalion on the right to seize objectives in the vicinity of La Maugerie. Colonel C.T. Lanham assumed command of the Regiment and Lt. Col. John F. Ruggles was sent to assume command of the 2nd Battalion in order that the attack might be pushed. The 2nd Battalion seized Sainteny and at dark the Regiment halted for the night along the line Les Forges-Sainteny.

RM: "3rd Battalion was committed in a flanking movement to the left, and the 1st Battalion advanced to the outskirts of La Maugerie. After continuous attack the 22nd Infantry Regiment was relieved by the 12th Infantry Regiment on the general line La Maugerie-La Roserie. The defense and delay by the Germans had been superbly executed, and as a consequence the advance which the inundated areas on both flanks restricted to a narrow front, was painful and laborious. The effectiveness of German fire coordination is reflected in the extreme number of casualties during what, according to later experiences, was a relatively short engagement. Names like Sainteny, La Maugerie, and Raids are all names of tiny French towns in the zone of advance that were taken at great cost. The 22nd Infantry Regiment slugged ahead against large numbers of Panther tanks, they knocked out 20 Panthers in 4 days."

After Action Rpt:

The Regiment continued the attack on 10 July with the 1st and 2nd Battalions in the assault. The 3rd Battalion was committed on the left (east) of the 2nd Battalion with orders to seize that portion of the Regimental objective east of La Maugerie. At approximately 1800, the 3rd Battalion movement masked the fires of the 2nd Battalion and the 2nd Battalion reverted to Regimental Reserve. The 1st Battalion advanced to the outskirts of La Maugerie and that position was held for the night with the 3rd Battalion on their left.

July 10 Journal: "21:30 – Reported tanks knocked out today were big tiger tanks; 21:35 – Col. Lanham wants position of front line elements so as to lay artillery down in front of them. Going to call Col Teague on radio for position immediately; 22:02 – Received word from forward

observer where 3rd Bn front line; 22:06 – Col Lanham gave warning order that 3rd Bn would probably be assault Bn tomorrow. Prepare to jump off at 09:00. Guard left flank tonight.; 22:45 – Maj Kenan told Maj Edwards plan of attack for tomorrow. 3rd Bn leading assault – 2nd Bn in support of 3rd – 1st Bn in reserve after mopping up St. Maugerie."

France
July 10, 1944

My Dear Darling,

To-day is another overcast day with clouds pretty high. It looks like a little rain but I hope not. The worst thing I have to put up with is mosquitos which are real large and bite like h--- at nite. I don't know which is worst the shelling or mosquitos. As I write this letter I can hear most all type of guns firing - as well as some planes overhead which sound real good. My outfit is in reserve to-day. I know you will like this - my chief runner is a Penn State graduate in forestry. I used him a couple of days and saw he could move through the country without getting lost so I asked if he was a good country boy like myself and his reply was, "I have worked in forest" So I found out his history. He was a private so I made him sergeant. Please send a box with anything to eat as "K" ration is pretty regular.

Love, Art

July 11 Journal: "17:00– Enemy holding up 3rd Bn. 1st Bn coming to help knock them out - Bringing Bazookas and AT gun. Col Teague said enemy tanks knock out part of hedgerow-camouflage front of tank and then place it were the hold is; making it look like part of the hedgerow. They then let troops come up (sometimes to within 25 yards) and open up with machine guns.; 19:35 – Gen. Garton to Lanham What's this about breakthrough's – no breakthrough – just want to keep up the drive until 22:00 at least. Believe the Germans are about to crumble. General gives OK but warns against counter-attack.. The Colonel said he has his 3 Bn well Echeloned and does not fear this. Barton warns that all gains must be held.

Roosevelt Dies: *Brigadier General Theodore Roosevelt, Jr., in Ste. Mere-Eglise on July 12, hours before he died of a coronary thrombosis. Arthritis caused him to walk with a stick. The 4th Infantry Division commander described him as "the most gallant soldier and finest gentleman I have ever known" (1944)*
- U.S. Government photo

July 12 Journal: "19:18– Kenan wanted to know if 3rd Bn was going to get off on time. Answer was yes. Field Order #22 was given out verbal last night - copies confirming verbal order are going out now; 09:30 – The artillery has lifted and 3rd Bn has started to push. 09:37 - 22nd Inf got away on time. Air mission and artillery came off OK; 09:47 – 3rd Bn was hit from our own artillery; 11:20 – Reported machine gun fire to 3rd Bn left and rear. 1st Bn coming over there. They will check; 12:30 – Col Hanson informs going to drop special propaganda pamphlets for S.S. Troops. 15:00 – Lanham tells Barton – Very little energy

left in the boys. Mortar fire and artillery fire on our own troops is feared. The sting is out of the boys in the forward elements. This is known by the CO's personal direction. 22:17 – Gene Barton wants to make sure Col. Teague understands that he is only to hold present position and contain enemy. If Col. Teague needs anything for support Gen Barton will do his best to obtain it. However, if Col Teague is planning something he can go ahead with his plans. 22:25 – Put arty on 327764 for 3rd Bn. *(A heart attack claims Gen. Theodore Roosevelt Jr on July 12, 1944 in Meautis, France.)*

July 13 Journal: "02:20 – Get a direct line to Teague in the morning. If Caisson wants to get in contact they can get him thru us. 02:45 – 12th 1st Bn has relieved 22nd 3rd Bn. 02:50 - The dope for tomorrow is let the men sleep as long as possible. B rations tomorrow. Kitchens will move up tonight. 03:02 – The relief has been completed of all the elements were moving. 1st Bn is moving out, 2nd has made its assembly area, & 3rd will be at their assembly area soon. This relief went remarkably smooth. 10:00 Request more fire power for 3rd Bn.; 11:00 – Ruggles checking the disposition of the 3rd Bn which is being held up by dug-in enemy tanks. No dope on the 3rd moving out.; 21:26 - Bainbridge request one man from each company to act as guard of honor for military funeral.

Commendation for Meritorious Service

3rd Battalion, 22nd Infantry – "On 10 July 1944 the 3d Battalion of the 22d Infantry was committed against the enemy. On 11 and 12 July 1944 the attack was resumed with the 3d Battalion advancing to seize an objective in the vicinity of by envelopment from the east. The 22d Infantry less 3d Battalion was relieved by elements of the 12th Infantry on the night of 12-13 July 1944. The 3d Battalion 22d Infantry was attached to the 12th Infantry and remained in constant contact with the enemy until 1800, 14 July 1944. During this period the 3d Battalion was constantly fighting heavy tanks and Infantry. It was subjected to enemy small arms, mortar and artillery fire. After being engaged for five days the 3d Battalion 22d Infantry was still prepared to further their position and to push the attack when ordered. Each officer and man of the Battalion is to be commended for his complete devotion to duty while engage with the enemy."

July 14 Journal: "01:15 - A shell landed about 10 feet from (22nd Command Post) tent. 4 men injured. Major Kenan, Lt. Deedy, and two guards on post. 09:45 – One man from each company to attend military funeral 1700 (for Gen Roosevelt); 12:55 – The 3rd Bn to revert to 22nd Inf upon relief by 3rd Bn of Cabbage at 1700. 13:00 - Tells (3rd Bn 22nd) of impending relief. Walker says that a daylight move will prevent casualties. 13:35 - Attack planned for today cancelled. Secure position. 14:43 - Report on tanks destroyed in the last five days - broken down into what weapons destroyed them. By 57 mm - 1, By Bazooka - 9, By Cannon 2, By AT - 10. One possibly destroyed by artillery.

After Action Reports - 22nd Infantry

(tomawski.net/category/1944/july/july-1944-after-action-reports)

On the 15th July the Regiment was alerted for movement to a new assembly area in the vicinity of Montmartin-En-Grainges. This movement was accomplished on the 16 July by motor and without mishap. From the 17th July to 18 July the Regiment remained in the assembly area carrying out a training schedule, resting, and taking advantage of Quartermaster showers and Special Service facilities.

Teague would receive a Silver Star along with five other members of the 22nd Infantry on July 17, 1944 from Maj. General Raymond O. Barton at the group's first overseas decorations ceremony *(below & next page)*.

Maj. Gen. Raymond O. Barton, Commander, 4th Inf. Div. addresses the 22nd Infantry, following their first decorations ceremony on the European Continent (July 1944)
- Photo courtesy of John Tomawski. Via 1-22infantry.org

RM: "On July 19, 1944, the 22nd Infantry Regiment moved behind the lines to the vicinity of La Mine, where, attached to Brig. Gen. Maurice Rose's Combat Command A of the 2nd Armored Division, it began almost immediately to plan and train for the forthcoming breakthrough operations. The overall plan contemplated the use of heavy bomber aircraft for saturation type bombing and, hence, was dependent on weather suitable for flying. Infantry-tank teams were organized. Training was pursued in this type combat to the end that members of the 22nd Infantry Regiment and Combat Command A developed confidence one in the other, and became fast friends."

On the 19th July RCT 22 moved to the Vicinity of La Kine where it was attached to the 2nd Armored Division as a part of Combat command "A", commanded by Brig. Gen. Maurice Rose. The Combat Team consisted of the 22nd Infantry, 44th Field Artillery, Company "C", 4th Medical Battalion, one platoon from Company "C" 4th Engineer Battalion, and the 427th and 428th Quartermaster Truck Companies. The mission assigned the combat command was to break through the hostile position on the front St. Gillis-Marigny and to seize, occupy, and defend the dominating terrain in the vicinity of Le Mesnil Herman. Bad weather delayed the planned saturation bombardment until the 26th. This period was used to train Infantry-Tank teams, to instill the offensive spirit and to perfect plans.

Sec. 1 - Col. Arthur Teague

Six Silver Star Medal awardees *of the 22nd Infantry receive their medals in France on July 17, 1944. Front row (L-R): Pvt. Bernard C. Christopher, Pvt. First Class Charles T. Jones, Technical Sgt Oscar C. Cantrell, Maj. Gen'l Raymond O. Barton (standing on jeep hood), unknown Color Bearer, Maj. Robert B. Latimer (CO 1st Btn),* ***Lt. Col. Arthur S. Teague (CO 3rd Btn)****, Lt. Col. Garlen R. Bryant (CO 2nd Btn.) - U.S. Army Signal Corps photo SC-244296 Photo courtesy of John Tomawski. Via 1-22infantry.org*

July 19, 1944
France

My Dear Darling,

Under separate cover I am mailing you silver star medal which was awarded to me yesterday. I also sent you a German swastika which my boys captured from a German tank. I will try and send you some pieces of parachutes that our boys landed in France with. You can make a handkerchief or scarf out of them. I also sent you a couple of clippings that were sent me. I guess you have several of them now. John Williams was in to see me yesterday - he looks real well. Walker and Goforth and Majors. Earnest got a broken leg but is in good shape. Ole Tom got a little lead in his fanny. One of my boys who just came to us saw Trib in England. Russell is still my driver but is not as fast as he was. Food has been good the last few days as we have gotten away from the K and C Ration which we've eaten most of the time. To-day is rather cold as clouds are low and overhanging - you need a field jacket.

With heaps of love, Art

July 19, 1944
France

Dear Darling,

Enclosed is a couple of clippings which Uncle "H" has sent me. This clipping went all over the States. I have seen copies of paper from California to Florida. Saw John W. yesterday and he is the same ole John. Darling, I'm feeling fine. Kiss dear little Jane for me - I'll try and be there for her 2nd Birthday. I received the pictures!

Love, Art

July 22 Journal: "08:34 – Bayonet practice to be stressed in training today. At least one hour this morning and one hour this afternoon. 16:00 - March table and overlay published. Distribution to be made. 16:17 - There will be a meeting at 19:00 of all Battalion and Company commanders at Regt'l CP. 16:42 – Meeting tomorrow at Pyramid Hq at 08:00. 21:00 – 3rd Bn CO need not attend meeting tomorrow at 0800. Col. Teague notified at 21:05 about not having to attend meeting."

Ellen, Arthur & baby Jane Teague
- Teague Family Collection

July 22, 1944
France

My Dear Darling,

I have received the Kodak pictures of Jane, the color pictures of her, and you and I, and the slides of her. They are all good and I sure do enjoy looking at them. Sure am glad that you are going up to N.H. It will do you and Jane good. Sure am glad Uncle Henry is getting along so well. He should take care of his eyes. I had a letter from him and he states he has not heard from me. I have written him many letters to Hanover Inn. I am enclosing two orders which have a little paragraph about me - they should be about my men as they won it or both awards. I appreciate them lots and have tried to get a large number of medals for my boys. It is just getting dark so I better quit and go to sleep in my foxhole that is lined with red silk. The silk is a parachute that landed here. We use the green ones for camouflage.

Love, Art - Time 10:20 P.M.

July 23 Journal: "11:50 – History of our first phase of operations in Normandy delivered; 11:55 – Distribution made of intelligence overlays to all units also secret document #15688 delivered.

RM: "In a letter dated July 23, 1944 (received by his mother early August when her son was already Killed in Action), Pfc. Emel was concerned about the $30 he was sending monthly to his parents. In part it read: "I am well and gaining weight. I spent three days in a rest camp and am just going back into action. Tell dad and the boys to be good and to get ready for a big celebration on New Year's eve. Are you receiving the $30 I am sending every month from my pay check and the war bonds I sent?"

Sec. 1 - Col. Arthur Teague

July 23, 1944
In France

My Dear Darling,

I have received your letter of July 7th to-nite. It seems like on that date I'm never around to see what I started (or we started) Here is hoping I'll be there for her next birthday. The ice cream and cake sure does taste good. Have had ice cream one time since I left the good ole U.S. Carrol, Swede Henley, Walker and all the gang are OK. Our food is good now since we have started to getting our regular rations and have our kitchen prepare them when we are in a rest area. However, when we are fighting we eat mostly our box rations or can "C" ration. I haven't seen "Trib" for over a month - he went the same way John W. did. I saw the latter just the other day and he wants to know how you are. Darling, I am feeling fine and have gained back a lot of my weight. Sure am glad you are going up to N.H. - it will do you good. With heaps of love to the one I love most in this world.

Love, Art

July 24 Journal: "12:00 – We have reverted to 2 hour alert. 15:36 - Civilians who passed thru lines this AM report 47 Mark IV tanks in woods last night.

July 25 Journal: "17:05 – Notes received from Lt. Bravrock concerning what movements were made today. The information contained no good advances or accomplishments. The movement is stymied and action has been slight, skirmishes. Air missions so far have not softened the enemy sufficiently.

RM: "July 25 dawned clear, and the weather, which had heretofore been overcast with steady rains, was announced satisfactory. At 1100 Hours the St. Lo Breakthrough commenced with bombardment by B-17 type aircraft. At the conclusion of the bombardment, elements of the 4th Infantry Division penetrated the German defense and rolled back the flanks to right and left. Combat Command A was to give an outstanding performance of infantry-tank coordination during the coming week. By noon of July 26, the Combat Command A of the 2nd Armored, with the 22nd Infantry Regiment attached, had knifed through initial defenses and several hours later was rolling southward on open roads, through St. Gillis and Canisy, reaching Mesnil Herman at dawn. Arrival of an American force at that tiny hamlet, July 27, spelled disaster for the Wehrmacht."

July 26 Journal: "12:15 – Arrived at New CP (temporary) Delayed enroute by heavy traffic.

After Action Reports - 22nd Infantry

(tomawski.net/category/1944/july/july-1944-after-action-reports)

On the 26th of July, Combat Command "A" began its breakthrough operation in the direction of St. Gillis and Canisy. Originally the Combat Command was to attack in two columns with the 1st Battalion in the left column and the 2nd and 3rd Battalions in the right or north column. The 3rd Battalion was the reserve Battalion and rode in two and one-half ton trucks in rear of the Infantry-Armored assault elements. This plan was revised the night of 25 July by the VII Corps. This plan directed the attack from a single column with all elements on the north route. Considerable difficulty was experienced in changing the plan of attack at this late hour but by daylight of 26 July, Combat Command "A" had moved assembly areas north of the breakthrough area and the attack ready to roll. Infantry-Tank teams worked together perfectly. The device for breaching hedgerows was of great assistance. Cross country with infantry riding tanks proceeded at about a mile an hour. Hedgerows plus craters from the air saturation the previous day precluded faster

progress. Late in the afternoon Combat Command "A" was directed to revert to the two column plan and to continue its advance on roads in order to accelerate the advance. Owning to the great length of the column, the disposition then in effect, and the badly cratered roads, this split was not completed until St. Gillis was secured. By daylight 27 July the objective was taken. The 22nd Infantry was digging in for all round defense and coordinating its fires all in accordance with detailed defense plans previously prepared. Reconnaissance teams were pushed to the south. Infantry patrols combed the area gathering up prisoners caught in the onrush. The colored truck drivers of the 427th and 428th Quartermaster Truck Companies participated in the roundup of prisoners. By noon the position was secure and the area thoroughly cleaned up.

July 27 Journal: "10:30 - 3rd Bn wire is in.; 12:55 - Have observers with all 3 Battalions. Cannot help 3rd too close. 2nd Bn has zeroed in and can aid. 13:00 - Can fire part of 3rd (all but L Co) Will zero in for White.

Late in the afternoon two task forces, each consisting of a company of tanks and a company of infantry were dispatched to make a reconnaissance in force to the south. Company "K" in the western force drove as far south as Villebaudon where it was picked up the next day by the remainder of the 3rd Battalion attacking south to Percy

Breakthrough Campaign
28 July - 1 August 1944

RM: "On July 28, 1944, Combat Command A (among them Pfc. Emel & the 3rd Battalion) moved in 3 columns and, while the 1st and 2nd Battalions of the 22nd Infantry Regiment were held up along the stream south of Moyen, Pfc. Emel's 3rd Battalion seized the high ground northeast of Percy. The 1st Battalion and the 2nd Battalion disengaged from the Germans and, having moved west to the Le Mesnil Herman-Percy axis, attacked south toward Villebaudon. Near Villebaudon, Combat Command A was struck by German columns counterattacking from 3 directions, and the situation became critical. Bold and decisive action by leaders in all echelons, and courage and determination on the part of the troops, stabilized the situation by nightfall."

From after-action interview with Lt. Col. Arthur Teague and Capt. Joseph T. Samuels - Co "I" commanding officer.

AST & CptS: *"By mid-day of the 28th (July), K Co had reached Villebaudon. The remainder of the 3rd Bn continued to follow in trucks. Acting as a reconnaissance unit, K Co on tanks swung around Villebaudon and ran right smack into German Troops. There were several A-T (anti-tank) guns and some infantry. Here our combat team lost 4 tanks. K was then thrown into position southeast of Villebaudon to hold off the Germans while the remainder of the battalion drove on south toward Percy. By dark L and I Companies got to Point 173 on the road to Percy and bivouacked for the night nearby.*

July 28 Journal: "13:35 - Company L is to move at once to crossroads to pick up tanks. Rest of 3rd Bn to move on moments notice. 14:30 - At a meeting of Battalion & Sep Co comdrs Col Lanham told commanders to tell their men that 2nd Armored Division said they had worked with

plenty of Infantry Regiments, but (the 22nd) was the best they have ever worked with. 16:30 - An American P47 just crashed near our CP. "

29 July 1944

AST & CptS: *"L and I companies jumped off at 07:00. L Co, riding the tanks, got to La Tilandiere; I Co following on foot. The objective was Hill 272 northeast of Percy. We received a report that a friendly reconnaissance unit was on the hill. This report meant that regardless of whether the Recon unit was on the hill or not or whether it could even hold the hill, we could not throw artillery there in support of an attack. Both companies following the road toward the objective ran into an A-T gun. Here we lost one reconnaissance car and another vehicle. Driving forward they... met the Germans who set up a defense along the sunken road. The Jerries ran a continuous column of tanks back and forth along this road. Col. Teague came up and said that the information that a reconnaissance outfit was on Hill 272 had been confirmed. He ordered I and K companies to send one platoon each up on the hill. These two platoons returned to the main road north of La Tilandiere and circled to the east crossing the road to Tessy and moving straight up the hill where the contacted the reconnaissance outfit on top of the objective at 18:00. We received word that the 29th Division was sending a regiment to relieve us. The two platoons on top of the hill were relieved by two companies. The night of the 29th we bivouacked near le Nesnil Ceron."*

July 29 Journal: "22:45 - Enemy planes overhead again. They have been coming over every night at the same time."

July 30 Journal: "00:10 - Reported casualties suffered due to enemy air raid were approximately 5 killed and ten wounded. 06:50 - AT gun and 3 half tracks knocked out by last night's bombing."

30 July 1944

AST & CptS: *"L Company was relieved from its position in front of the enemy. After we had been fully relieved by the 29th Div we were given the mission of taking Percy. I Co. led - riding the tanks down the trail toward Percy. The trail was so narrow that we had to use our tank-dozers much of the time to push a route through for the other tanks. By about 16:30 we had reached the bottom of Hill 185 where we found elements of the 29th Infantry Division. They said that they had been driven off of the top of the hill by mortar fire and had taken up their present position on the reverse slope of the hill. At 17:30 we jumped off from the bottom of the hill attacking through the lines of the 29th and continued on to take the top of the hill and hold it until the next day. We received a "hell of a mortar barrage." From the top of the hill we could look right down into Percy and shell it with tanks During the fight that night we lost seven tanks, most probably by bazookas. I Company lost twenty men by mortar fire."*

RM: "Running into strong German forces trying desperately to build a new defense line from Tessy-sur-Vire through Percy and Villedieu to Avranches, Combat Command A maneuvered and fought furious battles for 5 days. On July 30, 1944, Pfc. George H. Emel was Killed in Action at age 18, while fighting in the St. Lo Breakthrough operation. Pfc. Emel's IDPF lists his Place of Death as St. Lo area (France) and lists shrapnel as the Cause of Death. At the time of his death Pfc. Emel had with him 1 pen, 1 pencil, wallet, photos, souvenir coin, $.25 US, 1 pound English and 510 Francs (later George's father also received a check of $14.57 US, also belonging to his son George). First, Pfc. Emel was in a Missing in Action status. Pfc. Emel's Report of Death states: *"The indi-*

vidual named in this report of death is held by the War Department to have been in a missing in action status from 30 July 44, until such absence was terminated on 5 September 44, when evidence considered sufficient to establish the fact of death was received by the Secretary of War from the Commanding General, European Area." Pfc. Emel's Report of Burial states that George Emel was buried at the La Cambe Military Cemetery (La Cambe – Isigny, France, Plot BC, Row 9, Grave 174) on August 4, 1944, at 1300 Hours. The beneficiaries of Pfc. Emel, Mr. Frank *(father)* and Mrs. Barbara Emel *(mother)*, were notified about their son being Missing in Action on August 15, 1944. A little later they received a letter saying that Pfc. Emel was Killed in Action on July 30, 1944. On November 18, 1947, Pfc. George H. Emel was disinterred from his grave at the US Military Cemetery La Cambe. His remains were prepared and placed in a casket on November 28, 1947, to get transported by truck to Casketing Point B, St. Laurent, France. On January 24, 1949, Pfc. Emel was buried at the Normandy American Military Cemetery in Colleville-sur-Mer, France, at Plot H, Row 11, Grave 29 ("Nature of Burial: fatigues"). George Emel's flag was sent to his parents on February 1, 1949. The final letter sent to Pfc. Emel's parents dates from April 18, 1949, saying: "While interments are in progress, the cemetery will not be open to visitors. You may rest assured that this final interment was conducted with fitting dignity and solemnity and that the grave-site will be carefully and conscientiously maintained in perpetuity by the United States Government."

31 July 1944

AST & CptS: *"We were relieved by elements of the 28th Division at 07:00. With the exception of a few tanks, motorcycles, and a few other miscellaneous vehicles, which ran up and down the roads west and northwest of Percy, there was no enemy to be seen in Percy or around the hill we held. These vehicles were moving back and forth in and out of Percy seemingly aimlessly.*

July 31 Journal: "11:30 - Operations underway to secure left flank. 3rd Bn will move to Villebaudon as soon as Percy is taken. Note: General Rose of the 2nd Armd Div and commanding CCA, of which the 22nd Inf is attached, told Col Lanham that the 22nd Inf is the finest Infantry he has ever seen, including the 101st Airborne. 20:40 - Lt. Willis 3rd Bn S4 just came back from 3rd Bn. He told Maj Moon that the 3rd Bn is on high ground around Percy. A Bn from the 28th Div has relieved them He told about the Germans stopping some medical vehicles and letting them go through.

1 August 1944

RM: "On August 1, 1944, the 3rd Battalion, with accompanying armor, seized Tessy-sur-Vire, and outposted the high ground beyond. At noon on August 2, the 22nd Infantry Regiment reverted to the control of the 4th Infantry Division, and the initial phase of the breakthrough operation was terminated. For its outstanding performance in this operation (in the Marigny - St. Gillis area) the 22nd Infantry Regiment was awarded the Distinguished Unit Citation. From July 26 to August 14, the 22nd Infantry Regiment had lost 6 officers killed, 30 wounded, 109 enlisted men killed and 561 wounded."

AST & CptS: *"The 3rd Battalion moved up to Villebaudon and from the vicinity of Beaucondray attacked toward Tessy following a road north of and parallel to the road from Vaillebaudon to Tessy. This lesser grade road ran from Blondel through Chevry, and through la Magurie. I Company on tanks led, with K Company on tanks following, and L Company bringing up the rear in 2½-ton trucks. We attacked through the middle of one battalion of the 29th Division and received some machine gun fire but no casualties. here we had remarkably good luck in*

that the area was covered with fog ("Foggy as hell" says Capt. Samuel); the fog acted as a super smoke screen as it lasted until we got to within about two kilometers of Tessy. The fog was so heavy that we could not see to the hedge-row at the end of the first fields next to the road. On the way down we passed mines which had been placed on the side of the road for later mining of the road. in some places excavations had been made in places on the road so that the mines could be placed in the. Occasionally machine gun fire spurted in our direction but, since the Germans could not see us through the fog until we had almost passed them, their fire could not be accurate. Along the route we ran right past a German aid station, command post and kitchen (food was still cooking). The column ran over two motorcycles and around a truck coming toward us. Our mission was to take Tessy so we didn't stop for anything."

"Two tanks leading the column reached a point just south of la Poemeliere and passed on safely; the third tank, a dozer, was hit by a German tank located on the northern nose of Hill 112. Machine guns from both side of the road opened up on the remainder of the column and caused it to stop. The two tanks that had broken through the enemy swept on carrying eight men each right into Tessy. The other seen tanks coiled up in the field when stopped. It was only then that we knew that the column had been cut still further back; tank communication had failed be-cause we were moving too fast. The remainder of the column soon drew up and we learned then that it had been cut by a few enemy tanks. In all we lost four tanks before we chased the Jerries off; they were knocked out by some sort of rifle grenade."

"The column reorganized and started moving forward again at about 16:00. K Company on the right of road riding G Co's (66th) tanks; I Company on the left rode H Company's. We were to destroy the bridge just east of the city. The Germans had observation on the hill over which we had to pass just south of la Poemeliere. They laid down a murderous barrage of artillery from positions behind Hill 274 and from positions to the east of Tessy. To add to this a hail of mortar shells fell from mortars placed in the hollow just east of Tessy. K Company, now off tanks, was ahead of our tanks, when enemy tanks started firing at ours; K Co. was in the middle of tank duel. I Company waited for K to extricate itself from this fight but after about twenty minutes started for Tessy again. On its way in, I Company knocked out a number of Jerries and swinging north of the town reached the main road where they met part of the 30th Division moving into town. One company of the 30th was fighting on the easter outskirts of the town. We sent some of our tanks to help them. The tanks made short shrift of the Germans and the battle was won."

"Knowing that a strategic point is soon lost if not well prepared for counterattacks, we set up road blocks on all roads leading into town. We placed one tank, one TD (tank destroyer), and one platoon to cover each block except the one on the road to the south which the 30th covered. When we had moved into the town we had seen the two tanks which had headed our column and had run right into the town with eight men each on top. They had been knocked out but there was no sign of the sixteen men and we were not able to find out anything about them."

"During this campaign from Villebaudon to Percy and up to the taking of Tessy, I Company strength had been reduced from 135 to 80. Three company officers had been killed (two by mortar fire on the hill northwest of Percy and one by machine gun fire just west of Tessy). The company lost about twenty men by artillery fire on Hill 112. The battalion fighting with tanks from the 2nd Armored Division had fought well and hard. G Company of the 66th Armored had lost all but one tank; it had fought so hard that the tanks had been moved up front into dangerous positions where they were knocked out. On the way down from Villebaudon to Percy the 3rd Battalion had been cut

off from the remainder of the regiment by German columns cutting across the main road. Two of our medics were killed at Villebaudon and two more near La Tilandiere. One of our trucks (an ambulance) was sent up the road north from the aid station near la Tilandiere toward Villebaudon. The Jerries, attacking toward the highway, captured the truck shot six wounded men in it, and made a road block out of the truck."

General Order No. 14
War Department
Battle Honors - Unit Citation
3 March 1945

The *22nd Infantry Regiment* is cited for extraordinary heroism and outstanding performance of duty in action in Normandy, France, during the period 26 July to 1 August 1944. The *22nd Infantry Regiment* was the infantry element of an armored-infantry combat command which successfully effected a break-through of the Germany line of resistance west of St. Lo, forming the St. Gillis-Marigny gap through which armored-infantry columns surged deep into German-held territory. Operating against hardened infantry, artillery, and panzer units, this regiment, often riding its accompanying tanks, met and overcame the stiffest German resistance in desperate engagements at St. Gillis, Canisy, le Mesnil Herman, Villebaudon, Moyen, Percy, and Tessy-sur-Vire. The *22nd Infantry Regiment*, in its first action with an armored division, after a short period of indoctrination, assumed the role of armored infantry with unparalleled success. Throughout the swiftly moving, 7-day operation, the infantry teams kept pace with the tanks, only resting briefly at night relentlessly to press the attack at dawn. Rear echelons fought with enemy groups bypassed in the assault. There was little protection from the heavy artillery which the Germans brought to bear on the American armor. Enemy bombers continually harassed the American troops at night, but in an outstanding performance of duty the *22nd Infantry Regiment* perfected an infantry-tank team which, but the power of its determined fighting spirit, became an irresistible force on the battlefield."

Repo Depot

Replacements for casualties suffered by the 22nd Infantry came from the Army system that was the 2014 dissertation topic for Erik William Klinek. Klinek called the replacement soldiers "The Army's Orphans." His paper quotes Teague's observation of those men shortly before the triumphant entry into Paris. "On August 21, Lieutenant Colonel Arthur S. Teague, Commanding Officer, 3rd Battalion, 22nd Infantry Regiment, 4th Infantry Division, complained, "Many men received as rifle company replacements are trained as engineers ordnance, armored force, etc. In one group of 35 replacements received in my battalion, only two or three were infantry trained. Heavy casualties were incurred among this group." And when wounded veteran soldiers returned to the line "the commanding officer of the 3rd Battalion *(Teague)* found that his replacements were "scared to death from stories of casuals." His battalion, however, instituted a buddy system whereby it paired green replacements with combat veterans, "who quickly steady them down."

Sec. 1 - Col. Arthur Teague

Entering Paris

The Fourth Infantry Division, commanded by Maj. Gen. Raymond O. Barton, entered Paris Friday morning *(8/25)* with the French Second Armored Division, it was officially revealed here *(8/31)*. Gen. Barton's infantrymen entered the French capital from the south side of the city with the French division while a mechanized cavalry regiment entered simultaneously with other elements of the armored division from the west over the Seine River.

- release from First U.S. Army Headquarters - Aug 31, 1944

22nd Infantry After Action for September 1944

Combat Team 22, assembled in the vicinity of the Chateau Vex, was alerted at 0325 hours on 1 September 44, for a long motor move and a fight; the movement to begin at 0730 hours. The missions... were to move northward with all possible speed through a designated zone of action, bypassing points of resistance if possible, and to reach the Corps objective in Belgium on the east of Valenciennes by nightfall, 3 September 1944. The distance of the march was to be approximately ninety (90) miles. Leading elements of the Task Force reached Scissons at 1100 hours. Pont St. Mard was reached at approximately 1345 hours and although slowed by destroyed bridges, the motorized advance continued until 1625 hours when resistance was encounter south of Chauny. General Taylor split the column in two; the West Column under command of Lt. Colonel John F. Ruggles, Executive Officer of the 22nd Infantry, to overcome the resistance; and the East Column under the command of Colonel C. T. Lanham, Commanding officer of the 22nd Infantry, to swing to the east through Laon and north through Crecy. (Ruggles') West Column reduced the resistance at Chauny but was slowed by destroyed bridges at Lar Fere and Artillery at Danizy. By dark, the West Column had reached the Oise River and the column moved to the east seeking a by-pass. Pushing on through Remies and Pouilly, Ruggles finally joined the East Column south of Crecy at dawn 2 September. Meanwhile, (Lanham's) East Column passed through Laon but destroyed bridges at Crecy forced it to coil at 24000 hours in the nearby fields. The Task Force had covered over sixty-five (65) miles during the day.

At 0830 hours, 2 September the Engineers completed their bridge construction and the column moved out with (Ruggles) forming in the rear of (Lanham). Scattered enemy resistance was encountered, consisting of riflemen, machine-gun fire, armored cars, and some tanks; but the rapid advance was maintained through Guise. At the crossroads south of the Iron River, (Ruggles') Column turned to the northwest through Wassigny and Ribeauville. Several enemy armored vehicles and a tank were knocked out on this route and then the West Column, under orders moved into a defensive bivouac for the night in the vicinity of the crossroads at L'Arbre De Guise. Ruggles established strong road blocks at this point.

Lanham and the East Column continued north (from the Iron River) to Etreus where a firefight between the Free French Infantry and the retreating Germans was in progress as the Combat Team reached the bridge over the Oise River at the edge of town. Col. Lanham, who was at the head of the column, immediately ordered the tanks and infantry to clean the Germans out of the town and secure the crossing. After a short fight, the enemy was either killed or captured. Prison-

ers were left in the custody of the local F.F.I. so as not to interfere with the rapid progress. The running fight continued through Oisy and La Groise, where a German self-propelled artillery piece, the remnant of a larger force which the Combat Team had destroyed or scattered on the drive, cut through the column from a side road and, taking up a position beyond the town, attempted to cover the road with fire. One 2½-ton truck was set on fire, but action by a Tank Destroyer-Infantry combination forced the German piece to withdraw to the east.

Lanham entered Landrecies as the retreating enemy destroyed the main bridge over the Canal De La Sambre. To insure the successful fulfillment of the mission... it was necessary to effect an immediate crossing of the Canal. An abandoned railroad trestle over the Canal was found intact, but lacked suitable approaches. Within thirty minutes the bridge was sufficiently improved to permit the passage of medium tanks; and Company K, who secured the bridge. The enemy had large stores of ammunition and supplies on the railroad line across the Canal, which Company K captured. The successful crossing and the rapid advance which followed caused an enemy column to be cut off and its members either killed of captured. The remainder of Lanham's East Column moved off the road into assembly areas thee miles south of Landrescies. The area remained quiet during the night, but some enemy vehicles attempting to go through the road blocks set up by Ruggles' West Column were destroyed.

Shortly after midnight, orders were received to assemble the Task Force and move to an area along the Cateau-Landrecies line at 0730 hours 3 September. Lanham's East Column received this warning order at 0125. Ruggles' West Column did not receive the movement order until noon, because of the difficulty of physical contact. Ruggles by-passed Le Cateau to the southeast, and started closing in the designated assembly area by 1345 hours. Lanham began moving at 0800, but hit strong resistance after crossing the Canal De La Sambre. Several enemy vehicles were knocked out and aided by a dive bombing attack by P-47's, (American) forces annihilated a strong enemy force (estimated at a battalion) in a wood on the road to Pommereuil. Friendly contact was made at 1700 hours in Pommereuil and all units closed into their assembly areas. At 1900 hours orders were issued to "mop-up" areas to the north on 4 September.

The mop-up orders were modified when the 1st Battalion of the 22nd was sent east at daylight to join the 102nd Calvary Group at Brunehamel. The remainder of the group mopped-up during September 4th and 5th. The next day the Combat Team Commander personally checked the area "mopped up" and no enemy was found. Word was received during the night that the 1st Battalion had secured a bridgehead across the Meuse River at Fumay. During the period 3-6 September, Combat Team 22 had taken over 1,400 prisoners.

Sep 6, 1944
In France

My Dear Darling,

I received your letter of August 17th and the box you sent with cheese in it to-day. The box arrived in good shape and many thanks. The nuts and crackers I will stick in the stove and freshen them up. It takes a long time to

get mail now as our lines are pretty long. Enclosed are a couple of articles that I thought you would be interested in reading. My outfit was in them both. We made a long drive and now we are sitting around mopping up and getting ready for the next phase. Paris was a hard place to get through - I had to just take over a street and guard it and not allow anyone on it. I guess you are just about ready to return from N.H. Hope the weather will not be too hot. It sure is cold here and I guess it will be more so from now on. It gets dark about 9:30 now so the nights are much longer. Heaps of love to you and Jane.

Love, Art

History of the 22nd Infantry Regiment
The Belgium Battles

By the autumn of 1944, tank destroyer units were increasingly used to support infantry units. Here, infantry of Col. Teague's 3rd Battalion, 22nd Infantry, hitch a ride on an M10 3-inch gun motor carriage during operations near Mabompre, Belgium, on 8 September (1944) - US Government photo

A movement order was received the morning of the 7th. Proceeding rapidly, the Combat Team reached Fumay at 1455 hours. It then proceeded to an assembly area in the vicinity of Graide, Belgium, closing in at 2130 hours. The 1st Battalion returned to Regimental control late that evening. The Combat Team was in Division reserve, the 8th securing the flanks of the division by means of patrols. Late that day the 22nd moved to the vicinity of Smuid.

On September 9th, Col. Arthur Teague's 3rd Battalion attacked between the 8th and 12th Regiments in the early afternoon and, despite some enemy resistance, was able to move approximately seventeen miles east to Giuroulle. At this time supplies were extremely scarce, and the greater part of what was to be had was being dropped by parachute from transport planes. Due to this rapid advance of the Allied Forces, the available supply of gasoline had become so small that trucks were dispatched to move only one Battalion at a time. Therefore, on the morning of the 10th, the 2nd Battalion moved by truck to the rear of the 3rd Battalion at Saile and de-trucked. The trucks then returned for the 1st Battalion. Teague and the 3rd Battalion, in the meantime, pushed east through Gives and reached Compogne. When the head of column reached the southern outskirts of Houffalize, the road was found to be blocked by fallen trees and covered by automatic weapons. While the engineers were clearing the road, two platoons entered the town by a narrow trail paralleling the main highway. As soon as they had entered, a guide was sent back to lead the remainder of the column into the city. The citizens of Houffalize were apparently overjoyed at the sight of the American soldiers and did everything possible to help. They were materially responsible for the rapid progress of the 22nd. The citizens reported the disposition of and the size of the enemy forces as they had been several days before.

That evening the town was cleared. Teague and the 3rd Battalion moved a short distance north-east, and the 1st and 2nd Battalions closed into areas south of Houffalize.

From 22nd Infantry Journal:

Sept 10 Journal – "11:21 – Your air support will come from Serevins Group based in Savannah, Ga. (Meaning – no air support for today's operation); 20:15 – The German motor column coming from the north headed east was pretty well shot up today. 20:45 – Units on today's objective – have buttoned up. 21:09 – Col. Lanham told about the good work the civilians did today in building a bridge and of clearing road blocks, some of which were fifty (50) yards long. 21:25 – Two Battery Enemy ARTY reported – Col. Wants all troops to get this information to instruct them to keep well spread out for we are coming within range of enemy ARTY. 22:11 – AT (anti-tank) guns with 1st & 3rd Bn will revert to AT Co. – Send a platoon of AT guns to 2nd Bn. 23:00 – (Staff) instructed to write up a citation to the citizens of Houffalize for the magnificent cooperation and spirits with which they removed roadblocks and constructed a bridge on the site of one blown out by the enemy capable of supporting our heaviest vehicles."

The advance continued on September 11th. Despite road blocks, small arms, and artillery fire, the town of Beho was secured by 1830 hours. Late that night a strong reconnaissance patrol was organized with the mission of crossing the German frontier. 1st Lieutenant Robert L. Manny, 3rd Battalion Scout and Raider Platoon Leader was to be the leader. The patrol had attached to it two self-propelled tank-destroyers and five jeeps. The mission... was to advance approximately eight miles and return with a small amount of German soil which was to be sent to-teh President of the United States. When the patrol reached the Our River, it was impossible for the vehicles to continue, and the patrol was forced to continue on foot. Lieutenant C. M. Shugart led the foot patrol on into Germany. This is believed to have been the first organized unit to cross into German soil during World War II. Col. Teague's patrol crossed the border near Hemmeres, German, at 2130 hours, the 11th of September, 1944. No casualties were sustained, and the patrol was a success.

Entering Germany

On September 12th the advance was resumed, led by a strong combat patrol commanded by Lieutenant E. C. Martin. The patrol consisted of three tanks, two tank destroyers, six jeeps from the Scouts and Raiders of the 1st Battalion, and one rifle platoon led by Lieutenant Ruback of Company A, all of which were attached to Col. Teague's 3rd Battalion. Another patrol went out at the same time commanded by Lieutenant Merwiin W. Tolles and worked in conjunction with the 2nd Battalion. The patrols crossed the German border at noon and engaged in numerous skirmishes with the enemy, destroying one enemy tank and damaging another. The patrols upon return reported that the resistance encountered had been light. The patrol had captured three prisoners, killed on German, and several had escaped wounded. They had penetrated to the high ground beyond Elcherath and then had moved two miles north along the highway.

Sec. 1 - Col. Arthur Teague

Meanwhile, orders were received for the entire Combat Team to move to the high fround just west of the German Border. The 2nd and 3rd Battalions moved forward on line with the 3rd Bn on the left (north). The 1st Battalion followed up in trucks. By 1500 hours, Teague's Northern Column was two miles east of Gruflange. The leading elements of the 3rd Battalion crossed the border in the vicinity of Hemmeres, Germany at 1617 hours. At 1700 hours the Combat Team Commander, Col. Charles T. "Buck" Lanham was notified that General Raymond O. Barton, Commanding General of the 4th Infantry Division was on his way to the advance command post. Barton arrived 15-minutes later, the first American Division Commander to arrive in Germany.

Ernest Hemingway picks up Col. Teague's Story

Carlos Baker's 1969 book, *Ernest Hemingway: A Life Story* details a September 1944 dinner Hemingway shared with the commanders of the 22 Infantry Regiment of the 4th Division as the first American tanks were entering Germany from Belgium. Hemingway spent four months with the division covering it as a war correspondent.

"It was 4:27pm, Tuesday, September 12, 1944. In the town of Hemmeres *(Germany)* 'ugly women and squatty ill-shaped men' came sidling towards them with bottles of schnapps, drinking some themselves to show that it was not poisoned. Other villagers held up their hands in token of surrender. All the houses were deserted, and in one they found the still warm fragments of an officers' meal. Amid the hammering sound of heavy machine guns and the boom of artillery on the right, Lanham's combat team passed beyond the village to secure the high ground to the eastward.

"Ernest requisitioned a deserted farmhouse *(or post office in some accounts)* on the edge of the village, immediately adopting and feeding the cat and the dog, and sending Jean to find villagers who could milk the complaining cows. Then he asked Colonel Lanham *(commander of the 22nd)* and his staff to dinner. He shot the heads off a small flock of chickens with his pistol, and set a German woman to plucking and fricasseing them. About dusk, Lanham arrived with Colonel *(John)* Ruggles, his three battalion commanders *(including Arthur Teague)*, and his personal staff officers. They began with a staff conference, reviewing orders and outlining plans for the 13th. Hemingway, Lawless, Stevenson, and the Brazilius listened in and poured the drinks. 'All our booty drunk up,' wrote Hemingway in his War-Diary. '*(Arthur)* Teague sends for some wine. Supper of chicken, peas, fresh onions, carrots, salad, and preserved fruit and jelly for dessert.'

"The Brazilius, whom Ernest was now calling The Pest of the Pampas, had volunteered an exposition of his 'theory of the rear azimuth.' When the moment arrived, he leaped to his feet, waving a borrowed compass, and began to describe his 'rear-ass theory of pursuit.' The whole company dissolved in laughter. 'No one,' said Lanham, 'had the remotest idea what he was talking about.' To Lanham, in far retrospect, the dinner in the farmhouse seemed the happiest night of

the war. "The food was excellent, the wine plentiful, the comradeship close and warm. All of us were as heady with the taste of victory as we were with the wine. It was a night to put aside the thought of the great Westwall against which we would throw ourselves within the next forty-eight hours. We laughed and drank and told horrendous stories about each other. We all seemed for the moment like minor gods, and Hemingway, presiding at the head of the table, might have been a fatherly Mars delighting in the happiness of his brood."

Terry Mort, author of *Hemingway at War*, has doubts about Ernest's description of dispatching the chickens for the feast with his .45-cal handgun. "Shooting their heads off is not as easy as sounds, nor is it very efficient," he writes. "More likely he gathered them up one by one and wrung their necks, which would have been faster with less chance of damaging the meat." But Mort thinks Hemingway, like Lanham, would recall the meal as a very happy night in the war. "He was with friends he admired and who admired him in return. He was doing something that was useful - not the reporting, especially, which was only a means to an end - but simply being there to gather material and to support his comrades. He had organized this festive dinner, and he was sharing the wine and the laughter with men who would soon go into a desperate battle. And he was at the head of the table. There were no phonies in that room that night, no 'ball-room bananas,' no rear-echelon types, no women with their complicated sets of needs and emotions. These were men who knew the special language of the combat soldier and who knew the way their experience separated them from everyone else, and at the same time bonded them together. They were all at the moment living together in a clean, well-lighted place.

British Army veteran of World War II, Charles Whiting writes that Hemingway had first joined the 22nd during the second week of July 1944 with a beard, a live grenade in his pocket, and a canteen of Calvados. Col. "Buck" Lanham, an amateur poet and admirer of Hemingway, told his men, "A big war correspondent is coming to visit us. He can do some good publicity for the 22nd Regiment." Hemingway accompanied the 22nd that summer as it drove through La Denisiere, Villebaudon, Hambye, Villedieu-les-Poeles, and St.-Pois. Roy Morris, Jr. writes Hemingway escaped serious wounding or death in mid-August 1944 when a German counteroffensive "drove through the Mortain gap toward Avranches, heading straight for the 22nd Regiment's command center at Chateau Lingeard, an old Norman castle. The chateau came under heavy shelling, and several regimental officers were killed or wounded, including Hemingway's friend Colonel Lanham. Hemingway had been present at the chateau just prior to the attack but had unaccountably declined Lanham's invitation to stay for dinner. Later, Lanham wanted to know why the author had been so eager to leave. "The place stank of death," Hemingway said. His premonition had saved his life."

Carols Baker quotes Hemingway as saying of his time with Arthur Teague's regiment, "With the 4th Infantry Division and with the 22nd Regiment of Infantry I tried to be useful through knowing French and the country and being able to work ahead with the Maquis... I would like you to have known our Colonel of the 22nd Infantry (now General Lanham) who is my best friend, and the commanders of the 1st, 2nd and 3rd battalions *(Teague)*."

Sec. 1 - Col. Arthur Teague

Baker says while writing a new novel *(Garden of Eden)* in the early months of 1946, Hemingway told Lanham that he "intended... to write about his good friends in the 22nd Infantry Regiment, including (Charles T.) Buck Lanham, Art Teague, Swede Henley, George Goforth, and Tom Kenan. In fact, said he, he had accumulated enough material in 1944 to spend the rest of his life doing fictional accounts of the Regiment, the 4th Division, and the Royal Air Force. But this part of his book still lay in the future."

In March of 1968, seven months after Col. Arthur Teague's death, General Lanham told Baker that Teague was "the finest Battalion C.O. I had and perhaps the best I ever knew."

History of the 22nd Infantry Regiment
13 September 1944

A strong combat patrol led by Lieutenant Martin, without tank support, moved forth again on the morning of the 13th. The patrol went to Bleialf, where they first observed the Siegfried Line. From here they moved to Buchet, encountering only light resistance, All enemy contact was scattered and disorganized. The first day the 22nd entered Germany (12 September 44), they captured the towns of Hemmeres, Steffhausen, Auel, and Elcherath, the latter the site of the first Regimental Command Post on German soil. On the 13th the towns of Wintersheid, Bleailf, Buchet, and Schweiler were added to the list. Civilians did not interfere, but instead stared in amazement at the advancing columns and hung out white flags on all the buildings.

Sept 13 Journal – "10:20 – We are moving; 12:30 – 3rd Bn is now on their objective – small arms fire (light); 14:30 – Meeting no resistance so far – nothing from civilians as they seem to disappear into woods as we go by. 14:55 – Our Bns have reached their objectives. 16:00 – According to AT officer the towns nearby have white flags in front of all their houses and some civilians giving out fruit to our men."

Sept 14 Journal – "00:27 – Warning order: We are attacking line at 1000. We are taking along the minimum of vehicles – Eng will have to carry most of his explosives. Col (Lanham) wants Col Watson 44th FA to report to CP at 0730 prepared to give ARTY support for attack. To bring along a report on how much gas he has now, How much he will use; 10:50 - Movement as ordered on schedule. All Bns; 19:55 – Red reports enemy ARTY coming in CP – two (2) men hit.

British Army vet and historian Charles Whiting writes of the attack: "At first everything went well, and by 1pm that day (*Arthur Teague's)* 3rd Battalion had reached the Siegfried Line bunkers within 900 yards of their first objective, the town of Buchet. But now the men of the German Kampfgrupped (Battle Group) Kuehne, plus the handful of SS men who were assisting them, had begun to react. Enemy machine-gun fire and mortar shells intensified. There was that old, familiar, frightening ripping sound that the 100-pound 88mm shell made when it zipped through the air. A Herman was hit and jolted to a stop. The crew bailed out rapidly. They knew the 30-ton tank's bad reputation. They called the Sherman by its derisive nickname, the Ronson. It could ignite just as easily as the well-known cigarette lighter! The attack began to bog down. Although he was not there, Hemingway described it: "They (the infantry) started coming back down across

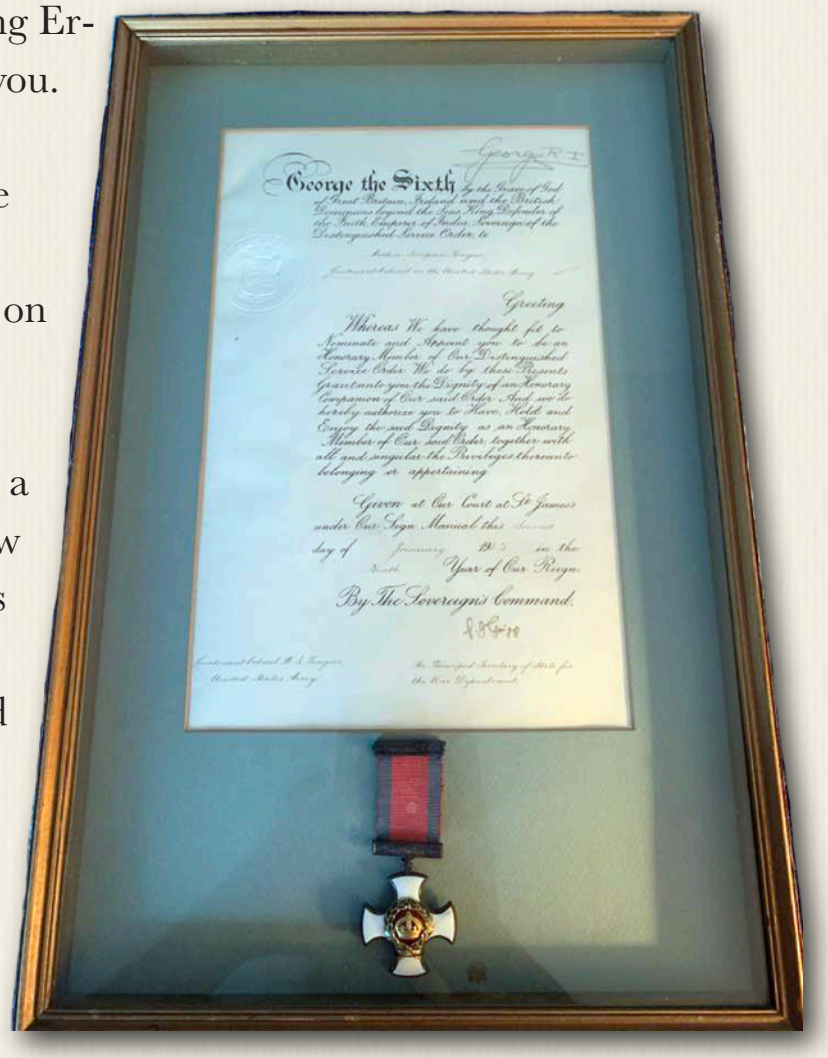
the field dragging a few wounded and a few limping. You know how they look coming back. Then the tanks started coming back and the TD's coming back and the men coming back plenty. They couldn't stay in that bare field and the ones who weren't hit started yelling for the medicos for those who were hit and you know that excites everybody." Whiting says Captain Howard Blazzard of the 3rd Battalion, who was with Colonel Lanham observing the battle, said, "Sir, I can go out there and kick those bastards in the tail and take that place." Lanham replied, "You're an S-3 (operations officer) in a staff function and you stay where you are." The two remained there for another 15 minutes with more and more wounded drifting back. Blazzard though gloomily, "we're going to lose this battle." Lanham must have thought the same, for, according to Hemingway, he said suddenly, "Let's get up there. This thing has got to move. Those chickenspits aren't going to break down this attack." The two of them, with Lanham carrying a drawn pistol in his right hand, moved up to a kind of terrace on the hillside where his men were lying down, taking cover. "Let's go get these Krauts," he cried. "Let's get up over this hill now and get this place taken!" Two days later, the attack was called off. All along that front the officers of the U.S. V Corps realized they were not going to break through the Siegfried Line like General Patton, commander of the Third Army, had put it, "crap through a goose." There would be no dash to Germany's last natural barrier - the Rhine. The war would not end by Christmas as the pundits back home predicted." Whiting writes, "For Hemingway, the time had come to depart from the Ivy Leaguers (of the 4th Division). He would return to his "headquarters" at Paris's swank Ritz Hotel and to his current mistress. For the time being, his favorite division would have to look after itself." But before Hemingway left there was time for...

Another Hemingway Meal

U.S. forces and the 22nd Infantry had pushed through Germany's vaunted Westwall and was in the area of Buchet and Brandscheid, Germany. Author Terry Mort says Hemingway commandeered a small hillside farmhouse in Buchet and may have helped a soldier do some spotting to help direct artillery fire onto German positions in Brandscheid. Despite the possibility of counter-attack by the Germans, Col. Charles T. "Buck" Lanham and his command staff *(including Arthur Teague)* invited Hemingway to dine with them at their command post. "Steaks were on the menu, no doubt harvested from local cattle, some already dead, others most likely victims of occupation or targets of opportunity. As the men were seated and served their steaks, an 88 shell crashed through the farmhouse wall and exited the rear without exploding. Either it was an armor-piercing shell that was not impressed by the farmhouse wall or it was a dud. (An 88 shell traveled at the speed of sound, and so did nothing to announce itself, incoming.) When the shell crashed through the wall, and exited, Lanham and his men *(including Teague and John Ruggles of Lyndonville, Vermont)* headed for the cellar, but Hemingway did not budge. He kept calmly cutting his steak. Lanham expostulated," writes Mort "but Hemingway would not move. Another shell came through the house, and Lanham came back to the table to talk some sense into Hemingway, who expressed his favorite opinion that when under artillery fire you were as safe in one place as another because they weren't firing at you personally. Lanham told him that it seemed to him that was precisely what they were doing. But he was stubborn, and Lanham was not to be outdone, so

he sat at the table and continued the meal *(with Hemingway)*. Finally a third shell came through the wall; it did not explode either, and that was the end of *(the barrage.)* The other officers came back to the table and dinner recommenced. Had the shells been high explosives with a contact fuse, they would have put an end of Hemingway and the staff of the 22nd." As to why the shells did not explode, Mort quotes a diary of a sergeant in the 22nd who says a French underground member who worked in a German munitions plant had sabotaged artillery shells, producing many duds. Sgt. Rothbart writes "None of the shells that came in my direction failed to explode, but one soldier said he owes his life to three 88 duds that fell near him." Perhaps, that soldier attended the Hemingway staff dinner as well. Historian Roy Morris, Jr. writes that sketch artist John Groth, who was present called Hemingway's behavior both "impressive and insane."

In correspondence with Hemingway biographer Carlos Baker in January 1962 and October 1965, Ellen Teague said her husband "Art never got down to Cuba *(like Buck Lanham did)* although Ernie invited him many times.... (Art) knew Ernie over a year. Art says, deep down inside, Ernie was sincere, but he always had an objective. He, really, loved "WAR". When Art says, he loved war, he means, Ernie thrived and lived on battle. Ernie went to Cuba to live to avoid taxes. I will let Art take over from here when he can. I noticed, in your letter *(to Col. Teague)*, you were wondering where Art met Ernie. I *(Ellen)* believe it was just after they got off Utah Beach, before they got to the airport at Cherbourg. I also believe they had many experiences together. Ernie also was a man of sound advice and I remember my husband telling me that once Ernie told Art that if he would "Go all Out, he would have less Casualties." In the fall of 1965, Ellen Teague wrote again to Professor Baker. "In late August, Maj. Gen. John F. Ruggles, who is at the Pentagon... (and) is my husbands' bet friend came up here to visit us in N.H.,"she wrote. "Ernie Hemingway's name came up and they actually went to town on discussing Ernie. I suggested that they try and get in touch with you. But with cocktails and vacation, the matter was dropped. I got the feeling *(Ruggles)* liked Ernie in the sense that he was an unusual man, but John did not seem an admirer of his. Ernie seemed to do things on his own, no matter what the orders were. (He even went ahead, into Paris, of the troops and against orders.) John knew Ernie well and was with him quite a while. He knows so many stories about him that flow so easily and John isn't a talkative man, for he comes from Vermont. I feel, very sure, that if you could talk quietly with John, that you would be able to find a great deal of information of what you are looking for."



Man Who Ran Cog Railway on Mt. Washington Shows How to Take Hitler's Pillboxes

Boston Daily Globe

Mon, September 25, 1944

By John Groth

WITH AMERICAN FORCES IN GERMANY, Sept 21 (Delayed) – At this point of farthest penetration into Germany, I *(reporter John Groth)* am lying in the underbrush at the edge of the forest on the German side of the Siegfried line. Before me, lie hills with ordered stacks of wheat sheaves, the soft edges of the hills hardened by enemy-occupied pillboxes. There are some Americans a few hundred yards forward. You can't see them but neither can the enemy. If anything moves out there, the quiet fields become a place of fire and noise. An artillery observer talks by field telephone to the battery behind. Moments later, shells whirl overhead. The soft and hard edges of the nearest hill are sharpened by flame, then softened by smoke. The inevitable counter-fire overhead has a German accent and behind us. There are falling trees and floating branches. That was the action today east of the Siegfried line. The fighting here has been as tough as any since D-day. Prisoners coming in report the Führer's own words: "Everyone must be ready to die in an effort to re-establish this part of the Siegfried line. It must be retaken at all costs." The battalion holding this sector is of a division that has spearheaded the drive since D-day. The battalion's commander, Lt. Col. Arthur S. Teague of Mount Washington, N.H., in civilian life operates the Mount Washington cog railroad, the first cog-railroad mountain climbing railroad in the world, built in 1866. He is very proud of the fact. His wife and year-old daughter now live in Philadelphia. He is the only battalion commander in the division, not away from the unit, who is neither wounded or dead. Teague took me up to advanced posts and through occupied pillboxes. Walking into this part of the forest held by this battalion in an interval between action, we saw the veterans of France, now the Germany campaign, engaged in the business of living.

"The battalion I am with *(the 3rd)* has captured 31 pillboxes. In nearly every case the enemy occupants fought to the last man. I entered a pillbox that had been manned by 18 Germans. Only one was taken alive. The battalion has repelled many counter-attacks. The forest is filled with bits of Germans, their uniforms, their equipment. The fighting is like Indian fighting. Tanks cannot get through nor can artillery grenades be thrown because of the branches. The men must creep from tree to tree to clean up the green uniformed Nazis in the thick green forest. Pillboxes are set up at intervals of 150 yards. They have green camouflaged concrete roofs six feet thick, walls four feet thick and bushes and grass planted on the roofs. Trees lean along the walls except for apertures in the doors of two-inch steel. Some of the pillboxes are air-conditioned and fitted with three-tiered beds. One the walls are warnings against smoking by day or on clear nights or showing any light near an open door of the aperture. There are warnings to close all apertures in case of gas attack. The pillboxes were built in 1939 by Louis Woerner. You can see his name plates on several of them. The pillboxes are manned by various elements, some by Russians and Slovaks commanded by the S.S. An S.S. corporal, who was captured, said they were ordered "if the Cossacks give any trouble to shoot them at once."

Sec. 1 - Col. Arthur Teague

"My temporary home in Germany is a farmhouse owned by an elderly couple. I share it with Ernest Hemingway, author, and Ted Hart of the London Sunday Express. The peasant couple are glad it's nearly over and say that they never believed that Hitler could succeed anyway. They are embarrassingly friendly and we occupy the best bedrooms. There are cows and chickens and it seems peaceful but our artillery is somewhere behind us and we hear the shells overhead, theirs as well as ours, and we are ever alerted for enemy patrols.

"**Leadership on D-Day Won Silver Star for Teague** – Lt. Col Arthur S. Teague was born in Graniteville, Ga., 33 years ago. His mother was a niece of the famous Senator Bill Tillman. He received his elementary education at Richmond Academy in Augusta, Ga. Later he attended Clemson College, Clemson, S. C., graduating in 1932. He next attended the University of South Carolina for a year. In 1933 Col. Henry N. Teague, president of the Mt. Washington Cog Railway, engaged Arthur S. Teague for service on that unique tourist railroad. Two years later he was appointed manager of the railroad and served in that capacity until he left to enter the Army in 1940."

Germany
Sep 27, 1944
10 PM

My Dear Darling,

The days of our war will be much longer than most people think. We quit liberating Towns and cities and have started the conquering now. It is a big difference too. All the way through two countries you were received with a big hand of welcome - but now the place is like a ghost - all you see is a white flag hanging in front of the house. In your last letter you asked me what I wanted for Christmas - darling there is nothing I know I need or could use as old Uncle Sam gives us just about everything. I haven't drawn any money since I left England - have $500 due me but I don't need it so I let the Government keep it. I have been sleeping with two or three blankets and my air mattress all summer long but the other day I got my bed roll off the kitchen truck and have started using it now. There were lots of things in it that you in it before I left Columbia (Ga.) - I enjoyed opening it up. The weather is getting sharp or about like it would be at the Base now - so you can see it is damp and cold. I knew you are glad to be back home where you are free and can do what you want. I expect it is a good thing that you lost Foogi before the winter comes as she will be lots of trouble in the house and the yard is not large enough. You'll just have to wait until this is all over and we can have a place in the country where we can have dogs, rabbits, chickens and Jane can enjoy them all. heaps of love to the ones I love most in the world.

Art

P.S. - Walker is CO of the second and Henley is the CO of the 1st so you can see I've produced quite a few Bn commanders. Two others were Goforth and Dowdy. Goforth is in England in Hospital. I am the only Bn CO with the Division that landed on D-day and I expect to be here when the thing comes to an end. - AST

P.S. - How about sending me a box - fruit cake in a can - sure would be good - AST

Germany
Oct 4, 1944

My Dear Darling,

Speaking of getting into Germany - with every house and all the land is Germany - For the first time the battlefield is on German soil - this makes you feel good anyway. Here are a few dates that you and I can add to our remembrance. June 6th the beach - July 25 the breakthrough - August 25th Paris and Sep 11th the goal of all soil. I believe I got all your letter of N.H. I received three letter to-day dated 19th - 21 - 23rd so you can see the mail man is doing a good job by the soldiers. No I won't be home for Christmas so don't start to think that way. There is nothing I want for Christmas except some food as we have no placed to carry it. When you sent me a fruit cake or some kind of cake try to get a tin box and then get some closure tape and try to seal it up. It takes a long time to get a box either way. Darling, I got the box with cheese but I have not received the pecan roll. I will have to on to Garland Bryant as he didn't give me a button. Sgt. Brown was a good man. He carried on for a couple of days as his Lieut. got killed. I had a naval ensign who was very good also. The Swastika was mailed and you will get it some time - I took it out of a tank we captured. Robots are the least of my worry - I saw them going over one night a long time ago. I am glad that you and all the family enjoyed the lunch and theater. Go ahead and paint up a storm - glad you're getting experience - Remember the Pink paint? Give Jane a big kiss for me and good nite.

Love, Art

Teague Has Conversation With German Over Pillbox Telephone (3 versions)

Glassgow Express Version

The Arizona Daily Star in Tucson, Arizona re-publishes a Scottish newspaper's story on Wednesday, November 29, 1944 that begins with the following preamble: "Maj. Mark Finley, former University of Arizona student and Tucson newspaper man, now with the U.S. Transportation Corps in France, sends proof that a mechanized war can also be a personal war. It is in the form of a story from the Siegfried line, as reported by Edward J. Hart of the *Glasgow (Scotland) Express*. The story said:

"Here is an almost incredible story of a telephone conversation in the Siegfried line between an American battalion commander, Lt. Col. Arthur S. Teague, and a German battalion commander, Lieutenant Decker. I vouch for its accuracy for I *(Hart)* was with Colonel Teague when one of his German-speaking linesmen, Pvt. Karl Schrader, came up to report that the switchboard in a newly captured pillbox was still intact and the telephone lines were still operating. Schrader explained he was laying wire near the pillbox when he heard the bell ring. He went in, lifted the receiver and listened in to a talk between a German soldier and his sergeant at a first aid post. Then, leaving the receiver off, he fetched Colonel Teague.

The American commander sent for his switchboard operator, Sergeant Ulm. The four of us returned to the pillbox. Schrader was told to ask one of the Germans to bring his commanding officer to the phone. This is a word-for-word transcript of their conversation:

Teague: "Do you speak English?"

Decker: "Yes, if you speak slowly."

Teague: "You are the battalion commander?"

Sec. 1 - Col. Arthur Teague

Decker: "Yes. May I ask what is your rank?"

Teague: "I am a lieutenant colonel. And you, I believe, are Lieutenant Decker?"

Decker: "If I admitted that, I would be giving you military information."

Teague: "According to the Geneva convention, you may give your name, rank and serial number. Now, how about those three men I lost on patrol over there a few days ago?"

Decker: "They are prisoners of war. Two of them were seriously wounded, the other was unhurt. Will you tell me, please, what happened to the four I sent out yesterday?"

Teague: "Two of your men were killed. The other two (naming them) were captured unhurt. Now, listen. I'm going to give you some orders you can publish to your troops. I'll be over there shortly to take you over. This is what I want you to instruct your men. When we are closing in on your pill boxes tell the men to raise a white flag and come out with no arms. They will be treated as prisoners of war. Otherwise you are all going to die because I'm going to cover you up in a pill box and let you go to hell. I'll not have my men booby-trapped clearing out pill boxes. We will take our big panzer bulldozers and cover your pill boxes with earth and let you smother to death."

Decker: "When they raise the white flag, how many men should come out of the bunkers?"

Teague: "Have one man come out with a flag. That man can see that the firing has ceased. Then he can go back into the box for the rest to come out."

Decker: "When I come over there are you going to put the same white flag up?"

Teague: "Hell, no! We've been chasing you all the way from the Cherbourg peninsula and we are going all the way to Berlin. And when we get there you are going to put the white flag up - not us."

Decker: "Why are you attacking Germany?"

Teague: "Why did you go into Paris? We are attacking Germany because we mean to destroy Hitler and all his Nazi ideas."

Decker: "Pardon me, but I think you are crazy."

Teague: "As one officer to another, why don't you come over and have dinner with me?"

Decker: "Have you any cognac?"

Teague: "Yes, some we took from the Germans."

Decker: "Is it Hennessey?"

Teague: "Now I'm going to tell you something about your own battalion. You have three Mk43 machine gun companies and one engineer company, with 8 and 12 cm. mortars and some panzer bazookas in it. Your C. P. (command post) is located just behind the red barracks at the fork of the road in one of the pill boxes. You'd better be ducking because I'm coming over there to smoke your tail."

Decker: "First you ask me to dinner and then you'll smoke my tail!"

Teague: "Why do you keep keep on fighting? Why do you shoot your own people? Don't you realise you are beaten? Every time you throw a shell in Bleialf you kill German civilians.

Decker: "No we are not killing Germans.* We removed all the Germans and left only Polish people there." *(*At the time of this conversation there were more than 600 civilians in the village of Bleialf. - E. J. H.)*

Teague: "Well, by God! You are destroying German houses because this is Germany. Now which would you rather do: let me drive you all the way back through Germany until the Russians take you, or surrender to the Americans now?"

Decker: "I don't wish to be captured by either side."

Teague: "How is our artillery treating you? Do you like our big guns? I can let you talk to my artillery officer about it if you like."

Decker: "Your artillery is very good."

Teague: "Where is your Luftwaffe?" (This question brought no reply.)

Decker: "I have a surprise for you."

Teague: "If it's those damned tanks with the headlights on them I'll make hash out of them. Were you ever in America?"

Decker: "I have been in Brazil, but would like to visit New York and San Francisco when the war is over."

Teague: "I 'm going to attack soon."

To end the conversation, Colonel Teague destroyed the telephone installation. In civilian life he is vice president of an American railroad."

- Arizona Daily Star - Wed, Nov 29, 1944 pg. 6

Stars & Stripes Version

Clemson, Nov. 1. – the following story about Lt. Col. Arthur S. Teague, 1932 Clemson college electrical engineering graduate from Greenville, (601 Pendleton street), appeared in the Army newspaper, *"Stars and Stripes,"* under the heading "On the Pillbox Party Line." It was written by Staff Writer Jimmy Cannon*:

INSIDE THE SIEGFRIED LINE, Oct. 11, 1944 – The German CO said he could understand English if Lt. Col. Arthur S. Teague would take his time. They were talking over the telephone system that coils through the pillboxes dug into the rocks of the Schnee-Eifel mountain. This is the conversation as Colonel Teague remembered it:

Teague: "What happened to the three men we lost on the patrol last night?"

German: "All are prisoners of war. Two are wounded."

Teague: "Why are you shelling your own people in the town?"

German: "We have no people in the town."

Teague: "The hell you haven't."

German: "They are not our people. We have moved all the Germans from the town. We have left behind only Poles."

Sec. 1 - Col. Arthur Teague

Teague: "I'm coming to get you and when I come I'm coming with a lot of panzers. I want you to put out the white flag when I come. Have one man come out of the pillbox with a white flag and then have him go back and get the others."

German: "When I come over there, it is you who will put up the white flag."

Teague: "White flag for me! You must dreaming. I chased your prat *(Informal noun: prat; 1. a person's buttocks. 2. British - an incompetent, stupid, or foolish person; an idiot)* all over Normandy and I'm not going to stop 'til I get to Berlin."

German: "Why are you attacking Germany?"

Teague: "Why the hell did you attack France? We're going to keep attacking until we destroy Hitler and every Nazi and every Nazi idea in Germany."

German: "Pardon me, but I think you are crazy."

Teague: "Come on over and have dinner. Maybe, I can talk you into surrendering."

German: "Do you have cognac?"

Teague: "We have plenty of cognac. We took it all off you guys."

German: "I will not come anyway."

Teague: "I know where your CO is. And you better start ducking right now because I'm going to burn your prat."

German: "One time – dinner. Now you want to burn my prat?"

Teague: "Forget the dinner. I'm going to smoke your prat right now."

The line went dead. The Nazi had heard enough.

- The Greenville (South Carolina) News – Thu, Nov 2 1944 pg. 12

* *Stars & Stripes* staff writer Jimmy Cannon was born in Greenwich Village in 1910 (the same year as Teague), the son of a Tammany Hall politician. Thomas J. "Jimmy" Cannon, was a protege of Damon Runyon, famed chronicler of New York life, and was influenced by Mark Hellinger, the Broadway columnist. He was a Hearst sports columnist when he enlisted in World War II. One of his idols and contemporary Ernest Hemingway said of Cannon, "He's an excellent sportswriter and he's also a very good writer aside from sports. I don't know anybody who takes his job more seriously or with more confidence. He's able to convey the quality of the athlete and the feeling, the excitement, of the event." A posthumous collection of his columns, *Nobody Asked Me, But...*, was published in 1978.

San Francisco Examiner Version

The *San Francisco Examiner* takes the Teague pillbox phone call and uses as part of Hearst's *The American Weekly Magazine* for the week of March 18, 1945 and inserted in the Sunday paper. The art department contributes caricatures to illustrate the segment:

"Lieut. Col. Arthur S. Teague doesn't know how his men and the Germans got their wires crossed in the shifting No-Man's Land of the Western front. But they did, and he found himself in telephone conversation with a Nazi officer instead of one of his own men in an advance post. "Who is

this?" the American inquired, when he heard the unmistakable guttural accent of a Hienie. "Leutnant Decker. Who are you and what do you want?" "I want to know what became of your Luftwaffe," said Teague. "Be patient, you'll find out. By the way, what happened to the four men I sent out yesterday?" "We killed two of 'em," said Teague, "but Schmidt and Roerber are in the hospital. They'll live." "When may we expect you?" asked the Nazi with mock courtesy. "you Americans don't seem very curious about the Siegfried Line." "We'll be calling any minute now," said the Yank officer, "and if you and your friends don't get the hell out of there, we'll plow you under with bulldozers. Why don't you raise the white flag?" "That privilege, Herr Colonel, is going to be yours. And now if you'll excuse me..." "Be glad to," said Teague, "because just a few minutes from now you're going to be very busy." He hung up and signaled for the artillery barrage to begin. The Yanks overran the German position. The shelter from which the Nazi officer talked became a shambles of broken concrete and twisted steel - but Leutnant Decker wasn't there."

Sixteen days after Cannon's story about Teague on the pillbox telephone appeared in the Clemson paper, Arthur S. Teague was wounded for the first time in the war during the second day of the 22nd Infantry's bloody 18-day campaign to take one village and six thousand yards of the Hürtgen Forest.

History of the 22nd Infantry Regiment
8 November 1944

"Activity during the daylight hours of the 8th of November was confined to preparation for the move. the 22nd Infantry had been completely motorized. The column completed the move fifty miles and closed in the assembly area near Zweilfall at 0850 hours the 9th of November. The 22nd, thus assembled in the western fringes of the hilly, thickly wooded Hürtgen Forest. The troops constructed wooden dugouts for protection from weather and enemy artillery. Between the 10th and the 15th of the month the Regiment continued its preparation for the oncoming offensive. The weather continued to be miserable, cold and damp. Schools were held for all company grade officers in woods fighting, map reading, and the adjustment of artillery fire. All enlisted men and officers were told how to make a "shell report" on enemy artillery, to determine range, azimuth, and size of the piece that was firing. Anticipation of difficulties resulted in intense work with communication teams, company aid men, litter bearers, and 81mm mortar platoons. The three mortar platoons were to be massed as a Regimental unit when the offensive began, and telephone communications were to be laid to each battalion. At 0100 hours Combat Team 22 was notified that D-day was to be the 16th of November and H-hour to be 1245 hours. The awaited assault on the Hürtgen Forest was about to begin."

Sec. 1 - Col. Arthur Teague

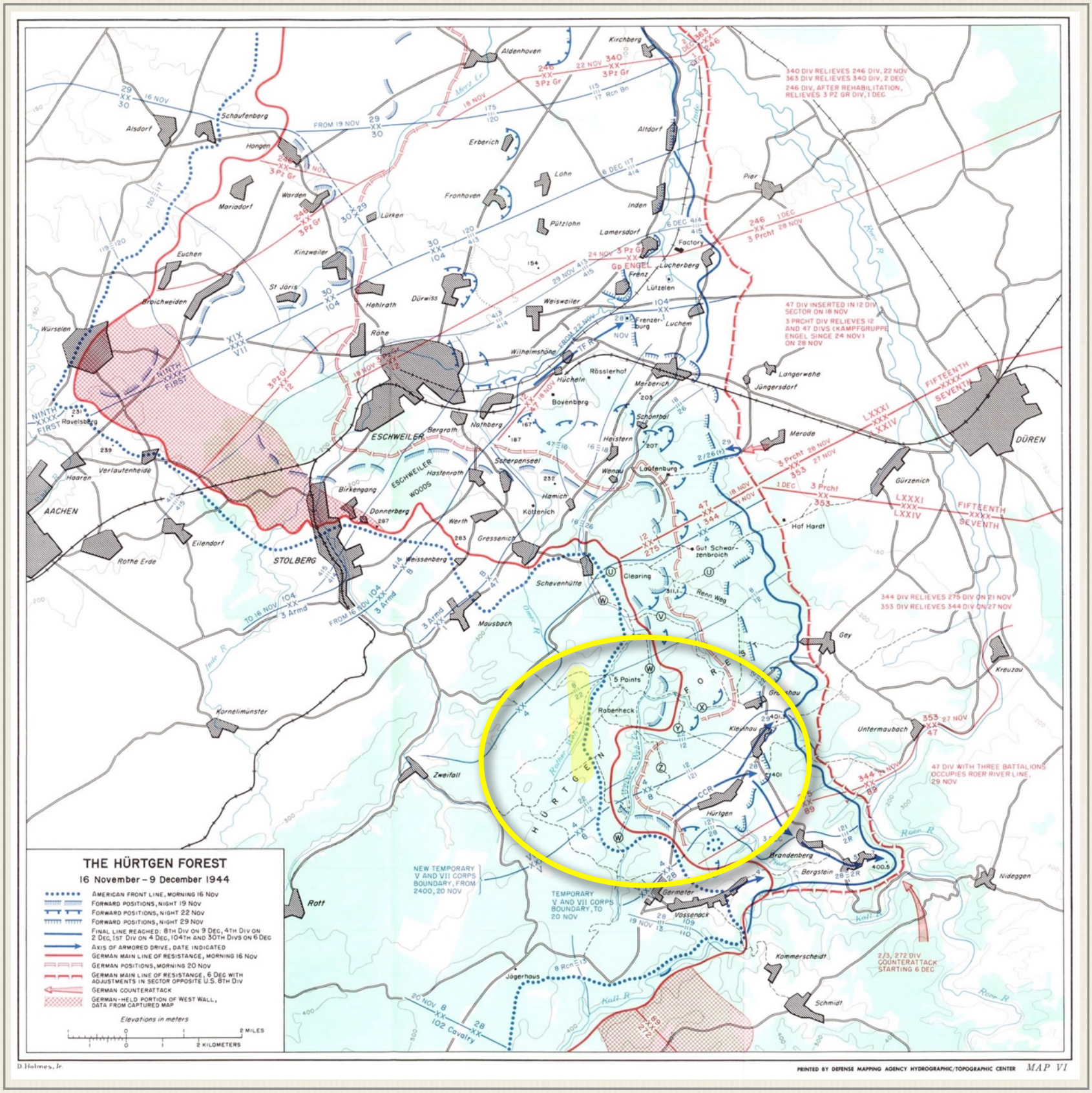
The campaign became part of an advanced infantry officers course at Fort Benning, Georgia in 1949-1950 conducted by Maj. Robert P. Strickland who participated in the battle. The following is taken from that monograph.

HÜRTGEN FOREST

"On 10 November 1944, after breaching the enemy defense line at ST. LO, and pursuit of the enemy through northern FRANCE and BELGIUM, the 4th Infantry Division had reached the German Frontier, and was in position on the western fringe of the HÜRTGEN FOREST, east of ZWEIFALL, GERMANY. The SIEGFRIED LINE stretches across the entire 7th Corps front. To the south the HÜRTGEN FOREST constituted a natural barrier which would be difficult to penetrate. In general, the terrain consisted of numerous streams and steep slopes which made it unsuited for armor. The terrain, combined with almost continuous adverse weather conditions favored the enemy's defenses.

"The wait for suitable weather to launch the coordinated offensive provided the regiment with valuable time for the preparation for the attack. Schools were conducted for all company grade officers, in woods fighting and adjustment of artillery fire. Anticipating the difficulties of maintaining communication during the operation, detailed arrangements were made to augment the regimental communication system. A surplus of wire and radio equipment was accumulated and communication personnel of the battalions were doubled, and in some instances tripled. Special attention was also given to supply and evacuation problems, and additional hand-carrying parties and litter squads were formed. During this five day lull, continuous rain, hail, or snow had turned the fields and trails into streams of mud. Icy mountain streams had flooded over their banks, which handicapped the movement of all vehicular traffic.

"The Regiment planned to attack initially in a column of Battalions in order 2nd, 1st and 3rd Battalion. (Teague's) 3rd Battalion, in reserve, would follow the 2nd and 1st Battalion to clear TRAIL 'E' and protect the right flank of the Regiment. D-day was 16 November, and H-hour was 1245. The day dawned overcast and cloudy. As the morning wore on, the sky began to clear.



At 1100 there was a ceiling of broken clouds over the entire Regimental sector. At 1145 the Air Attack commenced. Artillery preparations commenced at H-60 and continued to H-hour.

"3rd Battalion, led by Lieutenant Colonel Arthur S. Teague, was ordered to relieve elements of the 2nd Battalion securing the southern part or TRAIL 'E' and to clear this fire break for use as a temporary MSR *(Main Supply Route)*. At 1500, Company 'I' and 'L' moved to the right (south) flank to relieve elements or the 2nd Battalion and open TRAIL 'E'.

In the four daylight hours of its first day of attack, the Regiment had gained approximately 1500 yards at a cost or 46 Enlisted Men and 9 Officers. During the night enemy artillery and mortar fire increased in intensity. The tall firs caused the projectiles to detonate above the ground with the same casualty effect as air bursts. Maintenance or communications caused considerable diffi-

culty despite continuous efforts of communication personnel. Telephone instruments, wire lines, and radios were destroyed faster than they could be replaced.

History of the 22nd Infantry Regiment
16-17 November 1944

"As the battalions dug in for the night, new orders for the next day arrived. It was almost impossible for plans to be set forth more than twenty four hours in advance. As reconnaissance patrols were never able to extend more than a few hundred yards in front of the lines, troop leaders rarely knew the exact disposition of hostile fire power until they actually exposed themselves. As a result, intermediate objectives were assigned to the battalions each night.

Second Day of Attack
Strickland Monograph

"The scheme of maneuver tor the attack on 17 November called for the 1st Battalion with one platoon of tanks attached, to continue its attack along TRAIL 'E' to seize HILL 'X' approximately 1000 yards to the north and the TRAIL JUNCTION on its forward slope. The 2nd Battalion would continue its advance to the east to seize the high ground dominating ROAD 'A' · (Teague's) 3rd Battalion would continue to protect the right (south) flank or the Regiment and aid in clearing TRAIL 'E'.

"The attack, scheduled to jump off at 0830, was delayed until 0945 by extremely heavy enemy artillery and mortar concentrations throughout the Regimental zone of action, the death of the 1st Battalion Commander (Major Hubert L. Drake), the wounding of the 3rd Battalion Commander (Lieutenant Colonel Arthur S. Teague), and extensive minefields. However, with a 30-minute artillery bombardment, and with pursuit aircraft of the IX Tactical Air Command in support, the attack jumped off at 0945."

Robert S. Rush's *Paschendale with Treebursts* says "The 3rd Battalion... had no direct contact with the enemy, but nevertheless suffered heavy casualties from artillery. The battalion commander, Lt. Col. Arthur Teague, the last remaining infantry battalion commander in the division who had landed as a battalion commander on the Normandy beaches, and a large part of his staff became casualties within three minutes of (Maj. Drake's) death. The artillery did not let up and later that morning, Maj. James Kemp, the new 3rd Battalion Commander radioed his position was "hot as hell."

Hospital Admission Records
Department of the Army (1942-1945)

The 34-year old Teague was taken to a portable surgical/evacuation hospital as a battle casualty. Doctors found entrance and exit wounds where shrapnel from an artillery shell had perforated his leg with no nerve or artery involvement. The closure of the wound was delayed. He was evacuated first to Paris. He would be on the mend for nearly six weeks before returning to his outfit. *(Editor's note: While this is the first time Teague leaves his unit because of wounds, there is evidence that German shrapnel had sent him to an Aid Station in September 1944. A hospital admission card produced for his serv-*

ice number says Teague was "readmitted" for a prior battle injury to his "thoracic wall." No operation is noted for "artillery shell, fragments, afoot or unspecified." He was placed back on duty.")

The extent of Teague's wounds in November were enough for him to be evacuated from Paris back across the Channel. "In deference to Art's modesty and unselfish devotion to his country," writes Ellen Teague in her memoir. "I shall merely relate that he was wounded, sent to England for treatment and rest, and then returned to the Continent 'to finish the job' as he put it. He dismissed the fact that he received, among other awards, the French Croix de Guerre, the British Distinguished Service Order, the Silver Star, the Bronze Star, and the Purple Heart. 'It is not the medal, but the idea which counts," she reports he said.

10 December 1944 - Letter Home

"In a letter received this week *(12/28)* from Lt. Col. Arthur S. Teague, former manager of the Mt. Washington Cog railroad and now hospitalized in a hospital somewhere in England with wounds received on the German front, he has high praise for the medical care American soldiers receive in England. 'I was hit in the leg about three weeks ago *(the letter was written December 10)* in Germany,' Colonel Teague wrote. 'It is getting well now and the doctor took the stitches out today and I've been hopping around. It will be O.K. in a couple of weeks. This is the first time I have left my unit in five months. The medical care you get in the Army today is really wonderful - it just can't be beat, and they are getting some wonderful results. I was flown from Paris to England - a mere 90 minutes - while it took me almost three months to get to Paris the first time. I had the pleasure to run those --- Kraut all the way across France, Belgium and quite a way into their own country. It really does me lots of good to have the battleground on German soil. they need to get a taste of war in their own front yards - and they're getting it, too."

- Littleton Courier - Thu, Dec 28, 1944

28 February 1945 – D+268

VIII Corps informed the Divisional HQ that the presentation ceremony for the award of the Distinguished Service Order (British Decoration) to Lieutenant Colonel Arthur S Teague, 22nd Infantry, would be in Spa, Belgium, 8 March 1945. Recommendation for this award was submitted in June 1944.

20 March 1945 – D+288

However the March 8th ceremony was postponed. Cutline for photo *(right)* reads: "Field Marshall (Bernard) Montgomery presents the award of Distin-

Sec. 1 - Col. Arthur Teague

guished Service order to Lt. Col. Arthur S. Teague, 4th Infantry Division at Munchengladbach, Germany at 1400 hours, 20 March 1945. The photographer was apparently named Hussey and it was the 26th frame taken that day.

The following passage is from Bill Boice's *History of the 22nd Infantry in WW2*, deals with Teague's assuming command of the entire 22nd Infantry for a brief time in 1946:

On the 20th of February, Colonel John F. Ruggles, who had commanded from Sellerich, Germany, took a leave prior to his assignment to the General Command Staff School at Fort Leavenworth. This placed the Regiment in the hands of Lt. Colonel Arthur S. Teague *(who had returned to his unit from England as its executive officer)*. Great soldier, excellent tactician, leader of men and loyal friend of both his officers and men, Art Teague was loved and respected by the Twenty-Second Infantry Regiment as were few men. He had served as an officer with the regiment almost 5 years. Thus, it was fitting that he should inactivate the regiment, and the men were glad that he was thus honored.

Anne Teague Koop says her father never talked about the war around the house. Thus she was surprised at Col. Teague's reaction when the family went to see the movie, *The Sound of Music*. In the quiet theater when film showed the Von Trapp's returning to their home from a musical performance and a Nazi flag flew above their front door, the Colonel said loudly, "Those bastards!" Anne says the outburst surprised her, and apparently broke her dad's reverie. He looked abashed, and sat quietly through the remainder of the movie. Anne says Arthur Teague did discuss the war with her boyfriend's brother at one point. Allen Koop was not only a hut boy at the Lake of the Clouds, but a professor of history at Dartmouth.

The leaders of Combat Team 22 pictured in the marshaling area just before loading for the assault on D-Day. Seated, left to right: Colonel H.A. Tribolet, Commanding Officer 22nd Infantry; Lt Colonel John F. Ruggles, Regimental Executive Officer 22nd Infantry; Lt Colonel Arthur Teague, Commanding Officer 3rd BN 22nd Infantry; Lt Colonel S.W. Brumby, Commanding Officer 1st BN 22nd Infantry; Standing: Lt Colonel William A. Atson, Commanding Officer 44th Field Artillery; Lt Colonel Thomas Kenan, Regimental S-3 22nd Infantry; Lt Colonel Earl Edwards, Commanding Officer 2nd BN 22nd Infantry.

1942 Maj. Teague & A Court Martial

In early 1944, Col. Henry N. Teague received a letter from a woman in Columbia, S.C, who told him how much the enlisted men in Col. Arthur Teague's group thought of their battalion commander. "I am doing some work at the USO," she wrote, "and chat with the soldiers quite a bit. As I sewed on buttons for a private, he said there was not another man like Colonel Teague. He would hike 25 miles if the soldiers had to do it and sleep on the ground just as they did, although many officers had jeeps to transport them and to carry along better sleeping arrangements. The soldier said the men would follow the colonel anywhere for he knows what he is doing and can be trusted." *- Littleton Courier - Thu, Feb 3, 1944 pg. 8*

The enlisted mens' assessment of Teague's leadership style and their trust likely began nearly a year-and-a-half earlier when then Major Arthur S. Teague was leading his battalion on an early morning training march and found one of his officers riding instead of walking. It led to a court-martial. The case is outlined in Volume 14 of the *Judge Advocate General's Board-of-Review Holdings, Opinions & Reviews* for 1942. The following account is based on that and military court records.

Specification: In that First Lieutenant Joseph Davis, Medical Corps, Medical Detachment, 22nd Infantry, having received a lawful command from Major Arthur S. Teague, 22nd Infantry, his superior officer to put on his *(Lt. Davis')* web equipment, get out of his vehicle and march on foot with the battalion when not engaged in rendering medical attention to anyone, did, at or near Camp Gordon, Georgia, on or about August 20, 1942, willfully disobey the same.

August 20, 1942

Camp Gordon is located in Chamblee, Georgia just 10 miles from Atlanta in rolling farmland with some wooded areas. The Third Battalion, 22nd Infantry, between seven and eight hundred men, led by Major Arthur S. Teague was up early on that Thursday morning in 1942. They would begin marching roughly a half-hour before 6:53 a.m sunrise. when the temperature was closer to the 70-degree minimum recorded that day. The thermometer would eventually peak at 90-degrees on August 20. The battalion was taking a 20-mile march for "physical hardening" prescribed by higher authority for officers and men. They would march with a light pack, gas mask, pistol belt, liner and helmet. First aid men also carried their medical pouch. Major Teague's command of the Battalion was just a month old. First Lieutenant Joseph Davis, Medical Corps, Medical Detachment was the acting surgeon of the battalion for the march – there to care of men who

had medical problems along the route. Davis was 30 years old from Louisville, Kentucky. His regular outfit was the Second Battalion.

The march began at 6:30am and the column would halt every hour for a short break. Lt. Davis was in his jeep during the first period of the march, 6:30-7:30 a.m. and rode during the second period until about 8:15 when Major Teague told Davis "to get out and walk with him." "I told him (Davis) that we were sending some men back," Teague would recall. "They were new men and were only making a short hike, and we would have to get some first aid men to send back with them." Then Teague asked Davis in a laughing manner, "Do you know what these marches are for?" Davis did not reply. Teague told Lt. Davis "the march walk was for him as well as the rest of the officers and told him to get his equipment and walk. Lt. Davis replied that he would walk until the next halt, which came in about 10 minutes."

When the march resumed, Lt. Davis was back in his jeep. When the 3rd Battalion halted again at 9:20, Major Teague sent a runner back to tell Davis to report to him. Teague told Davis that he was not walking and asked if there was any reason why he should not walk. The accused hesitated and then said, "Not exactly." Teague asked Davis what he meant, and the Lieutenant did not reply. Major Teague then asked Davis if he was fit "for duty," to which Lt. Davis replied that he was.

Major Teague said, "I am going to give you a direct order, I want you to put your equipment on, get out of the jeep, and walk at the tail of the column. If any man falls out who needs medical attention, I expect you to stop and render medical attention. You can put the man in the jeep, and get in yourself, and ride up to the tail of the column, at which you will start walking again." Lt. Davis made no response.

Major Teague turned to First Lieutenant James C. Kemp, the Commanding Officer of L Company, and asked him to repeat the order to Davis. Kemp did. Lt. Davis then said, "I will have to refuse the order."

Major Teague said, "O.K. You can be tried for it," and then turned and walked back up to the head of the column.

After Davis' refusal, Teague "saw him during the next hour after the column started moving, I moved down to a small railroad station which is north of the railroad track, and while I was sitting there, as the tail of the column was moving by me, Davis rode up in his jeep."

"At the noon halt (the 3rd Battalion) was just east of Grovetown," recalled Maj. Teague, "and Lt. Davis rode up and I asked him how many (men) we had lost (from the march). I believe he said four men. I asked him if he was going to send then in, and he said no, after resting I think they can continue with the march."

"The first aid men walked with the column," Teague would testify. "However, when a man fell out Lieutenant Davis would pick these men up and send them forward in his jeep" where they

would continue marching with the column. For the remainder of the march, except for the ten-minute halts, Lt. Davis traveled in his jeep, and did not have on his full field equipment or his gas mask at any time.

Major Teague filed charges, and Lt. Davis was confined to his quarters the next day.

United States v. First Lieutenant Joseph Davis (0-382231), Medical Corps Medical Detachment, 22nd Infantry

At trial held on Sept 4 & 16, 1942 at Camp Gordon., Major Leslie H. Layman, Medical Corps, testified that he had examined Lt. Davis two days after the hike, and found that accused was not suffering from any disease, had nothing wrong with him except that he was underweight, was physically fit for field duty and of sound physical ability to make a foot march.

Major Layman was of the opinion that the underweight would not affect ability of Lt. Davis to march if he was not suffering from any disease and that Davis could have made the march without detrimental result. Davis weighed 114 pounds at the August 22nd examination.

Upon cross examination, Major Layman allowed that Lt. Davis could not have performed his best and most efficient medical service by marching all the way and working during the halts.

On the stand, Lt. Davis told the 11-member panel he was 30 years old and had been in service 28 months. Last year *(1941)* he made two or three hardening marches of ten or fifteen miles in Louisiana, with the fourth battalion, and this year made several marches with the second battalion, of which he was "battalion surgeon."

Davis testified during the second period of the August 20 march, Major Teague, called him forward, told him he (Teague) was sending back several platoons of men at the end of the next halt and wanted Lt. Davis to walk back with them. Lt. Davis walked about twenty minutes of that period and he estimated he had walked altogether, about four or five miles. There were casualties on the march. Davis said had been busy with casualties during the rest periods. He received "this" order in the third halt and followed the order as far as taking care of casualties was concerned. Davis said he did not comply with Teague's order to march because from past experience he knew he would become less efficient in taking care of a large number of men. He told the court he thought that his primary duty and his responsibility was to provide medical service to help the men

Upon cross-examination and upon examination by the court Lt. Davis testified that the duties he was to perform under Major Teague on this march were to take care of the men. He did not feel that he did not have to take instructions from Major Teague but felt that he would be better able to take care of the men if he was not fatigued himself. Davis said he did not have a chance to tell that to Major Teague or to tell Major Teague that he thought that he should not walk. Major Teague may have told him to march when Davis stated that he would walk until the next halt, but they were talking about taking care of the men.

Davis allowed Major Teague may have had in mind that he should walk but nothing was said after he told Major Teague that he would walk to the next halt. He thinks, now, that Major Teague could tell him where to walk in the column, but if Major Teague sent him to the head of the column, he couldn't do any good there.

In that respect, Lt. Davis considered himself first and not Major Teague. He was asked by Major Teague if he had any medical excuse why he should not walk, but Major Teague did not ask him anything after the order was given.

Captain Eugene R. McNinch, Medical Corps, testified that he had taken marches with Lt. Davis in the Louisiana maneuvers. Capt. McNinch remembered two marches with Davis, one of seven and a half to ten miles in which Lt. Davis lagged considerably and was pretty well fatigued. Captain McNinch believed that an officer who marches twenty miles and works during the halts could not render the best medical service. McNinch considered hiking as necessary in hardening medical officers as for line officers, but in the marches they had had for training purposes they had not been required to render medical services.

Captain William G. Jardine, Medical Corps, a member of the board which examined Lt Davis, found that accused weighed 110 pounds and was 63 inches tall, for which the standard minimum weight at 30 years is 112 pounds. According to that standard Lt. Davis was two pounds underweight, but according to the height standard Davis was but one pound under the minimum weight for 63 inches. Capt. Jardine said he believed that medical officers should have hardening marches but should not perform their duties on the march. He told the court, "A man cannot perform medical duties to the best of his ability if he is too tired." Jardine's experience had been that most of the medical officers who had been inducted without regard to weight had been placed on limited service.

Captain John T. McNabb, Medical Corps, first examined Davis on April 10, 1942, and found that he was suffering from sacroiliac strain with right side sciatica. McNabb said Davis told him he had injured his back "climbing out of a jeep." He next examined Davis on September 3, 1942, at which time Lt. Davis gave a history of loss of weight, weakness, nervousness and frequent colds for six months. Davis was 30 years old, 63 ½ inches tall and weighed 112 pounds. McNabb found no diseased condition. Davis was poorly developed, underweight and somewhat emaciated, but otherwise the examination by McNabb was negative. In Captain McNabb's opinion, a medical officer who makes a 20-mile march and cares for casualties during halts, could not possibly be efficient in his professional duties and would impair his efficiency to administer first aid.

Three efficiency reports for Lt. Davis were entered into the record: "General Rating of Satisfactory" for December 15, 1939 to June 30, 1940. "General Rating of Satisfactory" for December 15, 1940 to June 9, 1941. However, Lt. Davis' Division Commander for this period said "he would rate the officer as unsatisfactory, expressed the opinion that the officer was unreliable and that the present and potential value of the officer to the service was below minimum standards."

Sec. 2 - A Court Martial

A third efficiency report for July 29, 1941to October 24, 1941 gave Lt. Davis "a general rating of very satisfactory."

Lt. Davis admitted that he received the order from Maj. Teague, followed it as far as taking care of casualties was concerned, but did not comply with the order to march because Davis had found from past experience that he was getting less efficient in taking care of a large number of men. He thought that his primary duty and responsibility was to provide medical service to help the men.

Lt. Davis' assigned defense team lead by Lt. Col. Dee W. Stone told the 11-member court, "The order requiring this little doctor to walk twenty miles, work during halts, and render medical service in the heat of the day, and at the close of the march was not legal. The responsibility for training and conditioning is that of the regimental commander. It was not within the authority of Major Teague to order this doctor to march also to take care of the casualties. Major Teague had tactical control of the battalion, but he could not tell the battalion surgeon how to do his work. It is our contention that two of the elements of the order are missing which are necessary for the prosecution to prove, in order to sustain a conviction. The first one being, the command was unlawful, and the second, it was not given by his superior officer. It has been shown that this little doctor… knew he had a job to do. He realized he was a doctor and he did his job. How he did it, is a matter of his judgement and conscience."

The prosecution lead by Lt. Col. John C. Williams saw it differently. "Reference has been made to the fact that Lieutenant Davis is a little man. The Japs are little men, yet they march through swamps and marshes. No doubt the medical sections also march, because the Jeeps could not go through these deep swamps and marshes. The accused has been a member of this division a long period of time, yet he professes to be so soft that he refuses to even attempt to get himself in physical condition, even to the extent that he disobeys a lawful command of his superior officer, rather than make a foot march. The prosecution contends that if these first aid men marched 20 miles, not getting as much salary as the accused, then the accused could have done the same thing. It is our contention in the 4th Division that the officers are no better than the men, and we do not ask the men to do anything the officers can't do. I do not believe any officer in the history of our grand army has ever said in the face of a battalion commander, "I refuse to obey your order." Thereby showing from the beginning his intention to violate the order."

Both sides rested their cases. A secret written ballot was taken and two-thirds of the members present concurred in each finding of guilty.

Finding

The accused, First Lieutenant John Davis serving upon the staff of Major Teague, disobeyed the order of Major Teague given in the course of a prescribed hardening march, upon the theory that the fatigue of marching would render him less efficient in the performance of his medical duties to the members of his command. The accused failed to take advantage of the opportunity offered him by Major Teague to state any reason why he should not march. There can be no

doubt that Major Teague was the superior officer of the accused and that the order was a lawful one addressed to a member of his staff during that march. If it was considered essential to prepare the command for marching when transportation would not be available, it was equally necessary that the medical officer serving the men upon such a march should be hardened to insure their presence to the end of the march. The accused presumed to substitute his own judgment for that of, his commanding officer, an action fraught with danger in any military organization. Even if the professional ability of accused to perform his medical functions should be reduced during the march by fatigue, as stated in the testimony of the three medical officers, the decision upon that march rested in the hands of Major Teague and not in the accused.

Punishment

The Court found Lt. Davis guilty and ordered him to be dismissed from the Army and confined for one year.

The trial that had begun at 7:10 pm on Friday, September 4, 1942 concluded at 11:10 pm.

September 8, 1942

The Tuesday following the conviction, the Defense team of Lt. Col. Stone and Lt. Lawrence F. McGee were told their client, Lt. Joseph Davis had received a typhoid vaccination the day before the march.

September 10, 1942

Defense counsel submitted a request for clemency to the reviewing authority, the Commanding General, 4th Motorized Division. Their reasons: "1) Four days after the conclusion of the trial it was for the first time brought to the attention of the (Defense Counsel) that Lt. Davis had a triple typhoid vaccination on the day preceding the twenty-mile march during which he was ordered to walk. The fact that Lt. Davis was inoculated on the day prior to the march would have been strongly urged at trial as a mitigating circumstance if it had been known to Defense Counsel. 2) At the time Lit. Davis refused to walk he was below the standard of physical fitness prescribed for commissioned officers. It is probably that the physical condition of Lt. Davis had developed in him a mental attitude which made him feel that he was justified in refusing to walk throughout the march. 3) The order requiring Lt. Davis… to walk throughout the march and also to take care of casualties was unusual, at least. We believe Lt. Davis actually felt that it was his paramount duty to conserve all of his strength for medical service to the casualties of the march. 4) Lt. Davis did comply with that part of Major Teague's order requiring him to attend the casualties. 5) The undersigned are informed that the wife and two-year old child of Lt. Davis are dependent upon him for support and that the execution of the sentence imposed by the Court would leave them in straitened circumstances."

Sec. 2 - A Court Martial

September 11, 1942

The following day two of the eleven members of the court (Lt. Col. R. T. Nelson & Capt. Mark R. Harwood) recommended clemency by not jailing Lt. Davis for a year because the evidence indicated that the accused at the time was below the standard of physical fitness prescribed for commissioned officers, that Davis did comply with that portion of Teague's order requiring him to take care of the casualties and because they had learned since the trial that Lt. Davis had a wife and two year old daughter dependent upon him for support.

September 17, 1942

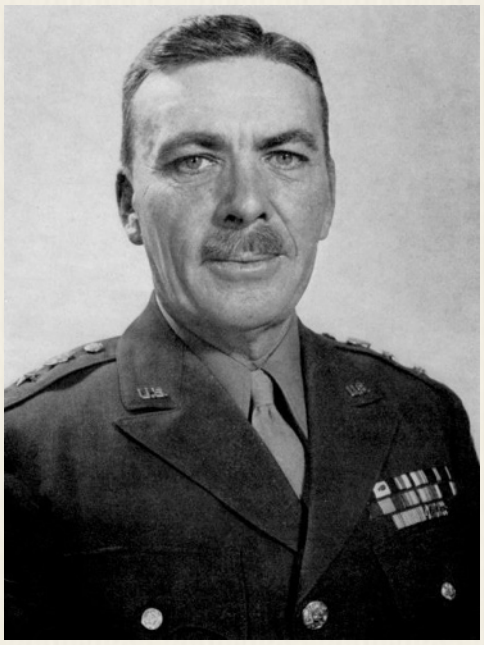
The record of the trial was received and reviewed by the Division's Judge Advocate Major White E. Gibson, Jr. His report said "Defense evidence was entirely that of medical witnesses. Capt. Eugene R. McNinch testified to having previously made two foot-marches with (Lt. Davis). During these marches (in Louisiana) of seven and one-half to ten miles, done in June, 1941, Davis had lagged and appeared fatigued. McNinch stated that it was customary for medical officers in this division to take foot marches and that, in his opinion, it was necessary hardening. McNinch also said that, in his opinion, a medical officer required to make a twenty-mile march could not cope with casualties occurring to the best of his ability.

"Was the order itself one which the commanding officer of the battalion could lawfully give? The theory of the defense appears to have been that it was not, in that it was one which, if obeyed, would render the physician less able to perform his medical duties efficiently. The entire question is whether any technical or professional qualification should be preserved by its possessor in defiance of an order from a military superior. It is believed that the argument of the defense ignores the vital fact. (Davis), whatever his other professional qualifications, is a soldier. As such, he was a subordinate – in a sense, a staff officer – of the battalion commander. The medical officer was not authorized to make decisions. His status was that of an adviser, his duty that of making recommendations within his field to the officer who was solely responsible for the welfare of the command. But if his advice was unheeded, he had no lawful alternative but to bow to the decision.

"It is clear that the battalion commander considered it better in general and for all concerned for (Lt Davis) to walk with the men, even at the risk of impairing his efficiency, than for him to ride. The wisdom of that decision is not an issue. The decision was made and announced. The command must be held to have been a lawful one. It follows that the disobedience of the accused was an offense under the 86th Article of War.

"The maximum penalty for the offense committed is death. It is considered that, on the whole, the sentence adjudged was a lenient one and that to recuse it would be to adopt too lenient an attitude toward what is a violation of the very basis of all military discipline. The sentence as originally announced contained an irregularity in that dishonorable discharge rather than dismissal was adjudged. The wording of the sentence was corrected by means of proceedings in revision (held on Wednesday, September 16.)"

September 18, 1942



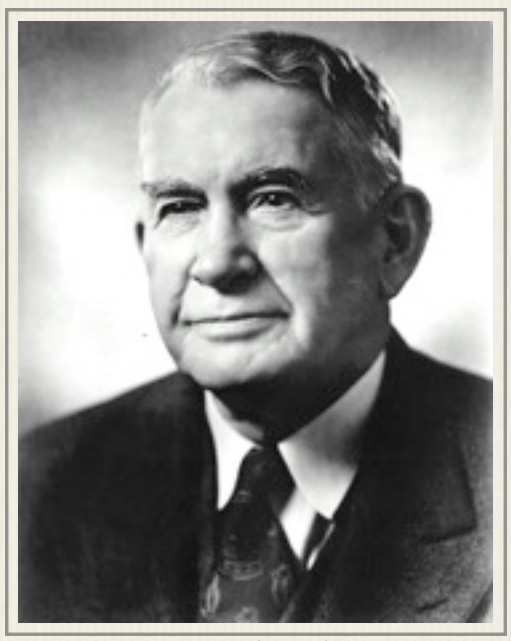
Gen. Raymond O. Barton

With the Division Judge Advocate's report in hand General Raymond O. Barton *(left)*, commander of the 4th Division approves the sentence handed down by the court. The next day the case record was sent to Judge Advocate General's office for review. It arrived in Washington on September 23, 1942

Lt. Joseph Davis was now faced with a year in prison, dismissal from the Army, and the loss of his $175 a month pay, and financial allotments to his dependents (wife Ella Rose and 2-year old daughter, Susan). He and his dependents decided to seek clemency on their own. It resulted in a series of letters sent from the couple's home - Broadway Apartments - A5, Augusta, Georgia and dated eight days after General Barton confirmed Davis' sentence.

September 26, 1942

Mrs. Davis Letter to Hon. Alben W. Barkley of Kentucky: "A great injustice has been done (to my husband) and I am hoping that you, as Senator of the State of Kentucky will take an interest in the matter and will be able to help us in rectifying the wrong.



Sen. Alben Barkley

"Lt. Davis had been ill earlier that same week, and when I came home from work found him sick in bed. He had his supper in bed and the next morning thought he could make it and went out to Camp. A few days later, which was the day before the hike, he was given a typhoid inoculation and that is a punishment in itself. He is a small person and not at all strong.

"After the trial I went to see Col. Hervey A. Tribolet *(1st Battalion Commander when Teague lead the 3rd in Normandy)*, who is in command of the Twenty-Second Infantry. He told me that it was never intended for this case to be brought to trial. General Raymond Barton, the Commanding General of the Fourth Division, who seems to thrive on military discipline made it a point to see that there was an investigation, that there was a court martial and that there was a sentence! He did not consider the facts of the case, only that an order had not been carried out. Col. Tribolet told me that before this occurred, Lt. Davis was in line for a Captaincy and was ready to be promoted.

Col.Hervey Tribolet

"Col. Tribolet suggested that I see the General in regards to clemency. (Tribolet) accompanied me to the General's office and was there while I pled for my husband… the General told me that he could not give men any hope… an order had been disobeyed and the Lieutenant would

have to be punished. It is not only my husband who is suffering by this sentence, but our little two-year old son, and myself, which is unfair. My husband's parents know nothing of this incident.

"If he should serve this year and then be dismissed from the Army, making him feel like a martyr, people will always know what happened as far as the sentence, but no one will ever believe that all he did was to fail to march the entire 20 miles on a training hike. They will always think that the Doctor has done something that was terribly wrong to merit this punishment."

"I am… going to have very difficult time carrying on if this sentence is upheld in Washington. I am faced with a big responsibility knowing that I may have to support my little family, and pay bills which have accumulated, for the next year. I will be glad to do anything to see that my husband's name as well as our son's name will not be blotted by mistakes of another.

"I am writing this to you, Senator, because you are the Senator of our home state and feel that you will take an interest in the case. Lt. Davis graduated from the Louisville Male High School, from the University of Louisville and the University of Louisville Medical School and after his internship practiced medicine in Smiths Grove, Kentucky and in Bowling Green, Kentucky, until he was called into the Army as a Reserve Officer on December 15, 1940. He was respected by all in the community. We gave up a practice, our office, our home and all we had so that he might serve our Country and it is disheartening to see the gratitude with which he is now being repaid.

"I was born and reared in Louisville… Our son was born in Louisville and our families are still living there. When this war is over how can we ever return there and be accepted as in the past? Would they believe us?" s/ (Mrs). Ella Rose Davis

Mrs. Davis Letter to Hon. Richard B. Russell of Georgia: This September 26th letter's description of events was the same as the letter to the family's home state senator with a different closing statement to the Senator representing the state where Camp Gordon was located: "I sincerely hope that you will see your way clear to help us out of this plight and trust that you will do all you can to assist use. We will be forever grateful to you."

Sen. Richard B. Russell

Lt.. Davis Letter to Hon. Richard B. Russell of Georgia: Ella Davis enclosed a letter from her husband typed on the official stationary of Dr. Joseph Davis' Smith Grove, Kentucky office: "I am not denying my being able to walk certain distances but contend that I am unable to do it and still provide medical service.

"… believing that my primary duty was to provide medical service, I had to decide either to hike all the way or to take care of the health of the command. Since through past experiences I could not do both efficiently, I decided to do the latter – my primary duty – medical service, so I rode. As a result, I was found guilty and sen-

tenced to be confined for one year, forfeiture of all pay and allowances and dismissed from the service, because I did my duty as I saw it and to the best of my physical ability."

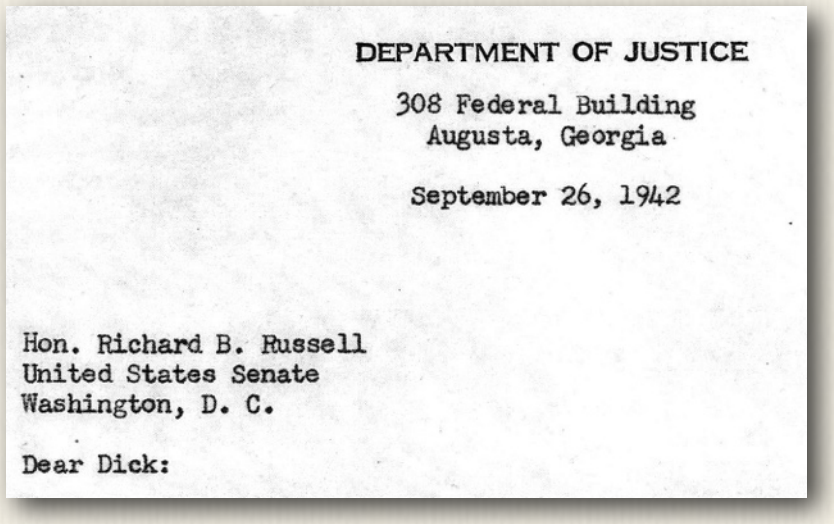
"Never have I tried to get out of any type of work, but always did my duty ungrudgingly throughout my entire military career of the twenty-eight months. I entered the service willingly and of my own free will, did my work to the best of my ability and when I found that I was becoming less efficient because of physical reasons, I immediately reported it to my supervisors and request hospitalization to determine why. I was laughed at, scoffed at, and turned down.

"I was tried and found guilty, unjustly, I believe. My ideals concerning duty and medicine have always been high. They are shattered now, but I have always held duty above anything else. I have never complained, although on several occasions I had right to. The day before the hike I received a typhoid inoculation, I didn't complain of the effects, didn't even mention it in my testimony – it was foolish perhaps, but such were my ideals. I feel bitter now, because of the irony of being dismissed and confined because of my high ideals.

"I desire… to make it clear that I wish to remain in the Army. This is not time for unjust prejudicial action such as I have received. We need doctors now. If there is anything wrong with physically – there must be in order for me to lose so much weight – then an extensive search should have been made to find that cause. Instead I was condemned because of a physical condition, the cause of which is unknown as yet. I honestly believe that my action was justified and I sincerely hope that you can right the wrong that has been done me."

Davis' Army wife, Ella was working as a stenographer for Cecil R. Hall in Augusta. Hall was a lawyer at the Department of Justice's U.S. Attorney Lands Division Field office. He was the commander of the state Disabled Veterans of the World War, and had run for the Georgia legislature in 1936 in DeKalb County. She asked Hall to write a letter to his friend, Sen. Richard Russell on Department of Justice letterhead. It, too, was dated September 26th.

Cecil R. Hall Letter to Hon. Richard B. Russell of Georgia: "Dear Dick – Mrs. Ella rose Davis, my secretary, has told me of the predicament in which she and her two-year old child have been placed by reason of the recent court-martial and sentencing of her husband, Lt. Joseph Davis.



DEPARTMENT OF JUSTICE

308 Federal Building
Augusta, Georgia

September 26, 1942

Hon. Richard B. Russell
United States Senate
Washington, D. C.

Dear Dick:

"While I'm not personally acquainted with Dr. Davis, I have read the record in the case and I believe that you, after reviewing the same, will agree that the sentence is decidedly drastic in view of the evidence in this case.

"Mrs. Davis is a valued employee of this office, efficient and conscientious in her work and I have agreed to do whatever possible to help her…. While I realize that military considerations

must predominate in time of war, I believe that this is one case which really merits careful consideration and modification on review. If after reviewing the evidence in the case, you feel that Dr. Davis is entitled to reconsideration and modification of the sentence imposed, it will be appreciated if you will notify the Judge Advocate General of your interest in the case and request a report on the same. Please be assured that whatever consideration you see fit to give this matter will be personally appreciated by the writer. Sincerely, Cecil R. Hall"

The last two letters in the Davis Family September 26th clemency campaign were sent to the Commander In Chief.

Lt.. Davis Letter to President Franklin D. Roosevelt: Much of the letter was the same as Lt. Davis sent to the senators - typed on his office stationary - with this adjustment: "My dear President Roosevelt, I am writing to you for help. Help that only you can give me. I am an American writing to my Commander-in-Chief because we live in America. This concerns me, my family, our welfare, the welfare of our country, as you shall see. Perhaps this letter will never reach you, I don' t know. If it does, I hope you will heed my plea."

Mrs. Davis Letter to President Franklin D. Roosevelt: Ella Rose Davis restated the case she made to Senators Barkley and Russell with this opening adjustment. "My dear President: I know that you are busy with the affairs of this Country, but I am hoping that you will find the time to read over these few pages and bear the facts in mind when the case is presented to you for the final decision."

September 30, 1942

Immigration Committee chairman Sen. Richard B. Russell sends a letter on committee letterhead to the Judge Advocate General expressing his interest in the case of Lt. Joseph Davis. "I have carefully read the evidence and pleadings in this case and I trust that, in view of the extenuating circumstances entering the case that your review officer will thoroughly consider the advisability and justice in lessening the severity of the penalty imposed."

October 3, 1942

Major General J. A. Ulio of the Adjutant General's offices writes to say the letter that the Davis' had sent to the White House was now in his possession. "Receipt is acknowledged of your letter addressed to the President and referred to this office for acknowledgment… The Record of Trial in this case is now undergoing examination by War Department authorities, and you may rest assured that it is being given careful examination and every consideration will be given to all facts and aspects submitted in the matter, including possible extenuating circumstances."

October 15, 1942

Kentucky Senator Alben W. Barkley passes along his Davis letter to General Ulio: "I am in receipt of the enclosed letter from Mrs. Ella Rose Davis, a Kentuckian, now residing in August Georgia, regarding her husband Lieut. Joseph Daivs, Medical Corps, U.S. Army. Apparently Lieut. Davis has gotten into some difficulty, and I shall appreciate anything you may be able to do for him in the matter."

Oct 19, 1942

The 3-member JAG board of review panel found: "The court was legally constituted. No errors injuriously affecting the substantial rights of the accused were committed during the trial. In the opinion of the Board of Review, the record of trial is legally sufficient to support the findings of guilty and the sentence, and to warrant confirmation of the sentence. Death or such other punishment as a court-martial may direct is authorized upon conviction of violation of the 64th Article of War."

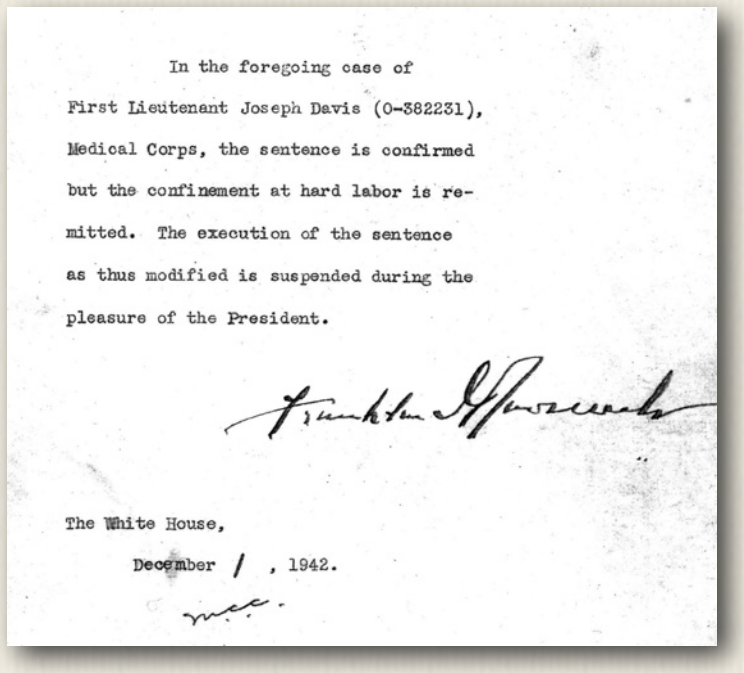
Oct 28, 1942

Maj. Gen. Myron C. Cramer, Judge Advocate General concurred. "Lt. Joseph Davis presumed to substitute his own judgment for that of his battalion commander (Teague). I believe that the direct disobedience involved warrants the forfeitures adjudged (One year in prison) in addition to dismissal."

Gen. Cramer sent the paperwork to President Franklin D. Roosevelt as Lt. Davis and his wife had written to the White House seeking clemency in the case. According to the U.S. Justice Departments clemency statistics website, President Roosevelt received 1,272 petitions during Fiscal Year 1942. FDR issued 305 pardons, 21 commutations while denying 55. Another 599 requests were closed without Presidential action.

December 1, 1942

President Roosevelt makes his decision on Lt. Joseph Davis: "The convening authority, having requested consideration of clemency and recommended that so much of the sentence imposed by the court as pertains to confinement be remitted, the record of the trial having been examined by the Board of Review in The Judge Advocate General's Office, and the Board of Review having submitted its opinion in writing to The Judge Advocate General, and the record of trial, the opinion of the Board of Review, and the recommendations of the Judge Advocate General having been transmitted directly to the Secretary of War for the action of the President, and having been laid before the President, the following are his orders thereon:


In the foregoing case of
First Lieutenant Joseph Davis (O-382231),
Medical Corps, the sentence is confirmed
but the confinement at hard labor is re-
mitted. The execution of the sentence
as thus modified is suspended during the
pleasure of the President.

Franklin D. Roosevelt

The White House,
December / , 1942.

"In the foregoing case of First Lieutenant Joseph Davis, Medical Corps, the sentence is confirmed but the confinement at hard labor is remitted. The execution of the sentence as thus modified is suspended during the pleasure of the President."

December 4, 1942

Following President Roosevelt's decision, the Secretary of War Chief of Staff G. C. Marshall ordered that First Lieutenant Joseph Davis be restored to duty status. Word was sent by telegraph to General Raymond Barton's office at Camp Gordon in Georgia *(next page)*. Following his orders,

Sec. 2 - A Court Martial

A.G.O.
AG 201 Davis, Joseph
(12-4-42)PO-M

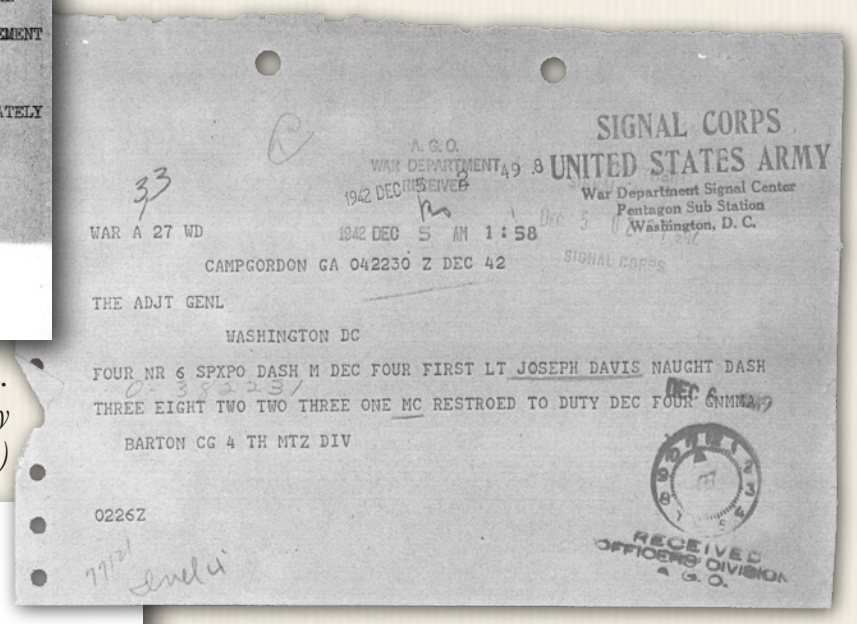
COMMANDING GENERAL December 4, 1942
CAMP GORDON GEORGIA

FIRST LIEUTENANT JOSEPH DAVIS O-382231 MEDICAL CORPS GCM SENTENCE OF DISMISSAL AND FORFEITURE ALL PAY AND ALLOWANCES DUE OR TO BECOME DUE IS CONFIRMED BUT CONFINEMENT HARD LABOR FOR ONE YEAR IS REMITTED STOP EXECUTION OF SENTENCE AS THUS MODIFIED IS SUSPENDED DURING PLEASURE OF PRESIDENT STOP RESTORE OFFICER DUTY STATUS AND IMMEDIATELY RADIO THIS OFFICE DATE OF RESTORATION CITE SPXPO DASH M

ULIO THE ADJUTANT GENERAL

OFFICIAL:

/s/ E.H.Koreman
ADJUTANT GENERAL



Cable (above) to Gen. Barton informing him of Presidents decision. Barton's radio communique that Lt. Davis was restored to duty (right) & Congressional inquiry about a second court martial (below)

WAR DEPARTMENT
OFFICE OF THE CHIEF OF STAFF
WASHINGTON
10 June 1943.

JUN 13 43 AM

MEMORANDUM FOR THE JUDGE ADVOCATE GENERAL:

Subject: 1st Lt. Joseph Davis, O-382231, 4th Medical Battalion, 4th Division, Fort Dix, N.J.

RECEIVED
WAR DEPARTMENT
ARMY SERVICE FORCES
J.A.G.O.

From information furnished this Division in connection with an inquiry from a Member of Congress, it appears that the officer whose name appears above was tried by a general court-martial convened by the Commanding General, Fourth Division. This occurred during August, 1942, or shortly thereafter.

There is also an intimation that Lieutenant Davis may have been tried by a general court-martial at an earlier date, about December, 1940, or shortly thereafter, at which time he was a member of the 4th Motorized Division, Fort Benning, Georgia.

If the foregoing information is correct, a brief statement concerning either or both of the trials described is requested.

For the Chief, Legislative and Liaison Division:

John P. Dinsmore
JOHN P. DINSMORE,
Colonel, General Staff Corps,
Executive.

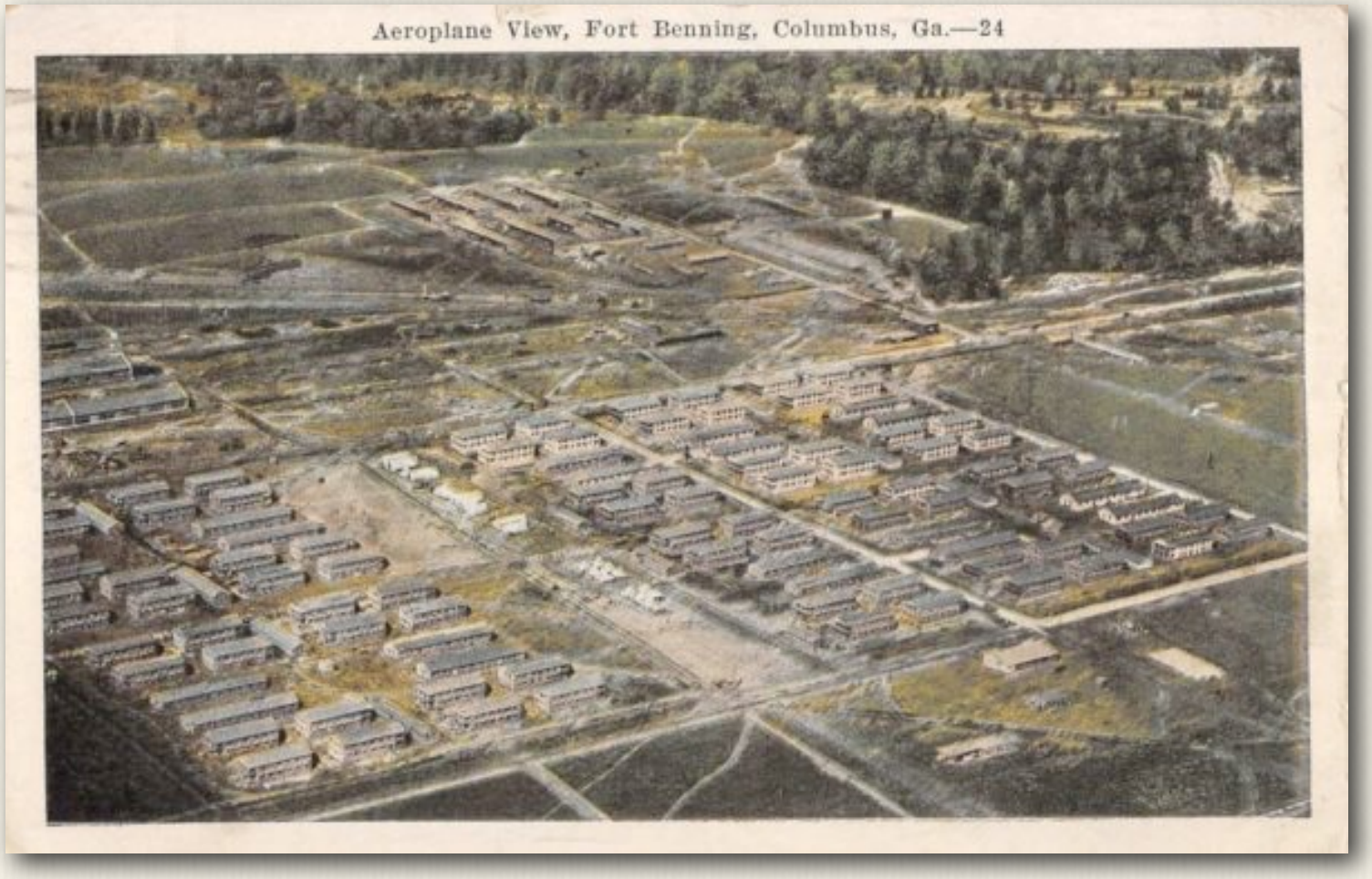
Gen. Barton radioed back that Lt. Davis had been restored to duty *(below)*. The case was apparently closed, however Lt. Davis would come to the attention of the War Department six months later in the form of an inquiry from an unidentified member of Congress.

June 10, 1943

The chief of the War Department's Legislative and Liaison Division wrote the Judge Advocate General seeking a brief statement about whether Lt. Davis had faced a court martial twice. Col. John P. Dinsmore wrote: "There is... an intimation that Lieutenant Davis may been tried at an earlier date (than the 1942 Teague case), about December, 1940 at which time he was a member of the 4th Motorized Division, Fort Benning, Georgia." The JAG's answer would be yes - the Teague case was the second time Lt. Davis had faced a military tribunal. That story follows...

June 6, 1941

Three years to the day before the Allied invasion at Normandy, Private Walter T. Fennell (32023750) of B Battery of the 29th Field Artillery was up on the second story fire escape of his barracks building hanging some laundry on the building next door. He was one of three soldiers



left in camp at Fort Benning, Georgia while the rest of the Battalion was out on field maneuvers. Around 8 am part of the fire escape railing he was leaning against came loose, and Fennell fell. He lay on the ground with a broken left arm, and "it was evident his back was injured."

2nd Lt. Herbert L. Peavy was officer of the day for Private Fennell's battalion. He was told one of his men was seriously injured, and headed for the scene. When he got there Private Fennell had been picked up by an ambulance driven by Private Francis E. Lenane, and taken to the 29th FA Dispensary. Lt. Peavy went there and "asked the man in charge of the dispensary (Private David Shelton) if the Doctor had been sent for. He said yes, and I understood he was on the way."

Lt. Joseph Davis was the medical officer of the day for the 4th Division Artillery. It was his duty to attend to all seriously injured men in the area. A call was immediately placed for him at the 20th Field Artillery Battalion Dispensary. Davis was not there "nor was he in his Quarters when he was called for there." Lt. Davis reportedly "was on his way to the 29th Field Artillery Dispensary" where Fennell lay in the back of the ambulance groaning from pain - loud enough to be heard inside the building through the screen door.

After some delay, Lt. Davis did call the 29th Dispensary, and talked with Lt. Peavy. Officer of the Day Peavy asked Davis to "come over and do something" for (Fennell) – perhaps a shot for the pain. Lieutenant Davis replied that it wouldn't do any good for him to come because he had no equipment and couldn't get to any because it was in the field." By this time Private Shelton had found the proper paperwork (most of the forms were in the field) had prepared an Emergency Medical Tag for the patient in the ambulance, and Fennell was taken to the post hospital at ap-

proximately 8:35 a.m. There he was put in a body cast for his back. His left arm was also placed in a cast.

June 12, 1941

News of the accident, and Lt. Joseph Davis' response to Private Fennell's fall had reached Brigadier General Fred C. Wallace. Wallace submitted charges on June 12, 1941 saying "The preliminary investigation indicates that the accused displayed a brutal indifference to the suffering of the injured man, which is incompatible with the standards of the Medical profession. The accused knew that the injured soldier would be transported ten miles in an ambulance; yet he took no measures to alleviate the pain involved in this movement or to comply with order regarding the movement of fracture cases. In submitting these charges consideration was also given to Lieutenant Davis's performance of duty prior to this time, which has been characterized by indifference and, on one occasion, failure to carry out standing orders pertaining to the Medical Officer of the Day. The enclosed charges are submitted without formal investigation because I am the accuser."

June 14, 1941

General Wallace's charges were officially investigated by Maj. Walter R. Hensey, Jr. of the 42nd Field Artillery Battalion. He reported: A man was seriously injured – Davis was notified and was within one-half mile of the injured man. Lt. Davis did not go to attend the injured.

The 44th Field Artillery Battalion's medical equipment was in the supply room of the Service Battery, and "not in the dispensary although the equipment of all other Battalions had been taken into the field. The group's narcotics were locked in the field safe of the 44th F.A. Battalion instead of "being under lock in the Dispensary, where they would be readily available in case of emergency." Maj. Hensey determined there were no extenuating circumstances.

During the investigation Artillery surgeon Lt. Donald L. Butterfield of the Medical Detachment was asked whether it was considered good ethics in the medical profession upon being called to the scene of an accident to go and render what aid you can, even though you have not equipment whatsoever?

Butterfield: "Good medical ethics would dictated to a physician that at the scene of any accident he would do whatever he could for the injured person, although in civilian practice, at least in most states, I believe the physician has the right to refuse to attend the patient."

Q: "Before or after seeing him?

A: Before seeing him, sir. If the physician sees the patient, he is obligated to do whatever he can for him.

Q: Is it the duty of the Medical Officer of the Day… to see all seriously injured men in the Division Artillery during his tour of duty, provided he is not otherwise engaged with another serious injury?

A: Yes, sir.

Q: In the 4th division Artillery, what provisions for equipment are made for the Medical Officer of the Day remaining in camp when the troops are in the field?

A: When the troops are in the field a medical officer is left here for duty twenty-four hours a day. Each section of the Medical Detachment is provided with certain equipment which includes a medical officer's kit, which should be kept with the medical officer, or kept where he can get to it easily at all times…

Q: Does the medical officer's field kit contain the equipment and the necessary drugs for administering what is sometimes known as a shot?

A: Yes, sir. The medical officer's kit contains a hypodermic set which includes a needle, a syringe, and a tube of twenty tablets of morphine sulphate. It also contains a small alcohol sterilizer.

Q: Do you know, Lt. Butterfield, why the property medical equipment and supplies for administering of medical aid to injured persons with the 4th Division Artillery Cantonment Area was not available on or about June 6, 1941, to the medical officer of the day?

A: No, sir, I do not know. To the best of my knowledge, I believe it was available.

Q: Whose responsibility was it on that day to see that it was provided, or report made that it was not available?

A: On June 6 it was the duty of Lieutenant Davis,

Q: Did Lieutenant Davis prior to June 6, on June 6, or subsequent to June 6 make a report to you that proper medical supplies and equipment were not available in the 4th Division Artillery?

A: No sir, he did not.

Lt. Joseph Davis told Maj. Hensey that on Friday morning June 6 he had stepped outside the dispensary right after sick call. Davis said he "came in very shortly afterwards and heard that there was a patient at the 29th Dispensary. I called the 29th Dispensary, asked the Charge of Quarters *(Pvt. Shelton)* who answered the phone that he had there. He told me that a man fell off the second story. I said all right, I'll be right over. At that time Lieutenant Peavy took the phone and he said he wanted me to give the man a shot. During the conversation I said that I would have to see the man before I could give him a shot, but that all the narcotics were out in the field. Lt. Peavy said that he had a car and was taking the patient right to the hospital and that it wouldn't be necessary for me to come unless I could give him that shot. I repeated at least two or three times that I would right over, but he still insisted that it wasn't necessary unless I could give him that shot. That was the conversation. I did not say that I did not have any equipment."

Lt. Davis said "In connection with the statement by General Wallace in the letter of transmittal that my performance of duty has been characterized by indifference, I would like to state that about three months ago, General Wallace called me before him and told me that he thought that I was indifferent. I told him that I was glad of this opportunity for him to see me about that. Of course, I didn't realize that I was becoming that way, and I told him that I would not have that attitude any longer; since then, this is the first information that I had that I was still giving the impression of indifference. In the future, I will try to perform duties in such a way that I will not give the impression of being indifferent. I know that I made a mistake in not going to see an injured man. I shall certainly do so in the future regardless of what any other officer might say. I also made a mistake by not drawing any morphine so that I could have it in the dispensary instead of in the Headquarters field safe when the other Battalions go into the field. I have done so since the accident and, in the future, any such complication will not arise."

"As I realize now to my great sorrow, my mistake, which I feel is not neglect, was that I did not see the patient regardless of what any other officer said, and I again state that no such complica-

tion will again arise. It has never occurred until now either in my military or civilian practice and never will again. I have always lived up to the Oath of Hippocrates and I sincerely state that I always will." Investigator Hensey concluded Davis was not "mentally defective, deranged or abnormal." No evidence of previous convictions.

June 16, 1941

Charges against Lt. Joseph Davis were received at Headquarters 4th Division Motorized

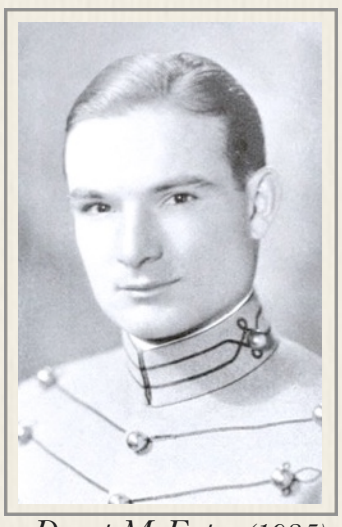
June 17, 1941

The charges were referred for trial

June 27, 1941

The Trial was held. The court met at 1:20pm. There were five members of the panel. The president was Lt. Col. James A. Van Fleet of the 29th Infantry. He was a West Point graduate - Class of 1915 where he was a classmate of Dwight D. Eisenhower and Omar Bradley. A battalion commander in World War I, Van Fleet would lead the 8th Infantry Regiment onto Utah Beach and win a Distinguished Service Cross for actions during the D-Day landings. Lt. Col. Herman F. Kramer was the law member of the panel. When the 66th Division was activated in April 1943 he was its Commander and would be in that position until August 1945. Captain Francis T. Pachler would eventually serve for more than 35 years becoming a Major General. The remaining two were also West Point graduates. Captain James L. Richardson, Jr. – Class of 1930 and Captain Ducat McEntee - Class of 1935. McEntee would be the first and only commanding officer of the 541st Parachute Infantry Regiment, formed 12 August 1943, disbanded July 1945, Luzon, Philippines. His men would see combat as replacements and then went into the Occupation of Japan as members of the 11th Airborne Division.

Gen. Van Fleet



Ducat McEntee (1935)

Davis plead "Not Guilty" to all specifications and the Charges. The prosecution made no opening statement. Instead, Capt. Russell Jenna called Lt. Peavy to describe what had happened at the dispensary. There was over 20-minutes of prosecution and defense sparring over Peavy's description of the phone call between him and Dr. Davis.

A five-minute recess was taken by the Court at 1:45pm – During the recess both the prosecution and the defense were instructed by the court to refrain from repeating matters, and to refrain from asking witnesses questions concerning matters of which they can not properly be expected to have personal knowledge.

The prosecution called Lt. Donald L. Butterfield to the stand.

Q: When all the units are out and there is one officer of the day left in cantonment area, at what dispensary is he supposed to be?

Butterfield: At the 29th-42nd Field Artillery Dispensary, as that was designated by Division Headquarters as the 24-hour dispensary in the area, and the medical officer of the day should be there whether the units are absent in the field or present in the cantonment area.

Q: In the event that you were officer of the day and there was an injured man in an ambulance ready to be taken to the hospital where he could get attention, would you think it necessary for you to go to the scene in such a case?

A: Yes

Q: Regardless of what you were doing at the other dispensary?

A: Unless I was attending a seriously injured patient at the other dispensary or doing something I didn't feel could wait, yes sir.

The Prosecution rested its case after Butterfield's testimony. The Defense lead by called just one witness - the Sergeant at the 29th-42nd FA Dispensary who had answered the phone from the dispensary where Private Fennell was lying in an ambulance. However, the accused - Lt. Joseph Davis asked, and was allowed to testify as a witness on his own behalf. :

Q: How long would it take you to get to the 29th FA dispensary from the 20th FA dispensary?

Davis: I would say it would take about three or four minutes in a car.

Q: Did you go over there to care for an injured man that morning?

A: No sir.

Q: Why not?

A: I didn't go because Lieutenant Peavy stated it wouldn't be necessary for me to come over there unless I could give the man a shot.

Q: Do you consider Lieutenant Peavy is qualified as a medical officer, and in position to state what should be done for an injured man?

A No sir.

Q Do you take a layman's opinion as to what should be done, in making a decision as to whether you should go see an injured person or not?

A: That all depends on the relationship of the layman to the injured person

Q: What was Lt. Peavy's relationship to you or the injured man?

A: None that I know of.

Q: Yet you took his advice and did not go to see the patient, didn't you?

A: It wasn't taking his advice. What I started to say a moment ago was that if he had been five feet further away from the phone so he could not have taken the phone from the charge of quarters I would have been there. I had already stated I would be there and then he took the phone and indicated he already had the man on the ambulance ready to go to the hospital and only wanted the man given a shot of some kind.

Q: Are you supposed to have morphine in your medical kits at all times?

A: Yes, we are supposed to have it, but no all kits have it.

Sec. 2 - Another Court Martial

Q: Isn't it necessary for a medical officer of the medical corps to have all those essentials in his medical kit while on duty?

A: It should be essential, and he should see that it is available.

Q: Did you have it in your Kit?

A: I had it available where I could get it on a moment's notice.

Q: Why didn't you go get it so you could have it with you in the kit?

A: At that time we didn't have any place in the dispensary to keep it. Morphine is supposed to be kept under lock.

Q: You heard Lt. Butterfield say morphine sulphate is supposed to be in each medical officer's kit. Is that correct?

A: Yes, that is correct.

Q: Did you have morphine sulphate in your kit?

A: No sir, however I had it available where I could get to it.

Q: Did you make an attempt to get morphine to administer a shot to this injured man on June 6, 1941?

A: No Sir, I didn't

Under questioning by the Court, Lt. Davis said he wasn't sure he was Medical Officer of the Day – that he couldn't find the roster.

The Prosecution recalled Lt. Butterfield.

Q: Was Lt Davis the only medical officer left behind in the Artillery cantonment area on that date:

A: Yes sir, he was.

Q: Did he automatically become medical officer of the day, then?

A: Yes sir, he would have automatically become medical officer of the day even if he had not already been so designated.

The Court asked Butterfield about the extent of Private Fennell's injuries:

A: He had a fracture of the third lumbar vertebrae and a fracture of the head of the left humerus. I came by the information by calling the station hospital and talking to the ward surgeon who was attending Private Fennel in an effort to find out how serious the injury was and the nature of the injury and how he was getting on.

Q: If you were in Lt. Davis' position, and you came into your dispensary and learned that an injured man was at the other dispensary and on calling on the telephone the man at the other end of the line told you the injured man was in an ambulance ready to go to the hospital, what likely would have been your decision in such a case – to let him go on to the hospital immediately or to have them hold him at the other dispensary until you could get there to examine him, taking into consideration the fact that by the man being in an ambulance meant that he had already been moved from the scene of the accident and that any damage that might be done by such moving had probably already been done?

A: Well, sir, I think the best I can do in answer to that question is to cite an instance, if I am not out of order. I had a case once of a man seriously injured. I had him held until I could see him, and he died the next morning, That was my best judgement at the time, and of course, I cannot say even in the face of the fact that he died as a result of his injures that my judgement was in error because the man may have died of his injuries on that occasion even if he had been rushed to the hospital the minute he was injured. If he was first brought

into the dispensary instead of being taken directly to the hospital I believe I would decide in each case that I should see him before any further move was made, so I believe I would have done so in this particular case.

Prosecution redirect of Butterfield:

Q: I have another hypothetical question, If a lieutenant of Field Artillery, to the best of your knowledge having no knowledge of medicine, told you he had a man in the ambulance ready to to the hospital, and told you the man ought to have shot before going to the hospital and unless you would give the man a shot it would be unnecessary for you to come over at all. What would you do in that case?

DEFENSE: I object to that as being immaterial and irrelevant.

Prosecution: It is true that it is only a hypothetical case.

Law Member: The question may be answered.

Butterfield: I believe I would go to the patient and make my examination and find out whether the man needed the shot or not."

Final Arguments were made but were not recorded as the court had not directed that they be recorded. The prosecution made a brief opening argument, outlining the evidence. The defense made a short argument, pointing out that this was a case where the accused understood the patient was being evacuated and assumed the patient would already be gone before he could reach the scene.

The court was closed, and upon secret written ballot, finds the accused Not Guilty of all specifications and the charge. The court was opened, and the President announced the acquittal. The court then, at 3:30 pm on June 27, 1941 proceeded to other business.

The Division Judge Advocate reviewed the record on July 14th. The Commanding General restored Lt. Joseph Davis to "an honorable duty status" on July 15th.

The record of the case was received by Judge Advocate General's Office on July 17th, 1941.

Comparison of the two courts martial of Lt. Joseph Davis finds that only he, and one other soldier were at both proceedings. Col. James A. Van Fleet - the president overseeing the June 1941 acquittal of Davis would be the senior member of the 11-member panel that would find him guilty of disobeying an order in August 1942. By that time, Van Fleet was with the 8th Infantry. Brig. General Fay B. Prickett would be both the president of the 1942 court and the law member. One wonders whether Col. Van Fleet may have remembered "the little doctor" in the refusing to march case as the same doctor who didn't have the equipment to treat the victim of clothesline fall fourteen months before. If Van Fleet did recognize Davis, did it have any impact on the decision later commuted by the President?

Sec. 2 - Court Martial Aftermath

Davis.

The Aftermath

July 3, 1946

"Dr. Joseph Davis, 4354 S. Third, Louisville released from the Army Medical Corps following six years of service, yesterday *(7/3)* announced the opening of offices at 4456 Park Boulevard. Dr. Davis, who held the rank of captain when released at Fort Knox, had served in the European Theater of Operations. A native of New York, he came here in 1928 and was educated in Louisville Male High and the University of Louisville School of Medicine. He was practicing in Bowling Green when called to service."

- Louisville (KY) Courier-Journal - Wed, Jul 3, 1946 pg. 13

September 11, 1959

Thirteen years later, an unusual start to a Friday night high school football game with an injury to an active duty serviceman prompted Dr. Davis' name to appear in print. The *Louisville Courier-Journal* explained the mishap this way in the Sunday sports section under the headline: ***They Saw Kickoff... That's All!*** "All I could think of was to blow the whistle." That was Marine Staff Sgt. John Bonner's most vivid recollection of the Atherton-Eastern kickoff play Friday night on which both he and Bruce Campbell of the Easter team received a broken right leg. Bonner was acting as head linesman. Campbell was playing center. Both were attended by the same physicians and placed in the same room (107) at the Kentucky Baptist hospital. "I guess there never was a football game before where two people received broken legs on the same play," said Campbell. "Not that I ever heard of," said Bonner. "And on the very first play, at that. It was one of those short kickoffs," he continued, turning to a reporter. "You know the kind. The ball rolled about 20 yards. I remember starting in from the sideline toward the ball. I saw an Ahterton player running over to block out an Eastern player. He missed the Eastern boy and plowed into me from the rear. It was purely accidental. If he'd hit his mark he wouldn't have hit me. I couldn't see what happened to Campbell, but he got his in a pileup, didn't

Staff Photo

TWO OF A KIND . . . John Bonner, head linesman (left), are Bruce Campbell, Eastern High center, receive visitors in their room at the Kentucky Baptist Hospital. Both received a broken leg on the first play of the Atherton-Eastern football game Friday night. Their visitors, from the left, are Dave Longenecker, game umpire; Bill Gwinn, Jerry Siers, Mike Hardin, Scott Campbell (Bruce's brother), Larry Siers, Miss Bonnie Embry, Buddy Bell and Don Taylor. All the boys are Eastern players.

you, Bruce?" Atherton won the game 27-6." The incident prompted Sports Editor Earl Ruby wonder "Why? - Isn't it customary for all Louisville high schools to have a football team physician on the bench of handy? When John Bonner and Bruce Campbell received a broken leg each on the first play of the game Friday there was a physician available on either side of the field. Finally medical attention was obtained from the stands.... Bonner, who is a staff sergeant in the Marines, ssaid it "seemed like 15 minutes" before a doctor came on the field. "Fifteen years in the mMarines," he said, "and I get my first injury in a high school football game." Physicians have told him he will be laid up from four to six weeks.

September 19, 1959

Louisville Courier-Journal Sports Editor Earl Ruby runs a letter from Dr. Davis trying to answer Ruby's question from a week prior as to why no team physicians at high school games. "The high cost of medical supplies, principally tape, and the low boiling point of school administrators, mainly principals, are responsible for many high school football injuries, thinks Dr. Joseph Davis, Atherton's team physician. "I regret that there were two leg fractures in our opening game a week ago," he write, "but I hope that, through you and your paper, something can be done about the medical athletic problem. As you know now we were only a few seconds late in getting to the field. The delay was caused by a small tie-up. It was the first time I ever have missed a kick-off. Allow me to brag a bit and say that Atherton is about the best covered high school in the state in regard to athletic events. Not only do I attempt to cover all practices session in football, basketball and track, but I am on the bench for all football games and on the field for the track events. Furthermore I have enlisted a team of physicians especially for football. I find the lack of knowledge among principals to the benefits of a team doctor. Some coaches as well as principals consider a team doctor as an 'unnecessary evil,' except at a time like the incident of Friday night. Cooperation is poor. They consider only the pre-season examination (usually a poor one) as necessary. But who else can evaluate the physical abilities of players but the man who sees all injuries, both major and minor, and can report to the coach, this man can or cannot play.

"I am a firm believer in preventive taping. Yet the cost of tape and other supplies frequently prevents thoroughness in this important work. Preventive taping is not merely covering the ankle like wallpaper, as I have seen, but a tape job that does its work. I feel that if the Easter High School boy had been taped he would not have had a fractured leg. At Atherton in the past I have taped 25 to 30 pairs of ankles before each game. This year we are taping only those who request it. It is against my policy, but the high cost of tape makes me go along. In the past four years, however, we haven't had a single ankle injury to a taped ankle."

- Louisville (KY) Courier-Journal - Sat, Sep 19, 1959 pg. 17

January 9, 1980

Joseph Davis, sports medicine pioneer dies: "Dr. Joseph Davis, a pioneer in sports medicine in high school athletics in Louisville and a specialist in rehabilitation medicine, died at 8:15 pm Wednesday *(1/9)* at his home after a short illness. He was 67 and lived at 1970 Trevilian Way. In the 1950s, he was team physician for Atherton High School. He enlisted a team of physicians

to care for almost any kind of possible injury to the players. Davis served on the staffs of Jewish, St. Anthony, Suburban and Methodist Evangelical hospitals and the Institute of Physical Medicine and Rehabilitation in Jefferson County. He was a medical director for the Muscular Dystrophy Clinic. He was a member of state and county medical societies, American Congress of Rehabilitation Medicine, International Congress of Rehabilitation Medicine, Southeastern Chapter of American College of Sports Medicine, President's Council on Physical Fitness, American Heart Association Council on Strokes, Southern Medical Association, Veteran of Foreign Wars and Adath Jeshurun congregation. He was a fellow of the American College of Sports Medicine and an Army Medical Corps veteran of World War II. Besides his wife, the former Ella Rose Goldberg. survivors include a daughter, Patty Weinberger of St. Louis; two sons, Dr. Steven J. Davis of San Diego and Arthur D. Davis of Roslyn, N.Y.; and six grandchildren. The family requests that expressions of sympathy take the form of contributions to the Muscular Dystrophy Foundation."

- Louisville (KY) Courier-Journal - Fri, Jan 11, 1980 pg. 4

January 27, 2004

Ella Rose Davis, 86, of Richmond, VA, formerly of Louisville, passed away Tuesday, January 27, 2004. She was the widow of Dr. Joseph Davis. She is survived by two sons, Steven Davis, MD , and Arthur Davis; one daughter, Pat Weinberger; two daughters-in-law, Susan A Davis and Susan F. Davis; grandchildren, Jeff and Naomi Davis, Ben and Catherine Davis, Paul and Lisa Weinberger, David and Lovelyne Weinberger and Aaron, Barry, Julia and Gave Davis; and great-grandchildren, Henry and Jane Davis. A graveside service will be held in B'Nal Shalom Cemetery at Greenwood Memorial Gardens, Goochland, VA. In lieu of flowers, memorial contributions may be sent to Beth Shalom Gardens, Richmond VA.

Military History: The Grangers

"Young Pliney in India"

India: Trolley Target
Clipping from the Granger Family Scrapbook with notation "Keep This"

The one-track Burma-Assam railroad meanders like the Toonerville trolley through the rich rice paddies of Assam province, starting at Calcutta as a broad gauge line and winding up at Darjeeling with the world's narrowest gauge (two feet wide). For the last four months the main, 700-mile line and two branch lines feeding into the Allied bases around the Ledo Road have been under GI management, working day and night to supply the U.S. and British troops in North and Central Burma.

It is for this vital target that Lieutenant General Masakazu Kawabe has aimed his four-pronged Japanese offensive. Last week, in spite of heavy and continuous behind-the-lines Allied bombings, Kawabe's supply chain from Burma had not yet snapped. His men had: Swept north from captured Tiddim to drive the British back from Tamu and Ukhrul to defensive positions all around Imphal; were storming the heights of Kohima, 60 miles northeast of Imphal; were "in contact" with the British and Indian troops around Dimapur, vital Burma-Assam railhead.

Sgt. Pliney Granger Jr. in front of bivouac in India as photographer, friend and local dog cast shadows. The Boston & Maine trainman worked alongside crews from the New York Central Railroad hauling supplies over "the hump" in what became known as the "forgotten theater" of World War II.
- Granger Family Archives

Sec. 3 - The Grangers

A Short History of the 721st Railway Operating Battalion

By Edward J. Venter

The 721st Railway Operating Battalion was activated at Camp Haranan, New Orleans, Louisiana, on April 14, 1943. The unit was composed of men from replacement companies, reception centers, a cadre from another battalion and reservists of the New York Central system, which sponsored the battalion. While at Camp Haranan for six weeks, the men underwent a rigorous physical training program, learned to march, hurdle obstacle courses, roll full field packs, fire a gun and become indoctrinated in army discipline, rules and regulations.

The battalion next moved to Camp Cushing located on the outskirts of San Antonio, Texas, and bordering the South Pacific Railroad tracks. A program of physical training, manual of arms, extended and close order drill soon molded the raw recruit into a soldier proud of his physical fitness and coordination. Here the men actually went to work shoulder to shoulder with the workers of the Southern Pacific, developing their skills as trainmen, engineers, carmen, telegraphers, trackmen and mechanics. Three months of this technical training helped the soldier-railroader become accustomed to his dual role and prepare for the real job ahead. There was also time for further military training, such as hiking, mimic warfare, passing through gassed areas, attending map reading and first aid lectures.

On the first of November 1943, the battalion, moved on to Camp Atterbury, Indiana, for final processing before departure overseas. Clothes and equipment were checked, inoculations administered for prevention of typhus and cholera, and records checked. To keep the men in good condition, a program of exercises, close-order drill, and hikes made up a good share of the daily routine.

During the last week in November 1943, the battalion entrained for "destination unknown." The trip was very enjoyable and picturesque through Indiana, Illinois, Missouri, Kansas, Colorado, Wyoming, Utah, Nevada and finally into Anza, California. Travel was by Pullman cars with delicious meals served to the men while in their seats.

The stay in sunny California was of a week's duration. Carbines and pistols were checked, gas masks were inspected, and clothing re-issued where necessary. All personnel received instruction in climbing cargo nets hanging from the side of a mock vessel. Everyone prayed that this practice would not be put to use while at sea.

During the early morning hours of December 9, 1943, the battalion moved onto a waiting train for a short ride to the San Pedro harbor where the *Mariposa* was berthed waiting for the troops to embark for the overseas trip. The sea journey was made without escort or protection in a zig-zag manner as a precaution against any enemy submarine, with gun crews at their stations during the entire trip.

On the seventeenth day at sea, the *Mariposa* steamed into the harbor of Hobart, located on the beautiful island of Tasmania, off the southeast coast of Australia. While here the ship refueled

and replenished the water supply. As the *Mariposa* started the last lap of her journey, the sealed orders were opened and literature was distributed to every man aboard describing India, its language and customs. The sea journey was completed on the 31st day after leaving the United States as the city of Bombay loomed on the horizon.

The Indians presented a strange picture to the eyes of the soldier-railroader. The usual apparel was merely yards of cloth wound around their bodies, which in most cases lacked cleanliness. The stench of filth was everywhere as sanitary practices were unknown in this country of ignorance and poverty.

On disembarking from the ship, the men were loaded onto third class railroad coaches comparable to a stateside box-car with windows and wooden benches, already filled with roaches, flies and other insects. The train journey lasted five consecutive days, with rations furnished by the British consisting of uncooked bacon, biscuits (dry and hard), orange marmalade, tea, with some bully beef and herring. After a few hours stop at Calcutta to fuel the engine, the long train journey was terminated on arrival at Parbatipur located in the Province of Bengal.

Parbatipur was the junction point for the meter and broad gauge track. Here the war supplies and materials were unloaded from the broad gauge cars onto the meter gauge cars for the trip to Ledo, then flown over the Hump or convoyed over the Ledo Road to China, The men lived in barracks constructed by inter-weaving bamboo strips and the roof made of grass tied to a bamboo mat. The camp was located along the Bengal and Assam Railroad.

The soldier-railroaders were immediately put to work using their civilian experience and army training in worthwhile application by assuming control of convoying war materials and personnel. Men went to work as train dispatchers, station masters, car repairmen, engineers,

Sec. 3 - The Grangers

Burma-Assam Railroad - Darjeeling, India
- George Henry Vorndran, Jr. (Nov 10, 1944)

trainmen, trackmen and bridge-men. The task of administration, feeding, clothing and transporting the G.I.s required the services of many soldiers. Immediate repairs to the equipment and roadbed resulted in a sharp increase in the tonnage of material transported. New tracks were constructed to accommodate the increase in traffic. American methods of transportation further increased the loads transhipped and rushed over the rails to Ledo.

On March 27, 1944, a fire broke out on one of the basha roofs. Fanned by a strong windstorm, the flames spread quickly and destroyed 25 out of the 27 bashas housing the battalion. Clothes, food supplies, arms, personal belongings and Battalion records were burned. However, tents, clothing and food were rushed from Calcutta and the crisis was alleviated immediately. During the spring of 1944, the Allies were pushing the Japs down from Northern Burma. However, the enemy did succeed in crossing the Burma border and imperil the Bengal and Assam Railroad life-line, but a successful offensive by the Allies spelled disaster for the Japs.

Despite extreme heat which caused heat rash and dysentery, the men worked long hours to ensure that the heavy tonnage continued on its way into China. The monsoon season caused heavy damage to the equipment and road-beds, but this did not stop the steady stream of supplies. A well-needed rest of two weeks at Darjeeling was given to the men about this time. This army rest camp, 8,000 feet high in the Himalayan Mountains had plenty of good food and recreation. About this time a recreation hall, post exchange and theater were constructed at the main camp. This tended to keep the high morale of the troops. Also a number of USO shows came through and entertained the men.

On May 8, 1945, the good news that Germany had accepted the surrender terms brought cheer to the soldier-railroader, but at the same time the realization that the warfare in our theater would be increased. The men, equipment and track facilities were well prepared to meet all requirements.

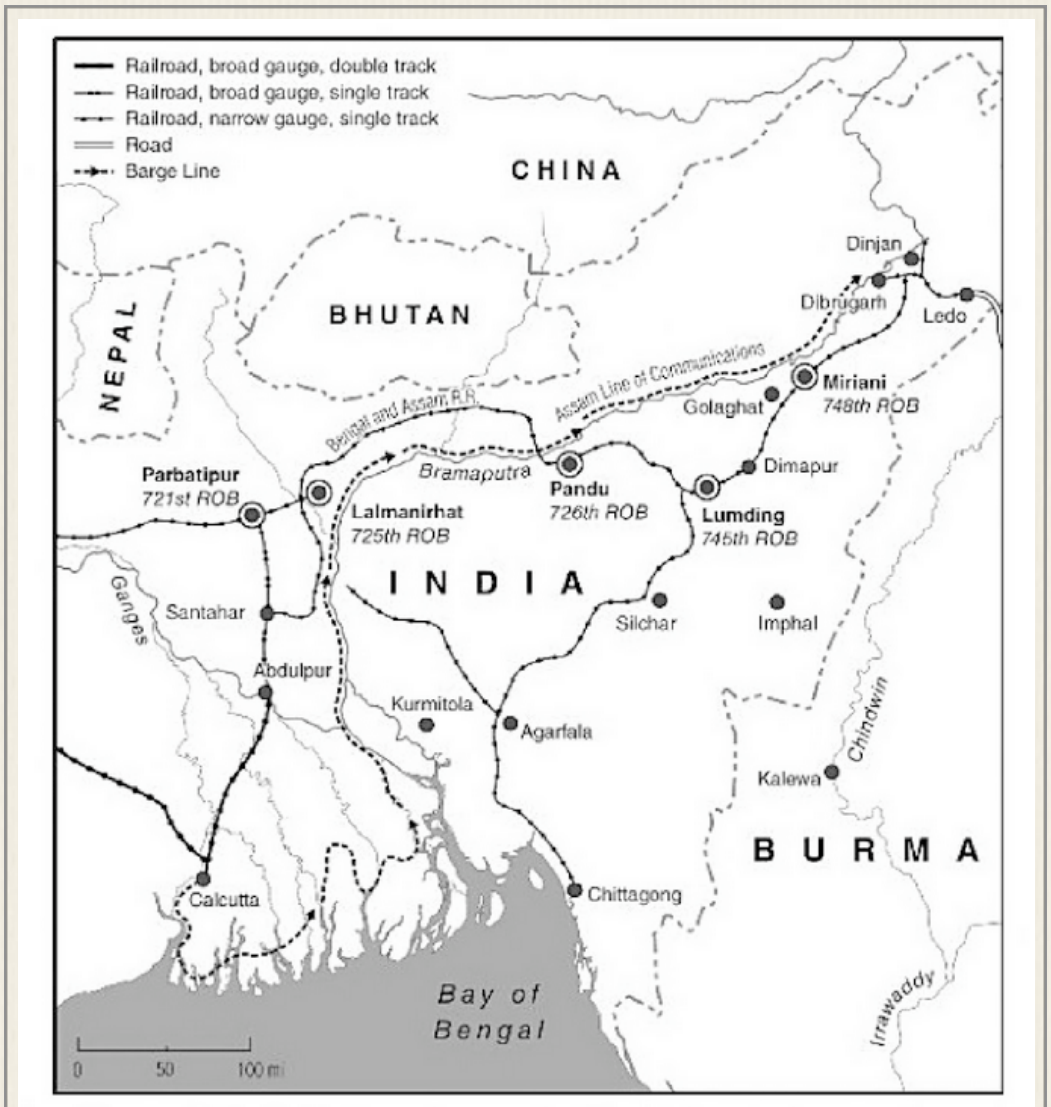
Burma-Assam Railroad - Darjeeling, India
- George Henry Vorndran, Jr. (Nov 10, 1944)

Increased offensives carried our naval and air forces to the shores of Japan, resulting in an unconditional surrender. Immediately, plans were formulated to return the operation of the Bengal and Assam Railroad to the natives. This became a reality on September 30, 1945. The *General Patrick* left Calcutta, India, on October 19, 1945. The boat, *General Stewart*, followed a week later. Each of these ships brought some of the members of the 721st Railway Operating Battalion happily homeward, with the realization that they had carried out their assignment in India for 22 months in a commendable manner. - Ex-CBI Roundup - July 1987 Issue

http://www.cbi-history.com/part_vi_721st_railway_bn.html

Granger Family Recollections:

When recalling his service in India, "Daddy *(Pliney Jr.)* used to say it was cooler to sit in the engine than outside," says his daughter Dale Ann Granger Eckert in the fall of 2015. "The bread looked like raisin bread because the flies would end up baked into it. He said it was tough driving the trains through the mountains because you couldn't use lights and never were sure if all the bridges were still there. He was a Catholic convert and was baptized in India."



Map 2. U.S. Army Railway Operating Battalions, Bengal and Assam Railway, March 1944. West to east: 721st, Parbatipur; 725th, Lalmanirhat; 726th, Pandu; 745th, Lumding; and, 748th, Miriani. Map by Erin Greb.

Pliney apparently used some Cog culinary knowledge passed on from his Uncle Stubby while sailing from the US to India and back. "On the long transport over the ocean he said he and a buddy would sneak into the galley area," says daughter Dale Ann, "and steal bread and onions - it was the only safe thing to eat that wouldn't be spoiled." Stubby Welch's onion sandwiches became part of the war effort within the 721st Railway Operating Battalion.

Brother Allen in Europe

ALLEN LAIRD GRANGER INTERVIEW : with Sandy Ferno 3-17-94 - "After getting married, we lived on one of my father-in-law's farms in Roxbury. I had a few cows and ran a vegetable truck garden that spring. I never had a chance to harvest it, however, as I joined the service in July 10, 1942.

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"I was sent to Fort Devins first and then on to Camp Croft in South Carolina for basic training. They kept me as an instructor because there wasn't an assignment for me at the time. Then I went back north to Camp Edwards, in Massachusetts to the 36 Infantry Division. I made it home to Northfield frequently, using my Boston and Maine pass. Our first child, a son, Allen Laird Granger Jr., was born on March 10, 1943. I had my picture taken with him. That was my last visit home before being shipped overseas.

"We landed in Africa. I was in the infantry. I first saw action during the invasion of Italy, at Sedano on September 9, 1943. We traveled to the shore in landing crafts and then ran to the beach and dropped. Around me were men who weren't moving, and I realized they were dead. We took the beachhead - were in the second group to make it to the beach - and fought until we were relieved.

"We fought at Cassino, which involved an assault on a hill. Later we were on the front line on a river. I was a Guard Leader then, in charge of twelve raw recruits. We were ordered to cross a pontoon bridge, which we did. The bridge was destroyed and we were stranded. Some men tried to swim back but were taken by the current. That night we could hear the Germans talking to each other. Then we were captured. It was January 21, 1944.

"We were taken in trucks to a train station. On our troop North, American planes attacked the train and some of the prisoners were injured. We were shipped to Poland to a prisoner of war camp, where we worked on a farm. I was a POW for fifteen months. We were marched toward France and the front, a thousand of us, until we were liberated by American troops.

"I came home in the spring of 1945 and bought this farm. Originally it had 240 acres, but later I purchased another 70 acres up on the hill," said Allen Granger.

This is how his military service was covered in the local papers: (1944) "In Uniform: P.F.C. Allen L. Granger, son of Pliney Granger of Lisbon, (NH) has been promoted to corporal. He is a squad leader with the 36th "Texas" division of the Fifth Army in Italy." / "In Uniform: Lisbon friends have been informed that Sgt. Allen L. Granger, husband of Mrs. A. L. Granger of Northfield, Vt., and son of Pliney N. Granger of Lisbon, was missing in action on January 22. No further details have been received. When last heard from Sergeant Granger was located in Italy." / "It has been learned that Sgt. Allen L. Granger, who has been reported missing since January 22 is in a German prison camp. A card to this effect was received by his wife at Northfield, Vt., April 5. Sergeant Granger is the son of Mr. and Mrs. Pliney Granger of Lisbon." (1945) "In Uniform: Mr. and Mrs. Pliney Granger of Lisbon have received word that their son, Sgt. Allen Granger was released from Stalag 2 B prison camp in Germany on April 14 and is on his way home to Northfield, Vt. Mrs. Granger's son, Earle Fulford entered the Navy on April 10 and is in training at Sampson, N.Y. Another son, Howard Fulford from Vershire, Vt., leaves for the Service May 7, making three sons, four step-sons and step-son-in-law in the Service. Two of the boys, Earle Fulford and Granville A. Granger, are in the Navy. Four of the boys, Sgt. Roy A Fulford, Sgt. Pliney N. Granger, Granville A. Granger and Sgt. Allen L. Granger, are overseas. Their son-

in-law, T/5 Cecil Charltrand, is also overseas." / "Sunday *(5/27)* guests at the home of Mr. and Mrs. Pliney Granger were their son and wife, Sgt. and Mrs. Allen Granger and son of Northfield, Vt. Sergeant Granger was released and on his way home just previous to VE-Day. Sergeant and Mrs. Granger will go to Lake Placid, N.Y., this week for 15 days and then to Fort Devens, Mass., to receive his discharge from the Army."

- Littleton Courier - Thu, Apr 13, 1944; Thu, May 17, 1945; Thu, Feb 3, 1944; Thu, May 31, 1945

Brother Guy at Pearl Harbor

Cousin Gary's wife "Guy was not a talker in general. All she can say about the Cog was that he worked there. She does remember hearing that he was in the Army and on the opposite side of the island during Pearl Harbor, but wouldn't talk about it. He was then sent to the Philippines."

December 7, 1941: *Photograph taken from a Japanese plane during the torpedo attack on ships moored on both sides of Ford Island shortly after the beginning of the Pearl Harbor attack. View looks about east, with the supply depot, submarine base and fuel tank farm in the right center distance. A torpedo has just hit USS West Virginia on the far side of Ford Island (center). Other battleships moored nearby are (from left): Nevada, Arizona, Tennessee (inboard of West Virginia), Oklahoma (torpedoed and listing) alongside Maryland, and California. On the near side of Ford Island, to the left, are light cruisers Detroit and Raleigh, target and training ship Utah and seaplane tender Tangier. Raleigh and Utah have been torpedoed, and Utah is listing sharply to port. Japanese planes are visible in the right center (over Ford Island) and over the Navy Yard at right. U.S. Navy planes on the seaplane ramp are on fire. Japanese writing in the lower right states that the photograph was reproduced by authorization of the Navy Ministry. (1941)*

- WikiMediaCommons.org

A Teague Confederate Encounter

Follow Col. Henry Nelson Teague's backstory and you will run into military history connections beyond Henry's attempt to serve in the Spanish & American War that was cut short by sickness in 1898. Henry's grandmother, Philomelia Staple Teague's lineage lets Henry qualify as a "Son of the American Revolution" because his maternal great-grandfather Moses Staple served in the Continental Army. Moses Staple was from Deer Island, Maine and joined Capt. Pillsbury's Company for a term of three years during the Revolution. Philomelia and Capt. Nathanial Teague's son, Capt. George Edward Teague and his young family become swept up in the Civil War when he meets one of the first audacious sea raiders of the Confederate States, Charles W. Read in June 1863. It's a dozen years before Henry is born to the couple, but the episode could have easily gone differently denying the Boston & Maine Railroad a Teague to takeover the Mt. Washington Cog Railway in the 1930s. What follows is an account of a Teague Confederate Encounter using a blend of sources.

Capture of Philadelphia Vessels by a Rebel Pirate – Full Particulars

In addition to the particulars published in another column of the depredations of the rebel pirate *Coquette* upon three Philadelphia vessels, The *Boston Traveler* furnishes the following account from *The Philadelphia Press*:

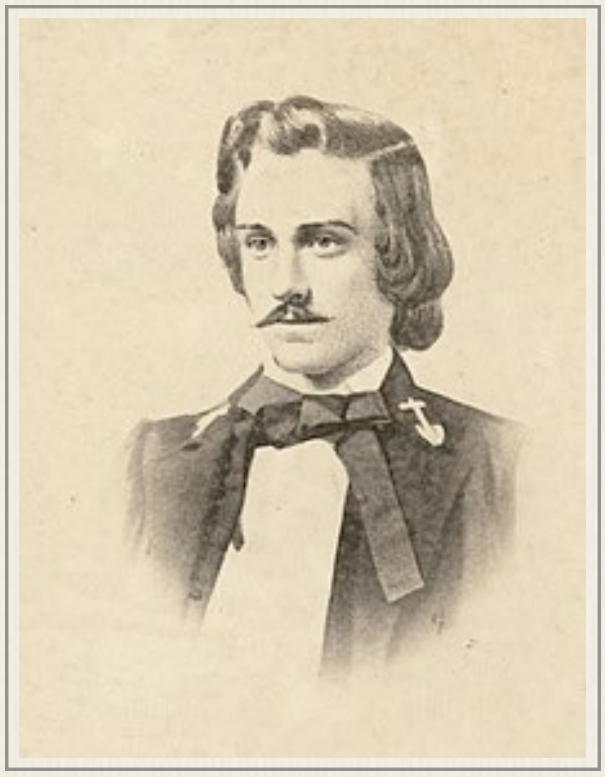
Yesterday afternoon *(6/14)* the schooner *Kate Stewart*, one of the vessels captured by the *Coquette*, and released upon giving bonds, came up the Delaware and hauled in at a wharf on Kaighn's Point. The *Kate Stewart* is commanded by Captain George E. Teague, of Bangor, Maine. The first mate's name is John Bisset. She is a Philadelphia vessel, and belongs to E A. Souder & Co., having been built nine years. Her value is $13,400, and she carries a crew of nine men.

Her Capture

At the time the *Stewart* was overhauled she was about 37 miles off Cape Charles, latitude 37° 10', longitude 76° 5'. On Friday morning *(June 12th)* she observed three vessels, one of which was in command of the pirate Read, and the other two were the prizes previously taken, and which had not yet been destroyed. Capt. Teague reports that from the signals made he supposed one of the vessels to be in distress, and having an American jack flying at the time, ran down to ascertain the trouble. As soon as he neared the pirate craft he was ordered to heave-to, and a boat with a crew of five men, without officers, was sent to board him. *(Australian naval historian Mackenzie J. Gregory says when Kate Stewart came on scene, the privateer's "6 pounder was in a boat en route to her new ship, Clarence revealed her dummy broadside, enough to frighten Captain George Teague to utter, "For God's sake don't shoot, I surrender.")* The (five-member boarding party) are reported as a most murderous-looking set of villains, two them being Portuguese. Captain Teague had left his revolver in the cabin, and while considering whether he should go down for it or not, the board(ers) came up. The pirates were all pretty well intoxicated at the time, and had their weapons concealed. One of them jumped on board and seizing the captain by the hand said, "How do you do?" The remaining four came on board, drew their weapons, and in a quiet manner informed the captain that he was

a prize. They ordered him, with four of his men, to accompany them on board the pirate craft, previous to which, however, they threatened to shoot him if he did not give up his revolver. The captain's wife *(Henry's mom Martha)* went into the cabin and produced the weapon.

Interview with the Pirate Leader



The Captain (Teague) and five of his men were then taken on board the craft, and he was soon ushered into the cabin in the presence of Read, the commander of the pirates. Read *(Annapolis graduate and former United States Navy midshipman seen at right)* is described as a careworn-looking individual, about thirty-five years of age, five feet ten inches in height, and fair complexion. Upon entering the cabin, he asked Captain Teague the value of his vessel *(Kate Stewart)*, and whether he was able to give bonds. The Captain replied that, under the present circumstances, he thought he was. Read then made out the bond for seven thousand dollars, and handed it to the Captain. (Capt. Teague said in the *New York Daily Herald*, "the commander of the privateer appeared to be much exasperated on account of information he had received that some of his *(Read's)* property in Jackson, Mississippi, had been burned by the Union forces. He protested that he would burn every United States vessel that he met with having a clearance from the ports not belonging to the rebels.")

While this scene was transpiring in the cabin, a transfer of the *(captured)* crews of the *Tacony*, brig *Mary Alvins*, and schooner *M. A. Shindler*, was made to the *Kate Stewart*, it having been agreed that this vessel should be released on bond. Nothing except *(Capt. Teague's)* revolver was stolen from the *Kate Stewart*, she being in ballast at the time.

A Copy of the Bond

The following is a verbatim copy of the bond, which Read, in his great haste, forgot to date: The schooner *Kate Stewart* was this day captured by the Confederate bark *Florida No 2*, and bonded for the sum of seven thousand dollars, payable to the President of the Confederate States thirty days after a ratification of a treaty of peace between the Confederate States and the United State of America. Chas. W. Read, C.S.N., Lieutenant Commanding.

He Takes his Departure

After making out the bond, Read politely informed Captain Teague that he could again go on board his vessel and proceed on his course as soon as he saw his *(Read's)* colors. The captain asked him if they would be the Confederate colors, when Read answered, "Never mind, you proceed as soon as you see any colors." The Captain *(Teague)* then came on board the *Kate Stewart*, and immediately Read hoisted the American flag, no Confederate flag having been displayed during the whole affair. Before Captain Teague, with his increased crew, had proceeded far the pi-

rates fired the *Mary Alvina* and the *M. A. Shindler*. All hands assert that they were treated very well by their captors, and but little alarm was felt as to their personal safety. It is thought that the pirates would have destroyed the *Kate Stewart* also, and retained the crews and passengers, only, as they said, they did not wish to be worried with females, there being a number on board the vessel.

Passengers on Board the *Kate Stewart*

Captain Teague had sailed from Key West (on the 27th of May), where he took in a number of passengers. Their names are as follows: Mr. Allen, deputy collector at Key West, with his wife and three children. Mr. Hugh Daily and lady, on their way to Scotland. Mrs. Frederica Glass, for New York. In addition to these there were one or two other persons, who were passengers on board the other two vessels. One of these was a Mr. Dougherty, a grain merchant, coming from Port Royal to this city (Philadelphia). He was captured on board the *Tacony*, which vessel Read took and destroyed his own. Mr. Dougherty lost about $500 in goods and money, although the privilege was given him of taking away his watch.

Statement of William S. Allen – Deputy Collector of Key West

From the *New York Herald*: "The privateer (a brig) was discovered about eight o'clock in the morning, directly on the vessel's course, hove to, with an American flag (Union Jack) flying. Near her were also hove to a bark and a schooner. As the *Kate Stewart* passed under the brig's stern she was hailed and ordered to heave to and at the same time her ports were raised, exhibiting a gun. Captain Teague at once hove to, thinking the brig to be a United States cruiser, and he was at once boarded by a crew from the privateer, who took possession in the name of the Confederate government. Captain Teague was at once ordered on board of the privateer, with his papers, and there, in consequence of the number of ladies and children, he had on board as passengers, he was allowed to reclaim his vessel by giving a bond for seven thousand dollars… He was also required to take on board twenty-four men composing the officers and crews and two passengers of the bark and schooner mentioned above (also prizes), and of a brig taken prize on the 9th. Captain Teague was short of water and provisions, and so informed the captain of the privateer, who promised to send some on board the *Kate Stewart*, but failed to do so, probably wishing to be at once out of sight of the two vessels, which he set on fire at the same time he sent his prisoners on board the *Stewart*. At a quarter-past eleven A. M. the privateer hoisted a signal for the *Stewart* to proceed, and at the same time she stood off to the eastward, leaving the two vessels in flames. At one o'clock P.M., the *Kate Stewart* standing toward the Delaware Breakwater, was completely out of sight of the privateer and the burning vessels. The last two vessels were captured on the same morning as the *Kate Stewart*. The escape of the *Kate Stewart* was owing wholly to the fact that she had for passengers four ladies and four small children. Were it not for the helpless condition of these passengers, this vessel would have shared the fate of the others. The rebel captain (who gave his name as Read of Jackson, Mississippi,) wanted no encumbrances of the kind on board his vessel. While privateers were in possession of the *Kate Stewart* they were very polite to the passengers, assuring the ladies and children that they should not be harmed, and that they need give themselves no uneasiness. The privateer was named the *Clarence*, of Baltimore, and was herself a

prize. She was captured by the *Florida* (in early May), while on her passage from Rio, with 300 bags of coffee and other merchandise. She was a fast sailer, and had a crew of about forty men when she made the captures. (Historian Gregory says *Clarence* was at first armed by Confederate forces with a 6 pound gun and small arms "By early June *Clarence* approached the American coast her armament transformed, spars had been turned into dummy guns, mounted on wooden carriages, gun ports had been cut, and the 6 pounder providing a puff of smoke at the appropriate time, it did look as if a broadside had been fired.")

After making these captures the privateer (Read) transferred his flag to the bark *Tacony*, and the *Clarence* was consigned to the flames. In less than an hour after the *Tacony* was captured her name was removed from her stern, and she is now doubtless going on a mission of destruction in place of the *Clarence*."

One of the Crew wants to join the Pirate Craft

One of the pirates informed Captain Teague that Read was in command of thirty-two men. One of the crew of the *Mary Alvina* wanted to join the rebel craft, but they refused to have him, as they were afraid they could not trust him. The pirate, before overhauling the *Kate Stewart*, tried to get rid of her prisoners by transferring them to some foreign-bound vessel, so as to carry them where they could not soon tell the tale of their capture. As no such vessel could be found, they were all placed on board the *Kate Stewart*, whose captain treated them with the utmost kindness. The pirates expected to sail next for Cape Cod to break up our fishery there, and disperse the fishing fleet.

How the *Mary Alvina* was Captured

Captain Frohock, of the brig *Mary Alvina*, reports that when the pirates boarded him, he also supposed they were in distress. They asked him what kind of stores he had on board, and he demanded to know what they wanted. One of them answered, very slowly, "Bread, beef, and pork." This had been a signal agreed upon by the pirates, as they each one drew revolvers, and covered him and his crew. The pirates on this occasion were commanded by a mate, whom they called "Cutts." Captain Frohock and his whole crew were taken on board the pirate. His crew were placed in the hold, but none of them treated harshly. The *Tacony*, the vessel now held by Read, was in ballast at the time of her capture, and belonged to Geo. R. Ayres, merchant of Philadelphia. *- The Philadelphia Press – Jun 15, 1863 pg. 2 & reprinted in Boston Traveler – Jun 16, 1863 pg. 2 / New York Daily Herald – Tue, Jun 16, 1863 pg. 4 /* http://ahoy.tk-jk.net/MaraudersCivilWar/CSSFlorida.html

How the *Tacony* was Captured

Letter from Messrs. E. A. Souder & Co., of Philadelphia, to the Secretary of the Navy, (Hon. Gideon Welles in Washington, D.C.) relative to the depredations of *C. S. (Confederate States) brig Clarence*.

Philadelphia, June 13, 1863

"Dear Sir: We telegraphed you to-day in regard to the outrages of the pirate *Clarence*, a sailing brig, called a tender to the *Florida*. Captain Munday, of the bark *Tacony*, of this port, reached here

at 3 o'clock this afternoon, and furnishes the following, and also handed us a letter from Captain Teague, of our schooner *Kate Stewart*, which vessel he left in a boat this morning and reached a town in New Jersey in time to take train for Philadelphia. He (Capt. Munday) states briefly as follows:

"Yesterday morning about 9 o'clock (12th instant), off Cape Henry, and almost in sight of it, he saw a vessel (brig *Clarence*) with the United States flag flying, Union down. He hesitated at first, but upon seeing men apparently in distress he put toward her, when the crew sent [a] boat alongside, all in seamen's costume, and upon coming on the deck of the *Tacony* presented revolvers at the captain and mate and those on deck and ordered them into their boat and took them to the *Clarence* as prisoners. They took all they had, and while aboard the pirate the schooner *M. A. Shindler* came along, and she was taken in the same manner and burned at once. Soon after, our schooner *Kate Stewart*, of 387 tons, on her way from Key West, in ballast, came along, and was captured also, but having some passengers, mostly ladies, aboard, was allowed to proceed, after extorting a bond from the captain for $7,000, being about half of her cost. The captain of the pirate (Read) then put on board the *Kate Stewart* the crews of all the other vessels and set fire to the *Clarence* and took the *Tacony* (bark) for his ship and put off. The crew told Captain Munday that the *Clarence*, the day before, was pursued by a United States gunboat and threw overboard their guns, except a small swivel, and consequently they have no armament on board the bark *Tacony* and could be captured readily in forth-eight hours if a steamer with a single gun was sent after her, or a sailing vessel in disguise. We submit this information to you that such steps as may be necessary may be promptly taken, And remain, dear sir, your obedient servants,

- Edmund A. Souder & Co."

- *From Official Records of the Union and Confederate Navies in the War of the Rebellion pg. 273 (302 pdf)*

[telegram]

"Navy Department, June 13, 1863 – Yesterday morning the privateer *Clarence*, a captured sailing vessel, fitted out by the *Oreto*, captured three vessels within 8 miles of Cape Henry. The bark *Tacony* they are fitting as a cruiser. Send out anything you have available. (s) Gideon Wells, Sec of Navy to Rear Admiral Lee, Newport News."

The Rest of the Story

Australian historian Mackenzie J. Gregory says the report "that a large Confederate Fleet was about to ravage the US eastern coast, in desperation the secretary of the Union Navy, Gideon Welles, issued orders that all available vessels should proceed to sea: "In search of this wolf that is prowling upon us." Within 30 days, no less than 38 armed ships were out and on the hunt along the coast, seeking to catch up and destroy *Clarence*, which of course was not the ship they should have been looking for. Now on the 14th of June, (Navy Secretary) Welles discovered the new role for *Tacony*, but too late, all his US ships were already at sea looking for a ship no longer afloat. He was unable to communicate with them, desperate measures for desperate times; the Secretary now ordered ships be seized or chartered. "Put aboard an officer and a dozen men, arm them

with small arms and 2 howitzers, and send them off in various directions," but still no sign of the elusive Read.

Read remained unknown, until on the 15th of June about 300 miles off the Delaware River he burned the brig *Umpire*, twice Read was stopped by Union warships who asked if he had spotted the pirate *Tacony*, on both occasions he responded positively, and gave bogus directions in which he had seen this Confederate ship sailing. On the 22nd of June, it was the turn of New England fishing schooners, 3 were burnt, and a fourth was loaded with prisoners, bonded and sent off to take her load to port. The next day, a further 2 fishing schooners were disposed of, and captured newspapers warned Read that the Union authorities now had a good description of his current Raider, and he was most likely operating on borrowed time.

Historian Tony Brown writes, "Read was blamed for violating the rules of war, but Federals did such things in the Carolina Sounds. Read himself wrote: "Burning farmhouses in Mississippi was alright, but it was 'piracy' to board ships of New England, and the noble editors *(in newspapers from captured ships)* were going to make us 'pull hemp' without any port hole, when somebody else captured us. On meeting "hundreds" of fishing craft, Read hoisted a rebel flag and fired a gun. The boats fled home, "Raising 'Cain' in general . . . and the price of fish."

Now the mackerel schooner *Archer* became Read's 20th prize, he had been successful beyond all expectations, the howitzer was out of ammunition, it was time to assume a new identity. All the gear and the gun were trans-shipped to the 90-ton *Archer*, and the trusty *Tacony* was disposed of by fire, the new Raider aiming to burn whatever Yankee ships she might find, and hoping to cut out a merchantman to become his new home."

Read was finally caught and captured off Portland, Maine on June 27th after abandoning and burning the latest ship he had captured in Portland harbor – the Union cutter *Caleb Cushing*. "This conflagration soon found the powder, and Lieutenant Read's 22nd. capture soon blew up," writes Gregory. "He (Read) had achieved a charmed run, had harried, pillaged and burned many Union vessels, even more, he had thrown their top brass into an absolute tizzy, made the Secretary of the Union Navy look a fool, and shown how a little daring, and some fine planning could achieve so much in such a short time." The Aussie naval veteran Gregor speculated that "In contemporary times, Winston Churchill would, I am sure, have warmed to Lieutenant Read of the Confederate Navy. Read and his crew went into prison for a year, to be exchanged as POWs. Read was to again fight, but not until the Civil War had almost run its course."

Tony Brown writes, "After the war Read *(left)* first settled in New Orleans, and entered the fruit trade. He later joined the Merchant Marine and in 1881 became Captain of a Royal Mail steamer, *City of Dallas* plying between that city and British Honduras. How he got a British Masters ticket is unclear. He married a Miss Carter of Meridian, Miss.; it seems that the marriage was happy, with many children." Charles Read died on January 25th., 1889.

http://revfrankhughesjr.org/images/The_CHARLES_READ_HOME_PAGE.pdf

CSA Capt.Charles Read *(above)* **/ *Capt. George Teague's*** *1868 Master certificate (below)*
- Ancestry.com

By The Lords of the Committee of Privy Council for Trade.

Certificate of Competency as MASTER.

To George Edward Teague.

Whereas it has been reported to us that you have been found duly qualified to fulfil the duties of Master in the Merchant Service we do hereby in pursuance of the Merchant Shipping Act 1854 grant you this Certificate of Competency.

Given undr the Seal of The Board of Trade, this twelfth day of September 1868

By order of the Board

Registered R.B.

Officers of the Marine Department.

Entered at the General Register and Record Office of Seamen, on the 14th day of September 1868.

Bermudes on Washington

Work In Progress
** Not Final ***

The Jitney Years Project tells the story of the Mount Washington Cog Railway through the eyes and the lives of its employees over the years. Historian Rob Bermudes Jr of Rochester, New York focuses on documentary evidence to get at the truth underpinning the oral history of Mount Washington as Bermudes knows the oral history often has more to do with the person telling the tale than the "truth" of the incident. Bermudes' paperwork quest to conduct his Mt. Washington historical research found him discovering the Jitneys' research website (now https://coggersofmtwashingtonnh.org) and then running into a copy of the April 2018 boxed volumes of manuscripts at the New Hampshire Historical Society in the fall of 2018. Bermudes went looking for a place to purchase the printout and on Christmas Eve 2018 sent an email to Jitney Jr. It was the start of a beautiful *"Casablanca-style"* friendship grounded in the White Hills of New Hampshire. This section showcases the research Rob Bermudes Jr has done to bring clarity to the Cog's story beginning with a paper written while earning his graduate degree in history. And continues with his fascination about how both the West and the East side of Mount Washington developed over time. Jitney Jr and Bermudes have collaborated to bring the microfilmed record of *Among the Clouds* into a searchable, digitized database of the mountaintop newspaper. They continue to call on each other, and other like minded fans of Mt. Washington to bring the story of the world's first mountain climbing railroad and the peak that it climbs into sharper, more nuanced focus.

"Crazy Man" Sylvester Marsh and the Origins of the Mount Washington Railway

Robert W. Bermudes Jr.

***Historical New Hampshire*. Vol. 72, No. 2 (Fall 2019)**

Twenty nineteen marked the 150th anniversary of the Mount Washington Railway, also known as the Cog or Cog Railway, carrying paying passengers to the summit of New Hampshire's highest peak. Books and numerous articles have been written about the Cog's operation, its rolling stock, and how it has operated since opening to the public.[1] What has been less documented, but is no less interesting, are the activities that led up to opening day in July 1869— the experiences and ideas that led Sylvester Marsh, the Cog's creator, founder, and projector, to be called a "crazy man" and prompted a New Hampshire legislator to suggest facetiously that Marsh be granted a charter to build his railway all the way to the moon. History knows Marsh was successful; less well-known is how that success was achieved.[2]

This article covers the period from Marsh's August 1857 hike up Mount Washington, from which he barely escaped with his life, to the spring of 1866, when he organized the company that constructed the railway that ultimately climbed Mount Washington. Historians have usually dismissed this period with a variation of Marsh's own words:

> Mr. S. Marsh visited the White Mts in Aug. 1857. Ascended Mt on foot—was overtaken by storm and night, and lost way, finally stumbled on to the Tip Top House nearly exhausted. He at once saw the necessity of an easier and safer way to ascend the Mt and being impressed with the fact that travel to the top of Mt. Washington was just in its infancy, He set himself to the work of devising some easier and safer method of ascension.[3]

The period between 1857 and 1866, for both Marsh and the Cog, was more colorful and significant than Marsh's summary suggests. Perhaps he understood as he was writing this summary around 1876 that the most amazing aspect about the Cog was not how it came to exist but that it existed at all. At the time Marsh wrote these words, his larger Mount Washington project was becoming fully realized. The Cog had been completed in 1869; the Boston, Concord & Montreal (BC&M) Railroad's branch line from Wing Road, near Littleton, to the Cog's Base Station had just reached its objective; and Marsh's Fabyan Hotel, located at the last stop along that line before the Base Station, opened in 1873. With the branch line in place and carrying trainloads of passengers directly to the Base Station, the Cog started paying dividends.[4] The project Marsh conceived in August 1857 was finally fully in place and could be judged by any objective standard as successful.

Sec. 5 - Bermudes on "Crazy Man" Marsh

The Climb, August 1857

In August 1857 Marsh and his pastor, Reverend Augustus C. Thompson of Boston's Elliot Church, traveled together from Boston to New Hampshire's White Mountains. Marsh had recently returned east from Chicago, where he had made his fortune in the meat-packing and grain-drying industries. Although he and his family settled in Boston, he had deep New Hampshire roots, having been born in Campton in 1803 and spending most of his childhood there. He still had several family members in New Hampshire with whom he kept in contact. An enterprising businessman and inventor, Marsh made much of his opportunities throughout his life, particularly while he lived in the burgeoning Midwest, but a love for the northeast and a desire by his new bride to be closer to her east coast family brought him and his young family east.[5]

Neither Marsh nor Thompson left records that spoke to the purpose of the trip or their complete itinerary. Both men, however, left personal accounts of being in the mountains during August 1857, and Thompson placed himself there specifically between Tuesday, August 18, when he wrote his daughter from the Profile House in Franconia Notch, and Friday, August 28, when he documented that he "reached home just in season" to attend the funeral of a parishioner.[6]

Several reasons for the men's visit to the mountains are possible. First, Thompson's wife, Sarah Elizabeth, had died just three months earlier.[7] Marsh may have offered to take his friend, after a period of mourning, to the mountains to rejuvenate his spirits. Second, Thompson may have traveled with Marsh, who was after all his parishioner, to support Marsh on a visit to Thornton to see his ailing older brother, John. That John died within two months of their trip, on October 14, suggests he may have been in declining health during Marsh's visit.[8] Third, it is possible the two friends just desired some time together and away from Boston. Travel to the White Mountains from Boston was relatively easy and quick in 1857. A train would have carried them from Boston to Plymouth, New Hampshire, where they could catch a stage up the Pemigewasset Valley to Campton, Marsh's birthplace, or Thornton, the next town north, where John lived. Marsh most likely visited Campton to see extended family members, and it was probably around this time that he donated the bell for the Campton Congregational Church's new building.[9]

During their sojourn in the White Mountains, Marsh and Thompson hiked up Mount Washington, most likely departing from the Crawford House on the Crawford Path to ascend the mountain from the south. At the time of their climb Mount Washington boasted four bridle paths; one from the Glen House and the east, one from the Crawford House and the south, one from the Jefferson Highlands and the north, and one from the White Mountain House and the west. There was also a four-mile, half-completed carriage road on Mount Washington starting at the Glen House in Pinkham Notch. The Mount Washington Road Company had begun construction of the carriage road in 1854, but a lack of funding had brought work on the project to a halt the following year at what was referred to as "The Ledge," just past the half-way point on the proposed eight-mile road.[10]

The exact date of Thompson and Marsh's Mount Washington climb was not noted by either man. There is, however, sufficient evidence to infer a date. Thompson was out of Boston from at least August 18 to August 28. In an August 18 note to his daughter, Martha, Thompson does not speak of an adventure on Mount Washington but does mention seeing the Old Man of the Mountain. Had he and Marsh had their adventure on Mount Washington by that date he almost certainly would have mentioned it in his note. This leaves the period between August 19 and August 27 (leaving the 18th and 28th for traveling) as possible candidates for their climb. Both Marsh and Thompson wrote of stormy weather encountered during the climb. In one of his September 1857 sermons, Thompson stated they ascended the summit cone, "in the midst of a fierce storm. The rain came in torrents, the mists grew so dense as to make premature night, and the wind heightened to a gale."[11] Marsh stated simply that they were "overtaken by storm and night, and lost way." Fortuitously John H. Spaulding, the manager of the Summit and Tip Top Houses at the time, kept daily records of the summit weather. Assuming Marsh, Thompson, and Spaulding all had similar definitions of "stormy," Spaulding's records narrow the date of the climb to either August 24 or 25.[12]

Another source helps pinpoint the date further. New York City resident and librarian S. Hastings Grant, on a trip with Professor Arnold Guyot to measure the height of Mount Carrigain, was at the Summit House the night of August 24–25. Grant, climbing from the Glen House, recalled his trip to the summit on the 24th this way: "On Monday morning everything was so promising that we started off, full of expectation, and ascended

more than halfway very pleasantly. Soon after that, however, the rain began to come, and come in such earnest that I was drenched so thoroughly that I could not get dry and warm before I retired to rest that night." Although Grant originally planned to descend that same day, the weather remained bad, leading him and his companions to decide that "it seemed like rashness to venture off again in it; so we... came to the conclusion to pass the night [on the summit]." Later he noted, "two persons ... came in near evening in an almost exhausted condition" - presumably Marsh and Thompson. Regarding the ferocity of the storm, Grant wrote that Spaulding, the hotel manager, told them, "it was the worst storm they had known this season [and] mentioned that it was on just such a night, about two years before, that Miss Lizzie Bourne perished, not forty rods from the house, from the exposure, and I feel assured that anyone would have died had they been out all this night." Based upon the foregoing, it seems reasonable to conclude that Marsh and Thompson climbed Mount Washington on Monday, August 24, 1857, and had they not found shelter, probably would have perished there. Ironically, at the same time the two men were climbing Mount Washington without a guide, the *Boston Evening Transcript* opined, "Strangers rash enough to go on to [Mount Washington] without a guide, should make their wills before starting, and if they escape death, should not complain if they read accounts of their recklessness in the papers headed 'attempted suicide.'"[13]

In an account of the trip that later appeared in one of his sermons, Thompson added that he thought divine providence was behind their finding shelter. After describing the first part of the climb in much the same terms as Grant - "Commencing an ascent... in the afternoon, and in comparatively fair weather" - the weather turned, and Thompson, ever the preacher, wrote about it eloquently:

> *It seemed as if all the forces of nature were roused to wrath at the temerity of mortals in climbing to those sublime, awful heights. The path grew indistinct; actual night began to settle down, and amidst that pitiless pelting, having no guide, we lost our way. At length we lighted upon a small piece of board with the word "Summit" freshly written upon it with ink. Following, though blindly, the direction thus given, and though still losing the way, we at last stumbled in the dark, upon the desired place of refuge. It was within less than an hour previous that a Christian gentleman, at the prompting of a suggestion—from what source I leave you to judge—had been down and placed that, the only way mark of the kind upon that perilous mountain.*[14]

Walking with their heads bowed, trying to keep the wind-driven rain from their faces and eyes, the feat of finding a stone building on a stone-strewn summit must have seemed all but impossible for the men. Imbuing the physical sign with divine properties was Thompson's natural inclination.

If Thompson viewed the climb as a religious experience, their fellow hotel guest Grant viewed the next day's sunrise from the summit as one as well. Penning a letter to an unnamed friend from the Summit House on Tuesday morning, August 25, Grant wrote:

> *About five o'clock I was awoke by one of the attendants coming to my state room . . . telling me to get ready and see a sunrise. I doubted it very much, but he opened the door, and I shall never for get the appearance presented. First would rush past a rosy-coloured cloud, suggesting to me a glimpse of pandemonium from its furious, driving, rolling character; then all would be blackness. I sprang to the floor in an instant, and soon such a sight presented itself as I never imagined or could describe. The sunrise from Mount Rigi was the nearest to it that I ever saw, but that was tame in comparison. There were cascades and torrents of clouds below us; I do not exaggerate. I despaired at the time of conveying any idea of what was passing around. No painter could depict it, for motion was one cardinal feature. It was almost impossible to stem the icy wind sufficiently to go a few feet; the rocks were covered with heavy hoar frost, the mercury having been at 25° during the night, and now standing at 31°.*[15]

Thompson and Grant wrote about their time on the mountain in spiritual terms, albeit death-defying ones. Instead of philosophizing, Marsh took action to find an easier way up the mountain so others could experience what he had with less risk. The effort engaged him for nearly a decade before his ideas were made real on the slopes of the mountain that had done its best to kill him.

Sec. 5 - Bermudes on "Crazy Man" Marsh

Charter and Patent, 1858

Upon his return to Boston Marsh threw himself into consideration of a better way to ascend the mountain. As Marsh saw it, he needed to attack the challenge from three directions: he needed to determine how to achieve a safer and easier method of climbing the mountain; he needed to secure reasonable rights to attempt that method on the mountain; and he needed financial backing not only to build the means of transport but also to ensure the success of the enterprise. He started work immediately on the first two steps.

Marsh considered several possible designs for ascending the mountain before selecting his champion. He first considered a stationary engine using ropes or cables to pull passenger cars up or let them down, much like the recently constructed tourist funicular railway on Mount Holyoke in Massachusetts. If he did not have personal experience with this railway, he certainly had experience with a railroad of similar design - the Mohawk and Hudson Railroad that used an "endless chain" at both ends of the sixteen-mile long track to get the trains up and down the steep valley slopes of the Mohawk and Hudson Rivers. Marsh rode this railroad on his way west in 1832 to bypass the twenty-seven Erie Canal locks between Albany and Schenectady, New York. He discarded this idea as impractical as the weight of the chain would be considerable for such a high mountain. If he were to use several stationary engines, he did not have a way to get them into place on the mountain.[16] He also considered an option that used only two cog rails, discarding this as impractical "as every mechanic will see I must necessarily go in a straight line" with this system - the two cog gears must necessarily get out of phase with the cog rails when the locomotive is in a turn. Fairly confident that turns would be required, and not wanting to limit the design at so early a date, Marsh rejected this option. After experimenting with track models and locomotive models during 1857 and 1858, he finally conceived the design he eventually adopted: a center cog rail between two standard rails. He hired a mechanic to create a model of an engine and track using this design. The model was powered by "a coil spring concealed within the boiler." This was the model he used to demonstrate the idea during the June 1858 charter hearing before the New Hampshire state legislature.[17]

One option that Marsh did not mention, but that was then under consideration by some in the small world of those seeking new ways of ascending mountains, was the idea of a balloon railway. In 1850 the editors of *Scientific American* saw fit to both publish the idea of a balloon railway and undermine it. "All attempts to apply balloons to the purposes of conveyance," the editors stated, "we must regard as wild chimeras, tending only to disappoint the projectors." The editors of *Harper's Weekly* were not so dismissive in their April 1859 issue when they shared that a German engineer and architect had proposed a balloon railway for Switzerland's Mount Rigi. "Should it prove successful there," the editor opined, "no doubt some shrewd Yankee will facilitate the ascent of Mount Washington, or some other of our celebrated heights, by such means." Marsh left no indication that he saw or considered a balloon railway. By the time of the 1859 *Harper's* article he had already chosen his preferred approach and was busy building the technical foundation upon which to construct it.

Two contemporary documents, the 1858 Cog charter and Marsh's 1858 patent submission for the "Improvement in Locomotive-Engines for Ascending Inclined Planes," offer the best evidence concerning what Marsh was thinking and what he had accomplished by the summer of 1858. The application was received by the United States Patent Office on August 30, 1858. After it was initially rejected that September, Marsh modified it, resubmitting it three years later in August 1861. The patent office accepted it on September 10, 1861, as patent number 33,255.

Marsh's patent application was extremely specific on the method of driving the locomotive. The drawing and the text referred to outer rails, a central rail consisting of a gear (or cog) rack, running wheels that supported the locomotive upon the outer rails, and a gear (or cog) wheel that worked in the central rail's gear rack, driving the engine up the incline (the outer wheels not being driven). Marsh also proposed a mechanism to prevent the gear wheel from being lifted out of the gear rack.[20] The drawing attached to the patent application was of a horizontal boiler engine, which was the standard design for railroads at the time, although railroads did not travel up steep grades as the Cog would do. By the time construction on the Cog's engines would begin in the mid-1860s, Marsh had reworked the boiler design and adopted a vertical construction, which enabled the boiler to remain level even when the Cog was ascending at grades of up to 37 percent. Clearly, in the summer of 1858, Marsh had not yet thought through all the technical issues to the final, implemented designs.[21]

The bill for the Mount Washington Railway Company's charter was introduced to the state legislature on Thursday, June 17, 1858, by Representative William Conn of Portsmouth. As Marsh recalled in 1876, when his

bill for a charter was introduced, "every member without an exception ridiculed and scoffed at the idea, when the bill was first read in the House it created a universal burst of laughter."[22] Marsh's bill was introduced two days after Lancaster representative John M. Whipple introduced a bill to extend the time for the Mount Washington Road Company to construct their road on the mountain, having arrived at the original charter's expiration date with only a portion of the proposed road constructed. Marsh's bill requested charters for railways to the summits of Mount Washington and Mount Lafayette and claimed each would have three rails, as disclosed in his patent application. He requested ten years to construct the railways, which the House in its deliberations reduced to five years. Although the bill requested charters for railroads on two mountains, the legislature, perhaps as a result of conversations with Marsh, named the resulting corporation the Mount Washington Railway Company.[23] The state charter enabled the formation of a joint stock company and the use of eminent domain for the right-of- way should that prove necessary.

During the legislative process wording was added to Marsh's proposed charter that limited the Mount Washington Railway Company's options for where it could build on Mount Washington. On June 21 Whipple requested that the House send Marsh's bill back to committee for an amendment that tied the Mount Washington Railway Company and the Mount Washington Road Company together. Because the Mount Washington Road Company was, at least legislatively, an on-going entity (although it was half-completed, bankrupt, and, as far as the public knew, abandoned in 1858), the Mount Washington Railway Company was prohibited from locating its right-of-way over the roadway that the Road Company had built. Furthermore, the Railway Company was prohibited from building on the eastern or northeastern side of Mount Washington without the Road Company's consent. Because the Mount Washington Road Company's original 1853 charter authorized it to build a road from the Peabody River to the summit of Mount Washington and then "to some point on the northwesterly side of said mountain, between the Notch of the White Mountains, in Crawford's Grant, and Cherry Mountain," the legislature in the amended Cog charter gave the Road Company precedence on the western side of the mountain as well. These provisions meant that if Marsh was going to follow the letter of the law, he would need to coordinate his right-of-way with the Road Company.[24] The governor signed the Railway Company's charter bill on June 25, 1858.

Marsh may have been the first to put into motion a feasible plan for building such a railroad, but he was not the first to conceive of such a project. In 1853 the newly chartered Mount Washington Road Company backhandedly ushered in the idea of a steam railway on Mount Washington. During the summer of 1853 Robert Stephenson, the famed English locomotive and railway engineer, stopped in Gorham on his way from Portland, Maine, to Montreal on the Grand Trunk Railroad. During the stop he and his traveling companions discussed the proposed mountain road with the road's surveyors and engineer. Stephenson "spoke in terms of admiration of the project, pronouncing the scheme entirely feasible." He also expressed the opinion that "the amount of travel to the summit of Mount Washington would yet require the use of a railway," albeit powered with horses instead of locomotives. In the spring of 1854, after examining the engineering plans and survey for the Carriage Road, the editor of the State of Maine newspaper wrote that the road would be the end of "the romance of horseback riding up the mountains, with its hairbreadth 'scapes and its perils by precipice and floods." The editor then took Stephenson's idea a bit further, musing that, "Who knows but that in a year or two we shall 'steam it' to the very pinnacle of the mountain." If Marsh was a crazy man for proposing his steam railway in 1858, Stephenson and a Portland newspaper editor beat him to the idea in 1853 and 1854.[25]

Five grantees were named in the Cog's 1858 charter: Marsh himself, Lester M. Clark, George Hutchins, William W. Russell, and Denison R. Burnham. Four of these men are never mentioned in any Cog histories. Only two of the four are mentioned in any official Cog records and then only once.[26] Why Marsh collected these men as associates is unknown. He may have known them as family friends from the Pemigewasset Valley or in some professional capacity. What they were told or expected from being named as grantees is also not known.

Clark was a thirty-eight-year-old Boston merchant in 1858, and over the next few years he expanded his business interests into shoe manufacturing, became a director of both the Howard Bank and Howard Fire Insurance, and amassed a sizeable fortune. In Clark Marsh found an upwardly mobile professional businessman with sufficient personal wealth to possibly invest in a railroad.[27]

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Hutchins was an experienced businessman prior to being named as a Cog associate. Fifty-eight-years old in 1858, he lived in Concord and was a merchant in English, American, and West India goods. He was a founder of the Concord Gas-Light Company in 1850 and served as a director of the Union Bank of Concord.[28]

Russell was a Plymouth merchant who has proven difficult to identify. Unfortunately for historians, there were two men named William Wallace Russell in Plymouth during the 1850s, a father and son. In 1858 both men were partners in Russell, Webster and Company, a general store. Either man could have been the Cog associate, but it is more likely it was the father, who was wealthier and, at fifty-seven, Marsh's age.[29]

Burnham was from Rumney and worked as a merchant in Groton and Newbury, Vermont, prior to moving to Plymouth around 1841, where he purchased William Webster's tavern, rebuilt it, and renamed it the Pemigewasset House. How Marsh knew Burnham is unclear, but in this choice of associate Marsh appears to have been shrewd. During the 1856–58 legislative session, Burnham was Plymouth's representative to the state legislature. He therefore could have been counted upon to assist with the charter's passage in the House.[30]

The selection of these men is interesting in that Marsh does not mention any of them in his extant letters and notes about the Cog Railway. The only place all four of their names are mentioned is in the Cog's 1858 charter. Only two of them, Burnham and Hutchins, were at the organizing meeting of the Railway Company in the spring of 1866 where they voted to bring on additional associates (all New England railroad men) and then disappeared from the company records.[31] As shall be seen later, these men had the opportunity to become investors in the Cog Railway but for some reason did not. When Marsh petitioned for the charter in 1858, he chose men with business experience and strong ties to New Hampshire, men much like himself; three of the four lived in New Hampshire. As Marsh later discovered, it was a different type of businessman, one with experience in railroads, that would ultimately finance his project.

The Cog Takes a Back Seat, 1859–64

Marsh was away from New England during most of the period from 1859 to 1864. His primary focus during this time was the grain-drying business, a business in which he had engaged in Davenport, Iowa, during 1852 and 1853.[32] He left no indication why he spent these years largely working in grain drying rather than devoting his energies to the Cog Railway. The business opportunity occasioned by the increase in grain exports to Europe, the near doubling of the U.S. grain crop during the 1850s, and the need for preventing spoilage during the storage and shipment of grains certainly played their parts.[33] Marsh took out five patents on grain drying during this time, suggesting a near total focus on the subject.[34]

While Marsh was in Brooklyn in 1864, he was in contact with the editors at *Scientific American*, then a journal of recently patented ideas. The magazine covered two of his grain-drying patents in its January 23 and February 6, 1864, issues. Then, in its March 5, 1864, issue, "Marsh's Plan for Ascending the White Mountains by Steam" ran on the front cover, accompanied by an article that made liberal use of Marsh's patent descriptions and provided a short history of how locomotives had overcome steep grades up to that time. It also included material that could have only been provided by Marsh.[35] The accompanying fanciful illustration portrayed the Cog's right-of-way on grade rather than on trestle and a beautiful viaduct spanning a ravine. It also pictured a Cog locomotive with a vertical boiler for the first time, a departure from his original Cog patent application and the only extant early Cog locomotive model. Marsh's thinking on the locomotive was evolving, showing that he had continued to ponder the project even while his attention was largely focused elsewhere. Whether planned or not, the spring 1864 *Scientific American* article signified a change in priorities as Marsh shifted his attention back to his Cog project with the same energy he had been applying to grain drying.

Marsh may have only sporadically worked on the Cog during the early 1860s, but he continued to refine his ideas regarding the technical aspects of building it. In August 1861 he refiled his original patent on the railway design, which was approved the following month. Three years later, in September 1864, he filed for a patent on locomotive air brakes. He also extended his 1858 railway charter as it was set to expire in June 1863; the state legislature granted a five-year extension giving Marsh the ten years to construct the railway that he had originally requested in 1858.[36]

Marsh had requested ten years because he was sensitive to the many challenges, technical and financial, involved in completing such a project. These challenges were exacerbated by the Panic of 1857, which started on August 24, 1857, the very same day Marsh and Thompson ascended Mount Washington.[37] Well aware of the

effect of panics - having gone bankrupt himself during the Panic of 1837 while a meat-packer in Chicago - Marsh knew firsthand how they affected the availability of money. Although it took the country five years to stabilize after the 1837 panic, it took Marsh ten years to financially recover and pay back all his creditors.[38] Recalling the long-term financial effect of the 1837 panic on both himself and the country, and recognizing that the 1857 panic was arguably a result of railroad speculation, Marsh had reason to believe, as he was drafting his railway petition to the legislature in 1858, that the 1857 panic would negatively affect his ability to raise funds for his railroad. It appears that the Cog charter's original five-year construction timeframe affected some scholars' thinking as well. Although Cog historians have claimed that the Civil War delayed the completion of the Cog Railway, Marsh himself had always projected ten years to complete the project, recognizing the inherent difficulties in designing, financing, and constructing his railway. His initial request for ten years in the Cog's 1858 charter is sufficient proof of his thinking in this area.

Even with the nation's relatively quick recovery from the 1857 panic, financing the project remained an ever-present problem for Marsh. Fortunately for him and his potential investors, they were able to learn from the experience of the Mount Washington Summit Road, which opened in 1861. It took two companies to push the Carriage Road to the summit. The Mount Washington Road Company, the first company that tried, formally went bankrupt in 1859. Its successor, the Mount Washington Summit Road Company, completed the roadway in August 1861, after half of that tourist season had already passed. Each year, starting in 1862, when the Mount Washington Summit Road Company held its annual meeting, Marsh and his potential investors gained access to the company's receipts for the preceding year.[39] The Summit Road may have also disclosed the number of one-way trips up or down the road at the annual meetings. During the first two full seasons of the road being open (1862 and 1863) there were 5,787 and 10,974 one-way trips, respectively.[40] This practical information helped Marsh and his investors calculate and confirm the viability of his railway idea, but he had yet to transform all this planning into action. That was about to change.

The Dream Takes Shape, 1864–66

Prior to 1864 Marsh's activities on the Cog were more intangible than tangible. He owned the intellectual property in his patent on locomotives climbing inclined planes, and he had permission from the state legislature to form a company to build railways up Mounts Washington and Lafayette. With the technical foundation for the Cog now laid, he was ready to make it real. To do so he redoubled his efforts to obtain funding.

When Marsh was granted a charter in 1858, he received no further encouragement from the legislature or the public. He claimed only two people, besides himself, believed in this project during these early years: Reverend James Freeman Clarke, one of his neighbors in the Boston suburb of Jamaica Plain, and Holmes Hinkley, a noted Boston locomotive builder. Later Marsh admitted that he "talked about the project a great deal during the next few years [after receiving his 1858 charter], but did not succeed in convincing anyone of the possibility of such an enterprise."[41]

Convincing investors to finance the project became the chief obstacle for Marsh in the mid-1860s. The front-page article in *Scientific American* featuring the Cog contained at its conclusion an appeal for assistance in financing its construction. Marsh pitched the railway not as a potentially valuable entity in its own right but rather as a way to construct and support a large hotel on the summit of Mount Washington. The article read in part:

> *There is any quantity of timber at the foot of the mountain, and one great advantage of this enterprise would be to afford a means of taking lumber and other materials to the top of Mount Washington, for the purpose of erecting a large hotel on its summit; this hotel could be kept without the difficulties now in the way, if this road was in operation. If those who would be benefited by such an enterprise will lend their aid, it can be completed in two years. The cost will not be great, as no uniform grade is required according to [Marsh's] plan; thus avoiding all expense of blasting and grading for the superstructure.*[42]

Marsh's idea to promote a large hotel upon the summit of New England was later picked up by others after the Cog was in place, much to his chagrin, when John E. Lyon and Walter Aiken built a large hotel on the summit without compensating the Cog Railway for carrying the materials. This corporate malfeasance bothered Marsh for the rest of his life.[43]

In addition to the appeal in *Scientific American* Marsh also tried another tack to obtain funding. He wrote a letter to John E. Lyon, president of the Boston, Concord and Montreal Railroad (BC&M), and, as Marsh de-

scribed him, "a man principally interested in White Mountain travel." Lyon became president of the BC&M in 1860, after it had reorganized as a result of the Panic of 1857. While the railroad's name suggested an extensive line across New England and into Canada, in 1864 it was a short line running between Concord, the state capital, and Littleton, located at the edge of the White Mountains. Marsh did not receive a reply from Lyon to his letter, but he recalled that when the two men finally met, Lyon said he thought the letter was from some sort of "crazy man."[44] Given Lyon's initial impression of Marsh, then, it is remarkable that Marsh managed to secure a meeting with him. An intermediary to introduce the two men was probably the key to this meeting, and Holmes Hinkley was likely that intermediary.

Hinkley was a Boston-based steam engine manufacturer who had been constructing steam locomotives since 1840. His company, Hinkley and Drury Works, started selling locomotives to the BC&M in 1848, the year the railroad started passenger service between Concord and Sanbornton Bridge (Tilton). Between 1848 and 1858, fourteen of the BC&M's sixteen locomotives were built by Hinkley and Drury Works.[45] As with the BC&M, the Panic of 1857 enfeebled Hinkley's company. As Hinkley explained, "All the railroads that were owing our corporation failed to meet their obligations, which embarrassed our company very much." The business continued operating, however, by mortgaging both the company's property and Hinckley's substantial personal and real property, "until the autumn of 1859, when we were obliged to fail after all."[46] One of the railroads that failed to meet its obligations to Hinkley and Drury Works was the BC&M. Perhaps for this reason Hinkley was made a BC&M director in 1858, to help steward the railroad's resources in the best interests of its creditors. As a director he would have had a close working relationship with its president, Lyon.[47] Marsh met Hinkley sometime during 1857 or 1858 when he asked the noted locomotive builder for his appraisal of his mountain-climbing locomotive design. Marsh reported that Hinkley "said I could ascend a grade with such an engine, but he did not believe in the feasibility of the Mt. railroad."[48] Despite his lack of faith in the financial viability of the project, but certain of its technical capabilities, Hinkley was likely the middleman who introduced Marsh to Lyon sometime early in 1865.

With the financing for the Cog still in the air, Marsh took initial steps during 1864 to prepare for the railway's construction. He started by purchasing land in the White Mountains with his own funds. It was only at this time that Marsh's plan for the Cog's route became known based on the property he purchased: he planned to ascend the mountain from the west side. He purchased his first parcel in Nash and Sawyer's Location in August 1864, paying $15,000 for 200 acres that had once belonged to Ethan Allen Crawford and his wife, Lucy.[49]

During the summer of 1865 Marsh, his eldest son Frank, and a third person, most likely Orville E. Freeman of Lancaster, surveyed the route up the mountain that the Cog would eventually follow. Marsh and Frank frequently stayed at the Crawford House, which stood at the head of the White Mountain Notch and about four-and-a-half miles away as the crow flies from what would ultimately become the Base Station of the Cog. The two men registered at the Crawford House on five separate occasions between May 18 and August 6.[50] They may have also stayed at the old Ethan Allen Crawford stand (about five miles from the Base Station) as Marsh wrote Lucy Crawford in February 1865 that he had made improvements to it.[51] Marsh later described this early effort on the mountain: "I had been on the Mt. with my son who is a civil engineer, and surveyed the steepest part of the Mt. to ascertain its grade. Afterwards, with the assistance of another surveyor, we surveyed the different routes up the Mt., and finally decided to start where the depot is at the base of the Mt." He found that there was a "simple horse path or logging road" that led from the closest public road at Fabyan "to within half a mile from where [the railway] started," a track that would be used to haul supplies to the Base outpost five miles in the woods.[52]

Marsh's vision, however, went beyond a railway to the summit of Mount Washington. He wanted to create a destination for tourists. In July 1865 Marsh and three others - Cog grantee Lester M. Clark, BC&M superintendent J. A. Dodge, and Boston attorney John W. Titus - were granted a charter for the New Fabyan House Company.[53] This hotel, according to the charter, was to be located "near or on the site of the hotel formerly kept by one [Horace] Fabyan, near Mount Washington." In addition to the hotel, the company was empowered to lay out, build, and maintain a horse railroad or turnpike road from the hotel to the base of Mount Washington with the right to connect with "any railroad running on to Mount Washington."[54]

All of these plans depended upon external financing. Hinkley's introduction left Lyon intrigued but not yet convinced. After all, Marsh could not expect to go from "crazy man" to funded entrepreneur in one meeting. Lyon would have been aware by this time, however, of the Carriage Road's success, the economic growth it was bringing to the east side of the mountain, and the business it was generating for the railroad in Gorham. Marsh continued to speak with Lyon about the railway for the next six months while also speaking with Nathaniel White, a Concord-based businessman who was, according to Marsh, "an old acquaintance of mine." He was also in talks with Henry Keyes, a Newbury, Vermont, resident and president of the Connecticut and Passumpsic Rivers Railroad. While all three men were now paying attention to Marsh, they had not committed funds to build the railway, even after Marsh had agreed to invest large amounts of his own fortune in the project. In an attempt to convince them, Marsh created a steam-powered model to scale: "I went to the expense of $500 and got up a complete steam engine and car, and some twenty feet of track on which I worked the locomotive at a grade equal to Mt. W.: eighteen hundred feet to the mile. The engine weighed seventeen pounds and I could put a fifty-pound weight on the car and run it up and down the track in my office in Boston as often as I pleased." The engine incorporated Marsh's patented atmospheric brake "and other appliances for safety in descending the grade." With the model in place he urged his potential investors to come and see it traveling between the first and second floors of his Boston office. Eventually Lyon relented and offered Marsh $5,000 if Marsh would put up the same amount and obtain subscriptions for $10,000 more.[55]

The model engine and track were impressive, but even this practical, if miniaturized, demonstration was not enough for some of Marsh's skittish prospective investors, resulting in him sweetening the deal. To the last two of what would become the original Cog shareholders, Joseph A. Dodge and Joseph P. Pitman, the BC&M superintendent and a BC&M director, respectively, Marsh gave his "personal guarantee and warrant that the stock should [always] be worth $0.50 on the dollar" in order to get $20,000 subscribed and bind the other stockholders to their subscriptions.**56** That was not all Marsh had to do; he also had to functionally demonstrate the railway on the slopes of Mount Washington before his investors would part with their first assessment. In other words, Marsh, with his own resources, had to con- struct a demonstration track on the mountain with all that entailed: build a blacksmith shop, get the rail to the site, design and construct a locomotive, and make the old Ethan Allen Crawford and Horace Fabyan path sufficient to get the locomotive to the base. Marsh calculated this cost at about $40,000— all of which fell on him.**57** Only after a successful demonstration would his investors, almost exclusively New England railroad men, finally commit to the project. Marsh must have felt optimistic about his prospects because during November 1865 he bought the entirety of Chandler's Purchase from William Heywood and Jacob Benton, paying $1,000 for their 20,000 acres.**58** It is adjacent to this land, actually in Thompson and Meserve's Purchase, that Marsh located the Cog's Base Station.

With the prospect of funding finally secured Marsh went to work. The contract for the railway's first locomotive, named *Hero* and later popularly called *Peppersass*, was awarded to Campbell and Whittier of Boston during the winter of 1865–66. He sent Frank, a onetime engineering student at Rensselaer Polytechnic Institute, to oversee the construction of the locomotive, "under my directions." Marsh later claimed that the locomotive "was a perfect success and answered every purpose for carrying passengers and freight."**59**

Marsh then organized the company and commenced construction of the railroad on the mountain. The first corporate meeting was held on April 27, 1866, at Concord's Phenix Hotel. Four men were present at the meeting, three of the grantees (Marsh, George Hutchins, and Dennison R. Burnham), and a clerk—local attorney Asa Fowler—to record the group's actions. At that initial meeting Marsh was chosen chairman, and Burnham moved that "John E. Lyon, Nathaniel White, Henry Keyes, Nathaniel G. Upham, and Onslow Stearns be admitted as associate members of the corporation."**60** Four of the five men they voted into the company were New England railroad presidents. At this meeting the company also agreed to purchase some of Marsh's land. Hutchins and Burnham then disappear from the Cog story forever.

Two weeks later, on May 10, Marsh sold a six-rod- wide right-of-way to the Railway Company for $1,000 along with "such additional land necessary... for depots, repair shops, and other accommodations." He also gave the company the right to "take and use... all such timber, stone, and other materials as may be necessary." The tract of land that Marsh sold the company was supposedly a very small portion of the 20,000 acres he had purchased in 1865, but he sold the tract for the same price he had paid for the entire parcel just the year before, earning himself a tidy profit.**61** As it turns out, the land he sold to the company was not even his to sell, al-

though he seems to have been unaware of this fact. The entire parcel the Cog was built on belonged to someone else. Damages to the landowners for the land the Cog took, in Thompson and Meserve's Purchase and Sargent's Purchase, was resolved by the New Hampshire Railroad Commissioners during the 1870s for a nominal sum.

At the next corporate meeting, on May 12, also at the Phenix Hotel, a new clerk, Charles Lane, the clerk for the BC&M, kept the minutes; two new associates, Pitman and Dodge, were voted in; and the company formally accepted the act incorporating it, passed by-laws, and elected directors and officers.**62** At the first directors' meeting, on May 21, again held at the Phenix Hotel, in addition to voting for officers (Marsh was elected president and Lyon became treasurer), two further actions were taken by the members: Marsh was appointed as the constructing agent for the railway, and Upham and Lyon were named a committee to settle accounts with Marsh for his patent rights.**63**

Concurrent with the start of the corporate meetings, Marsh brought workers to the base of his railway, located at an elevation of 2,700 feet, to start construction in late May 1866.64 Initial conditions for the workers were primitive. The men camped in the woods while they built a log cabin using oxen, single file, to haul the logs over the rugged terrain. Once the workers' quarters were finished, the men started hand hewing timber for the railway. Marsh meanwhile turned his focus to widening what he termed "the small and rough logging road" that most recently had been the White Mountain House's carriage road to the base of the mountain. The team widened the road sufficiently that the oxen could travel as teams (side-by- side) and started bringing in supplies, including rail and center rack, fabricated by the Machine Company of Boston and hauled by teamster Ed Lucas. Soon, the *Boston Morning Herald* reported that work on the Cog was progressing, and that "the old White Mountain [Crawford] Notch is alive with Mr. Marsh's men." The same newspaper reported that on June 29, "the engine for the steam railroad up Mount Washington passed up the Boston, Concord and Montréal Railroad [to Littleton]." On the day after the engine was delivered to Littleton, Cornelia, Marsh's wife, purchased a house in that town, about twenty-six miles from the mountain construction site.**65** With this action, the Marsh family settled in the White Mountains of New Hampshire where Marsh could oversee construction of the Cog, which would continue for the next three years. The story of the actual construction of the Cog, with all the challenges it presented to Marsh, is for another day.

Author's Note: The author is grateful for the efforts of many people who helped bring the story of the Cog's early days to light. He would like to specifically acknowledge the contributions of Richard S. Joslin, Sylvester Marsh's great-grandson, for access to his voluminous research on Marsh and his Cog activities, as well as supplying good cheer, acting as a sounding board on many points, and providing critical comments on an early draft of the article; Peter Crane, librarian of the Mount Washington Observatory's Gladys Brooks Library, for access to its Marsh holdings; Howie Wemyss, Mount Washington Auto Road general man- ager, for access to the Summit Road's corporate minutes; Donna-Belle Garvin for her close reading and feedback on the article; and Elizabeth Dubrulle for helping to bring it home.

Notes

1. There are four significant books on the Cog Railway: C. H. Hitchcock, et al, Mount Washington in Winter, chap. 5 (Boston: Chick and Andrews, 1871); Glen M. Kidder, Railway to the Moon (Littleton, N.H.: Courier Printing Company, 1969); Donald H. Bray, They Said It Couldn't Be Done (Dubuque, Iowa: Kendall/ Hunt Publishing Co., 1984); and Richard S. Joslin, Sylvester Marsh and the Cog Railway (Manchester, N.H.: Morgan Press, 2000).

2. The appellations "crazy man" and "railway to the moon" are pre- served for posterity only by Sylvester Marsh himself in his circa 1876 summary of the Cog ("Origins"), where he includes the story about John E. Lyon referring to him as a "crazy man," and in his 1883 Senate Labor Committee interview (p. 620), in which he quoted the phrase "railway to the moon" when recount- ing the legislature's response to the Cog charter request. See later in these notes for full citations for these sources. Apparently, Marsh did not object to these terms.

3. Sylvester Marsh, "A Brief Outline of the Origin and History of the Mt. Washington R.R.," MSS 1984.16.21, circa 1876, Mount Washington Observatory's Gladys Brooks Memorial Library, North Conway, N.H., hereafter cited as "Origins." The same document, with edits, may be found in Mount Washington News Bulletin 14 (September 1973): 55–60, 55. For the reader's benefit, this article will use the page numbers from the published Bulletin, but the spelling and punctuation as contained in the manuscript.

4. Henry V. Poor, Manual of the Railroads of the United States for 1879 (New York: Sampson Low & Co., 1879), 30. A dividend of 9 percent was paid. Marsh, in his 1883 Senate testimony stated, "[The railway] now pays ten percent. dividends on its stock. It is paying pretty well now." U.S. Congress Senate Committee on Education and Labor, "Report of the Committee of the Senate upon the Relations between Labor and Capital," 5 vols. (Washington, D.C.: Government Printing Office, 1885), 3:620

(cited hereafter as "Senate Testimony"). In his Senate committee testimony, given in Boston on October 22, 1883, Marsh was questioned by U.S. Senator Henry Blair, the junior senator from New Hampshire and a Campton native. Blair stated the purpose of Marsh's testimony was "to give the people of the present day an idea or picture of the industrial life of the American people, and of their development during your lifetime and within your recollection" (p. 607). While Blair does not state why Marsh was chosen to testify before this committee, it was likely because of Marsh's success as an entrepreneur and famous New Hampshire (and Campton) son. See Gordon B. McKinney, "U.S. Senator Henry William Blair and the 'Labor and Capital Hearings' of 1883: An Industrial Economy in Microcosm," Historical New Hampshire 56 (Spring/Summer 2001): 20–33, for more information on these hearings.

5. James R. Jackson, ed., History of Littleton, New Hampshire, 3 vols. (Cambridge, Mass.: University Press, 1905), 3:325. When Marsh moved east in 1855, his two children by his first wife, Charlotte, were living with their maternal grandparents. Marsh and his second wife, Cornelia, whom he married in March 1855, started having children in 1856.

6. Letter, Augustus C. Thompson to Martha A. Thompson, August 18, 1857, and "Augustus C. Thompson's Pastoral Reminiscences, 1857," Thompson Papers, MS 61-3152, Hartford Seminary Foundation Library, Hartford Seminary, Hartford, Conn. Marsh places himself in the mountains during August 1857 in "Origins."

7. Boston Congregationalist, May 15, 1857.

8. John Marsh's headstone, Pine Grove Cemetery, Thornton, N.H. Richard S. Joslin understood that John Marsh's decline in health was lengthy. Author conversation with Richard Joslin, Cambridge, Mass., April 27, 2019.

9. The bell, cast by Meneely of Troy, N.Y., is marked 1857. Author conversation with Campton historian Alan Hill, Campton, N.H., May 22, 2018.

10. Guy Waterman, An Outline of Trail Development in the White Mountains, 1840–1980, ed. Al Hudson and Judith Maddock Hudson (Randolph, N.H.: Randolph Mountain Club Archive, 2005); S. Hastings Grant, "With Professor Guyot on Mount Washington and Carrigain in 1857," Appalachia 11 (1905–08): 229–39, 232, stated that "very few have the courage to walk up [Mount Washington] at all." Jeffrey R. Leich, "Stone Hotels of Mount Washington," Appalachia 51 (June 1997): 41–62, 47.

11. Thompson, "Pastoral Reminiscences," Extract from sermon "Mountains," preached September 1857, Papers of Augustus Charles Thompson (1812–1901), MS 61-3152, Hartford Seminary Foundation Library, Hartford Seminary, Hartford, Conn.

12. During the period of August 19–27, Spaulding noted two stormy days (August 24 and 25), two rainy days (August 20 and 23), and the rest of the days during this period were "fine," "pleasant," or "cloudy." "Mount Washington Weather and Accounts, 1855– 1858," MS 624, Box 2, John H. Spaulding Papers, 1790–1906, Rauner Library, Dartmouth College, Hanover, N.H.

13. Grant, "With Professor Guyot," 232–33; Boston Evening Transcript, August 26, 1857. The reference to a guide in the Boston Transcript was probably due to the recovery of Benjamin Chandler's remains about one month earlier. Chandler, who went hiking without a guide, had gone missing on the mountain during August 1856.

14. Thompson, "Pastoral Reminiscences," Extract from sermon "Mountains."

15. Grant, "With Professor Guyot," 233–34.

16. Marsh, "Origins," 55; Joslin, Sylvester Marsh, 7; "Senate Testimony," 3:621.

17. Marsh, "Origins," 55. The 1858 model is not thought to be extant.

18. Scientific American, August 24, 1850.

19. Harper's Weekly, April 30, 1859.

20. Otto Gruninger, "Installation of Cogwheel Railway Technology on Mount Washington, N.H.," Verlin Garber, trans. (unpublished manuscript, June 1869), 38. This manuscript is held by the Swiss Transport Museum, Luzern, Switzerland. This report con- firms the rack-gripping feature was used in the original construction. "The President's Trip to the White Mountains," Frank Leslie's Illustrated Newspaper, September 11, 1869, states that Marsh pointed out this device to President Ulysses S. Grant during Grant's August 1869 trip up Mount Washington. The safety device was also pointed out to the public earlier in "The Mount Washington Railway," Littleton Republic, July 30, 1869. This feature was removed and is no longer used.

21. U.S. Patent No. 33,255, issued September 10, 1861.

22. Marsh, "Origins," 55.

23. No petition for the Cog Railway exists in the New Hampshire Archives and Records Management petition collection. The Journal of the House and Senate for 1858 was used to determine how the House and Senate modified the bill as it moved through the legislature. Fortunately for posterity, the committees documented their activities fairly well. Journal of the House, June

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Session 1858, pp. 204, 158; Mount Washington Railway Charter, New Hampshire Laws, chap. 2157, June 25, 1858, hereafter cited as Laws.

24. Journal of the House, June Session 1853, pp. 239, 298; Mount Washington Railway Charter, Laws, chap. 2157, June 25, 1858; and Mount Washington Road Charter, Laws, chap. 1486, July 1, 1853.

25. State of Maine newspaper, Portland, Me., August 10, 1853, and May 13, 1854. Italics in original.

26. Mount Washington Railway Charter, Laws, chap. 2157, June 25, 1858.

27. Lester M. Clark, 1860 U.S. Federal Census, Boston, Suffolk County, Massachusetts; Boston Directory (Boston: Adams, Sampson & Co., 1858, 1860, and 1862), 1858, 160; 1860, 95; 1862, 84, 452, 484, and 521.

28. George Hutchins, 1860 U.S. Federal Census, Concord, Merrimack County, New Hampshire; James O. Lyford, ed., History of Concord, 2 vols. (Concord, N.H., Rumford Press, 1896), 1:456, 624, 661, and 2:756.

29. William Wallace Russell, 1860 U.S. Federal Census, Plymouth, Grafton County, New Hampshire; Ezra S. Stearns, History of Plymouth, New Hampshire, 2 vols. (Cambridge, Mass., University Press, 1906), 1:421, 429–31, and 2:601.

30. Denison R. Burnham, 1860 U.S. Federal Census, Plymouth, Grafton, New Hampshire; Stearns, History of Plymouth, 1:434, 2:89, 90.

31. "Minutes of the Annual Stockholders' and Directors' Meetings from 1868–1894," Mount Washington Cog Railway Records, 1858–1921 (hereafter cited as "Cog Minutes"), MS-625, Rauner Special Collections, Dartmouth College, Hanover, N.H. The men's names only show up in the first documented meeting on April 17, 1866. It is possible they were at some of the subsequent meetings as the meetings of May 3 and May 12, 1866, do not contain a list of attendees.

32. "Senate Testimony," 3:619.

33. "Senate Testimony," 3:620. For the increase in U.S. grain production, see Donald B. Dodd, Historical Statistics of the States of the United States: Two Centuries of the Census, 1790–1990 (Westport, Conn.: Greenwood Press, 1993), 310.

34. Marsh Genealogy, History of Littleton, New Hampshire, 3 vols. (Cambridge, Mass.: University Press, 1905), 3:325; U.S. Patents No. 37,403 (December 1862) for grain drying; No. 37,632 (January 1863) for grain drying; No. 41,781 (January 1864) for lard rendering; No. 42,957 (April 1864) for grain drying; and No. 48,573 (May 1865) for grain drying.

35. Scientific American, March 5, 1864.

36. Mount Washington Railway Company Time Extension, Laws, chap. 2794, June 26, 1863.

37. Charles W. Calomiris and Larry Schweikart, "The Panic of 1857: Origins, Transmission, and Containment," Journal of Economic History 51 (December 1991): 807–34, 808. moved east in 1855, his two children by his first wife, Charlotte, were living with their maternal grandparents. Marsh and his second wife, Cornelia, whom he married in March 1855, started having children in 1856.

38. Letter, Augustus C. Thompson to Martha A. Thompson, August 18, 1857, and "Augustus C. Thompson's Pastoral Reminiscences, 1857," Thompson Papers, MS 61-3152, Hartford Seminary Foundation Library, Hartford Seminary, Hartford, Conn. Marsh places himself in the mountains during August 1857 in "Origins."

39. Boston Congregationalist, May 15, 1857.

40. John Marsh's headstone, Pine Grove Cemetery, Thornton, N.H. Richard S. Joslin understood that John Marsh's decline in health was lengthy. Author conversation with Richard Joslin, Cambridge, Mass., April 27, 2019.

41. The bell, cast by Meneely of Troy, N.Y., is marked 1857. Author conversation with Campton historian Alan Hill, Campton, N.H., May 22, 2018.

42. Guy Waterman, An Outline of Trail Development in the White Mountains, 1840–1980, ed. Al Hudson and Judith Maddock Hudson (Randolph, N.H.: Randolph Mountain Club Archive, 2005); S. Hastings Grant, "With Professor Guyot on Mount Washington and Carrigain in 1857," Appalachia 11 (1905–08): 229–39, 232, stated that "very few have the courage to walk up [Mount Washington] at all." Jeffrey R. Leich, "Stone Hotels of Mount Washington," Appalachia 51 (June 1997): 41–62, 47.

43. Thompson, "Pastoral Reminiscences," Extract from sermon "Mountains," preached September 1857, Papers of Augustus Charles Thompson (1812–1901), MS 61-3152, Hartford Seminary Foundation Library, Hartford Seminary, Hartford, Conn.

44. During the period of August 19–27, Spaulding noted two stormy days (August 24 and 25), two rainy days (August 20 and 23), and the rest of the days during this period were "fine," "pleasant," or "cloudy." "Mount Washington Weather and Accounts, 1855– 1858," MS 624, Box 2, John H. Spaulding Papers, 1790–1906, Rauner Library, Dartmouth College, Hanover, N.H.

45. Grant, "With Professor Guyot," 232–33; Boston Evening Transcript, August 26, 1857. The reference to a guide in the Boston Transcript was probably due to the recovery of Benjamin Chandler's remains about one month earlier. Chandler, who went hiking without a guide, had gone missing on the mountain during August 1856.

46. Thompson, "Pastoral Reminiscences," Extract from sermon "Mountains."

47. Grant, "With Professor Guyot," 233–34.

48. Marsh, "Origins," 55; Joslin, Sylvester Marsh, 7; "Senate Testimony," 3:621.

49. Marsh, "Origins," 55. The 1858 model is not thought to be extant.

50. Scientific American, August 24, 1850.

51. Harper's Weekly, April 30, 1859.

52. Otto Gruninger, "Installation of Cogwheel Railway Technology on Mount Washington, N.H.," Verlin Garber, trans. (unpublished manuscript, June 1869), 38. This manuscript is held by the Swiss Transport Museum, Luzern, Switzerland. This report con- firms the rack-gripping feature was used in the original construction. "The President's Trip to the White Mountains," Frank Leslie's Illustrated Newspaper, September 11, 1869, states that Marsh pointed out this device to President Ulysses S. Grant during Grant's August 1869 trip up Mount Washington. The safety device was also pointed out to the public earlier in "The Mount Washington Railway," Littleton Republic, July 30, 1869. This feature was removed and is no longer used. U.S. Patent No. 33,255, issued September 10, 1861. Marsh, "Origins," 55.

53. No petition for the Cog Railway exists in the New Hampshire Archives and Records Management petition collection. The Journal of the House and Senate for 1858 was used to determine how the House and Senate modified the bill as it moved through the legis- lature. Fortunately for posterity, the committees documented their activities fairly well. Journal of the House, June Session 1858, pp. 204, 158; Mount Washington Railway Charter, New Hampshire Laws, chap. 2157, June 25, 1858, hereafter cited as Laws.

54. Journal of the House, June Session 1853, pp. 239, 298; Mount Washington Railway Charter, Laws, chap. 2157, June 25, 1858; and Mount Washington Road Charter, Laws, chap. 1486, July 1, 1853.

25. State of Maine newspaper, Portland, Me., August 10, 1853, and May 13, 1854. Italics in original.

26. Mount Washington Railway Charter, Laws, chap. 2157, June 25, 1858.

27. Lester M. Clark, 1860 U.S. Federal Census, Boston, Suffolk County, Massachusetts; Boston Directory (Boston: Adams, Sampson & Co., 1858, 1860, and 1862), 1858, 160; 1860, 95; 1862, 84, 452, 484, and 521.

28. George Hutchins, 1860 U.S. Federal Census, Concord, Merrimack County, New Hampshire; James O. Lyford, ed., History of Concord, 2 vols. (Concord, N.H., Rumford Press, 1896), 1:456, 624, 661, and 2:756.

29. William Wallace Russell, 1860 U.S. Federal Census, Plymouth, Grafton County, New Hampshire; Ezra S. Stearns, History of Plymouth, New Hampshire, 2 vols. (Cambridge, Mass., University Press, 1906), 1:421, 429–31, and 2:601.

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35. Scientific American, March 5, 1864. 36. Mount Washington Railway Company Time Extension, Laws,

chap. 2794, June 26, 1863.
37. Charles W. Calomiris and Larry Schweikart, "The Panic of 1857:

Origins, Transmission, and Containment," Journal of Economic History 51 (December 1991): 807–34, 808.

38. Marsh Obituary, Concord Monitor, December 31, 1884.

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39. From the records of the Mount Washington Summit Road Company, the first annual meeting was held May 27, 1862 (p. 69), and the second on May 26, 1863 (p. 76). Both meetings were held at the Alpine House in Gorham. Summit Road records cour- tesy of Howie Wemyss, general manager of the Mount Washington Auto Road.

40. "Statement of Travel over Mount Washington Summit Road, 1860–93," Mount Washington Summit Road Company Records, 1796–1967, MS 911, box 3, folder 21, Phillips Library, Peabody Essex Museum, Rowley, Mass.

41. Marsh, "Origins," 55.

42. Scientific American, March 5, 1864. Located in New York City at the time, Marsh had relatively easy access to the money and rail- road men of New York, as well as to the Scientific American's offices. The magazine published articles on three Marsh inven- tions during January, February, and March 1864. The first and third articles received front-page placement, and all three ran with at least one illustration.

43. This large hotel was the second Summit House (1873–1908).

44. Marsh, "Origins," 55.

45. Walter S. Hinchman, ed., Holmes Hinkley: An Industrial Pioneer, 1793–1866 (Cambridge, Mass.: Riverside Press, 1913), 9–10, 23; and Edgar T. Mead, Up-Country Line: Boston, Concord & Montreal RR to the New Hampshire Lakes and White Mountains (Brattleboro, Vt.: Stephen Greene Press, 1975), 20, 56–57.

46. Hinchman, Holmes Hinkley, 25–26.

47. Railroad Returns, Secretary of State records, RG IV, Railroad Returns, box 22, folder 4 (1852–63), and box 23, folder 1 (1864–72), New Hampshire Archives and Records Management, Concord, N.H.

48. Marsh, "Origins," 55.

49. Deed, Isaac Dyer to Sylvester Marsh, book B16, p. 317, August 17, 1864, Coös County Deed Registry, Lancaster, N.H.

50. Crawford House Registers, vols. 1 and 2, 1859–70, MS 1976.66, New Hampshire Historical Society, Concord, N.H. Sylvester registered on May 18, June 6, July 25, and August 3. Frank registered on August 3 and 6.

51. Letter, Marsh to Lucy Crawford, February 19, 1865, Lucy Crawford Papers, 1797–1978, MS-626, Box 1, Correspondence Folder, Rauner Library, Dartmouth College, Hanover, N.H.

52. Marsh, "Origins," 57. Frank H. Burt, in an address on the 100th anniversary of the Crawford Path and 50th anniversary of the Cog Railway in 1919, shared that Freeman was the unnamed surveyor. C. E. Caswell, Boston, Concord & Montreal: Story of the Building and Early Days of this Road (Warren, N.H.: The News Press, 1919), 126. Frank Burt's son, F. Allen Burt, in The Story of Mount Washington

(Hanover, N.H.: Dartmouth Publications, 1960), 87, also named Freeman as the third surveyor. F. Allen added another wrinkle when he shared that Freeman was called in after a "city surveyor" had created a route that required cuts and fills.

53. Dorothy M. Titus, comp., Percy Hobart Titus, ed., Titus Family in America (Weston, Mass.: np, 1943), 17; New Fabyan House Charter, Laws, chap. 4157, July 1, 1865.

54. New Fabyan House Charter, Laws, chap. 4157, July 1, 1865.

55. Marsh, "Origins," 55–56; J. N. McClintock, "Hon. Nathaniel White," Granite Monthly 4 (November 1880): 49–53; Frederick P. Wells, History of Newbury, Vermont: From the Discovery of the Coös Country to the Present Time (St. Johnsbury, Vt.: Caledonian Press, 1902), 609–10; Letter, Sylvester Marsh, July 12, 1876, Mss. 876412, Rauner Library, Dartmouth College, Hanover, N.H.;

U.S. Patent No. 44,965, issued November 8, 1864.

56. Marsh, "Origins," 56.

57. Letter, Marsh to John Lyon, Nathaniel White, and others, April 1872, Mss. 1984.16.4, Gladys Brooks Memorial Library, Mount Washington Observatory, North Conway, N.H.

58. Deed, William Heywood to Sylvester Marsh, book B21, p. 137, November 15, 1865, and Deed, Jacob Benton to Sylvester Marsh, book B21, p. 127, November 18, 1865, both at Coös County Deed Registry, Lancaster, N.H.

59. Marsh, "Origins," 57. Frank Marsh never graduated from RPI but remained interested in engineering after leaving the Cog. Marsh family descendant Richard Joslin states that family tradition holds with Marsh undertaking the Cog project so that he

and his son could work on it together. If true, the project's success, and the active involvement of investors, had undermined that dream by 1868 when the railroad men who financed the Cog took over the operation, shutting Marsh out in all but name.

60. April 27, 1866, Directors' Minutes, "Cog Minutes."

61. Deed, Sylvester Marsh to Mount Washington Railway Company, May 10, 1866, book B8, p. 117, Coös County Deed Registry, Lancaster, N.H.

62. May 12, 1866, Directors' Minutes, "Cog Minutes."

63. May 21, 1866, Directors' Minutes, "Cog Minutes." This was the last recorded company meeting of any sort until September 2, 1867.

64. Construction had started by May 29 as the Coös Republican, on that date, quoting the Laconia Democrat, stated, "the work of building the road has actually commenced."

65. Marsh, "Origins," 57; Boston Morning Herald, July 4, 1866; Gruninger, "Report," 13; "Ned Lucas Writes Interesting Narrative," Littleton Courier, April 23, 1925; Deed, Franklin Eastman to Cornelia Marsh, June 30, 1866, book 291, p. 538, Grafton County Deed Registry, North Haverhill, N.H.

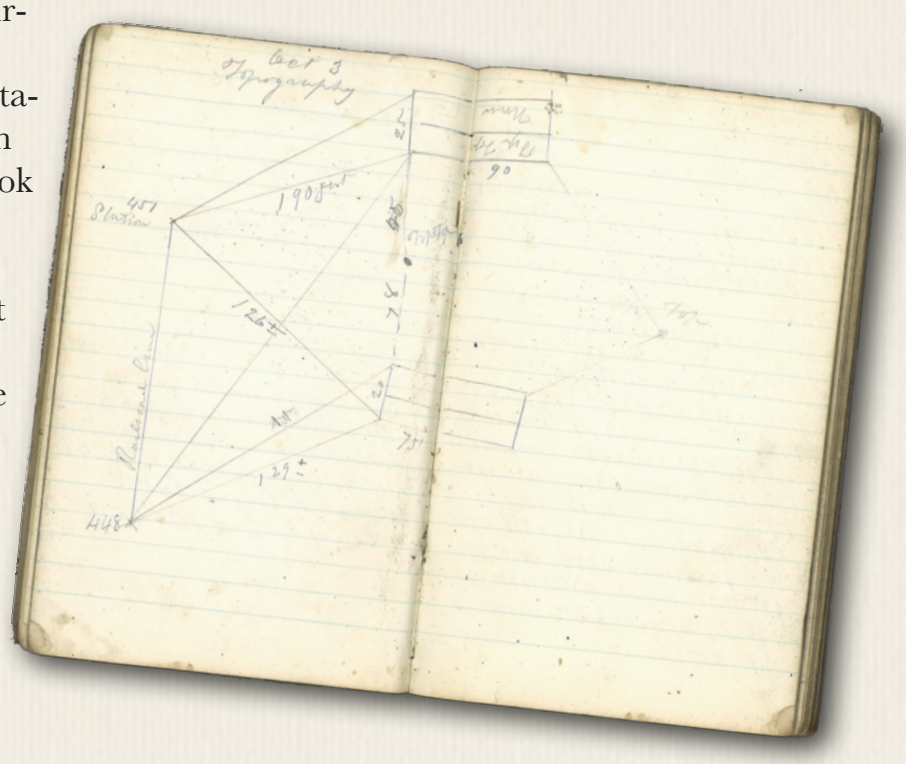
Identifying the Surveyor of an 1866 Cog Railway Field Notebook And Provenance of Said Notebook

January 14, 2024

Background and Identifying the Surveyor

On Monday, July 3, 2023, Joan Desmarais, the New Hampshire Historical Society's vice president, forwarded a note to your author *(Rob Bermudes)* from Dave Allen of Chesterfield, NH, proprietor of "Old Maps" in West Chesterfield and Greenfield, MA. Dave was familiar with an article the author wrote on the pre-construction era of the Mount Washington Cog Railway in the Fall 2019 issue of *Historical New Hampshire* and wanted to know if he was interested in a copy of a surveyor's field notebook that appeared to be from that Railway and had 1866 dates in it. The author quickly sent Allen an e-mail stating that he was indeed interested. Allen pointed to his business's website where the author downloaded all the page images of the notebook.

Upon inspection, the notebook did contain a surveyor's field notes and, after spending considerable time with the notebook's 73 pages, it was found to contain a May 1866 leveling of the Mount Washington Cog Railway for the first 5,420.25 feet (from the Base [Station 0] to "Waumbek Junction" [Station 164.25]) of the proposed right-of-way.[1] After the spring 1866 leveling activity (consuming the dates between May 10 to roughly May 22, 1866), the notebook documented the leveling and route of the right-of-way from Waumbeck Junction to the Summit (surveyed from September 30 to about October 10, 1866—what the surveyor did during the intervening months is not known). In October 1866 the surveyor leveled and described the route of the wagon road from Fabyan (the closest public road) to the Cog's Base Station, what later became known as the Mount Washington Turnpike, and is now called the Base Road. The notebook concludes with a July 1867 leveling of the road in Crawford Notch from the Crawford House down the Notch eight miles. There are also various estimates to construct the railway and turnpike, and sketches in the notebook, including an incomplete sketch *(right)* of the layout of the summit buildings in Oct. 1866.[2]



1. Taking a surveying course 24 months prior at his local community college allowed your author to interpret the notebook more or less accurately. Former NH surveyor, as well as former NH State Archivist, Brian Burford graciously shared his vast experience on multiple occasions after July 3, 2023, both in person in NH and via e-mail. "Leveling" is the term surveyors use to determine the elevation of things. The surveyor used slope instead of horizontal measurement of the distance.

2. . The 1866 surveyor's field notebook will henceforth be referred to as simply "the notebook."

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What the notebook did not contain was any person's name, either the surveyor's name or the names of any of the surveyor's assistants (and a surveying crew in the woods would usually contain 4 or 5 people, including choppers (axmen), rodmen, and chainmen, in addition to the surveyor). The notebook clearly stated what it covered, but was silent on who its creator might be. Because there is no person's name in the book, the author asked Allen for the notebook's provenance, to the extent he knew it. He said he no longer owned the notebook (he had sold it to an antiquarian map dealer "a few weeks ago"), and then shared a surprisingly deep provenance:

I have owned that book and all the other Clapp & Abercrombie (C&A) material since 1994 when I purchased the F. Deane Avery Land Surveying records from Andrew F. Wait. Wait had owned the files since about 1945 when his father-in-law F. Deane Avery died. Avery acquired the C&A records in the 1920s(?). C&A were active land surveyors/engineers from the 1890s to the 1920s. They designed routes for, and were partners with, several trolley car companies in Western Mass. A good part of their field book files (perhaps 100 notebooks) are laying out street railways, but in the early 1900s.

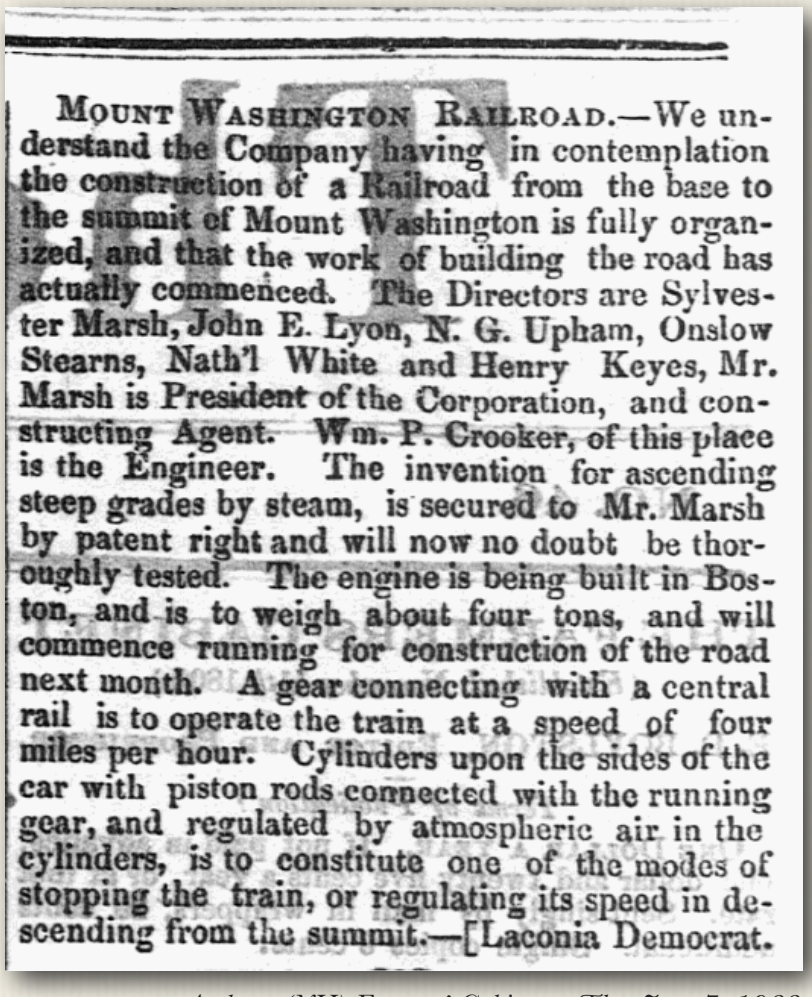
So why did [C&A] (or Avery or Wait) acquire this [Cog Railway] notebook? One possibility is a Greenfield, Mass. connection. Greenfield was the HQ for the street railways, and the Avery and Wait businesses. Can you trace Marsh (was he the 'star' of your recent [2019] article?) to Greenfield?

Here are 2 tidbits: I also have some 1850s West Point student engineering drawings made in the Mexican War. Their author was Charles Stone who was born in Greenfield and who later became a civil war general. Might Stone's heirs, who would have known Clapp & Abercrombie, have offered them the old engineering drawings?

Likewise my archives had an 1857 engineering report for a Florida railroad. That was done by Theodore Judah, a noted railroad engineer [associated with the U.S. Transcontinental Railroad] who also had Greenfield roots.[3]

So Allen knew the provenance of the lot he purchased in 1994 all the way back to C&A's ownership of it in the 1920s, 100 years ago. This suggested the Cog Railway notebook had a deep Greenfield-area history.

Sensing that General Charles Stone and Theodore Judah would be easy to confirm or refute as creators, they were checked first. Their online biographies did not put them in New England or near Mount Washington in 1866. Stone was in Virginia as an engineer and later superintendent for the Dover Mining Company, and Judah was busy "out West" with the construction of the transcontinental railroad (which opened in May 1869). With this discouraging, but not unexpected result, it was back to square one determining the notebook's creator.[4] Then, a chance re-reading of an early Mount Washington Railroad ("Cog Railway") newspaper clipping mentioned a possible name for the Cog Railway's surveyor/engineer. A June 7, 1866, clipping *(left)* from the *Amherst (NH) Farmers' Cabinet* (that had been cited from an earlier edition of the *Laconia [NH] Democrat*), already in one of the author's Mount Washington clippings folders, cited "Wm P. Crooker, of this place [Laconia]" as the May 1866 engineer of the railroad. A little further research suggested that the "Crooker" named in the article was actually William Plummer Crocker, a forty-two-year-old civil engineer living in Laconia with his wife, young son, and mother-in-law according to the 1860 U.S. Census.[5]



MOUNT WASHINGTON RAILROAD.—We understand the Company having in contemplation the construction of a Railroad from the base to the summit of Mount Washington is fully organized, and that the work of building the road has actually commenced. The Directors are Sylvester Marsh, John E. Lyon, N. G. Upham, Onslow Stearns, Nath'l White and Henry Keyes, Mr. Marsh is President of the Corporation, and constructing Agent. Wm. P. Crooker, of this place is the Engineer. The invention for ascending steep grades by steam, is secured to Mr. Marsh by patent right and will now no doubt be thoroughly tested. The engine is being built in Boston, and is to weigh about four tons, and will commence running for construction of the road next month. A gear connecting with a central rail is to operate the train at a speed of four miles per hour. Cylinders upon the sides of the car with piston rods connected with the running gear, and regulated by atmospheric air in the cylinders, is to constitute one of the modes of stopping the train, or regulating its speed in descending from the summit.—[Laconia Democrat.

- Amherst (NH) Farmers' Cabinet - Thu, June 7, 1866

3. E-mail note from Dave Allen to Rob Bermudes, July 6, 2023. In a later e-mail, August 28, 2023, to the author, Allen shared that, "My 'C&A' archives are 4 large copier boxes of musty dusty old records."

4. A quick search on *Wikipedia* for Stone and Judah was sufficient. The Cog Railway (July 3) would open about 2 months after the Transcontinental Railroad (May 10) in 1869.

5. William Plummer Crocker was born in Leominster, MA, on Nov. 25, 1817. He died in Montague, MA—the town the Village of Turners Falls resides in—and on the opposite side of the Connecticut River from Greenfield, on June 30, 1892.

This newspaper article[6], contemporaneous with the start of the Cog's construction, elevated Crocker to primary candidate as the creator of the surveyor's field notebook of the Cog Railway's right-of-way. More evidence to confirm Crocker as the creator, however, was needed. Two activities were undertaken simultaneously: 1) finding another source to validate the 1866 newspaper account that Crocker was the surveyor and 2) determining how the field notebook found its way from Mount Washington in 1866 to the C&A firm in Greenfield by the 1920s. Finding a known William P. Crocker writing sample, preferably in a contemporary field notebook (i.e., written under the same field conditions), would be a great third method of confirmation—if the handwriting matched.

Continuing Crocker's Attribution

An internet search of Crocker's genealogy and online contemporary newspaper stories commenced immediately. *Ancestry.com* was the primary genealogical resource used, but various online newspaper resources, including *Readex's Historical American Newspapers, Genealogy.com,* and *Newspapers.com* also provided genealogical and newspaper—contemporary and later—sources. Very quickly it became apparent that Laconia, NH's William P. Crocker moved to Turners Falls, MA, with his wife, Mary A.H., and son, William O., sometime in the 1870s. In the 1860 and 1870 U.S. census Crocker was listed as a civil engineer living in the Laconia section of Guilford, NH. In the 1880 census Crocker was listed as the treasurer for the Turner's Falls Co. and living in Montague, MA (which contains the Village of Turners Falls), with his wife and a domestic servant (Ellen Roy) living with him.[7] Montague is a town on the east side of the Connecticut River and the Town of Greenfield is on the west side of the river opposite Montague—they are adjacent towns, separated by the river. Thus, if Crocker was the Cog's 1866 surveyor, how his notebook ended up in the Montague/Turners Falls/Greenfield area becomes easier to comprehend.

Research found an obituary for Crocker, who died June 30, 1892, in Montague. The obituary, published on July 18 in the *Fitchburg Daily Sentinel*, stated, among other things, that "[Crocker] laid out the route of the famous Mt. Washington railroad, made the grades and superintended the construction. He surveyed the Boston, Concord, and Montreal [BC&M] railroad, and made preliminary surveys for one of the Canadian railroads." This confirms the 1866 newspaper article that Crocker was at least one of the early civil engineers for the Cog Railway and tied him to the laying out of the BC&M railroad in the 1840s, the mainline New Hampshire railroad most associated with the Cog Railway—the president of the BC&M, John E. Lyon, was the treasurer and principle executive manager of the Cog after Sylvester Marsh had successfully demonstrated the practical aspects of the Cog in late August 1866. That Crocker was known to the BC&M before performing the Cog survey suggests his selection was intentional as he was a known entity. "Wm. P. Crocker, Engineer," is also mentioned in a Mount Washington Turnpike ledger, receiving payment of $16.25 on September 30, 1867. Since the ledger was opened in March of 1867, this payment may be for Crocker's 1866 turnpike survey.[8]

Crocker's *Daily Sentinel* obituary went on to explain that he was invited to come to Turners Falls by his oldest brother, Alvah (about sixteen years his senior), then president of the Turner's Falls Company, "about 25 years ago" (or about 1867) and that "all the streets of the village were laid out by [William]."[9] The obituary also suggested why Alvah may have brought William to Massachusetts (besides brotherly love) when it stated that William's "greatest work was the [1852] topographical survey of Lake Winnipesaukee, for the Essex company of Lowell, to determine the amount of water that could be stored in the lake for manufacturing purposes in the cities on the stream [Merrimack River] below." It further stated that this activity had been attempted twice unsuccessfully by others before William successfully completed it. It is hypothesized that Alvah wanted the same type of measurement made on the lake formed behind the Turner's Falls Company's dam on the Connecticut River.[10]

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7. U.S. Census for 1860, 1870, and 1880. The Village of Turners Falls spells its name without the possessive indicated. Where the author writes of the village the possessive will likewise be omitted. Where the "Turner's Falls Company" is mentioned, the possessive will be used as that is apparently how the company was chartered. Various other spellings of these two names from others will be written in the appropriate form as stated in this note.

8. William P. Crocker obituary, *Fitchburg (MA) Daily Sentinel*, July 18, 1892. Twenty-eight-year-old Crocker's efforts on the BC&M right of way was also mentioned in a long article about the BC&M in *The (St. Johnsbury, VT) Caledonian,* June 2, 1845, "The survey is still progressing with all possible dispatch under an efficient corps of engineers, headed by Mr. William P. Crocker, in whose ability and integrity we have great confidence." Crocker has not heretofore been included in any Cog construction stories. This needs more research. Crocker's name is also mentioned in at least one extant early Cog record. What appears to be a ledger associated with the Mount Washington Turnpike (containing credits and debits from March 4, 1868, to April 1, 1882) notes a payment of $16.25 entered for "Wm. P. Crocker, Engineer" on Sept. 30, 1867. The ledger is in a private collection.

9. A published map of Crocker's 1868 Turners Falls survey may be found at the Massachusetts Archives in the Maps and Plans, 3rd Series, Vol 3, page 21

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To get a different sense of Crocker's work in New Hampshire (as well as Turners Falls), Charles Edward Hazelton's obituary ("Memorial") for his father (Charles William Hazelton, 1848–1937, born in Plymouth, NH) was consulted. From the memorial it is apparent that the older Hazelton shared stories of his early days with his son. Perhaps this is not too surprising as Charles E. followed in his father's footsteps as a civil engineer. The two men probably enjoyed sharing stories of their formational days in the profession. Charles E. wrote the following about his father's early days with the railroad and his eventual profession:

When [my father was] a boy, the new railroad—the Boston, Concord, and Montreal—[which ran through Plymouth, NH] had claimed his early interest. When work on his father's farm on the outskirts of the village or freedom from school would permit—and sometimes without such permission—he would be found at the railroad station located in the old Pemigewasset Hotel, or around the roundhouse which housed the glittering iron horses of that day. In fact, his first gainful employment at the age of twelve [circa 1860] was as a train boy selling apples from the farm orchard on the run between Plymouth, and Concord, N.H. With the help of the night operator he learned telegraphy and unofficially was allowed to send and receive some of the more unimportant railroad orders. Although there were parental objections to his "hanging around the depot," this interest brought him what turned out to be his opportunity, as it was in the railroad yard at Plymouth that he met William P. Crocker, brother of Alvah Crocker, then a Consulting Engineer for the [Boston, Concord, and Montreal Railroad Company]. At the age of seventeen years [circa 1865] Mr. Hazelton was employed by Mr. Crocker as a Rodman on the surveys for the Whitefield, Woodstock, and Montreal Railways—the first rung in the ladder of a civil engineering career. He was fortunate in his association during formative years with so eminent a civil engineer of that period.

As an Assistant to the Engineer in charge of surveys made during 1867 and 1868, preliminary to the actual construction [at Turners Falls], Charles Hazelton, at the age of nineteen years, was climbing over the rocks and cliffs about the Great Falls and cutting his way through the brush and forest surrounding it with measuring chain and sighting rod, and with probably no thought that the primitive scene before him was to be his future life's environment. Apparently, at this time, civil engineering had already gained his interest and allegiance as he continued with William P. Crocker, the Engineer in charge of the new project, as Assistant on the same work that he had started a few years earlier, and on various railroad surveys and reconnaissances in Northern New Hampshire.[11]

Crocker and Hazelton appear to have been brought to Turners Falls as a team as they arrived within days of each other. In 1926 Charles W. Hazelton wrote about their arrival this way:

Col. [Alvah] Crocker had a brother, who at that time was engaged in the practice of civil engineering at Laconia . . . and in September of 1867, this brother, William P. Crocker, was employed as engineer to go on with the work of developing Turners Falls, and it was with him, as a boy just starting in to learn surveying and engineering, that I came to Turners Falls, on the 18th day of September of that year [1867], although he had preceded me by a day or two in his arrival.[12]

Hazelton also spoke of his admiration for the man who was his benefactor and mentor, as well as a bit about his personality.

I have always felt that William P. Crocker, the civil engineer, has never been given due credit for the ability shown in the matter of laying out the place [Turners Falls], preparing plans for the future, and in solving the general engineering problems connected with that work; and I am very glad to have the opportunity of paying this tribute of deserved merit to his memory. He was a man of marked personal peculiarities, but he had an able mind, and time has shown that he made very few mistakes in those plans.[13]

There is one more bit of evidence that might argue for Crocker as a Cog surveyor. In the notebook are engineer's calculations for right-of-way cuts and fills—putting the Cog's track on the ground instead of on the trestle we know today—similar to mainline railroads. As, at times, a mainline railroad surveyor, Crocker certainly would have been capable of calculating cuts and fills as represented in the notebook.

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10. If you have ever read about the number of islands in Lake Winnipesaukee, or the area of that lake (or islands), or how long it's shoreline is, you have read Crocker's handiwork. *Map of Lake Winnipisseogee, Long Bay and Smith's Pond*, by William P. Crocker, Civil Engineer, 1858, New Hampshire Historical Society, 912.778a2 W776c 1858. Additional surveys and computations by Crocker may be found at the NH Historical Society and the NH State Archives using the search term "Crocker."

11. C[harles] E[dward] Hazelton, "Memoir of Charles William Hazelton," *Transactions of the American Society of Civil Engineers*, Vol. 104 (1939): 1924–30, 1925–6. C. E. Hazelton (1887–1965) was Charles W. Hazelton's son and was born in Montague, MA.

12. Charles W. Hazelton, "The Early Days of Turners Falls," *History and Proceedings of the Pocumtuck Valley Memorial Association, 1870–1879*, Vol. VII, Deerfield, MA, Published by the Association, 1929: 424–441, 429. Charles William Hazelton was born in Plymouth, NH, on Oct. 31, 1848, and died in Montague, MA, on Sept. 29, 1937.

13. Hazelton, "Early Days," 438–9.

Sec. 5 - Bermudes on The Surveyors

There has been historical chatter about a "city surveyor" that completed a Cog survey with cuts and fills that, as F. Allen Burt asserted, "would have run up an impossible cost."[14] Also in the notebook are the surveyor's cost calculations for the construction of the right-of-way, including the cost of timber, cuts, fills, and iron. While the calculations for possible cuts and fills must be noted, their presence within the notebook does not mean that the customer must use them, just that the engineer calculated them and the resulting grade profile—the engineer did a complete job.

The current Cog right-of-way follows the route as surveyed in the 1866 field notebook very closely, suggesting the notebook contains the final draft of the route. Marsh and his son, John Franklin, called "Frank," had surveyed possible routes to determine the steepest grade during the summer of 1865. Marsh also wrote, "Afterwards, with the assistance of another surveyor, we surveyed the different routes up the Mt., and finally decided to start where the depot is at the base of the Mt." Whether this third surveyor was the author of the notebook, or some other person is not known, but the route described in the field notebook is extremely close to the actual as-constructed route described in the 1869 report of the right-of-way to the New Hampshire Secretary of State.[15]

It is now taken as a given by the author that Crocker is the likeliest candidate as the surveyor who created the Mount Washington field survey notebook starting in May 1866. He is mentioned as being the Cog's surveyor in a source contemporary with the survey as well as in his 1892 obituary, is mentioned as being and engineer paid by the Mount Washington Turnpike in 1867, he performed the survey for the BC&M Railroad during the 1840s, a coworker placed him surveying for railroads in New Hampshire in 1865–67, and he provides an obvious culprit to Burt's undocumented statement that a surveyor proposed cuts and fills for the right-of-way. Truth be told, at this point it is difficult to imagine who other than Crocker might have more logically performed the task. But, as there are no names contained within the notebook, the world will have to live with "Attributed to William P. Crocker." It feels appropriate and right to note that Charles W. Hazelton was also most likely associated with that survey as one of Crocker's assistants.

The Montague/Greenfield Connection

Surveyor's field notebooks typically remain the personal property of the surveyor, not the surveyor's client. For their money the client receives a finished survey based upon the surveyor's notes and other inputs, but not the surveyor's notes themselves. With the possibility that the surveyor might need to "defend," or otherwise explain, his survey at some later date, it makes sense that Crocker would maintain control of his field notebooks during his lifetime, or at least for the duration of his working career.[16] This, it seems certain, was how the Cog Railway's surveyor's 1866 field notebook ended up in the Montague/Turners Falls/Greenfield area of Massachusetts upon Crocker's death in Montague, MA, in 1892—he brought it with him and it passed to family or friends upon his death. How, then, did the notebook get mixed into the C&A company's material per Allen's provenance? This appears to be the work of Crocker's family and friends.

As discussed in the preceding section, Charles W. Hazelton worked with William P. Crocker in NH for some time starting around 1865, and, starting in late 1867, the two men spent the rest of their professional lives working for various civil engineering firms in the Town of Montague. Crocker died in 1892 and Hazelton died in 1937, both in Montague. It is therefore possible that as a practicing engineer Hazelton held Crocker's Cog notebook (and possibly other of Crocker's notebooks) after Crocker's death. This is actually a familiar practice. When a sole-practitioner surveyor or engineer dies his professional papers traditionally go to the superseding firm or the most logical practitioner. As a long-time assistant and friend, in this instance it most probably would have been Hazelton. Hazelton was also in a position to formally take possession of Crocker's professional papers as Hazelton was a surety for Crocker's estate while in probate.[17]

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14. F. Allen Burt, *The Story of Mount Washington* (Hanover, NH: Dartmouth Publications, 1960), 87. Burt does not provide a source for his "city surveyor" comment, though he does place that term within quotation marks.

15. Sylvester Marsh, "A Brief Outline on the Origin and History of the Mount Washington R.R," MSS 1984.16.21, circa 1876, pages 7 and 8, Mount Washington Observatory's Gladys Brooks Memorial Library, North Conway, N.H. Bermudes, "Crazy Man," 46, spells this out in more detail. The proposed route of the Cog is on page 16 of the notebook.

16. Former NH surveyor Brian Burford shared a story with your author at the NH State Archives building in September 2023 about how a surveyor might use his old survey notes. During his active surveying days, Burford needed an old survey as reference for a survey he had been asked to perform. Since he could not find a copy of that old survey, he telephoned the old survey's creator and asked if he could obtain a copy. The surveyor said" sure, stop by at 2pm today." Burford stopped by at the appointed time and found the surveyor creating a new drawing based upon his field notes: the surveyor told Burford that the only drawing created of that survey to that point had been given to the client when the survey was done.

Sec. 5 - Bermudes on The Surveyors

If Crocker's professional papers did not pass into Hazelton's hands upon the former's death, there were still other opportunities for them to make their way to C&A. Montague was a small place during the early days of Crocker's and Hazelton's time there. The Crockers, Hazeltons, and Abercrombies together served as officers and on boards of directors of several local companies during the early nineteenth century. There is also the fact that William P. Crocker's granddaughter (and his only son's only daughter, Ella Adella Crocker, b.1876) married Daniel P. Abercrombie Jr., the "Abercrombie" in Clapp & Abercrombie, in 1898, right around the time C&A was formed.[18]

Starting around 1912 several instances of Abercrombies, Crockers, and Hazeltons serving as officers or board members of several companies were found in the *Springfield Republican* newspaper. The earliest was for the Turners Falls Co., found in the September 20, 1912, issue. In that year Daniel P. Abercrombie Jr., his brother Fred C. Abercrombie, Charles W. Hazelton, and William P. Crocker's grandnephew Alvah Crocker Jr., were officers of the company. Daniel P. Abercrombie Jr. and Charles W. Hazelton served together as officers of Crocker National Bank (1915) and Turners Falls Power and Electric Company (1915). Relatives of these two men (brothers or sons) served as officers of McLane Silk Co. (1918) (Fred C. Abercrombie—brother of Daniel P.— and Charles E. Hazelton—son of Charles W.) and Franklin Electric Light Co. (1920) (again, Fred C. Abercrombie and Charles E. Hazelton). From this it may be seen that there was every opportunity for people who knew William P. Crocker directly (Charles W. and Charles E. Hazelton) to interact with people who had personal and direct contacts with someone associated with C&A.

Perhaps the most straightforward method of placing Crocker's notebook in the C&A collection was through his granddaughter's hands. Ella Adella Crocker was the daughter of William O. Crocker, William P. and Adella M. Crocker's only child. Ella, born circa 1876, married Daniel P. Abercrombie Jr., born in 1875, in Montague in 1898, when both were twenty-three years old. William P. Crocker died in 1892, six years before the marriage and when Ella was about 17 years old.[20]

The firm of Clapp & Abercrombie was formed in 1897, a year before Daniel's and Ella's marriage.[21] However, engineers Charles Wellington Clapp, the older of the two partners, born in 1863 in Montague, and Daniel Putnam Abercrombie Jr., about twelve years younger, born in 1875 in Millers Falls, MA, another village in the Town of Montague, were working together in June 1895. At this time they made surveys for an electric railway between Stafford Springs and Rockville, CT.[22] Their formal partnership started in 1897. The firm appears to have survived until around 1926 when the last mention of C&A is made in the 1926 edition of the *Greenfield City Directory.*[23]

Thus, the notebook may have descended within the Crocker family to the extended Crocker family—the Abercrombie family—through Ella. At this time there is no way to determine how or when the notebook came to reside in the C&A collection, but that is not necessary to demonstrate, only that there was a logical way to get the notebook from William P. Crocker to the C&A collection. As has been explained, there are many logical paths for the notebook to have taken. It could have been Crocker's mentee Hazelton, his granddaughter Ella, or via another known party.

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17. William P. Crocker, Franklin County Probate Files, Ca. 1812-1915 (Franklin County, Massachusetts); Ancestry.com. *Massachusetts, U.S., Wills and Probate Records, 1635-1991* [database on-line]. Lehi, UT, USA: Ancestry.com Operations, Inc., 2015.

18. *Fitchburg Daily Sentinel*, Oct. 28, 1898. Ella's 1876 birth date implied from the 1880 U.S. Census of William O. Crocker family, Montague, Franklin County, Massachusetts.

19. And there may be earlier instances. All possible (and logical) search terms were not used and the full run of the *Springfield Republican* may not have been contained within the database searched.

20. Ella A. Crocker, Montague, Massachusetts, U.S. Marriage Records, 1840–1915, Ancestry.com. Accessed 4 Sept. 2023.

21. This was stated in the *Springfield (MA) Daily Republican* on February 16, 1905, and is borne out by company mentions and advertisements in the Greenfield (MA) Directory. The firm is not mentioned in the 1892 or 1895 Greenfield Directories and is in the 1897 Directory, suggesting that it could have been formed anytime between 1895 and 1897. Likewise, C&A is last mentioned in the Greenfield Directory in 1926 and is not listed in the 1927 or later directories. It may therefore be logical to consider that C&A existed from 1895–97 to 1925–26. *Greenfield City Directories*, 1892–1929, (Boston, W. E. Shaw).

22. *Springfield Republican*, June 29, 1895. The newspaper gets Abercrombie's initials wrong; he was not "C. P.," but rather "D. P.," and he was a junior. Abercrombie's father, also Daniel Putnam (b. 1844) was a bank cashier in 1880.

23. *Greenfield Directories*, 1892–1929, (Boston: W. E. Shaw).

Bringing the Notebook to the Present Time

With the notebook part of the C&A collection sometime between 1897 and 1926, the curious reader may inquire how it found its way to Dave Allen. That journey parallels the journey from Crocker's hand into the C&A collection, and is shared here.

This paper has hypothesized that the Mount Washington Railway surveyor's field notebook passed from Crocker's hand into the C&A collection via an intermediary, Hazelton, Ella Crocker, or one of Crocker's many family and friends who were civil engineers and had some association with the principals at C&A. The story from the early twentieth century to the early twenty-first century seems to follow the well-worn tradition of surveyor's records being passed down to other local surveyors, either for remuneration or for "free."

Francis Deane Avery (1876–1940) was an MIT-educated civil engineer who worked for the Boston & Maine Railroad before settling in Greenfield and starting his own civil engineering business around 1917. Active in the community, both politically and socially, he was well acquainted with C&A, having shared an office suite on Main St. with that firm starting in the summer of 1921. The two civil engineering firms shared the suite with an architect, Manvis Roscoe Drew (1856–1928).[24] When C&A ceased business around 1926, that company probably sold or gave its records to Avery, who had been provided access to the C&A records during his time as a suitemate, so they were not lost to the many C&A customers. Avery's rationale for accepting (or paying for) the records would be a possible expansion of business due to existing C&A customers seeking new work.[25]

The former C&A records then passed from Avery to Andrew F. Wait (1905-97), an RPI-trained engineer, WWII Navy Seabee, and Avery's son-in-law. Wait was an instructor at RPI, the part-time engineer for Franklin County, MA, and operated the F. Deane Avery Associates surveying and engineering company from 1941 until he retired in 1983. His obituary stated he was then a consultant.[26] This may be why his records did not leave his hands until purchased by Dave Allen in 1994. Perhaps most important for this conversation was Wait married F. Deane Avery's daughter, Irene Johnson Avery, in 1929, so Wait had a familial tie to Avery's firm and the former C&A records.[27]

Dave Allen stated that he purchased the records from Wait in 1994. Concurrent with that purchase, Allen also bought a fairly new surveying firm, Roberge Associates of Greenfield. While not a surveyor himself, Allen purchased Wait's records to help build his new business. Allen claimed the records "led directly to many surveying jobs for the Roberge Associates business" from customers of the previous firms between 1994 and 2014, when Roberge Associates went out of business. Allen also desired to keep the previous 100 years of records available to the surveying community. In this regard, Allen's purpose for purchasing the records from Wait was very similar to the reasons previous firms had purchased them; to help to start or grow a business as well as to preserve the remarkable archives for posterity.[28] As of this writing Allen has made the old records (some dating back to the 1700s) sold to him by Wait available to everyone via his various websites (http://www.robergeassociates.com and http://www.old-maps.com).

Dave continues to sort through the vast collection to find out what is there and to digitize the records. It was part of this activity that led him to discover the Mount Washington survey notebook and contact the author. Even before contacting the author, Allen sold the notebook to Michael Beuhler, proprietor of Boston Rare Maps in Southampton, MA. Allen made the digital files of the notebook available to the author right after e-mail contact was made. It was these digital files that whetted the author's desire to at least see the original, if not own it outright.

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24. F. Deane Avery obituary, *The North Adams Transcript*, March 6, 1940. *Greenfield Directories* (Boston: W. E. Shaw), 1917-22; Unsigned typescript "Agreement Relative to a Joint Occupancy of an Office Suite," Private Collection. The handwritten notes on the two-page agreement, F. D. Avery's copy, state that the agreement was dated June 21 and signed on June 25, 1921. According to Drew's Jan. 12, 1928, obituary in the *Springfield Republican*, he has designed "several of the best buildings of the town." He was born in Canada in 1856.

25. Most people today are familiar with a pharmacy's records being sent to a different pharmacy when the old pharmacy closed. Those of us familiar with sole proprietorship medical offices also know what it is like to have records arbitrarily transferred somewhere else. It was the same with engineering/surveying records. The 1921 agreement is available at F. Deane Avery Archives at Old Maps, 21 Mohawk Trail, Greenfield MA.

26. Andrew F. Wait obituary, *Springfield Union-News*, October 15, 1997. His obituary described him as "county engineer and Greenfield civic leader."

27. *Greenfield Daily Recorder*, February 9, 1929. They were married at the bride's home.

28. E-mail note from Dave Allen to the author, January 1, 2024.

Sec. 5 - Bermudes on The Surveyors

Allen was good enough to put Beuhler and the author into contact with each other in August 2023. By the end of August 2023 an agreement had been made for the price and the author purchased it, getting it into his hands on August 31, 2023.

Robert W. Bermudes Jr.
Rochester, NY
January 13, 2024

Appendix 1: How Survey Records Make It Through Time

If nothing else, this paper speaks to how old land surveys have made it to today. While the Cog field notebook might best fall into a survey of "special" interest to any time period and most any person, the bulk of the C&A records (along with many pre-C&A records, some date to the 1700s) probably do not fit into the "special" category, but are rather the day-to-day stuff of surveyors and landownership.

The C&A records appear to have been passed from friend to friend or between family members, at least until Dave Allen could inform us that he purchased the records directly from Andrew F. Wait as a way to quickly build the Roberge Associates' business. This makes sense, and one might think this is the way with all surveyors' records. But it is not. Your author has seen too many surveyors' collections within the collections of large institutions (think Dartmouth College Special Collections or the NH State Archives) to believe that the bulk, or even most, surveyors' records flow easily from one surveying firm to another. To try to understand how this "other" process works, Brian Burford, a former NH surveyor and former NH State Archivist was asked for his take on how records made it through time.

Specifically, the author asked Burford: "Did every succeeding surveyor purchase earlier surveyors' records? And if they did, was the price paid nominal ($1) or something more? If more, how much more? Was it dependent upon the size of the collection? What is/was the procedure for a retiring surveyor to "sell" his records to someone else? Is there an agreed upon process or is it dependent upon the region and size of the collection?" Burford responded to the author's inquiry, as follows:

"I have seen a few probate estates that listed Survey records as an asset in the late 1800s and first half of the 1900s. The records were typically valued at a couple of hundred dollars. There were many surveyor estates that put a value on the records.

I think that records were sometimes sold for whatever the market would bear in the 1800s and early 1900s, which was probably not much. The alternative was to take the records out in the backyard and burn them. If someone would give you $20-50 and save you the time of tending a fire, great. I would be pretty certain, too, that in other cases the lead surveyor died and the assistant took over the business. When professional licensing came about (I think in the 1940s in Massachusetts and in 1969 in NH) it was more difficult to find buyers, but when a buyer could be found, a surveyor's records might be sold for a couple of thousand dollars. In the 1980s, I knew of a few collections that had been purchased and suggested to the NH Land Surveyors Association that we form a committee of some of the members to assist in assessing the value of records of deceased surveyors. I think they were asked to consider 3 collections. The last was a surveyor from Northwood. He had worked in that area for decades, but had a very poor reputation among the surveyor community. The committee said the collection was worth $3,000 if my memory is correct, and the seller (a lawyer who bought the business location) was incensed with such a low estimate. And he still didn't find anyone wishing to buy it, so it was donated to the State Archives. Surveyors discovered that when they bought a collection, they had to find someplace to store it, organize it so they could find something, and reproduce the plans. They also found that fellow surveyors wanted copies free (professional courtesy). These days, I know of SEVERAL collections that have come to the State Archives, because no one wanted to buy them. The Archives has about 70 collections—some quite large, and some tiny.

In the recent past, the market seems to buy the business name and client list and then donate the records to the state archives."

The White Mountains in Transition: The Automobile and the Motel Archetype in the 1920s

December 30, 2018

The invention of the automobile brought many things: New technology, relatively fast personal transportation and the opportunity for new businesses to cater to automobiles, those who drove them and their traveling needs. This paper will look at the automobile's impact on lodging options in the center of the White Mountains, the area called Bretton Woods.**1** Specifically it will look at the accommodations provided to the autoists, and the people who provided them, at the transition to the motel archetype—standalone cabins— in the 1920s.

Hospitality in Bretton Woods dates to the beginning of the nineteenth century and the taverns run by the Rosebrook and Crawford families.**2** After the Civil War, and most notably during the Gilded Age, the tone and tenor of the area's hospitality changed. The hospitality options increased significantly and were run by professionals. At the turn of the twentieth century the Bretton Woods hotels were (from south to north with year of first season open): the Crawford House *(1859)*, The Mount Pleasant House *(1876)*, The Mount Washington Hotel *(1903)*, Fabyan House *(1873)*, White Mountain House *(1831)*, Twin Mountain House *(1869)* and, on the summit of Mount Washington, the Summit House *(1873)*. These seven hotels provided accommodations for 2,400 people.**3**

Bretton Woods catered to an upper- and middle-class clientele. Many, if not most, of the guests at the hotels enjoyed extended stays, some for the entire summer. The guests of the grand resort hotels that constituted Bretton Woods were not ones to lodge overnight in a small cabin by the side of the road. They enjoyed all the social aspects of the resort and would not provide the impetus for the emergence of the cabin colony, but the automobiles that brought them there would. This paper will consider two cabin colonies at length, the Willey House Cabins in Crawford Notch and the Kro-Flite Kamps at the lower terminus of the Mount Washington Cog Railway. It will also consider concurrent activity at the extreme western end of Bretton Woods in the area of the Town of Carroll called Twin Mountain. But before considering the cabins and their causes, a review of the history of Bretton Woods and how the hotel owners and managers responded to new technology in general and the automobile in particular is required.

The grand resort hotels in Bretton Woods were the legacy of the accommodations of an earlier era and the railroad. The two hotels extant prior to the railroad, the White Mountain House and the Crawford House, traced their lineages to the beginning of the nineteenth century. The White Mountain House descended from the first building in the mountains in the 1790s. The Crawford House, constructed in 1859 after a fire destroyed its eponymous predecessor, was the first modern hotel in Bretton Woods. The new Crawford House, "the most spacious hotel about the mountains" with accommodations for 250 guests, was owned by local businessmen and operated by a professional manager.**4** Earlier hotels on the same spot, dating to 1828, were operated by the Crawford family. They catered to teamsters hauling their produce down the Tenth New Hampshire Turnpike to market in Portland, Maine, and to the early White Mountain tourists. All other hotels of Bretton Woods (save one) trace their construction to the arrival of the railroad. The Twin Mountain House, the Fabyan House and the Mount Pleasant Hotel were built in response to the Boston, Concord & Montreal (BC&M) Railroad's approach along the Ammonoosuc River from the west and the Portland & Ogdensburg (P&O) Railroad's approach through Crawford Notch from the south. By the time the two railroads reached Bretton Woods in 1875 these three hotels were built or in the process of construction.

The BC&M extended its line from Wing Road, twenty miles away, into Bretton Woods to take advantage of the anticipated surge in tourism associated with the construction of the Mount Washington Cog Railway on Mount Washington. When completed in July 1869, passengers arrived at the Cog Railway Base Station, six miles from the nearest public road, in stagecoaches from the local hotels over the Cog Railway-owned Mount Washington Turnpike. Two round-trip trains a day left the base depot for the summit allowing passengers to make either a day trip or remain overnight.**5** When the six-mile BC&M extension was completed from Bretton Woods to the Cog Railway Base Station in the summer of 1876, a traveler could board a morning train in any major east coast city and with a simple change of cars ride the rails to the summit of Mount Washington in time for supper.

Sec. 5 - Bermudes on Auto Tourism

With the completion of the BC&M branchline to the Cog Base Station, the Cog Railway started to pay stock dividends. Up to this time the railroad had not paid returns to its shareholders. The first year of the branchline, 1876, also the Centennial year with its attendant celebration in Philadelphia, the Cog paid a nine percent dividend, and returned a total of eighty-eight percent by November 1885.**6** The commencement of a dividend should be seen as an indication that the branchline into the Base Station was needed to make the Cog Railway a paying proposition and that sufficient numbers of people were in the area to support the small, mountain-climbing railroad and area hotels.

Hospitality in Bretton Woods

The hotel business in Bretton Woods grew up catering to a Gilded Age clientele of the well-to-do and middle-class primarily from the northeast, but drew from an extended geographic area, including overseas.**7** The hotels of Bretton Woods were not only grand in scale (the smallest house in the valley in 1903 could hold 150 guests and the largest, 600), but they were also grand in style and activities.**8** To keep their guests delighted and returning season after season, the hotels continually provided outstanding value and amenities—they kept setting their standards higher.

The hotels competed on their physical amenities. The same year the first hotel in the United States installed electric lights *(1882)*, they were installed in a White Mountain hotel in Bethlehem (the town west of Carroll).**9** The other hotels followed. By 1900 electric lights were ubiquitous in White Mountain hotels—as were private toilets, steam heat and elevators.**10** The hotelmen thought nothing of adding to, or completely renovating, the physical plants when they became too small, "worn," out of fashion, or might otherwise provide them with a competitive edge.**11**

The hotels of Bretton Woods, and of the entire White Mountains, offered many diversions for their guests' long stays. Each house had an orchestra for music and dancing (and at least one had a boy's choir). Horses and carriages for riding and excursions were available, as were telegraphs and post offices, extravagant meals and plays put on by the guests in addition to lectures by noted individuals and Sunday services presided over by Henry Ward Beecher. The resort sports of croquet, golf, baseball, sailing, canoeing, rowing, bowling, archery, swimming, riflery, tennis, roller skating and billiards were all offered by the hotels. In the case of baseball and golf, each hotel built their diamond and course in response to local, regional and national competition. Many hotels fielded baseball teams with regular competition among them. Games were keenly followed and reported.**12**

In addition to competition among the local hotels, there was competition among regional resorts. The early 1880s brought a series of attacks by the New York City newspapers "representing the interests of the Catskill summer resorts." The *Telegram*, *Hotel Mail*, and later the *Mail and Express*, all ran articles critical of the White Mountain hotels. The New York papers declared, "[i]t is to be regretted that there should be so many well founded complaints of bad management at the [White Mountain] hotels" where Bostonians "congregate every year after mortgaging their houses, selling their jewels, and pawning the family plate," implying the White Mountain resort hotels were not only bad, but expensive—or at least more expensive than those in the Catskills. Ironically, the same newspapers suggested the White Mountain hotel keepers' financial positions were so poor that they would commit suicide if only the implements to do so weren't kept out of their hands by their wives. Then the New York papers got nasty. They printed rumors of typhoid fever and diphtheria in the White Mountains, facts sure to chase away guests if true (they weren't). The local newspaper, the *White Mountain Echo*, responded to each broadside as it was fired and got off a shot or two of its own. If the events of the 1880s did nothing else, they reminded the White Mountain hotelmen that they were in not only a local battle for guests, but a regional and national one as well.**13**

With the mountains just outside the door, walking in the woods, hiking or riding to a mountain summit or local area of interest were prime good weather activities. The hotels assisted the guests in these pursuits by building walking trails and bridle paths to nearby scenic overlooks and other locations and provided the horses, carriages and burros to convey them there. William Barron, the president of the Barron, Merrill & Barron Co., created the Twin Mountain Trail for pedestrians and C.H. Merrill, the manager of the Crawford House, improved the bridle path from the Crawford House to the summit of Mount Washington.**14** John Anderson, another Bretton Woods hotelman, created a bridle path between Bretton Woods and Franconia Notch (twelve miles distant) in 1903.**15** With the introduction of the bicycle to the mountains in 1877, the hotels built smooth

bike paths. Eighteen hundred eighty one saw one such path was built between the Profile House in Franconia Notch and the town of Plymouth twenty-eight miles away. Good bike roads were available in Jackson and North Conway by 1897 and in 1898 a bike path was opened in Bretton Woods between the Crawford and Mount Pleasant Houses (four miles).**16**

On September 1, 1899, a glimpse of the future was reported by *Among the Clouds*. F.O. Stanley and his wife, Flora, the previous day had driven their Locomobile up the Mount Washington Carriage Road with extensive coverage by the newspaper. The editor, and Newton, Massachusetts, neighbor of the Stanleys, Frank H. Burt, opined that "a new epoch of mountain travel begins from the present day," and while those arriving by automobile would be limited, they would "form an ever increasing factor in White Mountain travel." Burt would very quickly be proven wrong for suggesting the automobile's impact "limited."**17**

The enterprising hotelmen of Bretton Woods hustled to stay a step ahead of the automobiles. One day before the Stanleys' ascent, *Among the Clouds* informed its readership the hotelmen paid to survey a new road from the Crawford House to the town of Jefferson—a distance of twelve miles along the western base of the Presidential Range—that would "provide new and beautiful combinations of excursions" to the guests at the hotels. The hotelmen put up half of the anticipated ten thousand dollar cost of the road and petitioned the State Legislature (meeting next in 1901) for the other half. "Automobiles are sure to invade the mountain regions . . . and the hotel people who are to profit . . . feel the need of providing new and better roads for their enjoyment."**18**

The hotelmen were active in other ways to satisfy the auto enthusiasts. Two Bretton Woods hotelmen, C.H. Merrill and John Anderson, were State Highway Commissioners and therefore influential in any state road work performed in the mountains.**19** When New Hampshire created its State Highway Commission in 1905, the hotelmen of the north country made their voices heard for good roads by joining the Good Roads League. The League's goal of "the general improvement of the roads of New Hampshire" paralleled the mindset and demonstrated actions of the hotelmen.**20**

The Bretton Woods hotels embraced the automobile, and the wealthy with their automobiles embraced Bretton Woods. In 1903 "there were hundreds who made the trip through the mountains in motor cars." The following year the Bretton Woods hotels hosted the American Automobile Association's (AAA) tour for the Glidden Cup, complete with a hill-climbing contest on the Mount Washington Carriage Road. Nineteen hundred four also saw the creation of an automobile race track at Bretton Woods built with the cooperation of the railroads. To sharply define the import of Bretton Woods, it was noted that "[t]his race track will be the only one for automobiles north of Boston, and it is expected that it will give a new impetus to sport in the White Mountains."**21**

The 1906 AAA tour began in Buffalo, New York, and finished in Bretton Woods.**22** The conditions and quality of the roads in New York State drew disgust from the tourers. "The Governments of Java and Ceylon would consider themselves disgraced by any such cowpaths as we have been over [in the Mohawk Valley and Adirondacks of New York State]." **23** In contrast to this distain, the praise bestowed upon the White Mountains' roads stands out. "There are no better roads to be found anywhere. Their hard gravel surface makes them almost as smooth as asphalt."**24** The White Mountain hotelmen were getting their money's worth for the effort they put into the roads.

The Mount Washington Hotel expanded its auto garage and added fifty new sleeping rooms for chauffeurs in 1907.**25** This year also saw the introduction of the Ideal Tour for automobiles. The 877 mile tour took New Yorkers up through Vermont and Franconia Notch to Bretton Woods, down Crawford Notch and over to Portland, Maine, before turning back to New York.**26** Now those automobilists from New York who did not wish to participate in a competition like the Glidden Cup could follow a well- documented trail through picturesque New England with some time spent in Bretton Woods.

The New York Times reported that in July and August 1912, the Mount Washington and Mount Pleasant Hotels registered 7,014 guests, with 4,245 of them arriving in 1,335 automobiles, or 60.5 percent arriving by auto. Every state in the union, save Idaho, was represented in the garage, leading *Scribner's Magazine* to declare, "[Bretton Woods] has ceased to be a New England Monopoly and is a national possession."**27**

Sec. 5 - Bermudes on Auto Tourism

The Crawford House, a Barron, Merrill & Barron property, four miles south of the Mount Washington and Mount Pleasant Hotels, had its own garage and pumped gasoline by 1911. It garaged a maximum of twenty-eight automobiles at any one time during that season.**28** There must have been a fairly large number that were not garaged for it was observed that "[fully] three-quarters of the business at the Mount Washington . . is derived from automobile parties; the same percentage would no doubt hold at Crawford's or the Profile [House in Franconia Notch]."**29** Also interesting to note is that there were only four thousand autos registered in New Hampshire in 1910. This suggests New Hampshire's auto population swelled by at least twenty-five percent during the summer.**30**

The White Mountain hotelmen were not the only ones catering to autoists. The State of New Hampshire invested in the primary roads and conducted surveys to assist in planning road improvements. During the 1918 summer season a statewide traffic census was undertaken. The closest monitoring station to Bretton Woods was in front of the Twin Mountain House. Roughly fifty percent of all automobiles counted there were from out of state.**31**

In February 1919, little more one month after the death of Theodore Roosevelt, a group of Duluth, Minnesota, businessmen gathered in Duluth, along with representatives from four other states and nine cities, to discuss the idea of a northern transcontinental highway. After their discussions, the group announced their intention of creating the Theodore Roosevelt International Highway. It was to link Portland, Maine, with Portland, Oregon, and as it traversed the Ontario, Canada, peninsula, it acquired international status. The New Hampshire section of the highway consisted primarily of the road through Crawford Notch and Bretton Woods. The group did not expect federal aid to construct or maintain the highway. Federal aid for roads was a new phenomena and focused on aid for rural post roads, not transcontinental highways. The effort to memorialize the former president needed state and local support to be realized.**32**

New Hampshire eagerly supported the idea. As the road was already well maintained for summer visitors, the only action required by the state was to place signage along the route. This was completed by the start of the summer of 1920 with "poles . . . marked with a red band flanked by white borders, and the initials 'T.R.' in the center." The private sector then picked up the effort. The state chapter of the Roosevelt Highway Association publicized the route and promised those joining their group that all dues "would go to marketing and giving publicity to the roadway with the idea of bringing new tourists to the state each year during the vacation period." With the creation and publicity surrounding the new long-distance route the hotelmen in Bretton Woods gained more exposure to the public at large.**33**

In a more expansive statewide traffic census in 1922, out-of-state, or foreign, automobiles comprised fully seventy-four percent of the traffic observed at Twin Mountain. Of the 5,439 vehicles counted during the Fourth of July survey week, 4,041 were foreign. The total count was 250 percent greater than the 1918 count taken just four years earlier.**34** Whether the designation of the Theodore Roosevelt Highway had anything to do with the increase, or the war in Europe suppressed the earlier survey's count is open for speculation. At least one of the area's iconic tourist attractions, the Mount Washington Cog Railway, was closed in 1918.

By 1926 the traffic density through Crawford Notch and past the hotels of Bretton Woods—the Theodore Roosevelt International Highway—was in the second highest category assigned by the state. Between 500 and 1500 vehicles a day traveled that road between the Maine and Vermont borders. The roads in the highest category, 1500+ vehicles per day, were located in the much more heavily populated southern section of the state, typically south of Concord.**35**

The Bretton Woods hotels embraced recreating themselves for their guests. They offered a wide range of activities, places to go and ways to get there. When their guests started arriving by automobile the hotelmen of Bretton Woods embraced them, they had no choice, their clientele owned them and used them on their summer vacations. In addition to creating garages and other hotel-based facilities to support automobiles, the hotelmen were active in promoting and creating paths and roads for pedestrians, horses and automobiles. This keenness for continual improvement would lead one Bretton Woods hotelman to create a non-hotel lodging option for automobile-driving tourists.

Autocamping

Autocamping began as a vacation option for the middle class. Its appeal lay in the ability to travel without the tyranny of the railroad's timetable, locations or hotel. Jumping into his automobile with his camping equipment, the autoist could take whatever roads he desired, leave and arrive as he pleased and camp anywhere he could find a suitable site. In the early days of autocamping, stopping at the side of the road and pitching one's tent was commonplace.**36**

Autocamping resulted from a lack of automobile supporting infrastructure. There were few diners or restaurants outside of towns and very few lodging choices if one did not stay in a hotel (and very few hotels outside of towns). The infrastructure associated with automobiles taken for granted today did not exist. There were simply not enough automobiles to profitably sustain the creation of the private infrastructure needed to support them. Autocamping was the only way, short of lodging in town every night, to provide for your comfort while traveling by automobile.**37**

By the late 1910s the number of autocampers camping ad hoc had grown so large that towns and property owners rebelled. Farmers began to "shoo" people off their land because too many had taken advantage of their hospitality by destroying property and stealing produce. To control campers many towns and cities created free municipal camps to shepherd the campers into a central location. The better municipal camps provided toilet facilities, running water and other amenities.**38**

Denver's Overland Park was the model of the municipal camp. Opened in 1915 it spread over 160 acres and contained 800 camping spaces. Each space, measuring twenty- five by thirty feet, had electricity and was no more than 150 feet from a water hydrant. It had a three story "club house" that offered all the amenities of home. The club house contained a grocery store, kitchen, showers, lunch counter, "comfort stations," and a laundry room. It even had a barber shop.**39**

The hotelmen did not like free municipal camps. Not only did they lose potential hotel customers to the free camps, but the tax money paid by hotels provided the camp people with a free place to stay! While other local businessmen, and the town as a whole, might make money from the increased population, the hotelmen seethed. The free nature of the camps also posed another problem. The town fathers inevitably expected nothing but fine, upstanding citizens in the camp. With the decreasing acquisition price of a new or used automobile and "time payments" (credit), it wasn't just the middle-class autocamping anymore, more and more "lower class" people were participating. When enough "problems" were caused at the camp, the authorities grew skeptical about the advisability of a free camp. In an effort to remove "freeloaders," those taking advantage of the municipality by not abiding by the tacit agreement that the camper would shop in town and stay just a short while, fees were instituted as well as limits on the length of stay. This accomplished part of what was intended, it removed those without means of support from the camps. It also opened the door for competition.**40**

With the implementation of daily fees at municipal camps, and in many instances a limit on how long one could stay, private campgrounds became practical. While there were some early private campgrounds that did not charge a fee—usually associated with an ancillary business, like gasoline station, farm stand or café—the opportunity to compete for autocampers on amenities and correspondingly higher prices created the opportunity for private campgrounds to make a profit.**41**

During the 1920s there was no shortage of camping options in the White Mountains. In the White Mountain National Forest, created by the Weeks Act of 1911, the Forest Service provided six automobile-accessible campgrounds that together attracted ten thousand campers per year. Each campground was free, all that was asked was the campsites be left clean.**42** Camping was also permitted in the New Hampshire State Parks. In Crawford Notch State Park, created in 1913, there was autocamping at the former Willey House site by 1919 (and most likely earlier).**43** Thirty towns in New Hampshire offered camping facilities in 1925.**44** There were also private campgrounds. The Boston-based National Recreation Club operated twenty-six camping grounds in New Hampshire for its members.**45**

By the early 1920s it seemed everyone was autocamping. In 1921 the *New York Times* estimated there were nine million autocampers. That same year President Harding joined Henry Ford, Thomas Edison and Harvey Firestone on a widely reported autocamping trip (they camped in very fine style). The *New York Times* predicted one- half of the cars on the road in 1922 (five million) would be used for camping. The *Saturday Evening Post*

opined that five million cars and fifteen million people would autocamp in 1924.**46** The 1925 Eastern States Exposition in Springfield, Massachusetts, citing the "popularity of auto camping which has grown tremendously . . . in the past few years," provided forty acres for autocamping complete with "every necessity and convenience" including water and sanitary facilities.**47**

With many camps charging for the privilege of pitching a tent and cooking your own meals another opportunity presented itself. If the autoist could avoid having to setup and strike his camp, more time could be spent with his traveling companions, his family.**48** When the autocamper happened upon his first cabin—a small, stand-alone, fixed roof building complete with bed—and found the cost to be just a bit more than the cost to camp (typically less than one dollar), he found it inviting. If he happened to stop for the night and it was raining, the cabin looked even more inviting. A contemporary scholar observed a cabin "duplicates the home situation more closely than a hotel room and is less expensive."**49** He could have also stated that it was much less effort than camping. This was the impetus for the tourist cabin, the precursor to the motel.

Tourist Cabins

The veranda and front door of the Crawford House faced the gate, or northern end, of Crawford Notch, a long valley with an equally long history. One of the most widely reported and spectacular incidences to occur there was the death of the Willey family.

> *On Monday night, 28 August 1826, the entire Samuel Willey household— Mr. and Mrs. Willey, five young children and two hired men—were killed by an avalanche . . . . Triggered by a fierce thunderstorm, the slide started near the top of Mount Willey, carved a channel fifty feet deep, and obliterated the road at the bottom of the valley. Incredibly, the Willey's house was spared: A boul der had divided the landslide directly behind the house so that it passed by on either side. But for some reason the family had gone outside and was buried under the stream of earth, stones, and up rooted trees. An open Bible, a burnt candle end, and unmade beds were later found as evidence of the family's sudden departure. No survivors witnessed the disaster.***50**

After the slide, the Willey House became a mecca for tourists. They came to see the Willey House completely furnished with the Willey family's belongings and "marvel[] at the sheer perversity of nature in destroying a whole family at a stroke while leaving its house untouched."**51** Later, a hotel impresario, Horace Fabyan, capitalizing on the popularity of the site, built a hotel beside the house. With the destruction of the two buildings by fire in 1899, the forest reverted to something approaching its virgin state. To protect the majority of Crawford Notch from logging and development, the State of New Hampshire purchased the upper six miles in 1913. Soon "thousands of persons . . . stop[ped] at the Willey House site to see the historical spot . . . enjoy the unsurpassed view" and pitch their tents where they could camp overnight at no charge.**52**

The options for autoist's accommodations at the Willey House site increased in 1922. That year a Bartlett, New Hampshire, general store owner, James F. Donahue, leased part of the site from the state and built a small hospitality colony to cater to those "thousands of persons" who stopped at the Willey House site each year. In the first season the colony's buildings consisted of a public rest room and a "lunch room" with store. There were also an unstated number of "smaller cabins . . . both for service quarters and for use of overnight parties." It was observed that "it is no uncommon thing to have forty automobile parties pass the night [camping and cabins] on the Willey House grounds."**53** So began the first documented auto cabin colony in the White Mountains.

There is some uncertainly when the road-side cabin first became an option for automobile tourists. One important source discussing early tourist cabins in the United States offers the example of a California couple who built their "first simple cabins" in 1922. The same source describes an Arizona couple creating a campground in 1925 and "adding cottages in 1926."**54** A second, more contemporary, source stated that few cabins were available for tourists until 1924 and those that were were mostly shacks.**55** A third source suggests a Douglas, Arizona, "Cottage Camp" run by William Askins for workers in a copper-smelting plant was the first "when automobile tourists began to replace transient miners and their families," but doesn't speculate when this might have been other than to state "after 1910."**56** It is revealing to note that all three sources, when mentioning

early examples of tourist cabins, cite locations in the southwestern United States. In the northeast the cabin season was short, as was the tourist season. In the southern part of the country it could extend all year, as could driving automobiles. While none of the preceding examples of early cabins are necessarily contradictory—the 1922 California cabins could have been "shacks"—they do not assist us in identifying the first instance of auto tourist cabins.

The Willey House cabins could not be confused with "shacks." Designed by Boston architect Arthur A. Shurtleff, they met the state building code. Constructed of peeled spruce logs gathered from nearby state land (at no charge to the lessee), their rustic appearance blended in with the primitive mountain surroundings. The cabins were expected to "render great public service . . . for camping parties and outfitters." The intent was not to provide "hotel accommodations" as the cabins contained "cot beds, but no luxuries." Tourists stopping at the Willey House now had a choice: free camping or cabins at a "nominal price." Clearly the cabins offered no competition to the Bretton Woods hotels.**57**

The Willey House colony grew rapidly. The original two communal buildings used for the rest rooms and the store and restaurant were joined by two more in 1923: one an engine house (for lighting and power) and the other for auto supplies. The number of cabins available for public overnight use grew from six in 1923 to either twenty-five or thirty in 1935. Revenue increased over time too. The site generated revenue of $11,026 per year during the years 1922–1924 and revenue of $31,092 per year during the years 1925–1928. James Donahue was joined by a partner, George C. Hamlin also of Bartlett, in the winter of 1923.**58** From his aerie at the Crawford House just three miles away, William Barron could not but notice the increasing hospitality business at the Willey House site.

The time was now ripe for an entrepreneur to create a hospitality center catering to autoists somewhere around Bretton Woods. But where? And who? The hotelmen did not want to diminish the Bretton Woods brand in any way, yet desired to host the "well- meaning and clean class of people, largely from other states, [who] stop[ped] at the [auto] camps."**59** William Barron accepted the challenge. Some of Barron's guests had no doubt spoken with him about the lack of facilities of any sort catering to autoists at the Cog Base Station. Operating the hotel properties at the "civilization" ends of the two roads leading to the Cog Railway, Barron and his staff had to take time from their busy days to answer questions about the Cog as there was no one at the Cog to do so. Creating a hospitality center at the Cog Base Station could resolve these issues at a very small cost and perhaps realize a slice of the revenue brought in at the Willey House cabins—he could increase his business, serve his auto-based guests and rid himself of having to respond to questions about the Cog. How could he not make the (very small) leap?

The Barron, Merrill & Barron Co. entered into an agreement with the Boston & Maine (B&M) Railroad to rent five acres of land at the Cog Railway Base Station in the spring of 1925. The cost was the "gentlemen's agreement" price of one dollar per year.**60** Did the B&M ask Barron to open a hospitality center at the Cog Base Station? There are certainly reasons to think so. By the summer of 1925 the B&M had been through two decades of very difficult times and its survival was not guaranteed. It had been taken over by a New York railroad and nearly financially ruined, filed for bankruptcy, seized by the government during the Great War, heavily unionized and was in the process of reorganizing. It was creating a bus company to compete with itself on unprofitable branchlines and was trying (unsuccessfully) to abandon track.**61** It is therefore very plausible to conclude that the B&M, in an effort to help itself by keeping potential automobile customers on site, asked William Barron to create some type of hospitality center at the Base Station. After all, the Barron, Merrill & Barron Co. had been providing the hospitality at the Summit House on Mount Washington since 1886, why not provide it at the Base too? The B&M also reportedly asked Barron to purchase the Cog in the late 1920s.**62** The B&M obviously thought highly of Barron and believed the Cog and Barron properties might work well together.

The arguments for the B&M asking Barron to open a hospitality center at the Cog Base Station need to be considered, but must ultimately be rejected. The potential benefits to the B&M of a Base hospitality center were so trivial to the New England goliath as to be not worth discussing. If they desired catering to potential passengers arriving by automobile all they had to do was run more than the two trips a day that had been offered since 1869, a feat successfully implemented in 1931 by Henry Teague when he took over management of the Cog, Base and summit properties. More powerful than the reasons for Barron to create a hospitality center at the request of the B&M was the reason to create it for his guests. Barron built the new hospitality center to

cater to his guests who drove their increasing number of automobiles to the Cog for a day's outing. He called the hospitality center the Kro-Flite Kamps.**63**

How much original thought did Barron and his company put into the Kro-Flite Kamps? The layout of the "kamps" was similar to the 1922 incarnation of the Willey House Cabins. Much like the Willey House site, there was one building for the restaurant, store and living quarters for the resident staff in addition to a few cabins for rent to overnight guests. The Kro-Flite Kamp buildings were constructed of peeled spruce logs as were the buildings at the Willey House site. The primary difference between the two camps was the Willey House Cabins were on a main highway and the Kro-Flite Kamps were six miles from the main road deep in the woods. A hotelman for over thirty years, William Barron understood well the differences between the two locations and knew not to expect the same revenue as the Willey House site. But the continuing popularity of the Cog Railway and increasing popularity of automobiles could certainly allow him to believe the Kro-Flite Kamps would capture reasonable business.**64**

The "kamp" recorded its first revenue on June 30, 1925, when $2.15 was received for "lunch." The next day are recorded the first receipts for "candy" and "cigars." Ultimately the ledger recorded receipts for: lunch; candy and gum; tonic [soda or "pop"] *(starting July 16, 1925)*; tobacco & supplies *(July 18, 1925)*; cards and souvenirs *(July 20, 1925)*; parking *(July 30, 1925)*; cabins *(August 9, 1925)*; gas and oil *(August 22, 1925)*; ice cream *(June 29, 1927)*; milk *(July 10, 1927)* and film *(July 23, 1927)*. The first record for a cabin rental was on August 9, suggesting the cabins may not have been complete prior to that date. Construction of the kamp may not have commenced until the spring of 1925. The late date for the first sale of gasoline *(Aug. 22)* reinforces this idea. At 2,700 feet the ground at the kamp would not soften enough for digging until the summer. The total kamp revenue for 1925 was $1,643.40. The cabins brought in 2.1 percent of this amount, or $34.00.**65**

Ledger entries imply the cabins cost one dollar per person and were used on only eight nights during the first season. The maximum daily receipt for cabins was six dollars (twice). At one dollar per person, "the almost universal price," receipt of six dollars, or six people, implies there were most definitely two, and perhaps three, cabins.**66** (In 1925 the Willey House Cabins rented for $2.50 for two people, $3.00 for three and $4.00 for four per night. No indication what one person paid.**67**) During 1926 there were several days with cabin receipts of $7.50 (the maximum daily amount recorded that year), suggesting the rate for children was fifty cents or the rates changed between the first and second season. The high water mark for cabin receipts came in 1926 when they accounted for $220.30, or 8.2 percent, of the $2,695.05 revenue.**68**

During the entire six year span of Barron involvement, the cabins brought in $857.30 of the $18,173.14 total revenue *(4.7 percent)*. The restaurant brought in the lion's share of the revenue at $4,408.99 *(24.3 percent)*, followed by parking (fifty cents per car) at $3,258.50 *(17.9 percent)*, card and souvenirs at $2,370.69 *(13.0 percent)* and tonic at $1,847.90 *(10.2 percent)*. Even though ice cream was sold for only four of the six years, it provided 9.9 percent of the total revenues ($1,804.20). Some method of keeping things cold was introduced to the Kamp in 1927 as the two items sold that required refrigeration (ice cream and milk) recorded their first sales on June 29 and July 10, 1927, respectively.**69**

A Canadian-born Littleton, New Hampshire, family operated the Kro-Flite Kamps. Sam Smith, his wife Sylvia and their four children, Verda, Roland, Doris and Kathleen, spent their summers during the Barron era living at and managing the kamp.*70* That it was a family affair is not surprising. During the early cabin era it was taken for granted that camps were "mama-papa" (mom and pop) operations and the guests would be greeted by a couple. "The woman's role was particularly important. . . . a camp virtually had to be run by a married couple for both practical and aesthetic reasons. While husbands built and improved cabins and screened 'deadbeats,' wives usually managed the daily business."**71** The economics of the cabin business called for low overhead, possible when the income generated by a camp supported only one family. In New Hampshire it was found that the "personnel of the camp is small, and that the work of cleaning, washing, and cooking is done by the manager, and his wife and assistant."**72** Sylvia was in charge of the restaurant and "was a wonderful cook." Sam parked the cars and performed most of the maintenance and outdoor work. The three girls waitressed and assisted their mother while Roland helped his father and responded to any trouble on the hiking trails. Hard working and "down-to-earth," Sam was a farmer who may have worked at the Crawford House prior to working at the kamps and Sylvia was a former teacher and "brilliant woman."**73**

Kro-Flite Kamps were not advertised in either of the two local newspapers or the *White Mountain Directory*. Neither were the Willey House Cabins.**74** The only contemporary mention of the kamps is found in the *White Mountain Echo* during the summer of 1925. Under the heading "Fabyan House," the kamp was mentioned after a reference to an unadvertised and unscheduled "extra [Cog] train" to the summit. The correspondent shared the news that, "[t]he new camp and restaurant built at the base of Mt. Washington this season by Barron, Merrill & Barron, is proving a great convenience to the many who motor there to take the train from the Base."**75** While there are several ways to define "great convenience," the kamps up to the time of this notice brought in slightly less than three hundred dollars, or about eleven dollars a day. If this was considered a "great convenience," the Barrons would be delighted when the daily revenue for 1925 came in at just over thirty dollars a day.

With the advent of the Kro-Flite Kamps the Mount Washington Cog Railway had to change its ways. No longer could the Cog wait for the branchline train at the transfer platform, load those passengers and head directly for the summit. Now there were also passengers to collect adjacent to the kamps one-quarter mile east of the transfer platform. A small building with a very train-station-like sign reading "Kro-Flite" was erected beside the track where it crossed the Ammonoosuc River and just north of the kamp parking lot.**76** The train stopped at this building to save the passengers arriving by auto from having to walk down to where the Cog met the branchline, or perhaps more correctly, to save them from having to walk up to the kamps and their automobiles when the Cog train arrived at the Base Station from the summit.

The last three years under the Barron regime, the largest revenue day of the year for the Kro-Flite Kamps was the Sunday of Labor Day weekend. Starting in 1928 the Labor Day Sunday's revenue was 270 percent, 238 percent and 285 percent of the year's average daily revenue. During those years only one other day came close to achieving that amount of revenue—and it was not the Fourth of July (some of the large hotels weren't open by July 4). The first three years of the kamps' existence the Labor Day Sunday's receipts were not far from "normal" at 123 percent, 127 percent and 165 percent of daily revenue. A former Cog employee tells the story that Labor Day Sunday was called "Farmer's Day" by those working at the Cog during the mid-1930s. On that day "all the farmers in the area came to watch the cog. None of them rode it, they just came to watch."**77** Whether those farmers watched the Cog with a sandwich and tonic purchased from the kamps in hand is pure speculation. The only day that matches those "Farmer's Days" in revenue was the day of the *Peppersass* celebration, July 20, 1929. On that day the B&M heralded the return to the rails of the locomotive that built the Mount Washington Cog Railway in 1866–69. The crowds were large and the Kro-Flite Kamps realized $160 worth of business, or 264 percent of that year's normal day's revenue.**78**

The Kro-Flite Kamps were different from other cabin camps in one important way, they were owned by a hospitality company and not an individual, married couple or group of individuals. The contemporary and scholarly sources take pains to point out the ownership model of the camps they cite as examples. Belasco cites two couples, "the Bearl Sprotts" and "the Keytons," as the prototypical cabin camp owner and operator.**79** The New Hampshire State Board of Health, when referring to the cabin camps of the late 1920s, spoke of "the manager, and his wife and assistant" reinforcing the idea of a couple operating the business and probably owning it.**80** The Willey House Cabins were owned by an individual—albeit a businessman (but, then, weren't they all?)—then by two individuals before a company was formed to lease and manage the site in 1929, by which time the cabin concept was well advanced. The Barron, Merrill & Barron Co. owned the Kro-Flite Kamps, but made the management a "homey," family-run affair, exactly what the guests expected.

The Willey House business realized revenues of approximately $120,000 during the years 1925–1928. The Kro-Flite Kamps realized approximately $18,000 during the slightly longer period 1925–1930. Put another way, the Kro-Flite Kamps' revenue reached only fifteen percent of the Willey House site's business. While Barron knew the Kro-Flite Kamps would not match the Willey House revenues, he had to be disappointed by the financial results. As only five percent of the Kro-Flite Kamps' meager revenue was associated with the cabins, it could be said the kamp as a cabin colony was a failure. But as a center of hospitality the kamp was a success. It provided for Barron's guests, his primary objective.

Contemporary with the Willey House Cabins and Kro-Flite Kamps were eight other cabin colonies in the western White Mountains.**81** The first evidence of these colonies is contained in the 1926 edition of the *White Mountain Directory*. As the previous *Directory* was published in 1923, there is some uncertainty as to when these cabin colonies actually started. The most accurate statement possible is that they were going concerns in the

spring of 1926 and may have started as early as 1924 or, like the Willey House Cabins and Kro-Flite Kamps, opened earlier and eschewed advertising until the 1926 edition of the *White Mountain Directory.*

In the 1926 edition, the *White Mountain Directory* carried advertisements for eleven cabin colonies and campgrounds. Of these eleven, eight obviously contained cabins based on the photograph provided, the name of the business ("McGee's Log Cabins") or textual description of the business. Four of the eight cabin colonies were in Twin Mountain (near the Twin Mountain House), two were in Whitefield (about ten miles north of Twin Mountain) and there was one each in Franconia and Lisbon (ten miles south and twenty miles west of Twin Mountain respectively). One-half of the Cabin colonies and eight of the eleven cabin colonies and campgrounds sold gasoline. All but three of the eleven promised the availability of some sort of prepared meal, typically "lunch." And all but three offered some sort of store attached to the camp.**82** With most White Mountain cabin colonies providing services beyond cabins, the observation that cabins were "sidelines to gas stations, cafés, and produce stands," or vice versa, is confirmed.**83** The many people who built and managed the cabins to the north and west of Bretton Woods were, in all likelihood, already independent business people prior to entering the cabin trade.

The Mirror Lake Farm and Tourists Camps' (Whitefield) advertisement offers the most complete and alluring description. "Cabins equipped with stoves, cooking conveniences, dishes, etc. Good beds and clean linen. Screened porches and windows. Electrically lighted." They promised "attractive rates by day or week." None of the advertisements in the 1926 edition published rates.**84**

When the 1929 *White Mountain Directory* was released, there were thirteen cabin colonies and campgrounds listed. (Only three of the eight cabin colonies from the 1926 edition continued advertising in the 1929 edition.) All promised or suggested a campground and fully twelve promised cabins (the thirteenth hinted at cabins). Where none of the 1926 cabin advertisers disclosed their rates in print, by 1929 two cabin colonies advertised either "$1.00 per person" or "adults $1.00 each." This wording infers that children were less than one dollar and that the industry was, as stated by the New Hampshire State Board of Health, converging on an "almost universal price of one dollar per person."**85**

The 1929 advertisement for the Mirror Lake Farm and Tourists Camps' restates the amenities of 1926 and adds "running water" to the list. The Twin Mountain Camps offered "Cabins equipped with Simmons beds, heated, electrically lighted. Modern rest rooms, shower baths." It offered the cabins at "$1.00 per person" and "camping grounds 50¢ per car."**86**

In 1929 the New Hampshire State Board of Health surveyed "one hundred seventy camps . . . practically all of the cabin or bungalow type." They found the camps "vary greatly in their size and accommodation, some housing two people, some a hundred." For plumbing, "[a] few camps have running water in each cabin, and indeed two at least were found where each cabin included a flush closet." As implied by the proliferation of cabins, "tourists are using the [cabins] more and more . . . until the 'camping' element of stopping overnight has largely disappeared." The people engaged in the cabin business were a "largely educated, well-bred, and accommodating class of people," their guests "on the whole a well-meaning and clean class of people, largely from other states" and the "largest class of patrons of these small villages is the family on tour."**87**

The increasing number of autoists camping by the side of the road or in campgrounds created an opportunity for a low-cost, road-side alternative to both hotels and camping—an option that offered the best of both to the traveling public. Independent businesspeople adding to their businesses to take advantage of this new opportunity is not surprising. Finding an established hotel corporation take the same chance is. Or is until the root cause for William Barron creating the Kro-Flite Kamps is considered: Providing his hotel guests with the amenities that they had come to demand and reply upon. While profit was certainly the motive for the Willey House Cabins and the cabin colonies west of Bretton Woods, the Kro-Flite Kamps were an extension of the already profitable hotels run by the Barron, Merrill and Barron Co. The 1920s saw the precipitous rise of cabins. Where there were no cabins in 1920, by 1929 there were at least "one hundred seventy camps . . . practically all of the cabin or bungalow type." And by 1932 there were a reported 1,740 cabins owned by 352 individuals in New Hampshire.**88** The corner was being turned, camping as a form of lodging for the autoist was on the way out and the stage had been set for the tourist motel.

Endnotes:

1. Bretton Woods lays along the Ammonoosuc River plain on the west side of Mount Washington from the head of Crawford Notch north to the site of the former Twin Mountain House. Bretton Woods is located in the Town of Carroll, New Hampshire.

2. For the history of the Crawford and Rosebrook families and their hospitality businesses, see Lucy Crawford, *History of the White Mountains*, ed. Stearns Morse (Boston: Appalachian Mountain Club, 1978).

3. Bryant F. Tolles Jr., *The Grand Resort Hotels of the White Mountain* (Boston: David R. Godine, 1998), 240–43.

4. Tolles, *Grand Resorts*, 57.

5. Mount Washington Railway broadside, dated July 19, 1869, author's collection. This broadside states the fares from the base depot and the two nearest hotels. The roundtrip fare from the depot was $3.00. Roundtrip from the Crawford House and White Mountain House was $6.00.

6. Poor's *Manual of U.S. Railroads*, 1886 edition, quoted in Glen M. Kidder, Railway to the Moon (Littleton, N.H.: Courier Printing Co., 1969), 90.

7. A reading of the following newspapers during the season will provide a sense of the social weight and home states of the clientele: *Among the Clouds* (Mount Washington), *White Mountain Echo* (Bethlehem, NH) and *New York Times*. Also see Peter B Bulkley, "A History of the White Mountain Tourist Industry, 1818–1899" (master's thesis, University of New Hampshire, 1958), 71–73. In 1910 the "arrival book at the Bretton Woods garage [Mount Washington Hotel] shows cars from every State in the Union but Idaho." *New York Times*, September 16, 1910, 12.

8. Tolles, *Grand Resorts*, 109 & 240–43.

9. Leslie Dorsey and Janice Devine, *Fare Thee Well* (New York: Crown Publishers, 1964), iv, and Bulkley, "History," 76.

10. Bulkley, "History," 76–79.

11. For examples, see Tolles, *Grand Resorts*, 113, 117–8 & 221. As business was so good the hotels had to regularly expand their buildings to keep up with the demand.

12. Bulkley, "History," 76–79, and for the full range of sports, see George E. McAvoy, *And Then There Was One, A History of the Hotels of the Summit and the West Side of Mount Washington* (Littleton, N.H.: The Crawford Press, 1988), 151–70. Beecher summered at the Twin Mountain House 1871–80. He conducted services in the open at first. Later a tent and then a building were erected. (Bulkley, 74.)

13. Bulkley, "History," 91–5.

14. *Among the Clouds*, September 14, 1900.

15. Frederick W. Kilbourne, *Chronicles of the White Mountains* (Boston and New York: Houghton Mifflin Co., 1916), 373–74. This bridle path was turned into an auto road in 1905.

16. Bulkley, "History," 80.

17. *Among the Clouds*, September 1, 1899

18. *Among the Clouds*, August 30, 1899. This road is extant.

19. Kilbourne, *Chronicles*, 375.

20. Good Roads League, *State of New Hampshire Good Roads League By-Laws and List of Members* (Concord: The Rumford Press, 1905).

21. *New York Times*, June 12, 1904, SR10, and July 9, 1905, 8.

22. *New York Times*, June 17, 1906, XX2.

23. *New York Times*, July 22, 1906, 9.

24. *New York Times*, June 17, 1906, XX2.

25. McAvoy, *And Then There Was One*, 150. Tolles states it was a "100-room hotel for the chauffeurs." (*Grand Resorts*, 221.)

26. *New York Times*, September 22, 1907, X4.

27. *New York Times*, September 16, 1912, 12. *Scribner's Magazine* quoted in Kilbourne, *Chronicles*, 406– 7.

28. 1911 Crawford House Garage Records, Crawford House/Barron Hotel Co. Collection, M1976-65-67, Box 6, New Hampshire Historical Society. There was probably a garage and gasoline pumped prior to 1911. Unfortunately any records

pre-1911 are not available. With the Mount Washington Hotel providing a garage by 1904, it would be a fair assumption that the other resort hotels matched them within a year or two. New Hampshire auto registrations from *New Hampshire Highways* 1 (Dec. 1923).

29. *New York Times*, September 16, 1912, 12.

30. *New Hampshire Highways* 1 (Dec. 1923).

31. State of New Hampshire, *Seventh Biennial Report of the State Highway Department* (Concord: State of New Hampshire, 1918), 208.

32. Max J. Skidmore, "Following the Theodore Roosevelt Trail into the Heart of New Hampshire" *Historical New Hampshire* 62 (Spring 2008): 6–7.

33. Skidmore, "Roosevelt Trail," 9–10.

34. State of New Hampshire, *Ninth Biennial Report of the State Highway Department* (Concord: State of New Hampshire, 1922), 140. The automobile registrations in New Hampshire roughly doubled between 1918 and 1922.

35. Bureau of Public Roads, US Department of Agriculture and the New Hampshire State Highway Department, *Report of a Survey of Transportation on the State Highways of New Hampshire*, 1927. Maps opp. 30 and opp. 58.

36. Warren James Belasco, *Americans on the Road, From Autocamp to Motel, 1910–1945* (Baltimore and London: The Johns Hopkins University Press, 1979), 7, also John A. Jakle, Keith A. Sculle, and Jefferson S. Rogers, *The Motel in America* (Baltimore and London: The John Hopkins University Press, 1996), 31.

37. Belasco, *Americans*, 7.

38. Jakle, *Motel*, 33.

39. Belasco, Americans, 71–2.

40. Belasco, *Americans*, 106, and Jakle, *Motel*, 33–4.

41. Jakle, *Motel*, 34.

42. *New Hampshire Highways* 5 (Aug. 1927).

43. See photo in Skidmore "Roosevelt Highway," 14.

44. *New Hampshire Highways* 3 (May 1925).

45. *New Hampshire Highways* 2 (August 1924).

46. Belasco, *Americans*, 72 & 74.

47. *New Hampshire Highways* 3 (Sept. 1925).

48. "Good and Bad Tourist Camps." *The Literary Digest* CIII (Oct. 26, 1929): 30. States the largest class of patrons was the family on tour.

49. Norman S. Hayner "The Tourist Family." *Social Forces* 11 (Oct. 1932): 83.

50. Eric Purchase, *Out of Nowhere, Disaster and Tourism in the White Mountains* (Baltimore and London: The Johns Hopkins University Press, 1999), 1.

51. Purchase, *Out of Nowhere*, 1.

52. John H. Foster, "The New Willey House Cabins" *Granite Monthly* 54 (Oct. 1922): 380.

53. Ibid., 379–81.

54. Belasco, *Americans*, 131.

55. Hayner "The Tourist Family," 82. Hayner can not be dismissed. He researched and wrote extensively on auto cabins.

56. Jakle, *Motel*, 19. They were also much more completely outfitted than typical early tourist cabins. "Each *small house* contained a kitchenette, a bedroom and a 'front room'." Emphasis added.

57. Foster, "The New Willey House Cabins," 380–1.

58. Report of the Attorney General on the Donahue & Hamlin Controversy and December 1923 Mortgage by Donahue & Hamlin, New Hampshire Secretary of State, Miscellaneous Box (E-2, 4 – G-1, 9), Folder G- 1, 9, New Hampshire Records and Archives, Concord, N.H. Revenue calculations by the author are based on lease terms and payments to the state.

59. "Good and Bad Tourist Camps," 30.

60. Receipt in the Kro-Flite Kamps Ledgerbook and Invoices, 1925–1930, Crawford House/Barron Hotel Co. Collection, M1976-65-67, Box 12, New Hampshire Historical Society.

61. For the issues the B&M confronted see: Alvin F. Harlow, *Steelways of New England* (New York: The Creative Press, 1946), 329–38; Francis B. C. Bradlee, *The Boston and Maine Railroad: A History of the Main Road, with its Tributary Lines* (Salem, Mass.: Essex Institute, 1921); and Steven J. Diner, *A Very Different Age, Americans of the Progressive Era* (New York: Hill and Wang, 1998), 30–1, 234, 239 & 263.

62. F. Allen Burt, *The Story of Mount Washington* (Hanover: Dartmouth Publications, 1960), 166–7.

63. The name Kro-Flite Kamps is nearly lost to time. There are few sources for its existence. Most of them are people's memories and photographic evidence. In addition to the Barron, Merrill & Barron Co. papers pertaining to the camp (footnote 60), they are mentioned in Eleanor Early, *Behold the White Mountains* (Boston: Little, Brown, and Co., 1935), 76.

64. Photographs of Kro-Flite Kamps, author's collection. Mrs. Roland (Clara) Smith, telephone conversation with author, October 10, 2003. Mrs. Smith visited the camp in the late 1920s and married Roland Smith, one of the caretakers, in the 1930s.

65. Kro-Flite Kamps Ledgerbook and Invoices, 1925–1930.

66. Photographic evidence indicates there were at least two cabins. Mrs. Roland (Clara) Smith recalled seeing two. "Good and Bad Tourist Camps," 30, states one dollar was the almost universal price per person at cabin camps.

67. Skidmore, "Roosevelt Highway," 15.

68. Kro-Flite Kamps Ledgerbook and Invoices, 1925–1930.

69. Kro-Flite Kamps Ledgerbook and Invoices, 1925–1930.

70. Smith, telephone conversation, and Kro-Flite Kamp Ledgerbook and Invoices, 1925–1930.

71. Belasco, *Americans*, 137.

72. "Good and Bad Tourist Camps," 30.

73. Smith, telephone conversation.

74. *Among the Clouds*, *White Mountain Echo* for the years 1925 through 1930, and Crowley and Lunt's *White Mountain Directory* for 1923, 1926, and 1929 were searched. The only advertisement seen for the Willey House Cabins was on the back cover of a tourist souvenir booklet published in 1925 (Skidmore, "Roosevelt Highway," 15).

75. *White Mountain Echo*, August 1, 1925, 13. The note was apparently written by someone associated with the Fabyan House as the feature begins "Our register shows a marked increase," suggesting the author at least *felt* association with the house.

76. Photographs of Kro-Flite Kamps, c. 1928, author's collection.

77. George P. Morrison, conversation with author, Keene, NH, 24 August 2008. Mr. Morrison worked at the Cog during the 1934–38 seasons.

78. Kro-Flite Kamps Ledgerbook and Invoices, 1925–1930.

79. Belasco, Americans, 130–1.

80. "Good and Bad Tourist Camps," 30.

81. As defined by the geographic area covered by the *White Mountain Directory* (Beverly, Mass. and Portland, Maine: Crowley & Lunt, 1926), 630–33. This is generally the western and northern portion of what is considered the "White Mountains" today.

82. 1926 *White Mountain Directory*, 630–3.

83. Belasco, *Americans*, 147.

84. 1926 *White Mountain Directory*, 630.

85. *White Mountain Directory*, (Beverly, Mass. and Portland, Maine: Crowley & Lunt, 1929), 732–35.

86. Ibid., 732–33, and "Good and Bad Tourist Camps," 30.

87. "Good and Bad Tourist Camps," 30.

88. *New Hampshire Highways* 10 (Sept 1932), 15.

1871 Dead Man's Lawsuit

26-year old Civil War veteran Harrison L. Davis was working for the Mount Washington Railway in 1869. His family had gone from the poor house in Winchester, New Hampshire in 1850 to living in Hinsdale in 1860 with father, Jonathan supporting them working as a butcher. At 18, Harrison Davis enlisted in Company F of the New Hampshire 2nd Infantry Regiment. The Regiment had just fought in the First Battle of Bull Run. Davis would be in their ranks when the New Hampshire 2nd was at Gettysburg and later pulling guard duty at Point Lookout, Maryland before participating in the Battle at Cold Harbor in June 1864. Mustered out in September 1864, Harrison Davis marries Estella B. Smith in Winchester, N.H. on July 1, 1867.

Davis' name first shows up in the record at the Cog Railway in 1869 although he may have been on the payroll in prior summers.

Wagon Accident Details: "On the morning of the 11th, Mr. H. L. *(Harrison L.)* Davis, in the employment of the Mount Washington Railway Co., was severely if not fatally injured, on the road to the depot at the foot of the Mountain. He was taking a wagon load of machinery for the road to the depot, and the wagon went over an embankment and the load fell upon him. His physician thinks his recovery doubtful. Mr. Davis belongs in Franklin, is about 26 years of age and has a wife." *- Concord New Hampshire Patriot & State Gazette - Wed, Aug 18, 1869 pg. 1*

Davis would survive the injuries from the wagon accident. Davis would sue the turnpike over the accident in 1871.

Sec. 5 - Dead Man's Lawsuit

Hung Jury?: "In the Supreme Judicial Court at Concord, the action of Harrison L. Davis against the Mount Washington Turnpike Company has been on trial since last Wednesday *(11/8/1871)*, and was given to the jury on Monday *(11/13)* evening. The plaintiff *(Davis)* alleges that he was traveling over the turnpike road of the defendant corporation, leading from the lower terminus of the Mount Washington Railroad to the main road, on the 10th day of August 1869, in a careful and proper manner, when, in consequence of a defect in said road, he was thrown from the wagon in which he was riding and was seriously and permanently injured; and this action was brought to recover the damages ($10,000) for very severe injuries caused by the upsetting of his two-horse express wagon on the sand hill midway between the toll-gate and railway station. The defendant *(Turnpike)* claims that its road was reasonably safe and good for the travel passing over it, and that the plaintiff was not exercising the care and skill required of him by law, at the time of the accident, but received whatever injury he did receive, in consequence of his own negligence (intoxicated and driving carelessly). The jury failed to agree (the jury stood 10 for a verdict to 2 against) and were discharged about two o'clock Tuesday *(11/14/1871)* morning. Barnard & Sanborn for the plaintiff *(Davis)*; Minot, Tappan & Mugridge for the defendant *(Turnpike)*. There were two cases in which it was expected there would be jury trial to-day *(Tuesday, 11/14)* but they were both settled in other ways. As the law term in this District is so near at hand, and the court and lawyers require the intervening time to prepare for that, the court concluded to adjourn the present term till the 26th day of December, at 11 o'clock in the forenoon, and the jury that came in this week were excused till that time. This term thus far has been a profitable one to the county and parties interested - a large amount of work having been done and consequently a good many cases disposed of. Judge *(Charles)* Doe is a worker himself and inspires and procures work from those around him. Before he finally adjourns the term, the docket will have a thorough sifting and will be much reduced in size." *- Concord (NH) Daily Patriot - Tue, Nov 14, 1871 pg. 2; Manchester (NH) Mirror & Farmer - Sat, Nov 18, 1871 pg. 4; Manchester (NH) Weekly Union - Tue, Nov 21, 1871 pg. 3; South Royalton Vermont Journal - Sat, Nov 25, 1871 pg. 2 & Bellows Falls Vermont Chronicle - Sat, Nov 25, 1871 pg. 2*

The search for additional documentation of the November trial of *Davis v. Mt. Washington Turnpike* ran into the event horizon of an archival black hole in New Hampshire – a black hole caused by an on-going political fight over the organization of the Granite State's legal system.

"There seems to be a large gap in the records of the Merrimack County Court from 1872 to about 1880," says State archivist Bill Burford. "This, of course, was the period of extreme political upheaval that saw courts created and extinguished. As long as 25 years ago, my predecessor, Frank Mevers, noted the hole in the records."

According to Burford, that period of upheaval began in 1813 when the NH Legislature abolished the Superior Court and created a Supreme Court. Two years later, the other party won control of the legislature and abolished the Supreme Court and reconstituted the Superior Court. This cycle happened again in 1872 and 1874.

Meanwhile about 1855, the Legislature created a "Law Term" (which provided the appeals function now exercised by the Supreme Court) within the Superior Court. The Law Term be-

came known as the Supreme Judicial Court over time. Cases before these Law Term/Supreme Court judges were tried or kept in county Superior Court space across New Hampshire as the Supreme Court judges traveled from county to county.

In the 1870s, the Legislature told the Supreme Court/Law Term Judges to stop traveling and hold cases in Concord at the Merrimack Superior Court which is where *Davis v. Mt. Washington Turnpike* was argued.

In the 1890s, dedicated space for this Law Term court was designed in the brand-new State Library building across Park Street from the State House in Concord. In 1901 the modern Supreme Court was established by legislative act as a separate court with its own clerk and staff.

What paperwork does exist from the 1871 Supreme Judicial Court cases now constitutes just three boxes (without an index) that were sent to the State Archives by the Merrimack Superior Court. Archivist Brian Burford went through those boxes on Flag Day 2021 and found one contained nothing but criminal cases. Eighty percent of a second box was divorces, but no Davis v. Mt Washington Turnpike. The final box "contained the April and October Terms of 1871, but had no papers that I could see as late as November and December 1871" when Davis v Mt. Washington Turnpike was tried and hung. Burford next turned to Judgement Volumes (summaries of decisions made during a year) and Docket Books (outlining cases scheduled to be taken up). Burford found the lawsuit listed as Case #202 in the docket book for the October Trial Term of 1871, but no entry in the Judgement Book for the October 1871 Trial Term. *Davis v. Mt. Washington Turnpike* was Case #300 in the April Trial Term of 1872, but again nothing in the Judgement Book for that term. *Davis v. Mt. Washington Turnpike* was re-numbered as Case #224 for the October 1872 term. That term's Judgement Book contained the notation for Case #224, "Neither party appearing, this action is dismissed."

The Mt. Washington Turnpike's financial ledger provided the explanation as to why neither Davis nor the Turnpike went to court that fall. Historian Rob Bermudes' electronic copy of the Turnpike's financial records from Cogger Paul Forbes' collection notes a $1-thousand-dollar payment on November 1st, 1872 to Harrison L. Davis – the settlement on the original $10-thousand-dollar claim.

The 1871 $10,000 claim is equivalent to $221-thousand dollars in 2021. The $1000 settlement works out to just over $22,000.

Six years later, Harrison L. Davis is recorded as the operator of the Marshfield House hotel at the Mt. Washington Railway's Base Station in 1877.

An 1872 Trip Up Mt. Washington

St. Johnsbury District Clergymen's Association Picnic
For the *Caledonian* by Hiram Cutting, Lunenburg, VT
Published August 30th, 1872

The Association met at Lunenburgh on the 6th inst., and after holding a Preacher's meeting of unusual interest, which was well attended by the towns people, and highly enjoyed by all, the members and their friends, made a picnic excursion to the White Mountains; under the arrangements of Rev. Julius Leavitt and myself, acting committee.

The weather was pleasant, and as we neared the peaks of the "Agiochook" of the Indians, we could realize that to the "Algonquin" race, they might seem the resting place of spirit land. As Mt. Washington and other peaks of bald rock came out in majesty before us, we could in part share the veneration given by the Indian to his "Waumbeck" God, as his "Great Spirit" of the mountains with its "snowy forehead." What an achievement it would seem to that Indian, to see the iron horse puffing up to the very resting place of the "great Spirit," that he supposed would never permit the return of anyone that was daring as to invade his sanctity.

Crawford Notch
- NYPL Digital Collection

(They go to Crawford Notch where "the Portland and Ogdensburgh RR is soon to be built through this gorge.")

The lengthening shadows of the mountains tell us that, as about a dozen miles separates us from the Mt. Washington RR, we must turn our carriages that way. We reluctantly leave this wild scene of nature, and retrace our steps five miles. Again we are at the old "Fabyan stand," in the vicinity of which was the mound known as the "Giant's Grave," which has in part been leveled to accommodate a large hotel which they are now building. From this place, six miles of turnpike takes us to the depot of the Mt. Washington RR. Passing through the tollgate *(left)*, a few rods brings us to the graves of three veteran pioneers of the White Mountains – Ethan Allen Crawford, Capt Eleazer Rosebrook, and his wife, Hannah.

This is in, reality the only fine locality for a hotel this side of the mountains, and is the only spot available, that is in plain view from the tip top of Mt. Washington. There is a tradition extant that soon after the first house was completed, an old Indian stood on top of the mound leveled, and lighting his torch from an old pine tree that had just been set on fire by lightning, waved it wildly around in the darkness, saying that the sacred outlook from the snowy mount was desecrated; and no white man should take deep root here - that the Great Spirit of the Wambeck had whispered it in his ear.

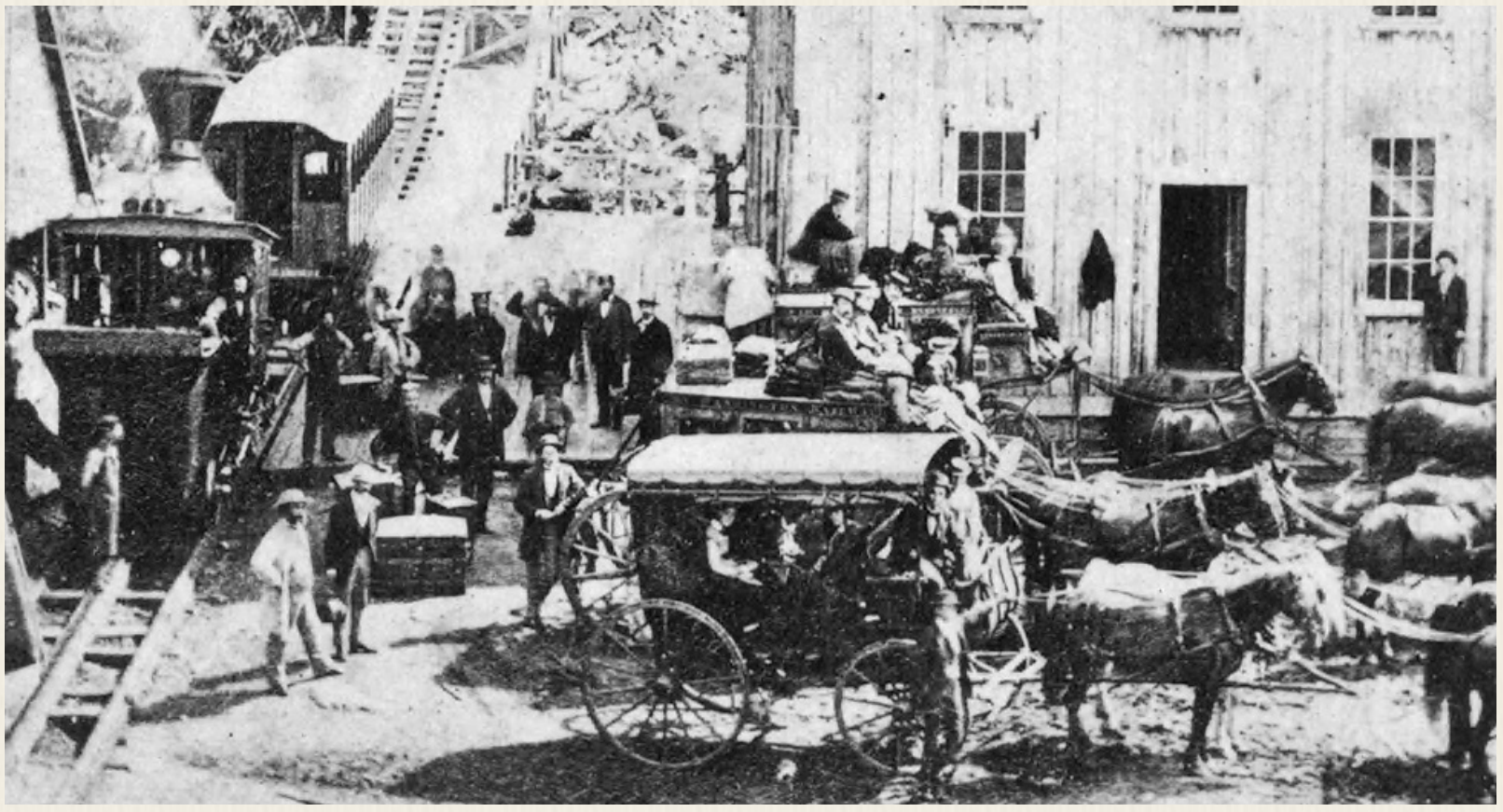
Riding three miles over the turnpike, we come of the upper falls of the Ammonoosuc *(above)*. Here is another gorge, worn in the gneiss rock, with large and small pot-holes, and other curious features, well worthy of a visit. Some one has put up a sign over one of the pot-holes, naming it "Greeley's wash bowl." It now contains water, and perhaps is so called as it a relic of the past.

Sec. 6 - 1872 Trip

About sundown we arrived at the "Marshfield house," near the Mt. Washington railroad depot. As the ground was very wet in this vicinity we concluded to accept the invitation of E.K. Cox, the gentlemanly proprietor of the Marshfield house, to make use of his hotel as best we could, and not put up our tent.

Here we met Rev. I Luce, our former presiding elder, with his friend Rev. Mr. Strout of Portland. We improvised a church in the parlor and listened to eloquent and heartfelt discourses from Bro's. Luce and Strout.

For the night the ladies were accommodated at the hotel, while the gentlemen took quarters at the barn, with the novel feature of having a horse under each bed. The only disadvantage was that we thought the horses did not sleep well.

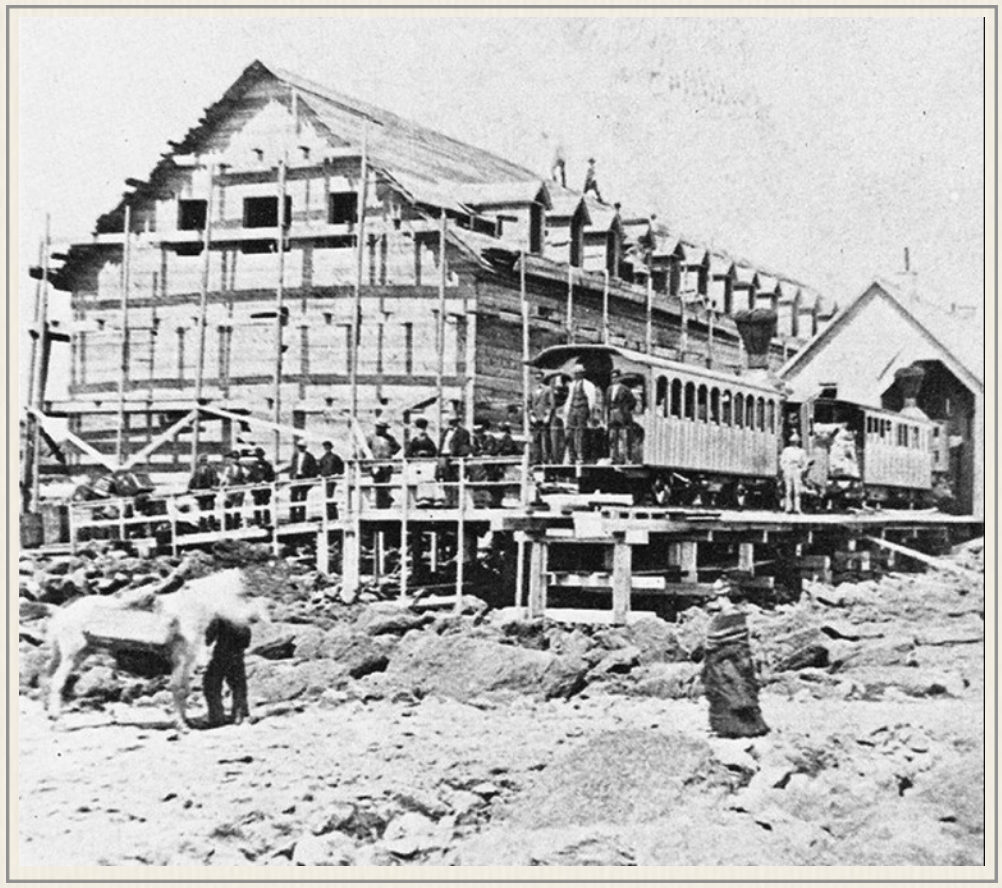


At early morn we were off up the mountain by steam. Slowly we ascended, and gradually came into view the surrounding woodland, with its gorges, streams, and lesser mountains. The atmosphere was clear, giving us a fine westerly view. We could see far into Vermont, but not as recorded by some of the early visitors, Lake Ontario or Champlain. The far sight-seeing from the White Mountains in the fabled past, is much greater than the most sanguine can realize. The fact is that for near 15 miles in every direction it is almost an unbroken forest, and the beyond that distance the human eye has very indistinct vision, and object of interest lose their significance. There is however a realization of the vastness in the view which is agreeable. As we neared the summit we were enveloped in cloud, which was hurled by us at the rate of 40 miles per hour. Yet to the observer below these "cloud-caps" as they are termed, seem perfectly stationary. The reason is that the vapor from the valleys, as the wind wafts it over the mountain tops, is condensed

into cloud by their coolness, and passes rapidly over and is dissipated as soon as it passes beyond the mountain. As the wind continually brings fresh vapor, the condensation and dissipation goes steadily on, and the cloud-cap is the result.

To many of the company it was a novel feature of the cloud world, and quite as interesting as a better view would have been.

As we neared the summit, close beside the RR track is the monument of Lizzie Bourne *(above)*, which marks the spot where this estimable lady lay down and died from exhaustion, with a cloud darkness around her darker than one not experiencing it can imagine. At the summit the "Railroad Co." are building a spacious hotel *(below),* and the lumber in piles, with buildings here and there, suggests a village. An opening now and then in the cloud, gives us good views to the north and east, but southerly we were not favored; but as a whole, we had a much better view than is usually obtained by mountain visitors. We could however hardly realize that it was clear and hot below us.



As we descended we noticed everywhere beside the railroad, and in all cleared land about the mountains, as well as all recently burned over, a thick growth of wild cherries. The question arose for discussion, as to how they came there.

The Devil's Shingle

White Mountain Chronicles -1916 (pg. 244-245)

This interesting contrivance was invented to meet the need of rapid transit for the workmen employed in track repairing and the like. By this means an experienced rider can go from the Summit to the Base in three minutes. The slide-board is about three feet long, rests lengthwise on the center rail, and is grooved so as to slide on it. The braking mechanism, by which the board is kept under such perfect control that it can be stopped almost instantly whenever necessary, is very simple. On either side of the board is pivoted to it a handle, to which is attached, near the pivot, a piece of iron bent in a peculiar form so as to project underneath the rail. By pulling up the handle this piece of iron is made to grip the flange of the rail very tightly. *(Note: a review of images indicates braking could occur either in front or rear of the board depending upon design of the particular board.)*

It was formerly the practice for the roadmaster or his assistant to descend on a slide-board before the noon train every day, going slowly enough to make a careful inspection of the track. The death of an employee in performing this hazardous act a few years ago, which accident cost the Railway Company several thousand dollars in damages and made evident the liability to mishaps of this kind, has caused the discontinuance of the use of this dangerous means of conveyance.

1867

Slideboard Genesis: "The workmen engaged in building the White Mountain Railway amuse themselves in rigging sleds with which they slide down on the greasy timbers which form the framework. Taking short trips at first, they have become more venturesome until the whole distance over which the road is built has been traversed in this novel manner. The distance from top to bottom – one mile – has been performed by one of their club sleds in a minute and a quarter. But the sport is attended with some danger, for one sled left the track, and the fall broke the leg of its occupant."

- (Concord) New Hampshire Statesman – Fri, Oct 18, 1867 pg. 2 & New England Farmer (Boston) – Sat, Nov. 16, 1867 pg. 3

Model slide board *(circa 1870) or "Devil's Shingle," used by workers on Mount Washington Cog Railway. Wooden board with three transverse wooden cleats on top surface. Bottom surface has longitudinal wooden cleat at front and one longitudinal brass track at rear (second track missing) Number "8672" written in ink on top surface. Tapered wooden brake arm on each side, attached to brass axle with brass connecting hardware. (Dimensions: H-3 W-2 L-5 inches)*
- Gift of the Manchester Historic Association to N.H. Historical Society

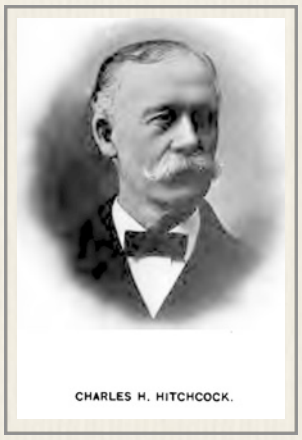
1870

The *Journal of the Franklin Institute* Vol. LIX - Third Series - No. 1 - January, 1870 - pg. 49 in 1870 writes of the railroad "In illustration of its apparent safety, it may be stated that more than nine thousand tons of construction material have been transported over, and great numbers of passengers, without accident or injury to property or person, the only individual ever injured being one of the workmen, who, having a careless habit of taking an easy way of getting down one of the steep inclines by placing a board on the centre track and sliding upon it, came to grief and a broken leg one day for want of a suitable brake on his machine." Suitable brakes were then devised.

1870-1871

Mount Washington in Winter

Chapter IV - Sliding Down Hill



The leader of the expedition, New Hampshire State Geologist C.H. Hitchcock of Hanover wrote, "The employees of the company often amuse themselves by sliding down the railway upon a board. There are two ways of arranging this vehicle of conveyance. The simplest and safest is to place the board across the central rail, and the person sitting upon it checks his course with his feet, one upon each side of the rail, striking against the ties, forty inches apart. The body must lean backwards a little, else an occasional irregularity in the rail will stop the progress of the board, and the passenger will be thrown off, at the risk of breaking a limb. By the other method the board, perhaps a yard long, has two narrow strips nailed beneath, so that it cannot slip off the rail, and the experimenter can put his feet upon it, using short sticks as brakes to diminish the speed. The board does not fit so closely to the rail as in the first instance, so that there is less danger from a sudden stop; but there is danger that the

Sec. 8 - Devil's Shingle

brakes may become unmanageable. By the first method a vast amount of muscular energy is demanded in the thighs, and those who try it, will have occasion to remember their journey for days afterwards, whenever attempting to walk. Persons have been know to slide the whole distance in ten minutes, but strangers are advised to avoid these "new methods." *- page 75*

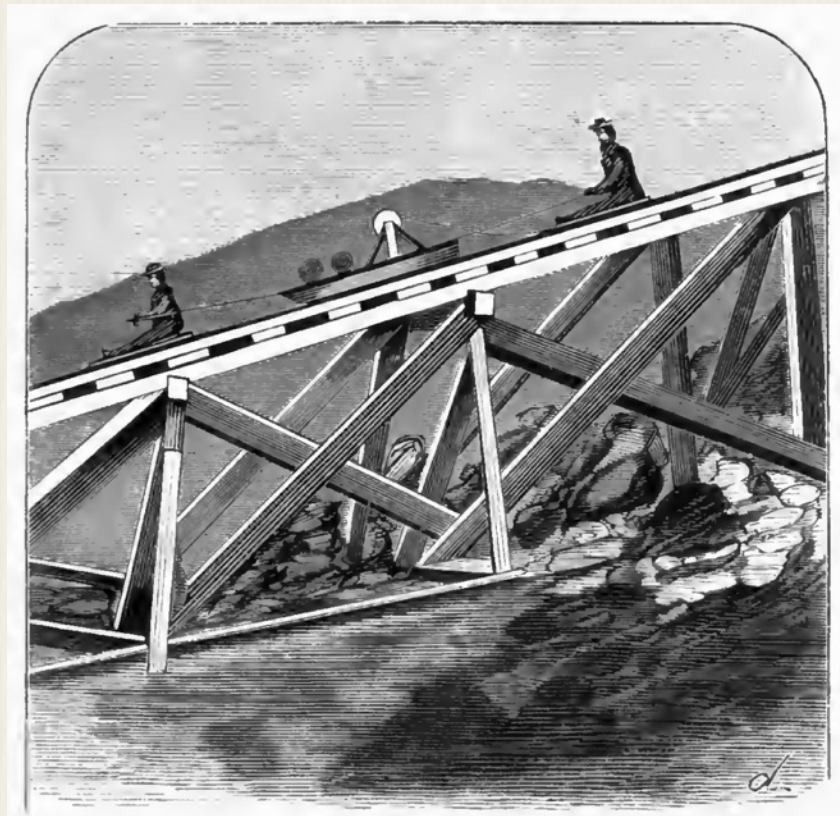
Strangers may have been advised to avoid the slide boards, but Professor Hitchcock's expedition that was to spend the winter of 1870-1871 in the newly built Mt. Washington Railway summit depot/ engine house found the devices helpful in setting up a communications link. Trained Signal Corps observer, Sergeant Theodore Smith, U.S.A. would use the telegraph wire to send daily weather data to those in the valley. Sgt. Smith outlined the installation in his section of the expedition's final report.

Mount Washington in Winter
Chapter X - The Telegraph Wire

THE WIRE HOW LAID

"Though the wire was now upon the summit, it was still a serious question how it was to be laid along the railway. A sled seven feet long was constructed, the coils were placed upon it, one being mounted on a reel. One of us sat upon a board in front to guide the sled and the other was behind, sliding down hill, as explained on page 75, and illustrated in the accompanying sketch.

The sled upon the railway glides smoothly down the steep grade, and the wire uncoils beautifully and is laid just where it is wanted. It was something fearful to pass over the high trestle below the Gulf Tank and on Jacob's Ladder, and even now it almost makes one



LAYING THE CABLE ON JACOB'S LADDER.

shudder to think of those dizzy heights, the load we had, and the steep grade. But we reach Marshfield in three hours from the time of starting, and the wire has been successfully laid. On our return the wire is fastened down with eyelets close to the outer rail, and the summit is reached just at dark. We put it on the ties, because if placed on the ground where there was little snow, it would be constantly moved by the wind and soon worn off; and should it be broken in the snow and ice there would not be the least possibility of finding where it was broken, as we should not

know where to look for the wire. On the railway we always know where the wire is, and more than half the way to Marshfield it has been most of the time out of the snow," wrote Theodore Smith in the expedition's final report.

1872

Sec. 8 - Devil's Shingle

French Slide Board Death: "The workmen on the Mount Washington Railroad have a way of adjusting a board to the rails and sliding down very fast. Thursday *(9/26)* a Frenchman was descending rapidly, and a heavy mist prevailing, he ran into a locomotive, killing him instantly."

- Laconia (NH) Lake Village Times – Sat, Oct 5, 1872 pg. 2

"On Thursday, the 26th (of September), a Frenchman by the name of George Tricott, 20 years of age *(Ed note: Real name Elzéar Turcotte)*, an employee of the White Mountain Railway, started from the summit station on a slide board or sled, in common use among the boys at that place, fitted to the middle rail or ladder of the track, and furnished with two lever brakes made to press against the side of the ladder. It was raining at the time, and the sides of the mountain were enveloped in fog or mist. The usual time of descending in this manner is said to be about six minutes, distance three miles. With the speed of an arrow he shot down in safety about one half the distance, when he discovered a freight train advancing to meet him It was but the work of an instant, the track being wet and slipper, made his brakes useless, and striking head foremost against the framework of the car, his brains were dashed out in an instant. His remains were taken on board the train and given in charge to his brother, who resides in that vicinity. S.N.J."

- Bellows Falls (VT) Vermont Chronicle - Sat, Oct 5, 1872 pg. 2

"The men employed on the railway daily amuse themselves by sliding to the base on a board adjusted to the rails and just large enough to seat one person. On the 28th, one of the employees, a Frenchman, against the wishes of his companions, made the attempt during the prevalence of a dense fog. He descended at a terrific rate, and not being able to effectually apply the brake, ran into a locomotive which had just started on the way up, killing him instantly. He had nearly reached the foot of the mountain when the accident occurred. The descent of two and half miles was made in the remarkable time of three and a half minutes, the speed being increased by the accumulation of ice on the track, the brake on the slide refusing to perform is accustomed service. More anon. – L." A second collision?: Initial thoughts were the Portsmouth newspaper had stated the wrong date (Sept 28th instead of Sept 26th) and was reporting on the same death, but Jitney Jr. noticed the description of the location differed - the first occurring near the halfway point of the line and the Portsmouth account saying this collision occurred closer to the Base Station. *- Portsmouth (NH) Journal of Literature & Politics – Sat, Oct 12, 1872 pg. 2*

1873

During the fourth year of operation of the U.S. Army's Signal Corps station (No. 46) atop Mount Washington, the War Department's office of the Chief Signal Officer ordered on April 19th that a "series of special (hourly) observations" be made in May and June at the Summit and temporary stations to be established at the Base, Waumbeck, and at Gulf Tank. Ten additional observers were sent to the mountain for the project. One was Private William Seely of Seneca Falls, New York. He and another private would assist Sergeant Robert Seyboth at the Marshfield House, where a wind-vane and anemometer would be put on the hotel's roof, and a rain gauge placed nearby with the barometers and thermometers located in railroad's telegraph office for communications with the summit.

Sec. 8 - Devil's Shingle

Enlistment papers reviewed by the Mt. Washington Observatory *News Bulletin* say Private Seely joined the Army in Saint Louis, Missouri, on August 16, 1872, at the age of 29. He was "born in Seneca Falls, and was by occupation a farmer. He was single and had no children. He enlisted for the standard term of five years. The recruiting officer certified that Seely had brown eyes, brown hair, fair complexion, is 5 feet and 5 ¾ inches high."

According to Sgt. Seyboth's journal, Saturday, June 28, 1873 "opened warm and cloudy, with light easterly winds and the barometer falling. (A) light rain commenced at 6 am and continued until 10:40am." Ten minutes before the rain stopped, Pvt. Seely "was sliding down the track from the Waumbeck House (station No. 3) on a board, when he was run into by Sgt. D. H. Sackett, who, being unable to control his board, in consequence of the track being very slippery from the effects of a prevailing rain, struck Seely's board with tremendous force. Seely was thrown forward on his head, and, striking on the cross-ties, was fearfully mangled. Sergeant Sackett instantly summoned assistance, and through the kindness of Mr. Walter Aiken a train was as quickly as possible run to the place where the accident occurred, and Private Seely was conveyed to the railway-depot. It was not until 10 pm that a surgeon could be obtained, the wire to Littleton being down. On being apprised of this fact Sergeant Sackett rode to Littleton and procured the services of Dr. Bugby. On examination, Seely's injuries were found to consist of a fractured skull, his right leg broken above the knee, his left ear torn off, and in addition the muscles of his chest and his vertebral column severely wrenched. As he was apparently suffering great pain, and required constant watching, by the advice of Dr. Bugby I consented to his removal to Littleton, where he could have proper nursing and medical attendance. Private Seely was unconscious up to the time of his removal, which took place on

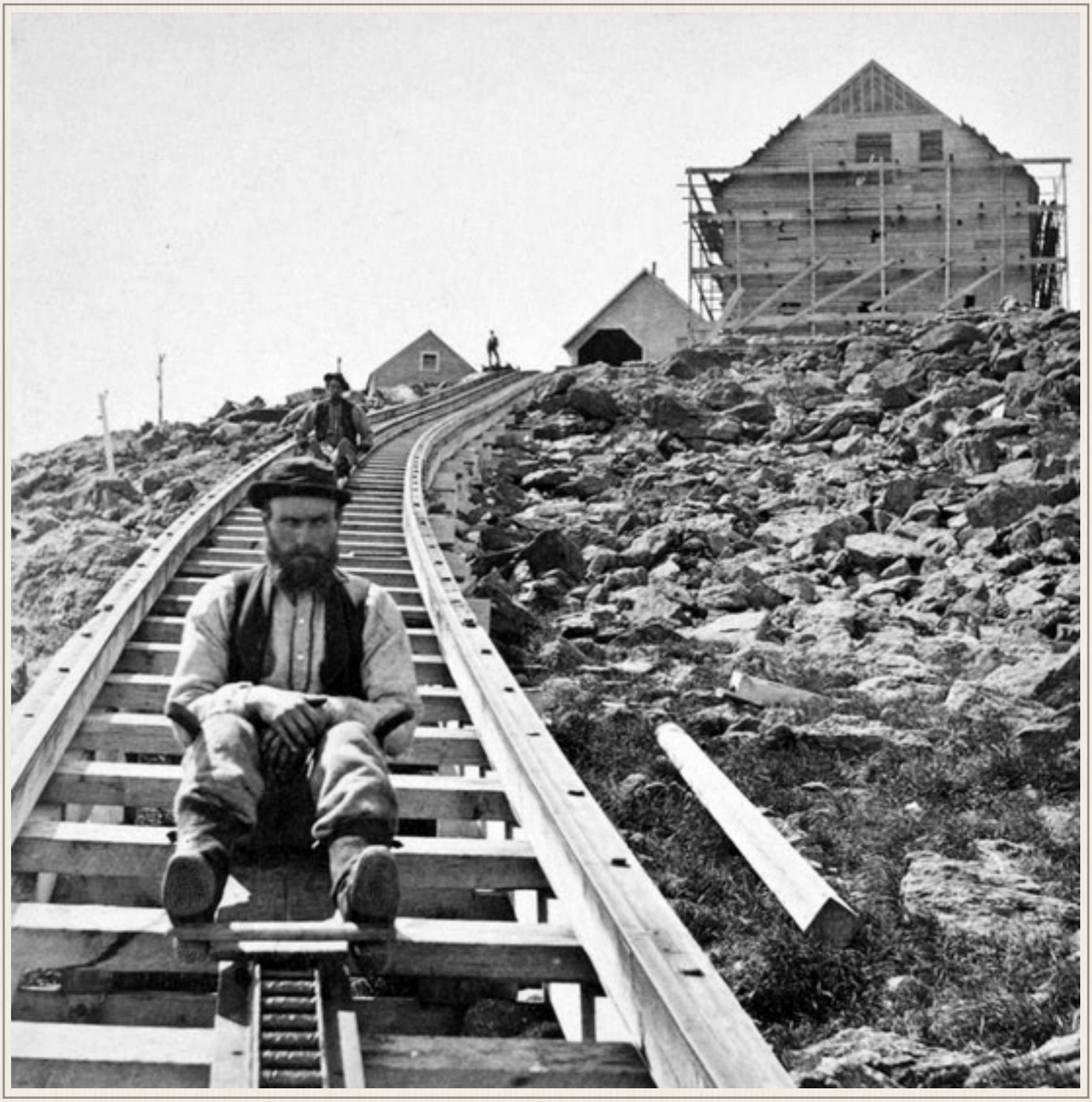
the morning of the 29th. Thanks are due to Mr. W. Aiken and employees of the Mount Washington Railroad, also to Mr. Edward Cox and ladies, for kind and efficient help rendered the suffering man."

Reports of the accident in the *White Mountain Republic* weekly newspaper in Littleton add an "e" to Seeley's last name. "On Saturday last, as Wm. Seeley, employed in the Signal Service on Mt. Washington, was sliding down the railroad track on one of the apparatus used for that purpose, was run into by a comrade, whose sled become unmanageable, and was seriously injured. He was brought to the village by Mr. E. Cox of the Marshfield House, and taken to Jennison's Hotel, where he lies in critical condition," the paper writes in its July 3rd edition. The following week, the newspaper reports, "William Seeley, who was injured in the descent of Mt. Washington, as announced last week, died on Wednesday the 2d, at Jennison's Hotel. He remained unconscious from the time of the accident till his death." In the Chief Signal-Officer's annual report, Seely was remembered as "an honest and faithful man, and his loss was greatly deplored by his comrades." Pvt. Sealy was laid to rest in the Glenwood Cemetery in Littleton, New Hampshire.

His death prompted calls to end the use of slideboards on Mount Washington. "The *Boston Herald* offers the following sensible suggestion in regard to the dangerous practice of sliding down on the railroad track on Mount Washington: "Since the railway to the summit of Mount Washington built, a contrivance for descending the mountain in a hurry has been in use, but which had better be abolished altogether. It consists of a board or two fitted to the track and is governed by a brake to arrest or retard the motion of the machine. Some remarkable feats in sliding down hill, as boys 'coast' on the Common, have been performed with these sliding boards. Not long ago a telegram was sent to the Tip-Top House, summoning a railroad conductor to come down immediately. In five minutes he arrived at the base of the mountain, having made three and a half miles in five minutes, beating the best time of Dexter and goldsmith's Maid. But this sort of trifling with gravitation is liable to accidents, as in the case of Seeley, one of the United States Signal Service men belonging to the Tip Top Station. He was, a few days ago *(6/28)*, descending the mountain very glibly on one of these sliding machines, and another man was following in the same manner. The brake of the one in the rear was broken whilst they were going with immense speed, and it came in collision with the forward one with a tremendous shock. Seeley was thrown ten feet in the air, his hip was broken, and other injuries to his head and shoulders proved fatal. Other accidents have occurred previously by means of this dangerous 'coasting,' and it ought to be stopped." *- Laconia (NH) Lake Village Times – Sat, Aug 16, 1873 pg. 2*

The 1884 Railroad Commissioners' report will note "The only serious casualties occurring on the road have arisen from the use of sliding boards, by which three lives have been lost." Signal Corpsman Seely was the only slideboard death discovered in early research for this manuscript leaving two names unaccounted for. An *Among the Clouds* dispatch printed in the *Pittsburgh Daily Post* on Sunday, October 16, 1898 says "Many years ago *(1872)*, not long after the road was constructed, an experienced person connected with the signal station, while making a descent, ran into a descending train and was instantly killed." The story was repeated in an 1899 issue of *Gran-*

ite Monthly magazine. This is likely one of those two unidentified men. A short blurb in the *Laconia (NH) Lake Village Times* found in 2021 indicates a "Frenchman" died in the fall of 1872. With a specific year of the death, a name was finally found: "OnThursday, the 26th (of September), a Frenchman by the name of George Tricott *(actually Elzéar Turcotte)*, 20 years of age, an employee of the White Mountain Railway, started from the summit station on a slide board or sled, in common use among the boys at that place, fitted to the middle rail or ladder of the track, and furnished with two lever brakes made to press agains the side of the ladder. It was raining at the time, and the sides of the mountain were enveloped in fog or mist. The usual time of descending in this manner is said to be about six minutes, distance three miles. With the speed of an arrow



Slideboard riders pose just below Summit during construction of new hotel in summer of 1872-73. Train depot and temporary building seen to left of hotel.
- New Hampshire Historical Society

he shot down in safety about one half the distance, when he discovered a freight train advancing to meet him It was but the work of an instant, the track being wet and slippery, made his brakes useless, and striking head foremost against the framework of the car, his brains were dashed out in an instant. His remains were taken on board the train and given in charge to his brother, who resides in that vicinity. S.N.J." *- Bellows Falls (VT) Vermont Chronicle - Sat, Oct 5, 1872 pg. 2*

1874

Board Riders to the Rescue: "Messrs. *(John H.)* Priest and *(John)* Horne of the Mount Washington Railway were coming down from the summit, Saturday *(9/5)*, on sliding boards on the railway when they came near running over Mr. N.H. Allen and Mrs. C. N. Allen, who were walking on the track. The lady fell and was quite badly hurt, so she was taken on one of the boards and slid down to the base safely - the first lady who ever performed the feat."

- Boston Globe - Wed, Sep 9, 1874 pg. 3

1876

"In the eight years that the road has been run there has been no accident resulting in the loss of life, though two or three of the railroad workmen have been killed in attempting to slide down the rails on boards fitted with rude iron runners to the center-rail, and regulated by a brake of like simple construction. Notwithstanding the danger of a descent in this way it seems to have a great fascination for some, and in our ascent we met several persons coming down on these sleds. As we approached they stopped their odd vehicles and detached them from the track; resuming their downward flight when we had passed. They are all right "while the breaching holds," but when that gives out it is the last of earth for the unfortunate sledder. In one instance where the rude brake gave way the rider was hurled down the mountain side against a car with such impetus as to crush him to almost boneless jelly. The descent of three miles on these sleds has been made in 4-and-one half minutes, or nearly the highest railroad speed, and the time usually occupied, including the "turnouts" for trains to pass, is less than 10 minutes."

- The Washington (DC) Evening Star - Thu, Aug 24, 1876 pg. 1

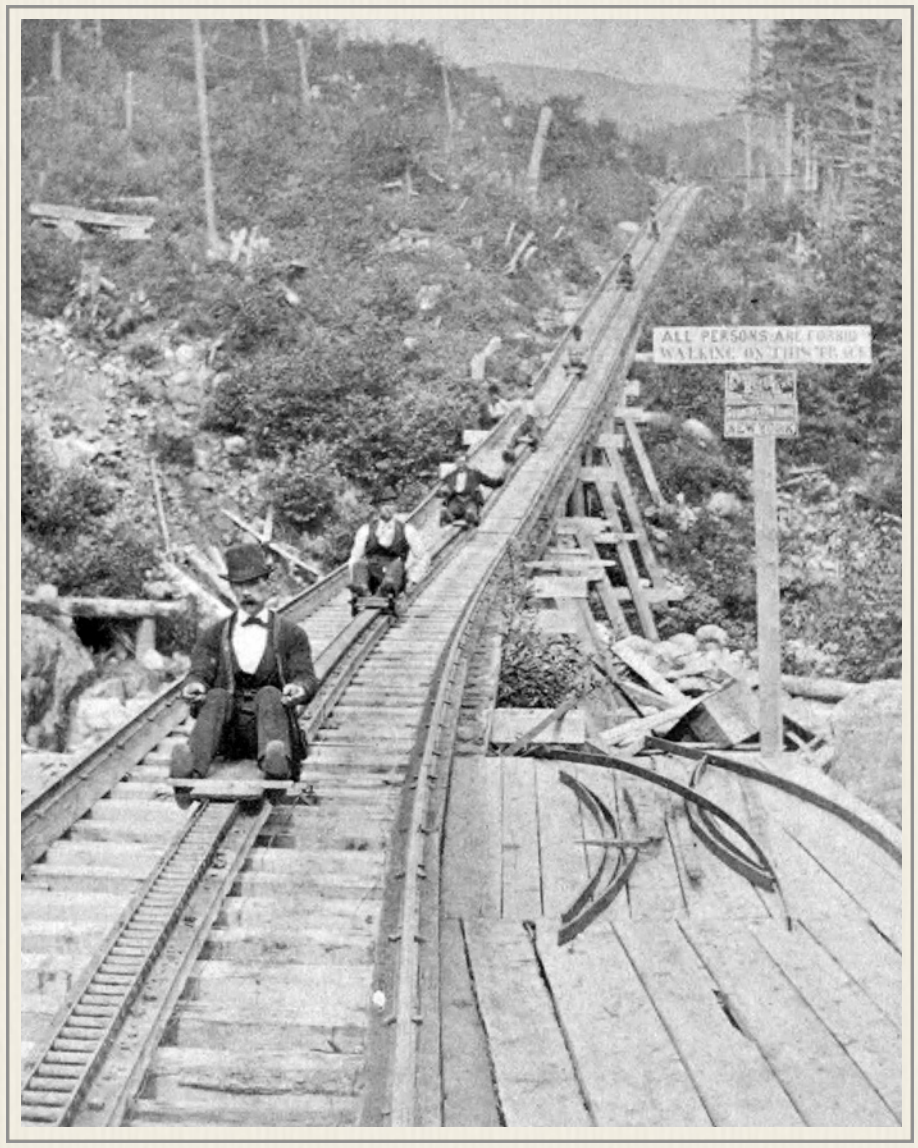
1878

Signal Corps personnel continued to use the slide board - even in winter, according to this story published in the *Boston Post* on Wednesday, January 23rd

"The descent of Mt. Washington on a sled is a sensation for whose enjoyment most men would be willing to endure bumping to a certain extent, although the experience of Sgt. Cone may be considered somewhat too severe to find compensation in the otherwise pleasurable novelty of his exploit. Sgt. Cone, being recalled from the elevated position which he has occupied watching the wind and the weather on the top of Mt. Washington, started to come down, Sunday morning, on a sled constructed to slide over the track of the mountain railway. Leaving one man in charge of the Signal Service station at the summit, the Sergeant and Private Murphy started on their long trip. All went well, at the speed of fifteen miles an hour, until "Jacob's Ladder," as the high and steep trestle work is called, was reached. Here Sgt. Cone determined to make the dan-

gerous part of the trip alone, and, Private Murphy stepping off the sled, the Sergeant started without company on the down grade. As the pitch was reached where the road descends about one foot in three, the sled suddenly took on the speed of forty miles an hour with the not unnatural result of "slewing" the sergeant off over the side and landing him in a snow-bank, one hundred feet distant, on his head. There his companion found him, insensible; made the journey to the foot of the mountain; telegraphed for aid from Littleton; returned and picked him up, still insensible; and at last brought him to the Fabyan House where medical skill made him as right as could be expected. This is a variety of railroad accident which has an interest all its own. The travel on sleds down mountain railways with a grade of one in three is not likely to become a usual mode of locomotion, and the disastrous termination of this experiment may therefore be regarded as conveying none of the lessons ordinarily drawn from casualties on the rail. The most obvious point is the fact that Sergeant Cone must have had a most glorious slide before he came to such a sudden overturn, and in these snowless winter days his experience must be the envy of every boy with an unused sled. – *Boston Post – Wed, Jan 23, 1878 pg. 2*

Sergeant Cone recovered and continued serving his country keeping track of Mount Washington from his new post at Fort Gibson in the Indian Territory (that would become Oklahoma) with a subscription to *Among the Clouds*. He wrote a letter to the editor July 13, 1878.



"Situated as I am here in this blazing hot country, with the temperature at 96 degrees in the shade, the perusal of your paper brought to mind pleasant recollections of our elevated position last summer on the summit of Mount Washington. Although the old mountain did not deal with me gently last winter, I would much rather be with you again this summer than where I am now. You are doubtless aware of my paralytic stroke on the 3rd of last November, by which I lost the use of the left side of my face. Owing to the fact of my not recovering on the mountain, I was ordered to the signal service hospital at Washington. I started down the mountain on January 20th, 1878, and in so doing took a tumble, as it were, about which you have not doubt heard all the particulars. I remained in Littleton until my wounds were healed sufficiently to enable me to continue my journey to Washington, where I arrived on the 12th of February. I remained in the hospital until March 16, when I was ordered to this outlandish place, in charge of the signal sta-

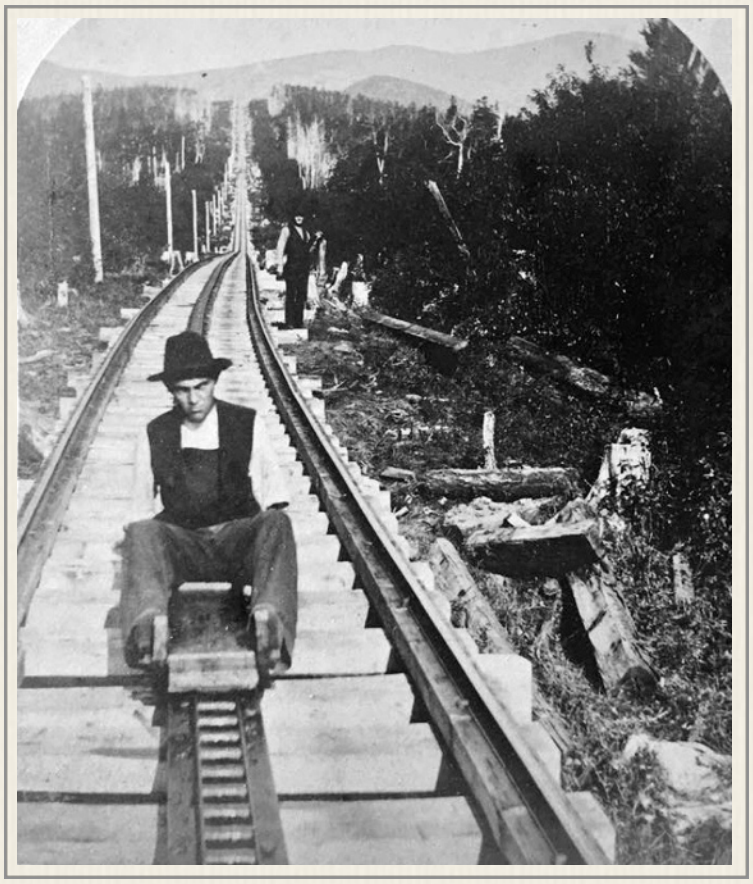
tion. Fort Gibson is a dilapidated looking town of about 400 inhabitants, composed of whites, Cherokee Indians, half-breeds, negroes, turkey buzzards and dogs - the last four named predominating. Society is a very low ebb here. Most every man carries a revolver and bowie-knife, and is very proficient in the use of them, too, though times are very quiet here now. There have been only three men killed in this immediate vicinity since I came here, about four months ago. About the only amusement I have is riding on horseback. I have become the sole proprietor of an Indian pony, on which I take a ride nearly every day in fine weather. Yours. O.S.M. Cone" *- Among the Clouds Fri, July 19, 1878*

A correspondent for the *Boston Home Journal* said the Sgt. Cone's slideboard took a place of honor and interest at the Base that summer alongside *Peppersass*. "We saw *"Old Hero,"* the first engine that over took the extraordinary flight, we might call it, to the summit, with its upright and swinging boiler, as crude as Stevenson's first attempt compared with the shapely and sturdy little Titan that now does duty in its stead. Nearby is the sled that precipitated its luckless owner, Sergeant Cone, from the trestle of Jacob's ladder last winter, a crazy affair that would seem to be too unsafe on a common hillside. The sled in common use by the section men is a peculiar affair, bestriding the centre stringer on which the cog wheels of the engine work, fitted with a brake like a pair of tongs, which by proper use is supposed to arrest its course with a vice-like grasp at a moment's notice. This sometime's a failure, however, as one of the hands can testify, who performed the journey at one time from summit to base (three miles remember,) *in four minutes and a half*, resulting from a broken brake; but we saw it used so successfully that we all wanted to try it ourselves, except the ladies, of course." *- The White Mountain Echo Jul 20, 1878 pg. 3*

Stories about rides on a slide board tempted tourists to try their hand at harnessing the Devil's Shingle and coming very close to Judgement. "A passenger on the afternoon train from the Summit Thursday *(7/11)* had a narrow escape from a fatal accident, through his own recklessness. Wishing to try sliding down the track, when the train stopped for water at the lower tank he left the car and, unobserved, seated himself close behind it on a board on which the roadmaster, John Camden *(left)*, had come to this point. The train before starting down the mountain track, always backs up the track a short distance. This passenger, not knowing this, would have been crushed by the

train, had not Mr. Camden missed his board, and on looking for it found the gentleman and rescued him from his perilous position just as the brakeman had given the signal to start."

- Among the Clouds Sat July 13, 1878



Railway manager Walter Aiken includes another slide board story from the "early days of the Mount Washington railway" in an article printed in the Thursday, September 12, 1878 issue of *Among the Clouds*. "We once had a little Frenchman by the name of Peter Goodroe, work for us. Peter was fond of sliding down the rail on his board. One day, when coming down Cold Spring Hill *(in background next page)* at pretty good speed, he came where some of the road men were at work on the track. They had a crowbar stuck in the center rail, which inclined down the hill and a little to one side. Now Peter thought the men would take out the crowbar, and the men thought Peter would stop. The result was that Peter did not stop but ran up and off the end of the crowbar, going into the air some twenty feet and one side into a bunch of bushes. There was some tall swearing in French on one side, and a great deal of fun at Peter's expense on the other."

1879

Rescue by Slideboard

"On September 1st, 1879, (a party of six led by mountain guide Allen Thompson of Bethlehem) walked up the railroad track to the Summit. While walking down Jacob's Ladder on their descent, Miss (Sophia D.) Hayward missed her footing, but was saved from falling off by Mr. E. I. Booraem, who had to hold her for half an hour on the trestle before she was able to resume the descent. At the Waumbek tank they were overtaken by Sergeant Jewell of the Signal Station, who was coming down by slideboard, and he carried the young lady on his sled to the Base. Some other slide-board coasters who followed Mr. Jewell took Miss (Carrie L.) Briggs and Miss (A. Maria) Nelson to the Base, but Mrs. Booraem walked all the way up and down on the track unaided. Sergeant Jewell, it will be remembered by old (Summit) visitors, afterward volunteered for Lieut. Greeley's Arctic expedition, and was the first of that unfortu-

nate company to perish." *- Among the Clouds - Fri, Sep 6, 1901*

1880

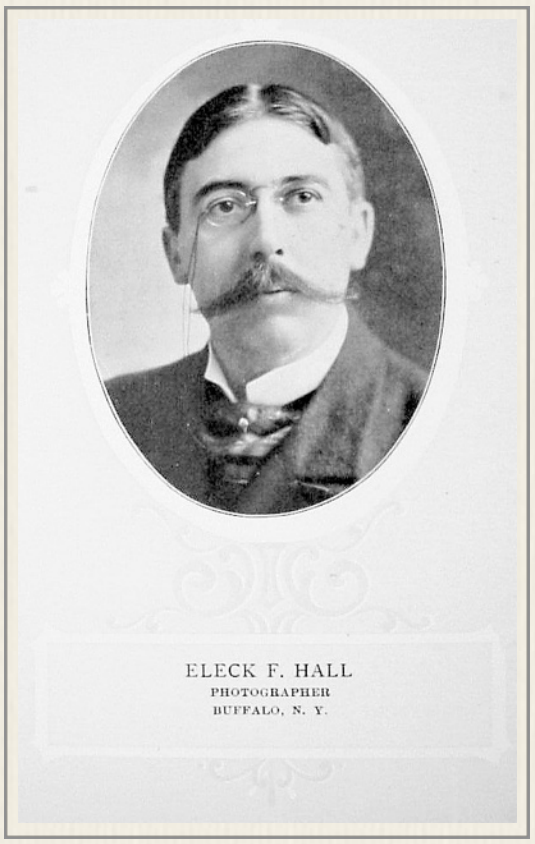
36th Annual Report
of the N.H. Railroad Commissioners

MOUNT WASHINGTON RAILROAD

No accident has occurred to a single passenger since the road was opened; and the only accidents to employees and others that have occurred, have been from negligence or failure to obey the rules and regulations of the management of the line.

End of Summer Slide?

Slideboard stories abound. One resurfaced in 1945 in the *Littleton Courier*. Jitney Jr. attempted to date the incident by researching the marriage dates of the people involved. It seems to have occurred at the end of the 1880 season. "Recently we *(Here and There columnist Arthur S. Morris)* saw an account of such a trip (on slideboards) taken by Mr. and Mrs. William Aldrich and Mr. and Mrs. Eleck Hall of Lisbon and Buffalo, N.Y. At the time the young people were not married. They walked up the mountain, intending to ride down, but they passed the last train of the season. Undaunted they continued to the summit, rolled rocks into what then was called the Gulf of Mexico (Great Gulf), then walked down over Jacob's Ladder where they discovered two sleds. Each young man took a girl in front of him and away they flew to the base station where they were given a severe lecture by employees of the railroad, who considered their stunt very dangerous. These two young ladies were probably the first of their sex to slide down the mountain, for the next year a woman reporter paid $40 to do it, then writing a story for a metropolitan paper in which she claimed that she was the first to make the thrilling trip. It is of interest to learn that soon afterwards the sleds were taken away, even from the section hands, so dangerous were they." *- Littleton Courier - Thu, July 19th, 1945 pg. 8*



Eleck F. Hall of Buffalo *(left)* was a Granite State native who became a noted photographer in New York. Gary Saretzky profiles Hall on his website. "E.F. Hall, whose first name was Eleck, was well known as a Pictorialist and professional portrait photographer in Buffalo. Born in 1857 in Bath, New Hampshire, he began his photographic career in his native state in about 1874. He married in Iowa and worked in Creston, Iowa, as a photographer, as well as in Hanover, Lisbon, and Littleton, New Hampshire. He moved to Buffalo in 1887, where his studio, "E.F. Hall & Co." at 306 Main Street, succeeded that of Powelson. In 1894, he moved to 469 Virginia Street, which appears in *Catalogue of the Second Annual Exhibition of the Buffalo Chapter of the American Institute of Architects*, March 1895. He sold this studio in 1908 to Howard Beach but continued operating there with Beach as "Hall's Photographic Stu-

dios" until 1913. Hall is included in Anthony Bannon's book, The Photo-Pictorialists of Buffalo *(1981)* and there is a photo of him in the 1897 Buffalo Merchants Exchange book, p. 117.

http://gary.saretzky.com/photohistory/hall/index.html

Jitney Jr's *Ancestry.com* search indicates the 23-year old Hall married 19-year old Ida May Brown of Littleton on June 25, 1881 in the bride's hometown. Therefore the estimate that the ride on borrowed slideboards occurred in 1880.

1881

"Foolhardy Notoriety"

From a June 23rd dispatch from the Fabyan House: "The Mt. Washington railway is being repaired and strengthened and is not running regularly yet, but will soon be in full operation. The White Mountain range is plainly seen, their tops covered most of the time with heavy, sullen clouds, which hug them closely, as if jealous of allowing their beauty and grandeur to be seen; but the clouds do sometimes rise and the peaks stand out against the clear sky with great distinctness and boldness; patches of snow are even now visible on Mt. Washington and in clear weather the cars are sometimes seen climbing the mountain. A dangerous pastime has prevailed around here with persons seeking foolhardy notoriety of sliding down the rails of the Mt. Washington railway on a sort of sled fastened to the rail by a clamp and government by a brake. The descent is like lightning, the three miles having been covered by some more daring than others in three minutes. The practice is not allowed now, as several were killed or injured; one man ran into the engine and was split in two on the wheel, and another fell off his sled at Jacob's Ladder and was crushed on the rocks below. – "Occasional" *- Lowell (MA) Daily Courier – Tue, Jun 28, 1881*

Borrowed Board Death?
Who Died?

There clearly was a serious slideboard accident on Sunday, December 4, 1881. However newspaper reports do not make it clear who was injured... or perhaps there were two?

"Last Sunday *(12/4)* four men, in the employ of Mr. Austin, at Twin Rivers, thought that they would take a trip to the summit of Mt. Washington. They made the ascent all right and attempted to come down upon the boards which are used to slide down the track upon, when in the vicinity of Jacob's Ladder, one of the number, Wm. Stone, lost control of his board and was thrown off cutting his face and head badly, and bruising his entire body in a serious manner, it is also feared that his skull is fractured and when first picked up it was feared that he could not live. Dr. Hildreth of Bethlehem, was called and dressed the wound and is attending him."

- Littleton (NH) Journal - Fri, Dec 9, 1881

"A Frenchman named Larush, working for Mr. Austin in the lumber woods, was nearly killed last Sunday *(12/4)* while sliding down Mt. Washington on the railway track. His skull was fractured and there is small hopes of his recovery." *- White Mountain Republic (Littleton, NH) - Sat, Dec 10, 1881*

"Four lumbermen started to slide down the Mt. Washington Railway, recently, on the boards which the workmen use in the summer for that purpose, but one of them lost control of his board, was thrown from the track, and received injuries which will probably prove fatal."

- New England Farmer (Boston) - Sat, Dec 24, 1881 pg. 2

1882

Coasting on Mount Washington

"Coasting is admitted by all to be one of the most exhilarating of sports and in the winter everywhere sleds and double-runners loaded with gay young people glide swiftly down the hills. Many of the sleds and double-runners are fitted and decorated in costly style and present a gay appearance to the lookers-on as they go by with their merry loads. Such sleds can only be used in the winter, when the ground is covered with snow, and during the summer they are useless. However, on the longest slide in the world, sledges are only used in the summer. This slide from the summit to the base of Mount Washington, on the railroad track, is an exciting and dangerous novelty. The track consists of three rails, the two outer being small T rails; the center or cog-rail is the essential part of this road and it is on this rail that the slide is taken on a board. This rail is spiked down to a timber running parallel to the outer ones, the edges of the rail extending nearly an inch beyond this timber on both sides, and leaving an edge under which the brakes are applied, The sleds are made as follows: About six inches from the end of a board three feet long and one foot wide, an iron bolt extends crosswise, projecting over each side of the board. The brakes are made in the shape of a common poker, the end being hinged to the bolt on the board, while the handles are held by the slider. Near the elbow of the brake is a projecting piece of iron which rubs on the under side of the flange of the cog-rail, and by pulling upon these brakes the men stop themselves at will. On the bottom of the board are fastened small strips of iron, which pre-

vent the board from slewing and wearing out, and as the cog-rail is kept greased with a mixture of oil and tar to prevent its rusting and wearing out, the boards glide along as if on ice. These boards are owned only by a few employed to keep the track in order, and no one else is allowed to slide even if is so rash as to desire to do so. Formerly the men simply places a board on the track, and used their hands, protected by a piece of leather for brakes; then came the iron shoes on the bottom, then the iron brakes until now their simple looking board is as complete as possible for its purpose. The length of this slide is three miles, and the fastest time on record in which the distance has been traversed is three minutes. To an experienced man this slide is as safe as the shorter ones which Young America enjoys all over the country, but several inexperienced persons have met with accidents, two of which were fatal. - Hoedus"

- Among the Clouds - Wed, Aug 30th, 1882

"The feat of sliding down the Mount Washington railroad on a board, a dangerous feat even for experts, was performed successfully the other day by Miss E. F. Coleman of New York. She made the three-mile slide in thirteen minutes, escorted by two old sliders, and was perfectly delighted with the trip." *- St. Johnsbury Caledonian - Fri, Sep 15, 1882 pg. 2*

"The dangerous feat of sliding down Mount Washington railroad on a board has been accomplished by Miss E. F. Colman, who made the three miles in 13 minutes. It was a smooth board, without slivers." *- Morrisville (VT) News & Citizen - Thu, Sep 21 1882 pg. 2*

1883

William Putnam's *The Worst Weather on Earth*, published in 1991 says about ten years after Signal Corps observer William Seely died on a slideboard, another observer suffered an accident while "coasting" down the mountain. On October 27, 1883, Private P. J. Cahill broke his leg in two places and received severe scalp wounds during a crash between Long Trestle and Jacob's Ladder. He spent two months recovering off the mountain. According to Putnam, a colleague attributed the injuries to "too much slideboard." Cahill's accident was noted in the November 8, 1883

edition of the *St. Johlnsbury Index* that said Cahill was taken to Littleton, N.H. for treatment and he had been injured while "sliding down the mountain railroad track on the 'flying devil.'"

- Mt. Washington Observatory News Bulletin - Summer 1992 / St. Johnsbury Index - Thu, Nov 8, 1883 pg. 3

The accident tale may have been buried in a blurb that begins with a Southerner talking about summit weather conditions: "And observer on Mt. Washington says that lookout is a miniature North pole, with the mercury 25 degrees below zero, and only a fortnightly mail, to get which the signal officers have to walk up and down the mountain on snow-shoes. This observer went to the mountain from Atlanta, Ga, which city he left wearing a straw-hat, and he found icicles six inches long on the Fabyan station on his arrival. Although the signal-service officers are scientific men, their assistants have not always the fear of the powers of nature before their eyes. A wild Irishman of the party (Cahill?) undertook to slide down the mountain railroad track on a board. He reached a speed of about a mile a minute, lost his grip and was thrown off, breaking a leg, spraining an ankle, cutting his head terribly and bruising himself up generally."

- The (Brattleboro) Vermont Phoenix - Fri, Jan 11, 1884 pg. 1

More details of the accident and Cahill's stay on the Summit emerged in articles printed in 1884 and 1885. "Sergeant Edward A. Beals is in charge of the (Signal) station, and he is assisted by P. J. Cahill. Both came here last October *(1883)* after the trains to the summit of Mount Washington had ceased to run. A telegram, published a few days after his (Beals) arrival, announced a serious accident to one of the signal me while descending the mountain. On reaching the base of the mountain he left his clothing and walked to the summit. A few days later the sergeant and his assistant constructed a slide-board for the purpose of descending to the base by rail. It was completed October 27, and at 10 o'clock Assistant Cahill set out to make the descent. The first mile was passed over without much difficulty, but after reaching Long Trestle on the second mile the slide-board gained a terrific speed, and Cahill being unable to control it with the brakes, was thrown from the track just above Jacob's Ladder into the air and fell among the rocks. Sergeant Beals, receiving no word of his arrival at the base, telegraphed the cook, Henry J. Knowlton, to see if an accident had occurred to Cahill, with instructions to cut the wire cable and touch the ends together six times if he found him seriously injured. Fifteen minutes later the cable ceased to work, and then came the unmistakable dashes. Knowlton continued toward the base to get assistance, and Beals provided himself with blankets, then walked down the track. On coming to the place where Cahill was injured he found him covered with blood, his head frightfully cut and his left leg broken below the knee. His slide board had made a clean leap into the air, while he was thrown more than twenty-five feet, falling upon the rocks. Assistance came from below, and after much hard work the injured man was taken to the base, thence to Fabyan's, where he arrived twelve hours after the accident. The doctor set the broken limb and a week later he was removed to Littleton, but it was two months before he was able to be about. This was a narrow escaped from death and the most serious accident that has occurred to any signal officer on Mt. Washington." *(Ed note: The reporter was apparently not told of Private Seely's death in 1873)*

- St. Albans (VT) Daily Messenger - Thu, Sep 18, 1884 pg. 2

Six months later Cahill's story was told in another Vermont paper. "The signal men have had various narrow escapes while carrying the mails to and from the base. On one occasion Private Cahill started down the railroad on a sled of his own construction, none of the regular sledges *(slideboards)*, having been left at the summit. He went as far as the place called Jacob's Ladder, and there the brakes were found insufficient to retard a velocity of almost a mile a minute, and the sled jumped the track. Cahill was shot off onto the rocks below, where he rolled over and over, breaking his leg in two places and cutting his head severely. Here he lay, almost dead from cold and loss of blood, until the Sergeant, not being apprised by telegraph, of his arrival below, sent the cook down to see what had happened. Sergeant Beals had ordered the cook to cut the wire and signal to him if Cahill was seriously hurt. The cook did so, and then spliced the wire. The Sergeant knowing that a dangerous accident had taken place, telegraphed to the base and to Fabyan's for assistance, The trackmen immediately went up the railroad with two sledges, and, with great difficulty, carried the wounded man to the base, where a wagon was procured, and he was taken to Fabyan's. The unfortunate observer had lost his cap in his fall, and to keep his head warm the mail-bag had been put over it. This, of course, covered the weather-reports in the bag with blood, but notwithstanding that, they were sent on to Washington, where they are now said to be kept as evidence of the trials which the observers have to undergo. Private Cahill, who seems to have as many lives as a cat, recovered and lived to be struck by lightning last summer *(1884)* while sitting at his desk in the signal-station. He saw the wires flash, and thought that he was to be killed, but, after a few seconds, seeing that he was still of this world, and remembering his former experience, he tried to move. This he could do, and, with the exception of a slight paralysis in one side, which lasted a few minutes, he was unhurt."

- Northfield (VT) News - Thu, Mar 26, 1885 pg 3

1884

40th Annual Report
of the N.H. Railroad Commissioners

MOUNT WASHINGTON RAILWAY

This unique road has been in operation twelve years, and the fact that no accident has occurred to any passenger of the one hundred thousand transported in that period, abundantly testifies to the care and skill constantly exercised by the manager and employees. The only serious casualties occurring on the road have arisen from the use of sliding boards, by which three lives have been lost. The use of this fascinating but dangerous contrivance by the public has been forbidden by the management, and all employees are enjoined against its use. A few employees still make occasional use of the board. Its absolute prohibition is desirable, as fatal accidents from its use are certain to be only a question of time. The utmost skill and vigilance are constantly exercised by the management to guard against any liability to accident in the operation of the road. No defect in the superstructure, track, or equipment is perceivable after the closest inspection.

"Mrs. William P. Campbell of Chicago rode a slide board from the summit of Mount Washington to the base on the railroad, Sunday morning *(8/3)*, a distance of three miles, in seven min-

utes. She went down with one of the workmen of the railway, and was so much pleased with the trip that she was sorry the road was not longer." *- Among the Clouds in Buffalor (NY) Commercial - Sat, Aug 30, 1884 pg. 4 & St. Johnsbury Caledonian - Thu, Aug 7, 1884 pg. 3*

1885

"Henry O. Blanchette, a machinist on the Mount Washington Railway, broke his right leg on Tuesday *(9/29)*, while sliding down the railway on a slideboard." *- Among the Clouds - Thu, Oct 1, 1885*

"Henry O. Blanchet had his leg broken and was badly cut and bruised about the face on Wednesday, 30th, while going down the Mount Washington railroad on a slide board. The accident was due entirely to his own carelessness as he knew that a train was on the track, about half way down, into which he slid at full speed. In using a slide board he was violating the company's rules. *- Concord NH Patriot & State Gazette - Thu, Oct 8, 1885 pg. 5*

1887

"Assistant Observer J. W. Bauer, who left Mount Washington Saturday *(7/16)* morning, to take a position in the New York signal station, could not resist the temptation to make his last descent of Mount Washington on a slide board. He made good time to the Base, and regretted that he could not take just one more slide." *- Among the Clouds - Mon, Jul 18, 1887*

"D. H. Cole, the telegraph operator at the Summit, finds the slide-board convenient when it is necessary to repair the lines. He went from Summit to Base a few days ago for that purpose and made good time." *- Among the Clouds - Fri, Aug 12, 1887*

1888

"The second woman to coast down the Mount Washington railway was Miss H. Winslow, who, with Mr. Brice, of Boston, went down in eleven minutes. This included four stops, one in the middle of Jacob's Ladder, where they got off and rested a moment."

- Durham (N.C.) Recorder - Wed, Oct 10, 1888 pg. 1

1890

"David Martin, an employee of the hotel, while trying, on Tuesday *(7/15)*, to see how quickly he could go from the Summit House to a place below the first water tank on a slide board, was thrown from his board and his left shoulder dislocated, besides being otherwise bruised. He was taken to the Base yesterday *(7/16)* and put under the influence of chloroform and the dislocated bone put in place. Dr. H. L. Miller of the Summit House, Dr. J. F. Frisbie of Newton, Mass., and Dr. Gove of Whitefield, and medical student, R. S. York, reduced the dislocation, which was a very serious one. It was not thought prudent to administer chloroform at this elevation, and at the suggestion of Dr. Frisbie, the patient was taken to the Base. The operation was successfully performed and Martin was brought back to the Summit last evening. Hereafter no one will be permitted to use the slide boards except the railroad workmen, who understand how to manage them."

- Among the Clouds - Thu, Jul 17, 1890

Hamlin Garland Coasted Down: "The *Boston Herald* of Sunday *(2/24)* contained a full-page story of Hamlin Garland, the article being entitled "Reminiscences of New England, Boston and the White Mountains." In 1890 Mr. Garland made the trip to the top of Mount Washington and was so impressed with the scenery that he later wrote a book on the subject. He made a memorable coast down the railroad track which he describes in his writings."

- Littleton Courier - Thu, Feb 28, 1918

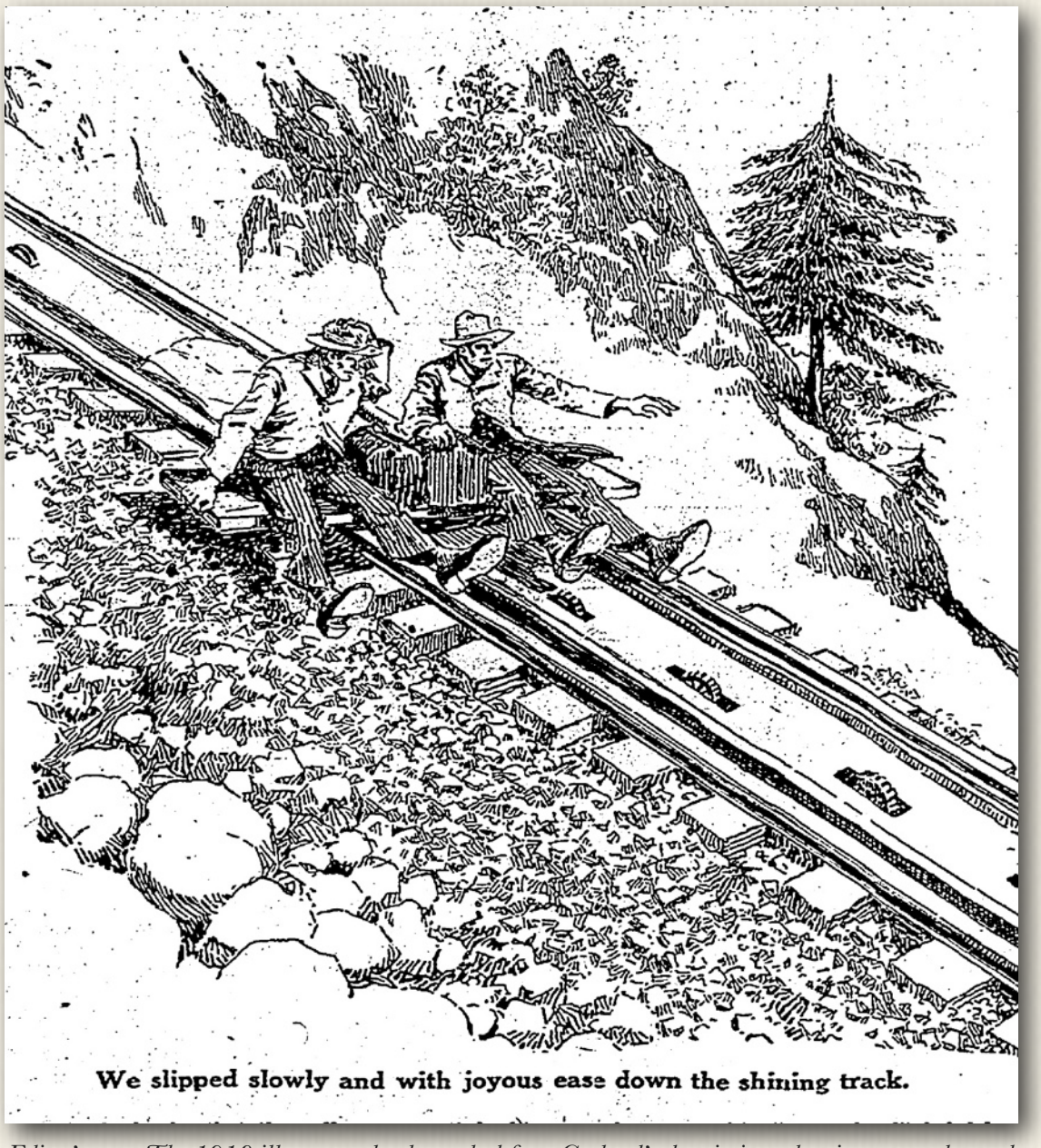
Hamlin Garland: "I came (East) again at 24 and lived nine years in Roxbury and Jamaica Plain. Boston's singers, artists, actors and writers profoundly educated me, just as New Hampshire's peaks and vales enriched my mental sky... I do not mind in the least mind your running the New England extracts of my book in your Fiction Department, for while the story is entirely true - as true as my memory can make it - it reads like fiction even to me, so wonderful is it all in retrospect."

Reminiscences of New England, Boston and the White Mountains

"When I next awoke it was dawn, and my body was so stiff I could hardly move. We had slept cold and our muscles resented it. However, we hurried from the barn. Once safely out... we began to lean and dance and shout to the sun as it rose out of the mist, for this was precisely what we had come 2000 miles to see - *sunrise on Mount Washington!* It chanced, gloriously, that the valleys were filled with a misty sea, breaking soundlessly at our feet, and we forgot cold, hunger, poverty, in the wonder of being "above the clouds!"

"In course of time our stomachs moderated our transports over the view, and I persuaded my brother (who was younger and more delicate in appearance) to approach the kitchen and purchase a handout. Frank, being harshly persuaded by his own need, ventured forth and soon came back with several slices of bread and butter and part of a cold chicken, which made the day perfectly satisfactory, and in high spirits we started to descend the western slope of the mountain.

"Here we performed the incredible. Our muscles were so sore and weak that as we attempted to walk down the railway track our knees refused to bear our weight, and while creeping over the ties, groaning and sighing with pain, a bright idea suddenly irradiated my mind. As I studied the iron groove which contained the cogs in the middle of the track, I perceived that its edges were raised a little above the level of the rails and covered with oil. It occurred to me



Editor's note: The 1918 illustrator clearly worked from Garland's description when it came to the track

that it might be possible to slide down this track on a plank - if only I had a plank!

"I looked to the right. A miracle! There in the ditch lay a plank of exactly the right dimensions. I seized it. I placed it cross-wise of the rails. "All aboard," I called. Frank obeyed. I took my place at the other end, and so, with our valises between us, we began to slip slowly, smoothly and with joyous ease down the shining track! Hoopla! We had taken wing!

"We had solved our problem. The experiment was successful. Laughing and shouting with exultation, we swept on. We had but to touch every other tie with our heels in order to control our speed, so we coasted, smoothly, genially.

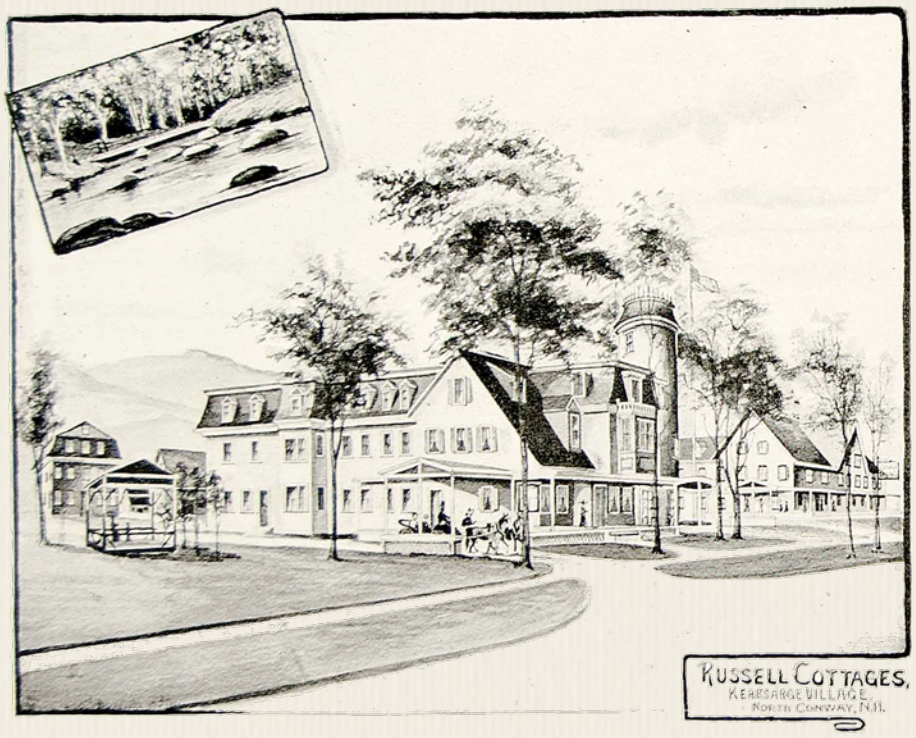
"On we went, mile after mile, slipping down the valley into the vivid sunlight, our eyes on the glorious scenery about us; down, down like a swooping bird. Once we passed above some workmen, who looked up in open-mouthed amazement, and cursed us in voices which seemed far and faint and futile. A little later the superintendent of the water tank warningly shouted, *"Stop that! Get off!"* but we only laughed at him and swept on, out over a high trestle where none could follow.

"At times our heads grew dizzy with the flicker and glitter of the rocks beneath us, and we rounded dangerous curves of the track, or descended with swift slides with almost uncontrollable rapidity, I had some doubts; but we kept our wits, remained upon the rails, and at last spun round the final bend and came to a halt upon a *(flat spot on the track)* just above the little station. There kicking aside our faithful plank, we took up our valises and with trembling knees and a sense of triumph set off down the valley of the wild Ammonoosuc."

- Boston Sunday Herald - Feb 24, 1918 pg. 41

Garland's Tale Prompts Recall of 1870s Board Sliding Adventure

A Unique Slide: "The novel exploit of Hamlin Garland and his brother Frank in slowly coasting down the Mount Washington cog railway on a plank, as set forth in *A Son of the Middle Border*, recalls to mind an earlier and more remarkable coast. Whereas the Garland boys merely set a plank across the raised iron cog track in the center of the track in which the cogs operated and braked themselves during the descent by touching every other tie with their heels, Frank Russell of Kearsarge Village, N.H., in the early seventies, made a descent on the footboard of a mountain wagon so precipitately that he saw nothing distinctly after passing Jacob's Ladder…



RUSSELL COTTAGES, KEARSARGE VILLAGE,
NORTH CONWAY, N. H.

Mr. Russell had driven a party of tourists to the Tip top House from Kearsarge, and while he was waiting for them to be ready to descend, he thought how easy it would be to put a plank lengthwise of the cog rack and coast down a hundred yards or so to the *(Lizzie)* Bourne Monument. For an improvised coaster, Mr. Russell used the oak footboard of his mountain wagon, a light plank about three and half feet long, nine inches wide and almost two inches thick. In a few minutes the footboard, which had two cleats bolted on one side while perfectly smooth on the other, was laid lengthwise of the cog rack. The adventurer then sat on the plank, braced his feet against one of the cleats, gave a few hitches sufficient to gain headway, and slowly glided down-

ward. He had not thought of going beyond the Bourne Monument, but as the greased flanges of the cog rack began to eat into the oak plank with the friction, the coaster found himself gaining greater and greater speed. At the monument, to his dismay, he found that he could not stop. Clinging tightly to the edges of the footboard and preventing himself from slipping forward by keeping his feet against the cleats, he saw the Bourne Monument slip by, and the curve of Jacob's Ladder, where the railway is carried on a trestle across a gully, loom ahead. It was not too late to plunge off the plank with any hope of safety. So steep was the incline from the monument down to Jacob's Ladder and so great was the speed of the footboard that Mr. Russell saw nothing distinctly from the time his narrow coaster took the curve at the trestle; the tremendous speed through the keen mountain air caused his eyes to water profusely; he was virtually blinded until he slowed up on the level stretch at the foot of the cog railway Mr. Russell reached the end of the descent at the base of the mountain in probably the quickest time ever made from the summit; the estimated time was approximately three minutes. At the Russell Cottages in Kearsarge Village the mountain wagon footboard, with two deep ruts burned into its smooth side by the flanges of the cog rack, was exhibited to curious tourists for many years. Only those grooved burned into the footboard before it reached Jacob's Ladder prevented board and passenger from hurtling off the trestle at that point. Since the Russell exploit government observers, who for years maintained a bureau at the summit, rigged up a safe coasting device with brakes attached, on which they made occasional trips down the mountain on days when the trains were not operating; but the Russell slide remains the only one on record made by a person who had no means of checking his speed when once under way."

- North Conway (NH) Reporter – Thu, Aug 7, 1919 pg. 1 from The Youth's Companion – Vol. 93 Jul 10, 1919 pg. 372

The "Newspaper Train"

Among the Clouds "Newspaper Train" staged publicity photo (taken during daylight hours). Appeared on the front page of the August 23, 1894 coaching parade edition captioned "On to Bethlehem - Among the Clouds Slideboard Express"

Sec. 8 - Devil's Shingle

White Mountain Chronicles

A picturesque employment of the slide-boards in former days was a "newspaper train." This novel enterprise was carried on in the early nineties, when the coaching parades at Bethlehem and North Conway were at their height, and there was thereby created a great demand for the issues of *Among the Clouds*, which contained accounts of the festivities. *- 1916 (pg. 244-245)*

1889

Among The Clouds

Thursday, August 22, 1889

BY SLIDEBOARD EXPRESS:

How *"Among the Clouds"* Reached Bethlehem Yesterday Morning: "Though perched on a bleak mountain top, 6300 feet above sea level, *Among the Clouds* is not beyond the realm of journalistic enterprise, as yesterday's issue proved. Every preparation had been made to meet the demand for a full, comprehensive and vivid report of the third annual coaching parade at Bethlehem. How well our reportorial staff succeeded in handling this by no means easy task of producing faithful pen-pictures of the many and varied features of the brilliant spectacle, those who read yesterday's *Among the Clouds* can best judge. But the printing of the best story of the parade was only part of our task. To be of value to our Bethlehem friends, hungering and thirsting for the tale of the day's doings and for the full list of the participants in the festivities, the paper ought to reach them much earlier than the arrival of the regular trains. To wait until after 10 o'clock for their eagerly awaited papers was far too much to expect of enthusiastic Bethlehemites. To satisfy their cravings at an earlier hour was the problem before us. Everybody has seen or heard of the slideboards used by employees on the Mountain Railway, by which they descend the mountain at lightning speed. Through the courtesy of Roadmaster Patrick Camden, the assistance of two of the bravest and most experienced coasters on the mountain was afforded us for the carrying out of the proposed stroke of journalistic enterprise. Joseph Marceau and Samuel Changrau were the men selected for operating "*Among the Clouds* limited express," and well did they perform the task. At three o'clock Wednesday *(8/21)* morning the edition of *Among the Clouds* with the full report of the parade went to press. At ten minutes past four a liberal supply of papers for Bethlehem and intermediate points was printed, folded, counted and packed in two bulky and solid bundles. The "limited" was all ready, as were the bold coasters. A bundle was placed on each sled, the conductors mounted their respective steeds, and with a parting salute from the little group gathered on the platform, and watching by the fading light of the waning moon, the first "special newspaper train" to leave Mount Washington shot out into the gloom. Only for a moment could there be heard the ring of the sleds on the rail was they took the plunge down the first steep descent and around the curve by Lizzie Bourne's monument and onward toward the Gulf and beyond sight and hearing. It took just ten minutes for the plucky coasters with their heavy loads to accomplish the dark and perilous descent of three miles to the Base station, which they reached in safety. Those watching for them at the Base noted their progress now and then by the streaks of fire from the friction of the sleds upon the track. At the Base a messenger was waiting with one of Frank Cofran's best horses. The papers were quickly transferred from sled to buggy,

and hurried away to the Twin, Maplewood and Bethlehem. The latter place was reached at 7 o'clock in less than three hours from the Summit, and more than three hours earlier than the arrival of the first trains. The demand for the papers far exceeded expectations. The first shipment was quickly exhausted and was followed by a further supply, which met with an equally warm reception. Expressions of commendation upon both the report and the prompt delivery of the paper were heard on all sides. For all the good words said, *Among the Clouds* returns its cordial thanks and promises to endeavor to keep up to the same standard of enterprise. We take pleasure in acknowledging our obligations to the Mount Washington railway people, and especially to Messrs. Marceau and Changrau, through whose pluck and skill we were able so promptly to met the demands of the occasion." *- Among the Clouds - Thu, Aug 22, 1889*

1890

Among The Clouds

Friday, August 22, 1890

AT LIGHTNING SPEED:

***Among the Clouds* Gets There - All Records Broken:** "The Bethlehem parade, as usual, taxed the abilities of the staff of *Among the Clouds* to the utmost, and the result of their exertions appeared in the ten-column story in yesterday's issue. Reporting for a paper to be printed on a mountain 20 miles away has its difficulties. These were increased Wednesday *(8/20)* afternoon by circumstances beyond our control. The 3:40 train from Bethlehem, which was to connect for Mount Washington, was so heavily loaded that it had to go by Maplewood *(right)* without stopping. Two members of our staff found themselves left, with a pocketful of valuable parade "copy." The next excursion train landed them at Fabyan's just before 6 o'clock. The mountain train had been gone more than an hour. Through the kindness of Station Agent Jackman the engine *Mount Washington*, which had just returned from the Base, was placed at our disposal and carried the representatives of this paper to the foot of the mountain in short order. The most athletic member of the staff was prepared to walk up the mountain if need be, to get the copy through. But it was not necessary, for a wood train was just ready to start. A seat in the cab was given our reporter and he was landed at the Summit House at 8:10 p.m. The compositors at once went to work and by 2:30 a.m. the last line of the report was in type. At 3 o'clock the forms were on the press, and at 4:45 three stalwart trackmen had in their arms huge bundles of *Among the Clouds*, and prepared to start by slideboard for the Base, that the papers might get the start of even the earliest trains. The few guests who had arisen to wait for the sunrise stood by with intense interest to see the strange procession start. But a moment of preparation

Maplewood Depot, Bethlehem (1890)
- New Hampshire Then and Now

was needed, and the three sleds sped off and were soon out of sight in the fog. The three plucky coasters - John Boyce, Sam Gingras and William Boyce - alighted safely at the Base in less than 10 minutes, having gone at the rate of 20 miles an hour. "Zed" Gaudette was ready with his team, and at 5:35 the papers were at the Fabyan House. One of Mr. Barron's fast horses here took the load, and the Twin was reached at 6:10, Maplewood at 7:05 and Littleton at 7:50 - the quickest time ever made by any newspaper express in the White Mountains. How well the papers sold we need not tell, for all our readers can infer it. *Among the Clouds* can once more claim the credit of giving the most accurate and full report of the great parade published by any newspaper. To the management and employees of the Mount Washington and Concord & Montreal Railroads, for their willing assistance and generous co-operation, we return our cordial thanks."

- Among the Clouds - Fri, Aug 22, 1890

Among The Clouds
Thursday, August 28, 1890

AGAIN TO THE FRONT:
***Among the Clouds* Beats all Competitors on the North Conway Parade Report:**

"Our reporters gathered their information during the progress of the parade, and the lengthy account, the most complete and reliable that has been printed, was put in type between seven p.m. and one o'clock a.m., and shortly after three Wednesday morning *(8/27)* the large edition was ready to be taken down the Mount Washington Railway on the slideboards used only by the workmen, to the base of the mountain. A hard rainstorm had set in, but that even did not deter the brave and swift riders, William Boyce, Peter Birjejne and John J. Boyce, from making the trip. Each carried on his slide-board a big pile of papers, and mid the pouring rain they shot out into the dense cloud which hung over Mount Washington. Hardly a minute had elapsed from the start before they were out of sight and thundering away down the mountain toward the Base, three miles below. The distance was covered in a few minutes, and on their arrival at the bottom, "Zed" Gaudette brought out his swift horse and took the papers to the Fabyan House in 45 minutes, a distance of six miles Here they were transferred to the early morning train for Portland and at half-past six they were being distributed to hundreds of anxious readers in North Conway, Intervale and Jackson. While the mountain riders are entitled to great credit in making the descent in the nighttime, Mr. Gaudette is entitled to special mention for driving so rapidly through the woods and over a rough and muddy road. The week before, when he carried out the papers for Bethlehem, he made the six miles from the Base to the Fabyan House in 35 minutes, a much less time than any other horse owned in this region has ever made. North Conway people never before enjoyed reading a morning paper with their breakfasts, and the demand was so great that the edition was soon exhausted, while a second was printed at a later hour and forwarded to North Conway." *- Among the Clouds - Thu, Aug 28, 1890*

1891

The following year, a 21-year old Dartmouth College student working for the mountain top newspaper, Almon O. Caswell from Orange, Massachusetts, was assigned a "reporter involve-

ment" story. His experience of covering the annual coaching parade, producing his copy, and delivering the news formed the basis of an article he wrote when he returned to school in Hanover in the fall of 1891.

Dartmouth Sketches

SELECTED FROM THE UNDERGRADUATE PUBLICATIONS OF DARTMOUTH COLLEGE

Hanover, November 23, 1892

A Mountain Slide (pg 155-158)

"The White Mountain coaching parade at Bethlehem has become an annual event of national reputation, and needs no introduction. During the summer of the present year I was on the staff of *Among the Clouds*, the summer newspaper issued from the summit of Mount Washington, and had occasion to report the parade for that paper. The event itself possesses little interest for the average reader except in so far as it leads up to the experience I have to relate.

"Tuesday afternoon, when the parade was over, I started for Mount Washington, where I was to write my report. Time was valuable, so I stood balanced on one foot, and wrote in the cars, as far as Base station. Going up the mountain the situation was more difficult, but I succeeded in producing half a dozen pages, which required more time for translation than it had required to write them. Promptly on my arrival, however, I commenced deciphering my hieroglyphics, and by midnight the last line was in type and the forms were on the press. Without the least consideration for my feelings, it had been arranged by my employer that for the next day I should descend from the pride and dignity of a moulder of public opinion to the plane of a common news-dealer. So I had to accompany the product of my genius to its destination, and superintend its disposal at so much per copy.

"There are no night expresses with sleeping cars attached on the Mount Washington Railway. There is, however, a custom of making the descent on what are called slide-boards. This practice is confined to railroad men, and is very dangerous for anyone unaccustomed to it. At about three o'clock Wednesday morning one of the section men *(John Boyce)* called for me, as it was time to make the start. My friends, the printers, all begged locks of my hair and the address of my parents, the latter for convenience in sending the body home, as they cheerfully explained.

"I had often heard stories of frightful deaths from injudicious use of the slide-board, and as these were all repeated, one after another, by the jolly printers, I started off in a happy frame of mind. I borrowed a pair of ink-stained overalls, several sizes too large, and took my seat on the board. The section-

man had a bright lantern which he suggested leaving behind, while I made haste to request, and, as I thought, without a suspicion of fear in my manner, that we take it along. But the man said, "Oh, don't you be scairt, young man! There ain't no danger." I took the lantern, however. The man grasped the brake handles, loosened the grip on the rail, and we slid. To any who are not familiar with this mode of travel I will say that ignorance is bliss. The contrivance for sliding comprises a board about five feet long, with an iron piece on the under side grooved to fit the edges of the cog-rail. There is a long handle at each side, fastened at one end to a pivot; on the top of each handle near the pivot is a piece of iron which, when the handle is lifted, grips the outer flanges of the rail and holds the board in a vice-like clutch. It is a perfect machine in theory, but there are some points about it which might be improved in practice. For instance, during the whole length of the descent the seat seemed covered with ten thousand points. This sensation is caused by the constant vibrations. There is an apparent rise of temperature underneath the seat which reminds one of the gentle heat which emanates from a red-hot cooking stove at mid-day.

"Of course I was not frightened, but merely experienced a queer sensation as we shot around the curves, down over Jacob's Ladder, into the world below. "Now don't you be afeared 'tal whatsoever," soothingly remarked the engineer. I kept up a continual flow of talk, in vain efforts to convince the man that I was a "tough," and not in the least alarmed at the situation. "Oh, this is grand," I exclaimed, - "the best ride I ever had in my life!" But my teeth chattered when I said it. The ride would have been very much like a coast in the winter had there not been the deafening whir of the board on the rail, and that pleasant sensation of warmth already described.

"At last the buildings at the base came into sight. There was a quick pull on the brake handles, and we stopped. The trip, which seemed not over five minutes long, had actually required twenty-five minutes.

After I had flattered myself that my fear had been completely concealed from my companion, what was my disgust on seeing in the next day's paper a vivid description of my terror, and describing how "our reporter clung desperately to the seat, and felt for his hair to see if he had any left." This was all true, but I did not care to have everybody know it, as it precluded the possibility of all the thrilling stories I had planned to tell about the coolness and courage I had displayed."

Here is the article that got under the young Dartmouth man's skin and identified Caswell's sliding companion.

Among The Clouds
Friday, August 28, 1891

HOW IT WAS DONE:

***Among the Clouds* Express Down Mount Washington Before Daylight: An Exciting Ride from the Summit to the Base:** "To report on important events, covering eight to ten columns, and have the paper at the breakfast table within a radius of 30 miles from the summit of Mount Washington, is not an easy undertaking, and yet it has been twice accomplished this week, much to the surprise of many readers, who did not know that while they were taking their accus-

tomed sleep, trained and daring men were going at lightning speed from the summit of Mount Washington to the Base, with huge piles of papers, sufficient to meet the demand for the latest news. The Bethlehem parade on Tuesday and the North Conway parade on Wednesday, were fully reported and put in type after seven o'clock at night, in our office, and before daylight the printed papers were going out to our many readers below in time to reach the more important villages in the vicinity, where they are sold. The Bethlehem parade was the first to be reported. Mr. A. O. Caswell had it in charge, and the excellent report which was printed was entirely due to his untiring energy. After gathering the thousand-and-one details of the parade he took the train for the Summit. At midnight eight long columns were in type. At 1 o'clock the fast Hoe press was turning out the printed sheets at a rapid rate, and after being folded and done up in large packages the most daring and exciting part of the work was begun. Those who have visited Mount Washington have observed the workmen on the railway sliding at night after the close of their work, at lightning speed, towards the base of the mountain. Four of these trained and skillful riders came to our aid, through the permission of Patrick Camden, the superintendent of repairs on the railway. They were Joseph Gingras, Samuel Gingras, Devene Vachon, and John Boyce. The latter took our reporter, Mr. Caswell, upon his slide-board, and away they went towards the bottom, 3625 feet below the Summit, three miles distant. They went into the darkness towards the base at a comparatively moderate rate of speed, but sufficiently fast to make it necessary for our reporter to hold to his hair, lest he might never see it again. After the road was clear the three others who were to take down the big bundles of papers put their slide-boards on the track in front of the Summit House, and as soon as they were ready away they went into the darkness and gloom of night. Their boards hugged closely to the track, and as they rounded the water station near the Lizzie Bourne monument, there was a long fiery light shooting out behind them, - sparks from the track, caused by the rapid speed that the slide-boards were making. A planet-hunter sojourning in the valley below, had he turned his eye towards Mount Washington at the time, might have thought he had discovered another comet. The three riders with the papers followed in close

Canine Rider: *Marshfield Station Museum display in 2017 suggests the rider with dog in this picture may be Dorvigny David Joseph Vachon (1873-1949) aka "Devene" or "Derveni" Vachon in contemporary newspaper accounts as David would take his dog "with him down the mountain on the Devil's Shingle." Vachon purportedly holds the record for fastest descent from summit at 2:45 for the three miles. - See Vol. 2 Cog Roster*

succession, and reached the terminus of the railroad in safety, with their great loads of papers, in five minutes from the time they left the Summit, accomplishing a most daring feat. Here came another important part in our special express arrangements. It was twenty minutes of 4, and the papers must reach Fabyan's by half past 5 o'clock. "Zed" Gaudette, an employee of the Mount Washington Railway, keeps one of the fastest horses in Northern New Hampshire, known as "Old Pete." Well, "Pete" is a good deal of horse, although old age is leaving traces on his wrinkled brow. He has done valiant service as a cavalry horse in the army, and is never so happy as when he is galloping over hills and plains in the discharge of honest work. He has a somewhat peculiar gait, and so far as any one has been able to observe when he has fairly warmed up to the work, he takes two leaps to the mile. As soon as the load had been securely fastened he plunged down the road toward the Fabyan House. He fairly made what little hair our reporter had left stand on end. It is seven miles from the Base to the Fabyan House and in precisely forty minutes from starting he stood in front of the Fabyan House door, and thus, in forty-five minutes after leaving the Summit our coaching parade edition of *Among the Clouds* had been conveyed ten miles - from a mile in the sky to the level of the Ammonoosuc."

"The North Conway parade which followed the next day... was ably reported by John P. Fernald, a newspaper writer of long experience, who for two seasons has represented *Among the Clouds* in North Conway and Jackson. His report went by the afternoon train to the Summit, and at 2:26 on Thursday (8/27) morning, four trusty riders were speeding toward the base of Mount Washington, each with a big bundle going to dealers at North Conway and Jackson. The slide-board riders were John Boyce, Joseph Gingras, Samuel Gingras, William Boyce, Devene Vachon and Phillip Camden. They had been specially charged not to make rapid time, but they managed to reach the base of the mountain in less than five minutes. Here Mr. Gaudette took the papers in charge and delivered them at the railway station at Fabyan's before half-past 3, an hour and a quarter ahead of time, the slide-board riders and "Old Pete" doing their best to make our undertaking a success. This is the way things are done up here. Pony expresses of olden times, and swift and tireless locomotives of recent days long since wore out their novelty, while dashing down steep mountain sides in the dead and darkness of night on a slide-board is still new and strange. If those who dwell on earth will come up here, slightly nearer things terrestrial, we will give them a few more lessons in enterprising journalism." *- Among the Clouds - Fri, Aug 28, 1891 pg. 1*

Almon O. Caswell would graduate from Dartmouth College in 1893. He then accepted a teaching position in North Pownal, Vermont, and was later a school superintendent in Milford, Massachusetts.

1892

Among The Clouds

Thursday, September 1, 1892

OUR SPECIAL EXPRESS:

***Sledding Morning Papers Down to the Lower World*:** "It is on such an occasion as that of the East Side parade that the inconvenience of printing a daily paper a mile and a quarter above sea level is most keenly felt. First, the report must be obtained and brought to the office;

next, the paper when printed must be send with all expedition to the scene of the event to satisfy the cravings of the thousands interested. From North Conway it is as long a journey to the top of Mount Washington as it is to Boston. This being accomplished, nine columns of matter put in type and the big edition run off, the paper must be put into the hands of its readers before breakfast. Our tried and experienced Slide Board Express service is called into action as usual. The expert coasters of the Mount Washington Railway force are kindly put at our disposal. The heavy bundles of papers fresh from the press are put into their hands at 2:50 a.m. By lantern light they are made secure to the railway sleds. At 2:56 precisely the first messenger calls out "Good night" to the little group from the printing office who are watching, and with a firm grip on his brake handles he spins down the dizzy slope toward Lizzie Bourne's monument at a three-minute gait. His lantern is out in a twinkling. Now by the dim moonlight his form can be seen as he glides more slowly along the easier grade toward the Gulf tank, then he is lost to sight and for a moment we hear the faint noise of the slide board as it runs along the rail. Then another rider is off, and another, and another. John Boyce, Philip Camden, Arcade Vachon and Derveni Vachon are the four plucky coasters who understood the responsible task. The three-mile descent is made by them all in ten minutes on the average - a speed which would take away the breath and rattle the brains of any but the bravest. At the Base our old reliable messenger, Zed Gaudentte, is in waiting with his trusty horse, and he is loaded and away at 3:15. Four or five previous trips with parade papers have taught his horse what is required of him on a day like this, and he doesn't lose a moment on the way. He and his load are at Fabyan's in ample season for the first train, and the feat is accomplished. The papers are brought into North Conway by 6:30 a.m., and in another hour our full and readable report is enlivening the breakfast tables of all the hotels. The distribution of the papers at North Conway was under the efficient charge of our agent, Ned Poole. To all who cooperated in getting the papers down the mountain and putting them before the readers, *Among the Clouds* returns hearty thanks and hopes they will all be here to help us on another parade day."

- Among the Clouds - Thu, Sept 1, 1892

1893

Among The Clouds

Thursday, August 24, 1893

"The Mount Washington slide-board express, which conveys *Among the Clouds* from the Summit to Base, on special occasions, was a complete success Wednesday *(8/23)* morning. The two trusty riders, employees of the Mount Washington railway, Samuel Gingras and Arcade Vachon left the Summit at 3 o'clock, Wednesday morning, each with a large load of *Among the Clouds*, and in five minutes Mr. Gingras reached the bottom, a distance of three miles. On the way down he ran into a hedgehog, who was taking a night's sleep on the track, but what became of him, the swift rider was making too rapid speed to find out. The animal, however, managed to leave over two hundred quills in Mr. Gingras' right hand and arm, which he extracted after reaching the base of the mountain. Mr. Gaudette, with his swift steed, took the papers on arrival, and at precisely 6 o'clock, just as the summer guest was taking his last nap, delivered them in Bethlehem, nearly thirty miles from where they were printed, and in ample time for the hotel guest to read the

paper at breakfast."

- Among the Clouds - Thu, Aug 24, 1893

1894

Among The Clouds
Thursday, August 23, 1894

THE COACHING PARADE EDITION:

***How "Among the Clouds" Reached the Public Many Miles Distant*:** "The work of compilation and preparing for the press was done by Mr. John H. Bartlett, for two years past the regular correspondent of the paper on the West Side. In order to fill in the detail matter, Mr. Bartlett was obliged to leave Bethlehem after the parade and take train for the Summit, where he passed the night, furnishing copy for compositors until the time for going to press. After the cylinder press had turned out many hundreds of the printed papers, some of the section men of the Mount Washington Railway were furnished huge packages, and they at once set out to carry them down the mountain on their slideboards. Mr. Zed Gaudette and Mr. Arcade Vachon started off at about 3 o'clock in the morning, and, although the tracks were covered with a heavy coating of frost and the wind blowing at a high rate, were soon passing over the rails as swiftly as the fleetest bird passes through the air. It was but a matter of five minutes before they had covered the three miles from the Summit to Base, and there Mr. Gaudette hurriedly harnessed his horse and started over the turn-pike road to Fabyan. Arriving there a change of horses was made and before 6 o'clock *Among the Clouds* was on sale at the hotels and news-stands in Bethlehem and other places. The Mount Washington slideboards had done for *Among the Clouds* what the special express trains are continually doing for the metropolitan dailies - furnishing the public with the latest news in the least possible time after the occurrence." *(Ed note: This story was illustrated with the "newspaper train" photo seen at the start of this segment.)* *- Among the Clouds - Thu, Aug 23, 1894*

1895

Among The Clouds
Thursday, August 23, 1895

"The trained riders of our slideboard express, acquitted themselves handsomely yesterday *(8/22)* morning, in taking the parade edition of *Among the Clouds* down the railway to the base of the mountain. The riders were Eugene Marcotte, Arcade Vachon, and Eddie Camden, and in less than a minute they not only out of sight but beyond hearing. They reached the base on schedule time. Zed Gaudette's fast horse was soon galloping down the road towards Fabyan's, where it arrived ahead of time. Another team took the bundles from there to Bethlehem."

- Among the Clouds - Thu, Aug 23, 1895

Among The Clouds
Monday, September 2, 1895

"The managers of the slideboards who took the North Conway coaching edition of *Among the Clouds* down to the base on Saturday *(8/31)* morning performed their duties with their usual faithfulness and dispatch. Those who occupied the slides were Sam and Omar Gingras, and Zeb

Gaudette, who was waiting at the Base, took the bundles in a team to the Fabyan station, and they were on sale at North Conway at 6:30 a.m." *- Among the Clouds - Mon, Sep 2, 1895*

1896

Boston Man's Terrible Slide Down Mt. Washington
Sensation Like Falling
From a Balloon

To many visitors to the White Mountains, the ride down the side of Mt. Washington on what are called "slideboards" by employees of the Mt. Washington railway proves more of an attraction than the magnificent views to be had in different directions from Washington's lofty summit. The ride is one seldom taken by anyone not connected with the road, but it is an experience that once passed through will never be forgotten. It is a downward flight for several miles at a speed rivaling that of the fastest express trains, and is so suggestive a plunge into space as to prove thrilling beyond expression.

The first use of the boards were put to were for the railroad men at the summit to make the descent of the mountain at the close of their day's work. Then it became the custom to have a man go down every day before the train started, to make sure that the track was in good condition. Now it is a regular thing, and twice a day during the summer season and while the road is in operation, the exciting and stirring spectacle is witnessed of a veritable slide for life.

The first run is between 12 and 1 o'clock each day, when a trackman goes down to inspect the track in advance of the mid-day train. While he goes at a pace that would prove alarming to a novice, he goes slowly compared with that of the men at the close of the day. Three and four of them then straddle the board, and the only thought is to get to the bottom and home at the earliest moment possible. To an eyewitness near the line of track there is hardly more than a flash, and the board and its load are out of sight. It was the pleasure of a Bostonian, Mr. H. L. Raymond of 2 Blanche Street, to take this ride not long ago. He was at the mountains, and through acquaintance with some of the Mt. Washington railway officials was accorded the privilege.

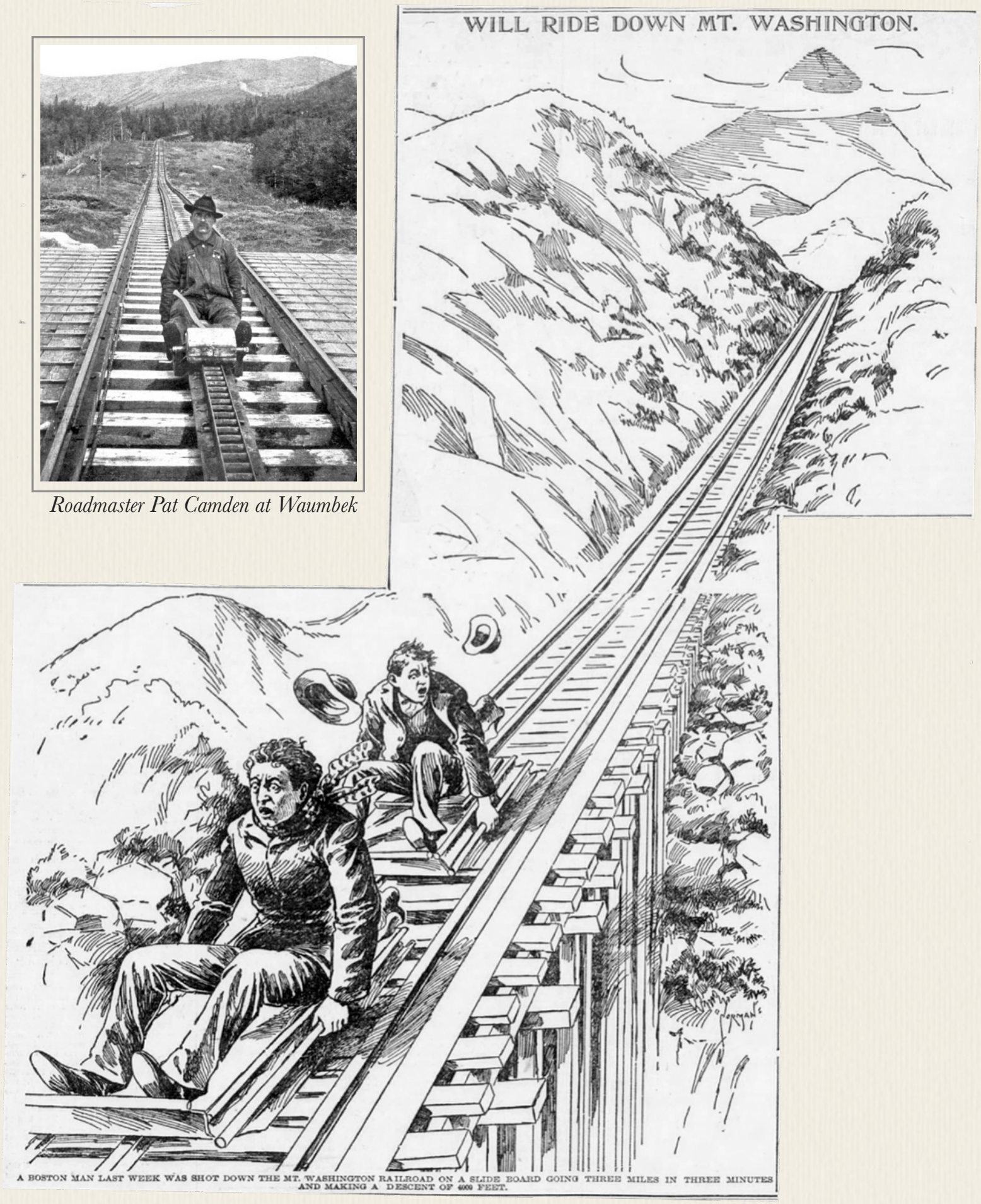
"I was given the front seat," he said to a reporter for the *Sunday Post*, when telling of the event one day last week, "with a caution to keep a good hold of the board and on no account to lose my nerve. I had shot the chute on Huntington Avenue and had sized up the ride down the mountain from that. It was nipping cold up there at the summit, water freezing quickly. I tied a scarf around my neck to protect myself against the wind, pulled my hat down over my ears, straddled the board, clutched the sides and announced myself as ready. Only one man went with me, and I learned later the he was the hardest rider they had, as he takes chances at the curves no other dared." *(Note: Likely Patrick Camden - who's '"stunt" of descending the railway track from summit to base by slideboard in three minutes was the talk of visitors for many years,' according to John Horne)*

"Well, we started, and I can tell you I do not care to repeat it. I am certain that ride came as near an out-and-out fall from a balloon as could be, and not be the real thing. The first thing my hat went off, and I thought my hair would follow. None of the words you would naturally use to

describe such a ride can begin to tell it. You can call it 'rush' or 'plunge' or 'dash,' or anything else, but it does not touch it. We simply fell for three miles. I could not see a thing, for the wind blew so strong and cold I had to shut my eyes. I do not know that I drew a breath from the time we started till we stopped. The pilot had the best of it, for I broke the force of the wind. He only spoke once, and that was when we rounded the sharp curve somewhere about half way down."

"I heard him say, 'Hold on, now!' and then it seemed as though some unseen force I could hardly resist was trying to throw me sideways into space. I should not have been surprised to have

Roadmaster Pat Camden at Waumbek



found myself shooting out over the tree tops as a stone is thrown from a sling. It seems to me now, as I look back at it and recall the sensation, like a drew - a nightmare. And those men enjoy it! It is an excitement that stirs their blood as nothing else can do, and they would not miss it for anything. I think it reasonable to call that the biggest chute in the world."

- Boston Post, Sunday, October 4, 1896 pg. 24

Among The Clouds

Thursday, August 27, 1896

"The annual feat of putting a large edition of *Among the Clouds* on sale in Bethlehem before 7 o'clock the morning after the parade was performed in the early hours of Wednesday (8/26). At 3:25 a.m. Eugene Marcotte and Eddie Camden, the expert slide-board men appeared in the office, and at 3:35 the former started for the Base with his bundle of papers. A few minutes later his companion followed. Each made the trip to the Base, three miles, in three minutes and 30 seconds. There the papers were taken by Zed Gaudette in his fast rig, and delivered at the principal points between Mount Washington and Bethlehem. It was fast work, and the expressmen performed their part of it with their usual faithfulness and alacrity. It is needless to say that the sojourners in Bethlehem and the vicinity were somewhat surprised and correspondingly pleased to receive the only full and accurate account of the parade, and our fine illustrated souvenir, Bethlehem supplement, at the early breakfast hour." *- Among the Clouds - Thu, Aug 27, 1896*

"The Mount Washington Railway is not noted for the fast time it makes, but some of its officials are not bothered for means to "get there," when the necessity arises. For instance, General Manager MacKinnon of the Boston & Maine arrived at the Base yesterday, while Superintendent Horne was at the Summit. In answer to a telegraphic dispatch, the latter donned a pair of overalls, mounted a slide-board, and disappeared in a cloud down the track. He probably got there about the time an answering dispatch would have been delivered."

- Among the Clouds - Fri, Aug 28, 1896

1896

Tuesday, May 26, 1896

"Stephen Vallier was arrested *(in Laconia, N.H.)* this afternoon for obstructing the track of the Mount Washington Railroad, and officers are after Napoleon Gingras for the same offense. The men were on the top of Mount Washington last week and for sport constructed a large raft of railroad ties, placed it on the track and started it down the mountain. The men attempted to ride on the raft, but jumped when it go beyond control, and the structure went crashing down among a gang of Italian workmen repairing the track, narrowly escaping smashing into a locomotive standing at the station. Vallier was taken to Whitefield for trial by Sheriff Follansbee."

- Hartford (CT) Courant - Wed, May 27, 1896 pg. 1

Sec. 8 - Devil's Shingle

1897

Among The Clouds
Tuesday, August 3, 1897

"Conductor Kenniston received a severe cut in one of his feet, yesterday *(8/2)*, while descending the Mount Washington railway on a slideboard. He, however, expects to be around again in a few days." *- Among the Clouds - Tu, Aug 3, 1897*

1898

Among The Clouds
Saturday, August 27, 1898

A FEARFUL RIDE:

Down Mount Washington a Slide-Board - A Railroad Track Covered with Ice: "One of the most interesting of the many novel sights to be seen on the Mount Washington Railway is to watch the workmen descend on their slide-boards. To give a scientific description of them would take too much space, but this will probably suffice. The slide-boards, or boards, as the workmen term them, are made of spruce, being about 3 feet 9 inches long, 10 inches wide and 1 inch thick, having guides on the under side to keep them on the cog-rail, and a lever and brake on each side by which they are manipulated. In the hands of an expert they are perfectly safe, but a novice may as well play with dynamite, the hind feet of a mule or some other powerful explosive, and it may not be out of place to say that under no circumstances are they allowed to be used except by the workmen. Looking at one as it lays alongside the track it appears as harmless as an Egyptian mummy or a ball of yarn; but put it on the rail, and, to use a horsey expression, give it a free rein, and you would think old Boreas *(Greek God of the North Wind)* was on a rampage. One of the employees, who calls himself an expert on a board, and who has made the descent from the Summit to Base in perfect safety inside of 4 minutes, told this story to the writer, and though it happened more than 20 years ago, when he recalls it, the cold chills creep on him.

"One Saturday early in June, he with some others were making repairs on the Summit, and the Signal Station being occupied at that time, some of the men invited him to spend the night to discuss Browning or play old sledge, he forgets which. He gladly availed himself of their offer, and next morning woke up to find one of the most gorgeous and enchanting cloud views he ever witnessed. To describe it is impossible. There was no land visible except the cone of the mountain; above was glorious sunshine; below one mass of white fleecy clouds. The morning was very cold, ice having formed on the platform, and bidding the signal boys good-bye, he put his board on the rail, and started for the Base. When opposite Lizzie Bourne's monument he entered the cloud which had formed hoar frost on the rail, and then the fun or rather agony commenced.

"The board went as if it had been shot from of the Oregon's 13 inch guns, and if it was possible to travel through that cloud in half a minute it did it, although it extended 2 miles down the mountain. What passed through his mind in that short space of time it is impossible to tell; the orchards he had robbed, the deceptions practised on his mother - all flashed before him; but it was very singular that he could not recall any good act he had ever performed. As luck was on his side,

he passed through the cloud into bright sunshine, got his board under control and arrived safely at the Base, but his nerves were so unstrung he did not know whether to laugh, cry or pray, so he compromised by taking a drink. The man's mind must have been partially unbalanced the rest of the season, for one of the first things he did after arriving home was to get married. Ex-M."

- Among the Clouds - Sat, Aug 27, 1898

Icy Rider's Identity Revealed?

In the summer of 1899, a chance meeting between an American tourist carrying a copy of *Among the Clouds*, and a Scottish mother on vacation in the Highlands led to a correspondence between Mrs. Archibald Maclaren and the new editor of the newspaper, Frank H. Burt. Mrs. Maclaren's father helped finish building the Mount Washington Railway as well as building the Summit House in the early 1870's and she spent her first twelve years spending summers at the Mountain. This Cog Kid was known as "Little Jessie," and she related her memories of slideboards, including the fearful frosty run detailed above.

"There is also the name of John Horne in (the paper), and I felt sure that he is the same person who had charge of the engines at the Base. I have often thought of the fearful ride he took on the slideboard down the mountain on a beautiful, but frosty Sabbath morning in early June. He spent the evening before with the observers in the Signal Station and left the Summit about 6 o'clock a.m. It was very cold, calm and bright on the top, the cone of Mount Washington being the only visible land. All beneath was enveloped in fog with a temperature much below the freezing point, coating everything with a white and slippery frost, that reduced the friction on his board to a minimum.

"He however, arrived safely at the Base, but what passed through his mind must have been something terrible. Fear and agony were depicted on his countenance and all day he kept his room and would not be seen. We could hear him laugh and cry by turns, and father would knock on the door, but the only reply was: "Please go away, I want to be alone." We did not see him until Monday, and his haggard face plainly showed the trial he had gone through.

Sec. 8 - Devil's Shingle

"Speaking of slide boards brings to my mind a laughable but dangerous incident. The original slide boards were very primitive affairs, being a common piece of board with a cleat on the underside as a guide, but no brakes on them. There was nothing to keep the board from rising except the weight of the person on it. The braking was done by means of a small piece of wood held in each hand and pressed on the cog-rail. One day the trackmen were at work about half a mile from the Base, and one of them placed a crow-bar in the cogs with the end pointing down hill. Another man was coming down on his board *(Ed note: Walter Aiken's telling of this incident identifies the rider as Peter Goodroe)* and he supposed that the bar would be removed to let him pass, and the man that put the bar there supposed the other would stop and remove it. Well, as it happened, neither supposed right, the man on the board kept going and the consequence was his board went up the bar and board and man landed in the bushes, but luckily he was not hurt. After he picked himself up he commenced to talk very loud, but whether he was praying or swearing I can't say, as it was in the French language, and I am no linguist.

"(T)he French-Canadians, rough in garb, but with hearts as big as the mountains themselves. How often after their day's work was done, have they taken a slideboard on their shoulders, holding on to my hand, and we would walk up the track a short distance and with what childish glee I would sit in their laps and slide down to the Base." - Mrs. Archibald Maclaren aka "Little Jessie"

- Among the Clouds - Mon, Aug 7 & Fri, Aug 25, 1899

1900

Derailed on Mount Washington

Two men employed on the Mount Washington Railway had a narrow escape from death late Friday afternoon. They were descending the mountain at terrific speed on what are termed slideboards. Suddenly they sighted a train coming up the mountain and to avoid a collision each man applied his brake. The slideboards were stopped so short as to derail both and the machines and men went over the trestle and fell to the rocks below, a distance of seventy-five feet. How either escaped immediate death is a marvel. The names of the men are H. N. Gilbert and John Camden, both of St. Agathe, Canada. Gilbert sustained a bad fracture of the skull and will not recover. He is married, is 35 years old and has a family in Quebec. Camden had a bad scalp wound and his system sustained a terrible shock. He will recover. The perilous trip which Camden and Gilbert were making down Mount Washington is not a new one for men of daring to make. Many women have descended in the same way. The slideboards are a form of handcar, which run on the cog-wheel road. The "boards" are equipped with brakes, by which the speed can be regulated the same as that of railroad trains in their descent. The slideboards can be readily stopped, although the brakes are usually applied more gradually than was the case Friday. The grade of Mount Washington railway at one point is 1,980 feet to the mile, and the distance from summit to base, which is three and one half miles, is usually covered in four minutes by slideboards.

-The St. Johnsbury Caledonian - Wed, Oct 3, 1900 pg. 5

Accident on Mount Washington
Slideboards in Collision and One Man Fatally Injured

CONCORD, N.H., Sept. 29. - H. N. Gilbert and John Camden were brought to the Maragaret Pillsbury Hospital in this city, suffering from injuries received while descending the Mount Washington Railway on slideboards, Friday afternoon.

Mr. Gilbert, who was in front, slowed up in the descent, not knowing that Camden was close to him. The men collided and both were thrown from the track, falling to the mountainside beneath the tracks. Gilbert's skull was fractured in several places, and no hope of his recovery is entertained. Camden was less seriously injured.

Both men live in St. Agatha, Canada. Gilbert is thirty-five years of age and Camden twenty-three. *- New York Times, Sept 30, 1900 (page 17)*

The *St. Johnsbury Caledonian* and *New York Times* reports of the Friday, September 28th collision seemed to make it a foregone conclusion that Mr. Gilbert would not live because of the accident. That turned out to not quite be the case, nor was the *Times* correct in the reporting Gilbert's first name. The railroad man with the fractured skull was actually Étienne Gilbert, who had been counted for the U.S. Census with John Camden, Jr. just eight days before their collision. And the subject, "E.G." became the focus of a "Report of a Remarkable Case of Fractured Skull," by the

Sec. 8 - Devil's Shingle

Chief Surgeon of the Boston and Maine Railway, Granville P. Conn, M.D. of Concord, New Hampshire.

First presented in May 1901, and published in the *Transactions of the New Hampshire Medical Society* at their 110th anniversary, the paper on the Gilbert's head injury echoed the 1848 case of Phineas Gage. Gage was on the railroad construction crew building a line through Cavendish, Vermont when an explosion drove a 13-pound iron bar completely through his head. He survived and became national celebrity. Dr. Conn reported Gilbert survived his head injury such that he was able to go back to his home in Canada. Here is Dr. Conn's illustrated report.

Report of a Remarkable Case of Fractured Skull

"E. G., age 30, native of Canada, was injured on Mount Washington, September 28, 1900, and was received in the Margaret Pillsbury General Hospital at 5:30 am, September 29, 1900, or about twelve hours after the accident. The injury consisted in a compound comminuted fracture of the skull, involving a large portion of the frontal bone, including almost all the super-orbital plate of the right eye, and more than half of the same of the left orbit.

"The injury was received on the Mount Washington Railway at a point very nearly approaching its maximum grade, by reason of Mr. G. being thrown from a "slide-board" when making about a mile a minute down a grade of about 33-degrees. He was thrown a considerable distance and struck his head on the corner of a hard-pine cross-tie. The accident was witnessed by the men on a train only a few rods distant and was described by them as showing that when the unfortunate man left his board he went into space and described a small arc of a circle. The arc of the circle being considerably larger by reason of the grade that it would have been had it been a level track.

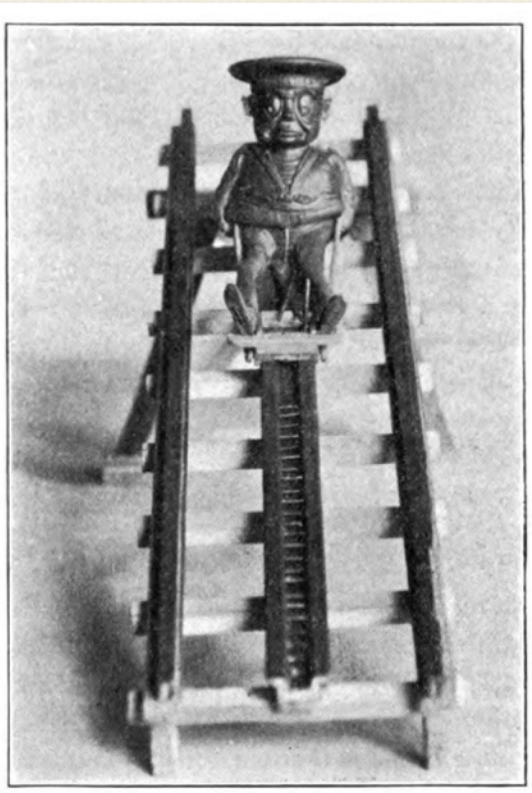


FIG. 1. Model of the Mount Washington Railway and a slide board, with a grade of 33 per cent. at the point where the patient was injured.

"The slide-board represented in the model *(left)* takes the place on the Mt. Washington road of a hand-car on an ordinary surface railroad. The workmen each have a slide-board, ride up the mountain on the train to such points where their work commences, then working down the mountain. The box on the slide-board serves to carry along their tools and material incident to repairs. This slideboard being clamped underneath the middle rail can be fixed at any point by the break handles. This road is a little over three miles in length, and men on these boards have made the entire distance in a little over three minutes. *(Note: This explanatory paragraph was added when the paper was published in the International Journal of Surgery in October 1901. That journal did not print concluding paragraphs of the original presentation reporting the final outcome for M. Gilbert.)*

"The accident was occasioned by reason of the man in front of him stopping his board, and when the second man and

board came to the obstruction caused by the stopping of the first board, the second board stopped instantly, for these boards are made to grip on the middle rail in such a manner that it is impossible for them to leave the track until the clasp is relieved. This accounts for the manner in which he was thrown, and partially explains why he did not have other wounds.

"The wound of the scalp was about two inches in length, semicircular, beginning in the eyebrow over the external canthus of the right eye and extending upward and laterally to near the medium line of the nose. The scalp was turned down over the eye and adhering to this integument and turned with it, was one of the larger pieces of bone consisting of both plates. The other pieces were loose, many of them detached and driven into the the brain substance and the pieces of the superorbital plate were turned up and found between the hemispheres of the brain. Twenty-seven pieces, large and small, were removed.

FIG. 3. Photograph of the patient 22 days after injury.

"You will observe by the photograph to be passed round that the amount of bone gone is much larger than the wound which I have described. In fact, there were numerous pieces broken off beyond the wound of the scalp, and considerable loss in small pieces of internal table of bone beyond the loss of the external table. There was evidently considerable loss of blood, but the patient was semi-conscious when he reached the hospital, twelve hours after the accident. A compress had been placed over the wound by a local surgeon and the head bandaged about an hour after he was injured. He was brought to Concord on a cot-bed, changing cars twice on the way, and was in fair condition when he arrived at the hospital. He was taken in the accident room and the wound thoroughly cleansed and disinfected with formalin *(note: a clear aqueous solution of formaldehyde containing a small amount of methanol used especially as a preservative first in 1893).* Consciousness had so far been established that ether was necessary. The large piece of bone that was turned down with the scalp was first dissected away leaving the periosteum on the flap. The other large pieces were easily found and removed in the same way. The smaller pieces were not so easily found as they were completely detached and many of them were driven into the brain. The most of them were discovered by the sense of touch, while the wound and the brain, as well as the space between the two hemispheres, was being irrigated with a 1 to 500 of formalin. I passed my finger over the globe of both eyes, found a piece of bone pressing on the optic nerve of the right eye, and other pieces between the two hemispheres. the wound was finally closed with catgut, the brain cavity full of formalin (1 to 500) and with a strip

of gauze for drainage. This extended from lower angle of the wound over the right eye and extended in front of the lobes of the brain across and beyond the left eye. There was apparently some effusion from the injured tissues of the brain, but no sepsis, nor was there any pus. Both eyes were closed by reason of the swelling, but in two days they began to clear up, and in a week he could open both eyes and discern objects. At first the focus was disturbed, and he had double vision, but in two weeks he recovered from this. You will perceive the right lid has a partial ptosis in consequence of the loss of bone to which the muscles of the lid were attached.

"After the first few days his recovery was uneventful and quite rapid, as you will perceive that he was up and had his photograph *(right)* taken twenty-two days after the accident, and that he returned to his home about forty miles this side of Quebec in twenty-eight days from the date of the injury.

"After a few days he rebelled against the liquid diet of the hospital and *demanded something to eat*. It was evident that he was unfamiliar with the menu furnished in a charming manner by the master or mistress of art in a chafing dish; neither had he any use for spoon victuals, but he did yearn for pork and beans, a boiled dish, or an Irish stew with dumplings. This is not the first time I have been confronted with a woodsman having a taste for the substantial rations necessary for work, rather than the delicacies that are relished by those having more education, yet perhaps less vitality and endurance.

"The only deductions I would offer may be summed up as follows:

"Do not be discouraged if you have a bad case of fracture of the skull, especially if it is about the frontal portion of the head, and is not complicated with a fracture at the base of the brain. Of course fractures of the occiput are more liable to involve the tissues about the base of the skull. Do not fail to explore fearlessly with sight and touch; always using the same precautions against sepsis as you would in a case of abdominal surgery. Be sure and remove all the pieces of bone, extraneous substances that may have been introduced, blood clots and brain substance that may be found within the cavity, and in may instances - not all - you will be gratified with your success in restoring your patient more or less nearly to a normal condition of mental and physical health.'

"This man while not fully restored to his normal strength and physical condition when he left the hospital was in full possession of all his faculties. His vision, hearing, smell, taste and touch were normal. The wound healed as you will see in the photograph by first intention and with the slightest possible scar tissue.

"He returned home, found a new heir, born after he was hurt, was welcomed by his friends and neighbors in that royal manner which only the rural population of Canada can fully understand. This went on for two weeks, when he came down with double pneumonia and died in five days.

"From the meager information I could obtain, I could not learn that the accident had any influence in the cause of death unless it was that he had less resistance to the disease because of not

being fully up to the normal standard of vital force and strength."

- Dr. Granville P. Conn, Chief Surgeon of the Boston and Maine Railway.

Étienne Gilbert died on November 14, 1900 - 47 days after his slideboard accident. 19 days after going home from the hospital. The French Canadian had been married for eleven years. He was either 30 (Dr. Conn), 35 (*New York Times/Caledonian*), or 37 (U.S. Census).

1901

Remembering "A Slideboard Romance"

"To the Editor of *Among the Clouds*: In answer to your inquiries for reminiscences of the early days of the Mount Washington Railway, I will mention one of my experiences with the slide-boards. The boards we used then were very primitive, and the braking force was applied exactly the reverse to the ones we now use. the levers ran backward, and power was applied by bearing down and out, whereas now the levers run forward and we pull up and in. I call attention to the difference of the construction in the two styles of boards, as the experience of the lady mentioned in this article could not take place on the boards now in use.

"I, in company with another employee, went to the Summit one Saturday evening intending to roam over the mountain the following day, but during the night clouds settled down and next morning put me in mind of the fog on the banks of Newfoundland. I think it was the densest fog I ever saw, and persons twenty feet apart could scarcely see each other. At that time there were no Sunday trains, and passengers going up Saturday evening had to remain until Monday morning.

"The could having spoilt our object, we concluded to make the descent on boards we took with us on the train. Unknown to us a gentleman and lady started down the mountain afoot, and they placed a small piece of timber on the track, evidently with the intention of trying to slide or help themselves down with it, and after satisfying themselves that it was a laborious kind of loco-motion, they abandoned it and careless left it on the cog-rail.

"My friend and I started on our boards, I going ahead and, as I have stated before, could only see a few feet. I ran into the timber, which almost threw me off, and, stopping to investigate, my board was struck by the man following. The language we used was not used by Martin Luther, nor do I think you will find it in Wesley's hymns, but I have no doubt it must have been used in the army of Flanders. To say that we were mad would be putting it mildly, and when we started again there was blood on the moon.

"After I pitched over on the long trestle I saw something loom up about twenty feet ahead, and being possessed of a good pair of lungs gave an unearthly yell. Instantly that something separated into two pieces, one going to the rocks below on one side of the track, the other falling through the trestle. Revenge is sweet, but there rose up a nobler feeling and I stopped to render assistance. It proved to be the gentleman and lady that left ahead of us. Neither was hurt seriously, but the woman was bruised so that walking to the Base would be a hard task. The man was not hurt in the least, and how he could jump to the rocks twelve feet below and having no time to look where

to leap and not be hurt is a mystery. The next thing to do was to get the woman to the Base. We held a council of peace and concluded to put the two boards à la tandem.

"We put the two boards together, the lady sitting in the shape of the letter L, with her feet on the forward board. We came along cautiously, three of us on two boards, and gaining confidence as we progressed, increased our speed. The understanding before starting was that I, being ahead, should do most of the braking, so that the boards should not separate. When we struck Cold Spring Hill my companion was not holding his brake firmly and I had the whole weight, going like the wind, or as only a Mount Washington board can. I shouted to him to hold up a little, which woke him out of his hypnotized state. He put on full braking power and stopped his board very suddenly. I kept on with the lady and she exchanged her seat from his board to the cog-rail. I stopped as quickly as possible, and looking back saw something fluttering from the ends of each rail.

"I looked at the lady and my first thought was I had exchanged her for a cog-rail, as the rails had more clothes than she, and she had more grease than the rails. When she realized the predicament she was in, and being very proficient in the "gift of gab," I thought there were two armies in Flanders. She concluded to walk the rest of the way, and my friends and I hung our heads, took to the woods and stayed there until we were sure (the couple) were at least ten miles away. I was told afterwards she borrowed clothing from the Marshfield House. - X. M. C."

- Among the Clouds - Tue, Sep 10, 1901

"Going up in the Mount Washington train the other night *(July 1901)* Conductor Browley called the attention of the passengers to some of the trackmen coming down on slideboards. After watching the exciting rush of the boards till they stopped and the riders had alighted, a young woman said with a mystified air to her companion, "Well, it seems easy enough for them to come down, but it must be terrible hard work to go up!" To the second lady this was at first a surprising thought; but after a moment's reflection she accepted the proposition and clinched it with this bit of logic; "Why, yes, of course they must go up on them, for how could they come down if they didn't go up first?" *- Among the Clouds - Mon, Jul 22, 1901*

1901

THIS CONTINENT OF OURS
by Charles Francis King
Principal Dearborn Grammar School, Boston

An educational text "for the use of Teachers and Normal Schools" that used a fictional "traveling club" of adults and young people who meet regularly to discuss various geographic features of America. "Handsomely illustrated for supplementary and regular reading in schools and the home," Lesson XII in the second of the six book series dealt with the White Mountains, and included not only the Mount Washington Railway, but a description of the "devil's shingle."

"George then described the railroad up Mt. Washington: People sometimes slide down the third rail on a common board three feet long, provided with suitable brakes. A writer thus describes the operation: - "As we were standing by the track, a young man, apparently a mechanic,

came out of the hotel with a piece of board and two round sticks, each a foot and a half long. The board he laid upon the rail, and attached the sticks to it, one by each side, by means of an iron bolt, and dropped the other ends upon the ties. He then brought an axe, seated himself on the board, braced his feet against a strip, which may have also secured the iron bolt, put the axe between them, picked up the handles (brakes), and then, like the foreign merchant with the steam leg, "in less than a minute was out of sight." Down the rail he went, swift as a bird flies. It was all done so quietly and quickly that those standing near him had no idea of what he was doing until he flew away from them. His rate of speed we know not, but it is said that persons have gone the whole three miles of this road in three minutes." *- pg.82-84*

Model Slideboard *Made by Howard D. Libby, machinist at Mount Washington Cog Railway base station. He resided at base station with William O. Page, locomotive engineer and father of donor. Model made for William O. Page in 1905 out of wood and brass. Wooden board with carved wrench and diamond shapes applied to top surface, including an ivory diamond on top of hooded front. Pricked letters on top surface, "W.O.P.", for William O. Page. Tapered wooden brake arm on each side, attached to brass axle with brass connecting hardware. Bottom surface has longitudinal wooden cleat at front and two longitudinal brass tracks at rear.Signed in ink on bottom, "H.D. Libby."*
- Gift to N.H. Historical Society by Albert Page

1906

August 23, 1906
KILLED "SLIDING" MOUNTAIN
Employee of Mount Washington Cog Railway Hurled From Track

MOUNT WASHINGTON, N.H., Aug. 24. - Yesterday morning Alexander Cusick, one of the oldest employees of the Mount Washington Cog Railway, was instantly killed in descending the mountain on a slide board. The accident occurred just below the Waumbek tank.

In company with S. W. Butterworth he had worked all night at the Summit House, repairing steam pipes. Early in the morning he left the Summit on the freight train, changing to a slide board when part way down the cog road. Just ahead was Louis Dumont, track inspector, who jumped from the track just in time to avoid being struck. Cusick was thrown off and instantly killed. *- New York Sun, August 25, 1906 (page 1)*

"Fred Cusick, a Barre Man, was thrown from a slide board on the Mount Washington railroad Aug. 23 and instantly killed. He was hurled 150 feet in the air, his head and face striking on the solid rock. The face was so horribly mutilated that it was not recognized when the train hands

reached the body. Cusick had been an engineer on the Mount Washington railroad for the last thirty years, but during the last two years he had worked in the sho at the foot of the mountain, only going to the summit when need to make some repairs as was the case when he met his death." *- The Orwell(VT) Citizen - Thu, Sep 6, 1906 pg. 2*

Among The Clouds

Thursday, August 23, 1906

Death of Alex. Cusick: "Alexander Cusick, one of the oldest employees of the Mount Washington Railway, was instantly killed below the Waumbek Tank this morning in descending on a slide board. In company with S. W. Butterworth he had worked all night at the Summit House repairing the steam piping, and after breakfast left for the Base on a freight train which went ahead of the regular seven o'clock passenger train. At the Waumbek tank he changed to a slide board, as did Mr. Butterworth, Mr. Cusick taking the lead. Louis Dumont, the track inspector, was ahead of them, and was alarmed to hear the rapid approach of a board behind him. Jumping from his board he was clear of the track just in time to avoid being struck by the board of Mr. Cusick, who was thrown off and instantly killed. The place of the accident was not far from the foot of the long slope called Coldspring Hill, or almost at the foot of the mountain. The clouds which enveloped the mountain reached nearly to the Base at the time. Mr. Cusick's remains were carried to the Base station on the train which he had left but a few moments before. The summer colonies of the Base and Summit are thrown into profound sorrow by the sad event. Rarely does death visit Mount Washington, and it is peculiarly distressing when it comes in such terrible form to one so closely bound by ties of friendship to his associates. In their isolation at the Base the railway people are like one family, and none was more esteemed than Mr. Cusick. He had worked on the road about thirty years. A skilled machinist and engineer, his services were valued in every department in which he served. Personally he was a man of fine appearance and sterling qualities. He was ever ready to lend a hand in an emergency, and the office of this paper has many times been under obligation to him for kind assistance. He was married three years ago to Miss Lucy Shaw of East Andover, N.H., long employed at the Summit House, and they have one child. Their home was at Websterville, near Barre, Vt.

DEATH OF ALEC CUSICK
State of New Hampshire
In Board of Railroad Commissioners

Concord, December 27, 1906

Investigation at Concord, December 21, 1906
Witness: John Horne, Lakeport, N.H.

Alec Cusick, a man about fifty-five years of age, employed as a blacksmith and engineer, was fatally injured on the Mount Washington Railway August 23, 1906. The afternoon previous, with other workmen, he had been sent to the summit on a special train, to make some repairs to the boiler in the summer house. The work was completed and the next morning the workmen started down the mountain on a special train. When the train reached the (Waumbek) water tank, which is located about two thirds of the way down, it was brought to a stop to allow the engine to take

- Conrad Ekstrom Jr. Collection

water. Here Cusick took a board, known as a "slide board," such as track inspectors are accustomed to use, placed it on the track and started down. There is attached to these boards an appliance for braking, so that the speed may be regulated, and the boards are fastened to the rail so securely that it requires fully a minute to remove them. An inspector is sent down on one of these boards in advance of every train, to make sure that the track is in every respect in perfect condition. In order that the examination may be very thorough from thirty to forty-five minutes are usually consumed in descending the mountain. In accordance with the usual custom, an inspector *(Louis or Lewis Dumont)* had started down this morning and was proceeding on his way at the usual rate of speed, when Cusick left the "special" at the water tank, and began his descent upon the board. Apparently Cusick forgot about the inspector being upon the track and presumably allowed his board to move at a high rate of speed. The summit was cloudy, the clouds extending a considerable distance down the mountain, and it is entirely reasonable to believe that these men could not see each other in season to avoid an accident. In any event, Cusick overtook the inspector, was thrown from his board, and probably instantly killed. Warned by hearing a noise, the nature of which he was unable to determine, the inspector *(Dumont)* rolled from his board and escaped injury. Owing to the fact that the only one who could give definite testimony as to the circumstances under which this accident occurred is out of the country and could not attend the hearing, we are left in doubt as to the exact conditions which prevailed. As Cusick wore glasses, it is probable that when he plunged into the fog the mist obscured his vision, and considering the speed at which he was probably traveling the accident was inevitable.

Sec. 8 - Devil's Shingle

Mr. Cusick had been in the employ of the railroad for over thirty years, was of excellent habits and regarded as a very careful man. He was familiar with the operation of the slide boards, having used them frequently. Upon this occasion, however, there appeared to be no reason why he should employ that method of descent. The train, which he left at the water tank, was being run for the special benefit of himself and other workmen. He had no special work to perform when he reached the base and would not have arrived there more than twenty minutes in advance of the train. There seems to be no reasonable explanation of this accident other than that the victim forgot the precautionary methods employed by the management to protect the lives of its patrons. He assumed that the course was clear, and this mistake cost him his life.

GEORGE E. BALES, For the Board.

1908
Non-Fatal Slide Board Accident Sets Legal Precedent

July 17th

Collision on Jacob's Ladder: "Michael Kildellan [sic], about 30 years old, is in a serious condition at the Littleton hospital as the result of an accident on the slide on the Mt. Washington railroad about 5 o'clock last Friday *(7/17)* afternoon. Kindellan slid down on the board, but was followed too closely by another man, who collided with Kindellan, causing him to lose control of his board. He was thrown into the air, his flight coming to an abrupt ending when he struck on a rail. Several teeth were knocked out, his nose was broken, the jaw shattered and he also sustained many cuts and bruises about the head. Kindellan was unconscious for some hours, but finally revived. He was brought to the Littleton hospital on the 1.30 train the following day, and at first it was feared he could not recover. Although his condition is still serious, his recovery is looked for Kindellan is a single man and lived at Twin Mountain. The man who collided with him was somewhat hurt, but was able to go to his home." *- Littleton Courier – Thu, Jul 23, 1908 pg. 1*

Legal Response

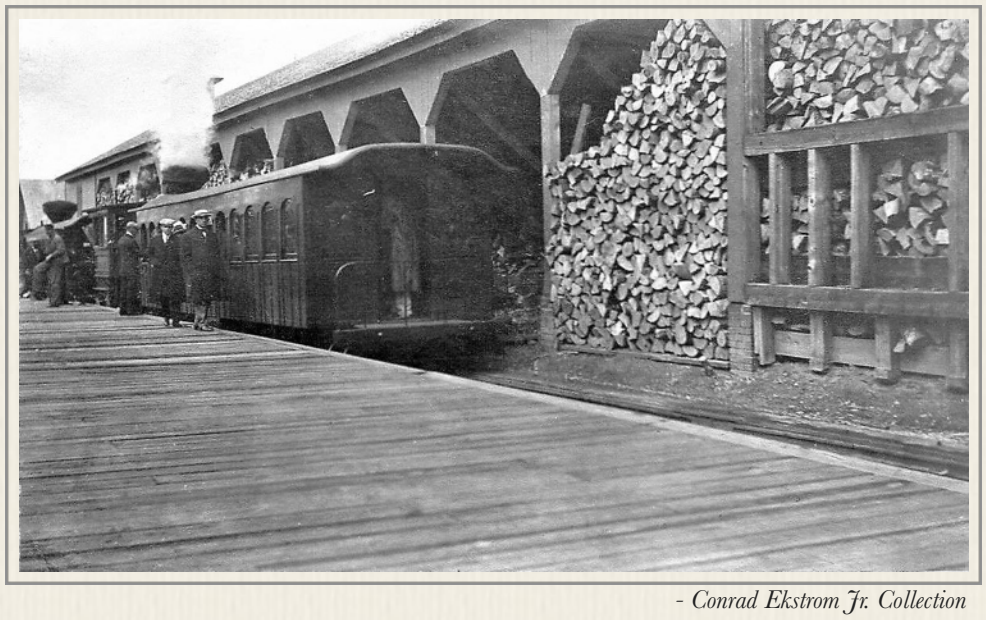
The Boston & Maine Railroad had engaged the Lancaster, New Hampshire law firm of Drew, Jordan, Shurtleff and Morris. When word of the slideboard accident reached their office, lawyer George Morris was dispatched to the mountain. "It seemed wise to make a thorough investigation of the matter as soon as possible," wrote Morris in his 1953 autobiography, *Reminiscences of a Yankee Jurist*. "It was a safe bet that an action would be brought against the road. With this in mind, I visited the scene of the accident and interviewed both the officers and employees of the railroad and took written and signed statements from all. Contrary to our expectations, suit was not brought against the railroad until some two or three years after the accident *(Ed note: Spring 1910 in Coös Superior Court)*. In the meantime, the affidavits that had been taken at the time of the accident had been filed away in our office. After the suit had been entered in court and was about to be reached for trial, notice was served by the plaintiff's counsel that a deposition would be taken on a certain date in the city of Calgary, Province of Alberta in the Canadian north-west. The notice did not name the party whose deposition was to be taken at this time. However, by making inquiries and by a process of elimination, the identity of the person in question *(likely Steve Meaney)* was finally

determined. His affidavit, taken at the time of the accident and on file in our office, was favorable to (the railroad) and we were anxious that the witness' deposition should follow the line of his affidavit."

"As the time and expense involved would hardly warrant the long trip from New Hampshire for a member of our firm," wrote Morris, "It was felt that a lawyer in Calgary might be instructed to adequately represent the railroad. Fortunately, another case came into our office, involving allegations requiring an investigation in the same general territory of Alberta. In this latter case I was urged to make the trip West at once. With these two important matters at stake, it seemed wise to do so and I arrived in Calgary three or four days prior to the date set for the deposition to be taken. Desiring to confront the witness with his signed statement before he could be interviewed by the attorney for the plaintiff and not being able to find his address, I closely watched the street near the entrance to the office where the deposition was to be taken and was finally rewarded by seeing my man enter the block. I contracted him before he reached the top of the stairway and confronted him with his sworn affidavit. His response was that whatever he had said in the affidavit at the time of the accident he would stand by. This he did."

Morris says the case was tried before a jury, resulting in a verdict for (Kindellan) in the sum of eight thousand dollars. The B&M appealed the verdict to the New Hampshire Supreme Court. Morris says the final judgement would hinge on a point made in the deposition of the Calgary witness. In June 2018, the *Clatter* publisher examined the case file at the New Hampshire State Law Library thanks to librarian Mary S. Searles. The file contained testimony and depositions from the Coös Superior Court trial that provided further detail to life on the Mount Washington Railway track crew/section gang in 1908 and slide board use after Alec Cusick's fatal accident in 1906.

Opening Up



- Conrad Ekstrom Jr. Collection

The 1908 season began the second Saturday in May and job one was to put the firewood for the engines into the long shed *(right)* between the ice house and the (anthracite) coal storage/ loading building where the Summit House fuel was stored. Superintendent John Horne told the court, "We go up there in the spring of the year and we have three engineers, three train crews. Now when those train crews are not running the trains I take the balance of the men and take them to do anything that is required. A man that is working as engineer today may be working on the section (track crew) tomorrow." Roadmaster Patrick Camden oversaw the track crew that could number as many as nine. Horne and Camden had worked as a team for 24 years. "In the fall of the year I would tell Mr. Horne

where I thought (the track) ought to be built new," said Camden "and he (Horne) would tell me to build it next spring." The so-called "section gang" in May 1908 was made up of Pat's brother, John Camden and fellow Canadian Joseph Meaney, both returning for their second season (although brother John Camden had worked "on and off for a few years" before 1907). It was the first year at the Mountain for Patrick Maloney from St. Agathe, Quebec, Michael J. Kindellan of St. Patrice-de-Beaurivage, and Joe Meaney's younger brother, 19-year old Stephen. This was his first job beyond the home farm in St. Agathe.

Though Kindellan was more than a dozen years older than Stephen Meaney they would become "good friends" while working together. Kindellan definitely had the more complex resume. "The first work I ever done I worked on a farm in Canada," testified Kindellan. "After that I worked in Berlin, New Hampshire, in the paper mill for a short time. I worked in a machine shop three years in Canada. Then I went to New York. Worked in a store for about five years, and then I worked in a machine shop for about three years and then back (to New York) in a different store – wholesale department store (Van Tinne at 877 Broadway – a "Japanese house") getting goods ready to ship, getting them packed and shipping them off, in the shipping department." Just before he went to Mt. Washington, Kindellan worked "up here in Groveton (N.H.) about three months in the Odell Manufacturing Company. They were building a mill there, sometimes I worked on the machine shop and worked all around wherever the boss would send me. I got two dollars a day up there." In true Cog fashion, Kindellan heard about the summer job through his social network. He met Pat Camden while at home in Quebec. "He told me if I was around when the men were put to work on the Mt. Washington (Railway) if there was a chance for me he would speak for me," said Kindellan. "I met him on his way to Mt. Washington on Saturday and he introduced me to Mr. Horne and I went up and staid over Sunday and went to work Monday morning." Horne says he didn't ask about Kindellan's past work, but "I thought he was a likely fellow and one of those fellows that could work." The pay was "thirty or thirty-five dollars a month (with board and lodging)."

The Work & The Boards

Work trains would leave from the Base Station *(now the Shops)* by the Boarding House at 7am pushing a standard flatcar with no roof. The men would toss slide boards onto the car with other supplies to possibly use at the end of the day. Employees got an hour for lunch, which they carried up with them, and the train headed back down in time for the supper bell at 6pm - the end of the 10-hour work day. The slide boards were made in the railroad's carpenter shop. Iron pieces were made by the railroad's blacksmith. Each man took care of his own board. "We took the bolts from the track bolts," said Pat Camden who had been sliding since 1873, "and we got the cranks made up by the blacksmith." John Horne said a general design had been finalized with the brake handles anchored at the front of the board and extending back to the rear. "We had two kinds, when I went there *(1874)* we had a kind different from that *(brakes in rear with handles to the front)* and we disused – didn't use the other one, went on this one *(brakes in front)*." Alexander Cusick's fatal slide board accident in 1906 curtailed the official use of slideboards - track crews were to ride the work

train up and down until passenger service (up at 10am - down at 1:45pm) began, and then the 3-mile slide board trip down from the summit had to take 30 minutes with riders staying 200 to 500 feet apart. They also had to space their starts. "I gave orders for five minutes," testified John Horne, "but that was not practical really, but I thought I would be on the safe side because in five minutes some men would be down to the Base. I didn't suppose they would live right up to that rule." Horne admitted he'd once been "foolish enough to come down in a little under four minutes," and he had seen his "official" slide board orders ignored but did nothing to enforce them. "I was too good-natured," said Horne. "The idea was, is this – simply this, when the men had done their work if they wanted, if they would use judgment I was just as willing they should get down to the Base on the board, because they got down much quicker than they could on the train." Horne considered the boards "perfectly safe" if it took thirty minutes to slide down, and said it only took one trip down for a man to learn how to use the device. No printed rules for slide-board use were ever produced. However, there were oral guidelines that included several stops to adjust the board's grip on the cog rack when the track was wet because the dampness made rail more slippery. Veteran slider Patrick Camden would stop and tighten the bolts "at head of Long Trestle and then ease it on the upper end of Jacob's Ladder. At the curve on Jacob's Ladder it would not go so easy and I would slack it up. At the head of Cold Spring Hill I would tighten it again and when I got it to the brook I would loosen it again." Camden said the process made "it easier on your arms to hold the brakes." And he said he briefed the 1908 crew in the spring of the year. "I said that no man should pass the head of long trestle without stopping to fix their board. I told all the men that."

The Fire

Beginning May 11, 1908, Camden says his crew spent about six days unloading the firewood, before starting to patch up the road. "We unloaded wood for about a week or a week and two days," Kindellan recalled. "Then we were up along the mountain and done a little work on the track and went up and shoveled some snow on the top of the mountain to put a piece in there." Steve Meaney remembers his track work involved "mostly tightening the nuts" on the new section at the the top that replaced track that was worn out. "We (also) put a spout at the Summit House," said Camden.

The new spout and the new track section didn't last long. Fire broke out in the Summit House just after the work train had departed for the Base on June 18th. Strong winds fanned the flames and every building on top, except for the Tip-Top House and two stables, was consumed. *(see Vol. 3 Timeline)*

Passenger train service was scheduled to begin on June 29. Camden and his sec-

Aftermath: *Looking north the Summit House chimney and partially burned water tank with actual summit at left. (1908)*
- Mary Anne Barnes Collection

10 Days to Replace: *Looking south track and platform debris post-fire (1908) - Mary Anne Barnes Collection*

tion crew had to remove the debris, replace the track and rebuild the platform despite unfavorable weather conditions. Extra workers were assigned and the deadline changed the standard railway work-week, "There was a couple of French fellows, I don't remember their names, one went to firing and one went as brakeman (after passenger trains started running), said Kindellan. "We worked some Sundays, it was just how we happened to work Sunday. We worked overtime on account of the fire." The Summit House could not (and would not be rebuilt) quickly. Instead a group of five or six railroad carpenters from Woodsville, N.H. led by a Mr. Fullerton were fixing up the Tip Top House so it would be habitable. Horne said Fullerton's men, like Camden's section gang would sometimes use the slide boards at the end of the day rather than take the work train down.

The New Guy & The Preamble

Thomas B. Sheehe from the Lincoln, N.H. area was 19-years old when he started working at the Mount Washington Railway on July 8th. He had no experience on railroads. The day before the accident, 19-year old Stephen Meaney said the crew worked from the Base up to Waumbek cutting grass around the track. After seven weeks on the job, he had a slide board of his own – "Dennis Maloney used it before me." Brother Joe Meaney showed him how to use it.

On July 17th, Camden's section gang returned to the summit. Some work was done in the morning, but Steve Meaney said it was a "windy, wet day, we didn't do much in the afternoon." The mountain was in the clouds down to the Half-Way House, and it rained after the lunch break. The man sought shelter in the engine, the stage office and Tip Top.

Just after four, foreman Pat Camden decided to call it a day because "we were doing nothing. I told them to take the train because it was so damp and foggy, and it would be better" especially because the Cog rack that got oiled twice a week to prevent wear had just received an application. The oil only added to slick conditions. "I ordered them all not to go down on the slide board because it was damp and foggy... They said we are going on the boards. I said, 'You run at your own risk.' Then I came along to Tom Sheehe (in the engine staying out of the rain) and said to him: "You go down on the train. I told him to get on the engine, because he looked to be too fresh." Camden said by "fresh" he meant "(Sheehe) was not long on the road and did not know the road and was a young fellow." Camden went to see what lumber he needed for the next day. Not one of his section gang took the train.

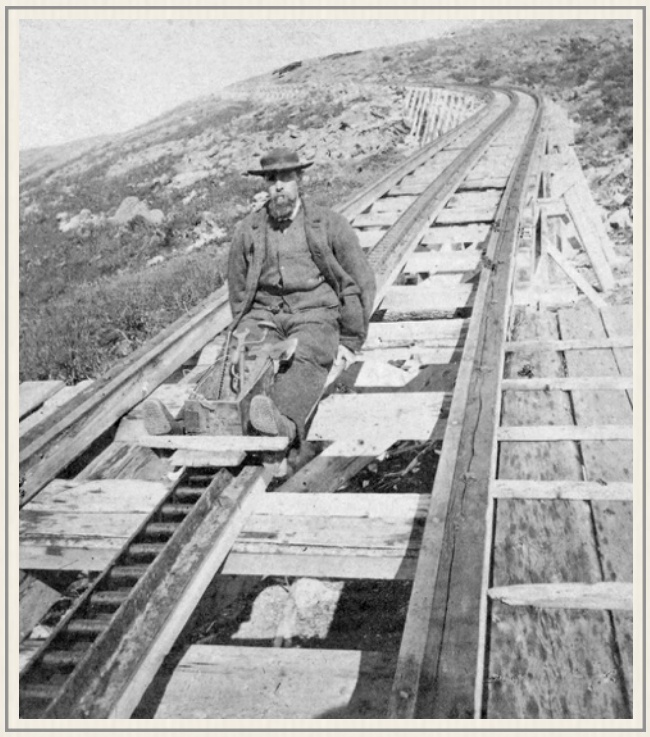
27-year old Patrick Maloney says the men chose the boards over the train "because it was wet and the quicker we got out of the rain the less wet we were." Maloney went first. He stopped at the top of Long Trestle to tighten the bolts. He safely arrived at the Base unaware of the accident behind him.

The Collision

Despite Camden's orders, Tom Sheehe put his board on the rack and was number two down the mountain. "I know he (Camden) told me to go on the train because I was a green man," Sheehe told the court. Visibility varied - "Part of the time you could see about fifty feet and another time you could see a hundred and fifty."

Michael Kindellan was the next to slide using a board that a man named Dubois used in 1907. Kindellan says he didn't know anyone had departed before him. "Just as I got to the high trestle I noticed Sheehe, and I didn't know he was on," said Kindellan who recognized Sheehe by the clothes he wore. "As soon as I saw Sheehe I knew Mr. Camden's orders had been disobeyed." Sheehe "was going slow." "I was just taking the trestle. You can twist around and you can see the Long Trestle and I went to look around and I see Meaney coming, and I thought then I was got caught in a trap." Kindellan said Meaney was going "terribly fast. I couldn't do anything only hold my board from running into Sheehe. While I was thinking what I would do I was struck and knew no more until I got to the Base."

Stephen Meaney was fourth to slide with older brother John Meaney coming behind him. My brother told me "to go slow, and be sure and stop on the Long Trestle. He told me not to let the board out because I might not be able to stop it." Meaney says he could only see about ten feet around him. "The sleet in your eyes, and I couldn't wear my hat on account of the wind. I didn't know where I was up till we got on to the Long Trestle and stopped. I couldn't stop at Jacob's Ladder, on the high trestle. When I come to that I saw the fog kind of lifted, and I saw Kindellan (not more than 20 feet) ahead of me. I tried to stop, and lifted all I could on the brakes… but it was too close. I didn't have space enough to stop… it was hard to stop on account of the rails being wet, and they had been oiled on that day. I hit him, just went into him, it was not a second from when I saw him before I struck him." Kindellan was knocked off his board on impact and it continued down without him, but Meaney didn't see that. "When I hit him I was knocked on to the side of the track, and I hung on to my board, and it dragged me down to the Halfway House, and then my board hit his board again. I couldn't get up, and I was dragged on the side of my board until I hit his board again, and then the two boards hit Tom Sheehe's board."



"I didn't know anything (about the accident) until the board *(Kindellan's)* hit me," testified Sheehe, "and I went

quite a ways and another one *(Meaney's)* hit me." "I was knocked off when the two boards hit Tom Sheehe's board," recalled Meaney. "There was a fellow there (a tourist who had been walking up the mountain) helped me into the Halfway House. I went there until the train came down." Sheehe was still sliding. "I went only quarter of a mile and I saw the boards and took them off and went down the track and told Mr. Horne."

Joe Meaney was the last of the gang to slide. He "came down to where Kindellan was, and then he went back and stopped the foreman."

As was his practice, foreman Patrick Camden was last down slowly sliding to study the track for places that needed repair. He admitted so slowly "sometimes I was late for supper." He had been coming down the track like that once or twice a day since 1873. The night of the accident, Camden said "I started my board at the top and I tightened it at the head of the Long Trestle. I could see about 150 feet when I got there. I was coming down (Long Trestle) slow and the first thing I saw – I saw Joe Meaney walking up… and met (him) about 300 feet above Jacob's Ladder." Camden says he had no trouble stopping.

Behind Camden was the work train run by engineer Eugene Armstrong. He told the court the train started down about 10 minutes after Camden – not far from half-past four. "I remember it being a little earlier than we usually started," testified Armstrong. "The brakeman and the fireman on the engine with me, and I think three carpenters (from the Fullerton crew). I used to let as many (men) ride (in the engine) as cared to, that could keep out of my way so I could do my work. I think I have had as many as five or six in there… besides the fireman and myself." The rest of Fullerton's carpenters went down the mountain that night on slideboards.

The train picked up the injured Kindellan and continued down. Camden says he saw Steve Meaney at the Half-Way House - "He seemed to be frightened. Not very bad." The train stopped to pick up Steve Meaney who finally saw his friend Kindellan. "(Kindellan) seemed to be unconscious then, he was all cut (on) his face." For his part, Meaney's arm, leg and back were injured.

Continuing down, Camden says he saw the slideboards involved in the accident "alongside of the road where Sheehe threw them off *(nearly a quarter of a mile below Half-Way – a half mile below the accident site at the center of Jacob's.)* As far as I know Steve's board was all right, and the other board was all right except the shock split the (tool) box and took off the iron from the hind part."

Aftermath

Stephen Meaney stayed at the Base for a week nursing his injuries - then went home to Quebec. Two weeks later, he was haying the fields at the home place. By the time the lawsuit was being tried in court, Stephen Meaney was in British Columbia.

Tom Sheehe became a Mount Washington Railway fireman.

John Camden completed the 1908 season inspecting the track on a slide board before passenger trains made their daily descent. He did not return.

Joseph Meaney worked for the railroad at least through 1910. Meaney's winter home was Sentica, Canada at the time of trial.

Patrick Maloney became a Mount Washington Railway brakeman in 1909.

Michael J. Kindellan went back to Van Tinne's after the accident "working in the retail section rather than wholesale as it is lighter work."

Engineer Armstrong became a "country grocer" in Windham, N.H.

Patrick Camden would continue as roadmaster for another ten years. He was ambivalent about slide board use. "I can't say that I was willing and I can't say that I was hard against it, because it was safe if they used a full half-hour to come down. The rule was that when there was no work train and the men had to come on slide boards they must not come down in less than half an hour. If a man came down in less than half an hour I thought it was not safe and didn't want them to do it." Camden himself would take less than a half hour to come down when he carried torches on his board, streaking down the mountain to celebrate the opening of the new Summit House in 1915.

Superintendent John Horne continued to maintain slide boards were "safer in my estimate than to walk down that trestle on the Mt. Washington Railway. The track is, it is a series of ties eighteen inches apart, and when the thing is elevated up – you come down on that steep incline and you are liable to slip, if you put your foot down there and don't get it on just right your foot would go down through and down you go through the tracks and you would hurt yourself." Descending slowly on a slide board, said Horne was "perfectly safe."

The Supreme Court Decision Reversing the Lower Court

Kindellan v. Mt. Washington Ry. Co.
(Supreme Court of New Hampshire, Coös, Feb. 7, 1911.)
[79 Atl. Rep. 691.]

Master and Servant - Injuries to Servant - Negligence of Master. Where an employee was fully informed as to the dangers of using a certain appliance in his work, the employer was not negligent in permitting him to use it.

Master and Servant - Injuries - Negligence. Plaintiff, a section hand, was working on top of a mountain up which a railroad ran, and was injured while sliding down the mountain from work in the evening on a slide board, by another employee running into him from behind on a similar board. All the men who used slide boards to descend had been instructed in their use and were familiar with the dangers attending their use, knew the necessity of keeping a reasonable distance apart, and going slowly, and were familiar with the route, plaintiff having used the board about 25 times, and the employee, who ran into him, about 20 times, before the accident. There had been three or four collisions in using slide boards within the past 20 years. Held that, since

plaintiff was familiar with the dangers attending the use of slide boards, the company was not negligent in permitting them to be used by employees so as to be liable for plaintiff's injuries.

Master and Servant - Injuries - Proximate Cause - Incompetency of Foreman. Where plaintiff's foreman told another section employee not to go down the mountain on which they worked on a slide board, but such employee disobeyed his orders and did go, running into and injuring plaintiff, who had gone ahead of him, on a slide board, no incompetency of the foreman could have contributed to plaintiff's injuries.

Master and Servant - Injuries - Action - Sufficiency of Evidence. In an action against a railroad company for injuries to a section hand while riding down the mountain grade on a slide board attached to the track by being run into by another section hand on a board, evidence held not to sustain a finding that it was the other employee's custom to descend the mountain on the train on wet nights.

Master and Servant - Injuries - Action - Sufficiency of Evidence - Assumption of Risk.* In a section hand's action for injuries sustained while riding down a mountain on a slide board fixed to the track by being run into by another employee riding on a slide board, evidence held to show that plaintiff knew and appreciated the danger, so as to have assumed the risk.

[Footnote: *For the authorities in this series on the question whether a railroad employee assumes the risks from dangerous conditions because he had knowledge of their existence and location, see last foot-note of Konifc v Chiceo. etc.. Ry. Co. (Iowa), 38 R. R. R. 493, 61 Am. & Eng. R. Cas.. N. S.. 493.]

Carriers - Passengers - Existence of Relation. Plaintiff was employed as a section hand; the crew working on the top of a mountain in the daytime and descending in the evening after the day's work was done. While the men sometimes descended on a train, they were also furnished slide boards, which were attached to the rails, and on which they descended by gravity. Held, that plaintiff was not a passenger in descending on a slide board; his ride down the mountain being a mere incident to his employment.

Transferred from Superior Court, Coös County; Chamberlain, Judge.

Action by Michael I. Kindellan against the Mt. Washington Railway Company. Verdict for plaintiff, and case transferred from the Superior Court on exceptions by both parties. Verdict set aside, and judgment rendered for defendants.

The defendants' motions for a nonsuit and the direction of a verdict in their favor were denied, and they excepted. The court instructed the jury that the plaintiff was not a passenger upon the defendants' railroad at the time of his injury, and that the count in the declaration charging them as common carriers of passengers need not be considered. To this instruction the plaintiff excepted.

Remick & Hollis, for plaintiff.
Drew, Shurtleff & Morris, for defendants.

Bingham. This action is brought to recover damages for an injury which the plaintiff received while in the defendants' employment as a section hand and general helper on the Mt. Washington Railway. The principal questions arise on the defendants' motions for a nonsuit and a verdict. At the time the plaintiff received his injury, he was riding on a slide board over the defendants' railway from the summit to the base of Mt. Washington, and was run into by a fellow employee who was following him on a slide board. The plaintiff's contentions are that the defendants were negligent (1) in permitting the section men to use slide boards at all, and (2) in putting the foreman, who he says was incompetent, in charge of the men if they were to use slide boards; and that he himself was in the exercise of due care and did not assume the risk of being injured.

Judge Bingham of Littleton (1908)
- WikiMedia.org

[1] In Leazotte v. Railroad, 70 N. H. 5, 6, 45 Atl. 1084. 1085, it is said: "A servant assumes the risk arising from all the ordinary dangers of his employment, of which he either knows or might have known by the exercise of due care; and this includes any risk arising from the negligent performance of the master's duties, if the servant knows of this danger and voluntarily remains in the master's employment." In more recent cases this statement of the rule has been modified some what; the view being that if the servant knows and appreciates the dangers to be encountered in the conduct of the master's business, arising from the nature or condition of the instrumentalities or the methods employed, as to him if it not negligent for the master to make use of such instrumentalities or methods; that the master owes the servant no duty as to dangers of which he is fully informed, and may perform his duty to the servant as to dangers of which he is ignorant either by fully informing him of them, or by perfecting or dispensing with the instrumentalities or methods from which the dangers arise. *Bouthet v. Company, 75 N. H. 581, 78 Atl. 650; Coolev v. Company, 75 N. H. 529, 77 Atl. 936; Manley v. Railway, 75 N. H. 465, 75 Atl. 81 ;Willis v. Companv. 75 N. H. 453. 75 Atl. 877; Deschene v. Companv, 75 .N. H. 363, 74 Atl. 1050; Kelland v. Company, 75 N. H. 168, 71 Atl. 947; Bennett v. Company,74N.H.400,68Atl.460.* It matters little which is the correct statement of the legal principle - whether it is based on assumption of risk or absence of duty - for the result is the same in either event. If, then, the jury were not warranted in finding that the plaintiff was not fully informed as to the dangers pertaining to the use of slide boards, the defendants were not guilty of a breach of duty, as respects him, in permitting them to be used.

[2] It appears that the plaintiff entered the defendants' employment early in May 1908, and on July 17th, when the accident occurred, had worked for them about 10 weeks. The first week he was employed in unloading wood at the base of the mountain. From that time on he worked at various points on the railways; the last of his work being at the summit, rebuilding the tracks that were destroyed when the Tiptop House *(ed note: Summit House, TipTop survived the June 18th fire)* was burned and removing the debris caused by the fire in the destruction of the building. Throughout his employment he and the other members of the crew boarded at the base of the mountain.

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Their labors began at 7 o'clock in the morning and ended at 6 o'clock at night. They left the base on the work train at 7 o'clock in the morning to go up the mountain, taking their dinners with them. This train was made up of a flat car and an engine. The passenger trains began to run June 29th. Down to that time the work train remained on the mountain until a quarter of 5 in the afternoon, when it returned to the base.

About a week before June 29th the foreman instructed the men to get out the slide boards to practice on, as they would have to use them when the passenger trains came on. Before this they had gone down the mountain at night on the work train. The crew then consisted of John Camden, Joe Meaney, Patrick Maloney, Steve Meaney, Michael I. Kindellan, and one or two others. All of the men, except Steve Meaney, procured slide boards and came down on them that week ahead of the work train. After that they left the summit as a rule at half past 5. Steve Meaney came down on a slide board two or three times before June 29th. On that day two or three of the men left the track crew and worked as engineers or firemen on the trains. Thereafter Steve Meaney had a slide board on which he regularly made the descent with the other members of the crew, with the exception of two wet or foggy nights, when, as he expressed it, he was "new on the board" and came down on the train. It took an hour and 15 minutes for the work train to make the trip down. The men came down on the boards in half an hour, and, as they usually left the summit at half past 5, they passed the work train at the water tank, part way down the mountain. The distance from summit to base was 3 ¼ miles. In using the boards the men were instructed to go slowly, to keep a good distance apart, to stop at the long trestle above Jacob's Ladder and tighten the bolts on the boards, which increased the pressure of the brakes, and to consume half an hour in making the trip. All of the witnesses testified that if a man had been down on a board from one to three times he would be qualified and could make the descent safely if he observed the rules.

The plaintiff testified that he could make the trip safely in 6 minutes, but that he could do it more easily and with a greater degree of safety in 12 minutes. It was more dangerous to go on a board on a wet, foggy night, as the rail would be slippery, and greater pressure would be required on the brakes to regulate the speed, and it would be more difficult to see where one was. All the men had used the boards on foggy nights, some perhaps not as much as others, prior to the accident. The plaintiff had used them about 25 times in all in making the descent, and Steve Meaney about 20 times. Both had been instructed how to manage a slide board, they had discussed with other members of the crew the dangers attendant upon making the trip, they knew the necessity of keeping a reasonable distance apart and of going slowly, and they knew the danger, in case one lost control of his board, of running into the man ahead of him and of being run into by one coming from behind. They had been over the road twice a day for nine weeks, and knew the nature of the grades and where they were the steepest. They had worked with each other and with all the men in the crew, except Sheehy *(likely engineer Edward Sheehe)*, from the day they entered the defendants' employment in May. They had been down the mountain repeatedly on slide boards in company with the other men, knew how they ran their boards and whether they complied with

the rules and instructions that had been given them, and knew the increased danger of their use on wet, foggy nights.

But, notwithstanding all this, counsel for the plaintiff contends that, inasmuch as there was evidence that during a period of 20 years or more three or four accidents had occurred through slide boards coming in collision, and for a time at least their use was forbidden, the jury were warranted in finding that the plaintiff did not know the dangers and assume the risks attending their use. However, we are unable to see that a knowledge of the facts disclosed by this evidence would have been of any aid to him, for he already knew all the facts concerning the use of slide boards necessary to his appreciation of the risk; and in our opinion the evidence does not warrant a finding that the defend ants were guilty of a breach of duty to the plaintiff because they permitted slide boards to be used.

[3] Was the plaintiff injured through any fault or neglect of the foreman for which the defendants were responsible? Counsel for the plaintiff take the position that on the night of the accident the foreman *(John Horne)*, in the presence of the plaintiff, ordered Steve Meaney and Sheehy to go down on the train, and that the plaintiff would not have gone on a slide board if he had known that Meaney was to go on one; that the foreman was an incompetent man; and that if he was given charge of the men the defendants ought to have known that his orders would not be obeyed.

The evidence relating to this branch of the case was that on the afternoon of the accident it had rained so that the men did not work. The plaintiff testified that at about a quarter past 4 the foreman *(John Horne)* came into the stage house, where he and Steve Meaney and two or three members of the crew were, and said, "Take your boards and go ahead of the train tonight;" that they started in the direction of the train to get their boards, and when they reached the platform beside the track, other members of the crew, including Sheehy, joined them. While they were all together, the foreman *(Horne)* told Sheehy and Steve Meaney "not to go on the boards, to go on the train," and, turning to the other fellows, said: "You better not go too close; if you do, you will kill each other. Keep apart. The track has been greased, and it is rainy, and you will kill each other." Having said this, the foreman turned and went to the Tiptop House. There was a heavy fog upon the mountain, so that at times one could not see more than 10 feet. Then, again, it would shift, and you might see 50 or 150 feet. The plaintiff's board was beside the track, a little below the engine. He procured it and attached it to the center rail. As he did this, he did not see any of the other men. He knew some of them had gone ahead of him, but did not know who. He started off without further ascertaining what the rest of the men were to do. Steve Meaney followed later, and, having let this board go too fast on the long trestle, he ran into the plaintiff on Jacob's Ladder, threw him off, and injured him. The plaintiff testified that he really believed the foreman thought Meaney would obey him; that he had never known him to disobey any strict orders, and although the men had disobeyed the foreman as to some small things, as he had probably done himself, they would not do so before him.

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Now, if the foreman gave this order to Meaney, as the plaintiff testified, we are at a loss to see how his incompetency, if he was incompetent, could be found to have in any way contributed to cause the plaintiff's injury. The order was an entirely proper one, and, if obeyed, the accident would not have happened. There was no evidence that *(John)* Horne, the defendant's superintendent, ever knew that the men disobeyed the foreman's orders; and the evidence would not justify a conclusion that he ought to have known of it.

Counsel also contend that if the order to Meaney not to go on a board, but to go on the train, was not given, the plaintiff had no reason to think that Meaney would go on a board that night, as it was wet and foggy; that it had not been customary for him to go on a board on such a night; and therefore the plaintiff could not be held to have assumed the risk of being injured by him in case the defendants permitted him to go. The order "not to go down on the boards," etc., was either given or not given. We have discussed its bearing in case it was given. We will now discuss the evidence on the basis that it was not given. If it was not given, then the question is: Was there evidence from which it could be found that the plaintiff had reason to believe that Meaney was not to go on a board that night?

[4] The plaintiff says it was not Meaney's custom to go on a board on wet or foggy nights. The only evidence as to this was that when Meaney was a new man - that is, when he first began using a board - there were two nights when it was wet and foggy that he went down on the train, and one other such night when he went on a board. But we do not think this would warrant the jury in finding that it was his custom to go on the train on such nights, and that the plaintiff would be justified in assuming that he would not go on a board. The train was on the mountain the night of the accident. The plaintiff justifies his own conduct in coming down on a board instead of on the train, upon the ground that he was ordered by the foreman to go on a board ahead of the train. This order is the one the foreman gave at the stage house, when he came in there to notify the men to get ready to go down the mountain. It will be recalled that this order was given to all the men in the stage house, and that Steve Meaney was there and heard the order the same as all the rest. The plaintiff himself so testified. Meaney also testified that the boss came in and "told us we better go down ahead of the train." Now, if the

plaintiff had reason to believe that he was ordered by the foreman to go on a board, he had just as much reason for believing that Meaney, to whom the order was given as well as to himself, would go on a board; and, as he had never known him to disobey strict orders, that he would not in this case.

The evidence also discloses that the plaintiff knew as much or more than the foreman did about Meaney's capacity to manage a slide board. He had worked with him every day from the first of the season to the day of the accident. He had been down the mountain on slide boards with him, sometimes starting just ahead, then again just behind him. He knew the increased danger be cause of fog and rain, and testified that he and the rest of the men were warned this very night by the foreman that the track had been greased, that it was rainy, and that if they went down that night and went too close they would kill each other.

[5] The only reasonable conclusion fair minded men could draw from the evidence was that the plaintiff knew and appreciated the danger and assumed the risk.

[6] The plaintiff was not a passenger. His trip down the mountain was a mere incident of his employment. *Gillshannon v. Railroad, 10 Cush. (Mass.) 228; Dickinson v. Railway, 177 Mass. 365, 59 N. E. 60, 52 L. R. A. 326, 83 Am. St. Rep. 284; Kilduff v. Railway, 195 Mass. 307, 81 N. E. 191, 9 L. R. A. (N. S.) 873; 6 Cyc. 543.*

The order is: Verdict set aside; judgment for the defendants. All concurred.

Lawyer George Morris of the Lancaster firm of Drew, Jordan, Shurtleff wrote over 40 years later, "The case of Kendellan vs. the Mt. Washington Cog Railroad was one of my most interesting cases, not alone because of the circumstances attending the plaintiff's injuries, but also because of the pleasure and knowledge derived in its preparation and trial and because of the business it led to and the satisfactory results finally attained" for the Boston & Maine Railroad. Lawyer George F. Morris would eventually sit as federal circuit court judge in the era of President Franklin D. Roosevelt.

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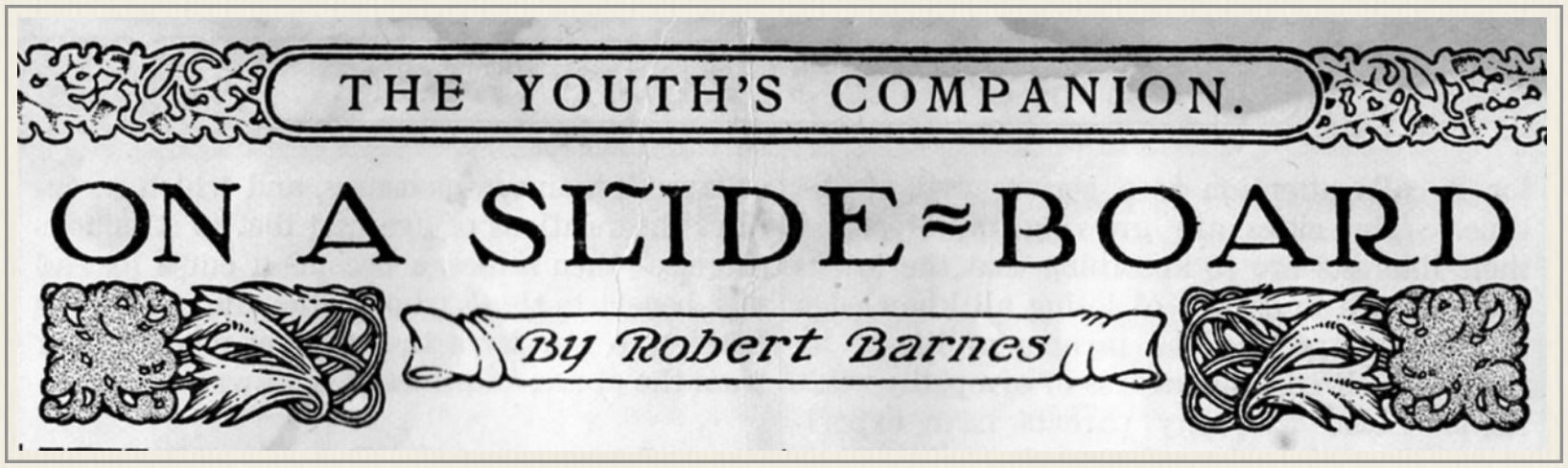

1909

Regular Issue (fiction) - October 21, 1909

At three o'clock on an August morning the press in the little printing-office on the summit ceased its clatter, and Corey Green brought out a bundle of *Stars*, wrapped in enameled cloth, to Bart Collamore.

"Here's your five hundred," said Corey, "hot from the types."

"All right," replied Bart. "They'll be on the hotel counters twenty miles away by six."

They walked down the platform before the Summit House. A dim light illumined the office, but the rest of the long building was dark. Only two other persons were awake – Frank Simmons, busy over the printing-press, and Luke Martin, the hotel watchman.

Overhead an occasional star glimmered through the driving wrack, and the low east disclosed the first faint tokens of a cloudy dawn; but in the west frowned a vaporous battlement, black and threatening, from which a strong wind was tearing detached masses and rolling them against the mountainside. Now and then a few flakes of snow flew by on the raw gale.

Lifting his slide-board from the platform, Bart set it on the cog-rail midway of the track.

This rail was bolted to a wooden centerpiece on the ties, and consisted of two parallel strips of wrought angle-iron, connected by steel pins three inches apart, on which the cogs of the engine worked. He turned the nut on the brake-rod until the iron plates by means of which the speed of the board was retarded were in position under the flanges of the rail. Then he pulled on his gloves, jammed his cap down hard, and buttoned his reefer up to his neck.

Corey glanced at the black western sky. "You're liable to hit the storm going down," said he.

"Guess I can beat it out," returned Bart. Seating himself on the slide-board, with the bundle of papers between his knees, he gripped the brake-handles. Almost of itself the board began moving.

"I'll be at the Base House in ten minutes!" he called back, as he sped away down the slope toward the north, while behind him the drone of the wind almost drowned out Corey's shout:

"Good luck!"

The slide-board was the conveyance used by employees and trackmen in descending the mountain railroad. Although perilous for a novice, it was easy of management for an experienced hand. It was of seven-eighths-inch spruce, ten inches wide, and something over a yard long. Three cleats screwed across its top kept it from splitting. Underneath were two sets of "shoes," the for-

ward of wood, the rear of iron, parallel strips half an inch thick and four inches apart, just far enough for the top of the cog-rail to slide between them.

As Bart slipped downward, the black buildings on the summit were blotted out by driving clouds. Little by little he swerved westward, turning his back to the dawn, hearing only the hoarse murmur of the rising gale and the rattle of his board.

Guide-books say that the three and one-third miles from summit to base may be covered by slide-board in twenty minutes. Actually, the record is two minutes and forty-seven seconds. This can be appreciated when on remembers that there is a drop of four thousand feet, and that the average grade approximates one in four. Bart had made the trip some hundreds of times in his fourteen years on the road. Every morning that summer he had gone down before daybreak, in order that the little paper printed on the peak might have early distribution among the various hotels.

Faster and faster sped the board. The top of the rack was abundantly lubricated with oil from the cogs of the engine, and the grade was growing steeper. On the left a dim shaft flitted by, memorial of a life lost by exposure on the mountain years before.

Bart put a little more pressure on his brakes. The stout birch handles, somewhat smaller than baseball bats and about as long as the board itself, were connected forward with the brake-rod running across the front in a hollow wooden bar, and with an iron plate under each flange of the rail. To retard his course, the rider simply pulled up on the handles, which were directly under his arms, thus lifting the plates against the flanges and pressing the board down harder on the top of the rack.

The track curved northwest for the next fifteen hundred feet to the Gulf Tank, a water cistern on the left. The grade varied from one in four to one in eight. The wind, keen, strong, and shot with hurrying snowflakes, stung even Bart's seasoned face. He had worked on the mountain long enough to know what was coming out of that inky bank ahead.

Gulf Tank swept past, a square gray shadow, and the track gradually swung west. And now he caught it in good earnest. The moan of the blast had risen to a furious howling. Bullets of sleet pelted his cheeks. Right before him rose a black wall, the edge of the real storm. It looked almost as if it were solid. Catching his breath, he ducked his head, and bolted straight into the heart of the tempest.

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In a second it enveloped him, rain, snow, sleet and hail. His board whizzed faster over the wet, slippery rail.

The grade increased, and he knew he had reached Long Trestle. Beyond lay Jacob's Ladder, the steepest place on the line, pitched considerably over one in three. He must not go too fast there. It was more than a mile and a half still to the bottom. If the board once got away from him – Bart stiffened himself against the fierce blast, gripped the brake-handles hard, and pulled up on them. A stream of sparks trailed out on each side, as the plates bit at the flanges.

He was leaning well forward now, boring head foremost into the yelling gale. His eyes were closed; he could not keep them open.

Now the Trestle was past, and the Ladder lay just ahead. He could tell where he was by the feel of the track. His head was clear, his nerves steady. All he needed to do was to keep a good hold on those handles, and the board would soon carry him safely to the base.

Suddenly his speed increased. He had struck the Ladder. The grade at its head was not far from one in two. Down he shot, lifting hard on the birch bars.

What was that? It could not be that left brake-handle was buckling! Yes! Something had given way. Up came his hand, higher, higher, higher, yet there was no response of the iron grinding against iron.

For just a second Bart felt sick.

The flange was only three-fourths of an inch wide. If that left plate once got out from under it, he knew very well what would happen.

A single brake could never hold the board on the rail. On the next curve, if not before, it would bound from the track with tremendous velocity, and its rider would land somewhere on the rugged mountainside with a broken neck. Somehow, if he cared to live, that plate must never lose its grip on the flange.

The Ladder was four hundred feet long and thirty feet above the rocks at its highest point. Bart was traveling forth miles an hour, so crossing the trestle took less than ten seconds. Before he left it, he saw what he must do.

Instinctively easing up on his right bar, so as to bring an even pressure on both sides, he ran his left hand quickly forward down the birch stick, to locate the break. Not many inches from the socket his fingers found it, where a knurl, imperceptibly weakened by long use, had evidently yielded at last.

Sitting where he did, he could just reach beyond the break by extending his arm full length, and he could exert only a slight upward pull. If he hoped to keep the board on the rail, he must immediately shift his position, so that he might put out his full strength. Several short curves were just ahead.

To change one's place on a narrow board flying down a mountainside at forty miles an hour through a pitch-black hurricane is no fool's task. Very carefully Bart hitched straight forward, until his knees were upright, and he was able to lift strongly on the unbroken portion of the bar. His speed now was simply terrific.

Round a curve he whisked, leaning far inward in the fear that he might ride the rail. Then, as his board settled down on a straight-away, he pulled up with all his might.

To his horror, he found that with so short a leverage he could not press the plate against the flange hard enough to check his speed.

The board was running away with him!

Bart knew every yard of that track, every pitch and curve, from the engine-house at the summit to the Marshfield turntable; and he realized that this was the most critical minute in all his years of railroading. Two courses were open to him – he might stick to the board, or he might roll off.

Which was the less dangerous?

If he rolled off at that speed, the best he could hope for would be a fearful bruising, broken bones and insensibility. It would be hours before rescuers could find him; and hours in that storm meant death.

If he stayed on, he took the chance of being hurled from the rail at some curve; besides, what would happen when he reached the bottom, if he ever did reach it?

He decided to stay on.

The slide-board took the curves at express speed. Time and again Bart thought it was flying off. He wondered to find himself still sitting hunched on the spruce, when Waumbek Tank slipped by. He knew it had passed, although he did not see it.

But little more than a mile due west, and almost thirteen hundred feet lower, lay the terminus. Was this to be his last ride on the line? In a couple of minutes at the most the thing would be decided. Bart manned himself for the finish.

On he shot, straining at the bars, head down through the pitch darkness. He was dashing against a forty-mile gale at an equal speed; that was equivalent to standing still in a hurricane blowing eighty miles. It shrieked round him with indescribable fury, striving to hurl him backward from his seat. His cap was torn away, and the sleet pattered like a sand-blast on his bare skull.

Cold Spring Tank flitted past, and the last steep pitch was near, seventeen hundred to the mile. In a moment Bart was rushing madly down the descent. His head swam with hideous speed. His board vibrated and trembled as it hurtled along the track. All seemed unreal, uncanny. But although dazed and buffeted, he never for an instant loosed his grip of the bars. A "green" man might have lost his head, and that could have had but one result.

Almost sooner than he could think, he was at the bottom of the pitch, darting over the Ammonoosuc bridge. Only a few hundred feet more. The track, he knew, was clear to its end, for cars and engines were housed for the night. Now for one last, long, hard pull!

Deaf, blind, numb, exhausted, bent almost double, he drained his strength to the dregs for a clutch on the handles; then he lifted, as if he would tear the flange from the centerpiece.

There was a terrific shrieking as the iron surfaces ground together. Fire followed each brake.

A building rushed by on the right – the carpenter-shop. Bart did not actually see it, but he knew it was gone.

Then came the car-barn, the turntable, the engine-house and repair-shop, and the long wood-shed. Less than thirty yards more! His speed was slackening on the level grade, but it was still tremendous.

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And now the laundry was past – the last building. Twenty-five feet beyond it the cog-rail ended. Bart threw all that was left of himself into one final, mighty wrench.

A second later he found himself rolling blindly along the ties, head over heels and heels over head, cuffed, punched, battered, as if a dozen flails were beating him at once on every part of his body. At last he came to a stop, a bruised, dizzy heap.

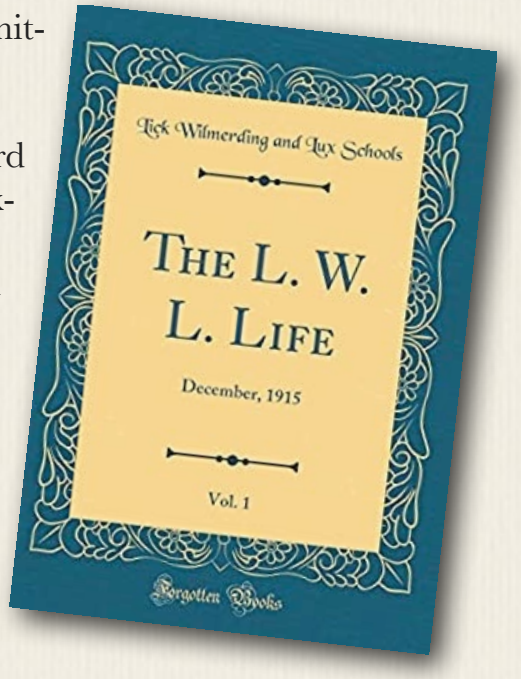
After a little Bart sat up, tried his arms and legs, and found he could get on his feet. He felt himself all over. Luckily his bones were well padded with muscle, so none of them were broken.

The storm was still blowing forty miles an hour, but by contrast it seemed to him to be almost over. He hunted until he found his bundle of papers; it had been tied tightly, and had not burst open. Then he limped up to the Base House.

"Here are your *Stars,*" said he to the driver of the team, shivering outside. "I've done my part; now see if you can get 'em to Bethlehem before six o'clock."*

Lick, Wilmerding, and Lux Schools at the 1915 World's Fair
- McCullough Library Archives at LWHS.org

* Six years later, it appears that a student at a San Francisco high school submitted Robert Barnes' above story from the *Youth's Companion* as his own. "Delivering the Papers" by Horace Cleveland '18 was published in the Literary section of the Football Edition of *The LWL Life* Vol. 1 No. 1. - "a journal to keep a faithful record of school life and to foster that spirit of righteousness and strength typical of Lick-Wilmerding and Lux" schools. This slideboard plagiarism was an interesting discovery for this professor/researcher. Mr. Cleveland's "literary" effort follows with changes in *(italics)* to reflect the original manuscript. What grade Mr. Cleveland might have received was not recorded in the *LWL Life* publication. The entire student body is seen attending the 1915 World's Fair above.



1915

Delivering the Papers

At three o'clock on an October *(August)* morning the press in the printing office on the summit ceased its clatter, and Winston Brown *(Cory Greene)* brought out to Bill Conners *(Bart Collamore)* a bundle of *Evening Stars (Stars)* wrapped in a water-proof package.

"Here's your five hundred," said Winston, "hot from the types."

"All right," replied Bill. "They will be on the hotel counters twenty miles away by six."

Lifting his slide-board from the platform Bill set it on the cog-rail in the middle of the track. The cog-rail assisted the mountain engine up the steep incline.

Winston glanced at the black western sky. "You're liable to hit the storm going down," said he.

"Guess I can beat it out," returned Bill. Seating himself on the slide-board, with the bundle of papers between his knees, he gripped the brake handles. The board was already moving.

"I'll be at the Base House in ten minutes," he called back, as he sped away down the slope toward the north, while behind him the wind almost drowned out Winston's call *(shout)*: "Good luck."

As Bill slipped downward, the black buildings on the summit were blotted out by driving clouds. Little by little he swung *(swerved)* westward, turning his back to dawn, hearing only the roar of the wind *(hoarse murmur of the rising gale)* as he sped along. The drop from top to the bottom of the mountain was four thousand feet and the record on a slide-board was two minutes and forty-seven seconds. This record was held by a brakeman on the mountain train.

Faster and faster sped the board. The top of the cog *(rack)* was well *(abundantly)* lubricated with oil from the wheel *(cogs)* of the engine, and the grade was growing steeper. On the left a dim shaft flitted by. *(, memorial of a life lost by exposure on the mountain years before.)*

Bill *(Bart)* put a little more pressure on the brakes. The stout birch handles, somewhat smaller than baseball bats and about as long as the board itself, were connected forward with the brake rod running across the front in a hollow wooden bar, and with an iron plate under each flange of the rail. To slacken his pace *(retard his course)* the rider simply pulled up on the handles, which were directly under his arms, thus lifting the plates against the flanges and pressing the board harder to the track.

Gulf Tank swept past, a mere *(square grey)* shadow, for the board was coasting downward at a terrific pace. Down ahead he could see the storm mentioned by Winston.

In a minute *(second)* it enveloped him, rain, snow, hail and sleet *(sleet and hail)*. His board whizzed faster over the *(wet,)* slippery track *(rail)*.

The grade increased and he knew he had reached Long Trestle. Beyond lay Jacob's Ladder, the steepest place on the line, with a grade *(pitched)* considerably over three to one. He must slacken speed *(not go too fast)* there. It was more than a mile and a half still to the bottom. If the board once got away from him - Bill *(Bart)* stiffened himself against the fierce blast, gripped the brake handles hard, and pulled up on them. He left a stream of sparks behind *(trailed out each side)* as the flanges hit the rail *(plates bit at the flanges)*.

With his eyes almost blinded by the rain he sat well forward trying to see ahead.

He passed the Trestle *(Now the Trestle was passed)* and suddenly his speed increased - he had struck the Ladder. The grade at this point *(at its head)* was not quite *(not far from)* one in two. Down he sped *(shot)*, pulling *(lifting)* hard on the brake handles *(birch bars)*.

What was that? Could it be *(It could not be that)* the left brake *(handle was)* buckling? Yes. Something had given way. Up came his hand higher and higher *(higher, higher, higher)*, yet there was no response of iron against iron *(the iron grinding against iron)*.

For just a second Bill felt sick. The left brake had given way and he knew well enough that one brake would never hold him. He pressed on the right brake and found to his alarm that the board tipped to a dangerous angle by too hard a pressure. To regain his balance he let go his hold all together and the little coaster leaped forward. Both brakes were practically useless. What would he do ! He pulled again, very gently, on the right brake and found to his horror the pressure made no

impression, only tipped him. Suddenly his mind awoke to one fact. *[the preceding section new material by Cleveland]* The board was running away!

Bill *(Bart)* knew every foot *(yard)* of the track ahead and he realized that two courses were open to him. He might stick on *(to the board)*, or he might roll off.

If he stayed on he took the chance of being hurled from the rail at some curve ; besides what would happen if he reached the bottom, if he ever did reach it ?

If he rolled off at that speed, the best thing he could hope for would be a frightful bruising, broken bones and insensibility. It would be hours before searchers could find him, and hours in that storm meant death. Another thing if he rolled off, the papers would be lost, and it was his duty to deliver them.

He decided to stick *(stay)* on if he could.

The slide-board took the curves at express train speed. Time after time Bill *(Bart)* thought that he was going to be spilled off *(it was flying off)*. He wondered to find himself still sitting hunched on the spruce when Granada *(Waumbek)* Tank slipped by. He knew he had passed it *(it had passed)* although he did not see it.

But little more than a mile due west, and almost thirteen hundred feet lower, lay the terminus. Was this to be his last ride on the line? In a couple of minutes at the most the thing would be decided. Bill *(Bart)* manned himself for the finish.

On he shot, straining at the bars, head down through the pitch darkness. He was dashing against a forty-mile gale at an equal speed; that was equivalent to standing still in a hurricane blowing eighty miles an hour. It shrieked around him with indescribable fury, striving to hurl him backward from his seat. His cap was torn away, and the sleet pattered on his bare head *(pattered like a sand-blast on his bare skull)*.

Iron *(Cold)* Spring Tank flitted past and the last steep pitch was near, seventeen hundred to the mile. In a moment Bill *(Bart)* was rushing madly down the descent. His head swam as a result of the great speed he had attained *(with hideous speed)*. All seemed unreal and uncanny. But although dazed and buffeted he kept his *(never for an instant loosed his)* grip on the handles *(of the bars)*. A green man might have lost his head, and that could have had but one result. Almost sooner than he realized it *(could think)*, Bill *(Bart)* was at the bottom *(of the pitch),* darting past the railroad company's yard limit sign *(over the Ammonoosuc bridge)*. Only a few hundred feet more. The track, he knew, was clear to its end, for the cars and engines were housed for the night. He gave a pull on the brake and to his great joy found that, now being on a level with nothing but his own momentum to drive him onward, the brake had a slight effect *(Now for one last, long, hard pull!!)*.

Deaf, blind, numb, exhausted, bent almost double, he drained his strength *(to the dregs)* for a clutch on the handles.

A building rushed by on the right, the carpenter shop. Bill *(Bart)* did not actually see it, but he knew it was gone.

Then came the car-barn, the turntable, the engine house and repair shop, and the long woodshed. Less than thirty yards more! His speed was lessening on the level grade, but it was still tremendous.

And now the laundry was passed, the last building. Twenty-five feet beyond, the cog-rail came to an end *(ended)*. Bill *(Bart)* threw all his remaining strength *(that was left of himself)* into one final mighty wrench.

A second later he found himself rolling blindly along the ties, head over heels and heels over head, cuffed, punched, battered, as if a dozen fellows *(flails)* had just finished giving him an awful drubbing *(were beating him at once on every part of his body)*. At last he came to a stop, a bruised dizzy heap.

After a little Bill sat up, tried his arms and legs, and found he could get on his feet. He felt all over himself *(all over)*. Luckily his bones were well padded *(with muscle)*, so nothing was broken.

The storm was still blowing - forty miles an hour but by contrast it seemed to be almost over. He hunted till he found his bundle of papers; it had been tied tightly and did *(had)* not burst open. Then he limped up to the Base House.

"Here are your Evening Stars," said he to the driver of the team shivering outside. "I've done my part, now see if you can get 'em to the hotels *(Bethlehem)* before six o'clock."

- Horace Cleveland, '18.

Ancestry.com reveals an 11-year old Horace Billings Cleveland living in San Francisco in Assembly District 39 in 1910 with his mother and father, who is a printing agent for a fruit insurance company. Cleveland *(right)* was president of the LWL Debating Society in his senior year. The Class History recorded that as a junior in an interclass tournament, "Lane, Cleveland and Schetter turned the trick that so embarrassed the defeated Seniors. We showed up well in other activities and had players on every school team." Cleveland also was heavily involved the school's dramatics activities. "Horace Cleveland who managed the entire affair *(Junior play and dance)*, the cast, and various committees, too much praise cannot be given. The play was a snappy one-act football story, entitled, *The Revolving Wedge*, and the class was highly complimented by the faculty for the business-like manner in which the affair was handled, as well as for its great dramatic success." Cleveland also managed the Senior Play effort, An American Citizen. "The play itself was the longest ever presented by a class, the whole evening being taken up, with no time for dancing. Under the skillful management of Cleveland, it turned out a big financial success, and a tidy sum was turned over to the Student Body." Horace served in the Navy - he is "somewhere - someplace," wrote LWL Life - "a gob in the U.S. Navy." In 1920, 21-year old Horace Cleveland is living with his mom and dad on 15th Avenue in San Francisco. Horace is working as a clerk in oil company. At 24, Horace is living at 82-5th Ave, San Francisco when he marries 23-year old Frances Louise Black in Alameda, California. She's from Oakland. Horace would die in Alameda on August 23, 1980 at the age of 82. Lick-Wilmerding High School, "a private school with public purpose" since 1895 continues to operate at 755 Ocean Avenue in San Francisco. https://www.lwhs.org/

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1911

"Shooting" Pike's Peak

A Colorado Springs dispatch states that R. O. Green of New York and M. H. Hayden of Detroit "shot Pike's Peak" last Thursday *(9/7/1911)* on a railroad "toboggan" - a greased board with cleats that fit over the cog rail of the Mountain railroad, somewhat after the style of the slide-boards so well known on the Mount Washington Railway. Starting from a point above the Half-way House, they reached Manitou, at the base of the peak, a distance of about five miles, in five minutes and thirty-seven seconds. this is at about the same speed attained by the "flyers" on Mount Washington, who have made the descent of three miles in about three minutes. "Shooting the Peak," the same dispatch states, was more or less common sport some years ago, but was stopped by the officials of the cog road because. as the management put it, "the fool killer got on the job too often."

- Among the Clouds - Thu, Sep 14, 1911

Hand Cars of the Manitou & Pike's Peak Ry. - "The average grade of the cog road from Manitou, Colo., to the top of Pike's Peak is 844.8 ft. per mile, and in several places it is as steep as 25 per cent, or at the rate of 1,320 ft. per mile. In order to insure traction for the locomotives rack bars are laid in the middle of the track, as seen in the illustration. For rapid transit down grade the officers and employees of this road use what are known as "slide boards," on which they can coast down the track at great speed. The device consists essentially of - a plank 12 ins. wide and 3 ft. in length, along the middle of the under side of which there is a cleat which runs between the

Pike's Peak - Similar, But Different: *The Colorado cog railway was of a similar, but different design - both in the center cog rack, and the workers' "hand cars" to descend the line. The western boards were not as wide and ran outrigggers to the outside rails for stability.(1904)*
- Catskill Archive Collection /www.catskillarchive.com/rrextra/pikepe11.Html

Go-Devils: *Orrie W. Stewart, wearing a suit, tie and hat, "coasts' down the Cog Railway track on a personal sled, or "go-devil," in an undated photo. Orrie and his brother, Ben founded the Stewart Brothers Commercial Photography business in Colorado Springs.*
Photo by Stewarts Commercial photographers, Pikes Peak Library District, 013-2386 in Colorado Springs Gazette - July 1, 2007

rack bars and holds the vehicle thereon. On either side of the middle cleat there are brake-shoes, bolted to the plank at one end and bearing against the outside surfaces of the rack bars or cog teeth. These brake shoes are applied by clamps bent over the sides of the plank and operated by a lever which, as appears in the illustration, the rider holds within his grasp. The plank bears upon the upper edges of the cog teeth by steel runners, which consist of two straps bent over the ends of the plank. To hold the device in balance a bar or pole, is bolted to the top of the plank, crosswise, extending over the track rail on either side. Across the front end of the plank there is bolted a rest for the rider's feet. The weight of the slide board entire is but 35 lbs.
The position of the rider when motion is clearly apparent in the illustration, and the method of operating the device is simply to place it on the track, sit down and attend to the brake. The speed attainable depends upon the pleasure of the, rider. A record of a fraction under a mile a minute has been made, and a ride at this speed over the rack rails is said to be stimulating if not exciting. The entire stretch of track from the top of the peak down to Manitou—9 miles—is used, except at four points where the rack rails diverge at sidings. At these points the rider must come to a stop and carry his board about 40 ft. On one occasion an employee of the, company made the trip over the 9 miles in 11 minutes. The friction of the runners on the rack rails causes the former to heat, and on the lighter grades of 8 to 12 per cent the heated runners have been known to adhere to the rack rail and stop the vehicle. For the purpose of lubrication, and to prevent the runners from unduly heating, the rider carries a bar of soap which he applies to the top of the rack teeth by reaching over in front of the board. Even then, the friction is so great that, at very high speed, on the long grades, streams of fire follow the flight of the rider."

- From "Notes on Track: 1904 by W. M. Camp" *http://www.catskillarchive.com/rrextra/pikepe11.Html*1919

Boys Who Tried To Slide Down Mountain Railway Are Killed

BRETTON WOODS, N.H., Aug. 6 - Harry Clausen, aged 19, and Jack Lonigan, aged 21, both of Boston, were instantly killed yesterday on Mt. Washington, when they attempted to slide down the mountain over the tracks of the Mt. Washington Railway on a slide board they had made from two railway ties roped together.

Their companion, John P. Jansky of South Boston, tried in vain to dissuade them from the hazardous venture and started to walk down over they trail when they insisted upon making the trip. Nothing more was heard from them until passengers returning to the base upon the afternoon train saw the body of a young man lying beside the track. *("About 100 yards above the half-way station" ac-*

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cording to the Littleton Courier - Aug 7, 1916)

UK Tourists near Half Way House (1919)

The train was stopped and the body of the other young man was found near by. The bodies were taken on board and brought to Fabyans where Dr. Blake White of New York said that the necks of both had been broken. The bodies were taken to Boston." *- The Evening Caledonian, Wed, August 6th, 1919 - pg. 1*

As the Cog Railway was approaching 100th year *(1968-1969)*, a George Woodbury wrote a *Hometown History* column about slide boarding. The clipping was found in a file at the Littleton Public Library, but had no date or indication from what "hometown" newspaper it might be from. It was clear the author was still taken by the romantic notion of the Devil's Shingle and its use.

"Furthermore it was a great deal of fun," wrote Woodbury. "The run from Summit to Base Station was a little more than three miles, but most of it was "on end." The gradient averages 25 percent, or a drop of about 1,100 feet per mile.

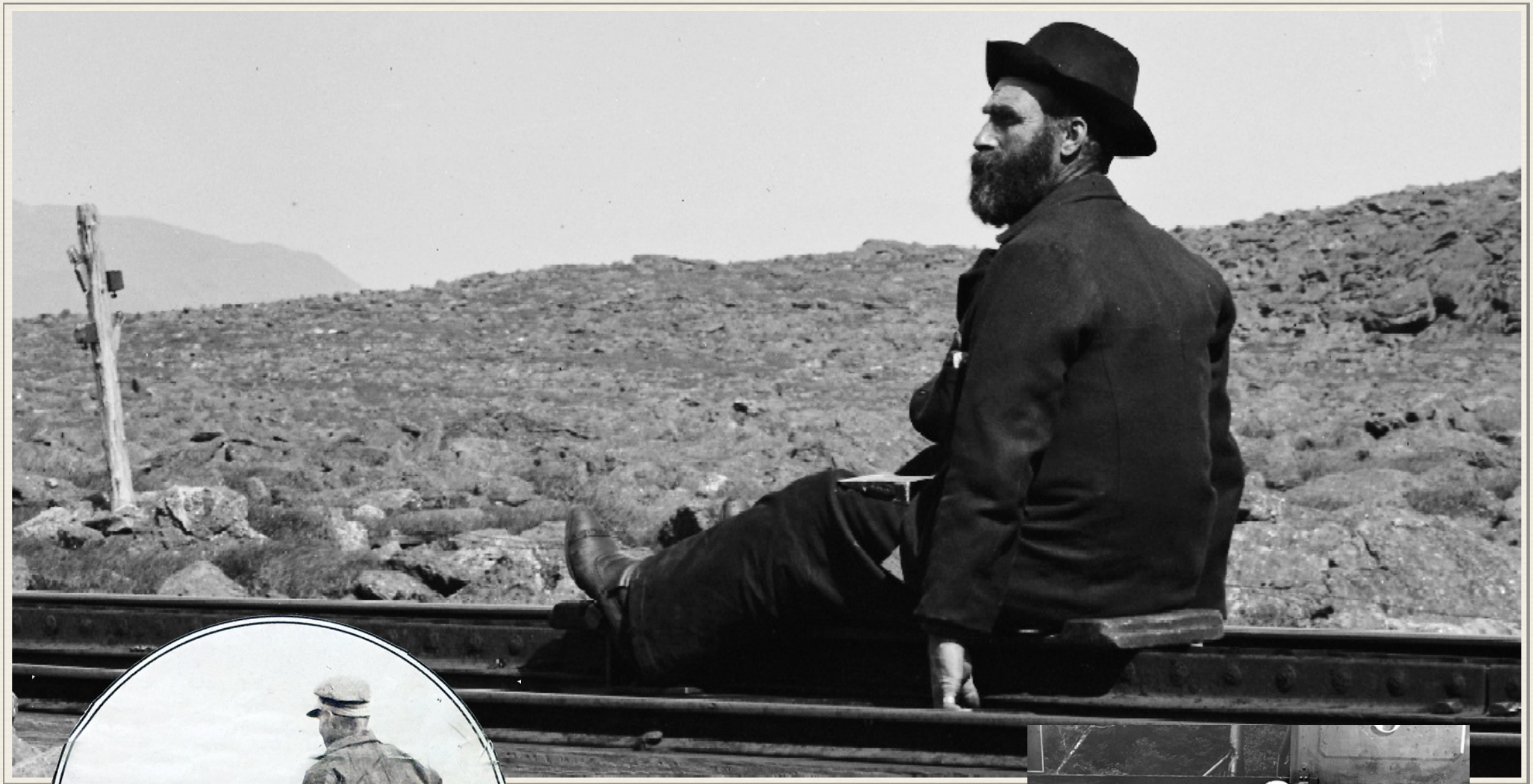
1954

John Henry's Ride Described

The *New Hampshire Profiles* magazine article in which a John H. Henry describes his trip down the Mt. Washington Cog Railway - on a "sliding board" made its way into the Kwik Klips column of the *Boston Traveler* that featured "the best, in brief, from the nation's current magazines... on Monday, Wednesday and Friday."

"The use of these board, I believe, even at that time, was forbidden, except to men working on the track, and then only in cases of emergency. The distance is approximately three miles, and we were told of experienced men making the trip in three minutes. We walked up as planned and used the boards coming down, and I recall that my time was 12 minutes. It was fast enough for me. The "sliding boards" slide on the greased cog rail, this being located midway between the two ordinary rails, and the boards being - as I recall it - approximately 16 inches wide, and equipped with a "handle bar," one on either side, and so clamped to the under side of the fringe of the rail that an up or down pressure with the handle bars regulates the speed of the board.

"All goes well as long as everything works as per plan, but when something out of the ordinary occurs - I for one wouldn't want to be there. We were told of a man who was riding a board at one time when something unusual happened to the handle bars, putting one of them out of use, and the only thing for him to do was to use his hands; by this means he finally stopped the board, but his fingers were worn down to the bone. On account of one or more casualties similar to this, I assume, the railroad management forbade the use of the boards, except in case of actual necessity." *- Boston Traveler - Fri, Feb 19, 1954 pg. 11*



Slideboard Veteran of the Cog Railway is Garfield Fillion of Quebec, (right) now a spry septuagenarian. He shows how he sued to ride the famed "slideboards" down the Mt. Washington Cog Railway back in 1912. He was a track inspector and in that era crewmen used the fast but dangerous slideboards to get down the mountain quickly. They were banned after a number of fatalities. Cog railway will shut down this month after a banner season. With fall foliage at height and snow capping the mountain, it is one of the state's prime October attractions." (1966)

- Manchester Union Leader - Sat, Oct 8, 1966 g. 18

- - Elvira Murdock photo - Jul 31, 1966

1970

Improvised Slideboard Recalled

A photo from 1914 is published to illustrate a pair of New Hampshire men's improvised board ride down the Cog tracks.

Riding Down Cog Railway

This picture, taken more than 56 years ago, shows William J. Goodwin, now of Route 101, Eliot on the railroad tie on which he and his companion rode down the Cog Railway in a dangerous, leg-tiring descent. His companion was Roy A. MacDonald of East Alstead. Both men still remember the rough ride down the "Killer Mountain" (Mt. Washington, that is.)

- Portsmouth (NH) Herald - Tue, Nov 24, 1970 pg. 14

ON THE GREASY "rack" of the Cog Railway the little slideboard fairly flew – at time they really did fly, or tried to, with disastrous results. The average run from Summit to Base Station required 10 minutes for a conservative slideboarder.

The record time for the run was two minutes and forth-five seconds – or an average speed of about 70 miles per hour!

Those who experienced slideboards said it was like dropping too fast in an express elevator, except that there was a good deal of lateral motions as the tiny sled shot around the curves.

The management of the Cog Railway allowed only authorized personnel to use slideboards. It took a strong man to manage the brakes. It took an experienced one to know the schedule and not encounter a train climbing up as he whizzed down.

Mike Boyce aboard a slideboard (1940s)

***

"JUST HOW LONG does it take to go down the mountain on a slideboard?" a pretty young tourist asked veteran John Horne.

"Well I can't tell you exactly," the old mountain man replied, "but I stood at the door of the Summit House one day with my watch in my hand and the telephone in the other and as the fellow let go the brake

and started down I hollered in the phone 'He's off!' and the operator at the Base Station hollered back, 'He got here ten minutes ago."

One Last Slide: Whispers in the Jitney Era hinted slide-boards were used one last time some four decades after "officially" banned on the road. Jit suspected Linc Handford and Dave Usher might have been involved. Tom Holzel confirmed in 2016 he was part of a group who were the "last to ride the Devils Shingles down from the top." Holzel says this occurred "the summer of 1960" and the group carefully prepared for their ride. "Sitting on the back of the passenger car on the way up," he writes, "we greased the entire cog all the way to the top. This took several days. Then one evening, on the last trip up, four of us hitched a ride up with Shingles stashed on the train. After it departed we began our descent. We knew that some sections of the cog had been changed. The cogs were connected left-to-right by an angle iron which sat on a wooden support. The horizontal flanges of this iron stuck out over the edge of the wooden support. It was that protruding part onto which the sled arms/brakes grabbed. (By the way, the "brakes" were not very strong and you had to pull hard for quite a distance to come to a stop.) However, we knew that there were a number of sections of the cog in which the supporting wood was wider than the flange. *(Ed note: a design change made to help clear the cog of ice and snow for winter operations in the late 40s - early 50s)* But we figured we could see the difference as we rode down. FALSE! What happened was that as you picked up speed, the sled, which was guided by a runner that was sitting directly on the cogs and kept going straight - by-the-by the vertical flanges rising above the cogs, began to vibrate like crazy--and completely blur your vision! The first guy down had his sled come to an instant stop and he went ass-over-teakettle down the tracks. It was a miracle that he didn't get hurt or killed! From then on, we all sledded down VERY CAREFULLY--and even then, a number of times missed seeing the new cog sections. But at least we all made it down in one piece."

Asked about Usher and Handford's possible involvement in the caper, Tom Holzel *(LEFTt)* said those names sounded "faintly familiar, but I can't for the life of me remember for sure." Holzel authors a website known as *Velocity Press: The web journal of "Forbidden knowledge."* According to the home page, the site provides "A skeptical examination of controversial subjects based on experience, logic, uncommon sense and (oh, how rare) the inclusion of exculpatory evidence!"

- *http://www.velocitypress.com/*

2008
Mathematics Competency Test

Some Silicon Valley-types hopped on the 19th Century slide board and rode the Cog in 2008 to help junior high school teachers "STEM" declining mathematics' competencies. The Noyce Foundation developed *Inside Mathematics*, a multimedia website to assist teachers, principals, and school district leadership who struggle to provide the best mathematics instruction they can for their students. "Too often, teachers who excel at reaching students have few ways of sharing these strong practices with others – and teachers who struggle, struggle alone," they write on the website. "Our classroom doors have remained closed too often and for too long."

As part of the packet of resources for 8th grade teachers they included a problem spiked to the Cog Railway *(left)* that featured the "Devil's Shingle."

"Coaches learn strategies of re-engagement with students around mathematics assessments, and demonstration lessons on re-engagement are featured here," the website says.

"The Noyce Foundation was created by the Noyce family in 1990 to honor the memory and legacy of Dr. Robert N. Noyce, co-founder of Intel and inventor of the integrated circuit which fueled the personal computer revolution and gave Silicon Valley its name." While the Inside Mathematics website continues, the Noyce Foundation itself closed up shop at the end of 2015 after twenty-five years of philanthropy. "It has always been our intention to spend the Foundation's resources in a timely way to address today's issues rather than to worry about preserving our resources in perpetuity.

The Cog Railway

This problem gives you the chance to:
- calculate and compare average speeds
- work with a time/distance graph

In 1869 a cog railway was built to take people to the top of Mount Washington, NH.

The track is 3 miles long and it takes between 1 hour and 1 hour 10 minutes for the train to climb to the top.

1. What is the average speed of the train:
   a. when the journey takes 1 hour?

_____miles per hour

   b. when the journey takes 1 hour 10 minutes?
   Show your work.

_____miles per hour

The train descends in about 40 minutes.

2. What is the average speed at which the train descends?
   Show your calculations.

_____miles per hour

Until 1920 workers went down the track on a wooden plank called a 'slide board'.
A typical ride down took 10 minutes.

3. How many times faster is this than on the train?

_____

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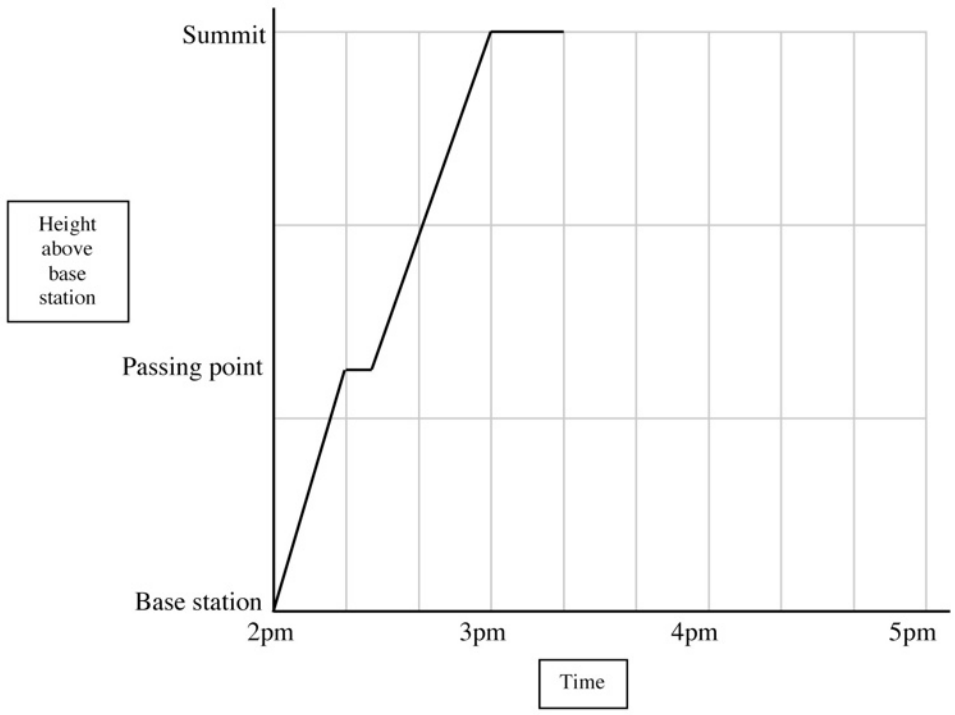
Sec. 8 - Devil's Shingle

The Shell Center developed and owns the Mathematics Assessment Resource Service (MARS) or Balanced Assessment tasks that included the Cog Railway problem. The project materials were produced as part of a collaboration between the University of California, Berkeley and the Shell Center team at the University of Nottingham, with support from the Bill & Melinda Gates Foundation. The team works with the Silicon Valley Mathematics Initiative and school systems across the US and UK to develop improved assessment.



This is an approximate distance/time graph of the journey up Mount Washington.

4. What does the horizontal line at the 'passing point' tell you?

_____

_____

_____

5. For how long does the train stop at the summit?

_____ minutes

6. On the distance/time graph draw a line to show the return journey that takes the train 40 minutes to descend from the summit to the base station without a stop.

9

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http://www.noycefdn.org/documents/math/MARS/MARS2008/tft2008gr8-part2.pdf

SECTION 9

1873 Stormy Night Breakdown

The Mount Washington Railway... would be just the place for a frightful accident, but until this week none of any consequence has happened upon it. As a party were ascending the mountain during a storm last Tuesday night *(September 9th)*, in order to witness the sunrise from the top next morning, an incident occurred which is thus related... by one who was there:

"And now we begin the fearful ascent of Jacob's Ladder. The little car, brought nearer to a perpendicular position by the acute inclination of the road, seems ready to fall backwards upon the engine and hurl itself into the abyss below. Poised in mid air, thousands of feet from the bottom of the mountain, in the very clouds themselves, a storm raging without, covered with a perfect sea of darkness, our only shelter a frail bark, which, for all we knew, the slightest mishap may cause to be dashed into atoms on the rock below, and who will wonder that the stoutest hearts feel just a little of fear? But onward we went, steadily onward and upward, when, just as we were congratulating ourselves that the worst of the journey must be over, there came without warning or premonition, a loud crash like a thunderbolt shot from a cloudless sky, so sudden and unexpected was it. Then there was an instantaneous stoppage of machinery, a palpable and terrifying lifting or upward movement of the car accompanied by a violent surge down hill as though striving to break away and leap from the track into the depths below, then a sudden settling to place again, and then - all was still! Was there a panic? No. Did anybody scream, or faint, or try to jump overboard? No, far from it. It was all so sudden, so appalling, so overpowering, that the effect was quite the reverse.

"The main eccentric shaft of the engine was broken short off, deranging all the machinery, and rendering further progress by rail, either up or down the mountain, utterly impossible. Of course there was a hurried and anxious consultation as to what had better be done, but there was one thing settled on the instant, and that was to leave the car, whatsoever might come next. Nothing on earth could have kept us there any longer. It was raining in torrents, blowing a gale, and blacker than Egyptian darkness, but that was nothing to the dread uncertainty of what possibly might happen if we remained where we were, and so gathering up as much light baggage as was on hand, out we went into the rain, into the gale, into the night, and clung to the timbers, to the car and whatever else could be laid hold of, as best we could, like so many drowning rats.

"Then lights were brought and our position determined, it was found that the accident had occurred within a few feet of the upper end of the first section of the Ladder, where the great trestle-work tapers away, and the rest upon a sort of abutment, formed by the projecting ledge, very much as a bridge rests upon its embankments at either end. The road was just as steep here as elsewhere but our height above the rocks was much less, being, so to speaker, nearer the short, which rendered landing possible; whereas, had the disaster occurred a few rods either below or

above, we must have remained all night in the car, or clinging to the trestle work. As it was we reached the ground with no little difficulty and danger. Once landed, it was one of three things: To remain where we were, or go down the mountain to the station, or to go up the mountain to the Summit House. The first proposition meant being chilled through and through, and perishing without exertion; and of the other two we chose the last. And so we started. Meantime the brakeman descended to the station at Marshfield on a "slide-board" at the risk of his life, and telegraphed to the Summit House for guides and lanterns to be sent to conduct us up the mountain. But who shall describe the narrow escapes from pitfalls and precipices, the heights scaled, the depth explored, as chilled and blinded by the driving story, we clambered, torn and bleeding, over the jagged rocks, up the steep sides of the bleak mountain? Or, how strong men broke down and gave out in utter despair; how week and sickly women had to be almost carried along by main strength; how others repeatedly fainted and fell, overcome by the terrible exposure and exertion, until life itself seemed gone out forever?

"All we could do was to keep as nearly as possible to the general bearing of the railroad, and push forward over rocks piled literally mountains high. Having been lost for some time we finally struck the railroad, and followed it up to a small shanty near the top of the mountain, occupied by the workmen on the road, where we arrived entirely exhausted and worn out. The guides sent down to find us, after having hunted for several hours in vain, had taken shelter here from the storm to await events. We were then conducted in safety to the Summit House, where we had a memorable reception.

"An hour ago our little company were gathered together for the last time; and as we stood around the piano in the great parlor and sang "Praise God, from whom all blessings flow" the words had a deeper significance than ever before.

- Springfield Republican account published in Detroit Free Press Thu, September 11th, 1874 pg. 4

Accident on the Mount Washington Railway

A thrilling adventure occurred on the Mount Washington railway, Tuesday night, while a party were making the ascent preparatory to witnessing the sun rise. They were about half way up, when the main eccentric shaft of the engine broke with a loud crash, followed by a lifting movement of the car and a violent surge down hill. For a moment the occupants were uncertain whether or not they would be hurled down to the rocks below, but just such accidents had been provided for in the arrangement of brakes, and the car quickly settled back on to the track and remained still. It was raining torrents, blowing a gale, and black as Egyptian darkness. Lights were finally raised, when it was found that the accident had occurred where the great trestle work rests upon a sort of abutment, formed by a projecting ledge. Crawling along on the timbers, the part soon reached the ground, and after several hours of stumbling and clambering, in which the ladies of the party became almost exhausted reached the summit in safety. The accident is the first one that has occurred on the railway.

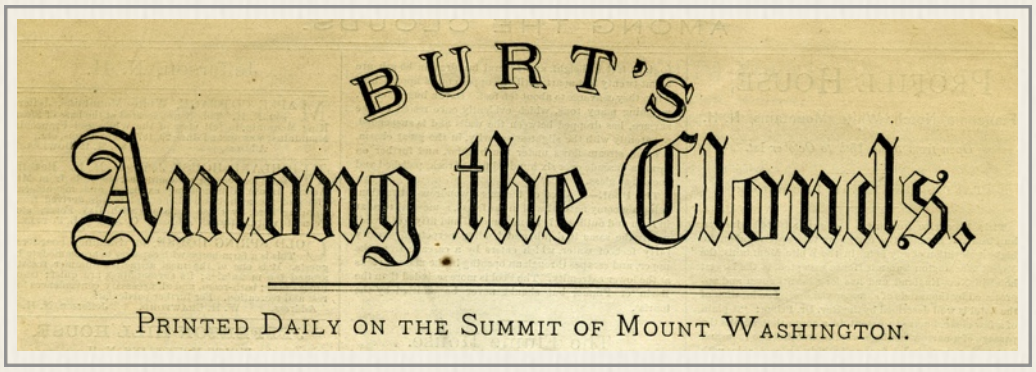
- Rutland (VT) Daily Glove - Wed, Sep 10, 1873 pg. 1

1878 Breakdown

The Mount Washington Railway Accident
The New York Times
Monday, August 26th, 1878

The little daily newspaper printed at the summit of Mount Washington during the Summer season, and called *Among the Clouds*, gives some additional particulars of the accident to one of the trains ascending the mountain on Thursday (8/22).

Each train consists of an engine, one passenger car, having seats for 40 passengers, and a small baggage car. The engine is below the passenger car, pushing the latter up the incline, which in some places is one foot in three. About 260 passengers started for the summit on Thursday morning, four trains being used to convey them, all, of course, being unpleasantly crowded.


BURT'S
Among the Clouds.
PRINTED DAILY ON THE SUMMIT OF MOUNT WASHINGTON.

Among the Clouds says: "The three forward trains arrived at the Summit nearly on time, but the fourth and last was delayed by an accident to the engine *Cloud*, the rear driving cog wheel breaking on the lower part of Long Trestle. The wheel is made of steel, and has 19 cogs, 7 of which gave way, owing to a defect in it when made.

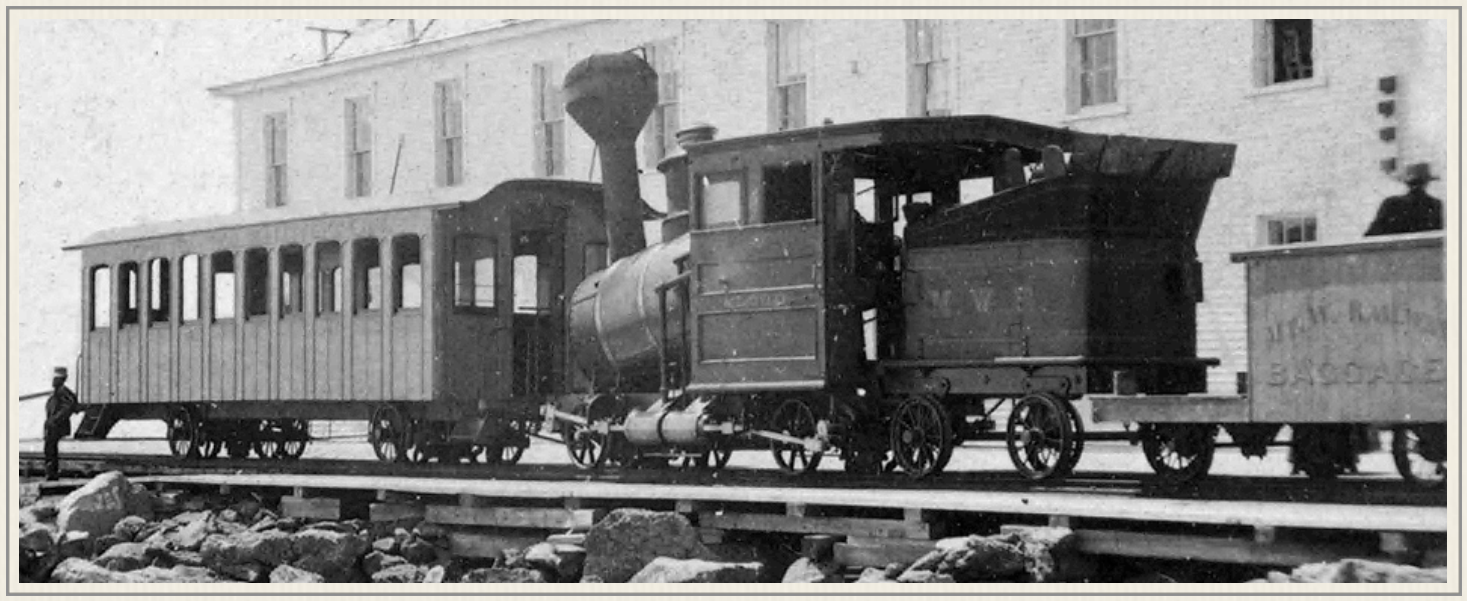
The engine was in charge of Henry Knapp, engineer, John McCarthy, fireman. The break in the wheel was instantly discovered, and the ratchet-brake on the forward driving shaft of the engine applied, which stopped the train instantly. All of the seats in the car were filled, and a number of passengers were occupying chairs on the baggage car in the rear of the engine. There were about 70 passengers on the train, and only a few were aware that an accident had occurred until after the engine had stopped. The engine was so securely held by the ratchet-brake that it moved backward down the mountain less than four inches.

The accident happened about 12 o'clock, and the passengers, excepting a few who walked up the mountain, remained until a train ran down from the Summit and took them up. The old engine at the base, *George Stephenson*, was fired up, and ran up the mountain to assist in taking the disabled engine down. The work was so difficult to perform that it was after 7 o'clock before the downward trip could be commenced, and after getting within three-quarters of a mile of the base the old engine broke down. It was then necessary to give up further work for the night.

Sec. 10 - 1878 Breakdown

The passengers at the Summit waited yesterday, expecting to be able to return, but when it was know that they could not, they took quarters in the Summit House for the night, where they were comfortably taken care of as circumstances would admit.

This accident fully demonstrated the fact that the road is carefully managed, and not the slightest accident can occur without being detected at once and injury to passengers prevented. This is the eleventh seasons since the road began business, and during the time it has carried over 100, 000 passengers, not one of whom has been injured."



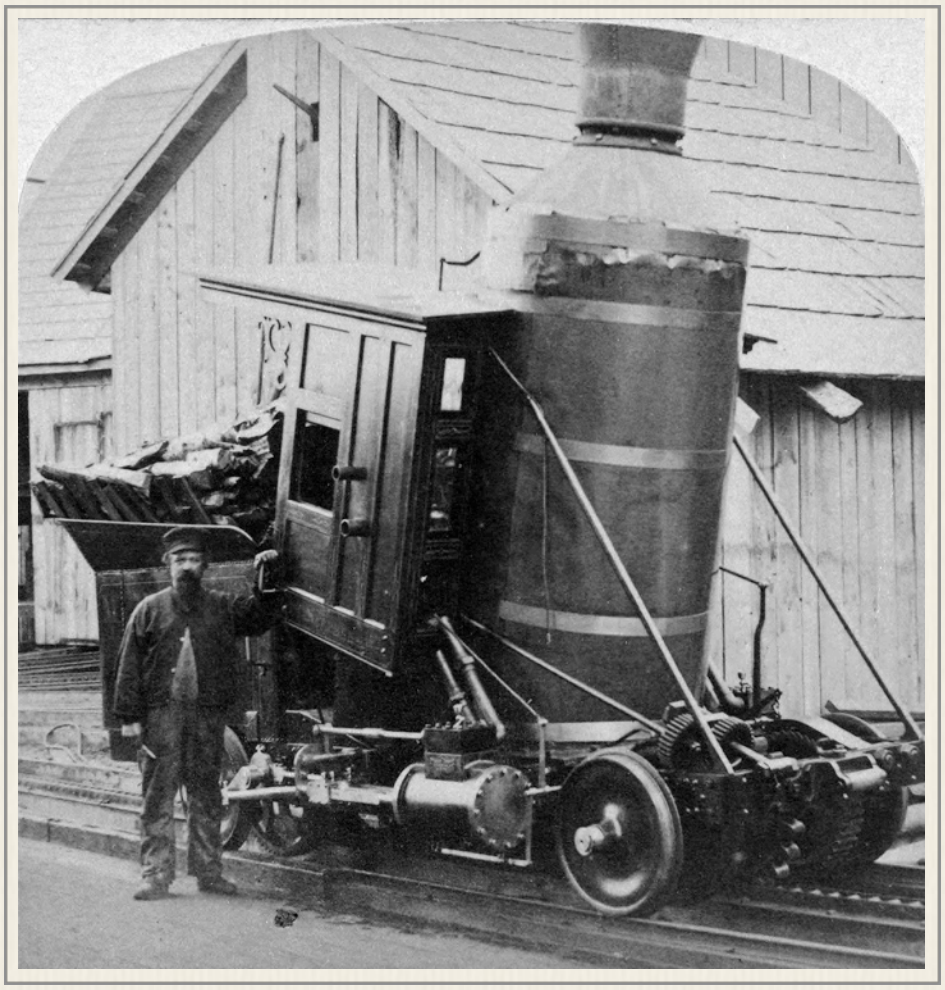
The "Cloud" pictured at Summit with passenger and baggage cars
- Stereoview by G.H. Aldrich & Co.

The Railway Accident

Among the Clouds
Saturday, August 24th, 1878

The removal of the disabled engine Thursday afternoon, on the Mount Washington Railway from Long Trestle to the Base, proved a greater undertaking than was at first expected. The only engine left at the Base was the *Geo Stephenson*, and that has not been used for several years on a passenger train. The tender of the *Cloud* was first taken to the Base, and then the *Stephenson* returned to Long Trestle to take down the engine. Everything went well over the steepest and most dangerous parts of the road; but on Cold Spring Trestle, within three-quarters of a mile from the Base, the entire weight of the disabled engine and the car above came upon the *Stephenson*, which was not sufficiently strong to hold it. Its driving cog wheel broke, and the entire train slid down the track, breaking the center rail and the ties for a distance of about one hundred and fifty feet when it came to a stop, the ties preventing it from going further. John Horne, the master mechanic, who was running the *Stephenson*, stood at his post and did everything he could to stop the engine, and was not hurt in the least. The other employees jumped off and were slightly bruised, one spraining an ankle, another laming one of his wrists, and a third hurting his back and foot. Trains were run yesterday between the Summit and the break, but after this morning they will not probably make farther trips until the road is repaired. A large force of extra workmen came to the Base last night, and work will be commenced this morning. It is hoped that the trains will resume their regular trips the first of the week. A turn-out is to be built around the disabled track so as to get the engines down the mountain, which will facilitate the necessary repairs. This accident,

though more serious than the first, was wholly due to the fact that the *Stephenson*, which is an old engine and not then in good running condition, was unable to stand the necessarily great strain which was put upon it. This engine was used from necessity, as it was the only one left at the Base. The guests at the hotels who desire to make immediate visits to the summit of Mount Washington can ascend by the carriage road, ample preparations having been made to transport all who wish between the Glen and the Summit.



"George Stephenson" at the Base roundhouse
- Robert Dennis Collection

Travel Resumed
Among the Clouds
Monday, August 26th & 27th 1878

A large force of workmen has been at work on the break in the track of the Mount Washington railway, and clearing away the obstructions, since the accident of last Thursday night, and trains will be run as usual after to-day. The storm of yesterday interfered somewhat with the work *(note: 2-inches of rain/60 mph winds at the Summit, then a little snow about 4pm according to another story)*, but everything will be put in running order to-day, so that the regular afternoon train to the Summit will probably make the ascent. The original intention of building a turn-out around the wreck was abandoned, and the cars and engine *Cloud* have been pulled up on to the uninjured track above, and the old engine *Stephenson* pulled to pieces and thrown off. The broken track is being repaired, and when completed the wrecked train will be let down to the Base by the engines above. Should nothing unforeseen take place, all this will be accomplished by this noon, so that the regular travel can be resumed at once. Mr. Aiken, manager of the Mount Washington railway, has been at the scene of the accident since Friday night, and personally taken charge of the work of repairing the damage.

The break in the Mount Washington railway was repaired sooner than was at first expected. The disabled engine was taken down to the Base without any difficulty, and the trains commenced to run regularly at 10:15 (Monday) morning. About a hundred passengers were brought up and they all had a splendid view.

Sec. 10 - 1878 Breakdown

Letter from the White Mountains

The Fitchburg (MA) Sentinel
Tuesday, August 27th, 1878

Bethlehem, Aug. 26

Although the readers of the *Sentinel* may have seen accounts of the accident on the Mt. Washington railway which occurred about noon on Thursday, August 22nd, on the last of the four trains which it required to take the passengers (260) who went up the mountain that day. It may be of interest to read an account of it from one who is acquainted with the mountain on both sides, having ascended it by the old bridle path from the Crawford House, which is set down as nine miles (but if it had been 18 instead we should not have disputed or even doubted it) and which leads from the Crawford Notch over Mts. Clinton, Pleasant, Franklin, and Monroe to Washington; I have also ascended from the Fabyan House side by rail on the Mt. Washington railway, and I have passed over the road since the accident and before any of the debris from the wrecked train had been removed. I was obliged to walk the first mile up the ascent to reach the train, as it was the engine on the last train which was broken, preventing those above from passing it.

For 11 years this wonderful railway has been in successful operation and has conveyed from the base to the summit over 100,000 passengers, not one of whom has been injured. Yet all things made by the hand of man must at last yield to the ravages of time and the strain brought upon them, and on Thursday, August 22nd, the large rear driving cog wheel to the engine *Cloud* which was attached to the last train up, broke when the engine was on the lower part of Long Trestle. The wheel is made of steel and has 19 cogs, seven of which gave way, owing to a defect in it when made. The break in it was instantly discovered; the ratchet-brake on the forward driving shaft of the engine was immediately applied, and that stopped the train instantly. Although there were 70 passengers on the train, a number of occupying chairs on the baggage car in the rear of the engine (the passenger car is in front and pushed up instead of drawn), few were aware that an accident had occurred until after the engine had been stopped. The engine was so securely held by the ratchet-brake that it moved backward down the mountain less than four inches.

Nearly all the passengers remained until a train came down the mountain to take them up. The old engine *"George Stephenson,"* the only one left at the base which had not been used for passenger work for a long time, was fired up and proceeded up the mountain to take down the broken engine. The work was so difficult that the down trip was not commenced until 7 o'clock and after getting within three fourths of a mile of the base on the Cold Spring trestle, the entire weight of the disabled engine and the car above came upon the *Stephenson*, which was not sufficiently strong to hold it. Its driving cog wheel broke and the entire train slid down the track breaking the centre rail and the ties for a distance of 150 feet, when it came to a stop, the ties preventing it from going further. For the 150 feet referred to the ties and main timbers were literally torn to pieces. John Horne, the master mechanic, who was running the *Stephenson*; stood at his post and did everything he could to stop the train and was not hurt in the least. The other employees jumped off and were slightly bruised. A turn out has been built and travel was resumed, today (8/

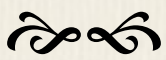
26/1878). This accident demonstrates the fact that not the slightest accident can occur without being detected at once, so that injury to the passengers may be prevented. - Darius

The Mt. Washington Railway Accident

New York Times

Thursday August 29th, 1878 - pg. 2

A correspondent of the Elizabeth (N.J.) *Journal*, writing from the White Mountain region on the 24th inst., reports the results of the accident on the Mount Washington Railway to have been more serious than has been represented. He went up the mountain by stage from the Glen House and says: "We found the Summit House very full, but having telegraphed for rooms, were all right. There had been an accident on the railroad (slight it was said,) which detains the excursionists, consequently every nook and corner was full. The next morning, with our heavy wraps folded closely about us for the air was very cold, we were permitted to look upon a sunrise no less beautiful than the previous sunset. We felt we were, indeed, favored. As to the accident, we were given to understand it was but a trifle, and so started down by rail, as had been our plan. When a little more than half way down, we came to the wreck, and were told we must walk the rest of the way. And such a walk - over rocks and timbers, under a scorching sun, and near the base, over a trestle-work, which made one very dizzy after the heat and fatigue, or if you chose you had the privilege of descending and wading through the stream. Now, we don't like to find fault with railroad companies, but we did feel indignant. Perhaps they could not prevent the accident, but two things could have been done. They need not have charged full fare and they might have put a few planks over this dangerous trestle-work. As to the accident, after seeing the wreck, we could not but feel it was more serious than the daily paper published on the summit represented. The timbers were badly crushed and the cog wheels raised several inches. Still, very fortunately, no one was hurt, but our faith in the safety of the road is somewhat shaken, and from the crushed appearance of the timbers it would seem that they carry too heavy loads."



Accident on the Mt. Washington Railway

St. Johnsbury Caledonian

Friday, September 6th, 1878

From the *Springfield Republican*

The first genuine scare since the Mt. Washington Railway was completed, occurred some two weeks ago, but its details have been carefully withheld from the press, and have only leaked out as individuals – who were up the mountain on that eventful day, have told the tale. It seems there was a great deal of blundering all around, especially by the railway company and the hotel folks at the summit. A responsible Springfield, Massachusetts man communicates the following to the *Republican*:

Sec. 10 - 1878 Breakdown

Continued bad weather had gathered a large crowd at the Fabyan house anxious to take advantage of the first fair day to ascend Mt. Washington. There was accordingly, such a rush at the base station on the morning of the accident that the cars were utterly unable to take all who applied, but the agent kept on selling tickets, and said that he should do so as long as anybody offered the money.

When the road was first opened, 30 passengers were the most that were allowed upon a car. On the day in question each of the four cars was crowded with 60 or 70, men crawling in through the windows, and even dragging women through after them. About two-thirds of the way up the mountain, the last engine and car being at the top of "Jacob's Ladder," one of the steepest points, several cogs on the drive wheel broke, and the car started back with a jerk, but was stopped by the numerous brakes. *(2015 Editor's note: the car actually stopped on it's ratchet.)*

When the car ahead reached the summit, it was sent back for the load of the disabled one, and then down again to take the car itself to the foot of the mountain, and an old one *(Geo Stephenson)* being sent up from the base station to help. This train had got about half way down *(Cold Spring Hill)* when it left the track, and jammed over the ties for several rods, demoralizing them and the rails, while, if it had gone 12 inches further to one side, it would have plunged off from the trestle work and been made a total wreck. The hands are said to have jumped off and been terribly bruised on the rocks. If this accident had happened with the load of passengers that had just left, a panic and many fatal accidents from jumping would inevitably have resulted, even with the car sticking to the trestle-work.

The people at the Summit were told that they would be taken down at 3 o'clock. Accordingly they crowded themselves into the cars as early as 2 to make sure of going, the jam being of course greater than in the morning when there was one more car. Most of them stuck there till nearly 9 o'clock without a movement being made, when they were told that they must remain at the hotel over night. It subsequently appeared that no effort had been made to get the obstruction from the track.

The hotel was jammed full, provisions were scarce, and many of the crowd, especially women had no money.

In the morning, it was announced that the cars would go down to the obstruction, and that a walk of half a mile over a good path would bring the passengers to the Base.

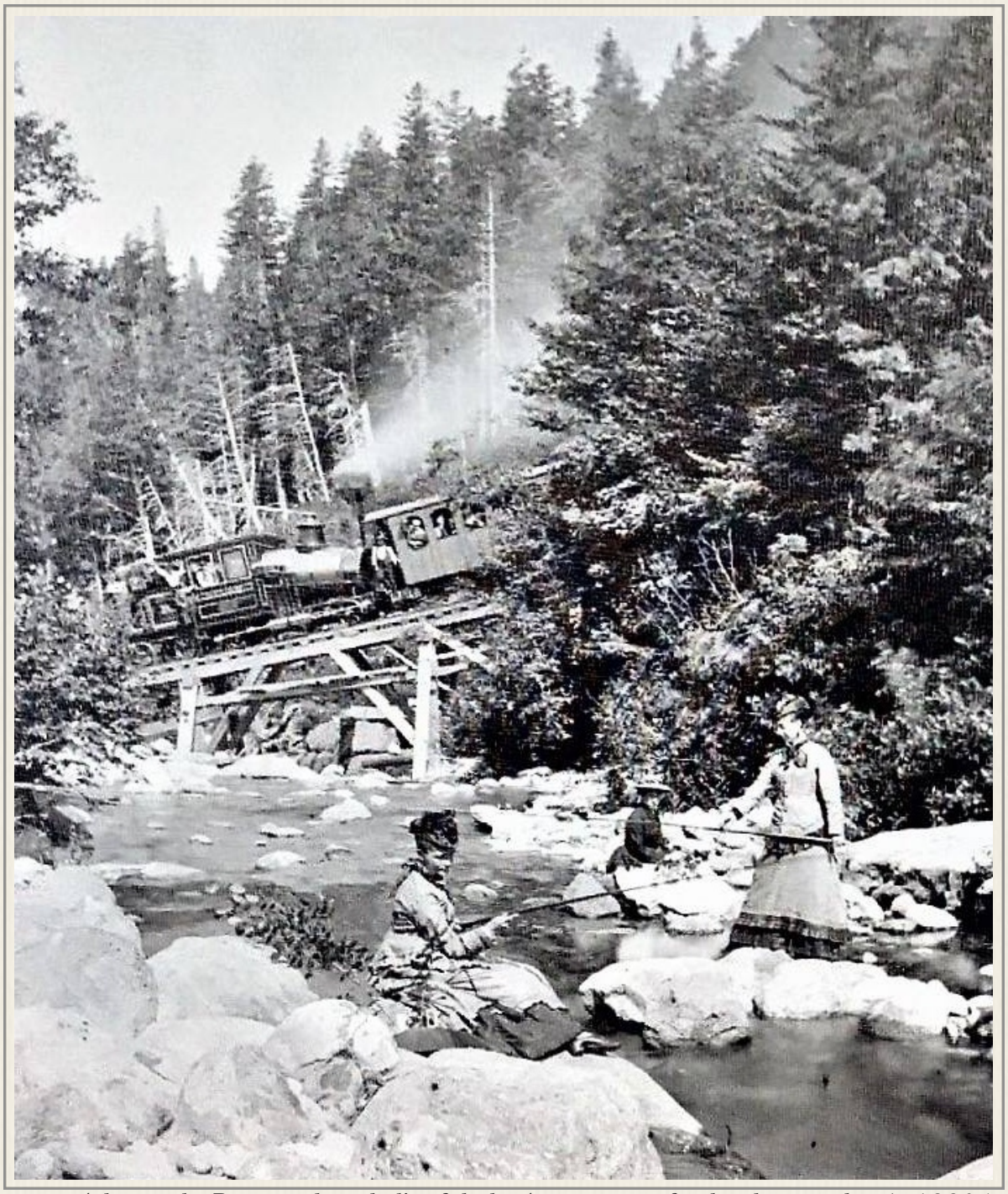
The cars had to fairly steal away to avoid being again over crowded. When the obstruction was reached, it was found that there was not a vestige of a path, and that travelers, including women and children, must walk a mile, either upon trestle work from three to forty feet high or over the sharp and jagged rocks of the mountain side, and that the Ammonoosuc river could only be crossed upon trestle-work 30 feet high. The sight of the demoralizing track and the wrecked car and engine didn't tend to steady nerves for the undertaking.

In the course of the descent two women of the party fainted, and one of these had to be carried most of the distance. Not a railroad man appeared on the scene, either to clear the way or help on the travelers. The cars went back to bring down another load to go through the same experience, and all the time tickets for the ascent were selling at the foot of the mountain.

At night at the summit the request to send a dispatch to inform people at the foot of the cause of the delay was refused, and at the Fabyan House only eight miles off, whence the party started nothing was known about it. The only relief offered by the railroad men during the 24 hours was late in the afternoon, when they offered to take people to the Glen house, on the opposite side of Mt. Washington, on their tickets good down on the railroad. Many went that way, the Glen coach managers offering every assistance in their power.

The hazard of the parties descending the mountain over the trestle-work and rocks will be realized when it is recalled that storms arise and cold comes on very suddenly, and that the winds which often blow on the mountain might have dashed them in pieces.

The gentleman who reports these facts also says he is informed that the overcrowding of the cars still continues. Many of those who descended with him said that a fortune would not tempt them to try it again.



Atlas on the Base trestle as ladies fish the Ammonoosuc for the photographer (~1880s)
- From glass negative in the R.B. Sanborn Collection

The Marshfield House

A structure glimpsed in early stereopticon pictures of Mount Washington Railway operations is a puzzle to most modern day Coggers as it was gone by the turn of the 20th Century. In 1926, Frank H. Burt wrote a remembrance in the *Boston Daily Globe* that explained the building's story. Here are excerpts from that article.

An Almost Forgotten White Mountain Hotel

A query by a correspondent in the columns of the *Globe* a few weeks ago brought back to memory the picture of an almost forgotten hotel that once stood near the foot of Mt. Washington - the Marshfield House.

Somewhat outside the circle of tourist hotels and primitive in its equipment, it deserves to be remembered for its unusual history, which covered from about 1871 to 1895, as well as for the fact that aside from the houses on Mts. Washington, Moosilauke and Kearsarge, it was the highest in altitude of any White Mountain hotel, being about 2700 feet above sea level.

Until the advent of the auto the Base Station was merely a spot in the wilderness where you alighted from the observation car *(below)* after a pleasant half hour's ride near the winding Ammonoosuc to scramble across a platform in a wild rush for the best seats in the little cars in which you were to be pushed up the ascent to the Summit House.

Mount Washington Railway trains loading at Base (1910)

Today, however, many motorists drive directly to the Base, either by the old turnpike, now a State road, or by another State highway from the Crawford House, so that the locality where the Marshfield House stood has ceased to be an unknown region.

The exact site of the old house is... 200 or 300 feet south of the track of the cog railway, on an elevation which commands a beautiful view. The Marshfield House was two and one-half stories in height, facing the west and having a plaza which commanded the beautiful landscape. Built before the days of modern hotels, it was about as primitive as they made 'em, but it probably wasn't much more than many of the simple village taverns of the mid-nineteenth century.

Marshfield House as seen from spur line transfer point with Depot complex to the left before the 1895 fire.
- Harold Young donation to Littleton Historical Society

"I do not know who built the Marshfield House," said John Horne of Lakeport, N.H. at 83. "It was there in 1873 (when Horne started working at the railway) and the landlord was E.K. Cox. It was used by the stage drivers... There were three large barns connected with it, which on some days were filled with horses from the different hotels."

"Regular stages were run from the Crawford, Fabyan and Twin Mountain Houses to connect with the morning and evening trains, and quite frequently some from the White Mountain House and from Bethlehem," said Horne. "I have seen so many teams near the old depot that we were bothered in getting out the engines and cars."

The busy days for the Marshfield House were of short duration. The stage lines were inadequate feeders for the mountain railway, the fame of which soon spread far and wide throughout the country. The railroads from east and west (the present Maine Central and Boson & Maine) reached Fabyans in 1874-75, and in 1876 a branch was built to the base to connect with the mountain railway.

The new road, while it successfully negotiated a grade of 325 feet per mile as part of its route, struck a grade too steep to ascent at a point about a half mile below the original terminus of the

cog railway, and so the latter was extended down hill from the former Base Station to meet the new railroad, abandoning the old depot.

This left the Marshfield House, so to speak, sidetracked, and with little reason for existence. There was, however, a nucleus for business in serving meals for the railroad "boys" and caring for their friends who came to visit them in their secluded hamlet, while occasionally fishing and tramping parties would seek shelter.

"Who owned the Marshfield House," Mr. Horne says, "I never could find out. A friend of mine wanted to buy it for a Summer resort, but could not get a clear title and the deal fell through. After E.K. Cox left it, the house was run by different parties. Among them were David Aldrich from Whitefield, George Crawford from Bristol, N.H.; Edwin Junkins and Harrison Davis from Franklin." *(Note: According to an Among the Clouds article 8.20.1879 a Mr. Willoughby of the Twin River House was involved in 1879-80)*

It seems a fair guess, in view of the informal way in which matters relating to the railroad were handled in those days, that the house was built on railroad land, with the consent of Mr. *(Walter)* Aiken, who was practically the sole authority in all its affairs, and that the builder, finding it unprofitable, abandoned it. Thereafter the railroad, for the sake of the convenience of having the house kept open, allowed any one to run it who would take of the chance of its paying - which probably it never did.

In the Spring of 1895 came the disaster that ended the career of the Marshfield House - the burning of the old depot, car barn, machine shop and other buildings of the road at the Base. The opportunity was availed of to rebuild in a more convenient location, close by the junction of the mountain railway with the Boston & Maine.

"When we were burned out at the base," says Mr. Horne, "the Marshfield House was not burned and the railroad boys moved in and we occupied it until the present boarding house was built. When we got settled down in the new house the Marshfield House became a source of danger, as tramps began making use of it. So we took out the doors, windows and blinds and everything else that was of any use, and set fire to the rest."

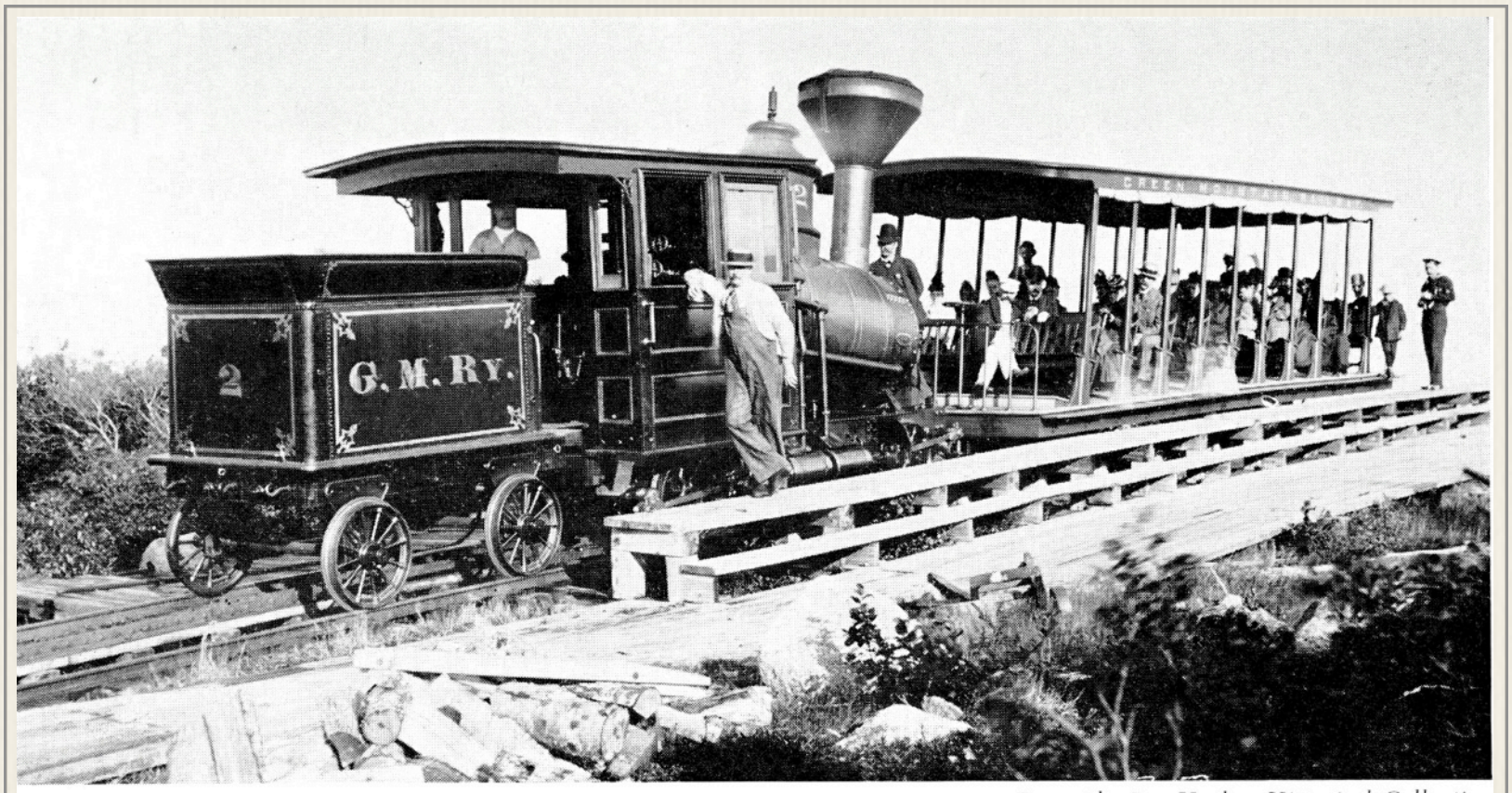
- Frank H. Burt (son of Among the Clouds founder Henry M. Burt) - Boston Daily Globe, July 4, 1926 pg. B21

An 1879 Base Experience at the Marshfield House

"Bears have been seen the present season on the line of the Boston, Concord & Montreal railroad, between Fabyan's and the Base, on the Crawford bridle path, the Glen carriage road and at Twin Rivers. The B.C.&M. railroad boys of the Mount Washington Branch, who lodge at the Marshfield House at the base of the Mount Washington, now claim the honor of having discovered a new species of wild cat. Shortly after midnight on the morning of Friday, August 8, J. F. Marsh and H. Dufur, who were sleeping in the corner room of the hotel, were awakened by footfalls on the roof of the veranda and the scratching of some animal at the window, causing each individual hair of the heads to stand on end. The animal commenced walking round the corner of the house to the other window of their room and back, seemingly determined on forcing an entrance. Your correspondent was not an eye witness to the scene, but the terror of the occupants of room No. 3 might be imagined. At each circuit the night prowler was plainly seen in the clear moonlight and ever and anon he peered in at them through the window. At last, taking advantage of a moment when the creature was rounding the corner, the indomitable Dufur seized such implements of war as were at command and hastened into the hall, the window of which was down at the top, waited until the animal had arrived at the end of his beat, and when he started on the return, launched the cover of a watering pot at him and immediately followed it up with a huge spittoon, which struck him full in the breast. The contents of the last bomb must have been very powerful, for the animal appeared to be completely blinded and rolled off the roof - as afterwards stated – with growls and cries most terrific. No slumber came to the eyes of Messrs. Marsh and Dufur during the remainder of the night, and at daybreak they repaired to the spot where the beast had fallen, finding, however, only a quantity of hair of an extremely bristly character, upon examination of which, Mr. J. Horne pronounced it to be that of a hedgehog, which he had nearly slain in an encounter a day or two previous and which had dragged itself to the Marshfield, wishing to die within the pale of civilization. Of course no one believes his theory to be true, and the gentlemen are given great credit for the courage they displayed in their encounter with the great unknown. – Q.D." *- Letter to Editor, Among the Clouds, Tues Aug 12, 1879*

1881 Green Mountain Railway

For a time there were two mountain-climbing railroads operating in New England - the Mount Washington Railway in New Hampshire and the Green Mountain Railway in Maine. Both served a tourist destination - the White Mountains and the seacoast of Maine. Owned and operated by different companies, the two railways were twins of a sort - born a dozen years apart as the Green Mountain Railway's track and trains closely followed the design of Sylvester Marsh. Green Mountain's track used very little trestle, anchoring the roadbed to rocks and ledge and ground, but engines were near copies of the Mt. Washington cog locomotives. This gave Coggers alternate employment opportunities while the Maine trains climbed what is known as Cadillac Mountain these days. This twin-like design would also prove to be important in 1895 for the Cog. While the Jitney Years' *Volume 3 Aggregated Timeline* has touched on the Maine line, *THE STORY OF BAR HARBOR An Informal History Recording One Hundred and Fifty Years In the Life of a Community* by Richard Walden Hale, Jr. *(1949)* neatly wraps up the overall story here in this extract from the history.



From the Bar Harbor Historical Collection

"In 1881 the *Boston Traveler* writes of *(Bar Harbor)* "more dressiness now than at the opening of last season," of "natty dark blue suits giving place to yellowish flannel for young men and maids," of "yachts vying with mackerel" in the harbor, and of there being money in a toll road up Green Mountain, of the number of permanent boarders being greater than at similar times in previous years.

"The simple customs of Bar Harbor began to change under this prosperity, and how they changed can be recorded here, for Joseph W. Wood, a businessman who had run various stores, now began publishing the *MountDesert Herald*. From it can be learned that Mr. R. H. Mehesey actually put an awning over the buckboard that ran to his Eagle Lake House. Here pride came be-

fore a fall, because a "liquor violation" was pinned upon him, and others took over the Eagle Lake House, which had grown from the pier and rowboats of 1874. Still, prosperity increased, and a Village Improvement Association was founded, in the winter of 1881, after the summer folks had gone. But it was short-lived.

"Other improvements—if they were such—came in 1881. By August there were five telephone circuits in operation and "a system of additional bells now so arranged that calls are not heard by others, save in case several subscribers are on the same circuit." So it was that four hotels, a livery stable, Bee's Store, and Dr. Amory were linked together.

"Even in the 1880's Bar Harbor was still primitive. That, however, was why it was growing. It was a low-cost town, where ship carpenters built hotels quickly, where money came from a big turnover rather than a few high-priced deals, where quantity rather than quality was the secret of success, where there was much money in transportation.

"Here it was that the struggle was joined against an outside invader, who sought to make money in mass transportation.

"In 1881 Frank Clergue, of Bangor, wrote to Walter H. Dunton, the owner of the side of Green, now Cadillac, Mountain, asking permission to use his land. Mr. Clergue was a good, old-fashioned Yankee capitalist, willing to make money on whatever line seemed good, whether a fertilizer factory or the Persian empire. He had an idea that if it paid small boys to collect informal toll on the road up Green Mountain it would pay to haul people up to see the sunset and stay the night for the sunrise. He knew how to get measures through. Quietly, but legally, the official notices necessary for opening a railway were published. Before anyone knew it, the time for objections had come and gone, and the railroad commissioners held a "public hearing" on February 2, 1883. In the meantime, the survey had been made. A. F. Hilton, who later that year built the Megantic Railway by which the Canadian Pacific got access to salt water at Portland, spent the months of December, 1882, and January, 1883, prowling over the sides of Green Mountain. Of several suggested routes, the one chosen first proved best, and was duly reported as such. The actual construction of the road was simple. When the snow cleared enough to permit work, rails were when possible bolted to the rock, being laid on ties cut a few feet from the roadbed, and hauled by oxen to where they were needed. To keep a good grade, occasionally, trestles were set up. Meanwhile, the hotel at the top of the mountain was transformed first into a boarding house for workmen, later into a combination hotel and restaurant that would sleep fifty and dine one hundred.

Naturally, with a man like Clergue at the helm, there was plenty of advertising of the Green-Mountain Railway. The *Bangor Mining Journal* carried a laudatory account comparing the proposed road with that up Mount Vesuvius; and that at theRigi - with, of course, a puff for the construction car and the two passenger cars that were being built at Hinckley & Edgery's, in Bangor. Meanwhile, until the cars and the locomotive came, gravity furnished at least a one-way route

down the mountain. The record for slide- board travel was one and one-eighth miles in one and one- quarter minutes.

The locomotive, when it finally arrived at Portland and was put on the wharf, proved too large for the *City of Richmond* to carry, and had to wait until the schooner *Stella Lee* could pick it up. Once brought to Bar Harbor, the locomotive had to struggle to reach its destination. It took fourteen horses to pull it from the wharf to a point between West and Cottage Streets. Then wheels were substituted for the runners on which it had been slid, and by April 21, three days after the landing, it had reached Eagle Lake, having been, apparently, winched along the road. But there its troubles were not over. That was a bad winter on that lake; and in May, Alexander Cameron was shipwrecked as he carried track material across it. So it was only when the snow melted, at the end of the month, that the scow of Richard Hamor - the builder of the original inn on the top of the mountain was still connected with things - carried the locomotive to the base of the tracks.

Locomotive and cars were all "high-behinds." They rode level, with tiny front wheels and large rear wheels, *(Ed Note: Have not seen photographic evidence of that set-up - perhaps mix-up with Mt. Washington?)* and backed down after they had gone up. The gauge was four feet, seven and a half inches, that of the Mount Washington cog railway, in which a legal change had been made on January 30, 1883, by a special legislative act. In the center was a cog rail, which engaged the locomotive's driving wheel, and allowed the locomotive to act as a brake going down. With the locomotive in place, and burning the wood that lay by the roadside, the completion of the work was easy. On May 10, two of Bar Harbor's professional photographers, Bryant Bradley and a newcomer, C. A. Paul, were able to take shots of the new engine in motion. By May 30 a party of ladies, Mrs. F. J. Alley and the Misses Alley, and Mrs. W. P. Dickey and her daughter, of Bangor, were able to ride to the top of the mountain. On June 23 the great day came. The railroad commissioners were invited to make their formal inspection. The steamship *Cimbria* was chartered for the use of guests of the Green Mountain Railway, starting at 7 a.m., to arrive at Bar Harbor at 2 p.m., then to return the next day, while the more convivial guests were to return the day after, using the same tickets on the *Queen City*. These passengers were the first to follow the regular route set up, by horse-drawn "barge" from Bar Harbor to Eagle Lake, by the steamer *Wauwinnet* from Eagle Lake to the foot of the mountain, and then up the cog railway.

The venture proved a great success, winning praise from the highest circles. Did not Senator Hale, of Ellsworth, bring his friend and fellow senator, the great John Sherman of Ohio, who had just restored gold and demonetized silver, to the top of the mountain? In good Republican circles, what higher praise could be found than that? Or that the railway paid six percent dividends, the first year, in spite of its expenses in fighting forest fires? Indeed, the Green Mountain Railway got "too big for its boots," and used methods not customary, it is to be hoped, in the State of Maine. For fear of competition by the carriage road, it blocked traffic by putting gates across the roadway. Naturally, these gates were pulled down. Then it sent to Bangor for sixteen men, who worked all

night setting dynamite, and that dawn blew the charges and destroyed the road. This, however, was the last such effort, for when the carriage road was rebuilt, it was left alone.

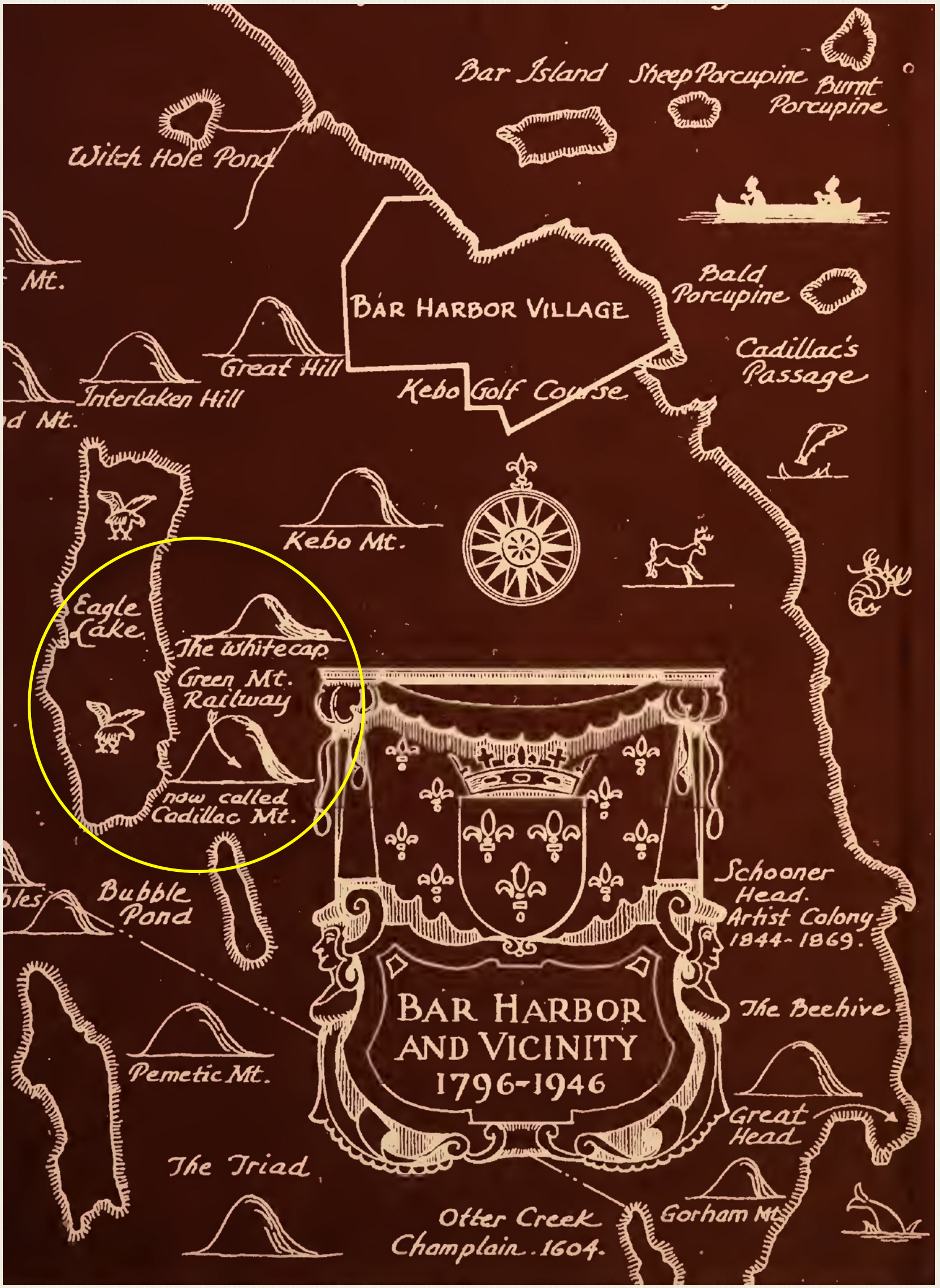
The Green Mountain Railway had other plans at that time, and wanted public support. Clergue felt that if he got money from one railway, he could from another. One attempt at a railway on the island had failed, when he had tried to slip a clause into the special act about the railway gauge, to allow spur lines to go to "Bar Harbor, the top of Newport Mountain, Seal Harbor, Northeast Harbor, Somesville, Greening's Island, Bass Harbor, and Southwest Harbor." This trick Section2 had been dropped in committee. Now, in November, 1883 Clergue revived his plans. A "blurb"appeared in the Mount Desert Herald, announcing that the Green Mountain Railway wished to open the first electric railway in America to replace the"barge"line that carried passengers to Eagle Lake. Here, however, Clergue met his match; the summer colony swung into action, and showed what it could do to protect the island. The struggle took place in front of the railroad commissioners, who held a public hearing in the autumn, on November 3. For the proposed Mount Desert Railway Company, Clergue appeared. Against it were two lawyers, A. P. Wiswell, and Hannibal Hamlin himself. Whatever hopes Clergue had had must have been squelched when he saw the caliber of the opposition. I f men affluent enough to pay for such representation opposed him, a man with a case as doubtful as his had no chance—as he doubtless knew from having been shouted down in a public meeting in Bar Harbor, when he had tried to lessen opposition by suggesting a railway station near the Belmont Hotel in place of the wharf. Clergue was down, but not out. The records of the commissioners show that, with the utmost ingenuity, he kept the Mount Desert Railway Company legally alive until 1890. However, he had other interests. His Mount Desert Fertilizer Company he transformed into the Bar Harbor Packing Company, a more genteel name. He founded a Mount Desert Land Company. And finally, as has been told, he quietly moved around the world, and exercised on the Shah of Persia his talents for salesmanship, to which endeavor he went with the blessings of his local enemies.

His Green Mountain Railway soon fell on evil days. Its first dividend was its best. Soon it did not pay the railway to run large barges to Eagle Lake, since buckboards could take all the traffic. The transportation and land boom broke, and the railway quietly stopped running. In 1893 the end came. The *Wauwinnet's* boiler was taken out of her, with all her other fittings, and she was scuttled in Eagle Lake. A notice was given of a sheriff's sale, and the fittings of the railway were sold to pay its final debts. If the stockholders put up the $100,000 Walter Dunton's daughter says they spent, they got remarkably little for their money.

Though the railway tracks were torn up, and the corporation no longer existed, its engine still puffed on. In 1895, there was a disaster on Mount Washington. In desperation, the managers of that cog railway bethought themselves of the only other one of the same gauge, and sent for the Green Mountain Railway Company's engine.

CITATIONS: For the Green Mountain Railway see the file in the Sawtelle Collection, which contains tickets, notices, etc., Maine Secretary of State legislative file 199 of the 1881-3 session, the *Ellsworth American*, April2 6,1933, and *Appalachia*, December, 1943, article *Mount Desert's Mountain Railway*, by Frank H. Burt.

Sec. 12 - Green Mtn. Railway



New England's Other Cog Railroad: The Green Mountain Railway

by John J. Hilton

The Shortline: The Journal of Shortline and Industrial Railroads
November 1981 – Vol. 9 No. 3

(Ed note: Another look at the Green Mountain Railway nearly a century after the fact.)

With the Mt. Washington Cog Railway (the world's first such line) a mere 14 years old, and only 2 other cog railroads operating in the world, the Green Mountain Cog Railway was built in the State of Maine. It is probably the only railway in the world whose entire original roster of steam locomotives is still operating today! *(1981)*

The First Sunrise

With the great success of the Mt. Washington Cog line in New Hampshire, a Bangor, Maine promoter named Frank Clergue reasoned, that if folks were paying good money to ride to the top of Mt. Washington, they might be willing to pay for a ride to the top of Green Mountain (now known as Cadillac Mountain). on Mount Desert Isle, in Maine. After all, it was the highest peak on the East Coast and, thereby, was the spot from which the rising sun could first be spotted in the United States. Indeed, tourists were already paying the locals to drive them to the summit in rickety wagons to view the sunrise. So, in 1882, Clergue purchased 200 acres of Green Mountain. Plans for his railway were approved by the (Maine) Railway Commission and a charter was obtained from the State Legislature. During December 1882 and January 1883, the line up the mountain was surveyed by one A. F. Hilton (no relation to this author). Mr. Hilton would later gain fame by surveying the Megantic Railway by which the Canadian Pacific would gain access to the ice-free saltwater port of Portland, Maine. With Hilton's survey in hand, Clergue set his men to work on the mountain as soon as the snows melted that spring. A right-of-way was cleared from Eagle Lake at the base of the mountain, to the summit, and track laying began.

Construction Short Cuts

Clergue instructed his men to use the cheapest means possible to construct the road bed. Unlike the Mt. Washington line, which was built on trestle-work, the Green. Mountain Cog was built on logs that came from the clearing of the right-of-way. Wherever possible, the cog rack and rails were bolted right to the granite of the mountain side, and rough-hewn trestle. work was used to span dips and gulleys as the track progressed up the mountain. Two streams had to be crossed as the line inched upward, one at the 350 foot level, which, incidentally, was tapped to supply the line's water tank, and another at the 1100-foot level. At the bottom of the line, which literally ran to the water's edge of Eagle Lake, a station, an engine house, a pier, and several work sheds were built. A small hotel at the summit had been purchased by Clergue along with the property needed for the rail line. With the track in place, it was now time to think about equipment.

The Equipment Arrives

Two locomotives, almost identical to the engines in operation on Mt. Washington, were ordered from the Manchester Locomotive Works of Manchester, NH. The first engine was shipped

soon after by rail to Portland, Maine. From there it was carried by sailing ship to Bar Harbor, on Mount Desert Isle. From the port it was 3 miles to Eagle Lake and the base station. A team of 14 horses hauled the engine from the dock up the somewhat long-grade leading out of town. After a day of pulling and tugging, the locomotive, mounted on skids, had gone from the dock only so far as West and Cottage Streets, a distance of about 3 city blocks. Work was halted for the day. When dawn broke the next morning, the skids under the engine were jacked up and wheels were added to the carrier. The remainder of the trip was made in better fashion, but still took 3 days. Upon arrival at Eagle Lake, the locomotive had to wait for the ice to melt before it could be barged to the base station. Considering the engine had arrived at Bar Harbor on April 18, the above statement serves to make the reader aware of the somewhat harsh climes in which this line operated. When the ice broke up, the engine was barged down the lake and took up residence on the railway. The line's second engine followed via the same complex route soon after. The locomotives were numbered 1 and 2 and named, *Mount Desert* and *Green Mountain*, respectively. Following close on the heels of the engines, was the rolling stock. This consisted of 2 passenger cars, each with a seating capacity of 48, and a single flat car for work service. All of the rolling stock was built by the firm of Hinckley and Edgery of Bangor, and it arrived via the same route as the locomotives. Now the railroad was complete. But one more link was still needed in the transportation link to bring passengers from the town of Bar Harbor to the base station. This was the small steamboat *Wauwinet*. The boat was purchased by Clergue and sailed to Bar Harbor. It was then hauled overland on skids and rollers to Eagle Lake. The system was now complete.

An Extensive Trip

The trip from the resorts and hotels of Bar Harbor to the top of Green Mountain went like this. The passengers from town would ride in long wagons, equipped with a roof and seats (colorfully called "barges" by the locals), to the north end of Eagle Lake. There they boarded the steamboat for a pleasant cruise covering the length of the lake. At the end of this boat ride, they would step onto the dock and walk only a few yards to board the cog railway for the ride to the summit.

It was now May10th, and the engines were now fired up for test runs and work service. By the middle of June, the line was ready to open. The great event took place on June 23, 1883, and business on that day, as well as for the rest of the summer, was brisk. Tourists flocked to the line to ride all or even part of the way up the mountain, as the enginemen had instructions to make flag stops anywhere along the line for those passengers who wished to get off and on for blueberry picking.

A Profitable Operation

Profits were sizable from the operation, but Clergue wanted a monopoly on carrying passengers to the top of the mountain. He felt he was not making maximum revenue as long as folks could get to the top of Green Mountain via the wagon road that, had indeed, predated the railway. He went so far as to have his men block the road with fallen trees and, when his barricades were torn down by the wagoneers, he hired a group of 16 "toughs" from Bangor to come out under the cover of night and dynamite the road. However, this damage was also repaired, and Cler-

gue finally left the road alone. In spit of all this turmoil, the cog railway turned such a healthy profit that the line paid a 6% dividend at the end of the first season. Unfortunately this would also be the only dividend the line was ever to pay.

In the first year of operation, with the success of his cog railway well established, Clergue started making grandiose plans for a complete railway system to cover all of Mt, Desert Isle. The first step in his plans was to try to slip a trick clause into his charter for the Green Mountain Railway. This clause stated that he could build a "spur" of the Green Mountain. However, this so-called spur would serve the towns of Bar Harbor, Seal Harbor, Northeast Harbor, Soamesville, Bass Harbor, and Southwest Harbor. In short, just about all the towns of any size on the island. The clause never made it through the committee stage of the legislature. Undaunted, he tried again later that year. He announced plans to build a 3-foot gauge trolley car line from Bar Harbor to his steamboat landing at Eagle Lake. This would eliminate the bumpy wagon ride his passengers now had to endure. During the fall and winter of 1883, he hired an engineer, named Danforth, from Portland, to come up and survey the proposed line. The electric railroad was to be called the Mt. Desert Railway. This time Clergue ran into stiff opposition from the residents of the island. It seems that, at this point in time, many rich families were beginning to purchase land to build large summer estates on Mt. Desert Isle, and they didn't want the peaceful and sylvan beauty of their new holdings disrupted by squealing, clanging trolley cars. The citizens mounted an anti-trolley campaign and, once again, Clergue lost. It is of great interest to note at this point that if Clergue had been able to build and operate his electric railway, it would have been the first commercially operating street-car line in the world. Say what you will about Frank Clergue's wheeling, and sometimes sneaky, dealing, but one must admit he certainly was an entrepreneur with an eye to the world of the future.

Fortune's Downward Slide

Business on the Green Mountain was good enough to prompt the directors of the line to boast that they would add another train to their equipment during the winter of 1883-84, however, they never seemed to get around to the purchase of the additional rolling stock and engine. The summer of 1884 saw four trips a day being operated up the mountain. As the distance to the top was slightly over a mile, one wonders why so few trips were operated. Perhaps the time needed for passengers to reach the remote location of the line, or the fact that only one steamboat was available to carry them down the lake to the base station was the cause of such a light schedule. Figuring the capacity of the line's cars, multiplied by the number of trips per day, it was possible for only 384 riders to make the trip daily. At any rate, during the next year (1885) earnings were only 75% of what they had been in 1884. This seemed to signal the beginning of the downward slide of the railway's fortunes. Ridership continued to decline until, by 1888, the tally of the season's customers was less than a thousand fares. Frank Clergue saw the handwriting on the wall and sold the entire operation, railway, steamboat and all.

The New Operation Fails

The new owners upgraded the line with new ties, but as fast they repaired one spot on the line, someplace else would need attention. Clergue's cheap workmanship was already beginning to show up in the rotting ties and timbers of the roadbed. The line struggled along for a few more seasons, but on March 10, 1892, the local newspaper announced, "The Green Mountain Railway is not likely to operate this coming season."

Indeed it did not. The cause of the line's demise was probably the fact that it was now possible to ride to the top of the mountain in carriages via an improved road directly from Bar Harbor, without the bothersome changes of equipment necessary on the Green Mountain Railway system. At any rate, the engines were put away, the enginehouse doors were locked, and the entire operation was simply left idle. Some holdings were later sold at a Sheriff's Auction, but the railway equipment remained locked away. Then a turn of events on the Mt. Washington Cog Railway in New Hampshire saved the Green Mountain locomotives from further rust and ruin.

Rescue by the Mt. Washington Cog

In the spring of 1895, a disastrous fire occurred at the base station of the Mt. Washington Cog. Nearly every building on the site was burned to the ground, including the engine house which housed locomotives 32, 4, 5, and 6. Engines #2 and 5 were beyond repair and were scrapped. Numbers 4 and 6 were repairable, but restoration would take some time. At this point, the Mt. Washington management heard of the two Green Mountain engines still locked away in Maine. The locomotives were purchased, shipped to New Hampshire, renumbered and renamed. Number 1 from the Green Mtn., was renumbered 4 and renamed *Summit*. Number 2 became Number 5 (later renumbered 3) and was renamed *Base Station*. The engines were put into service and gave a good account of themselves. Apparently, the years of storage had done them no harm.

With the engines gone, the rest of the Green Mountain equipment remained in storage, until one of the passenger cars was hauled into Bar Harbor to be set up on Main Street as a Cobbler's shop. The car was later moved again to an area known as Back Hill and saw further use as a dwelling. The fate of the remaining equipment is unrecorded. But it is safe to assume that, aside from the odd bits of iron bolts that can still be found sticking out of the granite on the mountain side, any remnants of the Green Mountain Railway have long since rotted away.

On July 24, 1895, the Bar Harbor Record carried one last news item regarding the Cog Railway – a notice of a Foreclosure of Mortgage. But, unlike many stories that would end on this sad note, the ex-Green Mountain locomotives are still *(in 1981)* doing business on the slopes of Mount Washington and are rapidly approaching a century of service!

2nd Summit House Appraisals

The Railway Commissioners' Hearing as reported in *Among the Clouds*: The hearing before the New Hampshire Railroad Commissioners on the petition of the Mount Washington Railway Company for condemnation of more land on the summit of Mount Washington and appraisal of damages, and also of the petition of Messrs. Coe and Pingree for a change of the location, as filed by the railway company in the office of the Secretary of State, opened before Chairman H. M. Putney of Manchester, Ex-Gov. B. B. Prescott of Epping, and J. F. Coburn of Derry, in the sitting room of the Summit House, at 9 o'clock Friday morning *(8/16)*. Hon. E. B. S. Sanborn and W. D. Hardy of Franklin appeared for the railway, and Ex-Senator Bainbridge Wadleigh of Boston, Ex-Judge W. S. Land and Wm. Heywood of Lancaster for the land owners. Both petitions were read, being based on the General Statutes of the State, that of the railway being predicated on section 10, "If from any cause they (the railroads) cannot or do not obtain such deeds, they may apply by petition to the railroad commissioners to condemn and appraise the damages to the owners of such lands occasioned by such railroad;" and that the land owners on section11 of same chapter, "Any owner of land over which such railroad is located, who is aggrieved by such location, may at any time before his damages are assessed, present his petition to the railroad commissioners, praying for a change of the location of such railroad."

April 18, 1872 – "The dimensions of the new hotel to be erected upon the summit of Mt. Washington will be one hundred and seventy-four by thirty-eight feet, instead of one hundred and sixty by forty as we stated two weeks ago. Work will be commenced at once."

- White Mountain Republic - Thu, Apr 18, 1872

May 11, 1872 - The proposition of the Mt. Washington Railway Co to erect a handsome edifice 36 x 124, three stories high, with French roof, on the tip top, is to be decided at the annual meeting, which is to take place next Wednesday *(5/15)* at the Eagle Hotel in Concord. A plan has been drawn, and everything put in a state of readiness in case the matter is decided favorably.

- Portsmouth (NH) Journal - Sat, May 11, 1872 pg. 2

June 12, 1872 - The plan of this hotel has been completed by Edward Dow *(right)* of Concord, and placed in the hands of John Bailey of (Franklin), who started yesterday *(6/12)* for the mountain to take charge of the building operations. The building is to be 172 x 88 feet, two stories with a spacious attic, lighted by seventeen Lutheran windows on each side. The lower story is to consist of a parlor, 86 x 86 feet; office, 26½ x 36 feet; dining room, 36 x 62½ feet; kitchen, 26 x 26½, together with reception room, store room, smoking room and various smaller rooms adapted to the wants of the building. The second floor besides the passage-way from end to end six feet in width,

and stairway contains thirty-six rooms, 9 x 16 feet. The third floor with a passage-way six feet in width, contains thirty-seven rooms 9 x 12 feet. The lower story is ten feet, the second eight feet and the third ten feet in height. The building is plain, but in good taste, presenting an attractive front elevation. The schedule requires ninety-nine thousand feet of timber, of which about two-thirds has already been turned out of the mill at the foot of the mountain. The hotel is to be wainscoted throughout, fifty-six thousand feet of board shaving been ordered for this purpose. There are to be four chimneys. The posts are to be joint-bolted to the sills and the beams joint-bolted to to the heads of the posts. All the jack rafters are to be bolted to the plates by ⅝-inch rods. It is to have a trussed roof which will support the two upper stories. The whole is to be anchored to the mountain by heavy iron guy-rods running from the head of each post into the solid rock *– Franklin Journal reprinted in White Mountain Republic (Littleton, NH) - Thu, Jun 13, 1872*

Sept 23, 1872 - The new and elegant, spacious and commodious hotel which has been in course of erection during the past season here on the top, is nearly finished and has received already its first coating of paint inside and out. The house is well built in every respect, with ample accommodations, and next season will compare favorably with the best hotels of the country, as a gentleman of long and successful experience in his line of business has been chosen to the management. The house will undoubtedly be the best house anywhere in the mountain region during the coming years, as every modern convenience has been here put, which is something unusual for life on the summit at Mount Washington. *- Rutland (VT) Weekly Herald – Thu, Oct 3, 1872 pg. 2*

The house will be heated throughout by steam, its furniture will be equal to if not better than that of most public houses, its table of the best, and its sleeping rooms, seventy in number, commodious, convenient and comfortable. The Captain has an immense refrigerator at the foot of the mountain, in which is already stored a large quantity of poultry and deer meat, that is frozen up, and which is to be kept until wanted. One of the happy arts of a model housekeeper is to keep "good help," and in the domestic department of this hotel among the clouds, this secret will be thoroughly demonstrated *- Portsmouth (NH) Journal of Literature & Politics – Sat, Jun 14, 1873 pg. 1*

During the summers of 1872 & 1873, second Mt Washington Summit House is built by Walter Aiken and John Lyon for $70,000. Dining room capacity 150. An ell was added, too for nearly 100 sleeping rooms. The Hotel is leased to the Railway. The two original stone buildings (first Summit House & Tiptop) lodged hotel and railway help. Railway president Sylvester Marsh is upset with the development but remains quiet for the good of the railway, and perhaps the fact the Mount Washington Railway board is controlled by Aiken following the death of the Passumpsic Railroad President. Marsh later writes "Messrs Aiken & Lyon have built a Hotel on the Mt summit. Mr. Aiken's father in law was conductor & manager of the road under a salary & rented and run their Summit house at the same time. Whether they favored the House at the expense of the road by doing its freighting without charge, etc. can be looked into & questioned. I have presided at nearly all the meetings in accordance with their wishes being President of the board never having any contention in the annual meetings knowing that I stood alone since the death of Mr. Keys (Pres't Passumpsic RR) and it would be useless to fight and I featured it would injure the reputa-

tion of the road if the Public knew that I was dissatisfied or had withdrawn from its management." *- Story of Mt Washington / - Sylvester Marsh papers, Dartmouth College MS 876412*

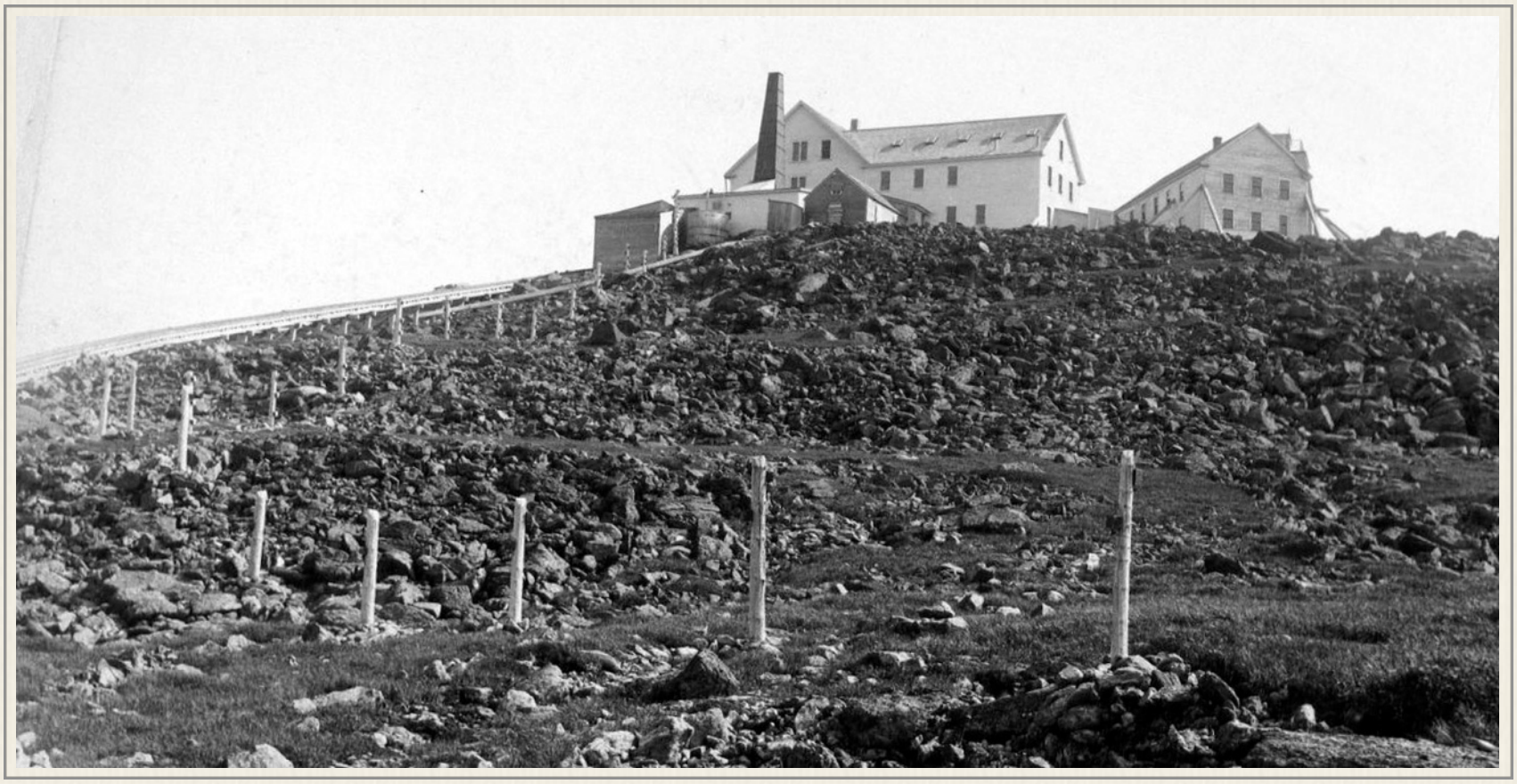
July 1873 – Buffalo, NY Tourist's account: "Heretofore, as your readers are perhaps aware, all the accommodation for sojourners on Mt. Washington was that afforded by two small and uncomfortable buildings known respectively as the Tip Top and Summit Houses. The buildings were erected a number of years ago with much difficulty; they were poorly warmed and badly arranged, and the tired traveler braving the difficulties of the ascent could secure so little rest or refreshment that one night on the mountain was considered to be an experience to last a lifetime. In July, 1872, the railway company, desirous of remedying the defect, commended the erection of the Mt. Washington Summit House. Between forty and fifty men were employed as long as the weather permitted; with the opening of the present season this work was pushed rapidly, and on the 18th of July the hotel was opened to the public. It is located exactly in front of the hold houses, which are yet retained as servants' quarters. The foundations are anchored firmly to the solid rock, and in addition, on each side, heavy chains, at intervals of twenty-five feet, reaching from the beam below the eaves to bolts in the rock, prevent all possibility of a catastrophe in the fearful Autumnal and Winter hurricanes. The house is three stories high, and its dimensions 176 by 38 feet. The first story is used for parlor, sitting-room, office, dining-room and kitchen; the second and third floors are divided off into sleeping rooms. The building is heated throughout by steam. It is built entirely of wood, one thousand tons having been used, all of which was brought from the valley below. The house cost $50,000, and furnishes accommodation for 140 people. Board I six dollars per day, which, considering the fact that all the supplies have to be transported up the mountain, I not unreasonable." - *Buffalo (NY) Morning Express – Wed, Aug 27, 1873 pg. 1*

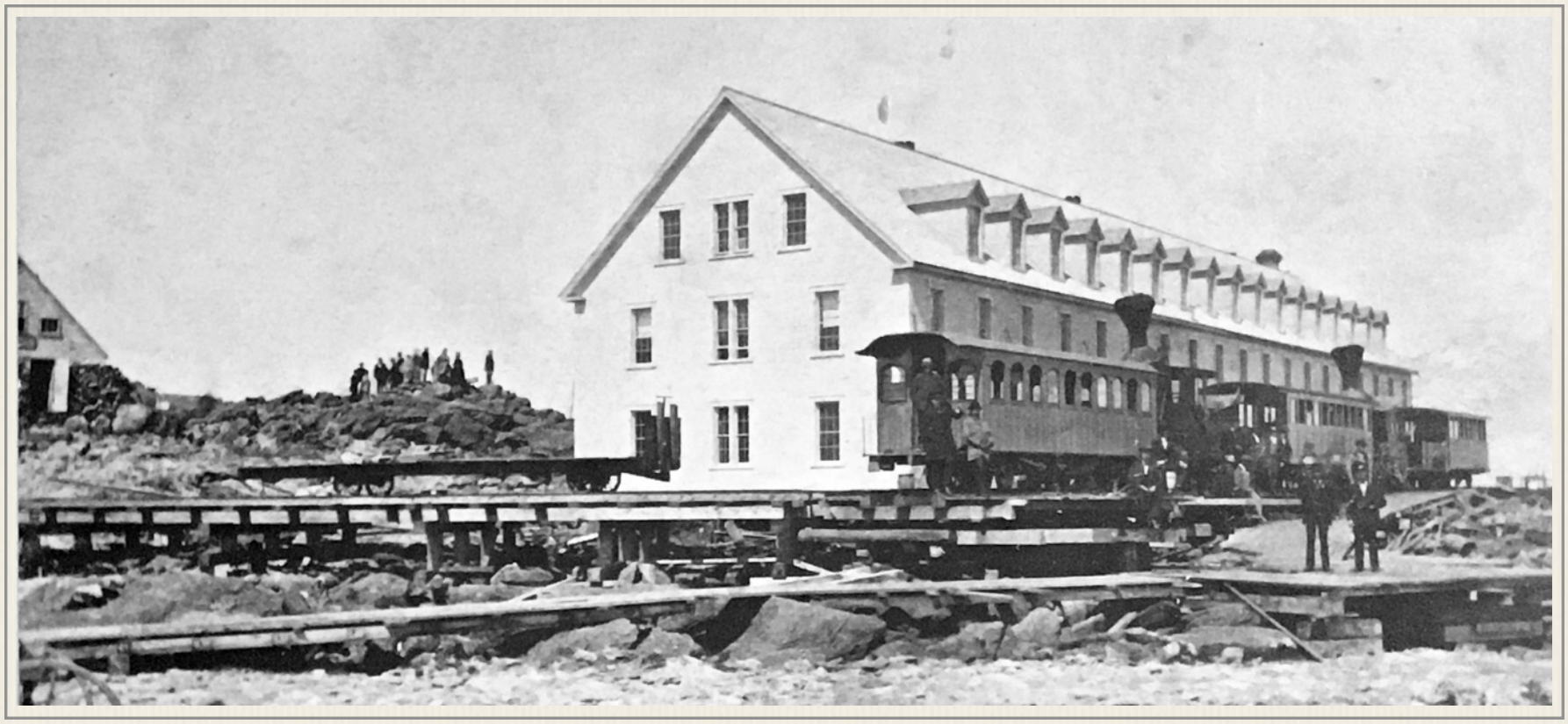
July 13, 1873 - "Sure enough there stood the new house with open doors, ready to receive us and administer to our every need in the highest style of the art. We did not stop to ask how the great things was brought up from the world where it was made, but content with the fact of its existence went in and enjoyed what was set before us…"

Sec. 13 - 2nd Summit House

Aug. 22d, 1873 dispatch: "On the Summit is a fine long Hotel called the Summit House, and it is really a first-class house and at prices but little higher than in Chicago, which considering the Highness of things generally, the elevated position, etc, I certainly very low. Hotel prices are generally reasonable around these mountains…" *- Kenosha (WI) Telegraph-Courier – Thu, Sep 4, 1873 pg. 4*

Aug 28, 1873 – From Our Own Correspondent: "We are ascending the western side *(of Mt. Washington by Cog train at sunset)*. Casting the eye upward, a long line of lights gleam from the windows of the Summit House – our car soon reaches the platform – a throng are waiting, in the twilight, to receive us – and we step out on the summit. There are more than sixty of us. We are ushered into the Summit House. What a transition – first from the beautiful city *(Portland, Maine)* where we slept last night, lulled by the murmur of the sea, to the wild scenery of the journey *(by train)*; then the excitement of the ascent with its marvelous, dissolving views, and now to be suddenly ushered into a common hotel, full of comfort and cheery with light and genial warmth, but so out of harmony – so proxy. As a matter of duty, then, let us look at our hotel at once. It is a long, wooden structure, two and half stories high, with windows in the roof. The parlors and dining halls are spacious and comfortable, and warmed with steam. A we ascend to our sleeping chambers – there are seventy-two of them in the house – the narrow hall and the closely economized space of the chambers strongly remind one of a steam-boat. But the rooms are nicely furnished, each containing two really luxurious single beds. And so at last we compose ourselves to sleep on the mountain top, having taken a final glance at the twinkling stars with a wonder if the morrow will be as gloriously clear as to-day. The sound of doors opening and closing softly, of muffled footsteps along the hall, awaken us. It is yet dark. Toilet are dispatched with not great ceremony, and muffled in overcoat and shawl we hurry down to find a hundred other masked figures on the spacious platform in the faint twilight. We stumble over a huge chain. What is it? Every twenty feet a chain cable comes through the platform from its anchorage in the rock beneath, and passing over the hotel is similarly secured on the other side – a windy suggestion. Does





it ever blow here? Soon thee great, round orb, red, but less intense lifts sluggishly from his mountain couch, and with a shout we, Fire-worshippers, pronounce the sunrise accomplished…. The sound of a gong unites all adverse tastes in the dining-room. Then the call to the train, "All aboard…" *- New York Times – Tue, Sep 2, 1873 pg. 2*

New Summit House Guest Count: "The register of the Mt. Washington Summit House show that it had 5,412 guests during 44 days of the present season."

- New England Farmer - Sat, Sep 13, 1873 pg. 3

1874 Tourist Guide to the Summit House: "The Mount Washington Summit House accommodates conveniently one hundred and seventy-five guests, though more than two hundred have been entertained. Several thousand persons visited it during the past season. Its appointments are very complete. Lighted by gas, and heated by steam, with all modern improvements, a liberal table, and good attendance, the visitor can be made comfortable for any length of time.

- Popular Resorts, And How to Reach Them - John B. Batchelder, Boston 1874

1874 Ell built...? James W. Sewall The Summit House with its L and annex gives about twelve thousand square feet, exclusive of the platforms.

At seven o'clock we arrived at the Summit House, a good hotel kept by Captain Dodge, the manager of the Mount Washington railway. The tables were decorated with vases of alpine flowers, tastefully arranged, bordered with mosses and brasses, grown on the line of perpetual snows. We were served to an excellent sirloin, rolls and coffee that would honor the cuisine of the best kept houses of the city. Our beds were clean, and our rooms tidy and comfortable in every particular. S.W. Brigham *- Montpelier: Vermont Christian Messenger - Thu, Sep 3, 1874 pg. 1*

Sec. 13 - 2nd Summit House

Sept 12, 1882 – David Pingree says they declined the offer of $2k a year for the lease "we were ready to purchase the house and · furniture under the conditions of the lease, arid asked him what be would. sell for. He at first named $45,000, but afterwards made it $42,500. We offered him $37,500, and at Judge Minot's suggestion we offered to split the difference. Mr. Aiken came down to $41,250 and said he should want $500 for the observatory, but was not willing to split the difference. We then agreed to have the property appraised. He named Charles H. Greenleaf on his part as one of the appraisers. We agreed · on Benjamin F. Prescott as the chairman, and we named Spencer Rogers on our part. Those three appraisers were agreed upon to go up to the summit on the 22nd · day of September, and appraise the house and furniture" We went to the summit of Mt. Washington on the day appointed for the appraisal, September 22, 1882. The three appraisers were present, and also Sylvester Marsh, president of the Mt. Washington Railway, Walter Aiken, E. S. Coe, and myself. After we arrived there Mr. Coe presented an agreement for appraisal to Mr. Aiken to be signed.

1882.09.22 2nd Summit House Appraisal for takeover by Coe & Pingree

Spencer Rogers of Portland, Maine joined ex-Gov. Prescott and Mr. Greenleaf of the Profile House as the three appraisers to determine the worth of the Summit House building and its fixtures. Roger says the appraisers were directed to go, "each one by himself, and take minutes of the hotel and furniture, and if they *(parties to the lease)* finally did agree to an appraisal, then we should meet and compare notes. One reason that he *(Walter Aiken)* gave for that was that the road was about ready to stop running for the season, and if they came to an agreement, we could not go up there again that winter. After they came to that understanding about our going on, Mr. Greenleaf, Gov. Prescott, and myself started and examined all the rooms in the hotel. We examined the furniture and I think went into every room in the hotel. Some one of the proprietors went with us and opened the doors, and we went in and looked around and I took a memorandum of all the furniture in those rooms and all over the building."

Rogers read from his note book and into the court record.

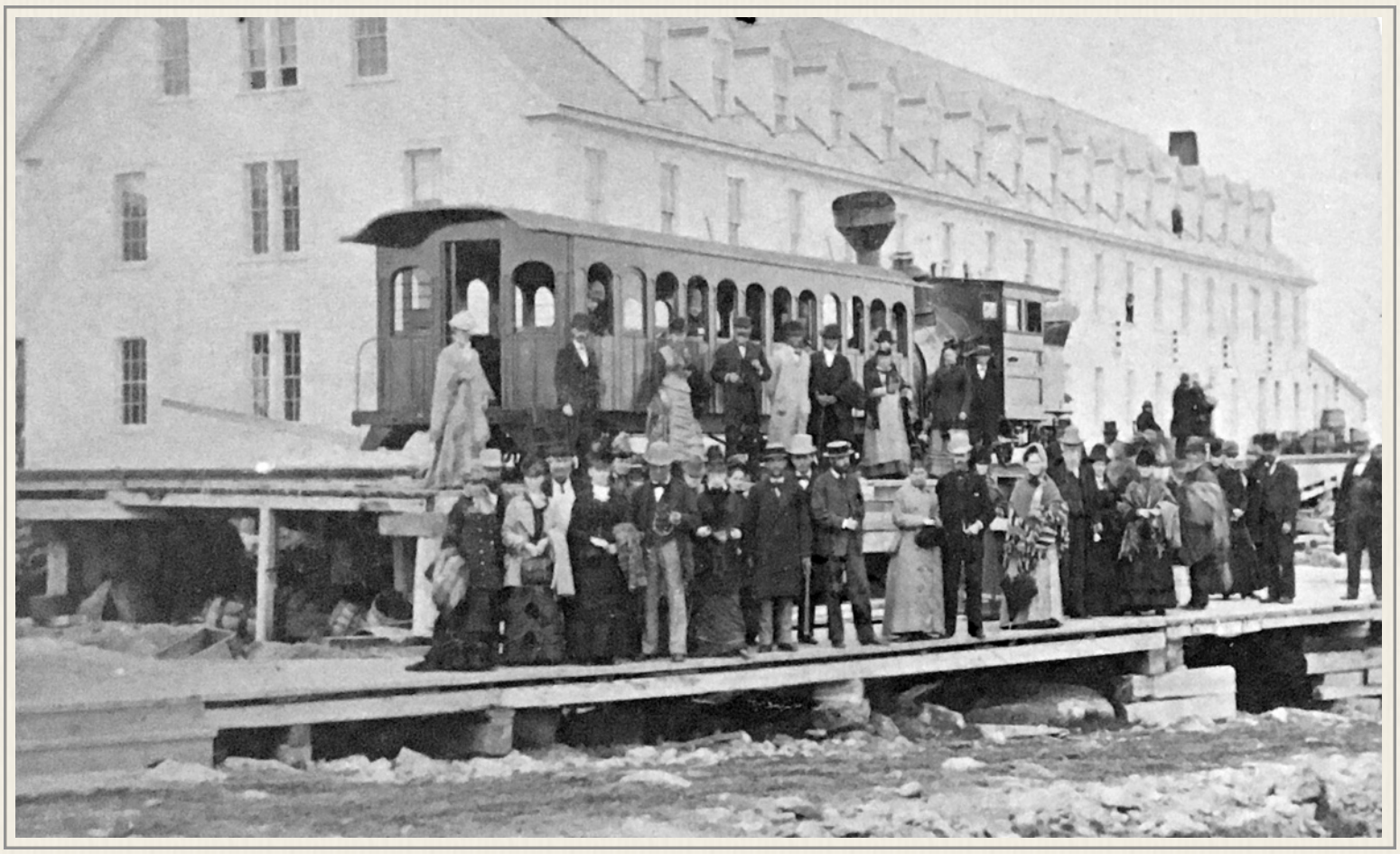
Second Story

Room No. 1 contained an ash walnut-top sink, bureau, lightstand, bowl and pitcher, slop dish *(for leavings of tea or coffee cups at a table)*, slop chamber *(or chamber pot)*, three hair pillows, two feather beds and 15 yards of carpet.

Room No. 2 contained two walnut-top sinks, table, two chairs, chamber, slop dish, bowl and pitcher, small towel rack, two hair mattresses, two bolsters, two pillows, 15 yards of carpet, one looking glass, 14 x 24.

Room No. 3 was furnished the same as No. 1, with the addition of two chairs and two rockers.

Room No. 4, the same as No. 1, with the addition of two chairs and one rocker.
Room No. 5 was the same as No. 4.
Room No. 6, the same as No. 4.



Room No. 7 was the same as No. 2, with one chair less.
Room No. 8, the same as No. 1, with two chairs and a rocker added.
Room No. 9, the same as No. 1, and add two chairs and two rockers and two mattresses.
Room No. 10, the same as No. 1, with one chair added.
Room No. 11 contained a cheap ash washstand, one table, one single bed, washstand, two chairs, bowl, pitcher, slop dish, and soap dish.

Room No. 12 was the same as No. 1. Add two chairs and a rocker.
Room No. 13 and 14 the same as No. 12.
Room No. 15 had a marble-top bureau, panel ash bedstead, marble-top sink, two chairs, one rocker, stand, and towel rack.

Room No. 16, the same as No. 12.
Room No. 17 had a full pine painted set, four chairs, and a rocker.
Room No. 18 had the same as No. 15.
Room No. 19, the same as No. 17, with the addition of three chairs and a rocker.
Room No. 20, the same as No. 17.
Room No. 21, the same as No. 1, with a chair and a rocker added.
Room No. 22, the same as No. 1, with two chairs and a rocker added.
Room No. 23, the same as No. 2, one chair and rocker added.
Room No. 24, the same as No. 2.
Room No. 25 was the same as No. 2, with one chair added.
Room No. 26, the same as No. 1, with two chairs added.
Room No. 27 had a cot bed, plain bureau, stand, three chairs, four rockers.
Room No. 28, the same as No. 1, with two chairs and a rocker added.
Room No. 30, the same as No. 2, with two chairs added.
Room No. 31 had a bedstead, washstand, table, and two chairs, rocker, and towel rack.
Room No. 32, same as No. 2, with two chairs added.

Room No. 33, the same as No. 31.
Room No. 34, the same as No. 2, with one chair added.
Room No. 35, the same as No. 31, with one chair added.
Room No. 36, the same as No. 31, with one chair added.

Third Story

Room No. 37, bureau, washstand, table, one rocker, one stand, looking glass, 13 x 24, towel rack.

Room No. 38, same as No. 37, with one chair added.
Room No. 39, same as No. 37, with one chair and a rocker added.
Room Nos. 40, 41, 42, 43, 44, the same as No. 37.
Room No. 45 had an extra bureau in it.
Room Nos. 46, 47, and 48, the same as No. 37.
Room No. 57, the same as No. 37.
Room No. 58 had two extra chairs in it.
Room Nos. 59 and 60, the same as No. 37.
Room No. 61 had an additional bureau.
Room No. 62 had an additional bureau in it, the same as No. 37 besides. It also contained a cheap bedstead and some damaged crockery.

Room No. 63, the same as No. 37, and had a bureau, but no table.
Room No. 64 had a cheap single ash bedstead, bureau, ash stand, two chairs, and a rocker.
Room Nos. 66, 67, 68, 69, 70, 71, and 72, the same as No. 37.

Description of Rooms 73 through 80 originally appear in transcript after Room 90

Room No. 73 had a single bed, cheap washstand, table, two chairs, and looking. glass.
Room No. 74, double bed, washstand, table, one chair, and a towel rack.
Room No. 75 had one table and two single bedsteads, bureau, washstand, and two chairs.
Room No. 76, double bed, washstand, table, and one chair. Washstand and glass in the hall.
Room No. 77 had two cheap single beds, washstand, table; and two chairs.
Room No. 78, the same as No. 77.
Room Nos. 79 and 80, the same as No. 77.
Room No. 81 had a cheap single bedstead, washstand, one chair, and slop jar.
Room No. 82 had a cheap double bed, washstand, table, one chair, and rocker, and a looking glass.

Room No. 83, the same as No. 82, with one chair added.
Room No. 84, the same as No. 82.
Room No. 85, the same as No. 82.
Room No. 86, the same as No. 82, with two chairs added.
Room No. 87, the same as No. 81, and no looking glass.
Room No. 88 had a cheap double bed, washstand, two chairs, and a looking glass.
Room No. 89, the same as No. 88. Add a table and one chair.
Room No. 90 was the same as No. 88, and add a rocker.

Fourth Story, Addition

Room No. 91, two good double and one single bedsteads, one chair, one mattress, one commode.

Some of the furniture had been taken from some of these rooms and put into the old Summit House, I suppose.

First Floor

Barroom had eight cheap chairs, one table, looking glass, 14 x 24, two spittoons, one twelve-foot counter, two single lamps, and there was one single lamp in the passage way.

In the ***parlor***, 144 yards carpet, three-ply, four stuffed settees without rockers, two walnut center tables, 2 ½ x 3 ½, marble top, two ash center tables, 2 x 2 ½, one piano and. stool, two plate walnut frame looking glasses, 22 x 40, one piano cloth, eleven narrow rep lambrequins *(a short piece of decorative drapery hung over the top of a door or window or draped from a shelf or mantlepiece)*, four three-light chandeliers.

In the ***reception room*** were 30 yards of carpet, corner walnut table, 18 x 32, center table, 2 x 3, two lambrequins, figured, cornice, walnut, one three-light chandelier.

In the ***reading room***, 23 yards carpet, walnut stand, 18 x 27, one bracket, one four-light chandelier, and nine chairs.

In the ***office*** there were seventeen arm basket chairs, one Morse safe, 3 x 2 x 6, one cigar case, 18 x 24, one letter press, one stand, one center table, three two-light chandeliers, three Babcock fire extinguishers, call gong, inkstand, and four one-bracket lamps.

Two one-bracket lamps in the ***hall***.

In the ***wash room***, one circular top, walnut, 18 x 32 looking glass, one base burning stove, twenty feet of funnel (a stack or flue for the escape of smoke or for ventilation), and one drinking fountain.

In the ***hall*** 57 yards three-ply carpet, 117 yards · two-ply carpet, 51 yards matting on the stairs.

In the ***dining room*** there were fourteen twelve-foot dining tables, 168 dining chairs, six high chairs, twelve two-light chandeliers, one small table, 12 side tables, 6 ft. x 12 inches, fastened to the wall.

Sec. 13 - 2nd Summit House

Interior of Summit House office. *Rare photo of lobby explored in-depth by Jeffrey Leich in the Fall 1991 Mt Washington Observatory News Bulletin (pg. 65-70) "It shows, from right to left, a corner of a wood or coal parlor stove, a large souvenir counter with security screens hinged from the ceiling, a corridor, a telegraph office in a separate room through an arched doorway, and an open door to the outside with a large dog lying in the doorway." (Sept 1904)*
- Photo by Simon Towle - Jeffrey R. Leich Collection

In the ***old Summit House*** there were two stoves, bedsteads, two cot beds, thirty-six in all, thirty-one old stands, thirty-five wooden chairs, and fifteen 9 x 12 looking glasses.

That includes all that I took. I do not know whether the other parties took anything (notes) or not. We went through kind of hurriedly, as Mr. Greenleaf had to go away.

As to the ***building*** itself, Rogers said, "We looked at the inside of the building as we went along. On the outside I examined it to see about its construction and its soundness as far as it showed on the outside, and as to the condition of the house outside. By going up into the attic, you could look up into the roof and see the timbers that it was built with. I went up there. I don't think the others did. Mr. Aiken called attention to the immense timbers. I could get at the beam and examine it… there was a hole somewhere where I could see under (the hotel) and see what the timbers were at the bottom of the building. It was done hurriedly. Mr Greenleaf had to go off the mountain · that day. We made it, I think, Saturday. I should say we commenced sometime between nine and ·ten o'clock, and I should say we might have got through before dinner, perhaps. I know we kept it up until Mr. Greenleaf had to go down. We didn't get to *(the heating apparatus)*. I looked at it, but took no minutes of it. Mr. Greenleaf did not have time to see it all. I looked at *(the crockery)* as we went along. As I understood it, Mrs. Dodge, the lady that kept the Summit House, said she would furnish us at any time we wanted it a complete schedule of all the crockery that went with the house. It was Mrs. Dodge I think. It was some lady in charge of the house." Rogers looked at the bed linen and the table linen but did not learn how many sheets and pillowcases there were. "We did not get as far as that. What we didn't see of such things, we had an understanding with Mrs. Dodge that she would furnish us a schedule at any time we wanted. She did not *(furnish it)*. We did not request it."

ATLAS
M. W. R.

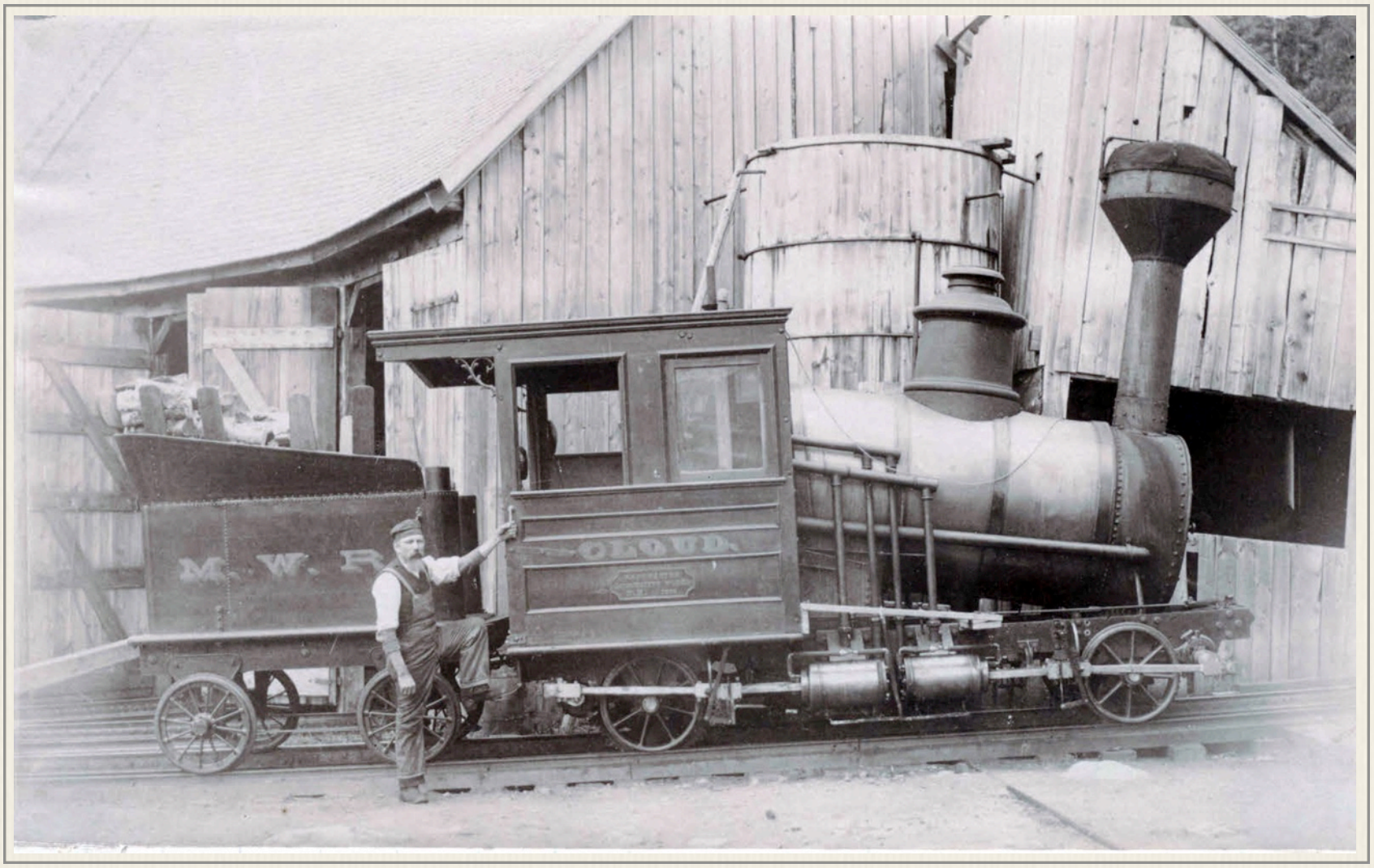
1892 - Aiken's Thesis

In 1890, Walter Aiken gave his nephew permission to use one of the Mount Washington Railway engines to conduct a series of experiments that would form the basis of a hand-written thesis young Charles W. Aiken and a colleague, Robert S. Ball would submit nearly two years later for a Bachelors of Science degree in Mechanical Engineering from the Massachusetts Institute of Technology in Cambridge, Massachusetts. What follows is an edited, transcribed version of that thesis that omits many pages of the measurements. Those interested in reading the full handwritten document may find it here (https://dspace.mit.edu/handle/1721.1/28188)

A Series of Tests on a Mount Washington Locomotive

This Thesis is the report of some tests made on the Mount Washington locomotive *Cloud* under the various running conditions. It consists mainly of two parts, the tests on the evaporative efficiency of the boiler and the power developed by the engine on the different grades. This second part may be again subdivided into two, the work done by the engine in ascending the mountain, and that done against gravity in descending.

The results of the boiler and engine tests were afterwards combined thus giving the fuel and water used per horse power per hour. The separate tests are finally compared all except two being made with different loads.



View showing the indicator and the piping for the indicators.

The locomotive on which these tests were made, resembles somewhat in appearance, an ordinary locomotive, but is in reality quite different. The boiler is of the locomotive type, designed to burn wood. It is set on the frame at an angle of 10-degrees with the horizontal, the head end being the higher. This is done to bring the boiler into a horizontal position, when the engine is on a grade. The shell of the boiler is 48" diameter, and there are 230 tubes 1½" dia and 5 ft long. The smoke space being 18½" in long. The shape and size of the fire box will be seen by reference in **Fig.'s 1** and **2** on the following page. The grate is 28½" below the bottom of the fire door which is 9" x 17". The frame on which the boiler rests is simply a rectangle made of wrought iron 1½" thick and 6" deep. This is 4 feet wide by 16 feet long and is braced by tie rods and cross pieces.

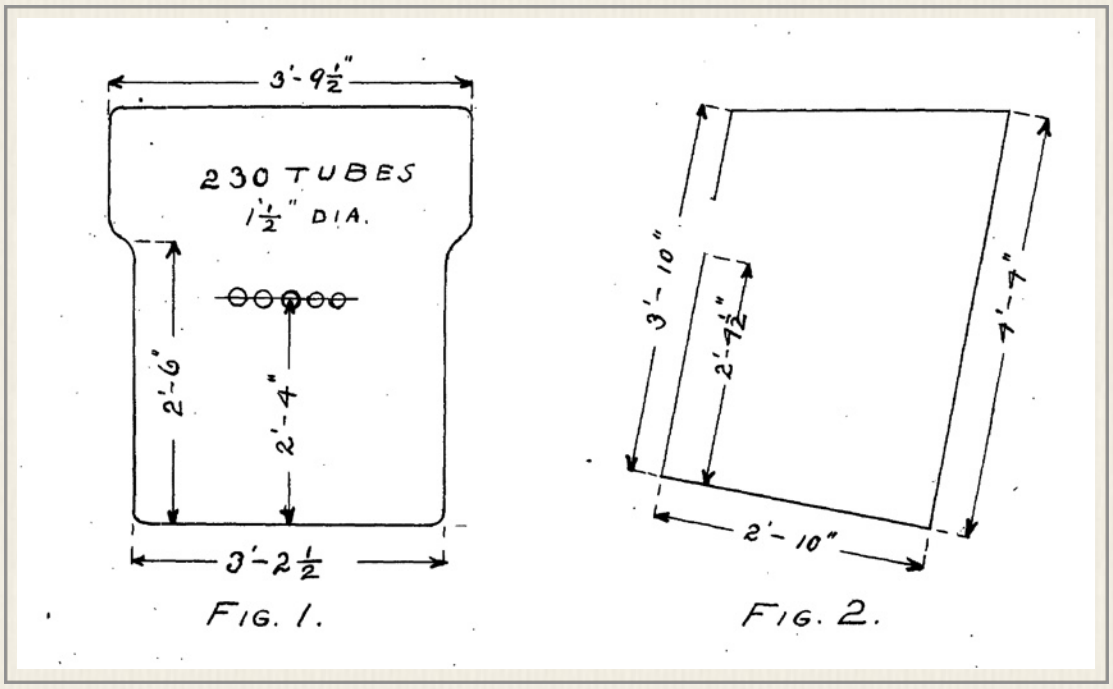
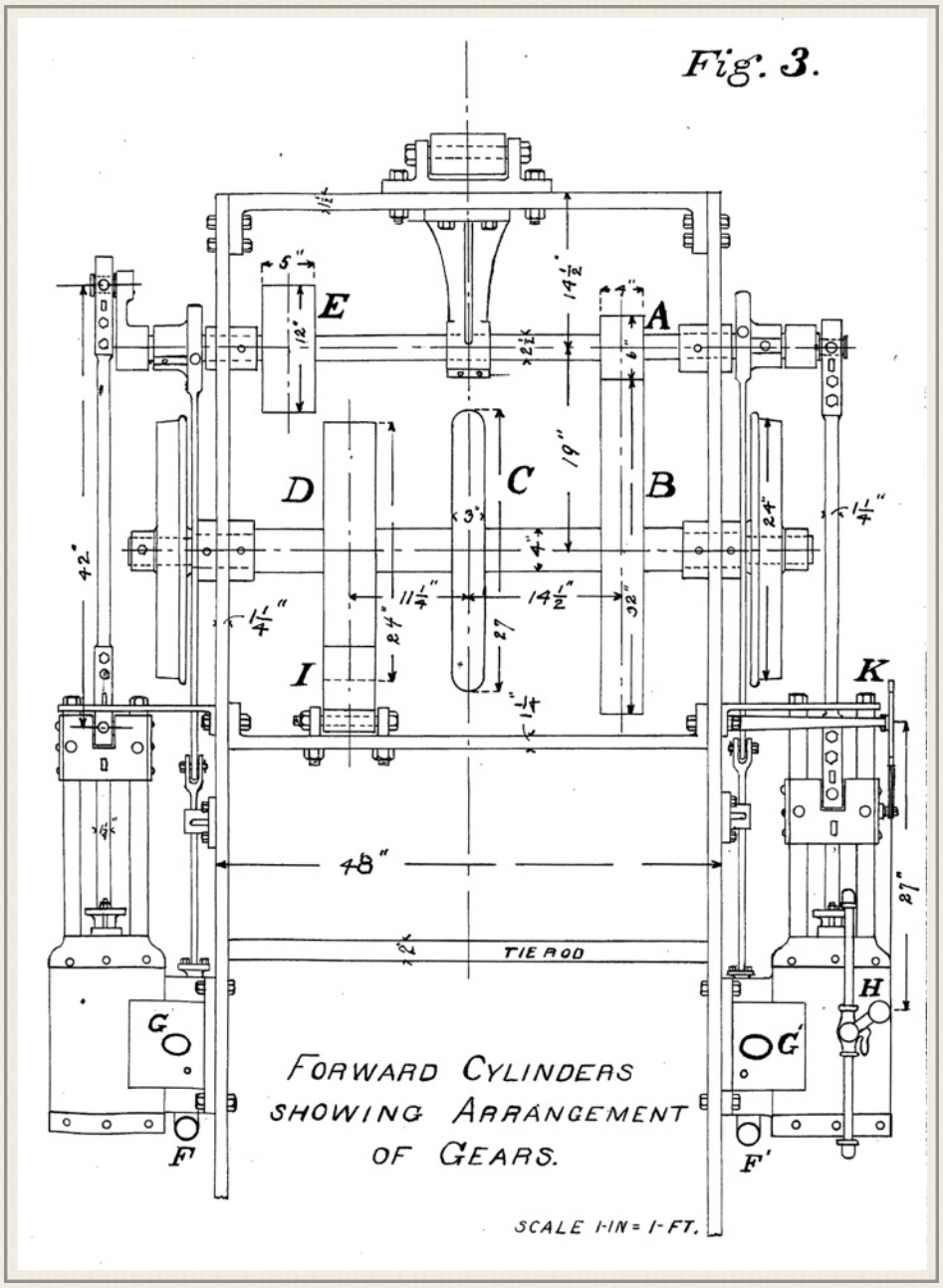


FIG. 1. FIG. 2.

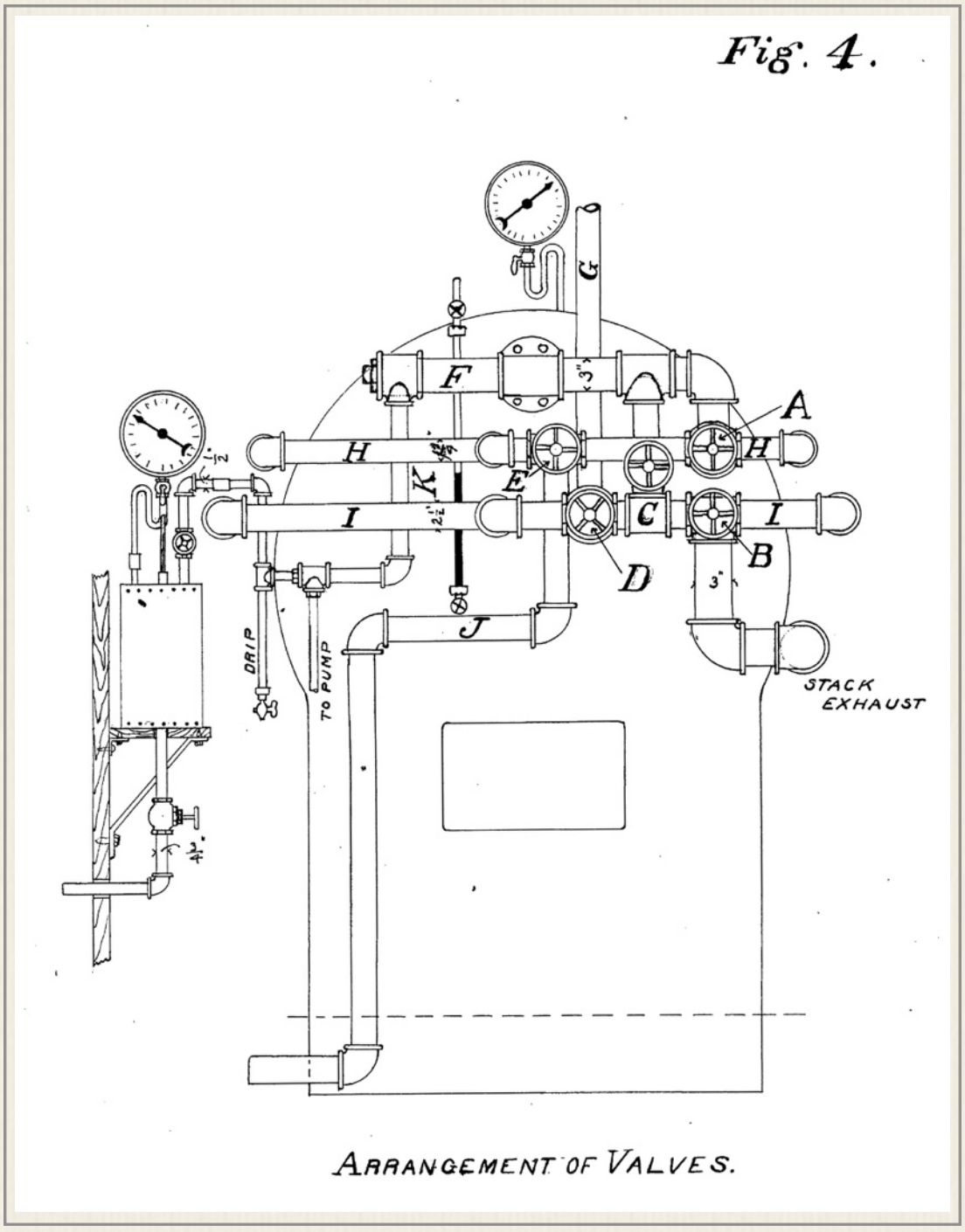


This frame rests on four wheels 24" in diameter which carry the weight of the locomotive, See **Fig. 3.** There are four cylinders, 8" x 12", two on each side. The two back cylinders working on the same shaft and the two front cylinders working together. Each pair are set 90 degrees apart and the back pair is set 180 degrees from the front pair. they have plain D slide valves, with the cut off fixed at nine inches no link motion being used. The front cylinders drive the axle **A**, **Fig 3**, on which is the small pinion gear **A**, which goes into the large gear **B**, on the shaft **B**. Through these gears the cog wheel **C** is driven, which running in the rack-rail moves the engine. On the axle **B** are also the wheels which support that end of the locomotive, as the cog-wheel supports no weight, but simply produces the motion. The pinion gear **A** having 12, and the large gear **B** having 64 teeth, the multiplication is 5 and

one-third, the crank making 5 and one-third revolutions for every revolution of the cog wheel. Since the cog wheel has 19 teeth the pitch being 4 inches, for every revolution of the cog wheel the movement of the engine is 76", then taking the cross speed of revolution as 200 per minute - the speed of the locomotive will be 238 ft per minute with a maximum of 325 ft per minute - on low grades.

The pulley **D** shown in **Fig. 3** is a ratchet wheel with which the pawl **I** plays on the up trip, thus preventing any movement in a backward direction. The pawl is raised on the return trip. The pulley **E** is used for a friction brake, being surrounded by a steel band lined with leather, which is brought to bearing on the pulley by means of a lever not shown in the figure. The pipes **F** and **F'** are the steam supply pipes and the pipes **G** and **G'** are the exhaust pipes. The indicator is show at **H** with the indicator rig at **K**. The details will be readily understood from the sketch.

The engine works in the usual way, going up the mountain, but on the down trip the manner of working is somewhat novel. The action of the engine is reversed are instead of a pressure in the cylinder moving the piston, and thus moving the locomotive, the locomotive, moving down hill under the action of gravity, causes the pistons to move, and thus, air being allowed to enter the cylinder, a pressure is produced in the pipes, which on the up trip are the steam pipes, but which on the down trip become the exhaust-pipes. This excess of pressure, on the under side of the vales, tends to throw it from its seat, which, is prevented, however, by having the vales bear both on its seat and on the steam chest - cover.

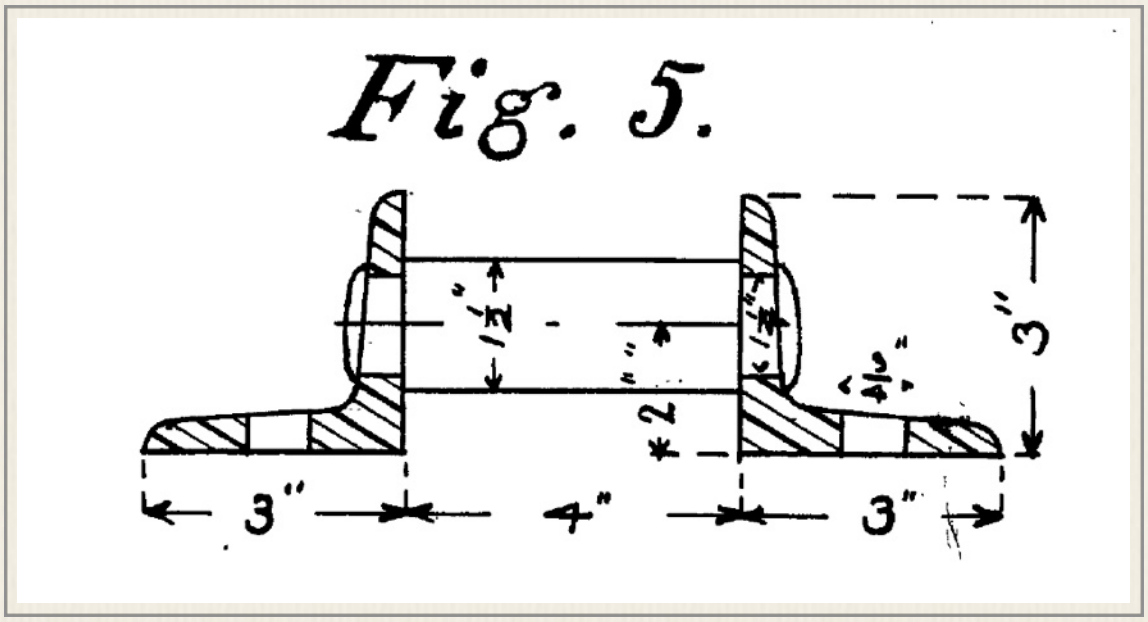


[*description of valves etc*]

In the purpose of lubricating the cylinders, when running down grade and using air instead of steam, water is admitted to the pipes from the boiler. This has been found to work in a much more satisfactory manner than oil.

The boiler is fed by a 2½" pump placed on the left side of the cab, on the floor.

The rack rail is made as shown in **Fig. 5** by riveting short pieces of wrought iron of the proper length into two angle irons. The rail are made in lengths of nine feet, and are bolted to the trestle work by means of ¾" bolts passing through the holes shown in the figure. The rails now in use are those that were originally laid and have been replaced in only a few instances.

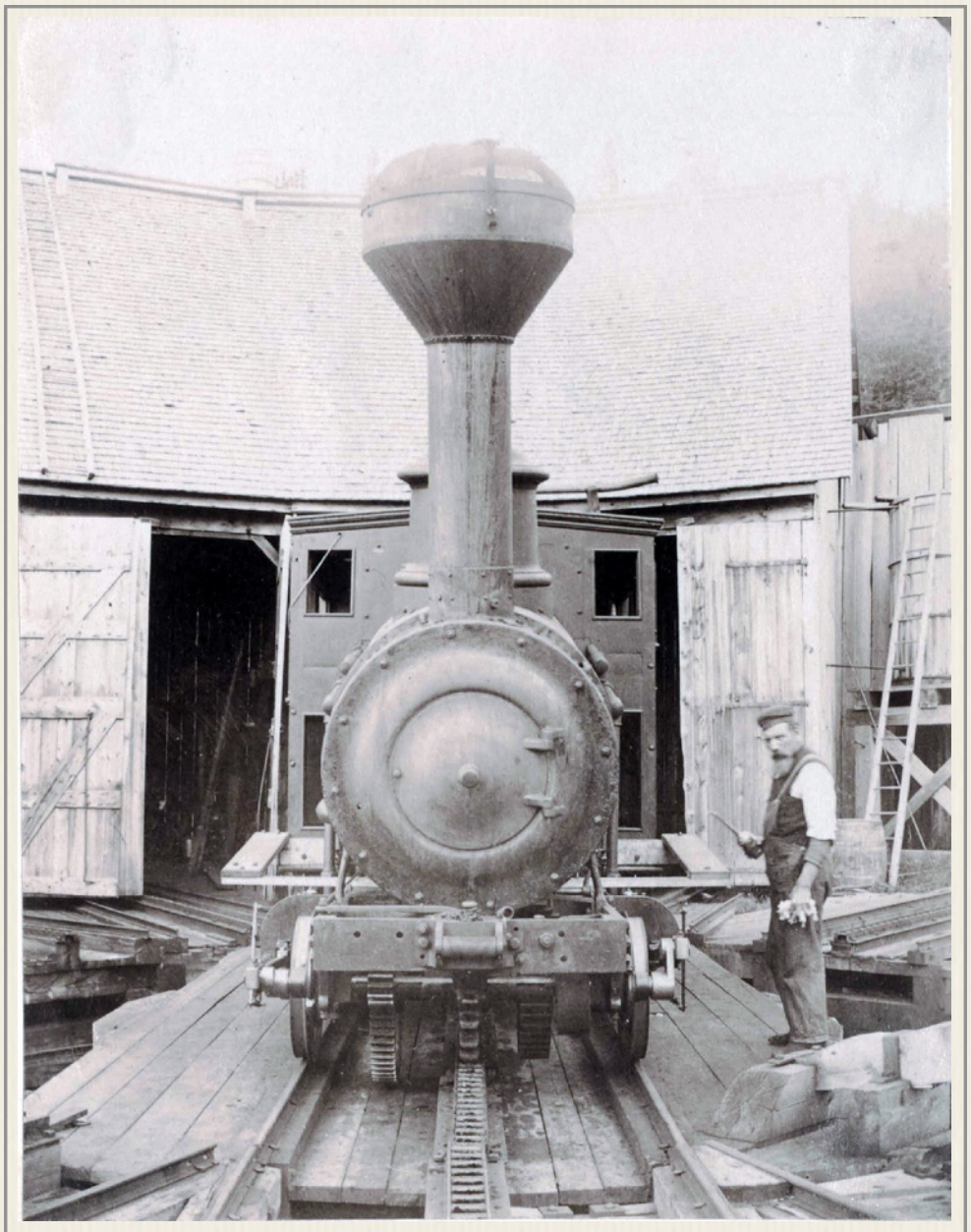


A mixture of tar and grease is used to lubricate the rack rail and cog wheel being applied every two or three days

[*engine constants & method measurement explained*]

A short description of the track is necessary for the purpose of future reference to principal points.

The track has a total length of about 3 miles and rises in this distance about 3,010 ft. It leaves the base, where the tests started, with a steep grade and becomes more nearly level as it approaches the Waumbek Tank. Up to this point it is almost straight, but soon after leaving Cold Spring hill on which the tank is situated, it curves considerably to the right. The next point noticeable is Jacob's Ladder where the track passes over a very high trestle (hence the name) and swings round a very abrupt curve. The gradient on the ladder is the highest attained on the course. At the head of the Ladder there is a steep portion which terminates in the straight piece known as the Long Trestle. Above the Long Trestle is located the Gulf Tank where the gradient is comparatively small. The most level portion of the whole is found just after leaving this tank. The last part of the track is very steep as it approaches the summit.



Front view of the Cloud, showing seats from which the indicators were managed.

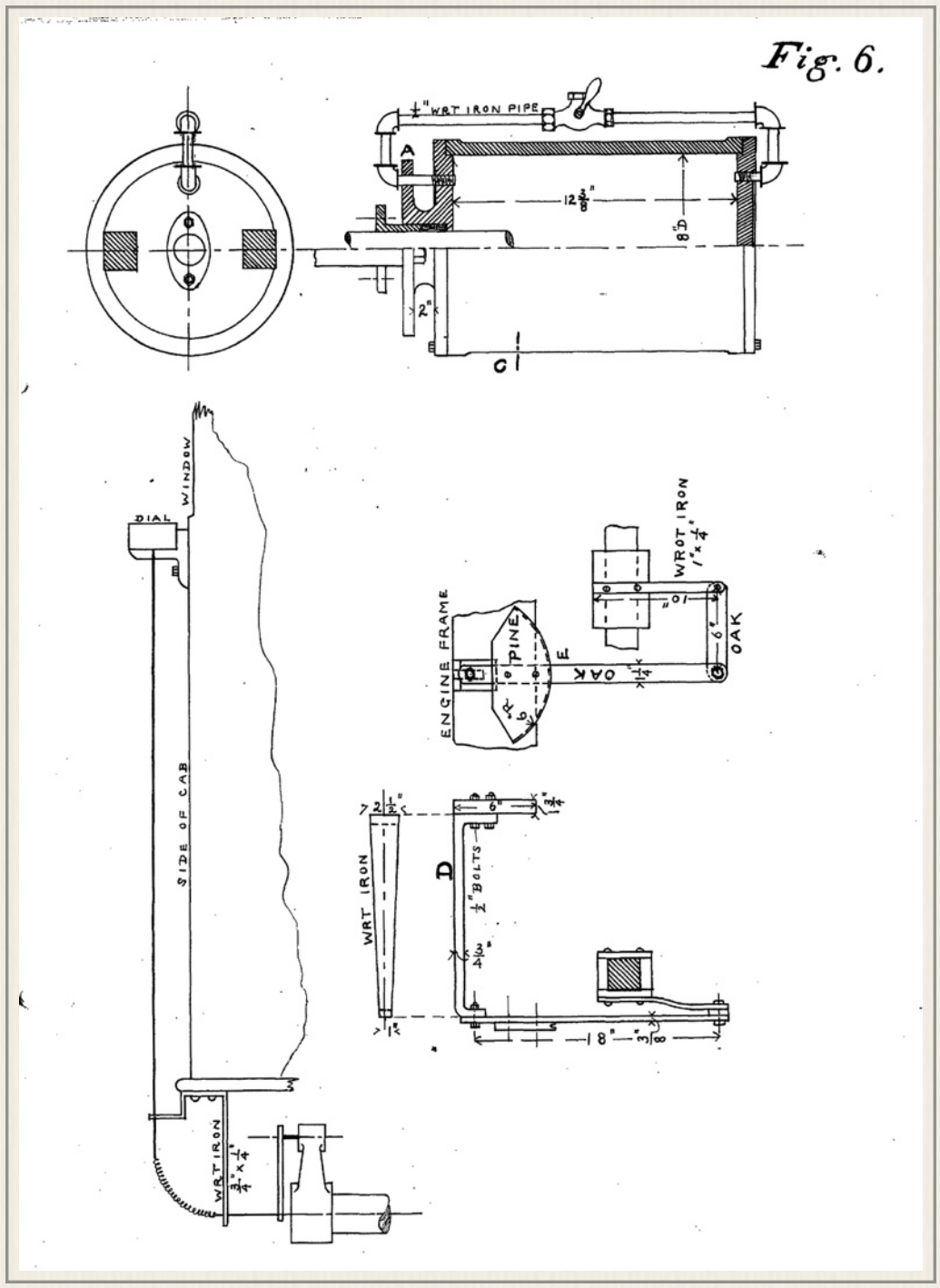
Sec. 14 - 1892 Aiken Thesis

Apparatus

The indicators used were four Crosbys fitted with 40, 50 and 60 scale springs. The cylinders were bored and piped through the ends and the two ends united by means of a 3-way cock to the indicator. The pipes were thus necessarily very long but it was found to be the only method as the clearance (3/16") was not sufficiently large to admit of side boring without cutting into the piston. All the pipes leading to the indicators were lagged with hair felt, and the indicators were placed midway between the ends.

The motion of the crosshead was reduced from 12" to about 4" by the Brumbo pulley motion which can be seen from reference to **Fig. 6**, that for the backward cylinders differed only in the respect that the forging **D** was not needed, wooden brackets being used to pivot the link **E** to the bottom of the cab.

Fig. 6 shows a vertical section of the cylinder, it will be noticed that the form of head in the head end is cast double so that the length of pipe was increased by having to bore through **A**. The strings from the Brumbo pulleys went direct to the indicators, those for the forward cylinders were rather long which made a variation in the lengths of the cards, while the backward cylinders were free from this error.



Counter The revolution counter was of the usual hawk clock type reading to one revolution and was tacked as is shown in **Fig. 6**

Grade The grade was determined by an apparatus which consisted essentially of a ½" wrot iron bar suspended inside the cab from ⅜" pin and swung in a vertical plane coincident in direction with the track. The distance from the center of suspension to a vertical pointer on the rod was 3'. This pointer moved over a wooden arc of 3' rad graduated to 1/100ths ft. The pendulum was set at zero while the engine was on the turn table. Difficulty at first was experience in reading the arc divisions owing to the exces-

sive vibration of the engine but this was obviated by fixing to the end of the rod a fan of tin which dipped into a circular trough of cylinder oil, the resistance of which made it possible to read accurately. The curve inserted was platted from the readings of the instrument and gives the grade in feet per mile. A correction of 2 must be subtracted from the gradiometer reading.

Barometer The barometer used was an aneroid. The instrument was frequently compared with the mercurial at the meteorological station on the summit and was found to be correct in its readings.

Calorimeter The calorimeter used was a 4" throttling one, and was used to determine the quality of the steam furnished by the boiler. It took steam from pipe **K Fig. 4** and it is shown in position on the left of the figure. A pressure of about 20 lbs was maintained in the calorimeter throughout the testing. the resulting percentage of moisture was 1.5, this being constant throughout.

The thermometers and gauges used were standard instruments and the boiler gauge on the engine was replaced by a Crosby.

The Waumbek and Gulf Tanks were calibrated per 1/100 ft of the depth within probabe limits of draught. For this purpose scales were made out of pine boards 3' x 1' cross section graduated to 1/100ths ft and well shellacked. By means of floats connected with pointer which moved on the scales, readings could be taken when the engine drew water. As the calibration of the tanks showed the amount per 1/100th ft depth to be a constant, the wt of water could be at once readily recorded.

The calibration was performed as follows. The valve on the tank was opened and the water allowed to run into a barrel on scales. When the level of the water was lowered a convenient distance as read on the scale, the valve was closed and the quantity of water per unit of depth determined. The leakage from the tank was negligible during the operation.

Result of calibration

Waumbek	per 1/100 ft depth	44.80 lbs.
Gulf	per 1/100 ft depth	83.00 lbs

The wood was weighed in lots of 500 lbs on a standard Fairbanks scale which was carefully adjusted and tested before use. The wood on being weighed was laid by until the engine came to the shed to "wood up." This operation usually lasted over an hour and every pound of wood put on the tender was recorded. At the conclusion of the test the wood remaining in the tender was weighed, but no attempt was made to weigh the ashes, it being impossible owing to the form of fire box. The error introduced from this cause must be slight, as there were but little ashes left at the conclusion of a test. What was left would form a very small percentage of the total wt of fuel burned on the trip. The percentage of moisture in the wood was found by roasting a fair sample weighing 50 lbs, in an oven for 24 hours. The heat of the oven was not sufficient to scorch the wood. The result of this showed the wood to contain 6 % of moisture.

Sec. 14 - 1892 Aiken Thesis

A pump test was made to find the steam consumption of the feed pump. The test was made while the engine had steam up in the shed. The pump was started forcing water into the boiler against the usual steam pressure. The strokes were counted, and when constant the feed pipe was discontinued from the boiler and the pump allowed to discharge into the air. The valve on the exit water pipe was then closed partially until the pump made the same number of strokes as before. The steam supply not being altered it was then assumed that the same quantity of steam was used. the wt of steam was determined by condensation in a barrel on scales.

Six tests were made 5 of which are recorded the first being merely a trial of the apparatus. Of these 5, nos 4 and 5 are both "up" and "down" tests and the rest are "up" only.

Indicator cards were taken from all cylinders at intervals of 5 minutes on the stroke of a gong rung from the cab. At the same time the gradiometer, counter, barometer & gauge readings were taken in the cab.

While coming down cards were also taken every 5 minutes. The engine test began when the train left the base & the boiler test when steam was up. The engine tank at starting was usually full & stops were made at Waumbek and the Gulf to draw water. The amount drawn in was recorded. On arriving at the summit the boiler feed pump was connected with the engine tank and the water pumped into barrels. This quantity was deducted from the amount drawn in thus giving the consumption on the "up" trip.

Test Number Two

Test No. 2 was made at noon on Aug. 4th. The engine pushing up a platform car loaded with wood and ice. The estimated weight of which was 3½ tons. The weight of the car being about one ton and the estimated weight of the engine with wood and water being 10 tons, making the of 14½ tons. We were obliged to take the estimated weight of the engine and cars, as there were no track scales on which we could get their weight. The duration of the test 71.5 minutes. [description of tables where results recorded]

Test Number Three

This test was made on the night train Aug. 4th. There being 25 passengers and the baggage car. The estimated weight of car and passengers being 5 tons. The wood and water were both weighed. [description of tables of results]

Test Number Four

This was made in the morning trip Aug 5th with a large car and 54 passengers but with no baggage car. The estimated weight of the car and passengers being 5½ tons. Both the wood and water were weighed. [description of tables of results]

Test Number Five

This test was made at noon on Aug. 6th with the engine alone, curves being taken both on the up and down trip. [description of tables of results]

The points on the plot came more evenly in this test than in any other. This was due probably to there being no car, and consequently, less friction going around curves.

Test Number Six

This test, the last of the series, was made on the night trip Aug 6th with 24 passengers and the baggage car. The estimated weight of the load being 5 tons. Both the wood and water were weighed. The wood being also weighed for the round trip including the building of a fire in the morning at the summit. 2743 lbs was used on the round trip.

Test Four - Down

Cards were taken on the down trip but the max FPs do not correspond with the max grades. The car being controlled by a friction brake, consequently the pressure on the engine was constantly changing. The max FP on the down trip was 101.58 taken where the weight of the car was allowed to come entirely on the engine.

Test Number Five Down

This test was made with the engine alone. The FPs varied more nearly as the grades for the same reason as on the up trip.

The loads pushed up on the different trips with the horse power developed are show on p. 92.

Tests 3 and 6 were made under practically the same conditions, but the same car was not used and the quantity of freight carried on the baggage car was not the same.

Test 4 was made with the largest car belonging to the road and which is supposed to be harder to push up than the other cars. This would appear to be the case as the baggage car included in the other tests would more than counter-balance the larger number of passengers carried on Test 3.

The larger amount of wood burned in Test 4 is to be expected. The quantity of water evaporated per lb. of fuel being slightly lower than in the other tests.

The water evaporated per lb. of fuel in Test 3 seems to be unusually high. This is probably due in a great measure to the fireman. The engine being fired on this trip by the most expert man. It would seem that 230 is a fair average for the lbs of water evaporated per lbs. of fuel. The HP developed between 90 & 95 with average loads. Test no. 5 shows the power required to run the engine alone, it being about 64% of the power developed with the average load, this at first sight seems rather excessive but appears more reasonable when the respective weights of engine and cars are considered, the former constituting about twice the total weight in each case. It will be seen that the work is evenly divided between the head and crank ends, the head ends if anything doing slightly more.

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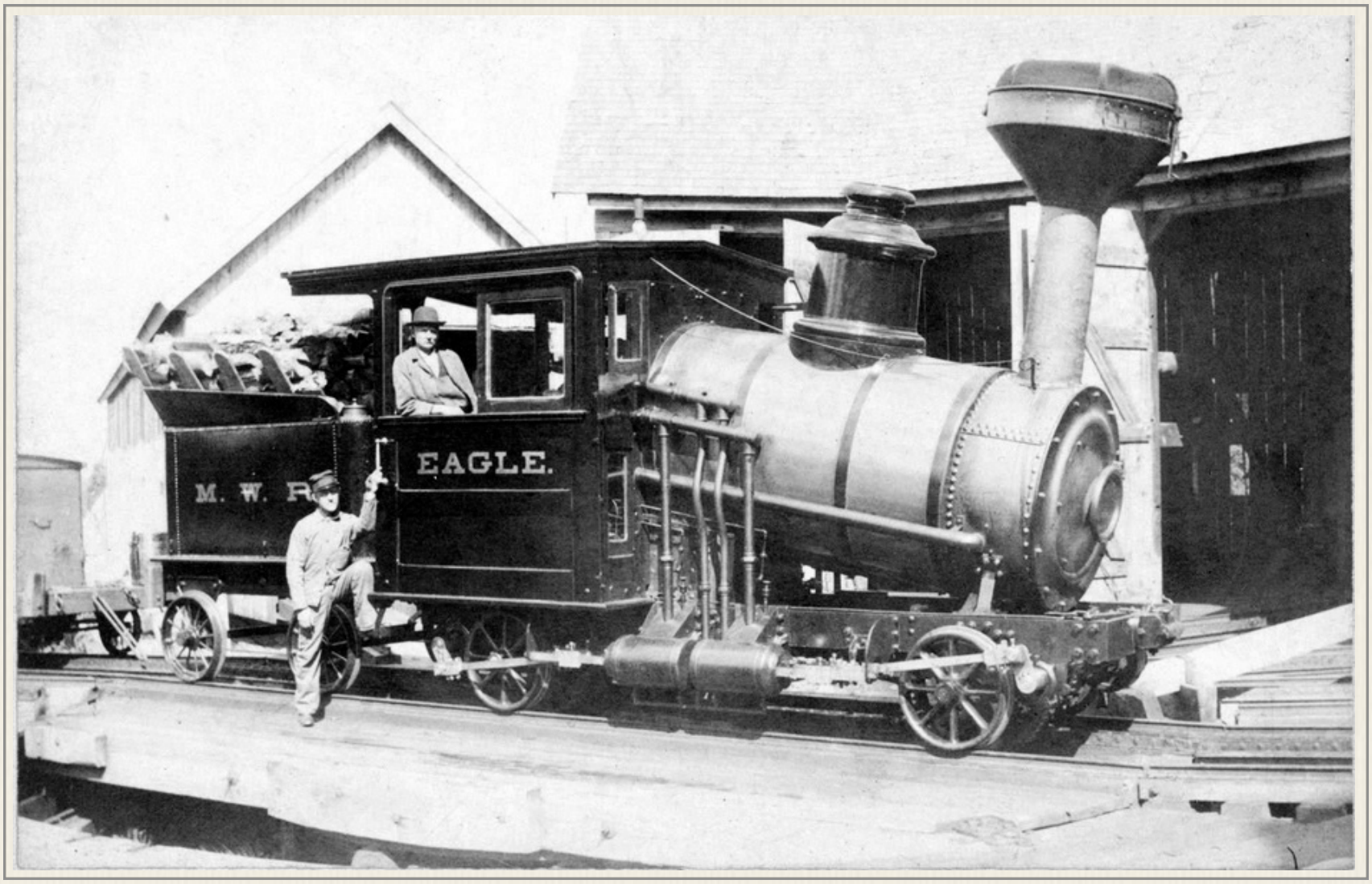
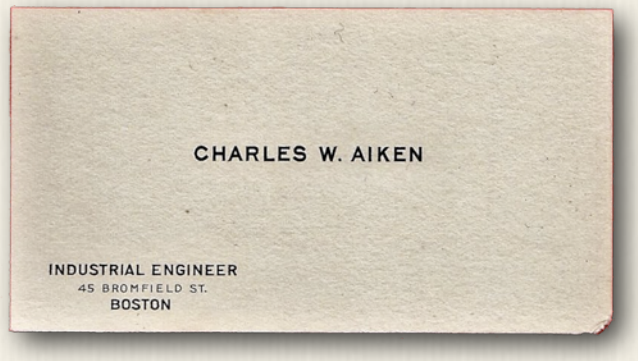
The quantity of water per HP per hour does not seem excessive when the type of valve and length of cut off (¾ stroke) are considered.

Greater efficiency could be got out of the engine by piping the cylinder so that there would not be such a drop in pressure between the boiler and cylinders. At present the engine is worked to its fullest capacity on steep grades, and were the piping rearranged such a high boiler pressure need not be maintained.



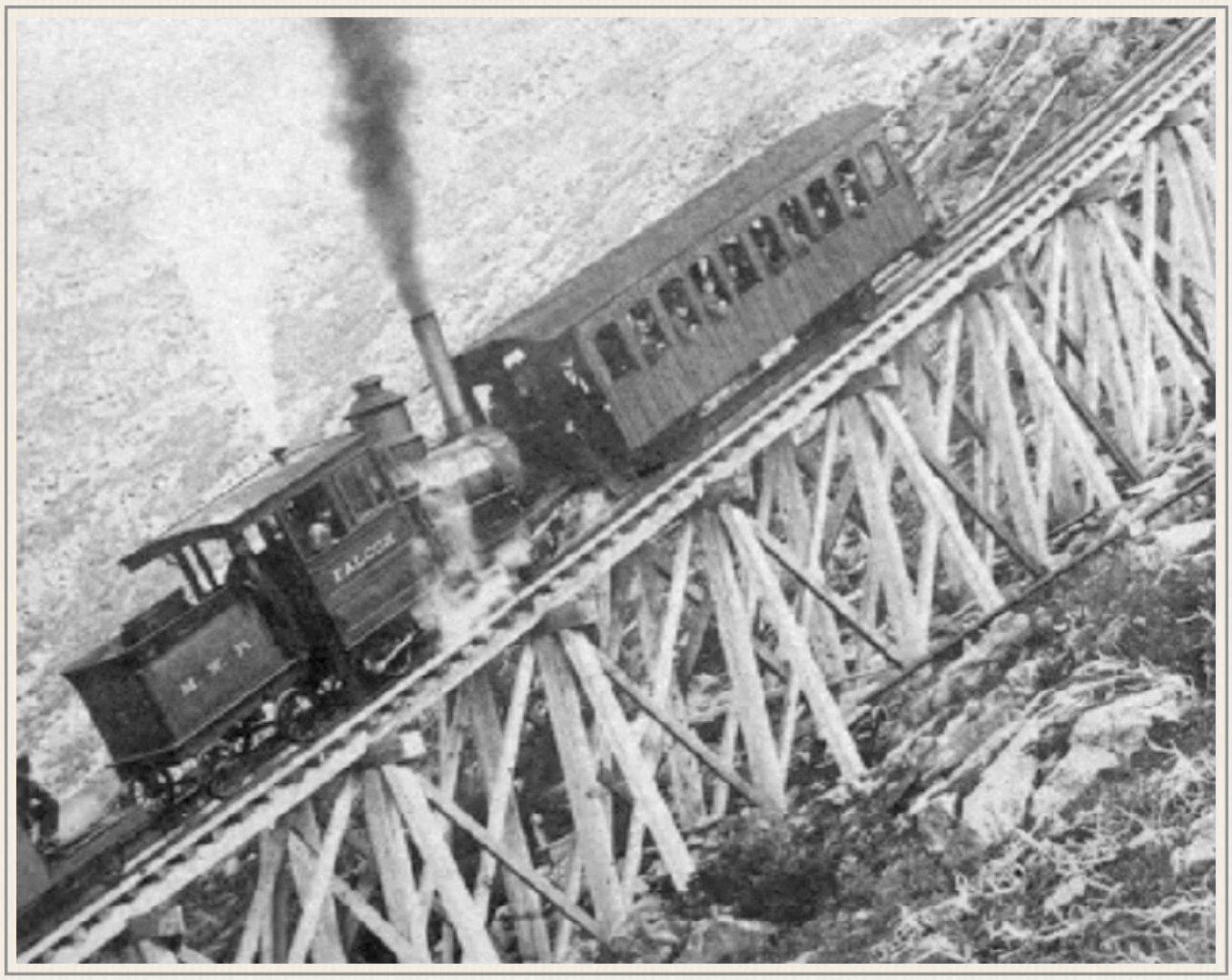
One of the engines in use at the current time on the Mt. Washington Ry.

The *Among the Clouds* newspaper reports on these tests may be found in Chapter 4 Sec. 16, and the Vol. 3 *Aggregated Timeline (1890 & 1891)* in this manuscript. Charles W. Aiken would graduate from the Massachusetts Institute of Technology, and become a consulting engineer living in Brooklyn, N.Y. His obituary in the *Brooklyn Daily Eagle* reports he was the owner of Aiken Manor on Webster Lake in Franklin, N.H. and had come to that place from Lorain, Ohio, to spend the summer of 1936. He died at the Franklin Hospital on September 2, 1936 at the age of 67. He was survived by his widow, a daughter, a stepson and a grandson.



The editor is indebted to Cogger Dennis "Stretch" Buss, who earned his BS, MS and PhD from the Massachusetts Institute of Technology, for convincing the MIT archives to rescan the online Aiken Thesis at photo-quality reproduction levels so the images contained in the word could be properly viewed.

1897 - The *Falcon* Takes Flight



When Cog kids in the Jitney era counted, their number sequence went "One, Two, Three, Four, Six, Eight, Nine" because there was no number Five or number Seven engine running on the line. Adults asked about the discrepancy were vague as to why - there was a wreck or something. There had been a No. 5 *Cloud (below)* and a No. 7 *Falcon (above)* at one time but no more.

Glenn Kidder's book says there were three *Clouds* in all. The first built in 1870 with an upright boiler *(left)* was replaced six years later with a No. 5 that featured a horizontal boiler. In the summer of 1890, the second *Cloud* helped Walter Aiken's nephew earn a Bachelor's degree from MIT. Charles W. Aiken and classmates, Robert S. Hall and F. A. Cole conducted a number of tests "on the evaporative efficiency of the boiler and the power developed by the engine on different grades." The hand-written thesis submitted in February 1892 contained mechanical drawings

of the *Cloud's* frame and boiler controls to assist in explaining the engine's operation. Those diagrams are reproduced here.

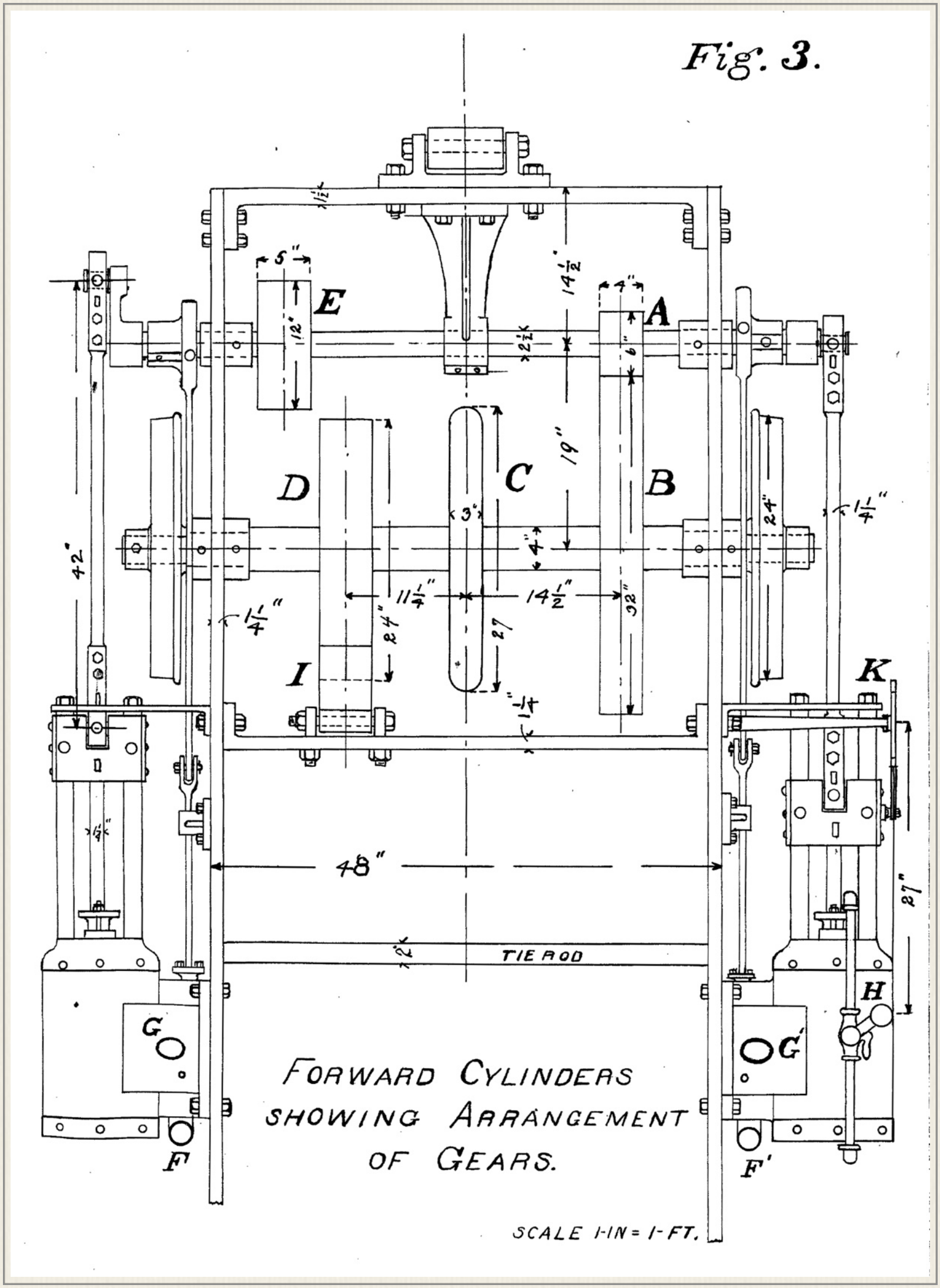
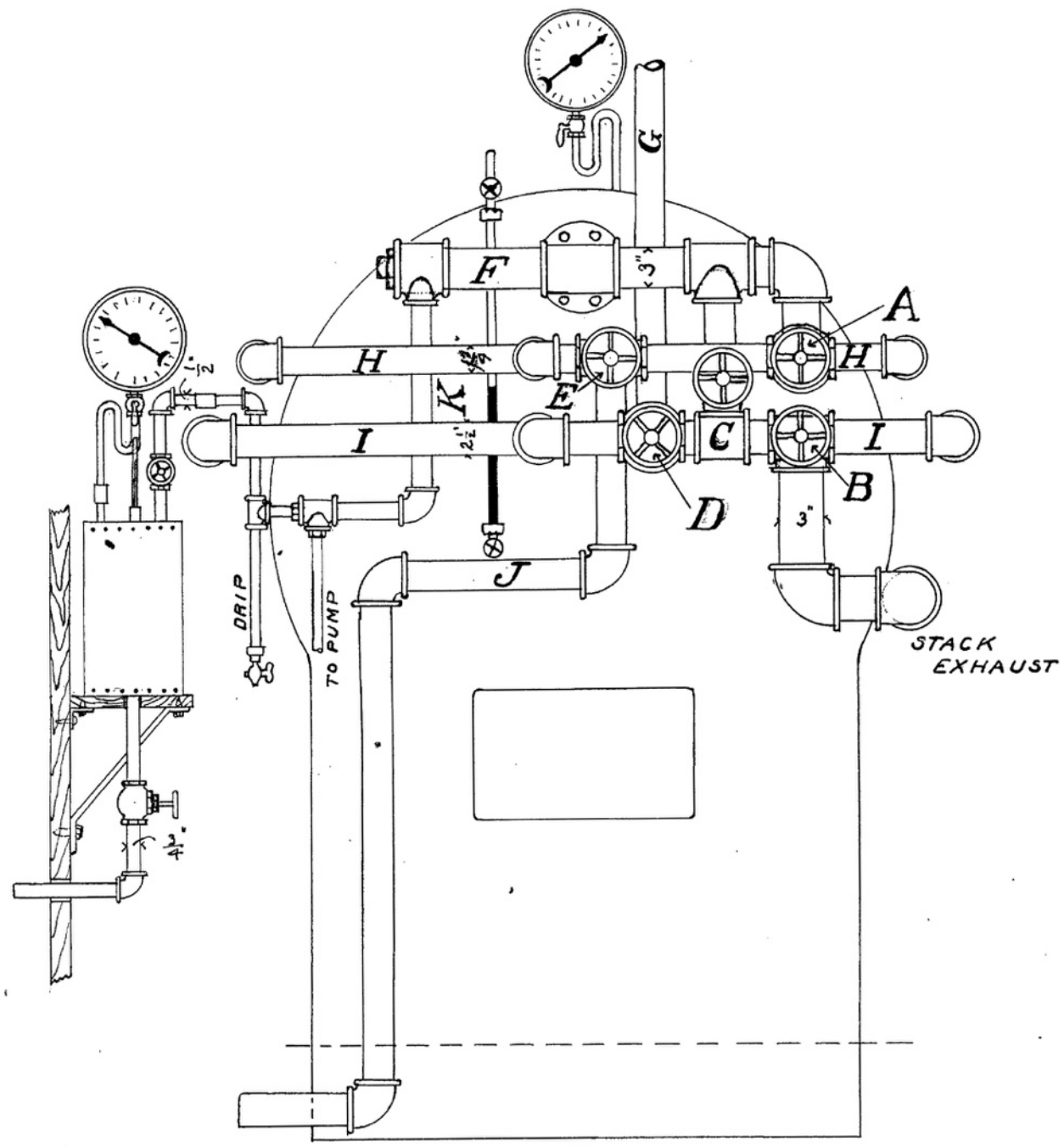
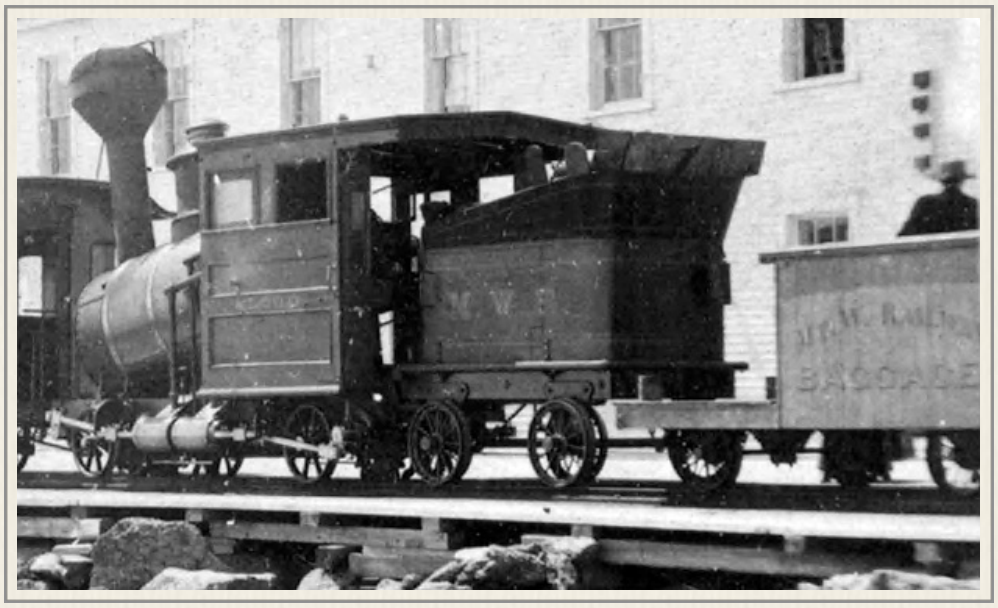


Fig. 4.

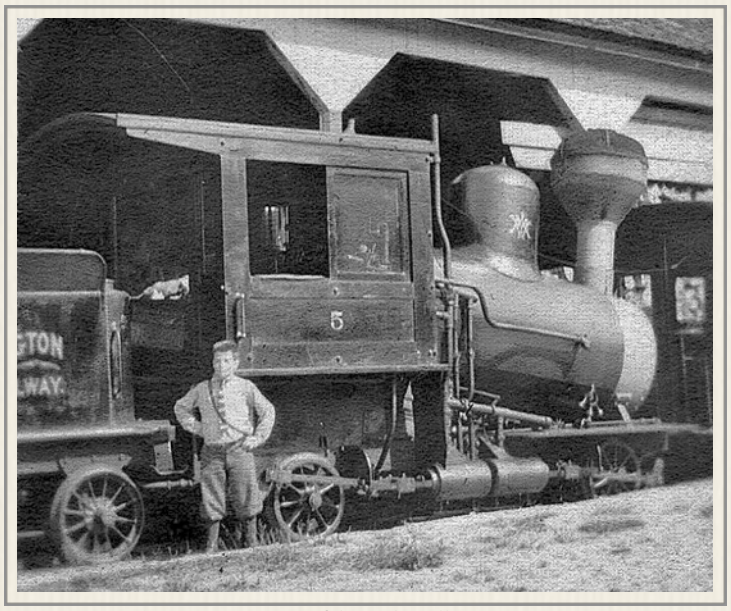


ARRANGEMENT OF VALVES.



Sec. 15 - *Falcon* Takes Flight

The second *Cloud* was extensively damaged in the 1895 Base fire and scrapped.

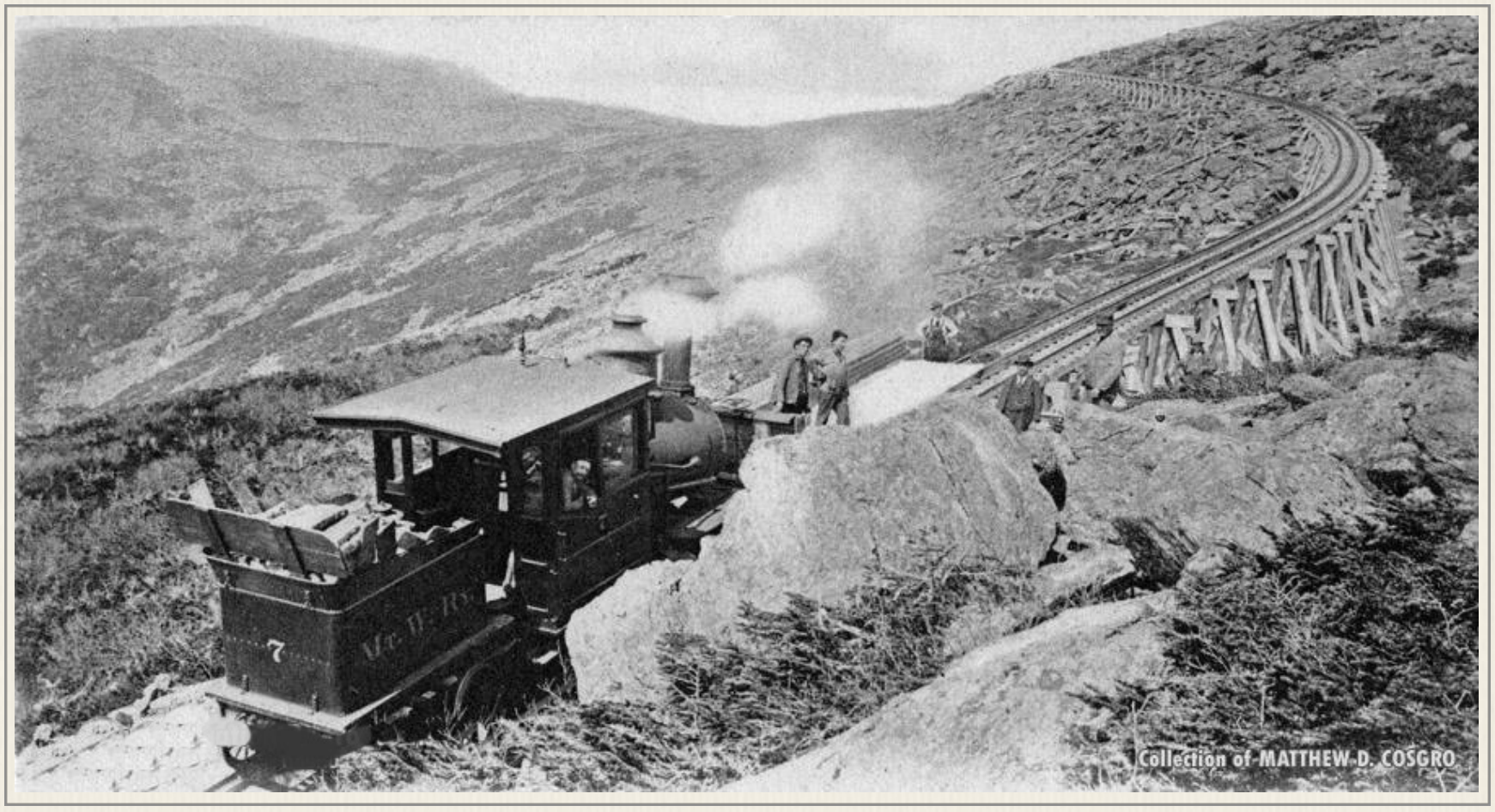


No. 5 at Base/Shop loading area (August 1913) - N.H. Then and Now Collection

The third *Cloud* was also built in 1883, but only carried the No. 5 and not the name. That No. 5 *(left)* became No. 3 *Base Station* when the No. 3 *Hercules* was scrapped in 1934. With that switch the number Five was retired from the locomotive roster, and *Clouds* disappeared from Cog sign boards.

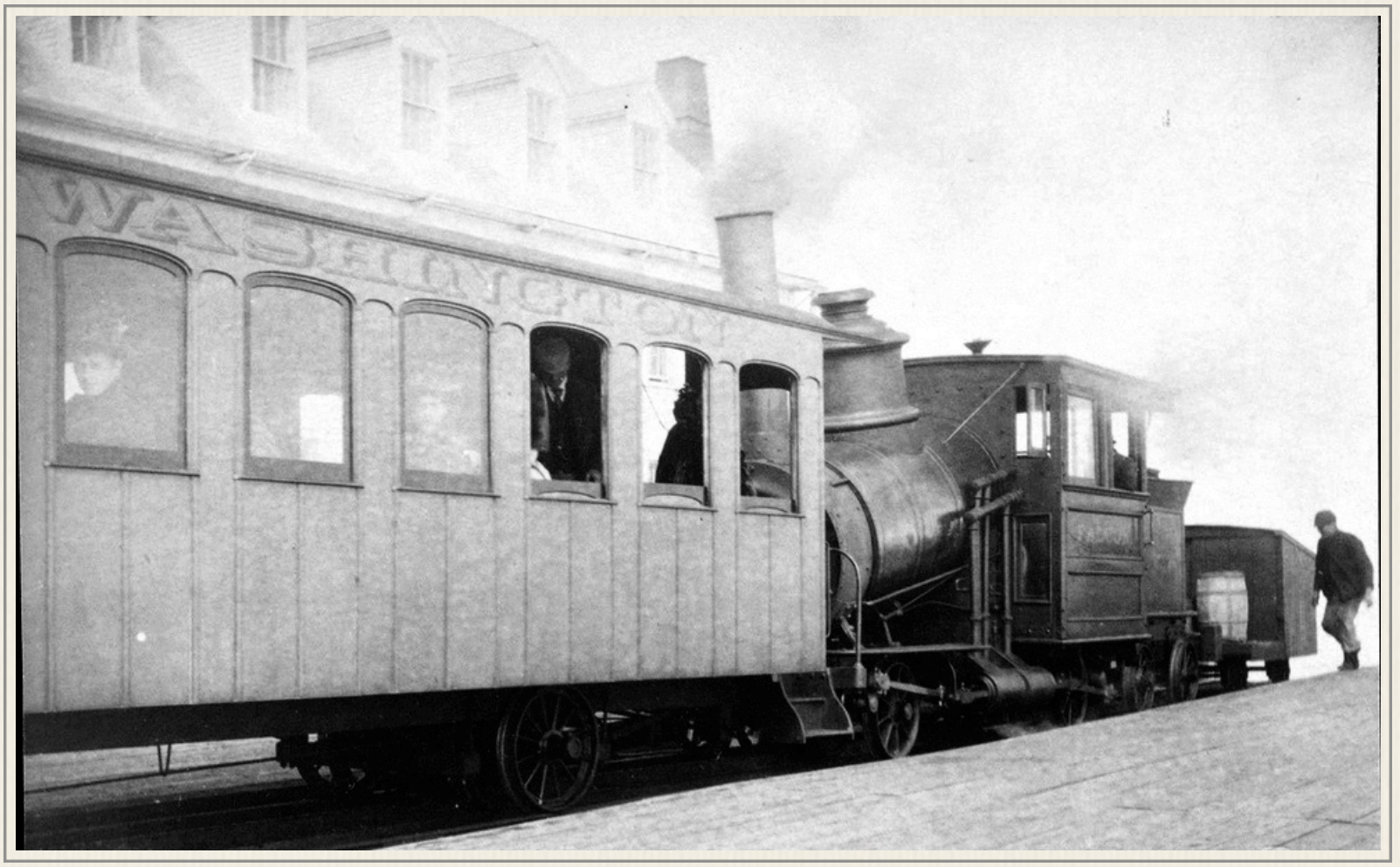
The first No. 7 *Falcon* built in 1883 *(seen at the start of this section)* was also singed in the 1895 blaze, but was re-built and became the No. 1 *Mt. Washington*. The second No. 7 *Falcon* was built in 1895 with a diamond smokestack *(below)* on a horizontal boiler, but it carried only the number Seven, and it's luck ran out just two years later in an "unusual" accident at the Summit. Unusual in that a locomotive parked according to procedure with brakes on, and ratchet down next to the hotel at the Summit should not be able to be pushed by the wind to roll off the top of the mountain and careen down the tracks. *(Editor's note: Tests on a flatcar at the Summit in 1946 determined wind would need to exert a force of some 825 pounds per square inch to move just a 3-and-a-half ton car on a partially wound brake, but if the brake was tight a steady force of 1930 pounds and gust jerk of 2870 pounds could not move the car. According to the Railway's Annual Report in 1896, the No. 7, it's passenger and baggage car would have weighed a total of 15 tons empty.)*

However in 1897, wind was precisely the villain named in an accident story that went national, and the No. 7 was never used again on an engine at the Cog.



Train Blown from the Track
Wind Hurls an Engine and
Two Cars Down Mount Washington

CONCORD. N. H. July 15 — A dispatch from Fabyan's today says that an engine, passenger car, and baggage trailer on the Mount Washington Railroad were blown from the platform at the summit of the mountain yesterday afternoon. The train was carried down the mountain, and was destroyed. There was no one aboard at the time. *- New York Times - July16, 1897*



Train blown Off

Last Wednesday morning an engine and car were run out of the engine house on Mt. Washington to the front of the Tip Top house, waiting for passengers to leave at 7 a.m. While the engineer was temporarily absent a gust of wind started the train down the track at fearful speed. When two hundred feet below the Lizzie Bourne monument, where there is a sharp curve, the engine left the track and was converted into a heap of iron. The car followed the track about a mile, when it leaped into space and landed some distance from the road, a total wreck. No passenger trains were run Wednesday on account of the mishap, but Thursday the road was open for travel as usual. This is the first accident of any importance since the road was built, twenty-eight years ago. It was a very fortunate circumstance that there were no passengers on the train.

- Littleton Courier - Wednesday, July21, 1897

An engine, passenger car and baggage trailer on the Mount Washington Railway were blown down the mountain last Wednesday during a terrific gale. The train was carried down the side of the mountain and destroyed. No one was injured as the train was empty. The accident would not have occurred if the engineer and fireman had been at their posts. The loss is heavy.

- Vermont Watchman (Montpelier, VT) - Wed, July 21, 1897 pg. 8

Sec. 15 - *Falcon* Takes Flight

Blew a Train of Cars Off the Mountain

CONCORD. N. H—The terrific cloudburst and tornado which devastated the northern portion of the state last week furnished a startling addition to the history of Mount Washington and its railway.

At the afternoon hour, when the wind had attained its highest velocity, one of the mountain trains, consisting of a passenger car, baggage trailer and engine, was standing on the platform at the summit of the mountain. The wind picked it up as if it had been a toy and blew it completely over, off from the track and down the precipitous side of the mountain. It was completely demolished.

Luckily there was absolutely no one either on the engine or in the car. There was no interruption in train service.

- New York Journal reprinted Los Angeles Herald, Volume 26, Number 304, 31 July 1897

Chronicles of the White Mountains - 1916

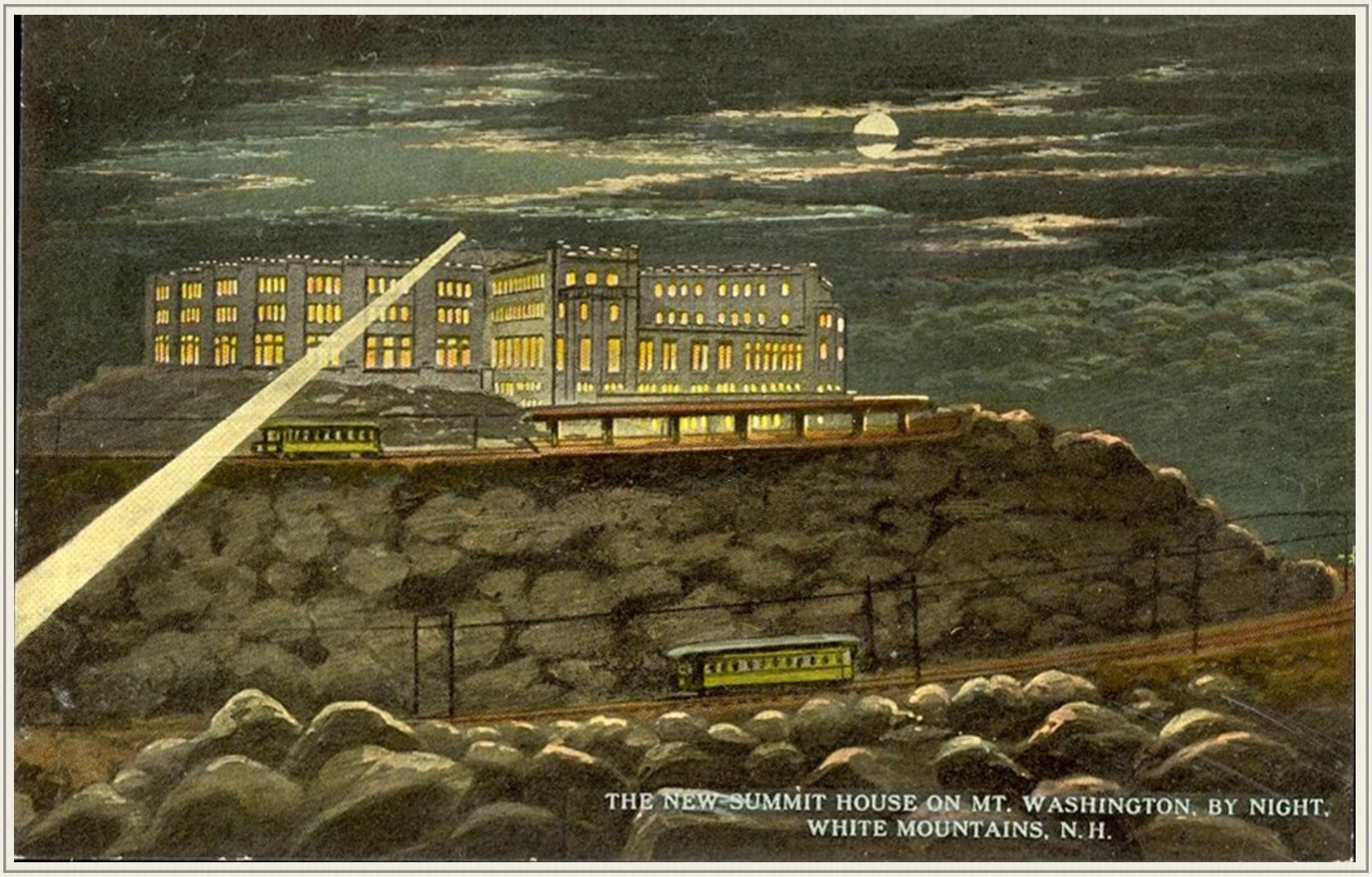
As has been already stated, no passenger has ever been even injured on the Railway. The only mishap of any consequence, and a most peculiar one, occurred about the middle of July 1897, when a train consisting of a locomotive, passenger car, and baggage car was wrecked. A heavy gust of wind struck the train, which was standing near the Summit, with such force as to start it off down the line. It was found that about a quarter of a mile down. The engine and baggage car had jumped the track, had turned over and over while falling a hundred feet or more into the gulf, and had become total wrecks. The man sent out to investigate on a slide-board reported that he saw nothing of the passenger car, but it was later discovered that this had left the track at a curve near Jacob's Ladder, had turned over and had been completely demolished. Fortunately no one was on board.

- Kilbourne, Frederick W. "Chronicles of the White Mountains" Houghton Mifflin Co. Boston, 1916 – pg. 244

The *54th Annual Report of the New Hampshire Railroad Commissioner*s for 1898 reveals the Mount Washington Railway Co. took $5,000 off its books - $4,000 for one locomotive and $1,000 for one passenger car "destroyed on mountain." Despite the loss, the company was able to pay out a 4 per cent dividend ($8,460) on its common stock, and end the year with a $14,413 surplus on its balance sheet. They carried 5,950 passengers that year.

MT. W. RY.
FALCON.

1912 - Electric Scenic Railway



Messrs Mellen & Morgan's Master Plan

"The new Summit House that is to crown Mount Washington, New England's grandest mountain, will in every respect be a monument to New Hampshire, while the new electric scenic railway, which will be nearly twenty miles long and circle the mountain two and one-half times, will be one of the wonders of the world. Plans are nearing completion for both railway and hotel. The total cost of the improvements, including the electric railway, hotel, power plant, rolling stock and equipment, is estimated at about $1,500,000. The vast proposition is to be financed by an issue of stock of the Concord & Montreal Railroad, authorized by a vote of the stockholders in June, 1912.

"A foot-path, opened in 1817, a bridle path, made in 1840, and a carriage road, finished in 1861, were in turn the means of ascent of Mount Washington. Then the happy thought of a New Hampshire business man - Sylvester Marsh of Littleton - revolutionized mountain climbing. The simple device of a cog wheel playing in a central rail was the means which he devised by which a locomotive might draw itself and its load up the steep grades. "Give him a charter to build his railway to the moon," said a member, when Mr. Marsh unfolded his plan to the New Hampshire Leg-

islature. But in 1858 the charter was granted. Several years went by before practical railroad men saw the merit of Mr. Marsh's idea and made his dream a reality. In 1869 the trains first reached the top of Mount Washington, and Mr. Marsh took his place in history as the builder of the first cog railway to the top of any mountain in the world. The cost of the road was about $150,000, and three years were spent in its construction.

"The present cog railway has been in operation for 43 years, and thousands of people have thus ascended and descended without accident. But it is safe to say that the little engines and closed cars are becoming insufficient to handle the growing traffic. This was the problem that had for some time confronted the railroad officials. At one time it was thought to electrify the present road, but that plan was soon abandoned. Then the idea of making a traction road was taken up.

"Vice-President E. H. McHenry, of the New York, New Haven & Hartford and Boston & Maine Railroads, was the first to take into consideration the construction of an electric railway which would depart from the old route and by winding about the mountain, open up new scenic attractions. He assigned to Chief Engineer A. B. Corthell, of the Boston & Maine Railroad, the working out of the problem. Under Mr. Corthell's direction, Engineer F. S. Darling was placed in the field and reconnaissances were made. The development of the enterprise, together with the planning of the new hotel is under Mr. McHenry's personal direction."

A Twenty-Mile Trolley Line to the Summit - A Masterpiece of Engineering

"The building of the old cog railway up Mount Washington was a simple piece of work compared with the problem which confronted the Boston & Maine Engineers. In building the cog road, the proposition was one of cutting down trees on a straight pathway, leveling up the inequalities of surface, and above the timber line putting in trestles wherever necessary. To provide for permanence of construction, to avoid the marring of the landscape, to secure easy grades and to reach points affording the finest views - all these were factors which entered largely into the new problem but not at all into the old one. Furthermore, the possibilities of destruction by landslides and winter avalanches had to be considered, as well as the use of a form of power unknown in Sylvester Marsh's day.

"Engineer Darling celebrated the Fourth of July, 1911, by starting the actual survey of the route along these lines. With seventeen men he began the preliminary survey, and in the face of great difficulties, but with a double crew of men the last two months, made both the survey and location of the road, and completed his task in October.

"Grades were studied and various routes followed, the grades varying from three to ten per cent. Finally, a uniform grade of six per cent was decided upon, and on this basis routes were studied. One ran around the Lakes of the Clouds, between Mount Washington and Mount Monroe. Another was planned to run along the Great Gulf side of Mount Clay, but the sheer precipices on this side caused an abandonment of this plan.

Sec. 16 - Electric Scenic Railway

"All the time the engineers had to keep in mind, besides the engineering problems, which were many and varied, the preservation of the landscape and the matter of reaching the vantage points for views. This, of course, complicated the task. Finally, a route which would afford the finest views to the West and North, reaching the picturesque height known as the Ridge of the Caps and the Castellated Ridge, and then going along the westerly side of Mounts Jefferson and Clay, and finally encircling the cone of Mount Washington, affording views in every direction, was decided upon. One advantage of this plan was that it would be possible, at no great cost, to run a spur to Mount Adams.

"The first part of the survey led through the dense woods on the lower slopes up the Jefferson Notch. But this was nothing compared with the difficulties met on the survey above timber line. The difficulties of locomotion over rocks covered with hedge-like growth of stunted spruces can better be imagined than described. In some cases the branches of the dwarfed trees, which were fifty years old and not more than three feet in height, were so interlaced that it was possible to walk along the treetops, stepping close to the trunks. This was dangerous, because the branches might give way, precipitating one into a hole in the rocks from which he might emerge with a broken leg. Added to this was the discomfort and difficulty of surveying where sudden rainstorms would arise, and clouds would hide members of the party from one another. To complete the field work in less than four months was a great feat in itself. All the time the engineers had to keep in mind those long streaks down the side of the mountain which told landslides which would wipe out any railroad structure. As the route is laid out, all danger from this source has been eliminated."

Proposed Right of Way

"The present road from Fabyan to the Base, a distance of nearly seven miles with a maximum grade of five and one-half per cent, will be electrified and used as part of the scenic system.

"Fabyan, the union station of the Boston & Maine and Maine Central Railroads, will be the starting point for the ascent. There will be a stop at Bretton Woods, half a mile from Fabyan, the station for the Mount Washington and Mount Pleasant hotels. Then, turning to the left the line passes Lake Carolyn and the Bretton Woods golf links and goes for some distance along the rocky gorge of the Ammonoosuc, where views may be had of the remarkable rock formations down which the raging stream tumbles. The southern peaks of the Presidential Range - Monroe, Franklin, Pleasant, Clinton, Jackson and Webster - are seen at the right, while Mount Washington is supported on the left by Mounts Clay and Jefferson. The line continues, crossing several streams, and always climbing higher, reaches the Base Station, 1000 feet above Fabyan and Bretton Woods.

"At Base Station the new road begins. It starts exactly at right angles to the present line, and at several points the road runs directly away from the summit of Mount Washington. Running almost north the first two miles of the journey from Base Station is through the woods, crossing Jefferson Brook and winding a serpentine way up through the picturesque and wild Jefferson Notch, with the Dartmouth range and Mount Mitten off to the left. At this point a feeder electric line

runs up directly toward the summit of Jefferson. From Jefferson Notch, which is reached at an altitude of some 3,200 feet, the road crosses what is known as the Ridge of the Caps, unfolding a series of panoramic views to the north and west. Five hundred feet higher the road comes to the very edge of the Castellated Ridge, and here will be one of the most interesting features of the journey. Instead of making a turn around the edge of the ridge the railway will go through the ridge by a tunnel, and with a turn to the left will come out and cross over itself.

"On the west slope of Mount Jefferson, beginning at the Castellated Ridge, the route presented great engineering difficulties, making it necessary to put in two switchbacks. Such a method, of course, could not be used on an ordinary road, but here it will be an additional attraction and a novel feature. In a direct line from Jefferson Notch to the highest point on the side of this mountain where the railroad runs is a distance of less than a mile and a half, but by the railroad it is about six miles. After the road passes over itself it runs back toward Base Station, but always climbing, for a mile and a half. At the first switchback there is a sheer drop in front of nearly a thousand feet. The car will then run backward to the Castellated Ridge and the second switchback, affording a view down into the deep Raving of the Castles and beyond Mount Jefferson to Mount Adams, Mount Quincy Adams and Mount Madison. From the second switchback the traveler for the next few miles faces Mount Washington. Running along the side of Mount Jefferson, some nine hundred feet below the summit, a detour is made between Mount Jefferson and Mount Clay in order to afford a view of the Great Gulf, although this is not seen at its best until later. To the right, looking across Burt's Ravine, some 1200 feet below, is an inspiring series of views. The road runs along the slope of Mount Clay only a few hundred feet below the summit and crosses the old cog road at a point near the Gulf water tank.

"From this point the road is on Mount Washington itself, and a wide prospect is opened up of the southern peaks, Monroe, Franklin and Pleasant, and the country beyond. Coming in sight of the Lakes of the Clouds, the road makes an abrupt turn to the left, beginning the circling of the summit and giving a wonderful view down into Tuckerman's Ravine. Climbing higher, it runs above the Alpine Garden and unfolds views toward North Conway, Lake Winnipesaukee and Portland. Making another turn to the left the road doubles back and crosses the carriage road, looking down into the Great Gulf, with Spaulding Lake 1200 feet below. Again crossing the old cog road the electric line completes a circuit of the Summit but, makes another complete turn and comes to an end in front of the new hotel, having run two and a half times around the top of Mount Washington.

"Thus the visitor will have repeated outlooks at different elevations toward every point of the compass, and will be able to look down on the road below over which he has already traveled. Many of the grandest sights will be brought within the reach of all which now can only be seen after long and arduous climbs."

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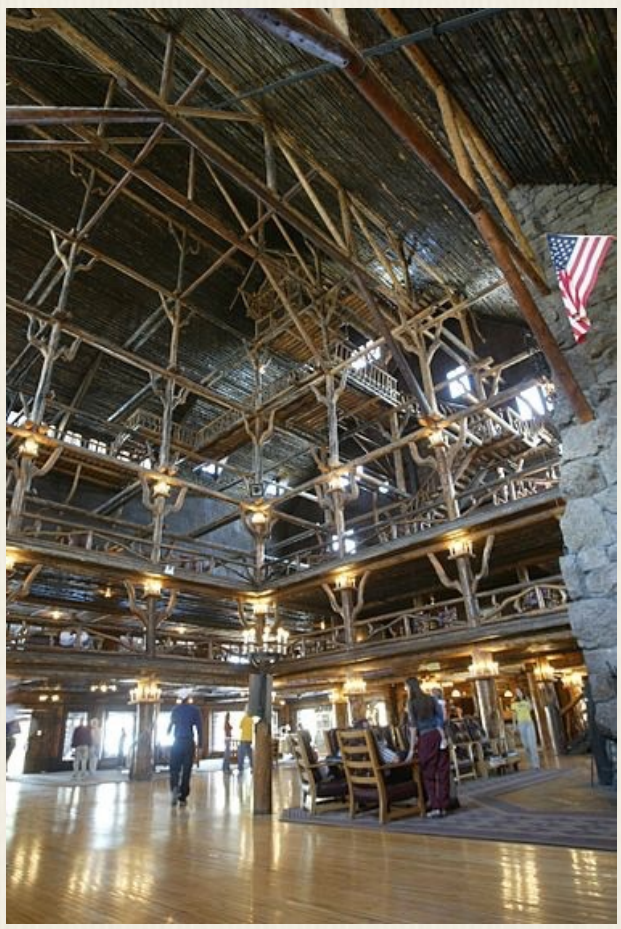
The New Hotel - A Massive Structure of Stone, Steel, Concrete and Glass

"Unique among hotels will be the structure which will surmount the pinnacle of New England. It will be the only hotel in the world which will have a mountain top sticking through its floor. It will have every room an outside room, and in spite of its location it will be equipped with all modern conveniences and provide for all the possible wants of tourists. The new hotel will have one hundred sleeping rooms and will be three stories in height. In planning it the most unusual features have been incorporated. It will be a combination observatory and hotel, and will not "get in its own way" to obstruct the view.

"In planning the hotel the general features were decided upon only after many consultations of officials, and the working out of the details of the plans was left to Architect R. C. Reamer *(right)* of the New Haven road's engineering department, who had years of experience in this line, having planned unusual features for the Yellowstone Park hotels *(below)*. It was recognized that the season would be short, and that a large number of people would go to the mountain merely to spend a few hours, while others, disappointed in the weather after reaching the summit, would wish to spend the night. Accordingly, provision was made for a dining-room which would accommodate some 300 or 400 people during the day. Of the hundred rooms, many will be provided with baths The building will be of stone, wood not being able to withstand the elements, and plenty of the solid material being already at hand. It will be absolutely fireproof.

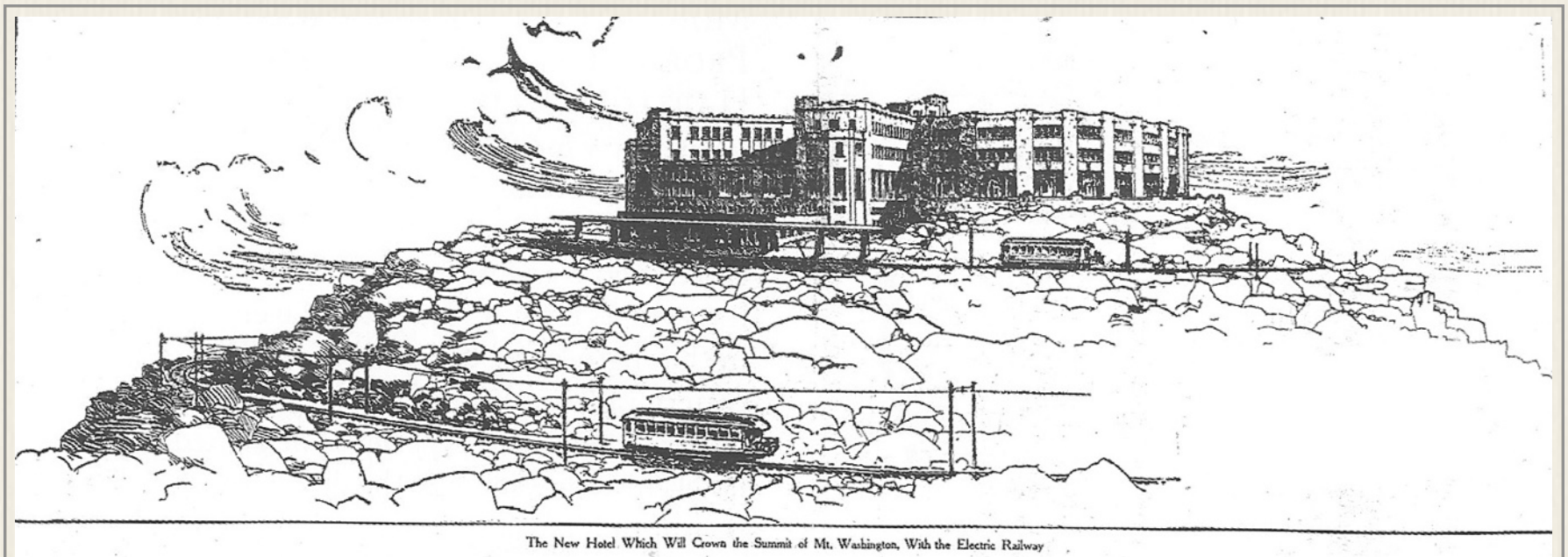
Architect Robert Chambers Reamer



Interior of Reamer's Old Faithful Inn with four stories of balconies

"The great feature of the building will be a circular observatory 150 feet in diameter. The sides will be practically all of heavy glass, and the fan-shaped wings of the building on the east side will be so placed that only 48 out of the 360 degrees of the circular observatory will be cut off from the view. The observatory, which is three stories high, will be surmounted by a circular walk on the roof, and a glass skylight 90 feet in diameter. Above all will be a searchlight which will be of sufficient power to be seen from Portland, Me., and other points equally distant.

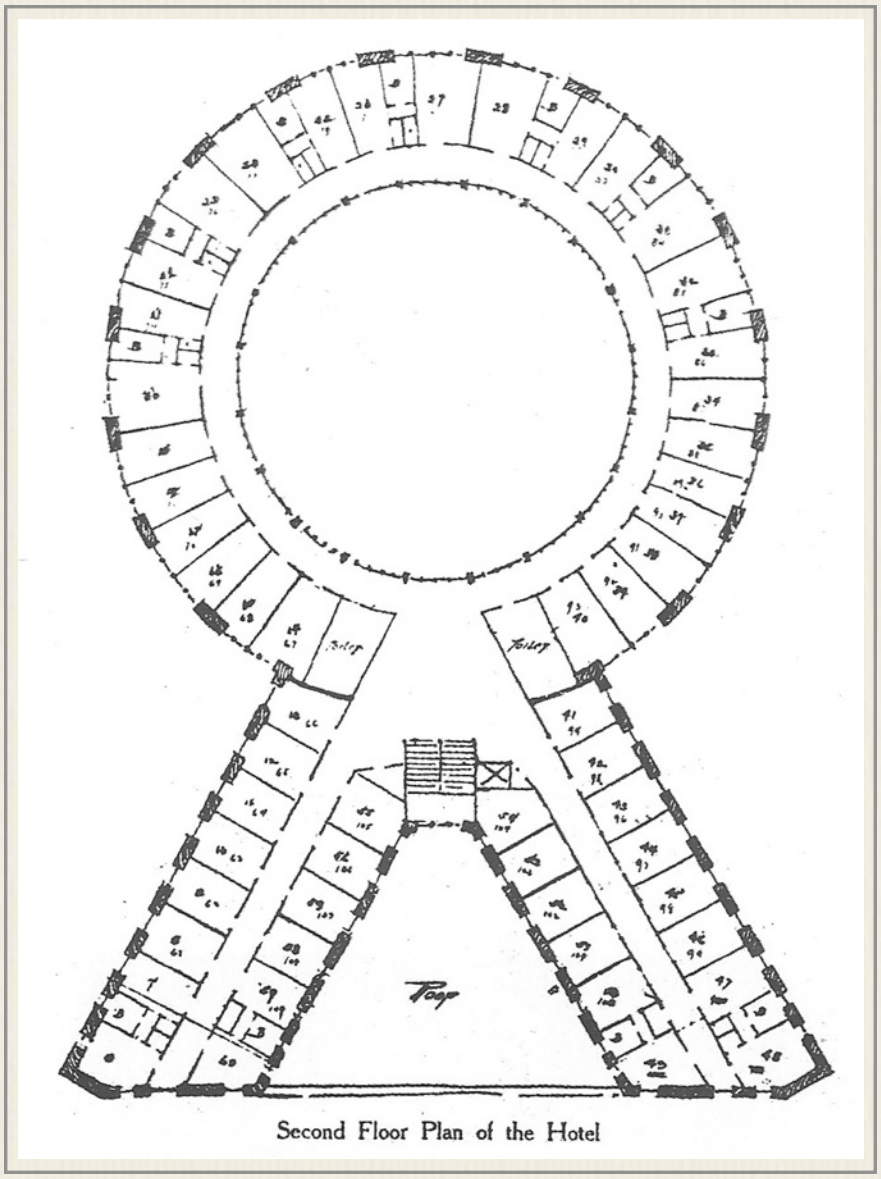
"The railroad station will be on the south side of the hotel, and provision is made for separating the passenger and freight traffic, one passageway leading to the service and store rooms, while another will go directly into the hotel. In the basement will be the kitchen, boiler and engine rooms, wine room, barber shop, billiard-room, lavatories and servants' rooms. From the passageway, which goes into the side



The New Hotel Which Will Crown the Summit of Mt. Washington, With the Electric Railway

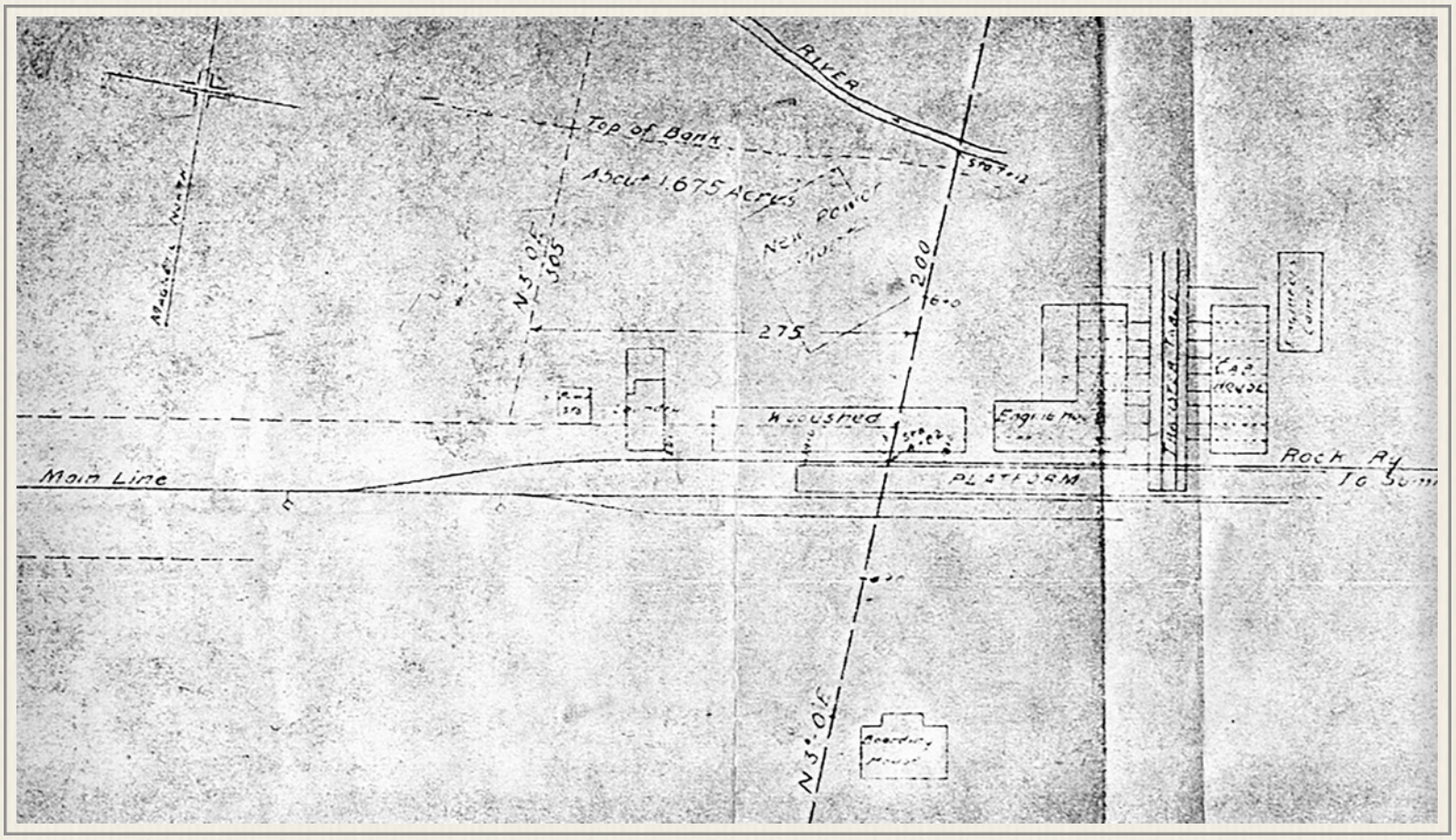
of the mountain, one goes up a flight of stairs or by elevator into the lobby of the hotel, which is entirely apart from the circular rotunda. Here will be the service rooms, some sleeping rooms, the great dining room and the news and souvenir stands. Above this are two stories, just alike, in which the rooms run around the observatory well and are in both wings.

"Verandas and porches are of little use on the summit of Mount Washington, and therefore the "verandas' of the hotel are placed within the observatory part itself. Around the outside of the first floor, however, will be a terrace, and the glass side of the rotunda will open so that one may step directly from there out of doors to the terrace. The observatory part will be centered on the highest point of the mountain, and a picturesque feature will be in having the very summit of the mountain itself protrude through the floor so that one may stand on the summit and view the horizon for 312 degrees of the circle. Inside the rotunda a row of pillars will support the upper stories, but these will not obstruct the view, as they have a common center, and between the pillars and the observatory walls will be a space of some 25 feet clear. On the second story, surrounded by the sleeping-rooms, will be a circular gallery, looking down into the rotunda. Around the circular skylight on the roof will be a space 25 feet wide. The building will be handsomely furnished throughout, and the interior finish will be rich and expensive. In lighting the interior some novel effects will be produced, but the details are not fully worked out."



Second Floor Plan of the Hotel

Sec. 16 - Electric Scenic Railway



Plot of location of proposed "new power house" site behind woodshed. New pumping station located to left of laundry. "Engineers Camp" building for survey team to right of Car House. (1912)
- Joseph Orlando Jr. Collection

New Line to be Concord and Montreal Extension

"The present road from Fabyan to the Base is now owned by the Concord & Montreal Railroad, which also owns valuable rights at the Base and Summit as well as the stock of the Mount Washington Railway. The new line will be an extension of the Concord & Montreal from Base to Summit.

"The pumping station at the Base to supply the new hotel with water was completed last fall, together with the pipe line from the Base to Summit. This plant is unusual in that the water is pumped in one stage or lift from Base to Summit, an altitude of 3,700 feet, and the pressure is tremendous.

"The power plant which will generate the electricity to keep this vast establishment in operation will be located on the Ammonoosuc river at the Base. The Base will also be retained as the headquarters for the railway.

"Electric cars will start at Fabyan and run through to the Summit without change, requiring less than two hours for the trip. When the new line is complete the cog road will be abandoned."

June 1912

The Design of an Electric Railway for Mount Washington: A Thesis Submitted to the Faculty of the Worcester Polytechnic Institute For the Degree of Electrical Engineer

by

Millard F. Clement

The design for an electric railway for Mount Washington has been undertaken as a thesis for three reasons: First, because of the writer's close acquaintance with the present conditions on the mountain, second, because the present railway with its smoky and dirty little engines is becoming insufficient to handle the growing traffic, and third because the proposition seemed of enough engineering importance to warrant the expenditure of time and efforts. The writer has not been disappointed in the least by the last point.

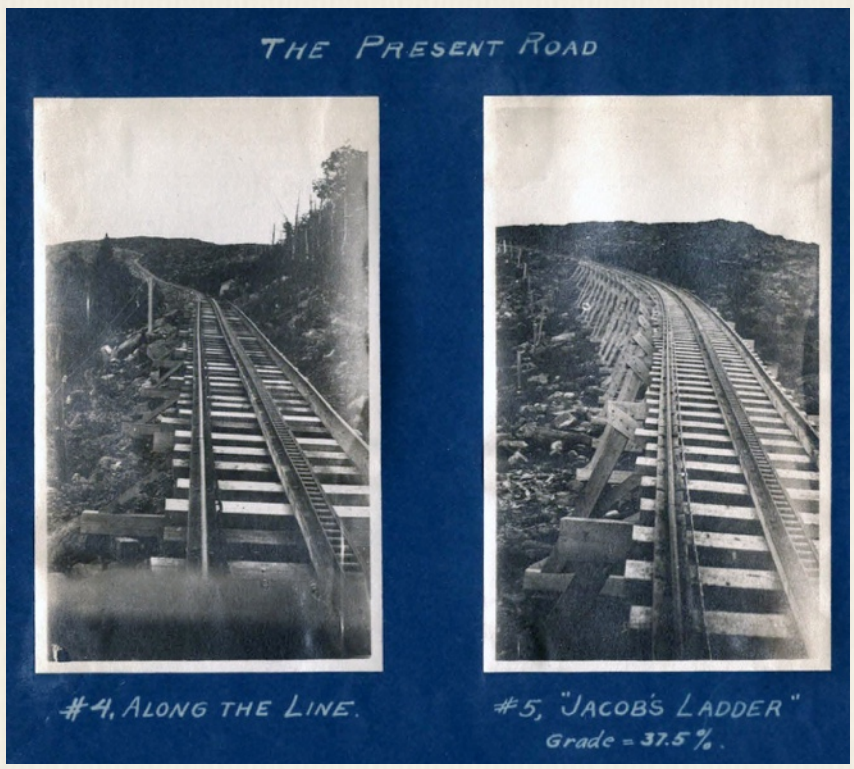
Historical

Mount Washington, the ancient *Agiochook* ("mountain with snowy forehead") of the Indians, is the highest point of land in the easter part of Norther America. It is situated in the northern corner of the state of New Hampshire, forming the crown of that section of the White Mountains known as the Presidential Range, and has an altitude above sea level of approximately 6,300 feet. It lies in the unincorporated tract of land known as Sargent's Purchase, and was originally sold by the state of New Hampshire to Jacob Sargent and others, May 31, 1832, for $3,000. It has passed thru various hands and is still privately owned, but a considerable portion of the summit has been conveyed to the Mount Washington Railway Company.

The present rack road which extends from Base Station (To be called Ammonoosuc) to Summit was the idea of Sylvester Marsh of Littleton, N.H. who was granted a charter for it in 1858.. The road was finished to the summit in 1869 having taken three years in construction and costing $150,000.

Length of Line and Grades

The essential features of the road are the rack (shown by photographs) and the heavy grade which averages 25% for the 3.3 miles of track with a maximum of 37½% at "Jacob's Ladder". The road is reached by a branch line from the Boston & Maine R.R. at Fabyan. A fuller explanation is given later under "proposed line" this same branch to the Base Station being used.



Rolling Stock

The rolling stock consists of 6 train units which are made up of an engine and tender and one passenger car. The locomotive, equipped with two pairs of cylinders conveying power to two large cog wheels operating independently on the roack, pushed the car up the mountain and holds back by compression coming down. Each car is furthermore equipped with its own cog wheel and hand brakes. A safety appliance, whereby only a definite speed can be attained, has proven efficient for the 43 years of service.

Sec. 16 - Electric Scenic Railway

Schedule Speed

The running time from Fabyan to Base is 32 minutes and from Base to Summit 80 minutes. The schedule speeds are then as follows: Fabyan to Base - 14 MPH / Base to Summit - 2.5 MPH

Concentrated Traffic

Schedules have been such that it was necessary to take the 400 (passengers) up at once in the morning and return in the middle of afternoon, although a train used to go up in later afternoon when Summit House was running and return in early morning. The above condition which prevails largely at present has lent the most difficulties to a proposed change of line with the accompanying use of electricity for power.

Reasons for Making Some Change, Preferably Use of Electricity

Inadequacy of Present System

The above figures in regard to the equipment and traffic show tht on those days when 400 are taken up the mountain the capacity of the cars is taxed to the utmost. In fact the writer has taken the trip when some over 300 passengers were crowded into 6 trains. As all cars seat 40, save one which seats 48, many sat on the steps, some sat on planks across the tender, while many were forced to stand.

Smoke Nuisance

Add to the above conditions the smoke and steam from a wood burning locomotive and with little or not wind the conditions are very unpleasant. Coal has been tried in the loconotives but found unsatisfactory due to the altitude.

Short Ride and Limited View

The third important reason for making a change is the fact that the present road follows one side of a ridge from base to summit which permits but a limited view, to obtain which the passen-

ger is forced to twist around in the seat and get his head out of the window, those on the inside faring still worse. The view at right angles to the line is very limited until near the summit and then in but one general direction which is often at this height obstructed by clouds.

The fare for the round trip, which at present lasts from 9:30 a.m. to 3:30 p.m. with 2 hours at summit, is four dollars.

Statement of Problem

The problem is then to enlarge the capacity of and the pleasure of a ride on the present system at a lower fare or, make use of a completely new line and equipment.

Possible Solutions

Enlarge Present System

The speed of trains on the present road, which is 2.5 MPH cannot be safely increased because of limitations in capacity of locomotive and the condition of the trestle-work. The number of trains cannot well be increased due to the schedule and there being no provision for two trains passing or a greater number being stored at the summit.

Replace Steam Locomotives with Gasolene Power

To replace the present steam locomotives with a gasolene type does not remove the above hindrances, merely eliminates the smoke nuisance; besides, a suitable gasolene equipment is not a present on the market.

Electrify the Present Road

The electrification of the present road is out of the question as is any change of power on the present road, since it would only increase the capacity possibly, while the view would remain the same and the fare for the short ride would in all probability be increased.

Add to the above features the fact the two equipments (branch line train and rack system) are already in use, causing delay while changing cars at Base Station, then the desirability of an entirely new system, involving same equipment from Fabyan to Summit becomes apparent.Proposed Right of Way

Uniform Six Per Cent Grade

In view of the limitations on the present rack system, as mentioned above, the writer proposes to abandon it and so a new right of way has been laid out from the Base Station (Ammonoosuc) to the Summit of Mount Washington which involves nearly 12 miles of approximately 6% grade and makes use of two switch-backs, one on the Castellated Ridge of Mt. Jefferson and the other at the foot of the cone of Mt. Washington near the Lakes of the Clouds. These switch-backs have been called Jefferson and Munroe respectively.

Location and Map

The proposed road would be a continuation of the present line, (see photo #10) from Fabyan to the Base Station. Following this page is an enlarged government map showing in detail the proposed extension to the Summit from the Base Station.

Description of Line

Beginning at Fabyan the run to Bretton Woods is over practically straight level track first passing thru the steel covered bridge and then paralleling the state road and main promenade between the Fabyan House and the Mt. Pleasant House.

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The start is really made at Bretton Woods (the station for the Mt. Washington and Mt. Pleasant Hotels) from which point the run is made over level track past Lake Carolyn and the golf links in a northeasterly direction meeting a 2% grade at the edge of the woods about 1.6 miles from Fabyan. Three miles of the 2% grade follow with curves varying up toe 11 degrees as the track winds up the south bank of the Ammonosuc, after which the gradient rises to 5.5% and the line continues crossing several streams including Pleasant Brook and reaches Ammonoosuc 1,000 ft. above Fabyan and 6.5 miles distant from it.

From Ammonoosuc the proposed line begins with a 14.6 degree curve 850 feeting long which bears around to the northwest across the river, over a wooden trestle, and follows the general run of the contours toward the north at a 5.8% grade. Clay and Jefferson Brooks are crossed on short wooden trestles and the road winds around the ridge of the Caps toward the north-east, then crosses several more small streams reaching Jefferson, the first switchback, at an altitude of 2390 ft. above Fabyan.

From Jefferson the road takes a direction nearly due south following along he west slopes of Mts. Jefferson and Clay at a uniform grade of 5.8% with alternate straight track and curves running up to 18 degrees. The old rack road is crossed at an altitude of 5100 feet or 3500 feet above Fabyan and with the same general direction the track ends at Munroe, the second switchback which overlooks the Lakes of the Clouds.

From Munroe to the Summit the grade runs at 6% in a northerly direction, recrosses the old rack road 700 feet higher than before and bears sharply to the east around a 19 degree curve. About 1500 feet further on it crosses the Carriage Road, makes a loop around a crag, and returns again toward the south beginning the spiral which requires two complete turns before reaching the Summit station at an altitude of 6270 feet and 4770 feet above Fabyan. The last 1800 feet of track would have a spiral varying from 21 degrees to 33 degrees, the latter being equivalent to a 1% grade.

Two 150 ft. sidings would be provided at the Summit for storage of cars during the lay-over and a small car barn for the cars remaining over night and needing slight repairs.

Storage Battery Cars

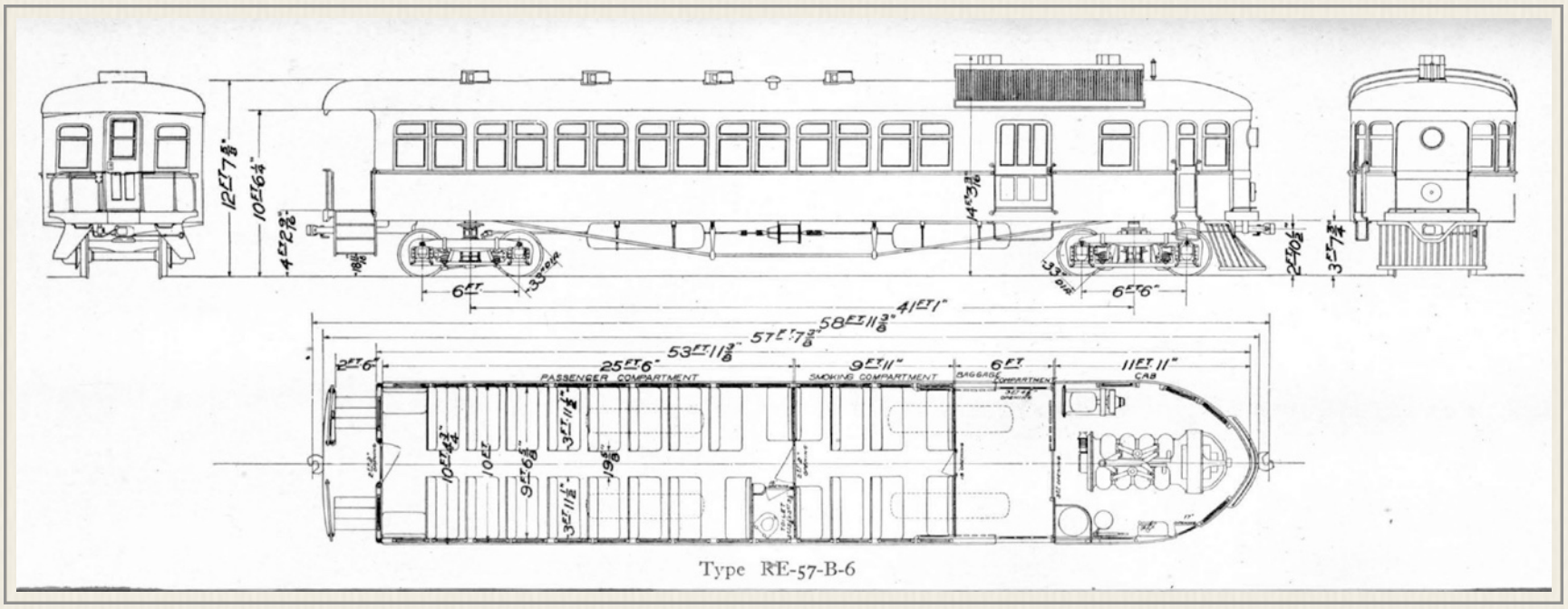
The above line having been decided upon several systems presented themselves; for it should be stated here, that although the design of an electric railway was the problem undertaken, yet it seem desirable at the same time to make comparisons as far as practicable with any other suitable system that came to notice.

The Federal Storage Battery Car was the first to come up and because it was early seen that with traffic bunched as at present the load factor on a suitable power plant would be exceedingly poor. It was hoped that a storage batter car might be used, thus dissipating in an hour to two the energy which had been stored up during the rest of the day, from a smaller plant, to drive the car up the grade.

(Clement contacts the company about the plan, and sends them the grade profile and map.)

Mr. A. M. Thresher, Chief Engineer (of Federal Storage) replied: "Although we are operating a number of roads having considerably steeper grades than suggested in your letter, we do not as a general rule recommend battery cars for heavy upgrade work. However, we will be very glad to go over the proposition and give you sufficient data to enable you to work out a thesis along this line, and will endeavor to send it to you some time this week." *Dated 3/4/12*

Up to the present, no data having been received... rough calculations have been made using standard equipments. We have (a) cost per train unit equal to $21,375 to $24,075. Since cars could be used but once a day (single battery charge) 10 would be required. This calls for an outlay aside from the power plant of over $200,000, three quarters at least of which is in battery. Thus unless a very much lighter equipment could be obtained a batter car is out of the question entirely.



Type RE-57-B-6

The Gas-Electric Motor Car

The gas-electric cars manufactured by the General Electric Co. seemed at first a very attractive solution to the problem which presented such a concentrated load for two hours with little or not load during the rest of the day. These equipments were therefore very carefully investigated and their ability to handle the service figured on.

Any car operating on the above grades as mentioned should have power enough to accelerate it from rest with load on a 6% grade at the rate of .25 MPH/PS. The #RE(rear entrance)-57 (ft)-B-6 (6 foot baggage room) type *(below)* with 75 passengers at 150 lbs. each weighs in round numbers 45 tons. This would call for an engine of at least 225 HP, which with increased weight of equipment would be prohibitive.

Mr. G. H. Hill of GE writes: "We do not build at the present time a Gas Electric Motor Car with a greater capacity of engine and generator than 100 Kw. output. This will not give the power required for the service you mention. The car body and trucks of these outfits are made just as light as is possible and the only way to save in weight would be to reduce the length of car and th saving would not then be sufficient to make the car powerful enough. An equipment could be produced to do this work by using motors of a greater current capacity and gearing the car to a speed of about 6 miles per hour on the grades. The cost of a standard car would be about $25,000, and this could be used as approximate cost for the slower speed equipment."

This speed is too low to meet the schedules.

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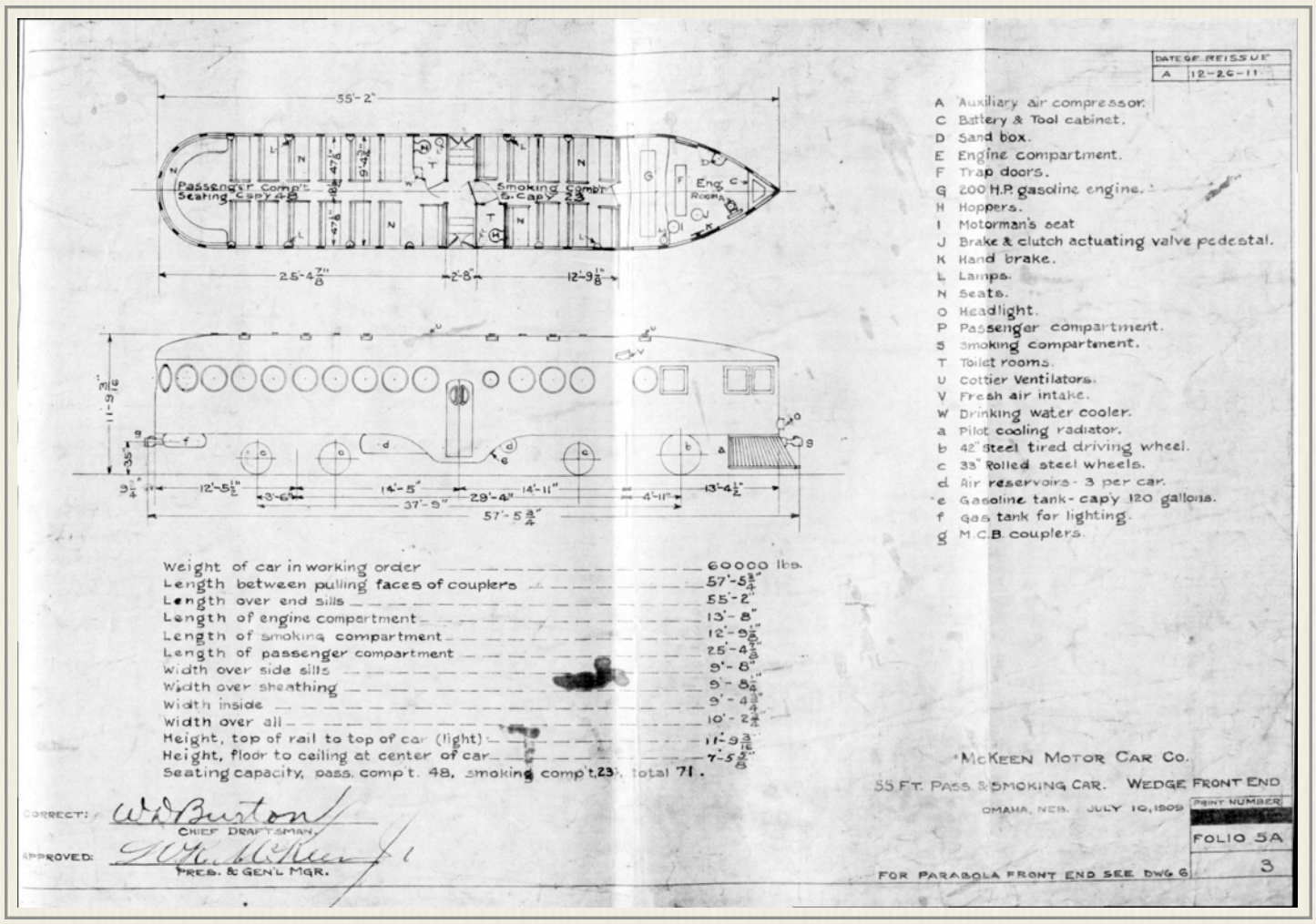
The Gasolene Motor Car

One other type of self propelled car was investigated and appears from the claims of the makers to be very well suited all around for the type of service. This is the McKeen gasoline motor car built at Omaha, Nebraska, blue prints of a standard car recommended for the service being show *(below)*. As show there it is 55' long and seats 71 passengers.



The following extracts from letters of Mr. W. R. McKeen, Pres. & Gen'l Manager: "The cars are propelled by a 200 HP, 6 cylinder, air starting and reversible gasoline engine of our own make and design. The engine is mounted on the front truck, entirely independent of the car body, and the drive is direct from the engine to the main axle. The cars are designed to be operated from one end only, but can be backed up without any difficulty, the engine being reversible and handled in the same manner in backing up a locomotive. The cars are equipped with air brakes, the braking power being 90% of the light weight of the car. A hand brake is also furnished and in emergency cases the engine can be reversed, using the clutch as a brake, or the engine thrown in reverse, air starting position, using the engine as an air pump against reservoir pressure to retard the movement of the car. Tractive power of the 200 HP engine and weight on drivers is sufficient to meet much heavier grade conditions than encountered on branch line railroads. However, for service having in the neighborhood of 14 miles of 6 % grade, a larger engine would be required, greater tractive power, special brakes, etc., to meet this special service... there is no question but that a speical car could be designed to meet these conditions... Price of a special car to meet your requirements would be int eh neighborhood of from $3,000 to $5,000 higher (than our standard $19,000 each f.o.b.) The ordinary railroad service cars average 3 miles per gallon of gasolene and the total cost of operation varies from 12 to 18 cents per car mile. In railroad service where more gasolene is required for the up grade service where there are heavy grades, this is off-set on the return trip as the car is allowed to drift, thereby saving fuel." *Dated 5/9/12*

From the above a very economical installation could be put in which besides being of use on this road in the summer could be used... on the many short branch lines of the controlling com-

pany (B&M) during the winter where very infrequent service is supplied at present. Thus the initial investment would be for a larger field of service and reduce the necessary charges on the mountain line. Some such type of equipment has been in mind during the whole study because the mountain road is operated only during the summer vacation season which is approximately 100 days in length. However, a more thorough and personal inspection of these cars would be needed.

The Electrification of the Proposed Line

In choosing a system for the electrification of the proposed 6% grade one of the first points to be considered is that of the return trip down the mountain and the demand for some kind of electric braking. This is imperative since the ordinary brake shoes would become excessively heated and be liable to break on such a long grade, in fact a larger per cent of the accidents on mountain division of steam railroads can and has been traced to over-heated brake shoes. this fact has led to the adoption of a three phase electrification system on one of our own mountains roads, "The Great Northern", and to several on the continent in Europe especially in Switzerland and Italy.

The inherent characteristic of the poly-phase motor to return power to the line when it is driven above synchronism by some outside source has brought this about. It is however a constant speed machine which has limited its use and manufacture in this country for railway purposes... although weight and efficiency favored doing so in view of the two overhead wires, which would have to be used and the two "third" rails near the summit of the mountain, (necessitated by the severe climatic conditions," and the accompanying increase in line cost, complication, maintenance, expense, and danger, it did not seem that the installation would be warranted since the regenerated power could not used to reduce size of power station due to the bunched schedule. Here again the real problem due to such a crowded schedule becomes apparent.

The single phase system was investigated but due to the greater weight and cost of motors as well as their higher heating rates it was not considered as suitable as a 600 volt direct current system which equipments could be used if desired during the remainder of the year on interurban lines of the controlling company (B&M).

As will be noted below the power for this system would doubtless be generated in a station along the line, however, should it be found possible to purchase sufficient power at a reasonable rate within 20 or 25 miles then the alternating current systems should be more carefully examined as a transformer station alone would be required besides the line and power if regenerated here could be used. The writer does not know of any such possibilities for so large an amount of power.

The Direct Current 600 volt system has been chosen because; first, the 18 miles of track is not spread out but on the contrary rather crowded together, thus abolishing the need of any substations, - second, the maximum safety is obtained which is required in such locations (especially the two ends of the line), - third, the apparatus is all standardized thus facilitating the obtaining of necessary data, - and fourth, comparing the motors with the single phase type commutation is better, armatures re smaller permitting lower speeds, weight, cost and maintenance is lower.

The 600 Volt D.C. Proposed System

Line

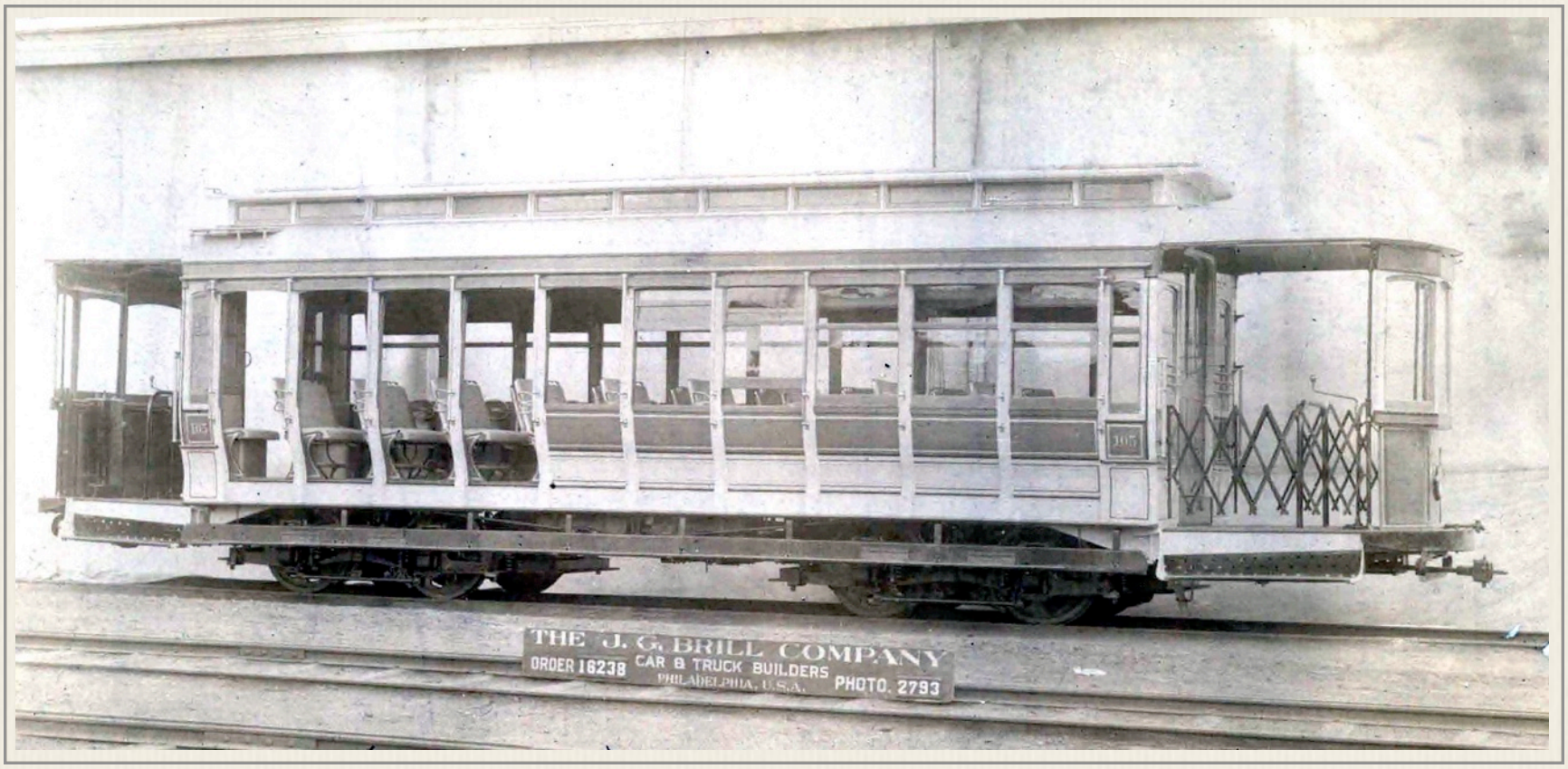
The line as explained under the last sectin is 18.75 miles in length and makes a rise of 4670 feet in this distance. The schedule speed required is 14 MPH which would take 1 hour and twenty

minutes for the trip up the mountain, the return being made at nearly the same speed as will be seen under Electric Braking.

Rolling Stock, - Cars

The type of car body required for this "scenic railway" class of service is determined largely by two factors; First, its sight-seeing qualities (and by that we mean of course its degree of openness) coupled with the ability to be speedily and effectively closed for the protection of passengers against storms; and as little weight per passenger carried as is possible for safety. The first requisite cannot be met by the ordinary open car with its canvas curtains since weather conditions as already noted are often too severe, nor should it be settled by using closed cars with large windows because in this construction the weight is not only excessive but the open-air ride is sacrificed. Again the car should operate from either end and its seats should be transverse and reversible to ensure easy riding on the grades.

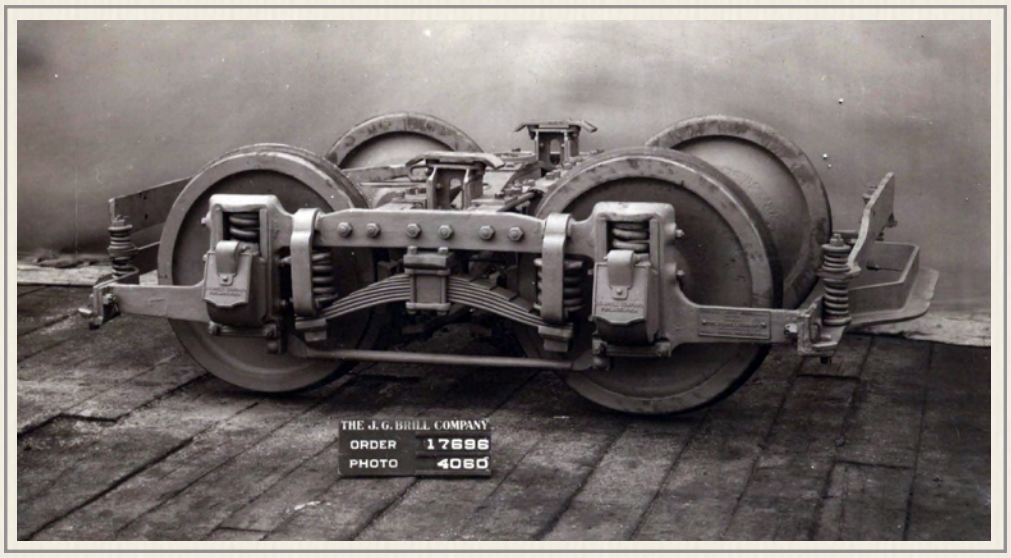
With the above consideration in mind the Brill Full Convertible Car with "Narragansett" Double Step was finally chosen, a photograph of which type, furnished by the Brill Co. is shown *(below)*. The weight of the car body as shown is 15,900 pounds. The car required would be somewhat longer with a seating capacity of 52 instead of 44 and have shorter vestibules fitted with folding doors instead of iron gates.



Mr. H. A. Henlings of the Brill Company wrote: "We can very readily furnish a car of this style that would have a seating capacity of fifty two passengers, which would represent a car measuring 36'1" in length over the end panels, or body proper. The convertible feature covers the furnishing of a car designed to have both upper and lower sash, as well as the side panels, storied in pockets in the roof when the car is being operated during the summer season and restored to their position between the posts when the car is being operated during the colder seasons or inclement weather.

"We could supply a 26'1" Brill Patented, Narragansett, Full convertible type of car, as mentioned, generally similar to our photo (No. 2793) except to have a seating capacity for fifty-two passengers, as indicated, said car finished in cherry or ash fitted with transverse eats of cane having reversible backs, platforms at each end closed by stationary vestibules and doors to be at all stop

openings, including the Brill No. 27 G02 trucks as shown in the photograph, at a price of $4075 delivered FOB our works, which figure, of course, is exclusive of electrical material and air brake apparatus."



Rolling Stock, - Trucks

The type of truck to be used is the Brill #27 - G 2 and is shown by the accompanying photograph, also furnished by the Brill Company. This truck weighs 5,000 pounds and is sold under the guarantee to carry a load of 38,000 pounds at a speed of 30 MPH with two 50 HP motors. 30" wheels are used. This type of truck was chosen in preference to a maximum traction truck so that all axles might be drivers, a feature which reduces individual size of motors as well as offering better braking conditions.

Rolling Stock, - Motors

The choice of a motor which is especially adapted to this class of service is perhaps the most important consideration from an engineering standpoint in the whole proposition for on it depends whether the schedule can be maintained, and whether the operating costs shall be high or low.

From the profile and schedule speed required it is evident that a rating considerably in excess of the one hour rating must be considered in order that the temperature rise shall not be excessive. There being but four short stops averaging less than a minute each the run is practically equivalent to a "shop test" of an hour and twenty minutes, the advantage being in favor of the run since the motors will be in a cool wind most of the trip.

The heating of railway motors concerning which so much has been written and yet which can be determined definitely only by a test under existing conditions is due, - first, to the iron losses (depending upon voltage), and second, to the copper losses which vary within the square of the current. In the two motors which have been considered the iron losses vary from 500 to 600 watts.

These two motors are the Westinghouse #306 interpole rated at 50 HP and 500 voltes, and the General Electric #203-A interpole rated at 50 HP or 600 volts. The decision was in favor of the G.E. #203 because it operates on 600 volts, is much lighter, and is self ventilated. The weight of this motor complete with gear and gear case is 2150 pounds which is 700 pounds less than the Westinghouse #306. Total weight of the car is now 25 tons approximately.

Schedule Speed, Train Sheet, Number of Trains

It was not considered worthy while with the limited time on hand to plot exact speed time curves of the different runs, because the starting conditions are such an extremely small percent of the total. It is seen that maximum speed of 30 MPH would be attained on the level in about 3 minutes and the schedule speed of 14 MPH in 5 seconds. The station at the base is on a piece of level track and at each of the switchbacks, Jefferson, and Munroe, the acceleration in either direction wold be made on a 5.8% down grade permitting a speed in excess of the schedule to be attained before striking the grades. This would reduce the starting current to 35 amperes per motor a value nearly half that on the level and a least 30% less than when running on the grades. To al-

low for 3 - 30 seconds stops and minor delays that are always incident to such traffic and because time did not permit the working out of detail runs for each section a flat schedule speed of 14 MPH has been used in making up the train sheet.

Number of Trains

As was mentioned at the beginning the maximum number of people that have been carried on to the mountain in any one day was 400. It is estimated that with the proposed electric road this number would be increased to 525 besides those who remained over night on the mountain. The number of single car trains required is then 10. These would go up with a 10 minute headway beginning at 8:30 a.m. except the last two cars which would leave at 10 and 10:20 thus connecting with later trains. this would be the car which came down at 7 a.m. from the summit. The 10 trains would return on a 10 minute headway, first car leaving at 2 p.m. and taking the 5:10 trip to the summit for the night. A freight and express car would leave Fabyan at 12 or as soon after as the noon freight was in from the South.

Power

Load Curves

As seen from the load curves the maximum peak load comes with the 8 cars on the line in the forenoon from 9:40 until 10. The maximum power required is then 1000 Kw. approximately for 20 minutes, while on either side of the peak this gradually falls off as the cars are starting or reaching the summit. The small load during the morning and afternoon while cars are descending is due to power taken by the pumping station at "The Lakes of the Clouds" the pumping being done at this time since power would be desired on the line for the air brake equipment. There would be a small load during the night for lighting the summit building which would be carried by a storage battery at the summit, which battery would also assist in taking the peak load in the forenoon.

Prime Mover

The type of prime mover has been given considerable consideration but the writer has time to do no more than decide in a general way upon what seems to be the most economical system, and obtain a lump figure for the cost of the equipment.

Steam - Gas - Oil

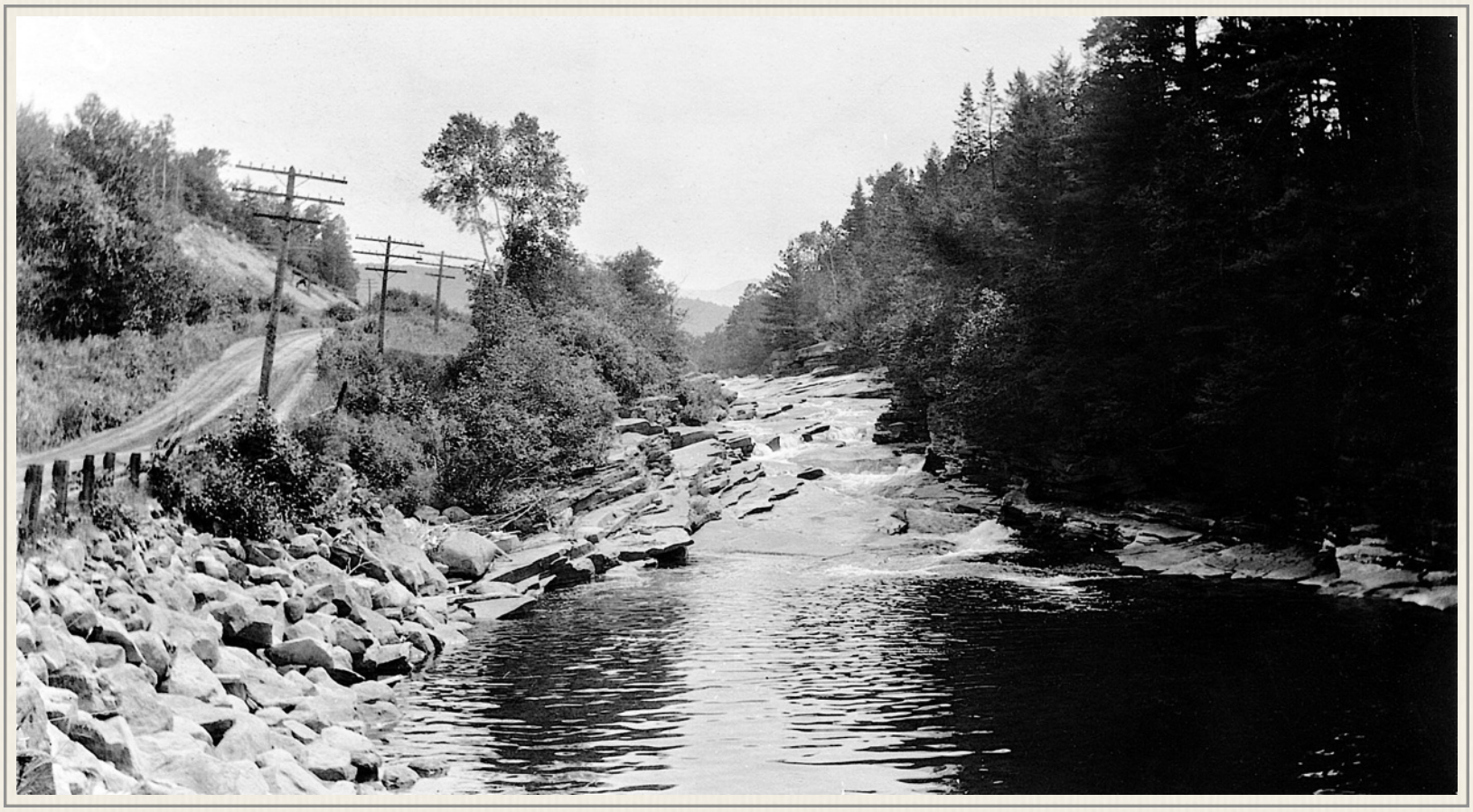
A steam plant would be out of the question due to high stand by losses. Gas producer plant was thought suitable with a large storage tank but when the size of a 10 minute reserve tank for a 500 HP engine was considered this system was abandoned. Oil Engines, while expensive in first cost, seem to be the most suited for this type of service, and were investigated as to initial and operating costs. In a plant of this size, the cost per Kw. output, based on oil at 3 cents per gallon, including the fuel oil, lubricating oil, waste and repairs in the engine, and operating labor, would not exceed one-half cent per Kw. output. With oil at 4 cents per gal. then the net cost per Kw. output would be a fraction less than 6/10ths cent.

Hydro-electric Power

It was thought that possibly sufficient hydro-electric power could be obtained from the Ammonoosuc river or the Peabody river, the latter flowing northeast from the "Great Gulf" into the Androscoggin river at Gorham. Accordingly, a day was spent last summer *(1911)* in examining the conditions for a power site on the last mentioned river and obtaining from the near-by inhabitants general information as to usual and abnormal flowage. There was no government data on the river, the reconnaissance proved without a doubt that there was not over a couple hundred horse power available.

The Ammonoosuc proved a little more attractive, but as sufficient storage could not be obtained the idea had to be abandoned after considerable time had been spent in surveys and calculations.

The two most attractive sites on the Ammonoosuc river were surveyed last September by the writer with the assistance of Messrs. R. E. Harrington and J. W. McGregor.



Lower Falls of the Ammonoosuc River (~1930)
- Robert J. Girouard collection

At the upper site which begins at the head of the falls just below the White Mountain House and about 9 miles from the Base station, there is a fall of 36 ft. in a distance of 1200 ft. Two miles below this site and just below the confluence with the Zeeland river there is a fall of 27 ft. in 1300 ft. of river. There is not storage practically at the upper falls. The flow during the summer at this latter point is often as low as 20 cubic second feet. With a dam 10 ft. high which is the maximum (because of the Fabyan golf links) the theoretical H.P is only 108. At the lower falls the minimum flow is 31 cubic second feet. As seen from the profile of the river bed at this point a dam could be erected 134 ft. in length having a height of 16 ft. The theoretical minimum horse-power is then 150. Although 3 or 4 acres could be flooded at an average depth of 5 feet this would be insufficient for storage as about 8 times this would be needed. Could a storage of 50 acre-feet be obtained as well as water rights to permit this then it might be considered.

Transmission and Feeders

The power house would be located at Ammonoosuc and supply energy at 600 volts to three feeder lines which would run as follows: One, down the line on the trolley poles feed the trolley at suitable distances. Another would follow up the line toward Jefferson, with a branch extending across to the upper line. The third would run up the line of the old cog road feeding in at both crossings and connecting with the storage battery at the summit. A branch feeder from a point near Munroe would run to a pumping station at the "Lake of the Clouds" and to several intermediate pumps between it and the summit.

Sec. 16 - Electric Scenic Railway

From Jefferson, which is at the edge of the vegetation, to the Summit a third rail should be used instead of trolley because of severe climatic conditions. Iron poles and trolley could be used but excessive cost would be entailed if made strong enough to withstand the winter conditions.

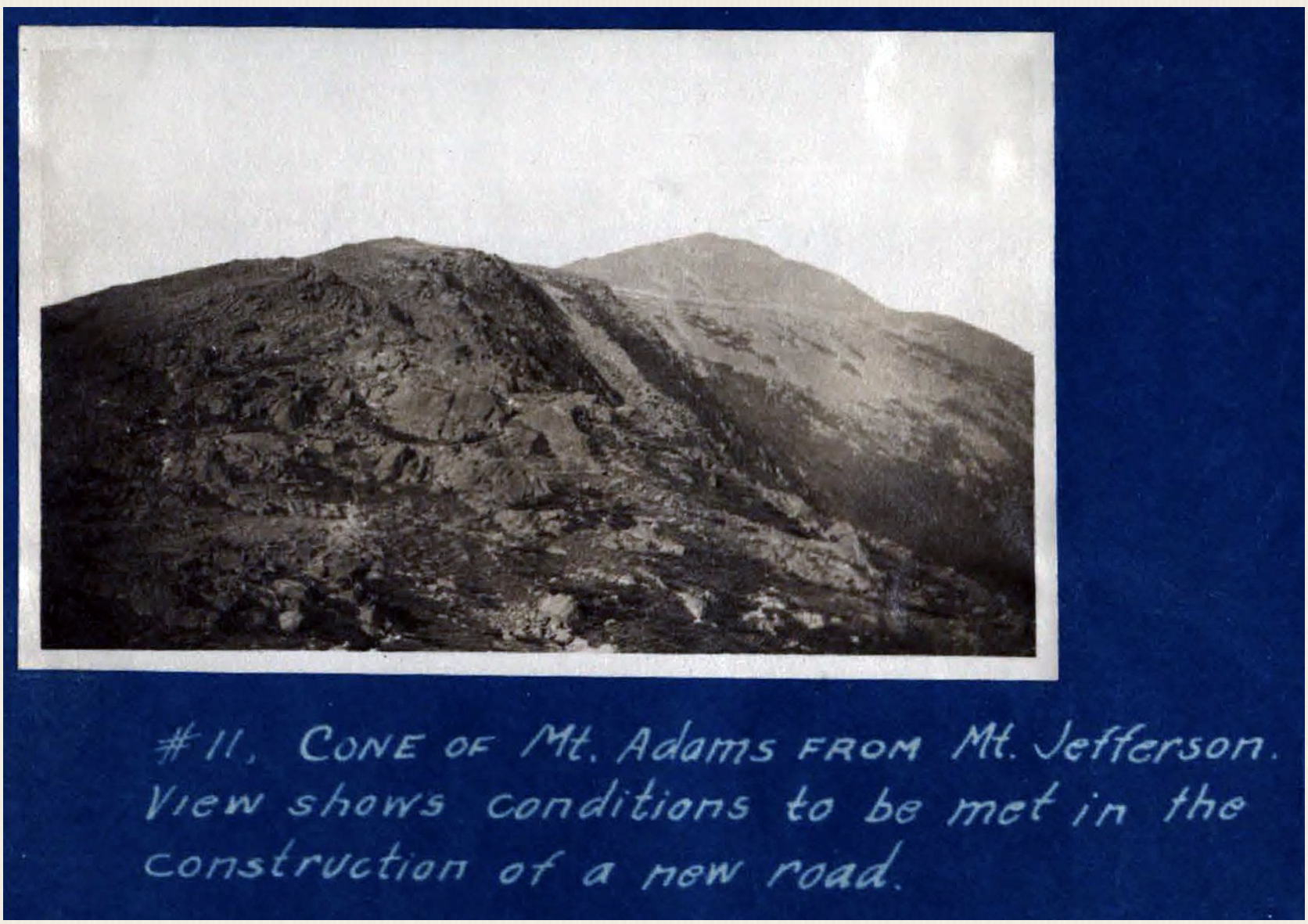
Telephone System

Since the line is single track and the headway short some method of communication between cars and stations and the starters at Fabyan and summit seems advisable. In case of accident of any kind on the mountain whereby a car was disabled some means of making this known from car to Ammonoosuc or Summit would be imperative. A systems has thereby been devised which provides for a portable telephone set in each car, permanent sets at all schedule stops and plug stations every half mile. This system would cost approximately... *(no figure in document)*

Cost, Maintenance, Income

The writer was compelled finally to leave out the question of costs except in a few of the more important cases as shown because of the delay caused by making comparisons between different equipments. The method that had to be adopted finally was to get an equipment that was satisfactory, and then if possible get at the cost.

It should be noted, however, that the large part of the expense of this proposition would come in constructing the line, most of which would like along the steep slopes of the mountains and even an estimate on such work could not be had with the data at hand.



Conclusion

In concluding the writer regret that so much time had to be spent in obtaining the necessary map and data for the proposed line. At first it was thought that a 6% grade could be assumed, required length calculated, and then the equipment determined. Perhaps this would have been sufficient but such a broad assumption would have taken away the real interest in working out an equipment. The conditions as met above, are, in the writer's opinion, very close to those which an actual survey would reveal, those from Fabyan to Base being actual present conditions. In view of this and the fact that considerable delay was experienced in obtaining necessary information on motor equipment many of the valuable details have had to be omitted from the calculations.

Especially is it to be regretted that sixes of feeders and exact run curves could not be worked out with a more detailed load curve on power station, as well as a satisfactory regeneration scheme for returning energy on the down grades for pumping water to a hotel on the summit.

This, in the writer's mind, would be the turning point toward economy of operation. However as long as the holding company feels that it is necessary to maintain such a bunched schedule just so long will the economics of the proposition demand some such scene as the gasoline self-propelled motor car.

Millard Fane Clement (1910)
- Worcester Polytechnic Institute

Thesis author **Millard Fane Clement** was born in Bethlehem, New Hampshire on August 28, 1887. He was the middle son of salesman Luther J. Clement and Ella Jane (Savory) Clement. Brother Murray L. arrived two years earlier and later served as police chief of the family's hometown of Whitefield, New Hampshire. Brother Maurice became a farmer in Springfield, Massachusetts. Worcester Polytechnic Institute student Millard Clement worked summers at the Mt. Washington Hotel and NOT the Cog railway (though its clear he went up the Base Road to visit with the Trolley project's main engineering team.) Daughter-in-law Priscilla Clement says Millard apparently was fairly agile and not afraid of heights. "The rope for the flag over the (Mt. Washington) hotel had come undone," she told Jitney Jr in a 2019 email. "$10 was offered to anyone who would replace (the rope). Millard volunteered and I've seen a small book he kept of expenses and income (during those summers) and sure enough there was listed "$10" for flag. I guess he had to shimmy up the pole!" Millard F. Clement married Marietta E. Ray on July 15, 1919, in Whitefield, New Hampshire. T hey had two children during their marriage. Robert Ray Clement *(b.1920)* and Gordon Millard Clement *(b.1922)*. Priscilla married Gordon who was a salesman for a brake manufacturing firm. While visiting with Cog Railway officials, Gordon Clement mentioned "he had a 'nuts and bolts' son, a senior in High School who would fit right in at the Cog. They said, 'send him up' so that's how Bob got started there. At that time, most workers were college kids from Dartmouth. Working at the Cog, lead Bob to purchase the hotel with a group of local men. Little did we suspect," says Priscilla "that Bob would one day be a part owner of the Mt. Washington Hotel." Bob's grandfather Millard enlisted in the US Naval Reserve and served aboard the *USS New York* in 1918 as a Lt. (jg) and became a Lt. Cmdr in 1929. Millard Clement was a long-time member of the Masons. He died on September 15, 1982 in Ar-

lington, Massachusetts at the age of 95. He was buried in the Pine Street Cemetery in Whitefield. His WPI thesis and its sketch of the proposed route is one of the few documents left from the ambitious Mt. Washington Electric Trolley project.

John M. Keenan - Mount Washington's Latest Victim
Among the Clouds report in Three Installments
No. 1 - Tuesday, July 15, 1913

Foreword - The season of publication for *Among the Clouds* for 1912 had just ended when young Keenan became lost on Mt. Washington, Wednesday, September 18. While the staff was assisting in the vigorous search for the unfortunate surveyor, the editor was busily engaged in sending out dispatches to Boston newspapers. Being thoroughly familiar with all the details, the writer is able to give the readers of *Among the Clouds* the best account ever written of this fearful casualty.

How Keenan Became Lost

John M. *(Martin)* Keenan, of Charlestown, Mass., eighteen years of age and fresh from the city, arrived at the surveyors' camp at the Base of Mount Washington on Friday, September 13, 1912, and the following day began to take up his work as rear flagman with other members of the party surveying the right of way for the proposed Scenic Railway which is to be built up Mount Washington. His work for the next few days kept him near the base of the mountain, but on Wednesday morning, September 18, he went to the Summit with a party of experienced engineers. At the Base it was quite calm, but on the mountain top the wind was blowing over fifty miles an hour. The sky was overcast, but the mountain was free from clouds the greater part of the forenoon. The temperature was about 40. Upon arrival at the Summit, the party descended the cone of Washington to below the point where the monument of Allan Ormsbee now stands and facing directly the Lakes of the Clouds. The chief *(H.S. Jewell)* began giving instructions, and placed his men in the various positions. Keenan, being the rear flagman, was stationed and was told to stay in his position, and in case it clouded up to stay there until they came for him. Otherwise to come up to them when they signaled for him. The party had not long separated when a heavy cloud enveloped the mountain and it became impossible to see scarcely ten feet.

The chief with his other men, who had then came together, waited for half an hour in hopes that the clouds would break away, but finding that it was getting worse, decided to go back and get Keenan and go up to the Tip-Top House. On reaching the point where Keenan was placed, they found that he had gone. They then began to shout for him and the chief fired off his revolver, hoping to attract his attention. This was at 10 a.m. They searched around the mountain in that vicinity till noon, when they thought he might have gone up to the Tip-Top House. They then made their way to the Summit, but Keenan had not arrived there. The thought then occurred that Keenan might have circled around the side of the mountain and boarded the afternoon train; so at 2:30pm they telephoned the Base, but found that he had not arrived there. Things began to look serious, so the party set out again for another search, which continued until nearly dark, when for the sake of their own lives they were compelled to give up.

When the surveyors that were with Keenan on the mountain arrived at the Base that night by special train and told their story of how Keenan got separated from them, word was at once dispatched to Fabyans, Crawfords, Randolph and Gorham to be on the lookout for the missing man. The bell on the Summit was kept ringing all night, while at the Base the steam whistle sounded at intervals throughout the dreary night. The wind continued high all night, but decreased to almost a calm the following day. The temperature ranged about 40 until Friday afternoon, when it dropped below 30.

It was then the opinion that Keenan became frightened when the cloud enveloped him and, in starting to find the other members of the party, got turned around and went in some other direction, which he evidently did. Had he only stayed in the place he was told to and obeyed orders this terrible calamity would not have befallen him. At that time no one gave it a thought but what he would be found the following day on the cone of Washington alive.

Thursday a searching party composed of all the engineering corps, available employees of the Mount Washington Railway and *Among the Clouds* staff, searched the entire cone of Washington through the dense clouds in vain hopes of finding the missing man.

Friday the search was continued on the mountain under great difficulties, as the clouds had not yet lifted and the falling temperature had cause the rocks to become coated with ice, making it very dangerous for the searchers.

Friday night word was received from Hon. George H. Turner, of Bethlehem, who, with Dr. Gile, of Hanover, was making an inspection of the State roads in an automobile and passed a man on the Pinkham Notch road, near the Darby Field, who answered the description of Keenan. They did not know, however, that a man was lost on Mount Washington until they reached Fabyans. Mr. Turner stated that it was between 11:30 and 12 noon, Friday, that they passed the man. He was standing by the side of the road and appeared almost demented. He did not speak a word to them, but as the car passed he waved his arms and pointed toward Mount Washington. He was travel-worn and his face had a vacant expression. Mr. Turner's description of this man compared favorably with that of Keenan.

Sec. 16 - Electric Scenic Railway

The searching party was spending Friday night on the Summit, and word was communicated to them to go at daybreak Saturday to the Glen House and start a search from there, and to follow up Mr. Turner's story. In the meantime several experienced guides were hired by the railroad, and they too were sent to the Glen.

Boston Herald First Person Report
The Search Zone

The following article appeared in the *Boston Sunday Herald* of October 13, from the pen of Raymond B. Hemenway, who represented the *Herald* in the White Mountains during the search for young Keenan. Mr. Hemenway made his headquarters in Gorham part of the time, and was actively engaged in the search for the missing man. The story was reprinted in the *White Mountain Republic-Journal* of Thursday, October 31, 1912

"It was Keenan's first day on the range, and, possibly frightened by tales of bears and bobcats, he evidently tried to reach the rest of his party or lost his head and wandered off. Search was shortly after instituted, but not a trace of him was found. The camp occupied by the engineers was half-way from Bretton Woods to the summit of the mountain, and as soon as a telephone was reached the Mount Pleasant and Mount Washington (hotels) were notified and searching parties hastily organized. These included summer visitors and the employees, many of whom have been familiar with the range for years. Frantic messages to the east side of the mountain called out at Gorham and the Glen house experienced guides and men who have hunted over the range since childhood.

"Above timber line, and below as well, the mountain is as if some gigantic dynamite blast or some powerful agency of the gods had thrown its rock foundation int eh air and sent the huge and little boulders hurtling over the sides and down the valley for miles. It is no wonder that the boy unfamiliar with the unusual conditions should have become confused. If one has never been caught in a fog on Mount Washington it is difficult to imagine the true situation. It seems as if a grey blanket were let suddenly down about 15 feet away, a blanket that queerly distorts everything within the now limited vision. On a clear day, as one looks from the summit to Bretton Woods traced out in miniature way down and down the valley and sees the clouds slide by below, it seems as if it were foolish to even think one could be lost. But let the skeptical one try to trace the trail that Keenan must have taken, as I did, from the spot where he was last seen, and wonder ceases.

"Trying to simulate the exact condition as on the morning Keenan left his position and fortified with a compass and contour map and with several days' experience as one of the searching party, I made a start from the summit, following the lie of least resistance, to learn if possible where Keenan would come out. Under the assumption that Keenan would not face the gale I went east and shortly found myself at the top of Tuckerman's ravine. At its head the ravine has a sheer wall of rock more than a thousand feet from the bottom where a stream winds it's way. The approach is hazardous, a step missed might mean a plunge down the whole distance, bounding from rock to rock and finally lodging possibly where a man might never be round, embedded in scrub pine or slipping into one of the thousand crevices which are almost caves. "Did Keenan go down there?" That is the question I asked myself.

"Back up the mountain for another start. It led to the same place, unless I tacked across the wind to Boot Spur, another ridge on the right or to Lion's Head, to Huntington's ravine, almost as bad, to the left. I concluded to try the latter. Guided by the white spots of the Appalachian Mountain club trail and the little pile of rock, I crept and crawled and slid, down and acrosss and back a little way, then down again, finally winding up at the bottom in a stream running over the rocks from way up the side of the cliff. Where it came from I could not determine, but as it dropped in a cascade about a hundred feet it seemed as if I could hear the sound of human voices. Were my companions afraid for my safety and calling to me, or was there some drowsy poppy or some subtle perfume sapping my senses? No! my feet were wet and my hand was bleeding where I had grasped a rock quickly to keep myself from falling. Surely there is nothing like this in a dream. The little piles of stones led down the stream, over and back, around a tiny tree by which it is necessary to swing to a rock below or through a gnarled thicket, and then horrors, a woman's foot-print in the earth, right in the middle of the path. My pride had taken a fall. But anyway, she didn't do it alone. There was a big print beside it. Die the row cairns mean anything to Keenan? Unfamiliar as he was with woodcraft would the white splotches on the rocks look any different that spots of quartz in others. If they did where were his tracks? He must have a left a sign if he had been there. All of a sudden the trail turned abruptly left, north, and for more than three miles led over some very rough country. All in the big timber or brooks, which tumbled over ledges, more up and downs, climbing up paths at an angle of 45 degrees, then down, almost straight it ran. To one who can read nature signs and the ones put there by the hand of man, the trail is easy, and through the woods it is just like the one across the corner lot. It is more than likely that the young man, even if he didn't get down the train of Tuckerman's ravine, would finally find his way out to about the place where Raymond's cascade shows through the opening in the trees."

Among the Clouds report in Three Installments
No. 2 - Wednesday, July 16, 1913
How Keenan Got Off the Mountain, And Those Who Saw Him

At the time Keenan was lost a fifty mile an hour gale was blowing from the southeast, and naturally he would not attempt to face the blast; thus it is very probably that he travelled with the wind, which would lead him into Tuckerman's Ravine.

John M. Keenan (1912)

How he ever got off the mountain alive after slipping, sliding, crawling and probably falling down the 1000-foot precipice will never be disclosed. Nevertheless he got down, and the first man to meet him was fire Warden Briggs, who was coming down a lonely old log road toward the Darby Field in the Pinkham Notch District, about two miles from the Glen House. The description that Mr. Briggs gave of Keenan was perfect in every detail. Briggs states that at 10:30am, Friday, September 20, as he was coming down the old log road, he heard a noise in a thicket of

dead spruce down the bank of the Peabody river. Briggs stopped and listened again, and then saw a man's head appear from the thicket. They both shouted hello. Keenan climbed to where Briggs was standing and leaned against an old stump. First he asked what day it was. When told it was Friday, he said he had been out two days. He said he was lost and the he was looking for Keenan farm. He said he belonged to a party of surveyors on Mount Washington, and that he was working for Jewell. He did not say much about hungry or wanting anything to eat; all he asked for was a piece of spearmint gum. He talked to Briggs in such a rambling sort of way that he could not make out exactly what he was saying. Briggs told him there was no Keenan farm that he knew of, but thought he wanted the Glen farm.

Briggs at that time did not know of anyone being lost on Mount Washington, and did not know that H. S. Jewell had charge of the surveying party. He did not think Keenan was a surveyor, as he was not dressed as a surveyor usually dresses, and he also thought the remark he made about working for Jewell was false, as the only Jewell that Briggs knew was W. W. Jewell, a liveryman of Gorham.

Briggs then brought Keenan out of the woods and down the log road to Darby Field, and putting him on the State road, started him toward the Glen House. Keenan told Briggs he had fallen down a ravine thirty feet deep, and from his appearance Briggs judged he might have fallen. When the State road was reached, Keenan bade Briggs good-bye, waved his hand and started down the road toward the Glen House, which is two miles from the Darby Field. It was then 11 a.m. Briggs went on in the other direction to his camp, half a mile distant, and as he had been in the habit of meeting curious looking characters throughout the summer in that locality, thought nothing more about it.

When the party of searchers arrived at the Glen on Saturday morning to follow up Mr. Turner's story, they met Fire Warden Briggs at his camp and asked him if he had seen anything of a stray man that had been lost on Mount Washington. In reply to this query, Briggs stated that he had met a crazy man the day before. In the conversation that followed, Briggs told his story and gave a description of the stranger, which answered Keenan's description in every respect.

Keenan was six feet tall, weighed about 170 pounds and of dark complexion. At the time he was lost he wore a brown pair of overalls over a grey pair of pants and had on a coat to match pants, brown slouch hat, low black laced shoes, black stockings and a striped negligee shirt. He carried a leveling rod. At the time Briggs found him he did not have on any coat, nor did he have the leveling rod. Up to this writing no trace has ever been found of his hat or leveling rod.

It was then thought that Keenan must be in the woods somewhere between the Darby Field and the Glen House, as no one answering that description had been see to pass the Glen or had been seen at or near Gorham. The searchers covered the ground carefully Saturday between the Darby Field and Glen House, but it brought no trace of the lost surveyor.

Up to this time of the search the weather was very disagreeable. All the mountains were cloud-capped and it was cold and rainy for a greater part of the time. Sunday, the 22nd, was the first fine day from the time Keenan was lost on Wednesday, the 18th.

The greatest search ever made for Keenan was on Sunday, September 22, when fully one hundred people from Gorham and various parts of the mountains volunteered their services and joined the regular searching party that had spent the previous night at the Glen. Every inch of ground between the Darby Hill and the Glen House was gone over, where Keenan was last known to be seen. The searchers covered both sides of the road for a distance of over a mile from the road through the dense woods, which is in many places almost impossible for a human being to penetrate. The shores of the Peabody river were followed for several miles, and Milliken's Pond was also drained in the search.

Mr. Lawrence J. Keenan, father of the missing boy, came to the mountains on Saturday, and was taken to the Base, where he spent the night at the surveyors' camp. Sunday he went to the Summit by special train in the early morning, and a team was there in readiness to convey him down the mountain to the Glen. Mr. Keenan was with the party all day Sunday, and was satisfied that a thorough and careful search was being made to find his son. Mr. Keenan returned by train to Boston that night and gave up all hope of finding his boy alive.

Monday the search was discontinued as all hope of finding Keenan alive was abandoned and a greater part of the searchers returned to their respective places, leaving on the experienced guides and few of the surveyors in the field. These men again went over the territory, exploring the caves, crevices and ravines.

In the meantime it had been rumored that a man by the name of Lightfoot who was following Mr. Turner in an automobile on Friday had picked up a man believed to be Keenan, but this story was contradicted at the time and appeared without foundation. However a few days later when the real story were revealed, it threw a new light on the mystery.

Among the Clouds report in Three Installments
No. 3 - Thursday, July 17, 1913
Lightfoot's Own Story

Mr. J. Howard Lightfoot, of Bethlehem, a chauffeur under contract to the State as a conveyor of certain State highway officials, was following the automobile of Mr. Turner and Dr. Gile on Friday, September 20. Mr. Lightfoot was in his own car, and was carrying the councilmen's baggage. Following is Mr. Lightfoot's own story of picking up Keenan in his automobile:

"It was about noon, when I was coming through the Pinkham Notch road and had passed the Glen House about half a mile, when I noticed a man gesticulating very vigorously for me to stop. I did so, and the stranger asked for a ride and got in.

"The young fellow was, in my opinion, about twenty years old, wore a pink and white striped shirt, attached cuffs with the cuff links gone; his hat was what I call a polo hat, the rim turned

down all around, and was probably brown; pants and shoes I cannot describe. There were two reasons for my noticing his shirt and hat: First, they were clothes that you would not look for on a tramp or mountain boy; and second, aside from a possible undershirt, this shirt was all he had on, and it was very cold and raining very hard.

"I carried him, I should say, about two miles and dropped him off at the deserted lumber camps near the Darby Field. He asked me where the Keenan place was, how far it was to Charlestown, and how far it was to Franklin. When I told him the distance to Charlestown he merely said, 'Yes, I guess it is quite a ways.' He seemed to ramble in his conversation and showed no great concern in anything. When we came to these old camps he said, 'I think I want to get out.' It was raining so hard that I did not look to see just where he went after getting out.

"I knew at the time that there was some one lost on the mountain, but supposed it was surveyor and would have looked for a bright looking fellow dressed as you might have expected a surveyor would. This fellow was not bright looking. He had a slightly receding chin and, if I remember right, his nose was a little larger than the average nose. His hair and eyes were brown. He was nearly six feet in height. He drooled at the mouth, which might have been due to his being cold and wet, although he was apparently suffering from neither cold nor hunger.

"When I got home the next day I was shown a picture in the *Boston Post* of the lost boy, which to me did not resemble the fellow I had carried; but later, when shown Keenan's picture in the *Herald*, I felt very sure that Keenan was my passenger."

At the time the searching party was at the Glen they did not know of Lightfoot picking him up and taking him back to the Darby Field. As they expected to find Keenan somewhere between the Glen House and Darby Field and not knowing he had been carried back, very little searching was done beyond the old camps or up in the woods from that direction at that time, but when the facts of Lightfoot's story were told a few days later another party was organized and covered the territory where Keenan was last seen, but to no avail.

Mrs. Keenan, the heartbroken mother, came to the mountains for a few days. She visited the Summit and was accompanied down the mountain side to the point where her son was station when the heavy blanket of clouds enveloped him.

What Probably Became of Keenan

In following up the stories of Mr. Briggs and Mr. Lightfoot it is evident that Keenan had lost his mind and gone insane and was not sufficiently conscious of the fact of being into civilization to profit by it. A comparison of the time indicates that Briggs saw him at 11 a.m. near the Darby Field and headed him toward the Glen House, Councillors Turner and Gile saw him beside the road between the Darby Field and the Glen House between 11:30 and 12, and Lightfoot picked him up a short time afterwards not far from the Glen House and dropped him, at his own request, at the abandoned camps near the Darby Field, not far from where Briggs first put him on the road. This all happened on Friday, September 20th, two days after Keenan was lost.

From the time Keenan left Lightfoot's automobile at the abandoned campus up to the present day no trace has ever been heard of him. It is very probable however, that from the old camps he wandered up some of the old log roads, thence through the thick woods and worked his way back towards Mount Washington. He probably kept on wandering and struggling in this helpless way through the wild, unbroken forest and through rain and storm, until from sheer exhaustion, he fell to rise no more.

To the writer it seems as though it was Keenan's fate. Everything possible was done that human power could do to find him, and yet after he had succeeded in getting off the mountain alive and was seen by several parties, even then it seemed as though he was doomed to wander back to the mountains and become lost again.

In concluding this story let us all hope that soon the boy's body will be found so that his remains may be laid away in some quiet grave where the heartbroken mother *(Delia)* may visit it and know that her boy is laid at rest. - Reginald. H. Buckle." *- Among the Clouds*

Modern Doubts: Frederick Moe of Warner, N.H. doubts Keenan was seen alive by Briggs or Lightfoot on the east side of the mountain after his disappearance. Writing in the December 2017 edition of the *The Novelty Pressman*, Moe notes Keenan had recently graduated from high school and "was unaccustomed to the backwoods. His only previous job had been as an elevator operator in Boston" and had come north attracted by the higher wages of the railroad. Moe says "John was known to be afraid of animals and afraid of the dark, and had never been out on his own before landing in the midst of hard-gambling, hard-drinking railroad men." Moe questions the reports because of the pink-striped shirt witnesses say he was wearing when they encountered him along the Pinkham Notch Road. According to Moe, Keenan arrived from Boston at the Base that Friday the 13th wearing a thin pink-striped shirt "notoriously in appropriate for railroad attire. That pink-striped shirt had been the brunt of snide comments from his co-workers for several days." Moe thinks the witnesses came up with the shirt detail from the rapidly circulating news of the disappearance. "In 1912," writes Moe, "information sped around the mountainous communities by word-of-mouth" more quickly than postings on the internet do today." Moe concludes "The reality is (Keenan) had no training on how to traverse the rocky topography, or the bitter cold environment, and had no knowledge of survival skills. He was young and healthy, so that was in his favor. Yet the likely scenario is that he perished somewhere in the wilderness and his body was never found."

John M. Keenan (1912)

Sec. 16 - Electric Scenic Railway

The Pumping Station: *The only part of the electric trolley project built still standing in 2016.. It was demolished in 2020*
- Kent Family Collection

Trolley on the Presidentials
C. Francis Belcher's Look Back at Mellen's Plan
Appalachia - June 1957 pgs. 320-328

C. FRANCIS BELCHER, the Appalachian Mountain Club's Executive Director, has also held the offices of Councillor of Huts *(1952-4)* and Treasurer *(1955)*. Earlier he was a hutman at Pinkham Notch and Madison. From 1936 to 1956 he held positions in the legal department of the Boston and Maine Railroad, where he became familiar with many of the interesting facts mentioned in this article.

"THE DREAMS OF NEW ENGLAND'S RAILROAD TYCOON of the early twentieth century, Charles S. Mellen, reached their peak in a plan which was legally embraced under the innocent title of "Extension of the Mount Washington Branch of the Concord and Montreal Railroad". When this plan was unfolded in the period between 1910 and 1913 and its supporters were looking for an aspiring name for the "Extension", it came close to being called "The Mount Washington and Great Range Railway".

This search for a proper name on the part of the Boston and Maine Railroad's high authorities prompted Allen Chamberlain, noted A.M.C. member and former Club president, to write on April 16, 1912, to Edgar J. Rich, General Solicitor of the B. & M. and himself a Club member, as follows:

> The madam [Mrs. Chamberlain] is jubilant over the prospect of the completion within her lifetime of the scenic railway on the Great Range.
>
> I can't say that I share her enthusiasm for this project. I confess that it was my hope that the work would prove to be too expensive to warrant construction. Your inquiry as to the suitability of a certain name for the road is discouraging, for it looks as if the thing is progressing.
>
> "Mount Washington and Great Range Railway" seems suitable to me, though I would substitute for the word "Railway" the phrase "Scenery Smasher".

What then was this "Scenery Smasher"? What was its back ground and its detail? From whom did it come, and now, some forty years later, where did it go?

By 1900 the Boston and Maine Railroad, by various methods, had taken control of most of the rail lines in the state of New Hampshire. Under this control, through a lease of the Concord and Montreal Railroad in 1895, came the famous Mount Washington Cog Railway, the summit circle fifty rods in diameter, and the Summit and Tip-Top Houses. The Summit House burned flat in 1908, leaving only the inadequate Tip-Top House to care for the many tourists who visited New Hampshire's most famous summer attraction.

While Charles S. Mellen had received his early railroad training in the Granite State, later his interests turned south to the more lucrative territory served by the New York, New Haven and Hartford Railroad. There, with the help of J. P. Morgan, he tied together a gigantic monopoly of transportation, including virtually every boat, rail and trolley line in southern New England. By the year 1907 this was not enough for Mellen and Morgan. Their eyes turned north again, and in the spring of that year they acquired a controlling interest in the stock of the Boston and Maine by exchanging New Haven shares for those of the B. & M. It didn't take long for the fertile minds of Mellen and New Hampshire's railroad titan, Benjamin A. Kimball, to evolve a dream for the future greatness of New England's highest peak, Mt. Washington. This dream reached the point of action in 1911. OnJuly 4 of that year they were ready. Surveyors were sent out that day from the Base Station to find a route for their dream, a twenty-mile electric railroad or trolley line that would end at a proposed breath-taking stone-and-steel hotel on the very top of the mountain. And for two years the efforts of these and many other New Haven and Boston & Maine officials and employees were directed toward the realization of this dream. Architects and draftsmen worked in New Haven and Boston, lawyers and financiers planned and argued in Concord, Boston, New Haven and Washington. Skilled workmen were busy at Marshfield. Surveyors toiled at the top, at the bottom, and for miles north and south in between.

The dream called for a single-track location that would amble from Fabyan to the Base Station and thence to Caps Ridge at Jefferson Notch. From there the line would proceed by loops and switchbacks over the Castellated Ridge to gain enough altitude to pass to the south around Mt. Jefferson and head for Mt. Washington, which had to be looped on the upper part of the cone to allow the line to come to its end at a spacious platform in front of the great and glorious hotel.

Sec. 16 - Electric Scenic Railway

What were some of the causes that had set this airy dream into being?

We must look to that era, a prosperous one, and examine it. Railroads had more than come of age by 1910. Electric trolley lines had started later than their steam brothers, but were fast catching up. By 1911 they were being run almost everywhere that steam lines were not. There was a chance that they were cheaper, they were cleaner, and they didn't start fires, a matter of particular importance in the wooded mountains. The consolidation of New England's major railroads under the control of the dynamic, spectacular and controversial Mellen meant their management by a strong advocate of electric traction lines. Behind this advocate stood the mighty house of Morgan.

Summertime accommodations on the top of Mt. Washington were cramped, to ay the least, after the disastrous Summit House fire of 1908. With each passing summer it became more obvious that the owners would have to provide some replacement. Meanwhile, the Cog Railway had been suffering for some years from improper maintenance. To return it to adequate condition would require considerable capital. This was not time to pour new money after old.

The final incentive came with the passage of the Weeks Act in 1911. The proposed creation of a National Forest in the White Mountains, as soon as practicable, brought with it new dangers to the dream. A *tour de force* was needed. The B. & M. must get title to the desired right of way while the needed lands were still in the hands of sympathetic owners, primarily the Berlin Timberland Company and the Conway Company, both large customers of the Boston and Maine.

On July 4, 1911, preceded and followed for days by a publicity fanfare of symphonic proportions, an engineering crew started from Marshfield to look for a practical and scenic route to Mt. Washington, to replace the worn three-and-one-half mile direct ascent then and now taken by the familiar "puffin' devils". Meanwhile architects had drawn plans for a new and spacious hotel, and lawyers were working out financing plans and petitioning for proper approvals.

The first group of civil engineers numbered seventeen. The route for which they searched could have no more than a six per cent grade at any point. With this in mind they began their efforts at the top. Daily they rode to the summit by the first morning train and worked downhill. The grade on the summit cone as to be controlled by two complete circuits of the mountain, which necessitated two crossings at grade of the Carriage Road. By this time their route had reached a point close to the present junction of the Southside Trail and the Crawford Path on the southwesterly side of the mountain. Later this crew was supplemented by other surveyors who both worked with them and also started out from below to work uphill. Eventually all transits were sighted on Mt. Jefferson, and there the two groups joined after a summer and a half of heavy work. A route was finally punched through.

The surveyors' plans called for the electric line to start at Fabyan, from which point the Boston and Maine was then operating a steam-train shuttle service to the Base Station. The trolley route followed this existing line to the base, where it turned abruptly left and ran north to Jefferson Notch. The description of the line from this point on can bet be given by quoting from *Among the Clouds* a story which appeared daily throughout the summer of 1912:

> From Jefferson Notch... the road crosses what is known as the Ridge of Caps... Five hundred feet higher the road comes to the very edge of the Castellated Ridge, and here will be one of the most interesting features of the journey. Instead of making a turn around the edge of the ridge the railway will go through the ridge by a tunnel, and with a turn to the left will come out and cross itself.
>
> On the west slope of Mt. Jefferson, beginning at the Castellated Ridge, the route presented great engineering difficulties, making it necessary to put in two switchbacks... After the road passes over itself it runs back toward the Base Station, but always climbing, for a mile and a half. At the first switchback there is a sheer drop in front of nearly a thousand feet [sic]. The car will then run backward to the Castellated Ridge and the second switchback.

The foregoing was the official language of the railroad's press releases and was quoted in many metropolitan papers of that day. It was surely understatement to say that one tunnel through the Castellated Ridge and

two switchbacks between this and Caps Ridge were "interesting features". Anyone familiar with this terrain and its steepness would be startled at this section of the safe and scenic route.

From the second switchback the cars would then run in a southerly direction along the west side of Mt. Jefferson, passing nine hundred feet below its summit, then traverse the western slope of Mt. Clay, parallel to and not too far from the present course of the Gulfside Trail. The location continued to follow this southerly course and crossed the existing Cog Railway track near the Gulf Tanks. Then it ran to the south across the lower west slope of the cone of Mt. Washington to the point previously mentioned (what is now the junction of the Southside Trail and the Crawford Path).

Meanwhile the B. 8c M.'s legal staff were hard at work, interviewing the property-owners on the land takings that would be needed and, more important, on their price. Almost all the land was owned by the Conway Company and the Brown Company's realty subsidiary, the Berlin Timberland Company. Again a quote from *Among the Clouds* (August 15, 1912) gives an inkling:

E. O. Woodward, Boston and Maine Conveyancer, Assistant Engineer H. S. Jewell, Survey Chief of the B. & M. R.R., H..G. Spaulding of the Mt. Washington Railway, and L. D. Goulding and G. D. Thompson of the Conway Company went to make an examination of land takings for the railway location and hotel site. The area at the summit is fifty rods in radius and the new location will require twice as much. In the afternoon the party took a tramp from Bae Station to Jefferson Notch and Castellated Ridge to determine the land required of the Conway Company.

According to the surveyors' plans a total of 171.02 acres would have to be purchased to provide for a location or right of way 99 feet wide, the loop and two switchbacks on the Great Range, and the hotel site on Mt. Washington. Of this total 130.18 acres in eight separate parcels were owned by the Conway Company, 39.16 acres in five parcels by the Berlin Timberland Company, and 1.68 acres in two parcels by other persons. The president of the Con way Company was a friend and business associate of Mellen. Since the Secretary of Agriculture by right of the Weeks Act of 1911 was also interested in procuring this entire vast area as a start for a new National Forest, the owners were in an interesting position. Results of this will be seen later.

On July 22, 1912, the New Hampshire Public Service Commission made possible one more step toward the realization of this project by making available a plan to finance it. They granted permission to the lessor-owner, the Concord and Montreal Railroad, to construct this "Extension". The matter of the issuance of $1,500,000 in stock was not ruled on at this hearing, and according to railroad records was to be arranged by the railroad as work progressed. Mellen never worried about methods of finance until necessary.

During all this time what was being planned for the top of Mt. Washington? The architect's sketch shows that it was an imposing structure. The railroad's publicists used elegant language. "Unique among hotels," "The only hotel in the world... to have a mountain top through its floor," "Every room an outside room," "One hundred sleeping rooms," "Entire hotel a circular observatory one hundred fifty feet in diameter," "Glass skylight ninety feet in diameter above [which] a searchlight... of sufficient power to be seen from Portland," "Inside verandas," "...having the very summit protrude through the first floor so that one may stand on the summit and view all but 48 degrees of the 360-degree view."

The plans were the work of the New Haven's noted architect, R. C. Reamer, who had gained fame for designing hotels in Yellowstone Park. The building was to be a massive structure of stone, steel, concrete and glass, since their experience then indicated that "wood [would] not be able to withstand the elements, and plenty of solid material being already at hand". How different from the *(Appalachian Mountain)* Club's experience in constructing their exposed huts at that time and in later years!

The station platform was on the south side of the hotel and summit. Two entrances led from it to the basement of the hotel, one for passengers and the other for freight and provisions. Passengers went through their entrance and reached the lobby by a flight of stairs or (for the goofer) by an elevator up one floor. The main dining room was on the first floor, above the platform-entrance section in the 48 degree area of blocked view as one stood on the center summit rocks. In this sumptuous room it was planned to care for the daily eating needs of 300-400 persons. Kitchens, wine room, barber shop, billiard room, boilers and other service rooms were in the basement area.

Sec. 16 - Electric Scenic Railway

Down below, at the Base Station, activity was increasing in other directions. A large modern hotel on top demanded among other things a vital commodity that the upper part of the mountain couldn't supply in sufficient quantity: water. In anticipation of the planned building above, steps were taken in 1911 to create an enlarged pumping station that would-and did-force the Ammonoosuc's clear water under very heavy pressure all the way to the summit in one lift, a height difference of about 3700 feet.

Work on this station was begun on September 7, 1911, by a B. & M. bridge and building crew. The structure was located some twenty-five feet from the track in the vicinity of the laundry building. It housed two Dean Brothers steam pumps with steam cylinders sixteen inches in diameter and a large steam boiler. The new three and one-half miles of water line to the top was made of double-thick piping 1½ inches in interior diameter. Despite what happened to other phases of this "Extension", this one was completed in 1912 and went to work shortly thereafter. At least there would be and has been water on top for the railroad and the present hotel buildings.

The power that would have to generate the electricity for the traction line was planned for on paper. A large steam generating plant was designed for erection at the Base Station. A transmission feeder line to give extra juice for the cars was also planned for installation between Jefferson Notch and the south end of the first switchback on Caps Ridge, and from the latter spot to the upper line on the west side of the cone of Mt. Jefferson.

By the end of the summer of 1912 progress was obvious. The final issue of *Among the Clouds* for that year (Sept. 14, 1912) summed it up this way:

> We take pleasure in informing our readers that a vast amount of work has been accomplished. The working out of preliminary details, such surveying the right of way, making changes in the line that would be beneficial for grades and. curves, and measurements for bridges and trestles have occupied the engineering corps all summer on the ground, as well as the legal and other departments of the railroad in taking over the right of way from different landowners who control this section of the country. By another season everything undoubtedly will be in readiness so that construction can begin... the railroad officials have entered into the matter with enthusiasm, and Supt. Cummings in particular has devoted himself to the undertaking heart and soul.

The year 1912 witnessed the high-water mark in actual work done for the dreams and hopes of the backers of this "Extension". While time remained, survey crews worked into the fall to check all the angles and level the grades for the big push that would start in the spring. It was during this work on September 18, 1912, that a portent of the end of the project might have been observed in the mysterious disappearance and death of John M. Keenan of Charlestown, Mass., a rodman. Keenan had been at work on the upper part of the cone of the mountain. It was his first day and, apparently alarmed when the peak suddenly became cloud capped, he disappeared downhill. A thorough search by many persons failed to locate him. Two days later, half-crazed, he was seen by three separate groups along the road in Pinkham Notch near the Glen House. One party actually gave him a ride south for two miles and let him out at his request near an old logging camp. Despite a further search by hundreds of volunteers no trace of him was ever found.

With this unfortunate event all crews were pulled off the hill. Work in the field on the "Extension" was finished for 1912 and for all time.

The final chapter in the history of the Scenic Railway can be told in various ways. But they all center around the crumbling of Mellen's vast New England transportation empire. In 1913 one of his last additions to the empire, the Boston and Maine, became the first to feel the weight of financial doom, and with the B. & M.'s collapse went the "Extension of the Mount Washington Branch of the Concord and Montreal Railroad". The first issue of *Among the Clouds* for 1913 (July 11, 1913) announced this with the following statement: "We regret to state that the work on the summit has been indefinitely postponed, which is probably due to financial conditions. However, as soon as this and other matters are straightened out, the new railway and hotel will in all probability be built." This is an interesting and conservative explanation and raises the question of what the "other matters" were that needed straightening out.

Previous mention has been made of the passage of the Weeks Act and the attendant possibility of the purchase of Presidential Range lands to form a part of a new National Forest. During the fall and winter season of

1912-1913 U.S. Department of Agriculture representatives on the one hand, and those of the Berlin and Conway Companies on the other, consummated agreements to sell all the lands through which the B. & M. planned to run their new line. There is reason to suspect that the owners anticipated the Boston and Maine's eventual financial crisis in making their decision to sell to the Government. This event left the rail road only two doubtful avenues by which to get their right of way to the top: (1) an act of Congress, or (2) modified tri-partite agree ments between the parties to permit the extension through Government lands. While both avenues were considered by New Haven and Boston & Maine officials, the possibility of success by either was so questionable that further action was dropped with the financial crisis in 1913.

The long and formal report of the investigation by the Interstate Commerce Commission in 1914 (I.C.C., Vol. 31, pp. 32-132) into the affairs of the New Haven Railroad, its many subsidiaries and appendages, Mesrs. Mellen and Morgan, etc., gives a final explanation of the demise of the "Extension". Quotes such as these are mild samples:

> The New Haven System has more than three hundred subsidiary corporations in a web of entangling alliances... The result of our research has been to disclose one of the most glaring instances of maladministration revealed in all the history of American railroading.... Marked features and significant incidents in the loose, extravagant, and improvident administration of the finances of the New Haven as shown in this investigation are the Boston and Maine Railroad despoilment... The domination of all the affairs of this railroad by Mr. Morgan and Mr. Mellen...

According to this long and thorough report the Boston and Maine and its many subsidiaries, including the Mount Washing ton Cog Railway, emerged from this mill of manipulation by Mellen & Co. a physical and financial loser.

A committee of two, who were appointed by the Appalachian Mountain Club Council in 1912 to look into matters concerning the railway and hotel embraced by the "Extension", had the words directly from Mr. Mellen himself, as a result of a conference with him in March, 1913. The Councillor of Improvements, Dr. Harry W. Tyler, and the Vice President, Walter Jenney, officially re ported their interview in Club Council records as follows:

> Dr. Tyler for the Committee for the Preservation of the Tip Top House reported an interview with President Mellen of the New York, New Haven and Hartford Railroad by himself and Mr. Jenney at which Mr. Mellen had stated that on account of the desperate condition of the finances of the Boston and Maine Railroad nothing would be done on Mt. Washington either with respect to the proposed scenic railway or the hotel.

Thus ended the work of many hands and the spending of large sums toward the dream of a few. This was the end: no looping electric necklace, no concrete crown. The high ridges and alpine areas of the Great Range fortunately never met this "Scenery Smasher".

Gideon in the Rafters

Facebook *Mount Washington Cog Railway - We Were There* group - September 20, 2015 ·
Art Poltrack: "Who knew this builder?"

The photo above prompting the question was likely taken in a tin building that was labeled a "shed" in the *1958 Report of the Governor's Mt. Washington Study Committee*, but the shed was actually the only part of the Boston & Maine's grand scheme for a new electric railway and summit hotel that was ever built in 1911. *(For details see Appendix Sec 11 & Vol. 3 Aggregated Timeline)* The "shed" housed a new, powerful steam water pump profiled in the *Boston Daily Globe* on December 16, 1923 when they ran a story from the *Washington Star.*

Water Shot Up Mt Washington by Tremendous Pressure

"At the foot of Mt. Washington, in New Hampshire, may be seen a small shed that contains one of the most remarkable high-pressure pumping plants anywhere. A single engineer, who acts as fireman, caretaker and oiler, operates the plant. It "squeezes" against a pressure of 2350

pounds to the square inch from the base of the mountain to the Summer hotel at the peak of Mt. Washington.

"It is difficult to comprehend such a pressure without a medium of comparison. The high-pressure system of New York's Fire Department, with 300 pounds to the square inch, which will throw water over even the 700-foot Woolworth Building, is insignificant beside it. The pressure of a harnessed Niagara Falls, or any of the numerous irrigation and power plant projects of the West, has about the same ratio to the weight of that column of water from the top to the base of Mt. Washington as the force within a soda water bottle has to your local water supply.

"If the Mt. Washington pumps were deprived of their duties at the foot of the mountain and connected instead to a turbine intake pipe at Niagara, or to the high-pressure fire lines of New York, they would pump 25 gallons a minute into the pipes again the 300 or 400 pounds pressure encountered." *- Washington Star*

Art Poltrack's question about the pump house graffiti came in the midst of a newspaper archive review for Mount Washington Railway references, and the name "Corriveau" came up in St. Johnsbury's *Caledonian Record*.

"Gideon Corriveau, who is at the base of Mt. Washington for the summer, spent Sunday with his family here."
- July 12, 1920 pg. 6

"Gideon Corriveau who (has) been at the base of Mt. Washington during the summer (has) returned to St. Johnsbury." *- October 4, 1921*

St. Johnsbury Local News: "G.C. Corriveau has gone to the Base of Mt. Washington to resume the railroad work he has done for the past several seasons." *- May 9, 1922*

The graffiti says "Gid Corriveau - July 1919 to Sept 1929." The Gideon Corriveau in St. Johnsbury was 52 when the apparent pump house operator/graffiti artist started work at the Cog and would've be 62 when he signed the beam.

Gideon Joseph Corriveau of St. Johnsbury was born on November 10, 1861 in Plessisville, Quebec - the son of Jean Baptiste and Adeline (Lariviere) Corriveau. In 1919, Gideon J. Corriveau had been working for the American Fork & Hoe Company for at least three years, and was living with his wife, Helene Victorine (Champons) at 48 Concord Avenue. When the pair got married in 1906, Gideon was 44-year old widow working as a blacksmith. In 1925, the St. Johnsbury City Directory says he is a "hotel man" and five years later he's working for the Boston & Maine RR. He died on June 3, 1949 at the age of 87 of a cerebral hemmorhage.

But there is also a Gideon J. Corriveau working as a knitter in in Belmont, New Hampshire who would be 30-years old in July 1919. Could he be a relative of the elder Corriveau and was visiting family in St. J? Then there's the problem with the middle initial - the *Caledonian Record* says the middle initial is "C" - both men's middle name starts with "J." Personally, I like to think the old blacksmith left his mark on the pump house beam.

Sec. 17 - Gideon in the Rafters

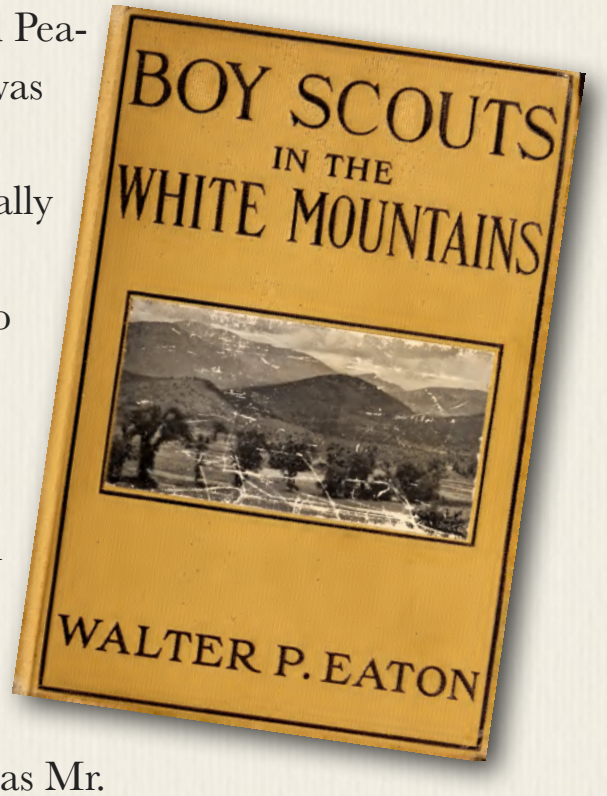
Gideon in the Museum

The pump house was demolished in the summer of 2020 to make way for a new $3-million dollar engine shop. The pumps and the boiler that powered them were set aside. Workers made sure to cut the roof beam with Gid Corriveau's signature as a memento of the project.

- Photos this page by Art Poltrack (2020)

Mountain Scouts

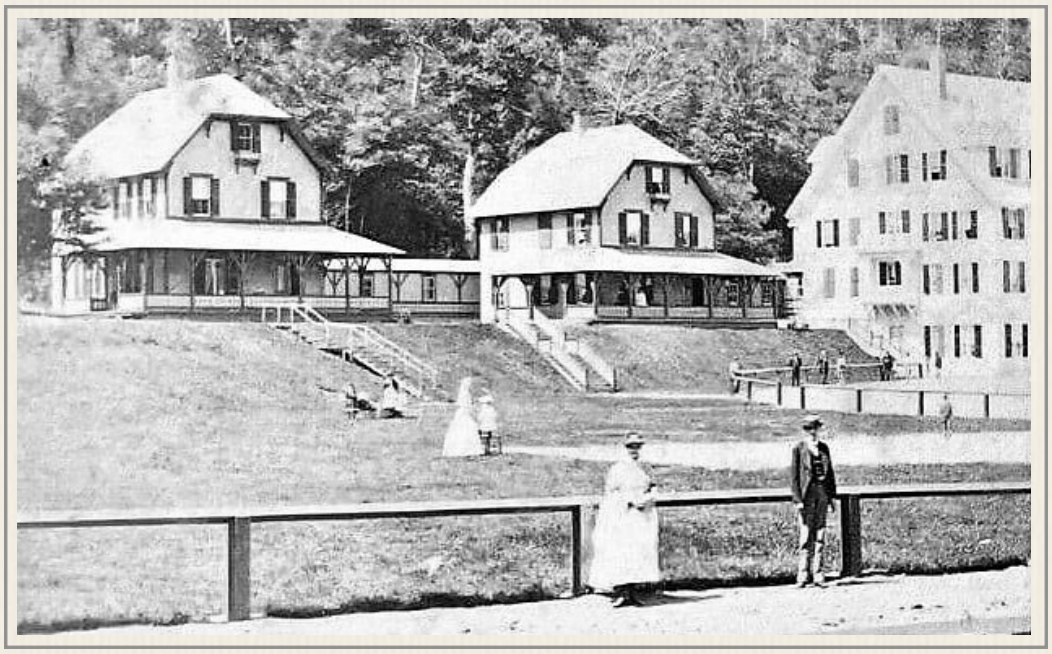
The following is an excerpt from the 1914 book, *Boy Scouts in the White Mountains*. It is one in a series of Boy Scout adventure books by Walter P. Eaton, and follows a small group of Scouts from Massachusetts on an early summer tramp in the region in the early 1910s. Eaton's narrative describes a trip that would occur between the time of the Great Fire on the Summit of Mt. Washington, and construction of the third Summit House. While the boys never ride the Mt. Washington Railway, the account contains details of summer tourism of the era, hospitality at the Tip Top House, and the plot is driven by the danger awaiting the unprepared - especially a young couple walking up from the Crawford House to catch the afternoon Cog train down the mountain.



"Where are we going to hike this summer, by the way?" asked Peanut. "The White Mountains," said Art. "It came to me while I was looking at that picture of the Alps which hangs on the side wall. These mountains about Southmead, *(Massachusetts)* they're not really mountains – only hills. But we've had a lot of fun climbing 'em. Think what fun it would be climb real mountains. We can't get to the Alps or the Rockies, but Mr. Rogers told me once it wouldn't cost any more to hike over the white Mountains than it cost us to go to the Dismal Swamp." "Me for them," cried Peanut. "That means saving twenty-five dollars between now and July. Wow! I'll have to do some hustling!" As vacation time drew near in June, the number of Scouts who were going to be able to make the trip had boiled down to four – Art and Peanut, of course, with Frank Nichols and Lou Merritt. In addition to these four there was Mr. Rogers, the Scout Master, and Rob Everts, who would be back from college in a week or two now, and was going on the hike for a vacation, before he started in summer work in his father's bank. That made a party of six, which Mr. Rogers declared was, after all, enough. "Just a good chummy number," he said. "The Appalachian camps will hold us without overcrowding, and we won't always be worrying about stragglers getting lost… I have the maps, " Mr. Rogers said. "here are the government maps of the Presidentials, and here is the little Appalachian Club book, with maps and trails." He brought out a small book in a green leather cover like a pocketbook, and opened it, unfolding two maps of the Presidential range, like big blueprints. The boys leaned their heads together over it, and began to spell out the trails. "Here's the Crawford Bridle Path – that's a long one – shall we go up that? Asked Lou. Mr. Rogers nodded. "That's the way well get up Washington," he said. It was agreed, as soon as Rob got home from college, to start the day before the Fourth of July, and celebrate the Fourth in the mountains.

The Scouts ride north on the train, spend the 4th on Mount Kinsman, hike through Franconia Notch, that abandoned town of Easton, up Moosilauke and over Mount Lafayette to the Profile House where they foil a late-night robbery by let-

ting the air out of the tires of the getaway car and then trailing the thieves to the hotel (right) to raise the alarm. After a climb to the top of the Old Stone Face, the young heroes get a ride to the Crawford House in a motorcar owned by the man who the would-be robbers had targeted.



The "Open Space" at the Profile House: *"...the Scouts came out into an open space. At the farther end, they could see the night lamps in the windows of what looked like a hotel. "Must be the Profile House," said Peanut. To the left they could see other houses, a row of them, close together, and in the trees, directly at their left, they could distinguish the outline of what seemed to be the last house of all. They stole toward it, on tiptoe, along a path in front. It was quiet. There was not a sound in the world. The whole settlement seemed asleep. But Art suddenly put his hand on Peanut's shoulder, and they dropped down together on the ground. The two men were sneaking from behind this house toward the next one. Art had seen their figures, as they passed a dimly lighted window of the second house. A second later, and the boys heard a faint, curious sound. "I know it !" Peanut whispered. "It's a glass cutter. Heard it at the painter's shop." They waited breathlessly, and heard a window catch sprung, and a window opened. "They're climbing in!" said Art. "Quick, now, to rouse the house!" He sprang up. Peanut after him, and emitted a Comanche yell, and then began shouting at the top of his lungs, "Robbers! Robbers!"(1914)*
- Boy Scouts in the White Mountains - pgs 112-113

They now came speedily into Bethlehem…. The chauffeur drove the length of the street and back (stopping to be sodas at a drug store) and then turned the car eastward once more, toward Mount Washington. They rushed along at thirty miles an hour, with Mount Washington getting closer every moment. In less than an hour, they had swung with the bend of the rushing Ammonoosuc River into a considerable level plain, and found themselves in the midst of a settlement. There were two or three railroad tracks, cottages, a small hotel, then a big hotel – the Fabyan House, and a junction railroad station, and then, still closer to the great wall of the Presidential range, the Mount Pleasant House and half a mile to the left, across a beautiful green golf course, the huge bulk of the Mount Washington Hotel. "Golly, that hotel is as big as Mount Washington itself," said Art. The chauffeur laughed. "Yes, and the prices are as high," he said. They now passed along the road, between the two hotels, headed south, and then began to go u-hill, leaving the Presidential range more and more on their left. After two miles, they lost sight of all the range. On their left was only a high, wooded slope. On their right was the same. In front of them a white hotel and railroad station suddenly appeared, and in front of that was only a narrow defile between the two hills, just big enough to let the road and railway through.

They set up camp alongside the Bridle path then explore the Notch and the Willey House. The next morning time to start the main tramp to Mt. Washington.

The packs were carefully packed, the blanket rolls firmly strapped, compasses examined and stowed in the pockets, and the party was ready for the ascent. They moved rather slowly into the path, and turned upward, for the loads were heavy. They were carrying enough provisions for four days, the evaporated vegetables and powdered milk and eggs having been largely saved for this final trip over the bare Presidentials, where they would be far from any sources of fresh sup-

ply, and their weight increased by flour, a little butter, some coffee, bacon, potted ham and sweet chocolate purchased the day before in Franconia. They plodded steadily upward, by a fairly steep grade, though not a difficult one. The rising sun was now striking down into the spruce and hemlock woods about them, but they noted that it was rather a hazy sun…. "If we get into a storm up there, a real storm," the Scout Master said. "We'll beat it back, you bet! I haven't told you, I guess, that as late as 1900 two men *(Curtis & Ormsby)* lost their lives on this path in a snowstorm on the 30th of June – that's hardly more than a week earlier than to-day. Down here it's midsummer, but up there on the five thousand or six thousand foot level it's still early spring." "Golly!" said Peanut, in such a heartfelt manner that the rest laughed – though they laughed rather soberly…

The trees were growing more and more stunted and rocks began to appear in the trail. In another half hour, the forest had shrunk to dwarf shrubs, and they emerged above timber line almost upon the top of Clinton. It was nine o'clock. The dome of Pleasant was free from clouds. The northern sky was blue. Yet the sun was hazy, and southeastward there seemed to be a haze over everything. The wind was cold. Mr. Rogers shook his head, but said nothing. It was warmer here in the shelter of Pleasant, and they stopped for a long drink by a spring. But, two miles from Clinton, they rose again beyond Pleasant upon the bare col between Pleasant and Franklin, and got the full force of the north wind, which seemed to blowing harder than before. The sun, too, was getting more misty. Mr. Rogers was watching the south and southeast, but while it was very hazy in that direction, the direction of the wind didn't seem to indicate that the mist bank could come their way. The path was no longer distinct. Here and there it was plain enough, but in other places it could be detected only by the piles of rock, or cairns, every hundred feet along the way…

(The scouts had noticed a man and woman hurrying up along the trail behind them)

The cone of Washington had gone out of sight in a white mass. Southward, the view was shut out, for the haze had moved up against the wind. The couple hailed the boys with panting breath. "How much farther is it up Washington?" the man asked. Mr. Rogers and the Scouts turned and looked at them. They were young, evidently city bred, and they had on very light shoes. The girl had on a silk waist, the man a stiff collar! They had no food with them, having eaten some sandwiches they brought, so they said, as they walked. They had put on their sweaters, and had no other protection. "You are two miles from the summit yet," said Mr. Rogers, "with the hardest part of the climb ahead." "Oh, John, I can never do it!" said the girl. "We've got to do it," the man answered. "You see," he added to Mr. Rogers, "we've got to catch the train down. Some people are waiting for us at the Mount Pleasant House." "The train down!" said Mr. Rogers. "Why, man alive, it's nearly noon now, and the train goes down shortly after one. It will take you two hours to make the summit cone, with your – your wife in her present condition, even if you don't lose the path." "I – I'm not his wife," the girl said, turning very pale. "We are engaged only. You see, we've got to get down again to-day. Oh, John, we must catch that train!" "Come on, then, we'll do it! Why , we can make two miles in less than an hour! Two hours, in-

deed!" He started ahead, but Mr. Rogers grabbed his arm. "Hold on!" he said, "have you ever been on this mountain before?" "No," they both answered. "Well, I have," the Scout Master continued. "Ahead of you lies the most dangerous stretch of path east of the Rocky Mountains There's a cloud coming down from Washington, and we may have a storm at any minute. You've got no compass, no provision, no proper clothes. You'd lose that path in five minutes in a cloud. In 1900, two men, good strong walkers, too, died of exposure between here and the summit. You stay with us." The girl went whiter still, and the man, also, grew pale. "But can't we go back the way we've come?" he said. Mr. Rogers pointed back over the ridge. A cloud was rolling up and over it from the pit of Oakes Gulf. "You'd lose that path, too," he said. "You stick with us, and if we can't make the summit before the storm breaks, we'll ride her out in the Shelter Hut. Come, I'm captain, now. Forward March!" They had not gone a quarter of a mile when the clouds that came down Washington and those which streamed in from Oakes Gulf closed together, and the last of the party, who chanced to be Lou, suddenly found that he couldn't see anything, nor anybody. His heart gave a great jump in his breast, and he let out a terrified cry, which was almost lost in the howl of the wind. "Come on up!" he heard faintly. A second later, and he saw the forms of Peanut and Frank emerge from the mist ahead of him. The whole party now gathered close in behind Mr. Rogers, keeping only two feet apart, almost treading on each other's heels. The Scout Master stopped a second. "Everybody watch for the cairns," he shouted, "and keep close together… We are only a short way from the hut. We'll go in there till the worst is over." The wind was rising. The cloud that packed them close as cotton batting condensed on their clothes in fine drops. Suddenly Peanut, who was blowing on his chilled hands, noticed that the drops were beginning to freeze! The rocks of the path were getting slippery, too. The girl had stumbled once, and strained her ankle. She was paler than ever. "Oh, why did I wear these high heeled shoes!" she half sobbed. Suddenly Art and Mr. Rogers ahead gave a cry. The rest, looking, saw dimly in the swirling vapor only a pile of stones and a cross. "It's the spot where Curtis died," Mr. Rogers shouted. "We have only a quarter of mile to go." At the sight of the cross the girl gave way. She began to sob, and Rob felt her weight suddenly sag heavily on his arm. (Rob and her companion) got Rob's blanket unrolled and wrapped about her, as best they could for the whipping of the gale, and then half carried her along, while she tried bravely to stop her hysterical sobbing. The gale was now a perfect fury. It must have been blowing seventy miles an hour. Alternately lying on their faces on the frozen, wet rocks to get their breaths, and pushing on into the gale, they struggled ahead for what seemed hours Actually it was only half an hour. Half an hour to go 440 yards! Suddenly, out of the vapor, not twenty-five feet ahead of them, loomed a small, gray shanty. "Hoorah!" cried Art and Mr. Rogers. "The hut!" Into the hut all eight of them crowded. Inside, they found two or three blankets hung on a string, and nothing else except a sign forbidding its use in any save cases of emergency. They looked through the window into what at first appeared to be the thick cotton batting of the cloud, but closer inspection showed them that it was snow. The cloud was condensing into snow!

(The party huddles in the cramped emergency shelter & storm subsides a bit after three hours – the ridgeline clears but Washington remains in the cloud)

(The Scout Master) looked at his watch. It was half-past three. "Now, less than two miles! Keep moving briskly. There's nothing to fear now. This storm is over, I'm sure. A fire waits on top!" They started out a good pace over the plateau of Bigelow Lawn… The snow was already melting, but it only made the trail the more slippery, and this coupled with the high wind, made walking difficult. The girl and her companion had no poles, so Rob and Art lent them theirs, and Rob walked beside the girl to help her over bad places… the summit path swung rather sharply toward the north and began to go up steeply, they were entering into the vapor about the cone of Washington, it was much less dense than during the morning, and they could see the path ahead without much difficulty. This path was something like a trench in the rocks, apparently made by picking up loose stones and piling them on either side till the bottom was smooth enough to walk on – or, rather, not too rough to walk on. Just at that moment, seemingly from the gray cloud over their heads, rang out the call of bugle! Everybody stopped short, and exclaimed, "What's that?" "We aren't up to the top yet," said Mr. Rogers. "Somebody must be coming down." "Hello, yourself!" yelled Peanut, at the top of his lungs. There was a sharp toot on the bugle, and as the Scouts moved forward up the trail, they presently saw dim figures above them, moving down. A moment later and the parties met. The newcomers were five men, with packs and poles. One of them had a bugle slung from his shoulder. "Is Miss Alice Brown in your party?" they called as soon as they came in sight. "Here I am," the girl said. "What is it?" She had gone white again, and hung on Rob's arm. "We're looking for you, that's all," said the five men, as the parties met. "Is your companion here?" "I'm here – we're both here, thanks to these boys and their leader," the man replied. "How did you know we were coming up?" "How did we know?" said the man with the bugle. "Miss Brown's parents have been spending $7,333,641.45 telephoning to the summit to find out if you had arrived. As soon as we got word that the lower ridges had cleared, we started down to look for you." "Oh, poor mamma!" cried the girl.

(The party turns and heads for the Summit)

They came suddenly into what looked like an old cellar hole in the rocks. "The corral where the horses used to be hitched after they'd come up the Bridle Path," said the man. "We're almost there, now." The path became more nearly level, and very soon, through the cloud, they could make out what looked like the end of a wooden bridge. A moment later, and they saw it was the end of a railroad trestle. Another minute, and through the vapors they saw emerge a house, a curious, long, low house, built of stone, with a wooden roof. The house was shaped just like a Noah's ark. "They summit!" cried Mr. Rogers. "There's the old tip Top House!" The Scouts gave a yell, and jumped upon the platform at the top of the railroad. From this platform a board walk led up to the door of the Tip Top House *(next page)*. Across the track, steps led down to a barn and second house, the coach house at the top of the carriage road, which ascends the eastern slope of the mountain. The girl, as Rob and her fiancé helped her up on the platform, gave a weary sigh, almost a sob, and then, hobbling on her lame ankle, she tried to run up the walk to the Tip top House. The boys followed a little more slowly, looking first at the cellar hole where the old Summit Hotel used to stand (it was burned down in 1908) and where a new hotel will have

been built before this story is published. *(Ed note: the new hotel was not built until a year after this story was published.)*

"It all depends on what winds Father Aeolus keeps chained, perhaps in the deep caverns of the Great Gulf, or which ones he lets loose to rattle the chains of the Tip Top House"

It was nearly half-past five when they entered the long, low room of the Tip Top House *(left)*, and felt the sudden warmth of a wood-fire roaring in a great iron stove. Dumping their packs in a corner, the boys made for this stove, and held out their hands toward the warmth. "Gee, it feels good," said Peanut. "Feels good on my legs, all right," said Frank. "I'm kind o' stiff and tired, I don't mind saying." The girl had disappeared. She had already talked to her mother at the foot of the mountain by the telephone which runs down the railroad trestle, and the wife of the proprietor of the Tip Top House had taken her up-stairs to put her to bed. "I guess she'll sleep all right to-night," said the man with the bugle, who had entered with the boys. "And she won't tackle the Crawford Bridle Path with high heeled shoes on very soon again, either!" said Rob. "Are we going to sleep here, too, Mr. Rogers? I don't believe we'll want to sleep outside. The thermometer by that window is still down almost to freezing." The man with the bugle whispered to them, so the proprietor wouldn't hear, "Don't stay here. They'll stick you for supper and put you in rooms where you can't get any air. The windows are made into the roof, and don't open. I got a horrible cold from sleeping here last year. Guess they never air the bedding. We are all down at the coach house. You may have to sleep on the floor, but the window will be open, and you can cook your own grub on the stove." "That's us!" said Peanut. "Say, we want to get some sweet chocolate first, though, and some postcards, don't we?" The Scouts all piled over to the long counter at one side of the room, and stocked up with sweet chocolate, and also wrote and mailed post-cards, to be sent down on the train the next day. The summit of Washington in summer is a regular United States post-office, and you can have mail delivered there, if you want. "Be sure you don't scare your families with lurid accounts of to-day!" Mr. Rogers cautioned them. "Better save that till you're safe home" "Why don't you write out a little account of your adventure for *Among the Clouds*?" said the proprietor. "You can have copies sent to hour homes, if you leave before it comes out." "What's *Among the Clouds*?" the boys asked. He picked up a small eight page newspaper. "Printed at the base every day," he said. "It was printed on top here, till the hotel burned. All the arrivals at the summit are put in daily." "You write the story, Rob," cried Art. "When will it be printed?" "Make it short, and I can telephone it down for tomorrow," the man said. "Fine! We'll all take two copies," said Peanut. "Save

'em for us. We'll be around here for two or three days. Hooray, we're going to be in the paper!" "You might all register over there while the story is being written" said the proprietor. Rob took a pencil and piece of paper and sat down by the stove to write while the rest walked over to the register. There were very few entries for that day, as you can guess. The top of the page (the day before) showed, however, the names of two automobile parties, who had written, in large letters under their names, the make of the cars they had come up the mountain in. "Gee, how silly," said Art. "Wait," said Peanut, his eyes twinkling, "till I register." He wrote his name last, and under it he printed, in big, heavy letters: *Smith and Jerome's Shoes.* "There," he cried, "that's the motor I came up in! Good ad. For old Smith and Jerome, eh? Might as well advertise our Southmead storekeepers." The man with the bugle, who was standing behind the boys, peaked over at the register, and roared with laughter. "You're all right, Kid!" he said. "I wish the motor parties could see it. It would serve 'em right for boasting about owning a car. Besides, that's the lazy loafer's way of climbing a mountain. If I were boss, I'd dynamite the carriage road and the railroad, and then nobody could get here but folks who knew how to walk." Rob had now finished a brief account of their adventure on the Crawford Bridle Path, and the proprietor went upstairs to find out the name of the man they had rescued. The girl's name they already knew. Rob turned his little account over to the proprietor, and the party left the warm house, and went out again into the cloud and the chilling wind. It was almost like stepping out upon the deck of a ship in a heavy fog. They could see the board walk ahead, as far as the railroad platform – and that was all. The rest of world was blotted out. The wind was wailing in the telephone wires and through the beams of the railroad trestle, just as it wails through the rigging of a ship. It was getting dark, too. The boys shivered, and nobody suggested any exploring. They crossed the railroad with its cog rail between the two wheel rails, and descended a long flight of steps. At the bottom was the end of the carriage road, which they could see disappearing into the cloud to the east, a barn on the left, chained down to the rocks, and on the right a square, two-story building, the carriage house. Inside, a lamp was already lighted, and the four men who had come down the mountain with the bugler, as well as the evident proprietor of the house, were sitting about the stove, which was crammed with wood and roaring hotly. In a short time the party of eleven (the proprietor cooked his supper later) sat down to the rough table, with bouillon cube soup first, and then steaming coffee, omelet made with minced ham, griddle cakes fla-

vored with butter and sugar furnished by the proprietor, and sweet chocolate for desert. For a time nobody said much. They were busy putting away the delicious hot food. They all sat for a while discussing the day's adventure, and planning for the next day, if it was clear. The five men were going down over the Davis Path, and as that path leads along Boott Spur, the Scouts decided to go with them… the Scouts to descend for the night into Tuckerman's Ravine, while the others kept on southwest, over the Giant's Stairs to the lower end of Crawford Notch. "And now for taps," cried the bugler.

He and Lou got up, and went out-of-doors. The rest followed, but the first pair slipped away quickly into the cloud, going down the carriage road till the lamp of the coach house was invisible. The universe was deathly still save for the continual moaning of the wind. There was nothing at all visible, either stars above, or valley lamps below – nothing but a damp, chilly white darkness. Lou was silent, awed. The man set his bugle to his lips, and blew – blew the sweet, sad, solemn notes of taps. As they rose above the moaning of the wind and seemed to float off into space, Lou's heart tingled in his breast. As the last note died sweetly away, there were tears in his eyes – he couldn't say why. But something about taps always made him sad, and now, in this strange setting up in the clouds, the tears actually came. The man saw, and laid a hand in silence on his shoulder. "You understand," he said, presently, as they moved back up the road, and that was all he said."

Real Mountain Scouts: *Eaton' story involves fictional scouts. Those above are real. "During the summer of 1931, the U. S. Forest Service enlisted the help of the Boy Scouts to conduct trail work on the Valley Way on the lower slopes of the northern Presidential Range. Pictured here with his crew of Boy Scout volunteers is WMNF District Ranger Truman Hale." (1931)*
- US Forest Service photo via Mike Dickerman FB page

1919 - Teague Labor Report

REPORT OF HENRY N. TEAGUE, ASSOCIATE DIRECTOR, DIVISION OF PUBLIC WORKS OF THE INFORMATION AND EDUCATION SERVICE, UNITED STATES DEPARTMENT OF LABOR.

Recognizing the great need of providing employment not only for returning soldiers, but also for the large number of employees of munition factories while they were being changed from a war-time basis to a peace-time basis, and realizing that neither public works nor private enterprises were being planned for the future that would accomplish that object, the Secretary of Labor felt that something must be done to stimulate both public works and private building enterprises. For 13 months the Federal Government discouraged in every way possible and in many cases absolutely forbade building operations. The public got out of the habit of building and it is curious psychology that unless people see buildings going up on all sides of them they are loathe to start their own building. Now, building is a basic operation. It not only keeps capital invested at home and supplies the opportunity to work in the community where the building is erected, but it also supplies work for practically every industry in the country. The miner, taking ore from the mine, is given employment; the woodsman chopping trees in the forest is given employment, as well as all the men connected with the industry between the growing of the tree and the finished product in the building.

The Information and Education Service has two objects in view - one to stimulate public building, because it is felt that private capital was unwilling, owing to the high cost of labor and material to start on a building program, but it was felt that these reasons of high cost of labor and material can not apply to public works, because in all good government whenever there is any employment, it is the duty of the State to provide its citizens with an opportunity to earn a living. This opportunity should be given in useful public works. There is nothing that is quite so much a loss to the State as idleness. For men unemployed are either a public charge or an idle producing unit.

The other object of the Information and Education Service is to promote home building and home owning, as it is felt that the best antidote for anarchy is home owning. The man who owns his own home will never desire bolshevism.

During the past three months I have traveled through the majority of the States of the Union and paid official visits on the governors and the mayors of the large cities, carrying to them the message of the two objects of the Information and Education Service and telling them of the seriousness of the unemployment situation throughout the country. I have been very much gratified

with my reception by them and their sympathy with the Labor Department on the question of public works.

I have seen the governor and legislative body of a great Commonwealth leave the Statehouse as a committee to ask mercantile establishments of a large city to provide work for unemployed soldiers and sailors, who had paraded the streets a few days before demanding work. I have seen in another city 500 discharged soldiers waiting for an opportunity to work in the United States Employment Service Office; and from this office I have seen two soldiers sent out to wash windows at 40 cents an hour. I have talked with hundreds of soldiers on their way home, and have been very much encouraged at the views of the soldiers and sailors who have done duty overseas; not one of them but stated in convincing words that we were obliged to enter the war; it was our duty to do so; and what they have seen on the other side has convinced them that we have the greatest government on earth, and they are unwilling and determined that anarchy shall not rule over here.

The governors and mayors of the great Western and Southern States have expressed a hope that a great many of the returned soldiers would come to their States to settle, as they feel that they will make the best possible citizens for them.

I feel sure from what I have seen and reports that I have received that within 90 days there will be so many public works started that there will be work for all, and that the most prosperous years of the country are at hand.

From the PROCEEDINGS OF THE CONFERENCE WITH THE PRESIDENT OF THE UNITED STATES AND THE SECRETARY OF LABOR OF THE GOVERNORS OF THE STATES AND MAYORS OF CITIES IN THE EAST ROOM OF THE WHITE HOUSE WASHINGTON, D. C. • MARCH 3, 4, AND 5, 1919 - *pgs. 156-157*

Camden Cottage

"A very fine vantage point on the west side of the old stone Tip Top House, the oldest structure on Mount Washington. In the center is Camden Cottage, and the Stage Office is beyond the Cog Railway trestle. The Filo camera seen here on the tripod.
- Winston Pote photo & caption / Mount Washington in Winter

June 1925 Boston & Maine Employees' Magazine: "Erected in 1922 for the shelter of winter tourists, by the Mount Washington Railway, at the request of the late Patrick Camden, a veteran of over fifty years in service of this company. His last work was to superintend the erection of a small house on the summit of Mt. Washington, which is now named in his honor - Camden Cottage. this shelter is left open during the winter to tourists, many of whom visit this building when others are closed. The idea of providing this shelter was original with him, and after he finally obtained permission to build it, he worked hard for its completion. His kindly disposition and his long and faithful service endeared him to all connected with the railway, as well as to countless numbers of its patrons, many of whom coming here year after year became personally acquainted with him. The cottage is marked with the following legend:

To you who to this cabin come
To seek shelter from the storm.
Of Patrick Camden have kind thoughts,
With him the idea to took form.

Sec. 20 - Camden Cottage

Frequent Visitor

The pictures of Camden Cottage in this section were taken by Winston Pote and are found in his 1985 book, *Mount Washington in Winter*. His personal photographic journey began in 1918 when a fellow employee at the General Electric test laboratories sold him a second-hand "Folding Brownie" camera for five dollars. He gravitated towards northern New Hampshire to take images. He was hired to be the official photographer for Green's Tours White Mountain winter trips. Nine years after he bought his first camera he was aboard the *Peppersass* when it took its final plunge down the Mountain. He was working as a druggist in Massachusetts and set out for his Pinkham Notch base of operations to document an early October snowstorm in 1925. His trip coincided with the dramatic rescue of Carriage Road employee, Max Englehardt by Pote's good friend, Joe Dodge.and Arthur Whitehead. Pote took a picture of the dead-tired pair and then hiked to scene of Englehardt's ordeal.

October 1925

"I found the summit icy with frost." Pote wrote. "The door to the old Stage Office building, where Max had been, was open. Inside, snow hung in frozen waves three inches long where the fierce winds had driven it right through the cracks in the walls. I made a time exposure showing the snow and the leftovers from Max's hurried last lunch before his retreat down the mountain. More than once I stumbled over a small file that was driven into the floor. A nearby piece of timber proved to fit the space between the file and the doorway. Apparently Max had used the timber, jammed against the file, to hold the door closed against the wind, but with only limited success. After the Summit House closed in early October, Max Englehardt, a French Canadian who had worked at the Glen House during the summer, moved up to the old Stage Office at the summit to serve sandwiches and coffee to those who came up by auto during the month. Before he went, some friends had tried to scare him with stories about the high winds at the summit—one story was about the time the door to the Summit House had been blown away and never found. Max was undeterred; he knew how to survive in the open during a winter storm by digging down into the deep snow—and it was a good thing he did. Although the weather was turning bad by (October) tenth, Max did not bother to get in a supply of firewood from the nearby Camden Cottage, perhaps because he was due to leave the mountain on the fifteenth. After the storm hit he realized that he did need the wood but that it would be difficult, if not impossible, to reach. He made one attempt to reach Camden Cottage, nonetheless, and was blown off the boardwalk connecting the buildings. Finally the door to the Stage Office blew off, hinges and all, just as in his friends' story. Max scrawled a note, found later by two climbers from the Glen House: "Laf at 12 for Tocman Arein— no wood." Translated: Left at 12 for Tuckerman Ravine. He then grabbed a blanket and a package of raisins, and headed down. There was a fierce west wind, and he wore only summer hiking shoes. He also carried a lot of money, of the heavy variety (coins), collected as tips from visitors. His blanket eventually was torn to shreds, but probably helped him during the first day and night on the mountain. He spent two nights buried in the deep snow. His feet froze. On the third day he found the Tuckerman Ravine headwall and slid down on the snow, which is a feat usually impossible so early in the fall."

"Joe Dodge and Arthur Whitehead, after a day spent searching for Max on the summit cone, often crawling on all fours to keep out of the wind, at last returned to Pinkham Notch. They had decided to go up the ravine from there. They borrowed some snowshoes (which had poor bindings, making the rescue effort more difficult). There were deep drifts, much like in midwinter, and their progress was very slow. Finally they heard a sound like a high-pitched train whistle. They

shouted in reply, then heard it again. Going in that direction, they saw a head beyond a large, sheltering rock. It was Max."

January 1926

Two months later, Pote was back on the Summit - this time alongside Joe Dodge. "We planned to stay in Camden Cottage, the winter shelter that Joe called "the best damned hut in the mountains!" He kept a cache of canned stuff there. When we arrived, Joe went ahead to see about a fire. As I reached the top of the drifted stairway on the summit, I saw a blanket come flying out the open doorway of the old Stage Office, which had not been visited since the October *(1925)* storm when Max Englehardt fled in panic, leaving everything in disarray. The now-open building had filled with snow, so we could just barely squeeze in past the doorway drift. Joe soon had a good fire going in the Camden box stove. Railway ties are fast-burning, as the wood is saturated with creosote. Used with care, it makes excellent firewood, but gale-force winds can create such a draft that a stove can become red-hot. We started drying blankets and clothing, and melted snow for coffee. In spite of my protest, Joe set a large can of frozen beans directly on the hot stove, allowing as how he had done this many times at the Lakes of the Clouds A.M.C. hut. "Oh, they just pop open," he assured me. Soon the beans were forgotten, for we discovered that the (Cottage) door seemed to be iced up and we couldn't get out. Meanwhile, the unattended stove did get red-hot. I was standing with my back to it, drying out as the coffee pot bubbled close by. Suddenly there was a deafening explosion that sent me flying across the room and into the woodpile! I yelled at Joe, "I told you so!" In spite of my pain, when I took one look at Joe I had to laugh. The boiling contents had flown in his direction, and his ears and hair were plastered with beans! The exploding bean can had pushed over the coffee pot, and scalding coffee burned my arm and some other parts of my anatomy, which was the reason for my quick broad jump. The ceiling and windows were covered with bean mush. We cleaned up some of it, but most we simply allowed to dry as we heated up some soup, both of us eating from the same dish." Next morning dawned clear, with a colorful sunrise beaming through the bean-smeared window. We took the broom and swept the dry bean residue from windows and ceiling. By the lime we had our housework done, clouds had come up from the south. Joe remarked, "We gotta get out of here!" So we quickly finished putting things in order and started down the mountain."

February 1927

Joe Dodge and Camden Cottage were in the newspapers again in early 1927 as Dodge relayed news of the Dartmouth Outing Club's climb to the top of Mt. Washington via his private radio Station 1-UN at Pinkham Notch to Alfred Sise operator of Station 1-ASF in Medford, Massaschusetts. The Dartmouth group had used skis all the way to the summit, "a feat which has never been done before, according to local authorities. At Camden cottage at the top, the party met R. J. Lougee '27; L. C. Conant '26, and H. Brige '30, Dartmouth students, who had come up from the base station to reconnoiter for senior trip next week." The Dartmouth men "piled skis against the wall of Tip top House. Summit House was reached at 3:15 p.m., and by the time the party was ready to descend a heavy storm had set in. Men had an exciting ski run down carriage road above Timberline and fine slide from Halfway House to Two-Mile Post" reported Dodge. The *Boston Globe* said "Dodge intends to broadcast a report of today's *(2/28)* activities, and also tomorrow's, about 8 o'clock at night."

February 1929

Yale Mountaineers Safe After Storm: "Edward P. Adams of Providence, R.I., and John W. Cutler of New York City, Yale students, arrived at the Glen House at Noon on Wednesday *(2/6)*

and immediately after dinner started to climb Mt. Washington spend the night. Thursday's snowstorm stranded them there. They had climbed the mountain safely, and went into the Camden cottage, which is kept unlocked through the winter to accommodate such as may climb Mt. Washington. They found there sufficient food to keep them going though supplies were rather scanty. The storm of Thursday was a blizzard on the mountain top where about a foot of snow fell. The students were snug, however, and fared very well. After returning to the Glen House yesterday *(2/8)* afternoon, they went to Cornish and returned to college yesterday."

- St. Johnsbury (VT) Caledonian Record - Sat, Feb 9, 1929 pg. 4

"Camden Cottage, our home for February and April of 1931. The unusualy frost-free entrances is due to the heat from the stove, which was near the door. The Stage Office is at left. Camden Cottage was erected in 1922 to shelter winter climbers, at the request of Patrick Camden, the veteran Cog Railway roadmaster."
- Winston Pote photo & caption / Mount Washington in Winter

February 1931

A friend from Lynn, Massachusetts, Joe Oliver accompanied Winston Pote and his dog *(previous page)* on this hike to the Summit and Camden Cottage. Joe had lost his appetite at breakfast and ran low on fuel during the hike up.

"We made very slow progress all the afternoon," Pote wrote. "I broke trail, although it was bad going. The dog was quite frisky. Then we climbed into fog, and it was getting late. The sturdy old stone wall was right there, guiding us along the road. As it got dark, the wind picked up. This was a very bad situation: trying to urge along someone who is losing strength, and uneasily aware that the point of no return has been passed and the trail back down is much too lengthy. We stopped often, and I thought longingly of the flashlights. We'd had no idea that we would need them, so they were stowed away in the very bottom of my pack. We had left the wall behind but I knew where we were: an area we called "the home stretch flat." Here I paused, removed clothing and some loaves of bread from my pack, and found the flashlights. One loaf of bread blew away,

and I chased it! Then the dog began to whine; he seemed to know we were in trouble. I tried to convince Joe that the summit was "right up there!" It was, and we got there, but only after what seemed like a long time. When we reached the summit stairway, which was buried in deep snow, it was a great relief. Joe could barely make it up this steep place. Camden Cottage appeared through the fog—a welcome sight. Someone had tied the doorknob to a fastener with a piece of rope, which had frozen. I thawed it with my bare hands. Joe had almost lost his voice by this time, but managed to ask if the door would open. We finally got in all right, and it seemed warm inside, compared to the gale outside. Several times on first entering the cabin I had thought there must be a fire in the stove; perhaps just getting out of the wind gives one that feeling. Anyway, it felt good to be inside, and I soon kindled a fire. That box stove was great. The trunks were upstairs, and by climbing on the table we could reach them. They were soon unlocked, and we unpacked a pan for melting snow, and some canned goods. I took out candles, to use instead of our flashlights, and gave the dog some water and food. Joe soon recovered—some hot soup did the trick - and all seemed well. That night the wind increased and moaned around, sometimes tearing shards of ice from the rocks and throwing them with an ominous clatter at the window panes. Camden Cottage was very well built, and we appreciated that fact during high winds. By contrast, the old Stage Office, which was built in 1915, could move around some under its chains. We made ourselves at home during the following days, and there was nothing but fog and high winds. I recall that several times, when the wind suddenly stopped at night, the silence would wake me up! We had to stoke the big box stove often, too many times at night, so one night when it was not very windy, I filled it up with large, heavy chunks of wood. Not long after, it began to blow real hard again, and the stove got red hot with all that pitch-soaked railroad-tie wood in it. I got up and opened the door, which was close to the stove, and held on. One could have made toast on that chimney pipe, even near the ceiling. My union suit was almost on fire on one side and seemed frozen on the other! The wind rushing past the door created a tremendous pressure on

"Inside Camden Cottage: One bed was on the bench, and a hammock swung up above."
- Winston Pote photo & caption / Mount Washington in Winter

"Stoking the box stove. High winds from a southeast srom blew the snow in around the door of the cottage. This picture shows the old shutters, once ont he Summit House, that we used to try to block the invading snow. Two years later vestibules were built on the entrances here and on the first observatory building (now the Stage Office), which improved conditions. It looks cold, but we had plenty of wood to burn."
- Winston Pote photo & caption / Mount Washington in Winter

our eardrums, like our heads were being buffeted. We tried to throw on some clothing just in case we had to get out, but finally the wood burned down. That mistake I never repeated!"

April 1931

Snow 32 Feet Deep on Mt. Washington: "A number of ski enthusiasts availed themselves of the mountain skiing during the last week (on Mt. Washington). Most of them were Harvard men, five of whom stayed one night at the Camden cottage on the summit, and four remained several nights and enjoyed ski slides down the auto road, which is covered in places by 32 feet of hard snow. The sow fields on the south side of the cone of the mountain offered some of the best conditions for fast skiing, with the sun making the survace slightly soft. The Harvard men who made Camden cottage their headquarters were Trafford, Balch, Livermore and Powell."

- Boston Globe - Mon, Apr 20, 1931 pg. 28

January 1932

The Harvard experience was not universal, nor was the successful outcome experienced by Englehart in October 1925 and Pote in February 1931. However, Englehardt and Pote's interaction with Mt. Washington contained details *(a scrawled note & failing strength)* of a tragedy early in 1932.

Shelter Nearby as Two Die: "Down the heart-breaking trestle line from Mt. Washington, with the wind roaring at nearly 100 miles an hour and the temperature at 25 below, a half-frozen, weary party of mountaineers and a team of sled dogs plugged their way this *(2/3)* afternoon, bear-

"Here I'm (Winston Pote) mixing p some "Klim" - powdered milk. The kerosene lamps gave us plenty of light, and the gasoline stove was a big help in melting snow and frost for water."
- Winston Pote photo & caption / Mount Washington in Winter

ing the bodies of two Greater Boston youths who lost a desperate battle with a storm on New England's most dangerous mountain. With them came the real story behind this tragedy of Sunday afternoon, a story full of heroics, inexperience and tragedy within a stone's throw of safety. (T)he dead youths, Joseph Chadwick of Woburn and Ernest McAdams of Stoneham were only three minutes' walk from the summit when they gave up their battle with the terrific cold and fell into the drowse from which they never awakened. Donald Higgins, the surviving member of the Sunday climbing trio, did fight his way over this three-minute barrier, but only after he had given his left glove to the faltering Chadwick, whose glove was blown away by the storm. The act probably will cost Higgins his left hand. McAdams was the first to fall, after they had crawled past the Gulf tank, the Western trail and had reached the last 100 yards. Higgins saw his companions die, He himself was at the point of death,. He crawled inch by inch, across the ice of those last few yards and, groping blindly through the gale, stumbled upon Camden Cottage, a hut at the summit. He fell onto the floor, expecting to die. With a last desperate effort, he pulled a pencil and piece of white paper from his knapsack. On it he wrote in faltering letters this tragic note: *"I am striking out and if I perish, let my dear mother and my sweetheart, Rose Donahue of Woburn, know that I perished in the story and for want of food. My two pals didn't make it. I just arrived here. Ernest McAdams perished first. His body is under the trestle. And 100 yards father up is Joseph Chadwick."* His name was signed at the bottom. The note, with no address, was dated "Sunday." Higggins worked his way across the hut and pinned the note tothe wall. There it was found this noon, when the first of the searching party came in out of the storm, after they had found McAdams' body buried in snow, with only a pack strap protruding out of the snow alongside the low trestle where he perished. Six men found the two bodies, first McAdams and then, after a difficult search under the snow, Chadwick's. But for

Sec. 20 - Camden Cottage

"A foggy day in February (1931). Here are the chained and padlocked trunks from the storage space upstairs. Rex sits near window."
- Winston Pote photo & caption / Mount Washington in Winter

the note, indicating the distance between the two youths, Chadwick's body might not have been found for days, for at this particular spot, with the trestle a few feet above the barren ground, snow was piled in. It was about noon when the six men - James Gail, James Webb, John McKennon, Charles Thayer, John Giffin and Dennis Meanie - reached McAdams' body. McAdams apparently had tried to crawl under the narrow base of the trestle - over which teh famous Mt. Washington cog-railway lies in the Summer months- and there sought a measure of protection from the wind and cold. His knapsack was still on his back but loosely attached. Numbed by the cold and able to see hardly five feet in front of them, the men searched vainly for Chadwick. They gave it up and climbed tot eh summit. When they found Higgins note, they retraced their steps and dug... with skiis and with their hands, and finally they found the second youth, one leg up against the trestle as if he had fallen. As they dragged Chadwick's body up to the trestle, the men saw that he had fallen less than five feet from the triangular slab erected Sept. 15, 1853, as a memorial to Lizzie Bourne, 20, who perished in a storm the previous day. Her death was the first on the mountain." *- Boston Globe - Thu, Feb 4, 1932 pg. 1 & 12*

Later that week, the *Boston Globe* attempted to tell its readers why there was a winter hiker shelter on the summit of Mt. Washington. Journalistically, it went as well as the young mens' hike.

"Camden Cottage," the shelter on the summit of Mt. Washington into which young Donald Higgins stumbled last Sunday *(January 31, 1932)* after companions, Ernest McAdams and Joseph Chadwick, had collapsed only a short distance from safety, has been maintained by the owners of the Mt. Washington cog railway for the past eight years as a memorial to Patrick P. Camden, for

more than half a century a faithful worker on the steep slopes of New England's most famous and most treacherous mountain. The Cottage - it is really little more than a one-room stone *(Ed note: built of wood)* shed - was erected *(in 1922)* by Camden three years before his death, and when Walter Aiken *(died in 1893 so this is wrong)*, manager of the Summit Hotel, and of the railroad, asked Camden's family how he could best do justice to the man's memory, it was quickly agreed that perpetual maintenance of the shelter as a relief station during the Winter months when the summit is deserted was what "Pat" Camden would have most appreciated. The problem of providing a haven for the Winter climbers had become increasingly serious as Mt. Washington became more and more popular. The Summit House was frequently broken into and considerable damage caused by mountain climbers who sought shelter. Camden hit upon the idea of killing two birds with one stone - saving the hotel from damage and providing climbers with a necessary haven. Every Fall he would equip this new hut with firewood, matches, provisions and blankets, and there is little doubt that this little shelter has saved other lives in addition to Higgins' last week.

- Boston Daily Globe Sun, Feb 7, 1932

March 1933

"Prospective mountain climbers are advised that winter conditions will prevail on the range for several more weeks. They should pack their own food but blankets will be furnished at the observatory for use in Camden cottage, the sturdy summit refuge where 19 Dartmouth students were obliged to spend the night of March 11." *- Littleton Courier - Thu, Mar 23, 1933*

February 1942

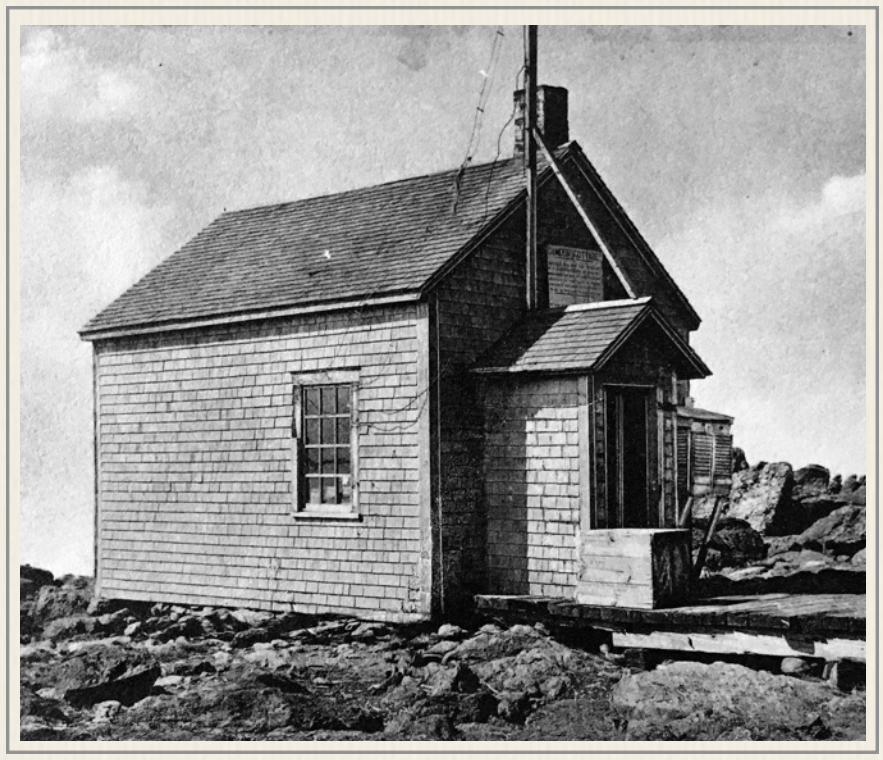
"Alpine skiing is perfectly possible in New England, and hundreds know it on Mt. Washington in the spring. In time it may become equally popular even in midwinter, though today those who try it are only a tiny percentage. What makes Alpine skiing, then, an adventure to be undertaken by so few? It's the unreliable snow and the lack of shelter from sudden storms. Alpine running may be glorious in the Alps where it snows oceans of "powder" every night, but New Englands high snows are wind-blown, wind-packed, icy and drifted. The five men who stay at the Mount Washington Observatory all winter are by no means novices, but often they'll radio down, "Plenty of snow but no skiing; it's all blown off." The lack of shelter is even more serious, for even on a day when there's hardly a cloud in the sky and just the faintest breeze, the high peaks can be treacherous. The fickleness of Mount Washington weather is notorious even in summer, and the other peaks are still more dangerous because they are so much farther from help in case of accident. Accommodations on the Northern Peaks include a few open shelters, but though skiers dote on camping out in the spring int he shelters below Tuckerman Ravine, it's something else again to cam out high up in mid-winter. Our only accommodation at all approaching the Aline hut is back on the summit of Washington - old Camden Cottage, familiar to and even beloved by hundreds. Camden is a one-story affair a couple of hundred feet in front of the Observatory. Built in 1922, it accommodates nine in its double-decker bunks. It has cooking utensils, a capable stove and a stack of chunk-wood with axe and saw nearby. Blankets may be hired from the Observatory. Nine bunks, however, aren't very many for a hotel where you can't engage reservations ahead, and sometimes many more than nine skiers decided to take advantage of a favorable week-end by making an over-night trip of it. Ten years ago *(1932)*, when the Observatory was first opened, the summit averaged the incredible number of 15 visitors a week all winter. Few of these were skiers, but today, though the number of snowshoe and crampon climbers has decreased sharply, the number of skiers who climb is increasing steadily. How about staying overnight at the Observatory, or at Yankee Network's grand new two-story headquarters just behind it? Well, not without a special invitation, for *(secret military)* work must go on, even on a spot where

adventure sits cross-legged beside the door, and unless you come up on a stretcher you get only a friendly nod and perhaps a short chat with the men on duty. But Alpine days, though short, are glorious. You start out early, before the sleepy dancing crowd are out of bed. Your group is generally men, with an occasional hardy girl for spice. *(Ed note: this story was written by reporter Gwendoline K. Spang.)* If you prefer Washington you can go up via Tuckerman, but only if you're someone like a racer or an Observatory man and never if you have a heavy pack, for the Tuckerman headwall in winter is nothing to trifle with... The usual route is the carriage road, eight long miles but easy ones. *(After the seven mile mark)* ten minutes brings the summit, with hotel and Observatory buildings, so busy in summer, now blanketed in silence. The clump of ski boots on the board walk echoes in the clear air. You push open the Camden Cottage door and pretty soon are drinking scalding tea that had the tea leaves boiled in it. Perhaps the best snowfield on Washington is the vast one, east of the summit, that lasts so long that it's used by skiers who chug up luxuriously on May 30 when the cog railway opens. It's steep, with no run-off, but the snow lies deep and smooth, and from it you look off and out on a great new world, blue and silver under a brilliant winter sun, as far as Portland and the ocean. Alpine skiing means hard work and a wary eye for weather, but some day a good part of the ski world will move up from the trails and out above the timberline, to try it." *- Boston Herald - Sun, Feb 22, 1942 Sec. B pg. 3*

February 1954

"In 1950 a brash writer in the September issue of *Holiday* (magazine) referred to our "undangerous hills." He was promptly taken to task by the *New Hampshire Sunday News* and others. Mt. Washington is dangerous especially when climbed by those who do not give our highest peak the respect it deserves. Hazards are not limited to the long winter season. Fatalities have occurred in every month of the year. When Dartmouth *(College)* gains possession of the summit tract, the question of a year-round, public refuge on the peak will probably be raised, this may seem to be a desirable addition to the summit colony, especially since Camden Cottage, erected by previous owners in 1922 for such purposes - and to discourage climbers from breaking into the Summit House, is no longer available for shelter. Camden Cottage saved the lives of a significant number of climbers in the years before 1932, when the peak was not inhabited. The assurance of its protection provided the encouragement needed by many parties to complete the final assault. Yet, its availability may have lured to the windswept upper slopes many other groups who should have remained in the valley." *- New Hampshire Sunday News - Sun, Feb 24, 1954 pg. 16*

Camden Cottage's Last Relief Mission: With the construction and staffing of the Mount Washington Observatory, the need for emergency shelter at the Summit waned. When demand for the women's restroom facilities within the Summit House were overwhelmed, the Camden Cottage structure was moved around to the backside of the Summit House and housed the women's toilet expansion for a time.



Dance Hall to Dartholm

Set back from its original location & heavily remodeled the Teague Homestead in Southwest Harbor, Maine (2021)
- All photos: Coldwell Banker Realty listing photos

It has been moved & modified, split-up and remodeled, but a structure that housed the family of Captain George and Martha Teague still stands in Manset, Maine just off Route 102A in Southwest Harbor on Mount Desert Island. Jitney Jr. went in search of the house that Henry sold to an old Dartmouth classmate. This is what he found with help of the History Trust http://historytrust.org/ on the island.

The land at 24 Shore Road once held a public hall in which dances were held. It became the home of George and Martha Cornelia Teague [T-188]. After interest declined, the building was divided in half, with one part moving down the road to Herman Smith's store – later S. Ward Newman's store. The other half was remodeled into a house.

It was sold by Henry N. Teague to Ernest M. and Cecilia Stone Hopkins on October 7, 1922 *(572/349)* after the Hopkins' spent the summer of 1922 vacationing at the facility. Ahead of Hopkins' stay, Teague had his Greylock Inn handyman and Manset caretaker, Wilbur Anderson install electric lights in the house. Anderson traveled to Maine from Williamstown, Massachusetts with his wife *(Ida)* and child *(one year old Nelson)*. The *Bar Harbor Times* of Wednesday, July 12, 1922 p. 7

Sec. 21 - Dance Hall to Dartholm

noted "The cottage is to be occupied for the summer by Prof. Hopkins of Dartmouth College." Hopkins was President of Dartmouth College for many years and called this cottage "Dartholm." When negotiating the purchase, Mrs. Hopkins told her husband, "you're dealing with a hotel man who has access to the wholesale prices in the linen market and... why don't you include a provision that the house shall be provided with linen and pay him? She said, I think you'll get out of it better that way. So I did."

Hopkins said, "when we got down here, the house was provided amply with linen and towels and everything of that sort, but they were all marked Greylock. [Laughter] The result of that of course was that every visitor we had for the next decade said, 'Oh, I see you've been staying at the Greylock.' [Laughter] The assumption was entirely unjustified but quite reasonable."

Land was added to the plot on February 17, 1923 [577-88], July 12, 1927 [611-484], and the house was remodeled in 1932. More land was added to the property on November 18, 1933 [643-320]

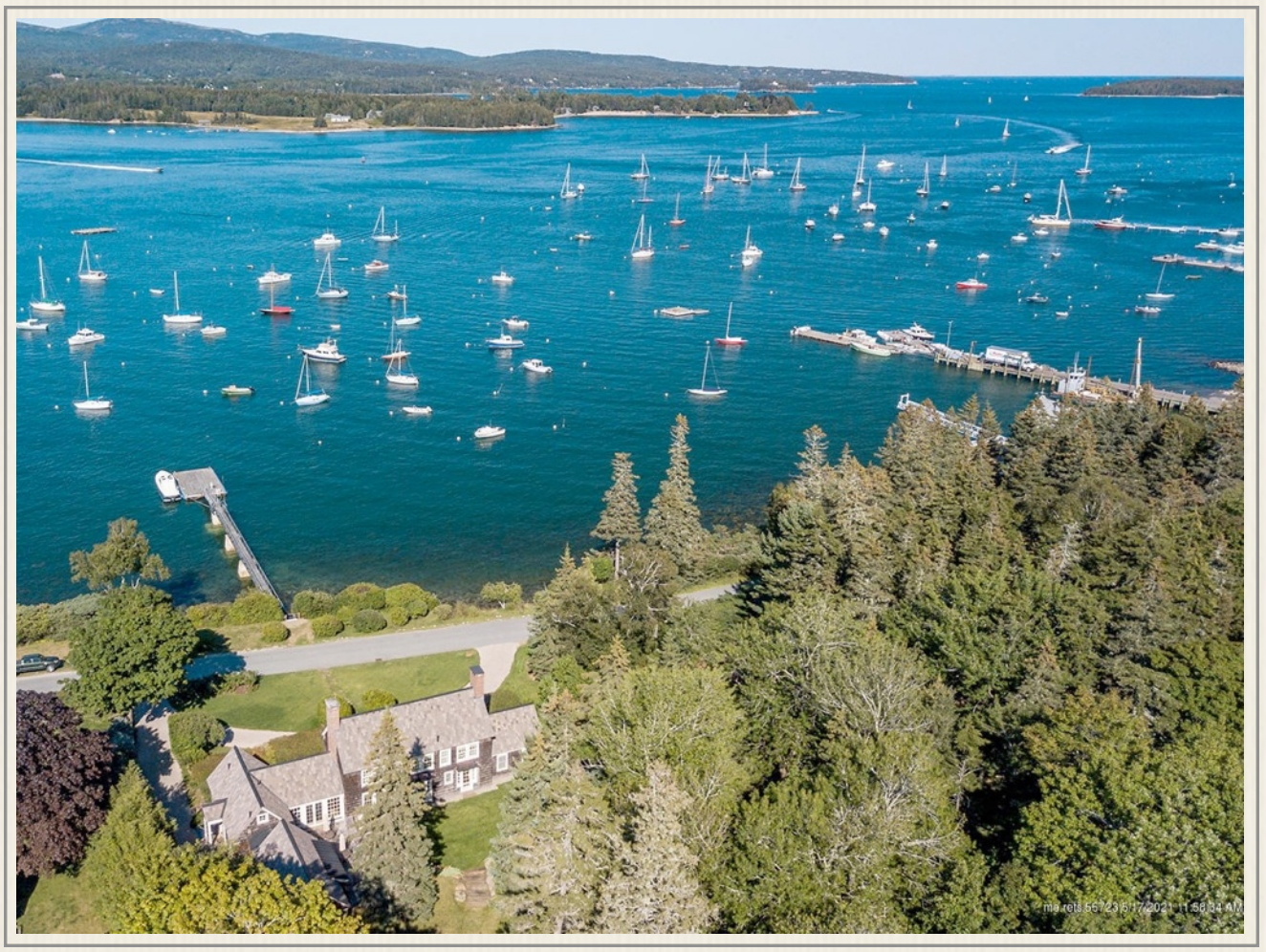
24 Shore Road was conveyed to Dorothy Ann Hopkins Potter December 6, 1952 (751/379) and to John Rust Potter, Martin Hopkins Potter, 134 Amy Potter Hancock, and Jessie Potter Kingston April 14, 1999 (2831/84).

The property was sold out of the Hopkins family to W. Morgan and Penelope Churchman March 28, 2001 (3046/250) and then sold to Roger Allen and Melanie K. Lawson October 9, 2007 (4866/55). (map 1, lot 81) *OUR NEIGHBORHOOD - p. 132-134*

In July 2021, 24 Shore Road in Southwest Harbor, Maine was listed for sale by Coldwell Banker Realty with an asking price of $4,370,000. It was put on the market on May 17, 2021. https://www.coldwellbankerhomes.com/me/southwest-harbor/24-shore-rd/pid_41356379/

The 3,384 square foot structure has five bedrooms, three full baths, 1 partial bath on 1.59 acres with a two-car garage. It was described as: "Dartholm, located on quiet Shore Road in Southwest Harbor overlooking the picturesque harbor, has had an unusual history. Originally built as a dance hall in the early 1900's, Dartholm was repurposed to become the summer residence for the president of Dartmouth (hence its unique name), and recently updated to be a gracious shingle-style cottage available for year-round living. Views from the traditional cottage are

expansive, with yachts and lobster boats traversing the harbor, scenic views of Somes Sound, the Cranberry Islands and mountains of Acadia beyond. Dartholm optimizes what life on the waterfront has to offer. Dartholm has been beautifully restored and renovated, a wonderful blend of traditional elements and modern conveniences. There are five bedrooms in the main house with the master suite and an additional bedroom suite on the first floor, a warm and inviting living room, cottage-style dining room, modern chef's kitchen and den. Additionally, a seasonal one-bedroom guest house offers an additional living area with full kitchen, laundry and bath. Most rooms enjoy the wonderful harbor, island and mountain views. Dartholm has been impeccably maintained and includes a beautifully landscaped private back yard with deck, two-car garage, garden shed, deep water dock and two moorings. The Town of Southwest Harbor, a vibrant year-round community, offers a multitude of quaint restaurants and shops, and is a well-known center for all types of boating activity; certainly, an area that would complement life at Dartholm."

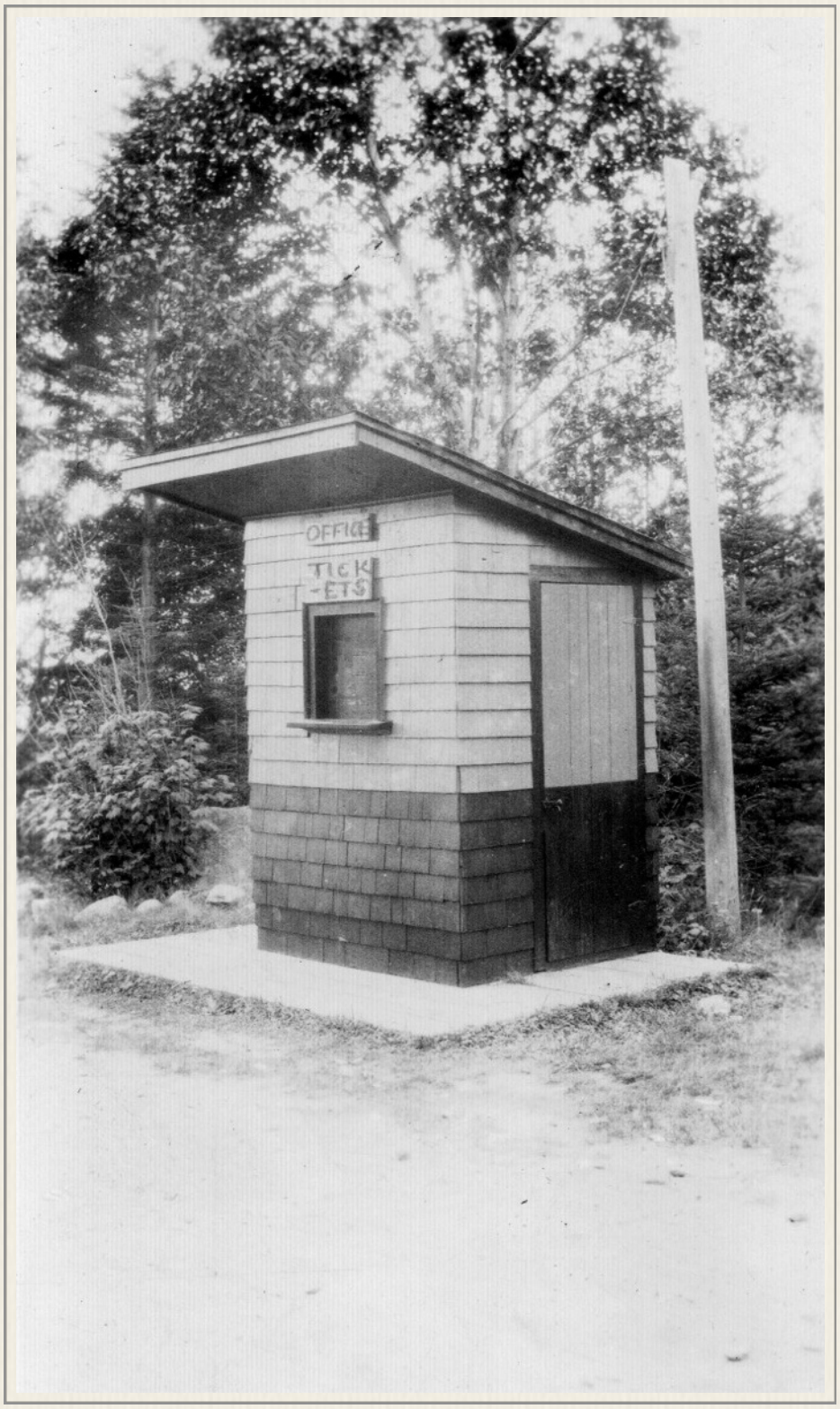


Tiny Ticket Office

Rev. Guy Roberts, who tracked down and successfully lobbied for the return of the *Peppersass* to Mt. Washington in 1929. wrote and published several booklets about the Mount Washington Railway. He also wrote about the unique nature of the Railway's ticket office for motorists arriving at the Kro-Flite Camps location rather than via the Fabyan railroad spur line in the mid-20s. His hand-written manuscript of the ticket office tale can be found in the files of the Littleton Historical Society. A transcript follows:

Smallest Railway Ticket Office
by Rev. Guy Roberts

What is quite surely the smallest of all railway ticket office buildings is the one shown herewith, located at the Marsh-Field station of the Mount Washington Cog Railway near the Base Station at the western foot of Mt. Washington, & also very near the "Kro-Flite Kamps" located there.



When the famous Cog-road was opened for travel in July 1869 & for 7 years thereafter there was no railway connection between it & the outside world, passengers being brought in by stage-coach & other vehicles from Fabyans, over the six mile toll-road leading in to the beginning of the Cog-road.

When the Cog-road was built it started at the Ammonoosuc River at the foot of Cold Spring Hill, a steep shoulder of Mt. Washington, & this remained the beginning of the road until the present railroad was extended in from Fabyans to the Base Station in 1876. When this was done it was found that the regular locomotives & trains could not make the steep grade of the last quarter of a mile, so the

Cog-road was extended that much farther down to meet it. This occasioned the awkward arrangement of having the depot - which was an ungainly three story affair - car & engine houses, stables, wood sheds, boarding house, etc., at the original terminus of the Cog-road, but with the actual junction of the two roads a quarter of a mile farther down the Mountain.

This arrangement was made the best of, however, until the fire of 1895 burned all these buildings excepting the old Marshfield House which was both hotel & boarding house for the mountain railway help.

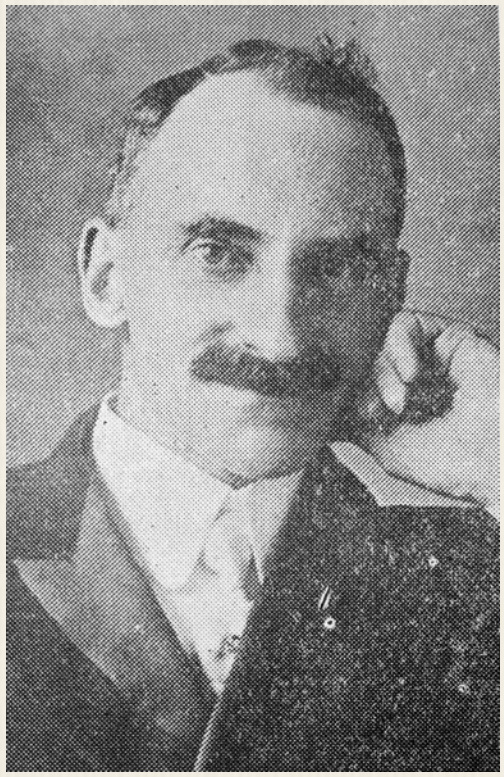
Naturally when the new group of Base Station buildings was erected where they were located where they now are at the real junction of the two roads. The old Marshfield House was in consequence deprived of its clientele & also its usefulness & soon becoming a menace & fire hazard because of tramp occupancy it was stripped of worthwhile material & burned probably in 1896. This left the little clearing near the original beginning of the Cog-road again without buildings of any kind & thus it remained until some four years ago *(1925)* when a small restaurant & two overnight cabins were erected at this place for the accommodation of auto & other tourists who in ever increasing numbers are annually "going up to the Base." As many of these made the ascent of Mt. Washington by the Cog-road trains it was found desirable to establish a station there just before the Cog-trains cross the Ammonoosuc on their Summit climb. A little waiting room building was erected here & named "Kro-Flite." A few years ago the author conceived the idea of having this named Marsh-Field, instead of "Kro-Flite," the new name being in memory of Sylvester Marsh, inventor of the Cog-road & engine, also in memory of Darby Field, of Exeter, N.H., who in 1642 was the first white man to make the ascent of Mt. Washington, while the combined name of Marsh-Field not only pays tribute their worthier but also commemorates the existence of the old Marshfield House above referred to.

Col. W.A. Barron, proprietor of the Crawford House orchestrated with the writer in this matter & the Boston & Maine accordingly had the name changed to Marsh-Field.

For the convenience of the public & also the conductor, Mr. McCarthy, a little ticket office building has been erected about midway between the Marsh-Field station building & the "Kro-Flite Kamps," as pictured herewith.

This little office is just four feet & four inches wide, by five feet & three inches long, & eight feet high at the highest point. It is opened & used by the conductor for the sale of tickets over the Cog-road, as each train makes the trip.

If anyone knows of a smaller ticket office building in real use we trust they will write the *Union* about it.



Rev. Guy Roberts

Rev. Guy Roberts Dies In Concord

Well Known Whitefield Methodist Minister Had Been Ill Some Time.

With the passing at a Concord hospital on Monday *(10/31)* of Rev. Guy Roberts of Whitefield, the North Country met with a loss not easily to be realized. For in one person he combined the virtues cultivated by nearly 32 years of service to New Hampshire Methodism, the ability to work with his hands at the same trade which his Master followed, that of carpenter, and fruitful interest in the natural beauties and legends of the White Mountains, which few, if any, have done more than he to preserve.

He was born at Goffstown, September 15, 1870, and it was there that he was married to Blanche Whipple Roberts, who, with a brother, Ned Roberts, a teacher in the commercial department of the Berlin high school, survives him. He was educated in a number of different schools, entering the ministry after a course in the School of Theology of Boston university, in 1900.

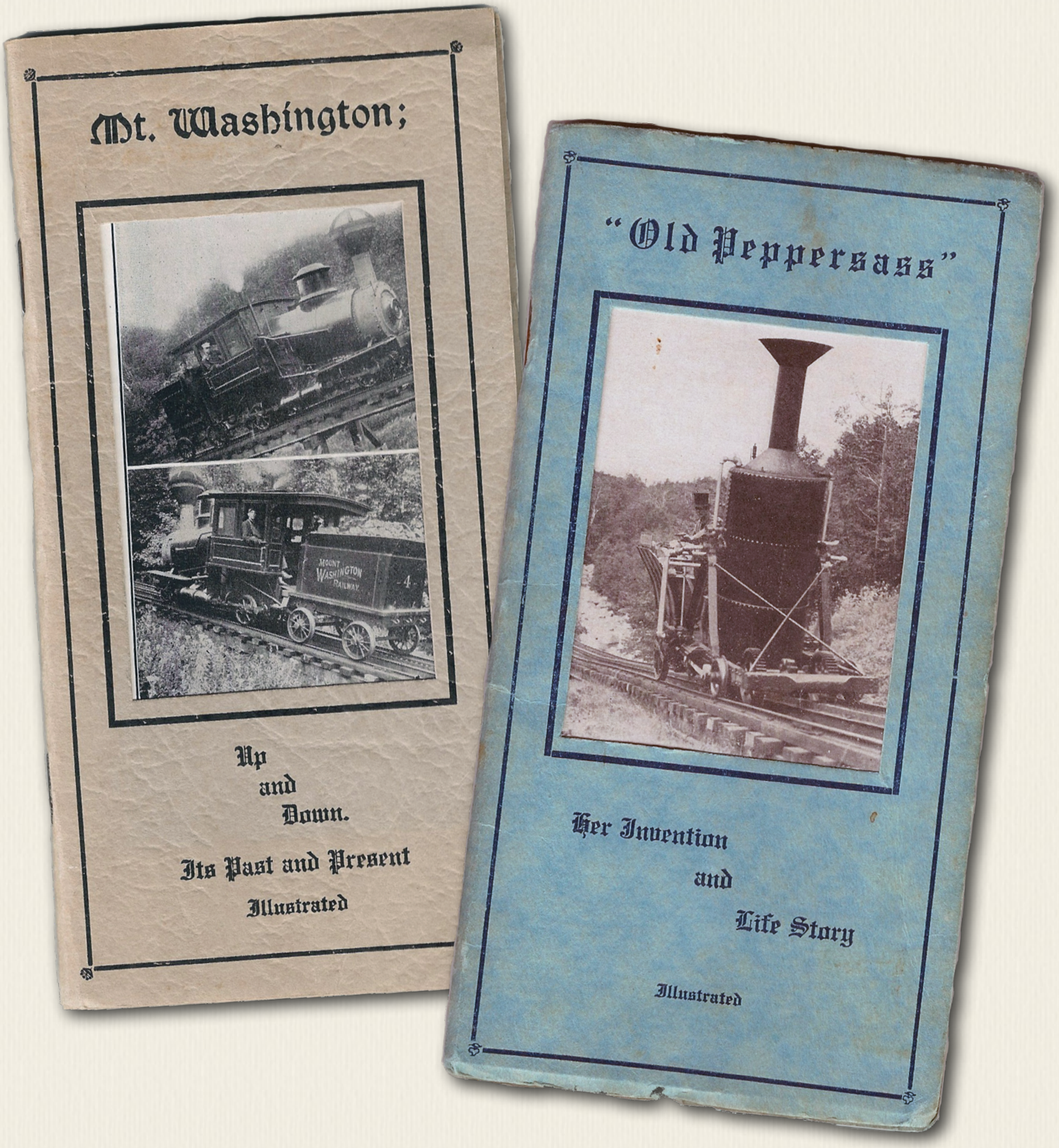
His avocation was nature, and to him alone is due the preservation of this state's greatest natural wonder, the "Old Man" profile in Franconia Notch. In 1906 he discovered that a large stone forming the forehead had slipped to the danger point, so that its 20 tons had only four more inches to slide before it overbalanced. That this important part of the profile was in danger was known in 1850 but knowledge lapsed until Mr. Roberts rediscovered it in 1906. By his efforts largely, the state government, under Governor R. H. Spaulding was stirred to action, so that by 1915 further slippage was arrested by mechanical means and the "Old Man" made a permanent asset with all its majesty of contour, never failing inspiration to thousands who, thanks to the interest of a man of action as well as ideals, may continue to gaze upon it.

This work alone was sufficient to place the people of the White Hills in his debut, but in addition he published a series of booklets *(next page)* exceeding all others in popularity, on Mount Washington, the Willy Slide, the Indian Head, Lost River, the Flume, and others, all of them scholarly, well illustrated, and of real interest. His latest feat was the resurrection of "Old *Peppersass*," original cog wheel locomotive on the Mount Washington Cog Railway.

The work that he did lives after him, whether graven on human hearts or the face of nature. No pastorate far from his mountains could ever tempt him. While it would be fitting that he be laid to rest near the Profile which he preserved, he will be near it in his lot in Whitefield's Pine street cemetery, where so often he ministered to others.

- Littleton Courier - Thurs Nov 3, 1932

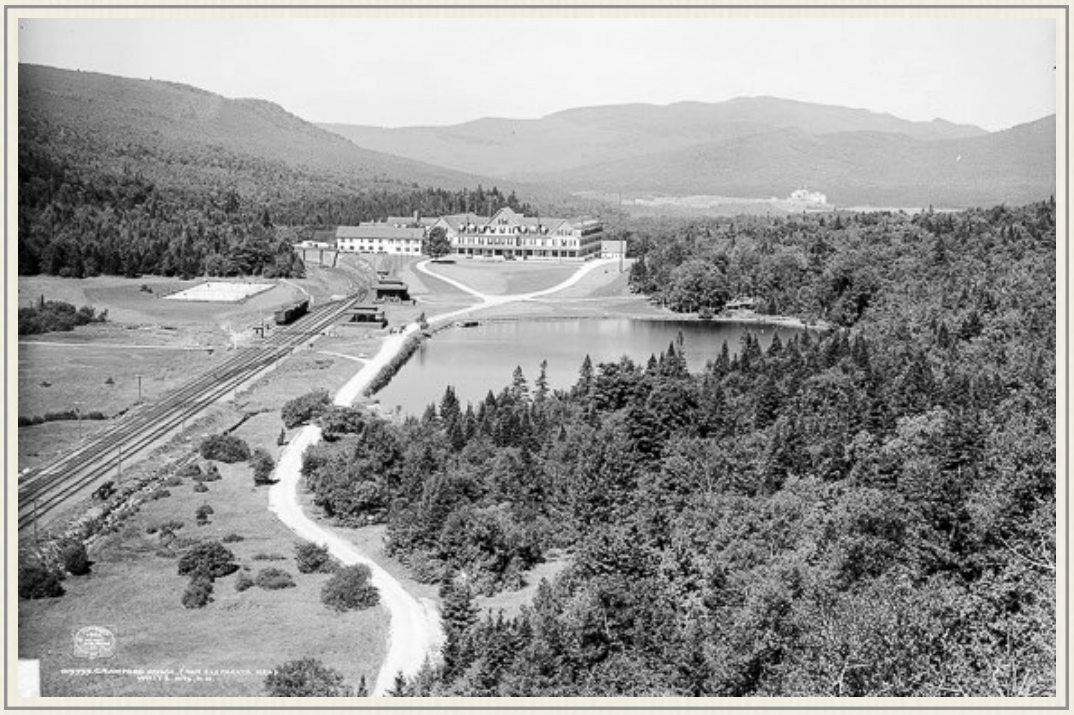
Rev. Guy Roberts' Cog Publications



A Visit to "The Inn"

This regards a 1920s-era winter hike to the Base Station, written some 30+ years later. Written by the late Laurence Breed Walker, who traveled all over the North Country in his youth. Transcribed by John Kurdzionak, 18 March 2020 from *The Weekly Cricket* Vol. #1; No. 34; 3 January 1958 originally entitled *The Mount Washington Railway of New Hampshire: "The Base Station in the Dead of Winter"* (Another in the "Editor Remembers" Series.) Note: For authenticity and accuracy, Mr. Walker's words were left exactly as he wrote them. Only a modicum of punctuation and words were added, and only in such places as were thought necessary for easier reading or for clarity. [Such additions are contained in brackets]. MEC = Maine Central Railroad

Eddie Greenwood was the desk clerk at the Crawford House for many summers. He was one of those tall, mountaineer type fellows, born and reared under the shadow of the Presidential Range for whom no work is too hard, no task too exacting and no location too deserted or lonesome. Girls signing the hotel register who suddenly looked up to find him standing there were rendered speachless[sic] and couldn't utter even a faint "tee-hee" and in following days could only squeal in delight if he passed along the hotel porch. Even boys who came as guests were so stunned when they first saw him that they, too, were inarticulate. The only counter part to him I have ever seen have been some "cow-punchers" in the Texas Pan-Handle; the real article and NOT some moving picture imitation.



Crawford House (early 1900s)
- White Mountains Remembered

During the winter he was the Watchman of the Mt. Washington Ry's Base Station. When he asked me to come and visit him and share his lonely vigil, you can well imagine the thrill that was mine. In fact if there was anything I wanted to do during the summers in the Mountains, I had him make the suggestion to my father[,] and anything Eddie said was "OK" [and] was quite all right with my family. During the fall, I lived only in dreams of the coming visit with him.

It happens that I was spending a week at the Station of the MEC at Crawfords and I took the noon train to Fabyans. "Eddie" was waiting on the station platform in a plaid mackinaw that would be visible at 10 miles away and carrying two pair of "Bear Paw" snowshoes. Never before

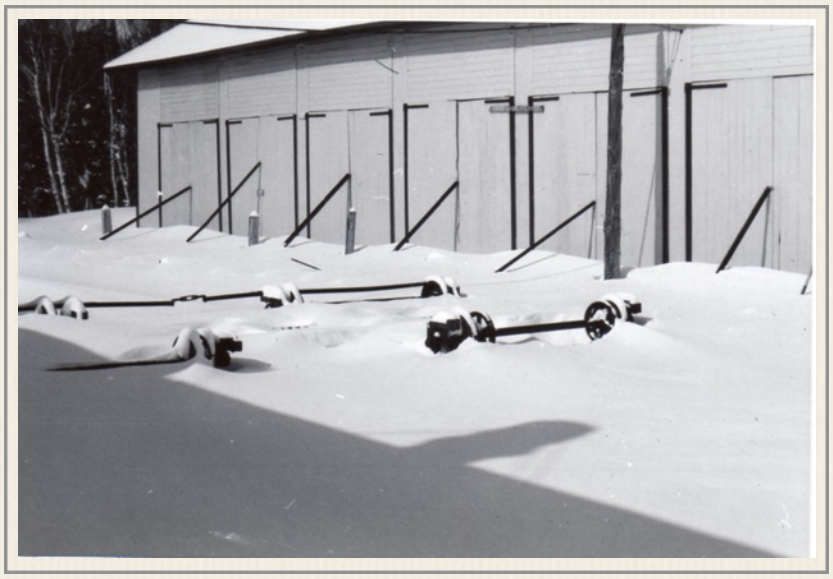
had I worn them and as we crossed the B&M bridge over the Ammonoosuc River he guided me over the treacherous ties which is a difficult proceedure[sic] at best on snowshoes. Of course no roads were plowed in those days and we followed the B&M tracks to Bretton Woods which were not used after October 1st. That view of the great sweep of the Presidential Range across the Hotel Golf Links is the most impressive scene this side of the Canadian Rockies. The temperature when we left the Fabyan station was below zero at noon and a cutting 25 mile an hour North Wind swept down from Mount Washington's towering summit and heavy school sweaters, mittens, mackinaws, wool shirts; they all availed little. Like the Indians of old, he set his face toward the Base Station and strode on with the same grace with which he handled bags and trunks in the hotel on rushed days. By the time we left the Bretton Woods Station, I was already at home on these funny creations that were destined in coming years to bring me to safety for many perilous episodes.

Only my nose was exposed to the elements and I was quickly aware of this fact. Faintly I could see the little "Inn" at the base, a tiny speck above the endless forests beyond the river. The little memorial chapel built in memory of the engineers who built the Portland & Ogdensburg Railway was encased in ice and the sweet toned chimes in the tower were silent. But at last we reached the welcome shelter of the deep woods. Although this is the steepest grade on any existing [traction] railroad we were not aware of any climb. Four feet blanketed the woods and the drifts along the right of way were often 3 times that depth. The beauty of the silent, snow buried woods far surpasses the same forest as viewed in full foliage on a calm July day. After a couple of hours of strenuous walking we came in sight of the so called "Inn" which is used for the train men of the "Cog Railway" during the summer. It is built on a sightly bluff and the little wiff of smoke from the chimney at least revived my hopes and sped up my endeavors to get there still alive.

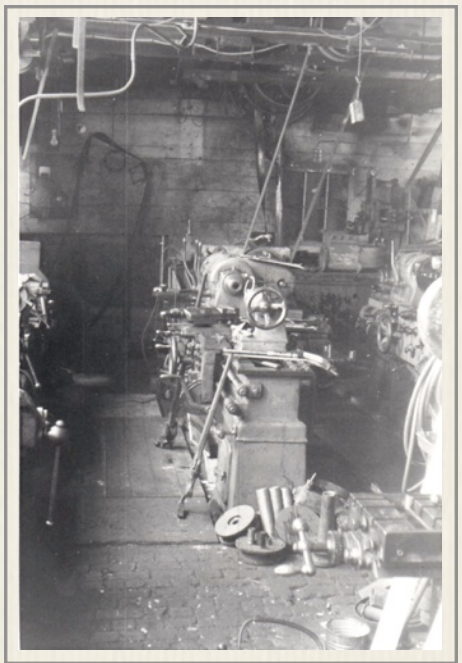
In the mountain country, the sun is gone and the shadows of evening begin to fall by 3.30 p.m. So, we stayed in doors and told stories of the figures and events of past summers. He had 3 rooms in the "Inn"; the office, a small anti-room as a bed room and the kitchen. A huge stove was in the center of these 3 rooms. There from October 15th until May 15th he lived alone. The nearest person was at Fabyans, nearly 7 miles distant. A single phone wire connected with the Fabyan station of the MEC & B&M; his only contact with the outside world. The wind that night increased and the temperature continued to fall. At bed time he brought out 2 sleeping bags and put on the floor by the

side of the office stove. So there on the floor we spent the night, completely dressed. I was used to the roar and rush of down-town Boston and the weird noises of that night gave me little sleep. Everything snapped[,] from the wood in the stove about 5 inches away[,] to the nails in the building snapping in the intense cold[,] and the trees in the wilderness a few feet away "letting out booms" in the "terrific silence" that resembled the firing of a[sic] motar [mortar?]. Twice during the night he had to check the fires. I found out whichever side was near the fire was nearly blistered while the other side of me was numb.

In the a.m. we made a tour of the buildings as required by the insurance regulations. A transfer table seperated[sic] the engine house from the car house. Of course the "table pit" was filled with snow but we got into the Car House and there stood the 7 cars so familiar to summer travelers. The snow had sifted onto the cars and they were covered with frost. Across



the table stood the seven engines, all in a row looking like the ice figures you might find on the



Dartmouth College Campus in late winter. At least they were protected from the elements. The small machine shop was intact as was the old coaling station which was built in days when only wood was used as a fuel and when the line

was owned by the Boston, Concord & Montreal R.R. He pointed out the location of the engine shelter built & used by the Boston and Lowell R.R. before the days of B&M control. In the rear the snow reached to the roof of the engine house and we had to use lanterns within the buildings even though the brilliance outside forced us to wear smoked glasses.

The only sign of wildlife was a few mice who would tunnel through the snow to appear for an instant[,] only to dive back out of sight. In fact they traveled from one place to another under the snow. From the Inn[sic] portch, miles away, I watched a long MEC freight creep along the side of Mount Stickney and I could see the distant Mount Pleasant House. The summit of Mount Washington was not visible from "The Inn". We could see the Rosebrook Range, the twin peaks of Twin Mountain; in fact towering mountains rose on all sides. Greenwood made 2 trips a week on snowshoes to Fabyans for mailing a few supplies but his stay was limited as he had to tend his fires.

On the 3rd day was a fierce mountain snow storm. We phoned Fabyans but the trains were running. In the woods we were sheltered but as you listen to the wild wind and watch the groaning and cracking trees, you realize the fierceness of Nature's potential powers. So heavy was the snowfall, that we saw on nothing on the return trip. The great Mount Washington hotel was completely hidden by the storm. Again we followed the railroad right of way and there was no danger of[sic] loosing the trail. Eddie left me early for the return trip as he feared for his fires and darkness in that storm would come soon after 3. I watched him as he glided on into the storm from the Fabyan Station, still wearing his "bear-paws" and in an instant he was literally "swallowed up by the storm." The caretaker of the "Base Station" certainly had a "tough assignment" but "Eddie Greenwood" enjoyed every minute of it. And the years that have followed I have lived over and over every minute of my visit and it is [is it] any wonder that a sight of the station [Fabyan(?)] brings back fond and sacred memories.

The Writer: Laurence B. Walker died August 15, 1970 in Salem, Mass. He left no immediate family. Born June 7, 1895, in Lynn, Mass., Laurence was a son of Charles E. and Laura (Breed) Walker. He transferred to Trinity College *(right)* in Hartford, Connecticut from Boston University in 1917 and stayed one year at Trinity. He did not graduate. At Trinity, he was a member of Sigma Psi, a local fraternity. Remembered in the 1918 Trinity yearbook as "a sweet and virtuous soul," Walker was a member of the Young Mens' Christian Association cabinet. He was an alternate on the debate team in 1917-1918 when Trinity faced Rutgers at New Brunswick, NJ. Mr. Walker was a radio news commentator in Boston and in Salem, and in recent years before his death in 1970, a minister of the Congregational Church, serving parishes in Maine.

Laurence Breed Walker (1918)
- Trinity College yearbook

The *Hero's* Odyssey

Melvin R. Wilkinson "made this model of the steam engine that pulled the Cog Railway on Mount Washington, New Hampshire." The family says it was featured in Yankee Magazine in the early 1950s - Ancestry.com

Origins & Travel

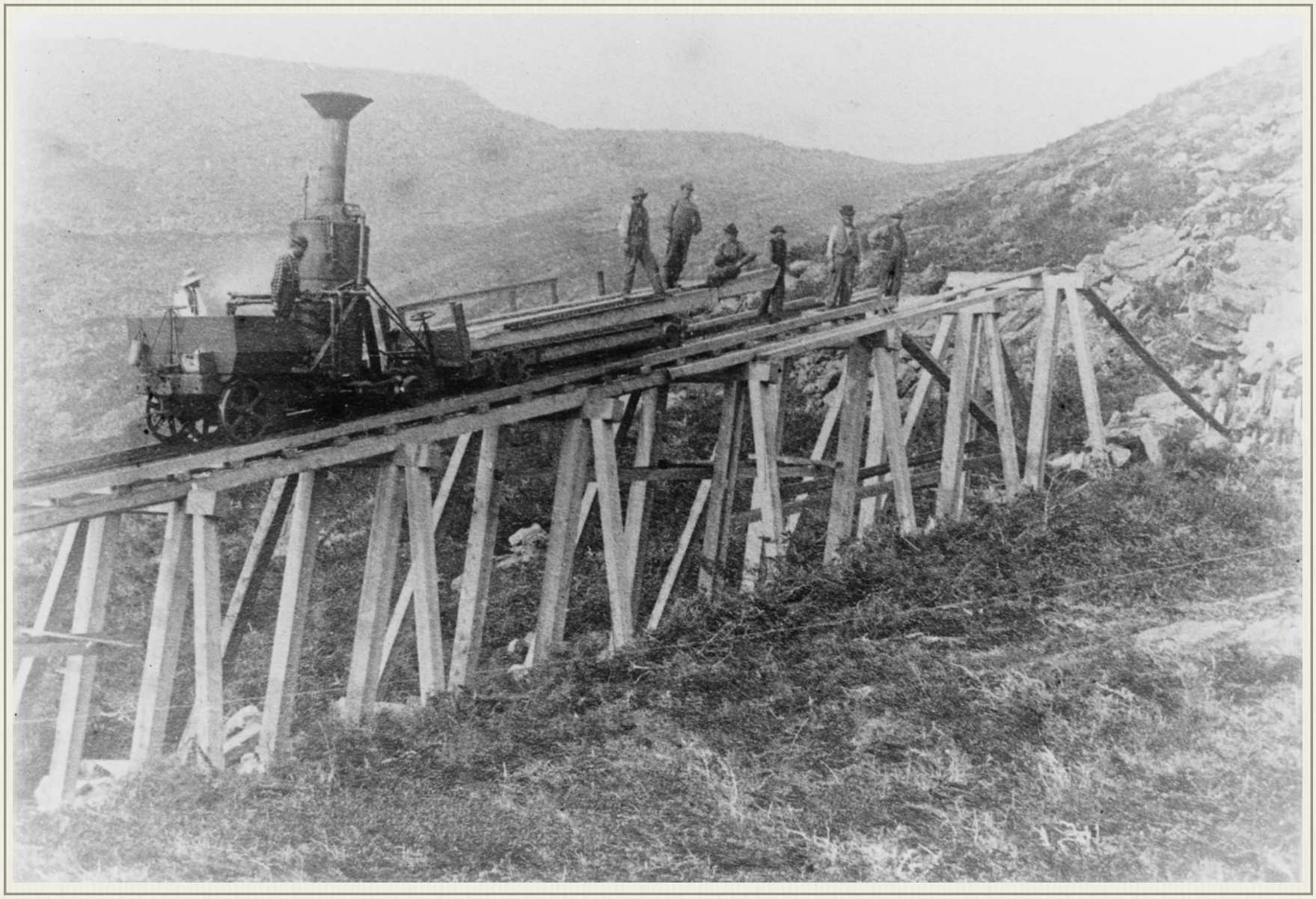
Mount Washington Railway engine No. 1 *Hero* was built by Campbell & Whittier in Roxbury, MA, for Sylvester Marsh in 1866. **Birthplace to Workplace: 247 miles est.**

The *Story of Mount Washington* says, "The first locomotive, shipped from Boston to Littleton in sections, was hauled twenty-five miles by ox teams to the base, and the parts assembled in an extemporized blacksmith shop. Hauling material over the rough road (at least seven miles of it corduroy) was a matter of great difficulty. At one time a piece of the engine slipped from an ox cart and pinned one of the men under its great weight. Hours passed before the machine could be lifted and the man freed. It is recorded that he was a 'very sturdy' man and that he lived through the ordeal." Engine No. 1 was the primary engine for construction of the railroad during the first two years - ferrying men and materials up the mountain as the first mile of track was built from

the Base to Waumbek. Amongst the workers, the *Hero* became known as *Peppersass* because of its resemblance to a condiment container of the era that held "pepper sauce."

The *Peppersass* made the first ascent of Mount Washington in 1869, and according to the Interstate Commerce Commission in 1929, "(the engine) was in regular service until 1878."

Exactly how many miles *Peppersass* liter-



ally racked up (and down) on the Mount Washington Railway during the construction of the 3-point 3 mile line and subsequent passenger operations through its retirement from active service in 1878 is unknown.

- Courtesy New Hampshire Historical Society

But during that time, Engine Number 1 *("Peppersass")* became an icon of the railway. A New Hampshire Historical Society magazine article by Donna-Belle Garvin in the Spring of 2009 said Edwin Gannell Burgum crafted a decorative Mount Washington Railway scene for scrollwork in the 1870s-1800s *(left)* that would appear on the famous Concord stage coaches that hauled passengers up the mountain.

In 1963, the wife of the director of the Bretton Woods Boys Choir began doing research for a book on the *Peppersass* for her good friends, Col. Arthur and Ellen Teague. Her manuscript can be found in the archives (ML-36) at Dartmouth College. Selections from Frances Ann Johnson Han-

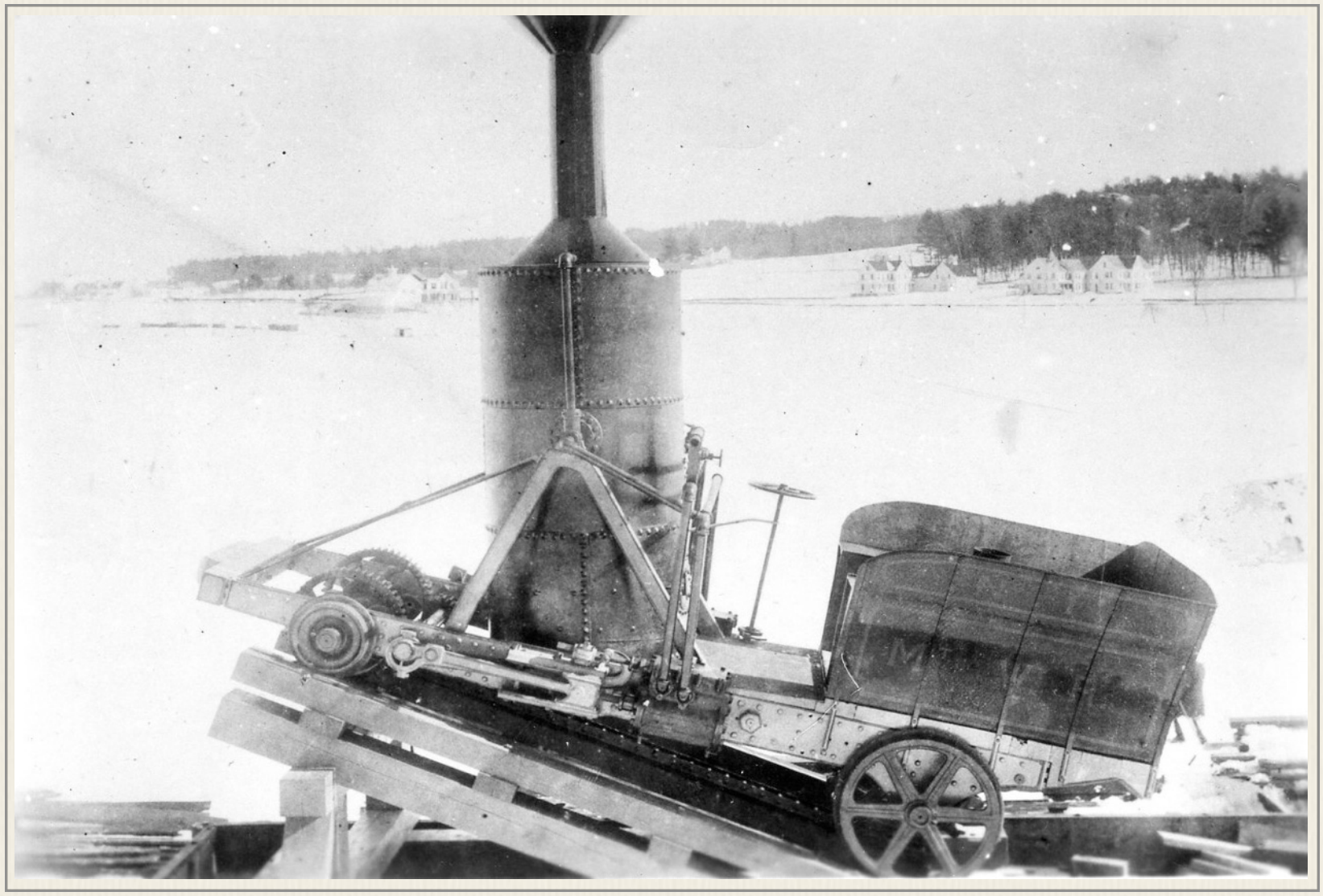
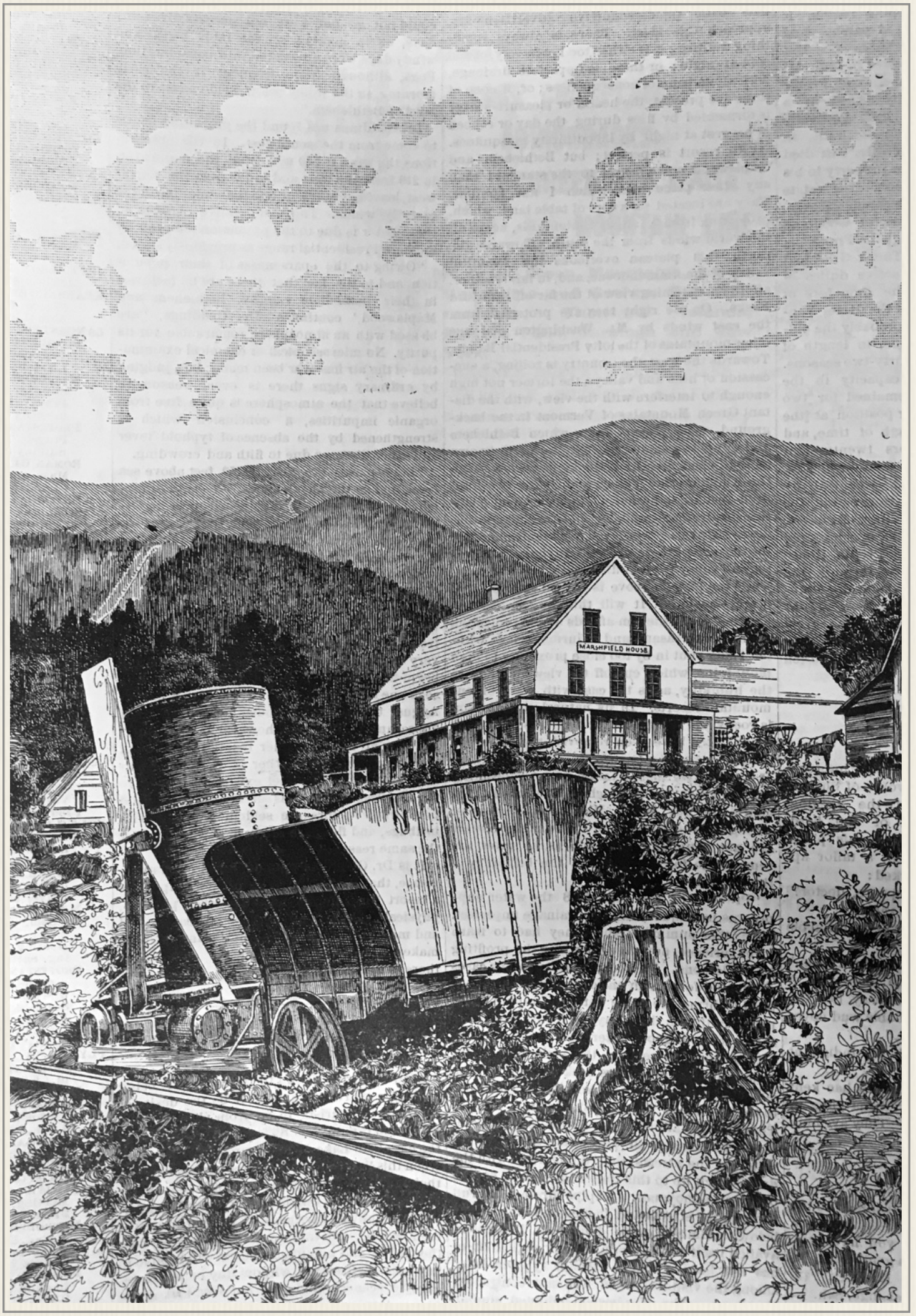


Image of Peppersass believed to be taken in Lakeport, N.H. after being refurbished for transport to the Chicago World's Fair (~1893) - Courtesy Boston & Maine Railroad Historical Society

Sec. 24 - *Hero's* Odyssey



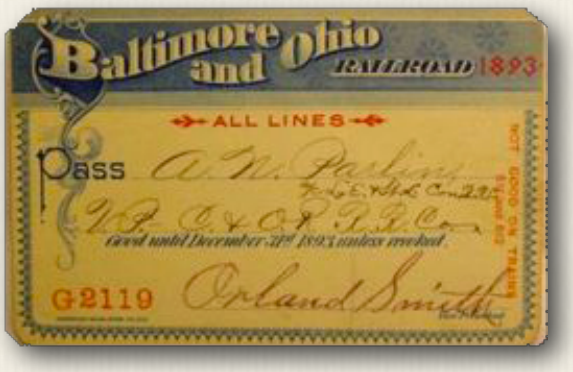
Out of Service / In Storage: *The August 20, 1892 White Mountain Echo magazine features an illustration based on a photograph by Charles T. Ranlet of Peppersass "in storage" down mountain from the depot. "The engine in the foreground of the picture, however, is not a representation of one of the little hump-backed giants that at the present day push their loads of humanity up the steep incline, but the likeness of the first engine employed in that service, and that was one which resembled a pile-diver, with a small upright boiler."*

- The White Mountain Echo and Tourists' Register - Bethlehem, N.H. Vol. 15 No. 8

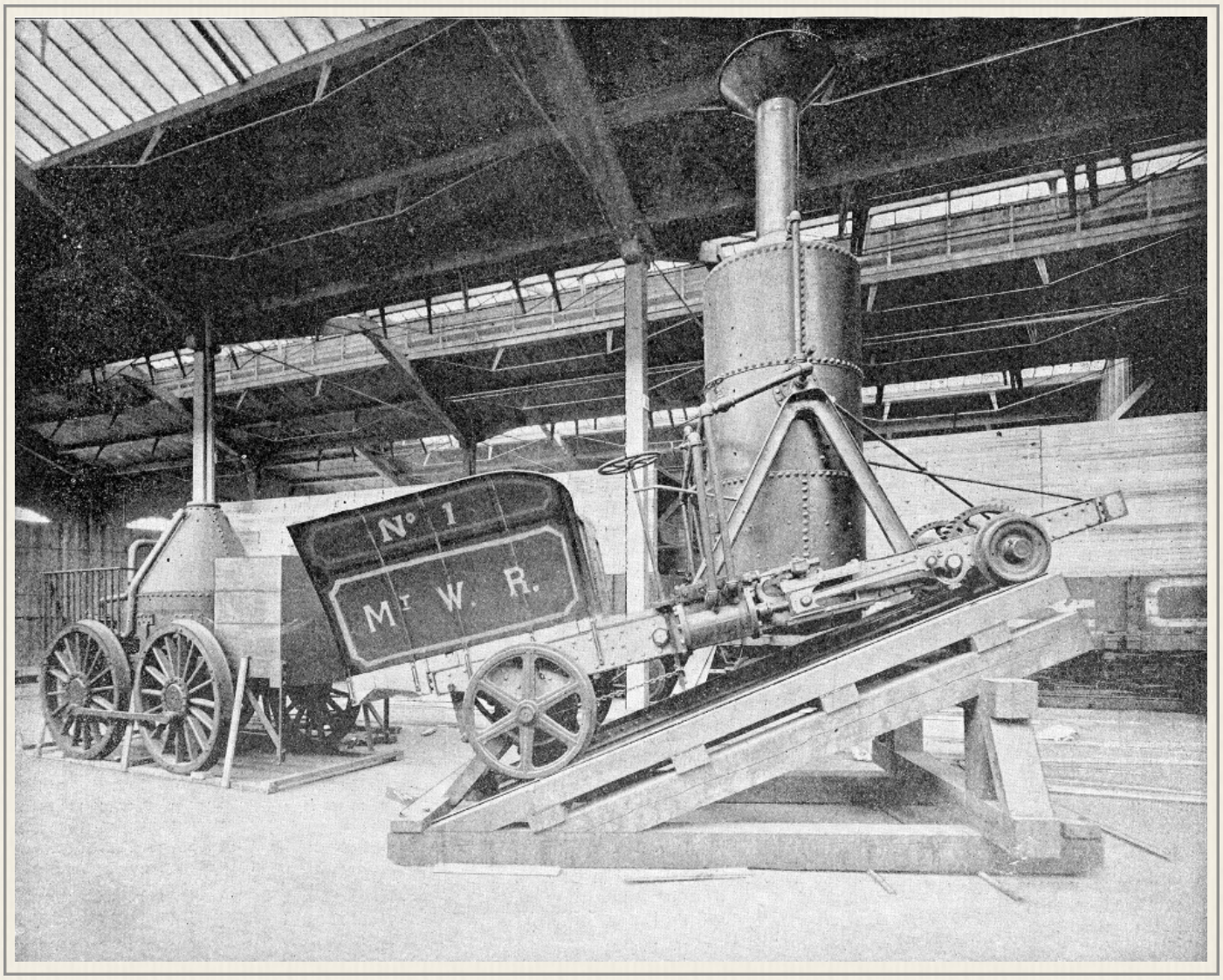
cock's work informs the next section of the *Hero's* Odyssey after her trips to the Summit came to an end. Google maps has been consulted to estimate miles traveled by the railway's *Hero*. Of course, actual historic mileage will definitely vary.

1893

Workplace to **Columbian Exposition**: **1125 miles est.**



"The Chicago World's Fair of 1893 marked the first renaissance of ancient railroad motive power. There was a brisk little man working for the Baltimore and Ohio. His name was J. G. Pangborn. His energy was endless and he conceived the idea of making that railroad's exhibit at the World's Columbian Exposition something quite a bit out of the ordinary. Quietly, Major Pangborn scoured the whole land digging out early locomotives. There were still a considerable number to be found and the persuasive little Major had little difficulty in securing a number of interesting items, such as... the old Peppersauce, 1869, in New Hampshire invariably known as the *"Peppersass."* In addition to these, the Baltimore and Ohio, the earliest public railroad to operate in the country, had a number of interesting engines of its own... They all went out to Chicago. To these genuine antiques Major Pangborn added an imposing array of full-sized wooden models of most of the well-known early locomotives of the world. He was quite a showman, was Major Pangborn." *- from an article by Edward Hungerford in the May 1939 issue of American Collector magazine reprinted in March 2009 in Collectors Weekly -* http://www.collectorsweekly.com/articles/collecting-iron-horses/



Sec. 24 - *Hero's* Odyssey

A Railroad Relic. - The *Boston Journal* is authority for the statement that the Concord & Montreal Railroad has forwarded to the Baltimore & Ohio Railroad to be placed *(below)* in their exhibit of "Railway Equipment and Appliances" at the world's fair in Chicago, the first engine which ascended Mt. Washington. This interesting and valuable historical locomotive has been contributed to the exhibit by Walter Aiken, of Franklin, N.H., president of the Mount Washington Railway. The engine *"Peppersass,"* was built in 1865, was the first locomotive to ascend Mount Washington and was the first mountain-climbing locomotive in the world. It is a rare relic, and has been thoroughly overhauled by the Concord & Montreal Railroad at its Lakeport shops for such preparation as was necessary to show it in complete original form at the exposition. With it was forwarded a section of trestle with track complete, so that when seen it will be in position as when ascending the "Jacob's ladder" of the mountain railway."

- The Railway Review - March 4, 1893 Vol 33 No. 9

1894

To **Field Museum of Natural History:** **< 14 miles est.**

The Mt. Washington Railway's *Hero* did not travel far after the Exposition closed, it was exhibited at the new museum in Chicago *(above)* for nearly eleven years

"The Field Museum was primarily an outgrowth of the World's Columbian Exposition held in Chicago in 1893. Early in 1892 an organization called the Columbian Historical Association was formed, at the suggestion of members of this committee, to take advantage of the privilege granted scientific societies to import exhibits free of duty (for the Exposition). A committee of three of the directors of the exposition called a public meeting 'to adopt measures to establish in Chicago a great museum that shall be a fitting memorial of the World's Columbian Exposition and a permanent advantage and honor to the city.' As time went on, however, and exhibits accumulated in

HALL 42.

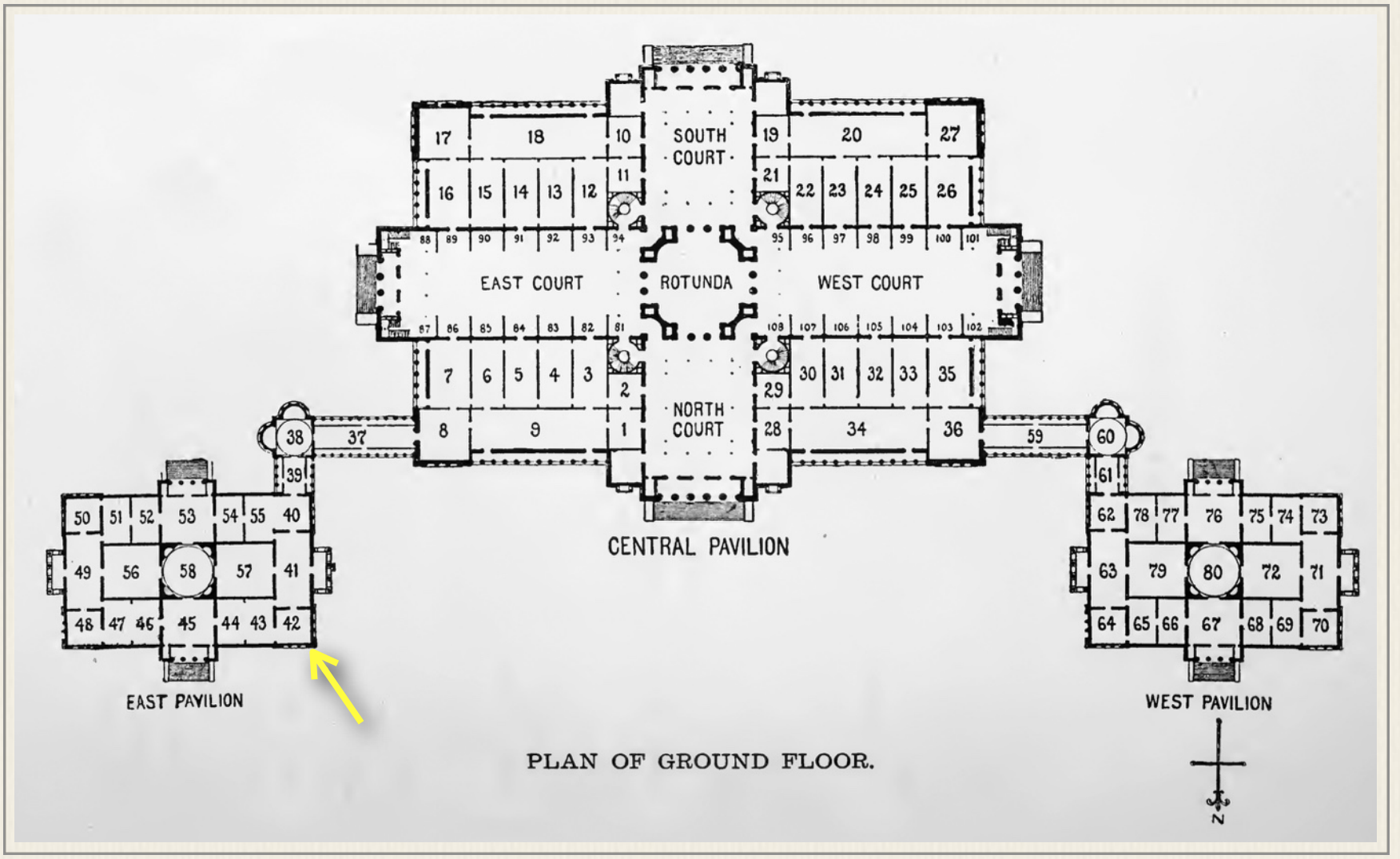
No. 56.—Original locomotive "Peppersauce," America, 1864; the first mountain-climbing locomotive in the world, standing on a section of the original track.

No. 57.—The original first iron railroad bridge ever erected on the American continent, it being substituted in 1839 for the wooden trestle-work on a crossing near Laurel, on the Baltimore & Ohio line between Baltimore and Washington.

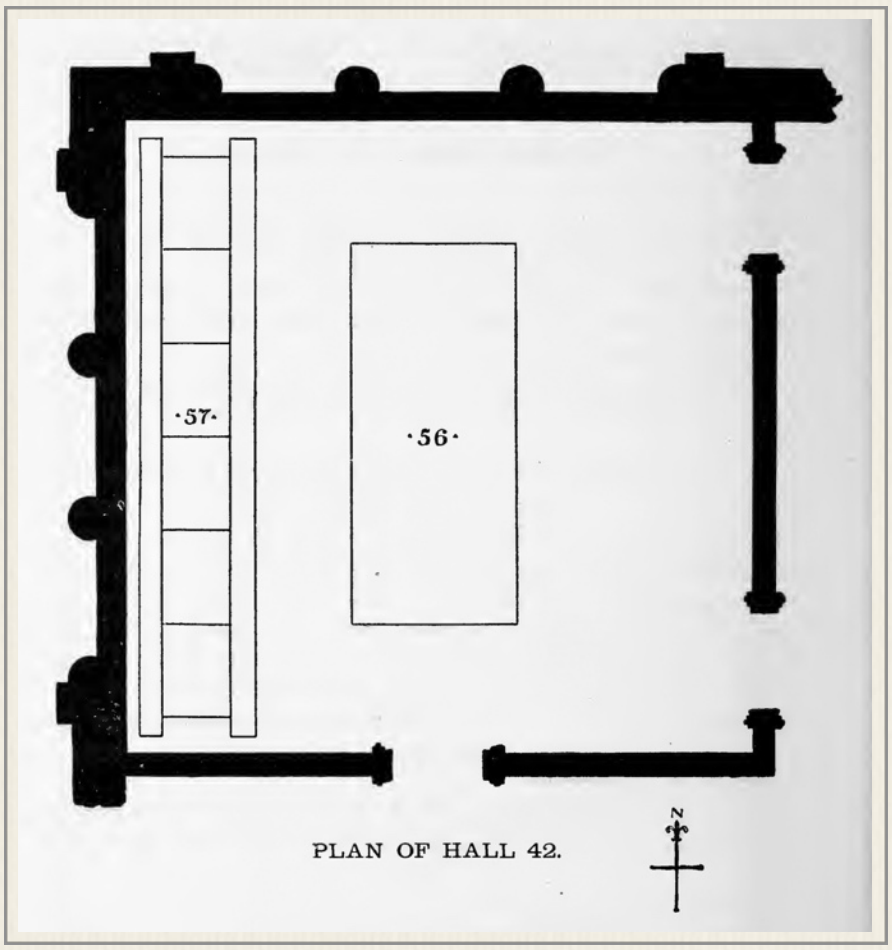
On Shelves.—Original cast-iron tram rails, from Merthyr Tydfil Tram Road, South Wales, 1800. Cast-iron edge rails, with frog, England, 1810. Loughborough edge rails, England, 1820. Old English plate rails, 1822. Original rails and chairs of Liverpool & Manchester Railway, Eng and, on which the first locomotive competition in the world took place, 1829.

On Platform.—Collection of modern railway appliances, permanent way.

On the Walls.—Series of large, original wash-drawings, showing modern compound locomotives of the world. Series of original drawings, showing the development of American railway passenger and freight cars, by the Harlan & Hollingsworth Co. Series of photographs of drawing-room, sleeping and dining cars. Series of photographs and lithographs of railways throughout the world.



large amount, it began to be realized that an adequate endowment to insure permanency to the institution was as yet far from being obtained. The countrywide financial stringency which developed to alarming proportions in 1894 was already beginning to be felt. Strenuous efforts which were made to raise the amount needed failed to give the hoped for results. Among Chicago's citizens in 1893 none stood higher in the confidence and esteem of the public than Marshall Field. On October 26, 1893 he announced that he would contribute the sum of $1,000,000 for the establishment of the proposed museum" and that started the fundraising ball rolling. On June 2, 1894, the Museum opened with *Peppersass (Hall 42)* still on the grounds "in the former Palace of Fine Arts Building in Jackson Park, what is now the Museum of Science & Industry."



https://www.fieldmuseum.org/about/history

1904

To **Louisiana Purchase Exposition:** **317 miles est.**

The Palace of Transportation completes the main picture of the Exposition on the west. It stands at a convenient point for entrance of railroad trades from the northwest (of St. Louis). It presents its station-like front towards the east on the Plaza of Orleans and is a commanding object from every quarter. A fine façade also looks north towards the passing trains of the Intramural Railway. The exhibits in the Palace of Transportation show the most advanced practice of today in railway building, equipment, maintenance, operation and management, and also the history of the railway as developed during the less than a century of its existence, in all parts of the world. Vehicles of all sorts, from the most primitive to the most complex, are arranged in the order of their invention and development. *- 1904 Official Guide to the Louisiana Purchase Exposition - April 30th to December 1st, 1904*

1905

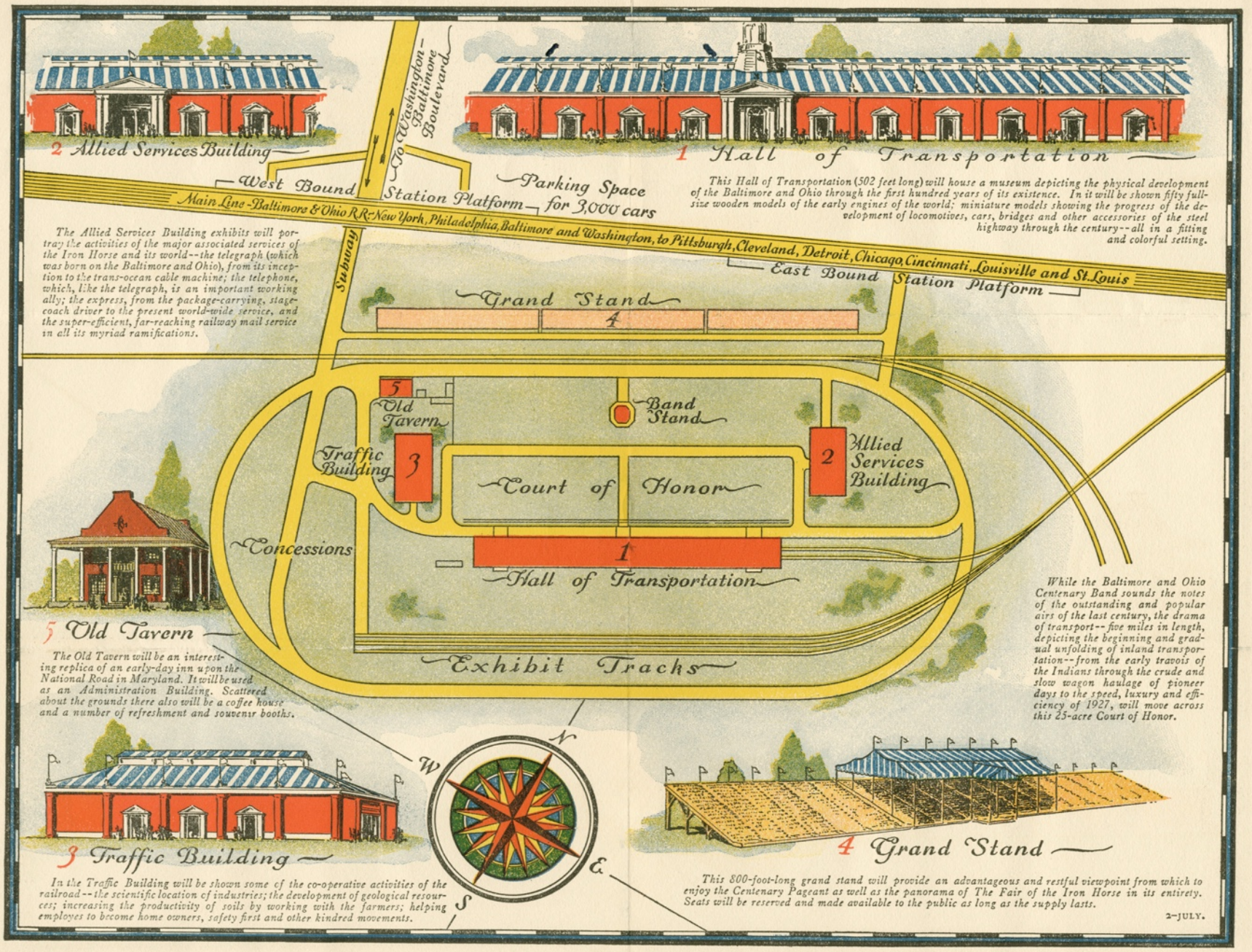
To **Storage at B&O's Camden yards**, Baltimore, MD: **874 miles est.**

1928

To **Fair of the Iron Horse** at Halethorpe, MD: **10 miles est.**

"Between Sept. 24 and Oct. 8, 1927, more than 1.25 million people visited Halethorpe for the Fair of the Iron Horse, a massive festival thrown by the Baltimore & Ohio Railroad to celebrate 100 years of American railroading. A miniature world's fair spread out over 25 acres along the Old Main Line - the nation's first commercial railroad route - running parallel to Hollins Ferry Road and the event included exhibits, music and other entertainment provided free to the public by the B&O. The high point of the fair was the daily Pageant of Transportation. Every day (except Sunday and Monday) at 2 p.m., in front of a reviewing stand holding a crowd of 12,000 people, a parade of historical vehicles and costumed performers filed past to illustrate the progress of wheeled transportation through the ages." While not rolling in the pageant, some locomotives *(like the Peppersass)* were assembled on a set of tracks behind the Hall of Transportation.

http://patch.com/maryland/arbutus/then-and-now-the-fair-of-the-iron-horse



The Allied Services Building exhibits will portray the activities of the major associated services of the Iron Horse and its world--the telegraph (which was born on the Baltimore and Ohio), from its inception to the trans-ocean cable machine; the telephone, which, like the telegraph, is an important working ally; the express, from the package-carrying, stage-coach driver to the present world-wide service, and the super-efficient, far-reaching railway mail service in all its myriad ramifications.

This Hall of Transportation (502 feet long) will house a museum depicting the physical development of the Baltimore and Ohio through the first hundred years of its existence. In it will be shown fifty full-size wooden models of the early engines of the world; miniature models showing the progress of the development of locomotives, cars, bridges and other accessories of the steel highway through the century--all in a fitting and colorful setting.

While the Baltimore and Ohio Centenary Band sounds the notes of the outstanding and popular airs of the last century, the drama of transport--five miles in length, depicting the beginning and gradual unfolding of inland transportation--from the early travois of the Indians through the crude and slow wagon haulage of pioneer days to the speed, luxury and efficiency of 1927, will move across this 25-acre Court of Honor.

The Old Tavern will be an interesting replica of an early-day inn upon the National Road in Maryland. It will be used as an Administration Building. Scattered about the grounds there also will be a coffee house and a number of refreshment and souvenir booths.

In the Traffic Building will be shown some of the co-operative activities of the railroad--the scientific location of industries; the development of geological resources; increasing the productivity of soils by working with the farmers; helping employes to become home owners, safety first and other kindred movements.

This 800-foot-long grand stand will provide an advantageous and restful viewpoint from which to enjoy the Centenary Pageant as well as the panorama of The Fair of the Iron Horse in its entirety. Seats will be reserved and made available to the public as long as the supply lasts.

2-JULY.

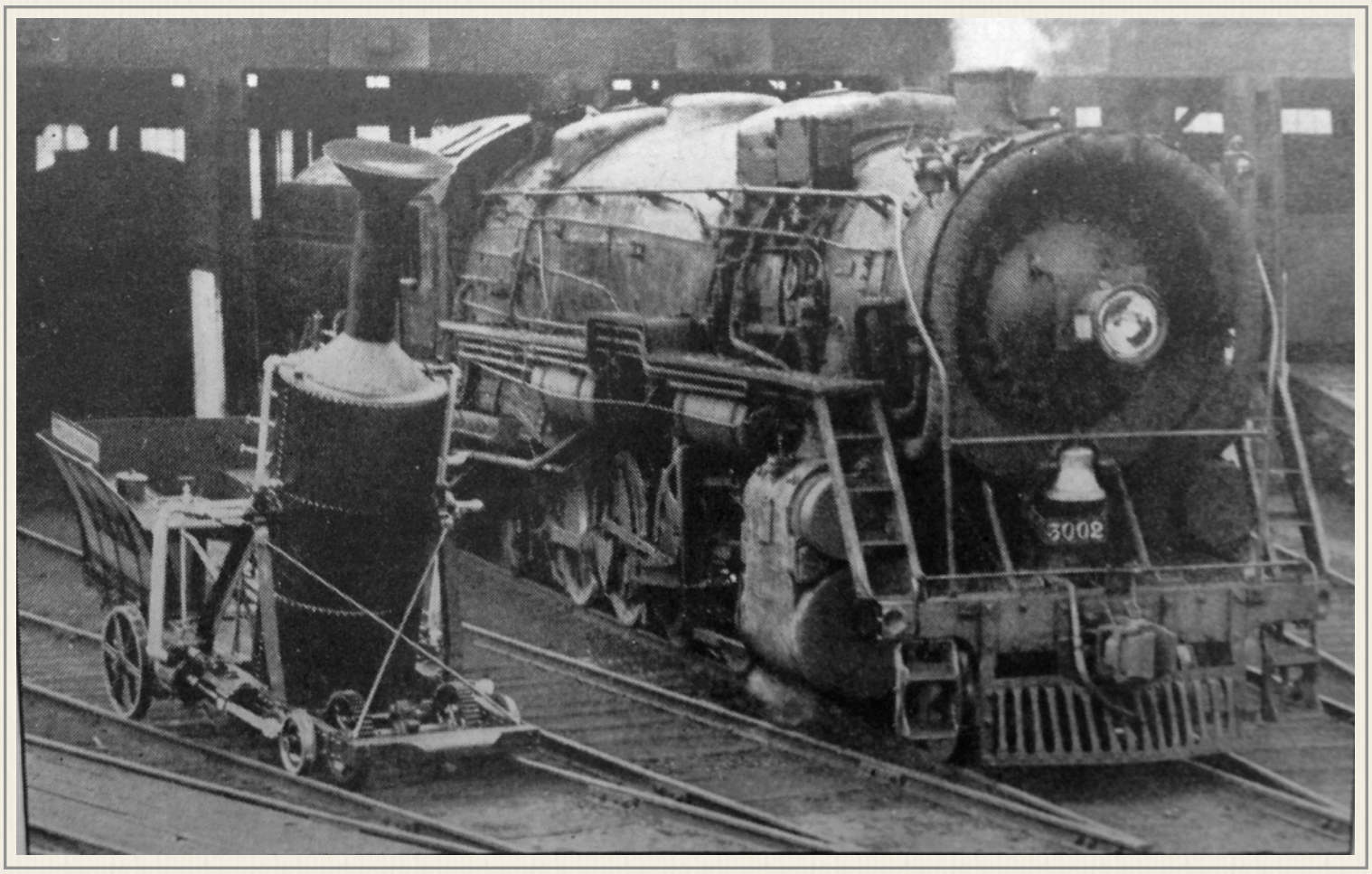
http://www.rgusrail.com/mdfotih.html

Spring 1929

To **Boston & Maine shops**, Concord, N.H.: **461 miles est.**

Chief Mechanical Officer Richardson stated that he made an inspection of engine No. 1 upon its arrival at Concord shops for the necessary work and repairs in preparation for the ascent of Mount Washington. The main concern was with the strength of the boiler, which was 63 years old; a hydrostatic test with a pressure of 150 pounds was made, which pressure remained applied over night. The boiler was also tested by representatives of the mechanical engineer's office and after the results of these tests had been assembled it was considered perfectly safe to run this engine under a steam pressure of 50 pounds. *- Interstate Commerce Commission Report - August 2, 1929*

Engineman Edward C. "Jack" Frost, whose regular position with the Boston & Maine Railroad is enginehouse foreman, had worked on the Mount Washington Railway for six consecutive summers as machinist, extra engineman and master mechanic. In preparing engine No. 1 for the exercises on July 20, he examined all parts and found the main parts in very good condition. The



"You may be bigger'n me, but I bet you couldn't climb my mountain"
Old Peppersass might have spoken thus to the big Boston and Maine fast freight engine, and it's perfectly true that the latter, being cogless, could not climb Mount Washington. - Mainline magazine

main valve was missing, but this was replaced and other parts were renewed, including the pistons. *- Interstate Commerce Commission Report - August 2, 1929*

Reconditioned by the railroad's engineering forces, the veteran little climber was "refurbished with gay old-time colors and decorations," according to the railroad's own chronicle which adds: Officials of the Boston and Maine mechanical department, on inspecting the locomotive, were astonished to find that the old vertical boiler, with its conical rivets headed by hand, easily met water and steam-pressure tests. Only the replacement of a few minor parts was necessary to restore *Old Peppersass* to her original condition. she has been pronounced not only a tribute to "Yankee genius" in design, but a lasting exemplar of New England thoroughness in construction. And so the old lady was dolled up for her birthday party, which was attracting a vast pilgrimage of sightseers to Mount Washington, together with a distinguished company of invited guests, including an assortment of Governors."

- B&M Mainline magazine

June 26, 1929

To **Base Station**, Mt. Washington:

126 miles est.

After the engine was taken to the base of the mountain several trial trips *(left)* were made by running part way up the mountain and during

Officials come to watch the refurbished Peppersass go through tests ahead of the celebration. Grandstands have been constructed and a modern engine is behind the Hero ready to assist. An unidentified Cog kid can be seen in the cab window. (1929)
- Courtesy N.H. Historical Society

these tests the engine appeared to function perfectly. **Q.** (of Mr. Richardson - B&M Chief Mechanical Officer) You were perfectly satisfied that the engine was capable of making the ascent safely and the descent safely? **A.** I was fully satisfied. The only question as to the trip was whether or not she would descend freely. In all previous tests she had so much internal friction it was necessary to put another engine on to push her down. Had to drag it back by means of chain. **Q.** There was on the rear of the tender a buffer of some kind; an iron strap around the rear of the tender. Can you tell us why that was applied? **A**. That was placed there in case she became stuck on the upward ascent. However, as testing progressed the climbing ability was established and it was found this (buffer) was not necessary. *- ICC interview*

Handshake for engineer "Jack" Frost. Push locomotive engineer leans out window as man in hat signals as to roller/bumper meeting (1929)
- Courtesy N.H. Historical Society

"*Peppersass*" Exercises Game Plan for July 20, 1929

To **Summit**, Mt. Washington (partial) **~3 miles**

A Boston & Maine planning document for the July 20th event says "The object of these exercises is to advance New Hampshire recreational interest, at the same time that we restore the origi-

nal engine of the Mount Washington Cog Railway. The program as now planned provides that the principal event will take place... at 2pm. At that time President Willard of the Baltimore & Ohio will be invited to formally return the *"Peppersass"* to the Boston and Maine Railroad, President Hannauer will accept, and in turn will address Gov. Tobey to the effect that the old engine is now permanently rededicated to the development of recreational New Hampshire. It is hoped Gov. Tobey will respond. Except for a test run to be held some early morning *(left, below & previous page)*, (the engine) will be protected against public view. The *"Peppersass"* will climb the mountain again after the formal exercises. A grand stand should be provided opposite Base Station for about 150-200 persons. The permanent location of the *"Peppersass"* will be at the easterly end of the Bretton Woods station, where a hole should be opened through the roof for the smoke stack, and a railing should be provided about two feet from the engine. Shutters will be needed for the winter (this work will be performed by Mr. Barkers' forces). Mr. Barker will arrange for a suitable sign on the platform, and on the highway. We shall make general news announcement of the plans through three stories. We shall have news stories from the ground and fresh photographs. In connection with the event itself, we shall consider in conjunction with the New Hampshire Publicity Bureau invitations to a group of Boston newspaper men and possibly a group of hotel and travel editors from New York. There should be a booklet typical of the occasion, sketching the history of the *"Peppersass"* and the Mt. Washington Cog Railway against a background of the White Mountains and New Hampshire recreational attractions, in colors to conform with those of the *"Peppersass."* Efforts should be

Peppersass on Ammonoosuc trestle during pre-celebration tests (1929)
- B&MRR Photo - Alan E. MacMillan Collection

made to clear the Cog Railway right of way, removing the old timbers and other debris, both as a matter of general maintenance and in connection with this event. The old time roadbed beyond Base Station should not be disturbed; and should be marked by a sign."

- T.F.J. 6.21.29 memo

Exercises of Restoration

"OLD PEPPERSASS"

Original Locomotive of the

Mount Washington Cog Railway

MOUNT WASHINGTON, NEW HAMPSHIRE, JULY 20, 1929

Under the auspices of

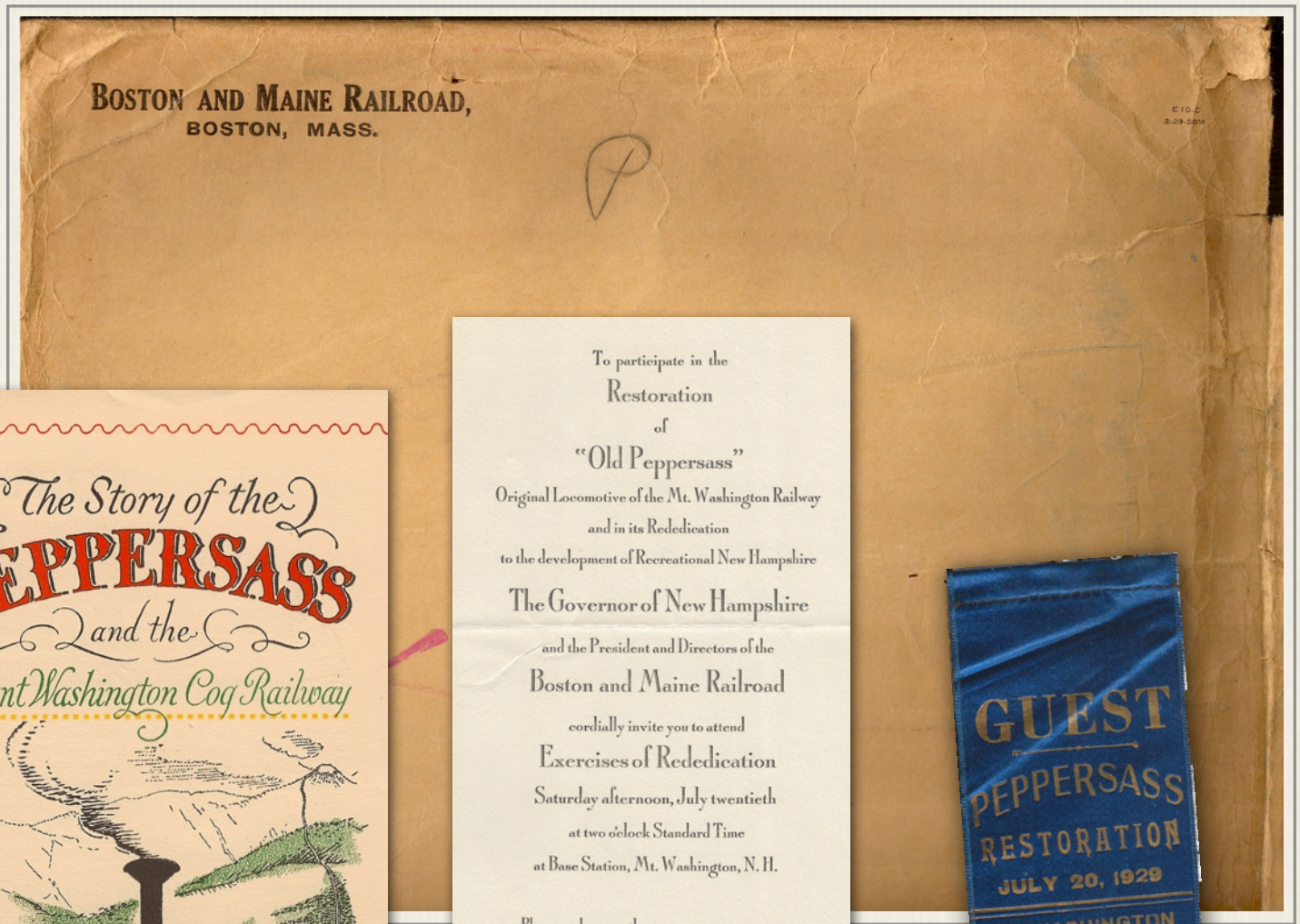
The Governor of New Hampshire

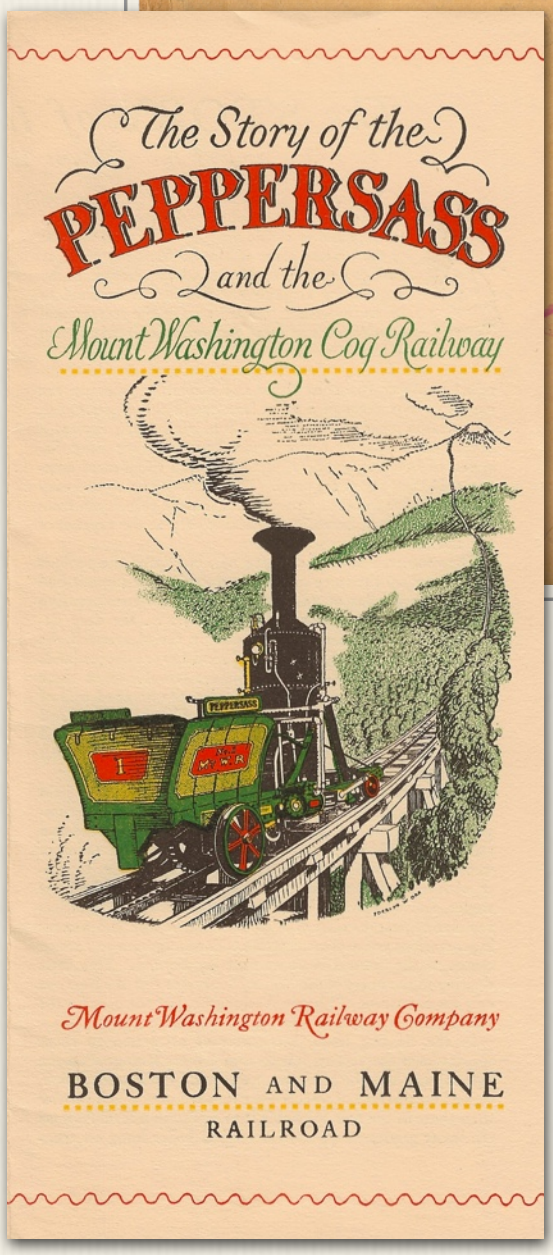
and

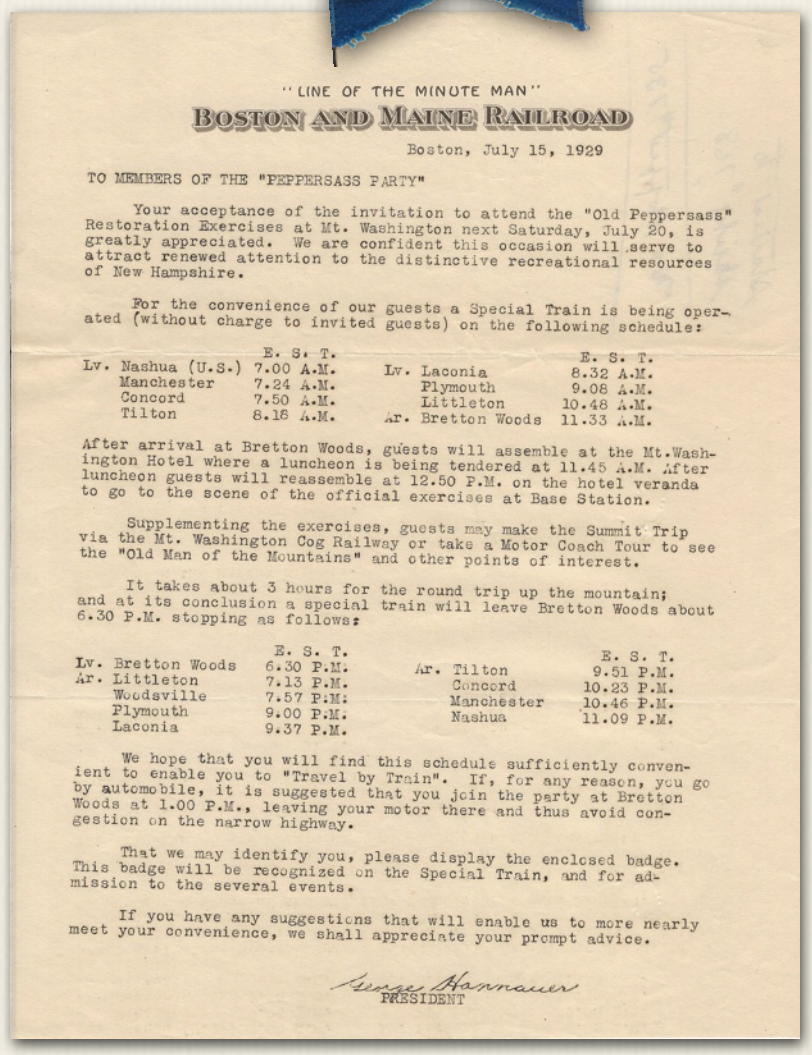
The President and Directors of the

BOSTON AND MAINE RAILROAD

"*Peppersass*" Exercises Press Kit & Invitation issued July 15, 1929







"LINE OF THE MINUTE MAN"

BOSTON AND MAINE RAILROAD

Boston, July 15, 1929

TO MEMBERS OF THE "PEPPERSASS PARTY"

Your acceptance of the invitation to attend the "Old Peppersass" Restoration Exercises at Mt. Washington next Saturday, July 20, is greatly appreciated. We are confident this occasion will serve to attract renewed attention to the distinctive recreational resources of New Hampshire.

For the convenience of our guests a Special Train is being operated (without charge to invited guests) on the following schedule:

	E. S. T.		E. S. T.
Lv. Nashua (U.S.)	7.00 A.M.	Lv. Laconia	8.32 A.M.
Manchester	7.24 A.M.	Plymouth	9.08 A.M.
Concord	7.50 A.M.	Littleton	10.48 A.M.
Tilton	8.16 A.M.	Ar. Bretton Woods	11.33 A.M.

After arrival at Bretton Woods, guests will assemble at the Mt. Washington Hotel where a luncheon is being tendered at 11.45 A.M. After luncheon guests will reassemble at 12.50 P.M. on the hotel veranda to go to the scene of the official exercises at Base Station.

Supplementing the exercises, guests may make the Summit Trip via the Mt. Washington Cog Railway or take a Motor Coach Tour to see the "Old Man of the Mountains" and other points of interest.

It takes about 3 hours for the round trip up the mountain; and at its conclusion a special train will leave Bretton Woods about 6.30 P.M. stopping as follows:

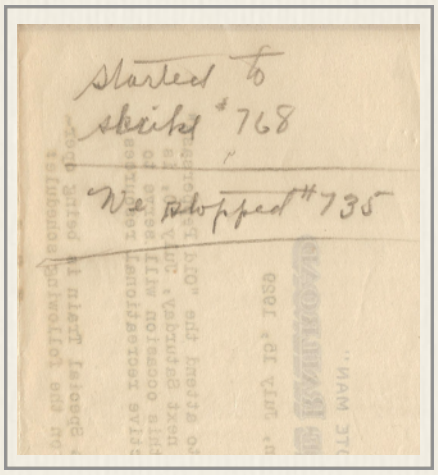
	E. S. T.		E. S. T.
Lv. Bretton Woods	6.30 P.M.	Ar. Tilton	9.51 P.M.
Ar. Littleton	7.13 P.M.	Concord	10.23 P.M.
Woodsville	7.57 P.M.	Manchester	10.46 P.M.
Plymouth	9.00 P.M.	Nashua	11.09 P.M.
Laconia	9.37 P.M.		

We hope that you will find this schedule sufficiently convenient to enable you to "Travel by Train". If, for any reason, you go by automobile, it is suggested that you join the party at Bretton Woods at 1.00 P.M., leaving your motor there and thus avoid congestion on the narrow highway.

That we may identify you, please display the enclosed badge. This badge will be recognized on the Special Train, and for admission to the several events.

If you have any suggestions that will enable us to more nearly meet your convenience, we shall appreciate your prompt advice.

George Hannauer
PRESIDENT



Press Kit: *Found in an estate sale by Mat Glover of Lincoln, N.H. - now part of the Jitney Collection - the cover letter (far right) was apparently used to take notes. Found on the reverse (near right) in pencil - observations made as the press train descended to the crash site. The numbers & notes correspond to bent numbers included in the final ICC report.*

From T. F. Joyce
Assistant Vice President
Boston and Maine Railroad

(FOR USE IN PM'S SATURDAY, JULY 20, AND AM'S THEREAFTER)

BRETTON WOODS, N.H., JULY 20 - This was "Old Peppersass'" Day.

The little old locomotive which looks for all the world like a donkey engine with a wheelbarrow behind, - yet 60 years ago the first in the world to climb a mountain, - held the center of a scenic stage on the western slope of New England's highest mountain, to which a distinguished audience had come to join in extending official welcome back to its native cog rails on Mt. Washington. And the quaint old contraption that was climbing mountains before most of us were born, dressed again in its gay colors of the sixties, was ready to "step up the hill" on the Mt. Washington Cog Railway once more before being given a permanent place at the Bretton Woods station of the Boston and Maine Railroad.

This re-visit to the glimpses of its mountain-climbing past was arranged to follow the formal exercises in which the State of New Hampshire and the Boston and Maine Railroad joined to do honor to the old locomotive and to commemorate the beginning of the cog railroad which opened up to the public at large the enjoyment of Mt. Washington, towering 6293 feet above the sea, and of the 500-mile scenic panorama which is available from its summit, roof-tree of all New England. In these exercises, Governor Charles W. Tobey represented the state. President George Hannauer of the Boston and Maine Railroad who brought about the return of the old engine was to formally re-dedicate "Old Peppersass" to a further extension of the enjoyment of New Hampshire's recre-

ational resources. Ex-Governor J. J. Cornwell of West Virginia, as general counsel of the Baltimore & Ohio Railroad, was here to represent President Daniel Willard in restoring the pioneer mountain-climber to the Boston and Maine. As toastmaster, Col. W. A. Barron of Crawford Notch, chairman of the New England Council committee on recreational development, presided. He was to introduce Rev. Guy Roberts of Whitefield as the man to whom President Hannauer said was due the original suggestion that "Old Peppersass" be found and restored.

By train and by automobile, from distant city and from mountain hotels and camps, - by invitation and without, - the audience for the spectacular exercises came. From far places, the governors of seven states (Utah, Minnesota, Iowa, Alabama, West Virginia, Missouri and Vermont) and official representatives of several more came with their wives and aides, reaching here by special train from Portsmouth whence they had been brought by sea on naval destroyers assigned for the purpose by President Hoover. From eight of the cities of New Hampshire (Portsmouth, Manchester, Concord, Nashua, Laconia, Keene, Berlin and Rochester) came their mayors. U.S. Senator George H. Moses, Congressman Edward H. Wason, Chief Justice William H. Sawyer of the Superior Court; President E. M. Lewis of New Hampshire University; Secretary of State Enoch D. Fuller and a host of other officials joined in the occasion. And from large city and small town, from nearby places and remote hamlets, congregated the members of the New Hampshire legislature, a host in themselves. These were the invited guests. Uninvited, but welcomed, were hundreds of tourists or vacationists in White Mountain resorts who came in from all sides, and swarmed over the little clearing where the exercises were held.

The exercises were preceded by a luncheon at the Mt. Washington

Hotel, and were to be followed by a formal dinner tendered by Governor Tobey at the Crawford House.

After the exercises it was arranged that the guests should ascend on the Mt. Washington Cog Railway, with Prof. Walter C. O'Kane and other mountain authorities pointing out the records of the Ice Age on the slopes, the changing vegetation culminating above the tree line in flora found elsewhere only in Greenland and Iceland; and picking out on the 500 mile sky-line (if the view is clear) points as distant as the Adirondacks on the west, Cape Elizabeth and the Atlantic on the east, Lake Memphremagog on the Canadian border to the north and Lake Winnipesaukee to the south.

Probably the proudest man on the mountain today was "Jack" Frost, listed on the payrolls of the Boston and Maine as E. C. Frost, engine house foreman, Concord, N.H. Ten years ago Frost made a record of 2 minutes, 45 seconds sliding down the 3¼ miles of rail on the cog road on a slide-board. Two months ago he was given the job of rehabilitating "Old Peppersass" for her last climb "up the hill." Today, he was her engineer, with W. I. Newsham, a machinist at the Concord shops of the Boston and Maine, as fireman. The "Peppersass" burns wood, and it was expected the fireman would be a busy man.

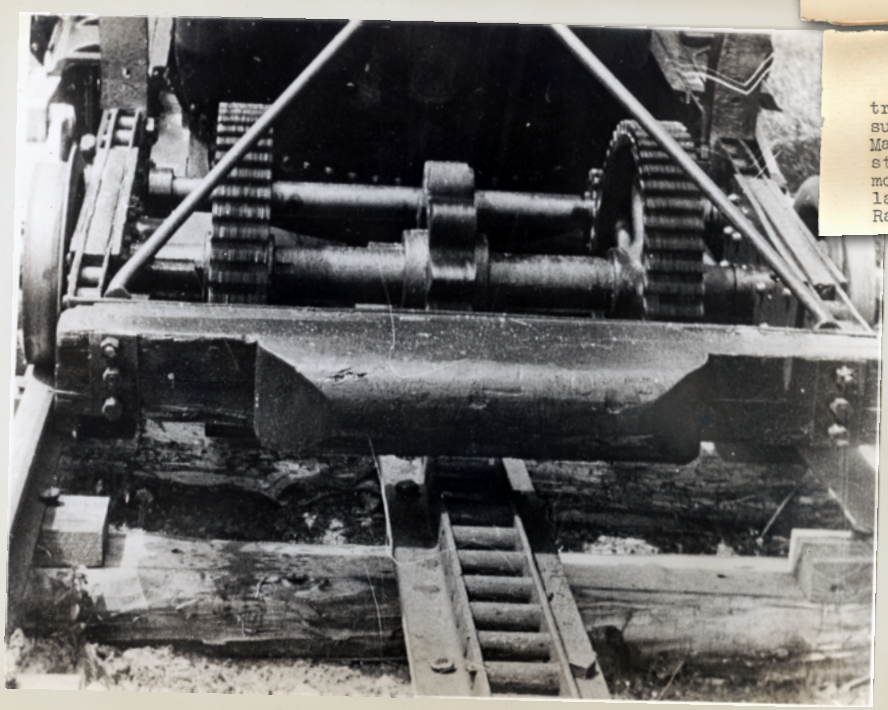
Because "Old Peppersass" is not gaited as fast as the newer locomotives on the cog railway, she was to go only beyond Jacob's Ladder, steepest ascent on the entire mountain, where there is a grade of 36.6 percent, with a rise of more than one foot in every three. Then, descending back, she would be headed directly for the pedestal at Bretton Woods where she is to spend the rest of her days.

- R -

Sec. 24 - *Hero's* Odyssey

"Old Peppersass" and her doughvy driver, "Jack" Frost. The restoration of "Old Peppersass" to Mt. Washington and the cog railway where three generations ago she was the first locomotive to climb a mountain, is being marked today by exercises sponsored by the State of New Hampshire and the Boston and Maine Railroad; in connection with which "Jack" Frost is to attempt to drive "Old Peppersass" once more over the steepest grades of Mt. Washington, 6293 feet high, where in some places the rise is one foot in every three. The picture shows between the two large gears the cog device which, meshing with the ladder-like center rail, steps the unique locomotive slowly but surely up the mountain.

Wearing ancient beavers of the days of "Peppersass" original triumph, when in 1869 she became the first locomotive to reach the summit of a mountain, Engineer E. C. ("Jack") Frost of the Boston and Maine at the throttle, and Fireman W. I. Newsham, at the woodpile, stand by to take the old engine up the Mt. Washington Cog Railway once more. Frost, engine house foreman, and Newsham, machinist, had a large share in reconditioning "Peppersass" at the Boston and Maine Railroad's shops at Concord, N.H.



Here's the "works" of "Old Peppersass," shown head on as she grinds her way up Mt. Washington. In the center is the stout cog wheel which bites into the middle ladder track and pulls her slowly but surely up the steep grade. On either side are the gears through which power is conveyed from shaft turned by pistons on outside of engine frame. At the extreme right and left are the two tiny front wheels running on ordinary supporting rails.

PROGRAM

11.45 A.M. Luncheon tendered by Mount Washington Hotel

12.45 P.M. Old Stage Coach—and Motor Coaches—leave Hotel.

1.10 P.M. Special Train leaves Bretton Woods.

2.00 P.M. Exercises Restoring "Old Peppersass."

2.45 P.M. Cog Trains Start up Mount Washington.

3.00 P.M. "Old Peppersass" Climbs Once More!

3.15 P.M. Train goes to Bretton Woods for motor coach tour.

4.00 P.M. Arrival of Guests at Summit.
Brief description of scenic panorama by Prof. W. C. O'Kane of New Hampshire University.

4.30 P.M. Departure from Summit

6.00 P.M. Arrive Fabyan for Buffet Supper.

6.30 P.M. Special Trains leave.

7.30 P.M. Governor's Dinner at Crawford House.

"RESTORATION *of* OLD PEPPERSASS"

(Engine No. 1 of the Mt. Washington Cog Railway)

Exercises at the Base

TOASTMASTER . . . . . COL. W. A. BARRON, Crawford Notch
Chairman, New England Council
Committee on Recreational Development

ADDRESS . . . . . HON. J. J. CORNWELL
Former Governor of West Virginia
General Counsel, Baltimore & Ohio Railroad

ADDRESS . . . . . PRESIDENT GEORGE HANNAUER
Boston and Maine Railroad

ADDRESS . . . . . HON. CHARLES W. TOBEY
Governor of New Hampshire

Sec. 24 - *Hero's* Odyssey

Saturday, July 20, 1929

A long Boston & Maine train "arrived at Bretton Woods just before noon Saturday. Then followed a delicious lunch served in the main dining room of the Mount Washington hotel. The governors and Rev. Guy Roberts made the trip from the hotel to the Bretton Woods station on top of the old Crawford stage coach. It was drawn by six prancing steeds driven by George Howland of Lisbon and Crawfords, an old-timer at this kind of work. Mr. Howland handled the reins like the veteran he is and the start from the hotel was to the accompaniment of clicks from the many cameras present," noted the *Littleton Courier* report.

"The special trains for the base station were appropriately decorated with red, white and blue bunting. At the base a special grandstand had been erected for the guests. This was gaily decorated as well as the mountain trains. *(The newspaper would note after the fatal accident the red, white and blue bunting "disappeared as if by magic.")* Those who were obliged to wait for the second special train (up to the base station) were entertained by selections from a band which featured a tenor soloist. The railroad officials had attended to every detail to make the restoration exercises complete and appropriate."

Program begins at 2pm
(and follows script)

"At the proper moment *Old Peppersass* came chugging up the track, blowing her whistle in answer to the cheering thousands. Engineer Jack Frost and fireman William Newsham were dressed in bright red shirts and tall beaver hats. Governor Charles W. Tobey officially received the locomotive for the state of New Hampshire..."

- Winston Pote recollection - N.H. Profiles - Aug 1960

Old Peppersass is run out onto the transfer and moved to the mainline to run up to its re-dedication celebration. The photo shows the Model-T engine rigged to move the transfer back and forth. (July 20, 1929)
- B&MRR Historical Society Collection

"This is indeed a rare occasion for New Hampshire, for the White Mountains and for New England," Col. W. A. Barron of Crawford Notch said as toastmaster. "We in this part of the country know the language of Recreational Development; we understand its importance not only to New Hampshire but to all New England. That the restless *Peppersass* is finally to come into its own, as a worker and as an exhibit consecrated to greater recreational development for New Hampshire, is a gratifying termination of the day's festivities."

"On August 29, 1866, the party who gathered at the official trial (of the cog railroad concept) adopted a resolution which stated its purpose was to 'greatly enlarge the facilities of enjoyment of the best and noblest scenery of the country,'" B&M President George Hannauer told those assembled. "*Old Peppersass* stands as a symbol of the recreational enjoyment that awaits the visitor to these hills; and as a symbol also of the Yankee ingenuity of Sylvester Marsh, who built *Old Peppersass* and who built this railway; and who lived to smile at his scoffers as the *Peppersass* and her successors climbed to the clouds - without serious accident to this day."

"The intensity of modern life, with its great strain on our mental and physical qualities, has made necessary greater recreational facilities, and New Hampshire has much to offer in this direction," said Governor Charles W. Tobey. "Nature has been lavish with us in her distribution of lakes and mountains, and today gathered together in this environment, surrounded by these majestic peaks, product of the handiwork of the Great Architect of the Universe, the very soul of man is moved, and we feel if we do not say, 'What hath God wrought?' President Hannauer, as Governor of New Hampshire it is a great joy to greet you... and on behalf of New Hampshire I accept *Old Peppersass* and join with you in the happy thought of rededicating it to the attractions of our White Mountains, and so to a continuous service to our fellow-men."

The engine is rededicated by (B&M President George Hannauer) with the ceremonial smashing of a large bottle of water (obtained by toastmaster Col. Barron of the Crawford House) from the Lake of the Clouds on its right cylinder mimicking the launch of a boat. "Six trainloads of guests *(next page)*, each train consisting of an engine pushing one car ahead of it, ...preceded engine No. 1 up the mountain to the summit. *Peppersass* was in charge of En-

gineman Frost and Fireman W. I. Newsham, ...proceeded up the incline."

- Interstate Commerce Commission Report - August 2, 1929

State forester Warren F. Hale was one of six guides selected by Robert P. Peckett of Sugar Hill to ride in the passenger coaches that afternoon and describe the sights and surroundings during the journey. The group had met the night before at the Willey camps in Crawford Notch to coordinate their spiels. The team - Hale, Joe Dodge of the AMC, Walter Goldthwaite of Dartmouth college, Nat Goodrich from Hanover, Tom Joyce of the Boston & Maine and Fred Gardner of Concord spent the night there. Just after breakfast in the morning, Hale and Dodge had organized a search for a bellhop missing from the Crawford House. It was feared the young bellhop named Graves had walked the tracks of the Maine Central and started to climb the slippery, steep southern slopes of Mt. Willard. "No walkie talkie radios were available in those days," recalled Hale in 1954 in a *Concord Monitor* column. "Messengers were dispatched every two hours to the Crawford House as to the progress of the search. At noon Dodge and I left Ranger Spinney in charge as we drove to the base station to be on hand for the *Peppersass* ceremony."

Cross for 19-year old John Richard Graves. He was a bell boy at the Crawford House. On July 19, 1929 he decided to go for a hike up Mt. Willard after dinner. When Graves didn't show up again, a party went out looking for him. Richard had slipped and fell off of Mt. Willard and died. His mother Mary, had a cross put up on the side of Mt. Willard in memory of her son. Today the cross has long been covered by rock slides. (1930)

- Raymond W. Evans photo / Robert J. Girouard Collection

"There were not sufficient trains to carry all the party up the mountain. Those who could not find places on the trains were taken back to Bretton Woods where buses were boarded for a sightseeing trip about the mountain highways. Some remained at the base."

- Littleton Courier - Thu, Jul 25, 1929

Special guide Warren Hale had taken his position on the third train. "Evi-

dently many people did not hear the words "special passes" or believed that passes (to board the trains) were unnecessary," wrote Hale. "It seemed that almost every one present proceeded to the six one-car trains and hoped to get aboard. Each train had a brakeman and while he stood at one entrance the first arrivals entered the car at the other end. Not only were the seats rapidly filled but people were standing in the aisles. Many (without passes) were asked to leave the cars... which they did and it believed all the invited guests were finally taken aboard."

Noted New Hampshire photographer Winston Pote who was in the press gaggle recalled in 1960, "There was a scramble for space on the small trailer car for photographers. I managed to squeeze in behind the newsreel cameras and altogether too many folding camp chairs. I had arrived on the scene a bit late with a friend and no certain plans for going up the mountain. With me I carried a Graflex camera, a doctor's leather bag full of extra lenses and film, and a Filmo movie camera. It was not until I found myself on the flatcar that I realized that the lunch was still locked up in the car and that the keys were in my pocket. In my haste to get pictures of the ceremonies I had not taken time to eat, and now there would be no food available for several hours." Pote said, "The fact of my increasing hunger was to be a fateful one in the decisions I made that afternoon."

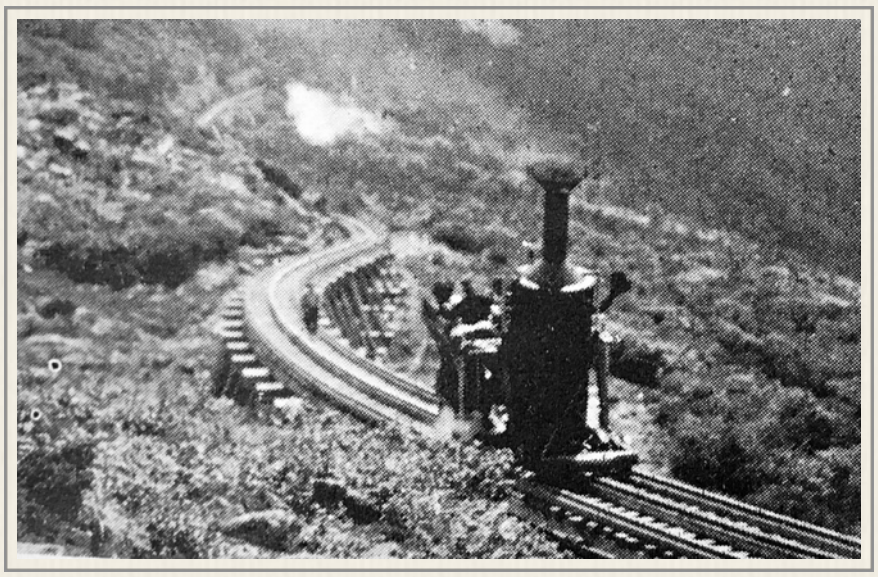
"The signal was given to start up the mountain and with loud cheers we left a throng behind," recalled guide Warren Hale. "I found my assignment to talk to this group (on the third train) with every one talking to each other rather difficult. With the snorting and hissing of the engine directly behind the car I found it necessary to go to the upper end and try to interest those nearby that I was trying to act as a guide and tell them about Mt. Washington; the Cog railroad and the *Peppersass.* We should have been provided with megaphones and I was wondering how the other guides were making out. I gave a short talk - short because I wasn't sure whether anyone could understand me. Then I repeated this performance in the middle of the car as I could not reach the other end because of people in the aisle." As the celebration trains went up the mountain, the rescue party in Crawford Notch found the lifeless body of the missing Crawford House bellhop on the lower slopes of Mt. Willard.

While Hale struggled to present his part of the program, photographer Winston Pote was trying to do his job, too. "The cog train we rode climbed slowly as possible in an effort to keep the slow moving P*eppersass* within camera range. All of us were trying to get pictures at once, some hopping off and on our

train and even hitching rides on the old locomotive for an effective close-up. For it was hard to hold a camera steady, what with the jolting of the cog wheel. Our train made frequent stops, since nobody knew how far *Peppersass* would attempt to climb. At the first water tank *(next pag)* an official signaled the *Peppersass* to return, but Frost continued on upward to the Halfway House, a small building near the track. There they stopped for more wood, which was quickly loaded onto the queer tender. (Once again *Peppersass*) continued upward instead of starting back down as we half-expected she would.. After *Peppersass* climbed a few feet, we distinctly heard a loud bang. 'That doesn't sound so hot!' said a newsreel camera man. There was no further comment about it, but I was to hear a very similar sound on our descent. Another quarter of a mile, perhaps, and we crossed Jacob's Ladder with *Peppersass* following slowly in the distance. Engineer and fireman were busy waving those tall hats and blowing the whistle which made little puffs of smoke in the almost calm air." *- Pote's Peppersass eyewitness account published in August 1960 N.H. Profiles magazine*

This engine (No.1) made one stop while ascending the grade due to low steam pressure and another to lubricate the cylinders. (Frost) ran the engine up as far as Gulf Tank. At this point he inspected and oiled the engine. *- ICC Report - August 2, 1929*

Just after the photographer's train passed over Jacob's Ladder, Rev. Guy Roberts stepped down off the car. Nicholas Howe writes in *Not Without Peril* that Roberts wanted to watch the *Peppersass* go over the famed trestle one last time. Roberts had campaigned for more than 20 years to bring the historic engine back to the White Mountains. He thought the climb would end above Jacob's, and he would escort the locomotive back to the Base "by either walking along with her or perhaps riding down while standing on her forward 'bumper,'" Roberts wrote in the *Littleton Courier*. "Frank T. Joyce, assistant vice president of the Boston and Maine railroad, who was in charge of all the exercises, had... told me that the old relic would only run to the top of Jacob's Ladder, for doing so would prove her ability to climb to the summit, but



that going clear to the top would too much delay the return of the other trains." The Reverend was surprised when it kept climbing towards Skyline.

"The procession continued upward to the Gulf tank," wrote Pope, "where *Peppersass* stopped to take on water. I remember they filled it so full it ran over. More pictures were taken of the process, and I climbed out with all my gear. When my train moved off toward the summit, only a short distance now, I did not rejoin it but stayed watching the old locomotive. Frost had evidently received orders to take *Peppersass* back down, but still he waited, looking longingly upward as though his goal was fading away. As I watched, *Peppersass* took on two more passengers - the engineer's son Caleb, a boy of sixteen and Daniel P. Rossiter, who was official photographer for the railroad."

After taking water at Gulf Tank the return trip was started down the grade... running backwards, traveling at an estimated speed of 3 miles per hour.

- Interstate Commerce Commission Report - August 2, 1929

Winston Pote decided to join his colleague, Rossiter. "*Peppersass* started steaming slowly down the moderate grade of the area. I grabbed up my equipment, and, with both hands filled, tried to run over the rocks - a strange chase after a strange engine. It was only going two miles an hour, so I was sure I could catch up. Yet twice I stopped, as though to give up. It was as though there were some restraining force holding me back. I chalked it up to an empty stomach and ran on, catching it at last. Frost stopped, reached down with a helping hand. Then with a clank and a roar of steam, we were off down the mountain. My first need was to load the movie camera. I had done it on a moving dog sled and on a speed boat, but this jolting conveyance was the worst yet. Young Caleb Frost lent a hand, and together we struggled with the camera on the pile of firewood, which was taking up most of the room. We got it finished just as the engine reached the steeper grade. Watching *Peppersass* from above, I hadn't realized how noisy and rough she was, once in motion. Conversation was limited to brief shouts. Engineer Frost stood by with a huge oil can and used it when his aim was good. Newsham, the fireman, tossed a chunk of wood into the flaming firebox. Here were two fine closeup shots, and I shouted into Frost's ear that I would like such pictures if he could stop. It was impossible to hold the camera steady otherwise. 'You can get that at the base' - I could just make out his words. At that point we reached the top of Long Trestle, and I could hear the engineer's words as he yelled to Newsham: 'How do you like the looks of that!' I was not alone in feeling apprehensive about this ride," recalled the hitchhiking photographer.

Nothing unusual occurred until (Frost) reached a point (Bent 800) about one-half mile from where the return trip was started when he heard a snap at the front end of the engine, immediately followed by the forward end raising up and when it came down the cog wheel was out of the cog rail. *- Interstate Commerce Commission Report - August 2, 1929*

"We passed two climbers who waved.... Down we dropped - a different kind of jolt, now... Rossiter sat holding his camera, near the doorway. My equipment was scattered on the woodpile... What a fine, clear day, I thought - and how hungry can you get... There was a large sledge ham-

mer crack," says Pote. "We seemed to bounce a bit and lurch to one side. As we picked up speed, there was an ominous grinding sound. Frost grabbed the old hand brake wheel, which spun loosely and seemed to have little effect. I could see his mouth opening, shouting, *'Jump Jump!'* I'm sure I didn't hear the words, so terrifying was the clatter."

Rev. Guy Roberts had been waiting at Jacob's Ladder for some forty minutes before he first heard *Peppersass* descending. "Glancing up the track I saw steam or smoke as from her stack," he later wrote, "the engine was being concealed by a brow of the mountain. But in an instant she was in sight and I thought, 'Here she comes.' Then I realized that her speed was very fast and the next instant I thought, 'Why, she is running away!"

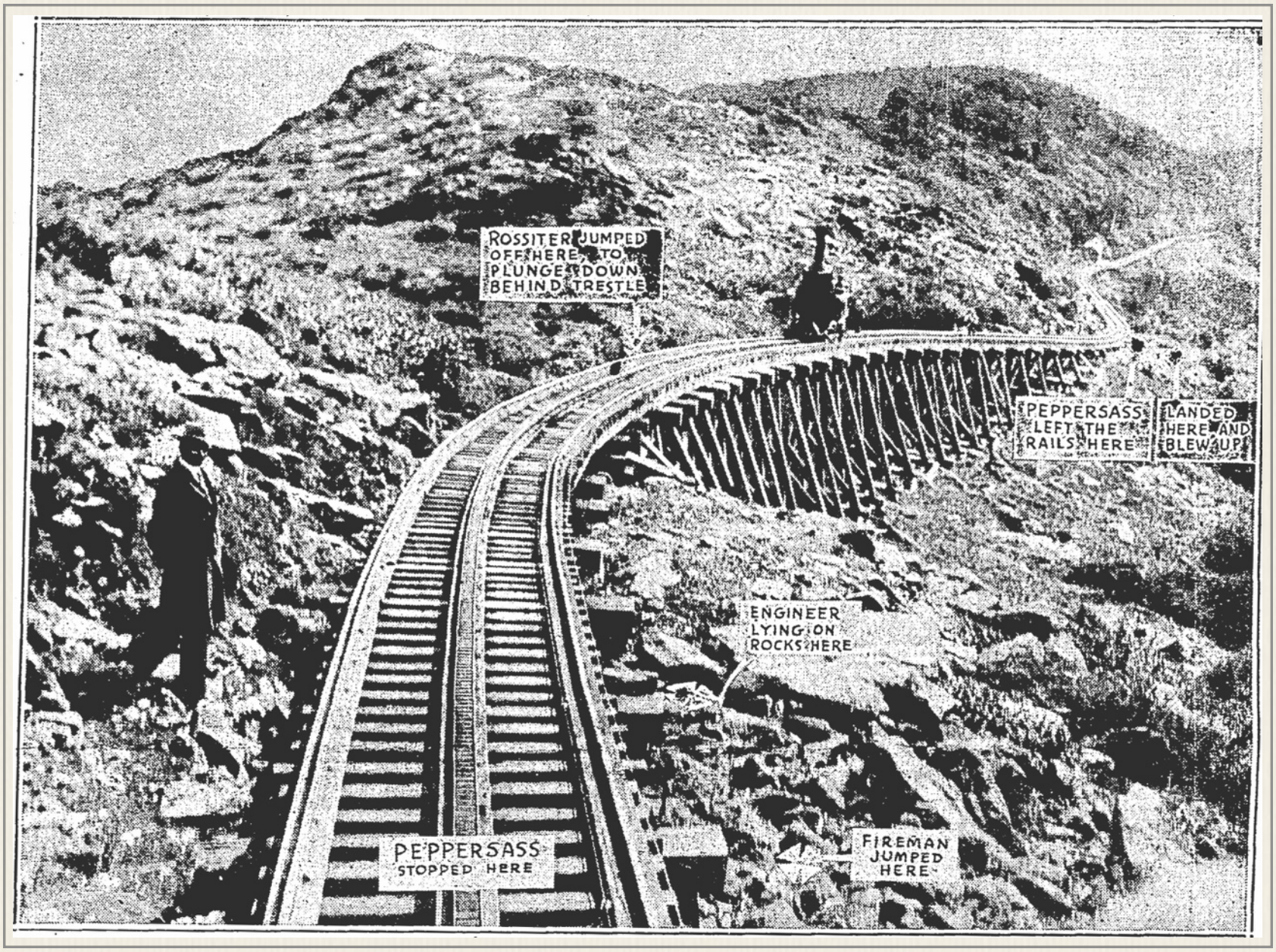
Cog Kid Hitches a Ride

Caleb Frost, 16 years of age, son of the engineman, stated that on the day of the accident he walked up the mountain behind the engine. When the engine started the return trip, he, together with two other persons, got on. The engine was proceeding normally and without indication of trouble until he heard a snapping sound near the front part of the engine and it appeared to be derailed and bumping on the ties. He jumped just as the engine started down the long trestle and the last he saw of the engine was when it disappeared around a curve running at high speed and tearing up the ties. *- ICC Report*

"Struggling to the woodpile, I grabbed a bag of film and lens equipment - carefully threw it out the doorway," writes Pote "and watched it roll over on a grassy place. I should have gone with it. Caleb was the only one with presence of mind to jump this soon and got away with only a torn shirt from the bushes that cushioned his fall. The brake must have been holding partially; we were not going more than fifteen miles an hour - but it was unpleasant. The engine rocked violently, and pieces of flaming wood and embers flew from the firebox. Rossiter still sat with his camera. We were going too fast now. Then something else gave way, and we started to roll freely, a sudden drop, like a high speed elevator. Any brake action was gone. I was sure the old engine would tip over. Trees and rocks whizzed by." *- N.H. Profiles - August 1960*

With the assistance of the fireman, (Frost) attempted to apply the hand brake but without much effect on the speed of the engine, and realizing that the engine was out of control he shouted to the other persons to jump. *- Interstate Commerce Commission Report - August 2, 1929*

"Engineer and fireman hung on in on the doorways, on opposite sides, looking for a soft spot." Pote was in the tender, "As I jumped from the woodpile, I caught one toe on the *Peppersass* sign. So it was headfirst, a dive instead of a jump, with no sensation of falling, only of speed. Sky-rocks-sky-then a huge rock looming up for a landing. I tried to throw my head back to protect my face. Stars I saw plenty, but I remember better seeing the engine like a comet with a long tail of steam. I knew I had a broken jaw, because I could hear the bones rattle. I tried to find the camera, but something was wrong with one knee. I was very close to Jacob's Ladder, and some time later remember seeing the engine's smokestack under it. It was here that Rossiter had dropped off, or was thrown, after hanging on to the tender with his camera. He was killed instantly. The engineer and



fireman suffered broken bones but recovered, in time. Frost had made a miraculous 30-foot jump on the high ravine side (of Jacob's Ladder.)"

Rev. Roberts watched alongside the track. "On she rushed, careening and tottering, when with a sudden lurch, off toppled her smokestack, crashing onto the rocks at my right. Then I noticed that a man was hanging on the flaring top of its tender, swaying as it careened!" he recalled. "The terrible outfit flashed past, showering me with its cinders, as on it dashed in its mad rush to death down Jacob's Ladder, tearing and crashing. When but some fifteen feet beyond me the man dropped from his hold on the tender and was shot down some forty feet through space outside the upper side of Jacob's Ladder, where he crashed to death on the sharp jagged rocks and huge timbers at the foot of the trestle and about midway its length."

"Some of those waiting for the return of the trains to the base had field glasses and distinctly saw the accident, although of course they did not know whether there had been any injured. It was close to an hour later before anything definite was known." *- Littleton Courier*

Engineman Frost could not account for the front end of the engine lifting out of the cog rail unless it was caused by a broken tooth from a cog wheel being stuck in the cog rail. He further stated that he had never known of cog wheel breaking on any of the engines used on this line; at

one time a front pinion gear broke on one of the present type of engines and the train stopped immediately. *- ICC Report*

Assistant to the Engineer of Maintenance of Way Watson… found marks on the side of the cog rail between bents 768 and 734 which appeared to have been made by something sliding on the angle iron which forms the side of the cog rail. There were also marks on the ties in the same vicinity which appeared to have been made by a gear sliding on them and about 50 ties were broken between the bents. Later he found several teeth from a broken cog wheel and parts of the broken main driving gears, approximately 1,100 feet from the first mark of derailment. *- ICC Report*

Crash investigators determined the engine... continued down the incline, gaining speed rapidly, and finally left the trestle about 2,050 feet from the initial point of derailment while traveling at a speed of about 25 miles per hour. Rev. Roberts described it this way. "Watching *Old Peppersass* as she shrieked out her swan song, she continued tearing down the Ladder until coming to the reverse curve at its foot. Being unable to make the curve she leaped from the rails into space over the brink of Burt's Ravine, where with a thunder-like report the boiler exploded amid a great puff of steam, landing her some thirty feet from the rack with pieces of metal and debris flying in all directions, at last burying her shattered and scattered self amid the rotten wood, stunted spruce and birches that there were growing."

Rossitor's 1918 Passport photo
- Dan Szczesny Collection

Investigators found the engine fell a distance of about 12 feet and was destroyed, practically the only part intact being the boiler. What Guy Roberts saw as an exploding boiler was likely the rush of steam from within as the cylinder feed pipes were ripped from the pressurized container. However, eyewitness reports, like Roberts', of the boiler exploding made headlines the next day.

The person killed (Daniel Rossiter) was a photographer-writer, who was temporarily employed by the Boston & Maine Railroad, and the persons injured were the engineman, fireman and a photographer, all of whom were riding on the engine. The *Berlin Reporter* wrote Engineer Frost "sustained a five inch gash on his head, a broken shoulder, sprained ankles and a sprained wrist. He also suffered cuts and bruises. He was unable to move his head and and complained of severe pains, but physicians were hopeful that, barring unforeseen developments, he would recover. (Fireman Newsham, 29) has two broken ribs, a sprained ankle, broken wrist and cuts and bruises."

Rev. Roberts' eyewitness account continued in the *Courier*. "Immediately after the terrific explosion I hurried down over the somewhat shattered Ladder, putting out several small fires enroute, and noticed the bruised and broken body of what proved to be that of my friend, Daniel Rossiter, lying on the jagged rocks below and in such a broken position as to not in the least resemble a man as seen from above. Hurrying to him I felt his pulse and otherwise examined him, finding

him dead, his face cut and bleeding, arm broken, legs also, and probably his back, while at the left ear his skull was fractured and indented"

A golf caddy from Bretton Woods who had been at the foot of the Ladder when the crash occurred. The caddy, Paul R. Brennan and Roberts "lifted Dan and placed his head and shoulders in a less terrible position and thus was he found by those who removed his body." Rossiter's "broken glasses were rescued, and his monogram white gold watch, dented and broken, was found and later returned to his widow by Mr. Roberts who also wrote her the full details of his death. He also found three of his camera plates although the camera smashed to pieces, and had the plates developed and prints made from them." The day Rossiter died his wife was with her parents in Ludlow, Vermont recuperating from an illness and celebrating their baby daughter's arrival exactly three-months earlier.

(Daniel) Rossiter is believed to have been trying to save his camera gear – clinging to the side hidden by the tender from Frost and Newsham. Eighty-eight years after the wreck, Manchester author and journalist Dan Szczesny posed his theory as to why Rossiter did not jump. "It's hard to say why Daniel hesitated," wrote Szczesny in the *Concord Monitor.* "As the photographer for the railroad itself, 33-year-old Daniel had a promising career ahead of him. Just one amazing shot of the *Peppersass's* final plunge could set him and his family up for life. I think I know what was in Daniel's mind. Years earlier, Daniel had been conscripted by a local paper in Vermont to cover a motorcycle race at a county fair. One of the racers jumped the track and crashed into the spectators. Daniel dropped his camera and rushed to the aid of the injured, then ran to get a bucket of water for rescuers who arrived in an ambulance. Only then, did he stop to take pictures of the wreckage. He was fired for that brief moment of humanity, his managing editor furious that Daniel failed to bring back a picture of the wounded. After a time, Daniel had begged for his job back, telling his boss that next time he comes across a man on fire, he'd take a picture of him first, and throw water on him second. He was rehired. He was a journalist's journalist, Daniel was. He did retrieve his camera, which was later discovered focused and ready for a shot. But Daniel never had a chance to secure his legacy, for somewhere around the high point of that ladder as *Old Peppersas*s jumped the track for the final time and plunged into Burt's Ravine, so to did Daniel." *- Concord Monitor - Sat, May 6, 2017*

Rossiter *(right in window at ceremony)* held on for about 1500 feet then dropped to his death at the foot of bent 669. "(Rev.) Guy Roberts saw him drop and was the first to reach him." Roberts was the man who tracked down the whereabouts of *"Old Peppersass"* and convinced the powers that be to return the historic engine to the mountain. He was one of only "three to have witnessed, close at hand... the tragic ending of what had promised to be so fine an affair." Golf caddy

Brennan and postcard photographer E. D. Putnam of Antrim were the other two eyewitnesses. Putnam's friend John Brassil was on scene but reportedly "was too busy getting down one of the large posts of the Ladder trestle... to have seen much if anything that really happened here so tragically." Roberts wrote that he found comfort in the fact that although he pushed to bring *Peppersass* back to the mountain "the attempted round trip of the old engine was not of his planning, which relieves all sense of personal responsibility for this sad demise of the ancient relic."

Boston Globe photographer Edmunds Bond was one of the first reporters at the crash site. He'd hopped on board the last train up when it started down from the Summit just ten minutes after arriving. New Hampshire Governor Tobey was on board. "The train had gone down, perhaps three-quarters of a mile, when somebody hollered that a man was down beside the track," wrote Bond. "They picked up a young fellow holding onto his jaw (Pope). I jumped off, asked somebody what was the matter, and one of the officials, who had him by the arm, said he had fallen down. I wasn't surprised at it - among those crags and broken rock - so I didn't think anything of it then. I went into the observation car (behind the tender), had it all by myself, put my camera down and started looking. By leaning out I could see down over the side and I noticed pieces of ties gouged out along the track as if something had dragged over it, and the grooves grew deeper. Over to the right I saw a man in a red shirt wandering around kind of dazed. I recognized the fireman (Newsham) on the *Peppersass*. Below him, 100 feet or so, was the engineer (Frost), face up, as if he were dead. 'There's a dead man beside the tracks,' I called to the engineer of our train. He (Charles LeMora of Concord, Mass.) brought it to a stop. Just then a boy ran up. He proved afterward to be the engineer's son. Men lifted the engineer on board and the train was started (down). The next thing I saw was somebody waving his hands frantically, as to warn us off the tracks below. He looked like a mountain climber (Rev. Roberts). The ties were all splintered and split, I noticed, they didn't appear to be any too safe, and over on the left-hand side of the track seemed to be all broken. We'd started to make the curve (above Jacob's) and the brakes were on, but they didn't mesh in the cogs. There was a rip and a burr and the crew (LeMora, fireman Alfred Trudel & brakeman Adelard Bushey) was frantically trying to stop the train. I slid out over the side and was already to jump off before the train got momentum, when I felt it stopping, so I held on and then climbed down. Right beneath me in a deep-rutted hole was a body. I slid down the trestle, probably a drop of 10 feet, and bent down and felt of the heart, picked up one of the hands. It was limp. A man up the tracks with a straw hat about 40 feet away told me it was Rossiter. The smashed camera was underneath him, where he'd clung for dear life, probably hoping to save his pictures." Bond's training kicked in. "I ran back up the mountainside because the passengers were getting off. I made a picture or two of them, carefully making their way out of the train onto the rocks below and then I went down under the trestle, crawling over big bowlders and having to go on my hands and knees through crevices and up over rocks until I could climb onto the track and look for *Peppersass.*" *- Boston Globe - Mon, Jul 22, 1929 pg. 7*

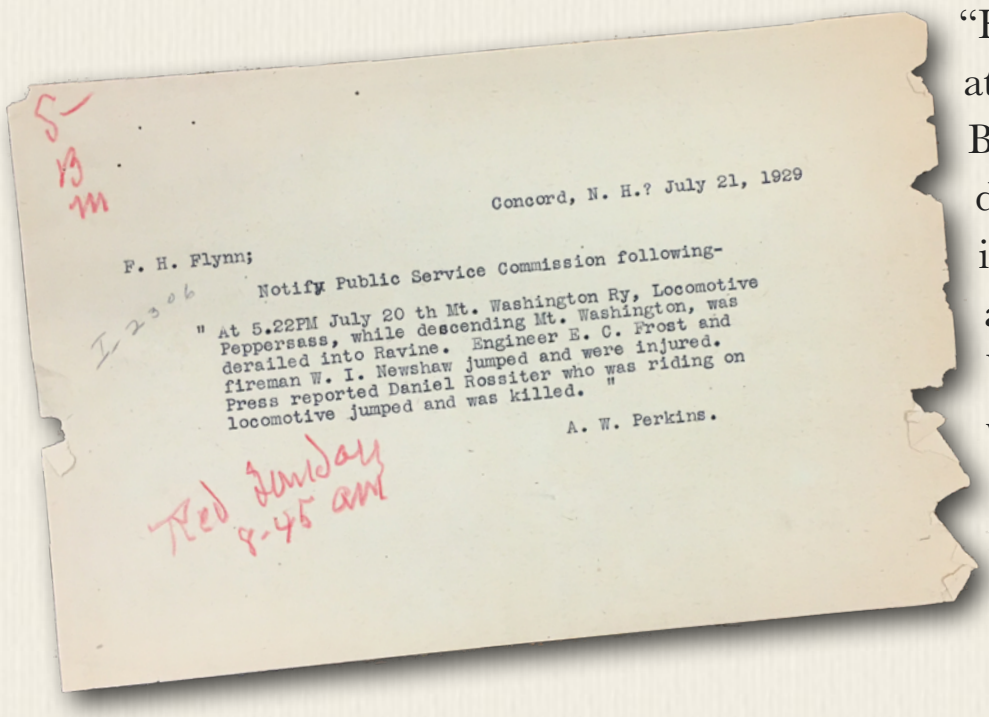
Federal investigators reported at Bent 640 "she leaped from tracks and crashed opposite bent 625 on the edge of Burt Ravine. The boiler landed in a large growth of trees more than 100 feet

away, and the bottom of the ash pan slid along the tracks until it bounded off near bent number 560, a distance of 960 feet from where the engine had left the rails." The crash tore out the telephone lines along the track. The water pipe was damaged so not enough water could be pumped to get the stranded trains back to the summit. Passengers climbed down from the cars and walked – 230 passengers returned to the top. 60 or 70 climbed all the way down. It was 4:30am before the last group came down.

- Hancock research / ICC Report / Littleton Courier - Thu, Jul 25, 1929 pg. 1

Where the Hero left the track just below Jacob's Ladder. Halfway House in the distance. (1929)
NH Public Service Commission Peppersass Accident photo

Globe photographer Bond saw the track damage from below. "On the curve in the middle of the Ladder I saw where the ties were demolished and from there I sighted the remains of the old engine. I saw where she struck, but I could find no part of her larger than a splintered fragment. For 150 feet there were just bits of iron and wood still smoking and smouldering. My film was exhausted on what was left of *Old Peppersass*. I followed John Barry, the reporter, down over the rocks. Later, fearing that I'd break my camera by falling, I walked on the railroad ties, until I could find a scrabble of path the hikers have worn out in places. I stopped at a brook to drink a quart and half of water, I think - 'My wasn't I hot and thirsty.' John was the first down, the engineer (LeMora) second and I was third." *- Boston Globe - Mon, Jul 22, 1929 pg. 7*



Concord, N. H.? July 21, 1929

F. H. Flynn;

Notify Public Service Commission following-

" At 5.22PM July 20 th Mt. Washington Ry, Locomotive Peppersass, while descending Mt. Washington, was derailed into Ravine. Engineer E. C. Frost and fireman W. I. Newshaw jumped and were injured. Press reported Daniel Rossiter who was riding on locomotive jumped and was killed. "

A. W. Perkins.

"Herbert H. Downing, who happened to be at the base station, was delegated to go to Bretton Woods and make arrangements for doctors and ambulances. This he did and in less than an hour the Littleton hospital ambulance and Dr. A. T. Downing and Dr. White of the Mount Washington hotel were on hand. There was one engine at the base which had not been used for some time. Fires were built in it and it was made ready for a run up the moun-

tain. On a flat car went ties and necessary articles to repair the damage to the track. But there was no engineer present." *- Littleton Courier*

Finding that engineer took awhile, according to Nicholas Howe's *Not Without Peril*, as one of the six engineers, who had taken the nearly 250, now stranded passengers to the Summit, had to walk down to the base to run the rescue train up.

"The 60 or 70 people who walked down from the first train just above Jacob's Ladder as well as the few remaining at the base went to Bretton Woods on a train. They came onto the base station platform in small groups, many of them on the verge of collapse. There were few lights and it was no small task to work down the mountain over the stones. But with a few minor accidents, all arrived in safety, even if they were exhausted and lame for days."

"The relief train started up the mountain just before dusk and it was near 10 o'clock when it returned with the injured engineer (Frost) and fireman (Newsham). They were tenderly transferred to the ambulance and rushed to the Littleton Hospital. A motor cop cleared the way for a quick trip. Winston H. Pote, who had a fractured jaw, was rushed down the mountain (from the Summit) and taken to a hospital at Berlin Around 11 o'clock the relief train again ascended the mountain, this time to bring down the body of Daniel Rossiter. The train was met by Bingham and Meacham, undertakers of Littleton, who prepared the body for shipment to Ludlow, Vt. Meanwhile those on the mountain top were having unusual experiences. It was several minutes before those on the trains nearest the top knew that there had been an accident. Finally it was learned that the thing to do was to get back to the Summit House. This was done, but it was close to midnight before the last train-load arrived on the top. (Mike Boyce and Charles Barlton were the engineers that ran the shuttle service between Great Gulf and the Summit House.) One train ran out of water and it was necessary to abandon it and the occupants, including many women, had to get out and walk in the dark to another car further up the mountain. There were many thrilling experiences. It was like a shipwreck at sea. Families were separated, not to be joined again until early Sunday morning. After lunch at the Summit House the 236 guests were taken down the carriage road in automobiles to Glen and then by bus to Crawfords and Bretton Woods. Governor Tobey personally supervised this work and was the last to leave the mountain top, after being sure that all had been properly taken care of. At the Crawford House every-

The Hero's boiler where it came to rest in the scrub of Burt's Ravine (1929)
NH Public Service Commission Peppersass Accident photo

thing possible was done for the comfort of the guests as they would arrive during the night on the buses. Colonel Barron and Senator George H. Moses personally served sandwiches and coffee to all desiring refreshments. They did not quit the job until the last bus, in which was governor Tobey, arrived at 4:45 o'clock Sunday morning."

B&M officials told federal regulators "an inspection of the boiler after the accident *(leftt)* showed the flues intact, top of boiler and all seams except the mud ring were tight, the dent on the mud ring being inward. This inspection convinced (Richardson) that the boiler was not involved in the accident." The ICC report concludes "The damaged condition of the driving assembly indicates that the gears probably were jammed by the broken tooth of the pinion gear becoming lodged between this gear and the large driving gear with which it was supposed to mesh, resulting in the locking of the mechanism. This condition apparently accounted for the raising of the front of the engine sufficiently to disengage the forward cog from the rail, and when this end of the engine came down the cog wheel failed to mesh with the cog rail."

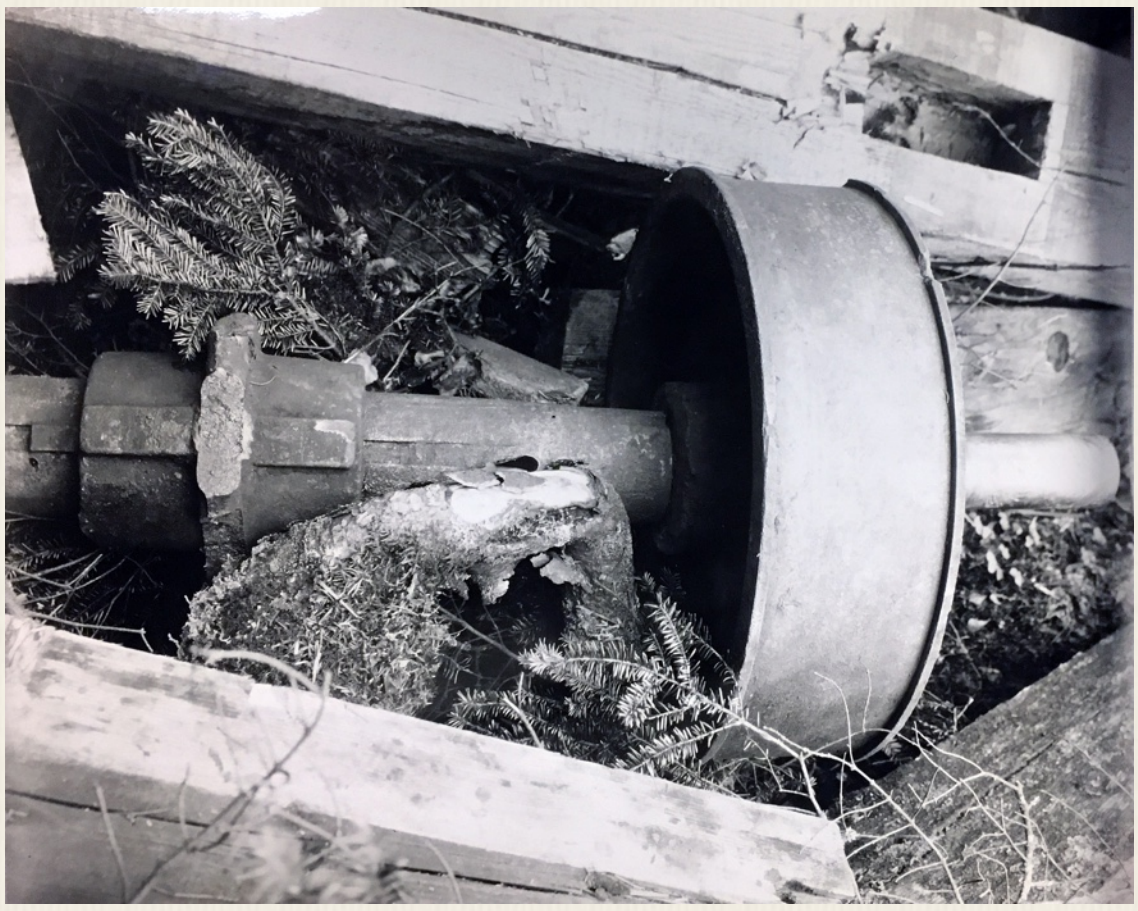
The broken frame, pinions, shaft and tender in the scrub of Burt's Ravine (1929)
NH Public Service Commission Peppersass Accident photo

Reverend Roberts says he made "a later hasty visit" to the spot where the engine landed. "I noticed but little of the precious old relic, so completely had she annihilated herself. The large trunnion supports *(right)* were quite intact, however, with

The Hero's frame & cog gear in the scrub of Burt's Ravine (1929)
NH Public Service Commission Peppersass Accident photo

the cog wheel and axle entirely detached but bent and wrecked. A large piece of the tender was also noticed, but the rest was mostly buried beneath the varied vegetation there abounding." -
Littleton Courier

Winston Pote wrote "They say the following day the mountain was like an ant hill, with souvenir hunters carrying away anything that was light. Fortunately, most of the engine pieces were heavy. The steam gauge went across the Presidential Range, while the whistle found its way into Pinkham Notch. The only thing that remained on the old engine was my Graflex - and pieces of that eventually turned up at the University of New Hampshire. I never did find the lens. Many photographers went up Mt. Washington July 20, 1929, looking for special pictures. All of us missed the big one. However, I had the fastest ride on the slowest locomotive ever built, and lived to remember the last climb of *Old Peppersass.*"



Peppersass' shaft and brake drum in the scrub of Burt's Ravine (1929)
NH Public Service Commission Peppersass Accident photo

July, 1929

To **Boston & Maine shops**, Concord, N.H.: **126 miles est.**

The scattered remains of the engine were gathered up and taken to the repair shops in Concord and pieced back together that winter of 1929-1930. Mike Boyce later tells Jitney the railroad

had to station people at the crash site to protect the famous wreck from souvenir hunters seeking a piece of history.

August 1, 1929

"It is understood that the Boston & Maine railroad plans to restore *Old Peppersass*. The pieces, as found on the rocky sides of Mount Washington, have been picked up and will later be put together as far as possible. a representative of Henry Ford was in New Hampshire Tuesday *(7/30)*, endeavoring to purchase the old relic. He was not successful." *- Littleton Courier - Thu, Aug 1, 1929*

Centennial Parade: *This was the Peppersass Centennial parade. The picture was taken at the corner of Main & Pleasant Streets (Jun 21, 1938)*
- Courtesy/Harold Kimball - NH DOT Archives

Sec. 24 - *Hero's* Odyssey

May - June 1930

To **Bretton Woods Station**:
120 miles est.

Early in the summer of 1930, the re-assembled *Peppersass* was finally put on exhibit at the Bretton Woods station in front of the Mount Pleasant Hotel *(right)* where she remained for awhile. This was where the engine was to be taken following her "celebration" the summer before.

August 17, 1933
"*Peppersass*" House ?

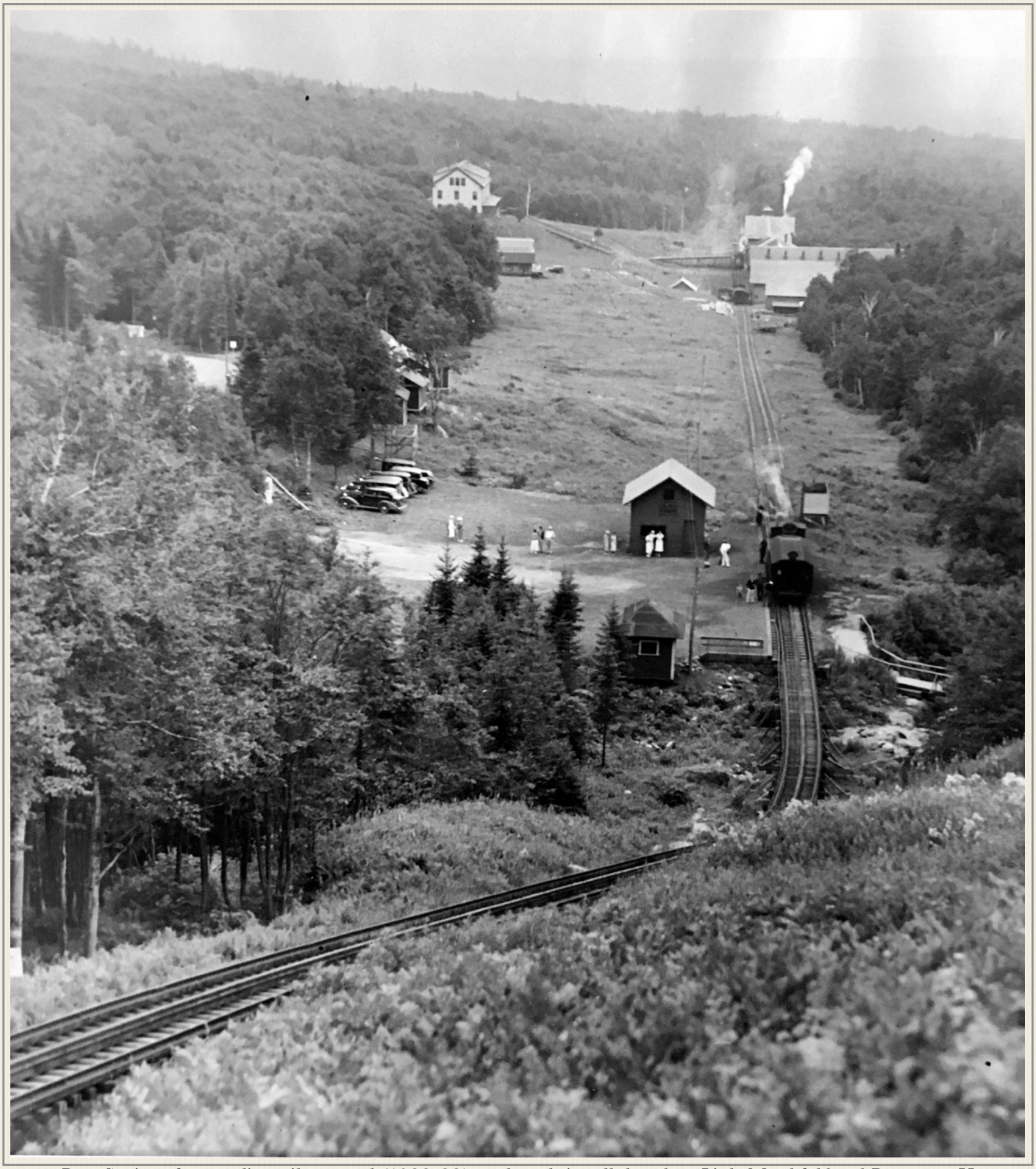
To **Base Station**:
6 miles est.

Photographic and document research for this manual indicates that sometime after *Peppersass* arrives at B&M's Bretton Woods Station, during the early part of the Col. Henry Teague ownership of the Mount Washington Railway, the engine is brought to the Base. In the summer of 1933, the *Portsmouth Herald* reports on its editorial page that "On Thursday *(8/17/1933)*, that famous engine, the gallant first conqueror of Mt. Washington was brought up from the Base Station roundhouse and placed beside the tracks at the Marshfield station. The form on which it stands is pitched at a 35 degree angle to give a realistic picture of the engine climbing the steep slopes of the mountain. Battle-scarred but proud... *Old Peppersass* can now rest in peace and watch from its perch the ascent to the top of the mountain of the other engines that have taken its place. It is painted red and green and looks almost exactly as it did on its initial journey in 1866. *"Old Peppersass"* is unique among engines. It deserves an honored resting place."

It is unclear whether the locomotive went into its own house that summer. But at some point a building to exhibit the No. 1 is erected at Marshfield Station, where tourists arriving by automobile are congregating. The building appears on the railroad's tax valuation map in 1934. It is glimpsed in a Floyd Williams photograph after construction of the log structure across the tracks that was the restrooms building during the Jitney era. A tourist leaning out of passenger car No. 5 captures the structure *(below)* and the rest of the Marshfield station as Mike Boyce and the *Great Gulf* climb the first trestle over the Ammonoosuc.

- Robert J. Girouard Colllection

The Granger Family photo album includes a series of photos of "Old" and "Young" Plineys with a work crew, and *Peppersass* with its house *(previous page)* and on a truck *(below)*.



Base Station after spur line rails removed (1932-33), coal trestle installed at shop. Little Marshfield and Peppersass House at loading area. No restrooms across the tracks. Reflects 1934 Tax Valuation Map. except for new bridge leading to Jewell Trail (proposed Aug 1934)
- Courtesy N.H. Historical Society

But the house has been moved by the time construction of the new Marshfield Station is underway and seen in photos in 1938-1939 *(see Ch. 9 Sec. 3)*.

June 21st, 1938

To **Concord, N.H.**
and **Back** to **Base:**
245 miles est.

MWR Engine No. 1 attends the parade for New Hampshire's Constitutional Sesquicentiennial Parade – Rising some 20 feet tall, *"Peppersass"* only appeared on the capital's Main Street *(right)* "where there were no wires." The morning before the parade she was housed in the nearby State Highway Department garage.

1939

To **New York City:** **355 miles est.**

No. 1 was carried by a railroad flat car loaded at Fabyan and shipped for a two year stay at the New York Worlds' Fair. The fair opened on April 30, 1939 and 206,000 people attended. The site in Flushing Meadows covered over 1200 acres - only the 1904 Louisiana Purchase Exposition was larger. The New York expo was the first to be based on the future and the world of tomorrow. *Peppersass* was part of the Railroad Conference exhibits. The headlining act was a live drama re-enacting the birth and growth of rail called "Railroads on Parade." Videos of the pageant are available on the internet. MWR No. 1 *Hero* was part of the historical objects on display *(right)* at the World's Fair, and it was not the only Mt. Washington-based locomotive in attendance.

No. 1 & No. 494
Together Again - For the Very First Time

B&M Employees Mag: "Old 494" Goes to the Fair | Our Shop Forces, in Cooperation with Railroad Enthusiasts, Have Veteran Engine as Exhibit.

Saved from the junk-pile and now resplendent as when it was built nearly 50 years ago, one of the early types of American locomotives - Boston and Maine No. 494 - is now one of the feature exhibits at the Railroad Building at the New York Worlds Fair.

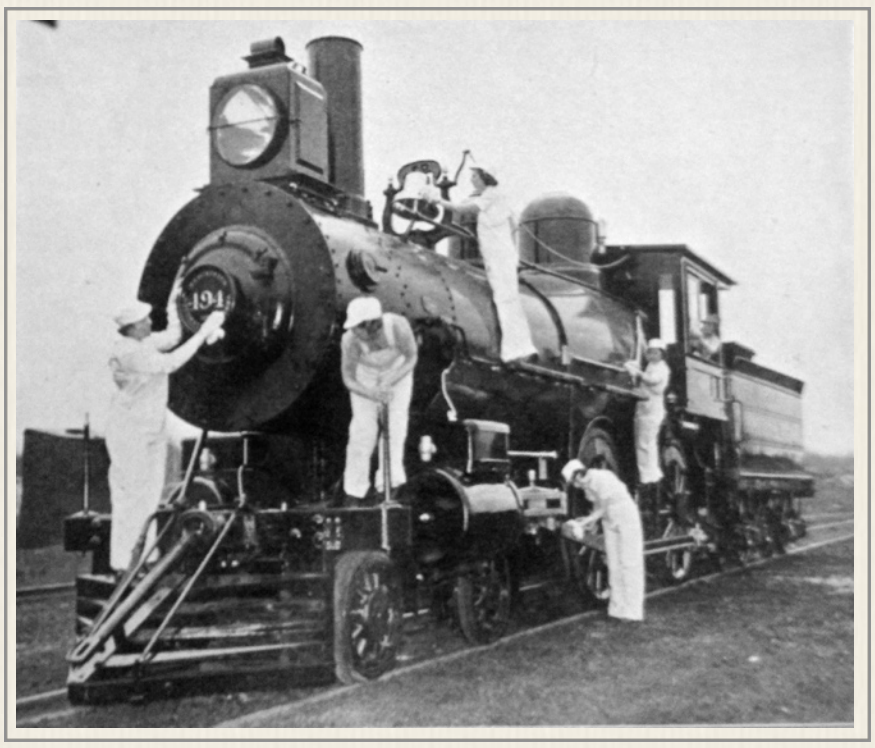
Thanks to officials, foremen, shopmen, and almost everybody else at our shops at Billerica and at Concord, who gave unselfishly of their own time and labor to assist in a project originated by our friends, the Railroad Enthusiasts, Inc., our railroad has a mighty fine exhibit at the big exposition in New York. It will be viewed by millions in the next two years.

Some months ago, officers of the New England Division of the Railroad Enthusiasts, Inc. approached President French and asked if they might have "Old 494," rusting away at Portsmouth, New Hampshire and awaiting retirement to the scrap-pile. The Enthusiasts suggested that they would like to restore the old engine to its original state and exhibit it at the Fair.

Once a "mighty piece of railroad power, hauling fast passenger trains after it was built at the Manchester Locomotive Works in Manchester, New Hampshire in (July) 1892, the "494" had rather ignominiously finished her railroad career as "No. 905" at the prosaic task of hauling cars of coal from Fabyan, New Hampshire to the Base Station of the Mount Washington Cog Railway.

Our shopmen found that "Old 494" was far from being "what she used to be." In the period since the engine was built, improvements in locomotives had resulted in substitution of a steel cab for a wooden cab; removal of the pilot and wheel guards; an electric headlight had replaced the original oil lamp, and most of the fancy brass work which featured locomotive building in the early '90s had been replaced by more modern steel and malleable iron.

But once they took over the job of restoring the engine, that didn't stump our shopmen one whit. Our shop folks actually put in more than 2,000 man-hours of their personal time evenings and on week-ends, so that when they had finished the job old-timers who actually worked on "Old 494" said that "she's almost entirely just as she used to be, and it would take a 'railroad mechanical detective' to find anything wrong." Among the B&M volunteers was machinist Earl C. Cone.



Following the '39 World's Fair, No. 494 was

stored at the Fitchburg and Lowell yards for several years. There was talk of scrapping this engine. Finally, a Boston-based group, later incorporated as "The Railroad Enthusiasts, Inc.," acquired No. 494 from the Boston & Maine Railroad, saving the engine from the scrap yard. The Railroad Enthusiasts sought a permanent home for this historic steam locomotive. Finding interest to the north, ownership of the locomotive was transferred to the Town of Hartford, Vermont in 1957. The engine remains on display today at this historic hub of railroad activity. During its heyday, as many as 50 trains a day arrived and disembarked from White River Junction, in Hartford, Vermont

- Boston & Maine Locomotive No. 494 Restoration Project - Society for Industrial Archeology - New England Chapters newsletter Vol. 18 - No. 1 1998 - Wilfred E. Smith

On May 23, 1997, the 494 Restoration Committee officially became the White River Junction Chapter of the National Railway Historical Society. The goal of this group is to document the history of the B&M 494 steam locomotive and restore this engine as closely as possible to its original condition. This historic engine had served the Eastern and B&M lines, hauling passenger cars and light freight. In 1911 No. 494 was renumbered as the 905. Toward the end, the 494/905 was used to haul coal from Fabyan Station, at steep grade, to Marshfield Station at the 2700 foot level of Mount Washington, New Hampshire. This coal was used by the Mount Washington Cog Railway for its climb to the 6,288 foot summit. Engine No. 494/905 was finally retired in 1938. The 1939 restoration was done at the Boston & Maine shops in Billerica, Massachusetts. No attempt was made at that time to restore the engine to full steam.

Sec. 24 - *Hero's* Odyssey

B&M 494 - It's a long way to White River: Boston & Maine Railroad's Engine 494 is not just any old steam locomotive; it has a unique history of its own. Built in Manchester, New Hampshire in 1892, Engine 494 hauled passengers on the company's Eastern Line, then was used on the uphill run from Fabyan Station to Marshfield Station, 2700 feet up the side of New Hampshire's Mount Washington. It hauled coal to fuel the Cog Railway, which ran from Marshfield to the summit. Over it lifetime, many improvements were made in train construction and with each, Engine 494 was modernized to keep up with the times. It was retired in 1938. But not quite. In 1939 Engine 494 was chosen to represent Boston & Maine at the New York World's Fair, and it was unmodernized, its steel cab replaced with wood, its electric headlamp replaced with an oil light. After the fair it was stored and almost scrapped, but a group called the Railroad Enthusiasts was unwilling to see this unique example of a restored nineteenth century locomotive die, and a new home was found for it in White River Junction.

However, the 494 built in 1892 was not the first heavy engine to make the tourist run from Fabyan to the Base when the spur line opened in 1876.

"Mt. Washington"

B&M Employees Magazine: Log train of 32 years ago *(above)* on the Mt. Washington branch at Ammonoosuc falls *(1894)*. "The old *Mt. Washington* was truly one of the characters of her day in the north country," writes R.H. Large, our correspondent at Woodsville, New Hampshire. "It used to be the practice to clear the main line when she moved between Woodsville and Lakeport, and it was not thought expedient to use her on a regular assignment off the Branch account of the hazard of broken rails due to her excessive weight.

"During the summer months the old *Mt. Washington* was used to run the observation train between Fabyans and the Base Station with passengers taking the trip via the cog railway up Mt.

Washington. After this road closed in the fall she was sent to Lakeport for overhauling and stored until logging operations began, when she returned to the Branch to haul hard wood logs (as shown in picture) from the Ammonoosuc Falls to Twin Mountain, where they were split and sawed into short lengths. In the spring this wood was shipped back to the Base Station to be used as fuel in the small locomotives on the Mt. Washington Railway." The picture *(previous page)* includes (L-R) Engineman David Perkins; Fireman Frank Reynolds (both deceased); Conductor Frank N. Keyser, now passenger conductor on the White Mountains - Passumpsic division; Brakeman Fred A. Carr, now general yardmaster at Woodsville, and Brakeman John Mayo."

Vermont forest service member Bill Gove says the *Mt. Washington* was hired out to New Hampshire timber baron James Everill Henry and his Zealand Valley Railroad. Gove writes in the *Northern Logger and Timber Processor Magazine* in November 1975 that "Henry leased it for about three winter seasons as a yard switcher *(1886-1889)*, and according to reports, treated the engine so roughly that the Boston, Concord & Montreal railroad wouldn't lease it to him anymore."

Like the *Peppersass*, a mechanical failure on the *Mount Washington* during her logging chores in 1890 led to the death of a railroad employee. According to a New Hampshire Board of Railroad Commissioners investigation, the *Mt Washington* - "an eight-wheeled machine weighing 75,000 pounds..." was put into service on the Kilkenny Railroad - a ten mile line "built and used exclusively for the purpose of hauling timber from the forests of Kilkenny to Lancaster... It was cheaply constructed and the grades upon it are heavy, but it is in fair condition for the business for which it is designed. Leonard H. Crouch, one of the most capable and trusted engineers upon the Concord & Montreal systems was selected to run the locomotive, - a position which it was understood required a man of excellent judgment and nerve." The report says engineer Crouch was accustomed to using the *Mt. Washington* "to haul daily from the mountain logging trains consisting of from twelve to fourteen lengths of timber, each resting upon two sets of trucks, to which were attached brakes that were set by hand, with wrenches before the load started, and were relied upon to hold the train as it passed down the grades. In the latter part of January, the *Mt. Washington* blew out a cylinder head, and the *Triton*, a four-wheeled shifter built... about a year before was sent from the Concord yard to take her place."

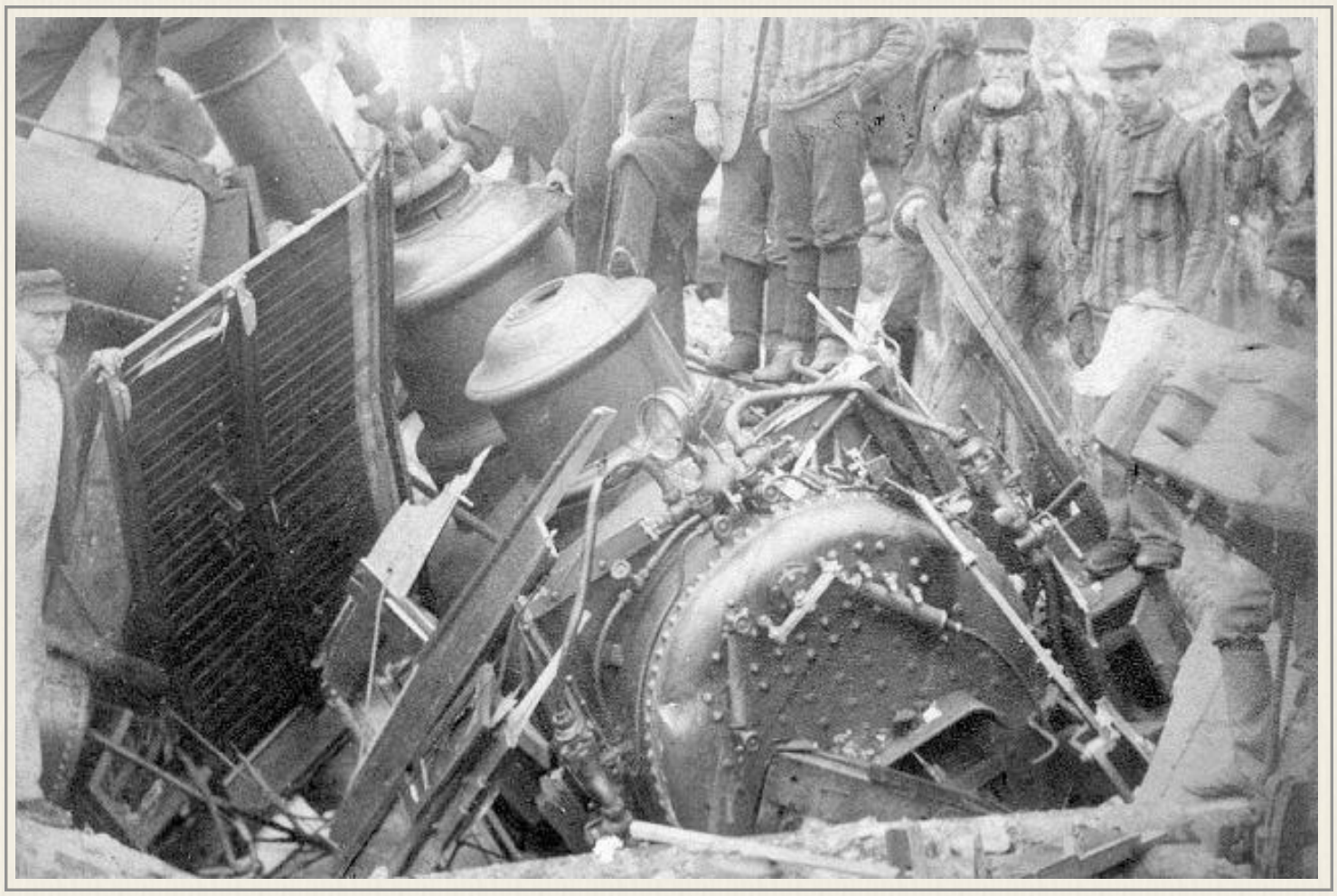
The investigation revolved around whether the *Triton* was a suitable substitute for the *Mt. Washington*. "The *Washington* had eight wheels, six drivers, and two leading trucks, while the *Triton (nearly 14 tons lighter)* had but four drivers and no leading trucks." According to the report most trainmen believed that a locomotive like *Mt Washington* with leading trucks "is more likely to keep the track when passing over curves at a high rate of speed." They said "the *Washington* would not have been derailed under the same circumstances as the *Triton* was." There was conflicting evidence as to what engineer Crouch thought. Railroad superintendent H.B. Mann testified that "after running (the *Triton*) from Woodsville to Lancaster, Crouch said she was a smart engine, and he guessed she would work all right and do good business; but the fireman, Mr. (William P.) Balch, says Crouch criticized the engine at the landing because she had no leading trucks and her tender

was too light; said he did not consider her safe, and told him (Balch) if anything happened going down the hill to jump through the window."

That something happened on January 31, 1890, when the *Triton* started downhill from Button's Landing trailing "its tender, twelve lengths of logs containing about 60,000 feet on flatcars and trucks, and a saloon car" with Superintendent Mann, Conductor C.W. McIntyre and brakemen C.M. Nourse and George P. Gonyer inside. In a sag just before Orchard hill, the pin coupling the fourth and fifth lengths of logs broke - the train separated and the *Triton* with Crouch and Balch in the cab, the tender and four lengths of logs pitched over the hill and picked up speed. At a curve a quarter mile down the track, the *Triton*, traveling at nearly 30 miles per hour "left the iron, and was instantly wrecked, the tender and logs attached to it being piled upon it." The brakes on the rear section of the train held and it traveled at a very slow rate down the hill - running no more than four miles per hour when it was stopped by the wreck. No one in the saloon car was hurt. Crouch's body was pulled from the wreck. Balch was badly hurt, but recovered.

H.M. Putney writing for the Board said "whether it was an error of judgment to send the *Triton* to Kilkenny... the Board can arrive at no decision which warrants a definite finding upon that point... That the Kilkenny men were competent and faithful we have no doubt. That they had on the 31st of January, the machinery that was safest and best, is, and it seems to us must always remain, open to doubt and to controversy."

The preceding narrative was developed from the New Hampshire Railroad Commission's Annual Reports. However, the photo *(above)* is from Littleton author Mike Dickerman's account of the *Triton* wreck in his books, *Logging Railroads of New Hampshire's North Country* (2010) and *Stories from the White Mountains: Celebrating the Region's Historic Past* (2013).



The *Hero's* Odyssey Resumes

1941

To **Boston & Maine Shops,** Concord, N.H.: **268 miles est.**

At the conclusion of the New York World's Fair, the *Hero* was stored for several years in Concord, New Hampshire.

1948

To **Base Station:** **126 miles est.**

When Mount Washington railroad operations resumed after World War II, the "increasing crowds inquired for her, and it did seem strange that the railway's famous pioneer locomotive should be absent. So in 1947 plans were made to bring her back home once more. On August 4, 1948 amidst a flurry of excitement at the Base Station, *Old Peppersass* again returned, this time after an absence of 10 years. She was trucked up from Concord by a powerful Diesel tractor and placed on a section of inclined track where she could look toward the Summit she had reached so many times." *- Hancock research*

1951

To **Museum of Science**, Boston**:** **168 miles est.**

"In March of 1951 *Old Peppersass* was loaned to the Boston Museum of Science, but was brought back in 19?? to her honored place beside the tracks of her Mountain home. And here she remains, the pioneer veteran of a century of adventure. It is the hope of all who love her, that she may never have to go away again, but may always be in her place every summer to welcome visitors to a ride on the railway she helped to build and was first to climb." *- Hancock research*

The Frances Hancock's *Peppersass* manuscript never went to print. Col. Arthur Teague wrote to her on April 14, 1963, "Frances I did not forget about the little booklet last Fall - but Alan Burt who wrote the Mt. Washington book had spoken to me about printing a little pamphlet and since he has loads of material and photos - I told him to go ahead and see what he could do..."

1953

To **Eastern States Exposition:** **436 miles roundtrip est.**

"The world's first mountain-climbing locomotive, "*Old Peppersass*," will hold the featured spot in the New Hampshire exhibit at the Eastern States Exposition, September 20-27. A spokesman for the State Planning and Development Commission, the agency arranging the Granite State's program at Springfield, Mass., said the eight-ton locomotive will be moved on two trucks. Col. Arthur Teague, president of the Mt. Washington Cog Railway Co., accepted the P&D's invitation to put the original locomotive used in building the famed line nearly 90 years ago, on display. At the

present time the engine is on a pedestal at Marshfield Station of the Cog Railway."

- Portsmouth Herald - Fri, Sep 4, 1953 pg. 7

195?

To **Base Station:** **168 miles est.**

Jitney remembers seeing the engine on the back of big flatbed truck at Marshfield, and wondering how it would be unloaded. He watched as "Young" Pliney Granger and crew jacked and rolled the *Peppersass* onto a timber crib made of ties and then use the jack to support the machine while removing the ties one-by-one, back-and-forth, and neatly lower the load to the ground. Jitney would employ the same method to boost a heavy stationary steam boiler into place in his steam shed known as "Jitney Junction."

Jitney also remembers Mike Boyce telling him that there was a loose cylinder cock on the *Peppersass* display and that Jit should add it to his collection of memorabilia. Jitney did not follow his mentor's advice, but later that part and others slowly disappeared. Jitney the collector had his eye on one of the *Peppersass* tender name plates that was "hanging around" at the shop waiting for the right time to ask for it when it was about to be tossed. He missed his chance as one day he discovered the metal sign had been cut up by the shop crew for shims to use on the locomotives.

Science teacher Norm Lewis' class field trip to Cog Railway (1960)
- Lewis Family Collection

Other than minor adjustments to the location of its pedestal in front of Marshfield, *Peppersass* would not travel during the remainder of the Jitney Years, sticking close to home and providing a place for youngsters to scramble and play engineer turning the valves - fireman opening and closing the firebox door - and brakeman winding the wheel on the right side of the machine. It provided the backdrop for hundreds, if not thousands of photographs and very nearly ran under its own power once more. In 1966, the centennial of Sylvester Marsh first hauling his *Hero* to the Base, Col. Arthur Teague told news outlets *Peppersass* would be rehabilitated so with 20 pounds pressure in its boiler it could steam from the Shop to Marshfield in 1969 to commemorate the Cog's Centennial. The events of 1967 would put a kibosh to that plan.

8-year old Miss Jitney takes the controls (1963)
- Lewis Family Collection

Peppersass maintained its vigil at the Base Station through another ownership change, the construction of a new Marshfield Station, the fiery destruction of the old Marshfield, was joined by other steam-powered veterans in a display park and persevered as best it could. A new era of travel and promotion by the first engine of the world's first mountain climbing railroad resumed in the summer of 2015.

An Alternate 1929 Crash Explanation Surfaces
1971

"Next Generation" Cogger Roger Clemons says an elderly visitor to the Base Station challenged the official "broken gear tooth" cause for the *Peppersass* crash over four decades after the fact. "I talked with an old man in 1971, who said he was at the dedication," Clemons recalls in December 2017. "(He) said he and a friend hiked up the tracks behind *Peppersass* and started back down when *Peppersass* went past him and his friend somewhere round Skyline Siding. He said he didn't see anything unusual, but heard a loud crash and went down to see what had happened." Clemons says the old man "walked me out of Marshfield early one morning after breakfast and we took a look at the old engine. He noted no broken gear or axle. He then told me that when they put the original, extended tender on *Peppersass*, it had a bad habit of lifting up, pulling a "wheelie" if you will, when fully fueled and watered. He said that the cog rack had been closed in the early days and that when the problem with *Peppersass* was first noted the shop added a couple of "fingers" to the front of the engine (his words) to go under the rack to hold the front down. These weren't in place during the last run. He said that Jack Frost re-fueled and took water at the Gulf Tanks and they started back down. They didn't experience any problems until they got past Skyline platform and onto the steeper grade of Long Trestle. I think he told it to some of the others working at the Cog at the same time (1971) and *(General Manager)* Paul Dunn told several of us, at breakfast one morning, that an old man had told him the same story. Interesting bit of info, but I doubt if it could be proven."

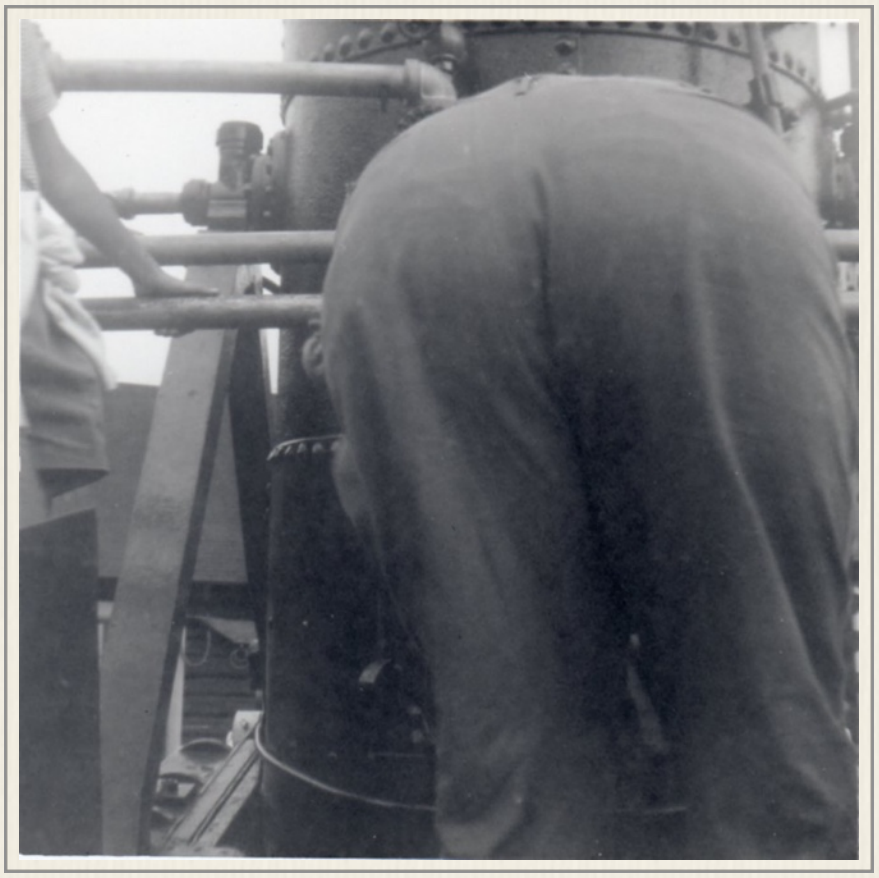
Some of the old man's details can be corroborated. Photographer Winston Pote's eyewitness account of his ride says the Gulf Tank stop did involve water. "I remember they filled it so full it ran over," but there's no mention of additional wood. However, Pote says "My equipment was scattered on the woodpile" just before the large jolt occurred that started the engine's fatal slide and there apparently was enough wood to provide Pote a launching platform - "As I jumped from the woodpile, I caught one toe on the *Peppersass* sign."

The story's detail of the Cog rack flange and the "fingers" are accurate, but use of the "fingers" was part of the original design and was discontinued as the Peppersass' length of service on the Mountain got longer. Master Mechanic and Railway Superintendent John Horne explained the situation in the July 13, 1910 edition of *Among the Clouds*: "As the Mt. Washington Railway was the first mountain climbing road, everything was in what may be termed an experimental stage, and the promoters realizing that safety must be the prime factor, had the idea that the cog-wheel might possibly lift out of the rail unless it was held in position, so they used a timber narrower than the rail. On the first engine there were brackets, one on each side of and lower than the rail,

and attached to each bracket was a small roll that reached under the projecting edge of the rail which would keep the wheel and rail in proper relative position and it was impossible to get out of mesh. Experience has shown it was not required."

As Clemons rightly observed in his email to the *Cog Clatter* publisher, "Finding the 'truth in any enterprise is difficult at best and in the clouds surrounding the Cog story, much is hard to be confirmed even if it is 'seen.'"

Peppersass goes to the Liquor Store: On July 8, 1978, a commemorative decanter *(right)* went on sale in New Hampshire's 71 liquor stores. Gov. Meldrim Thomson said he anticipated "this special decanter will become a prized collector's item, as well as a permanent memento of the Yankee enterprise of Sylvester Marsh, the Campton farm boy who pioneered the *Peppersass* and its railway." Also on hand were "Augustine Flanagan, 79 and William Menzies, 89, of Concord, and Albert Drescher, 68 of Contoocook, all of whom worked on rebuilding the *Pepperasass* following its disastrous plunge." In addition, two sons and a daughter of the late *Peppersass* engineer Edward "Jack" Frost received complimentary bottles. Newspaper reports say Jack Frost died within six years of being injured in the 1929 crash due to complications from those injuries.



Peppers'-ass: *Unique view of Jitney Jr. examining MWR No. 1's firebox. Moral of the story don't let your sister hold the camera.*
- photo by Miss Jitney - Lewis Family Collection

Photographer Lovey Harwood finds winter winds have deposited Peppersass' stack in the melting snows of spring 2011
- Lovey Harwood Collection

Sec. 24 - *Hero's* Odyssey

"On the Road Again"

Peppersass came down off her pedestal in the 21st Century to once again promote the World's First Mountain-Climbing railroad.

July 29, 2015

To **Craftsmen's Fair,** Mt. Sunapee, N.H.:

200 miles roundtrip

September 2015

To **Eastern States Exposition**, West Springfield, MA:

436 miles roundtrip

November 27, 2015

To **Littleton Holiday Parade**: **40 miles roundtrip**

May 3, 2016 - The New Hampshire Travel Council kicked off the *(2016)* summer season at an Omni Mount Washington Hotel gathering. The council's 40th annual Governor's Conference on Travel and Tourism, which ran Sunday to Tuesday, drew more than 200 attendees, including Gov. Maggie Hassan. The conference ended with a singing of "Happy Birthday" and cake for the 150-year old *Peppersass* cog railway engine, owned by the Mount Washington Cog Railway.

- Union Leader - May 4, 2016

May 7, 2016 - 166 miles / 332 round trip
Watch City Steampunk Festival, Carter Street - Waltham, MA

June 25 - 26, 2016 - 210 miles / 420 round trip
Everything Trains: *Peppersass* Comes to North Adams - Western Gateway Heritage State Park North Adams, MA

July 15 - 16, 2016
First Annual Handcrafted Event - The Mt. Washington Cog Railway Mt. Washington, N.H.

July 17, 2016 - 41 miles / 82 round trip
Ray Burton Annual Picnic - Bath, N.H.

Sec. 24 - *Hero's* Odyssey

August 5 - 14, 2016 - 106 miles / 312 round trip
83rd Annual League of N.H. Craftsmen's Fair, Mt. Sunapee Ski Resort - Newbury, N.H.

August 20, 2016
Steampunk Festival at Cog Railway - Mt. Washington Cog Railway Mt. Washington, N.H.

September - October 2016
438 miles / 876 roundtrip

Steamtown National Historic Site *(left)* - Scranton, PA

November - December 2016
118 miles / 236 roundtrip

Manchester Airport (tentative), Manchester, N.H.

November 25, 2016 - 40 miles roundtrip
Littleton Holiday Parade - Littleton, N.H.

January 28, 2017 - 436 miles roundtrip
Model Hobby Railroad Show - Eastern States Exposition, West Springfield, MA

May 6, 2017 - 246 miles / 492 round trip
Daytrips & Destinations Travel Expo - Hartford, CT

May 25 to June 10, 2017 - 112 miles / 224 round trip
Common Man Roadside North - Hooksett Welcome Center, Hooksett, N.H.

June 10, 2017 - 149 miles / 298 round trip
Ashby 250th Anniversary - Ashby, MA

June 24, 2017 - 20 miles / 40 round trip
Annual Fly-In & Tractor Show - Mount Washington Regional Airport, Whtiefield, N.H.

July 1, 2017 - 24 miles / 48 round trip
Old Home Days Parade - Franconia, N.H.

July 15 - 16, 2017
Second Annual Handcrafted Event - Mt. Washington Cog Railway Mt. Washington, N.H

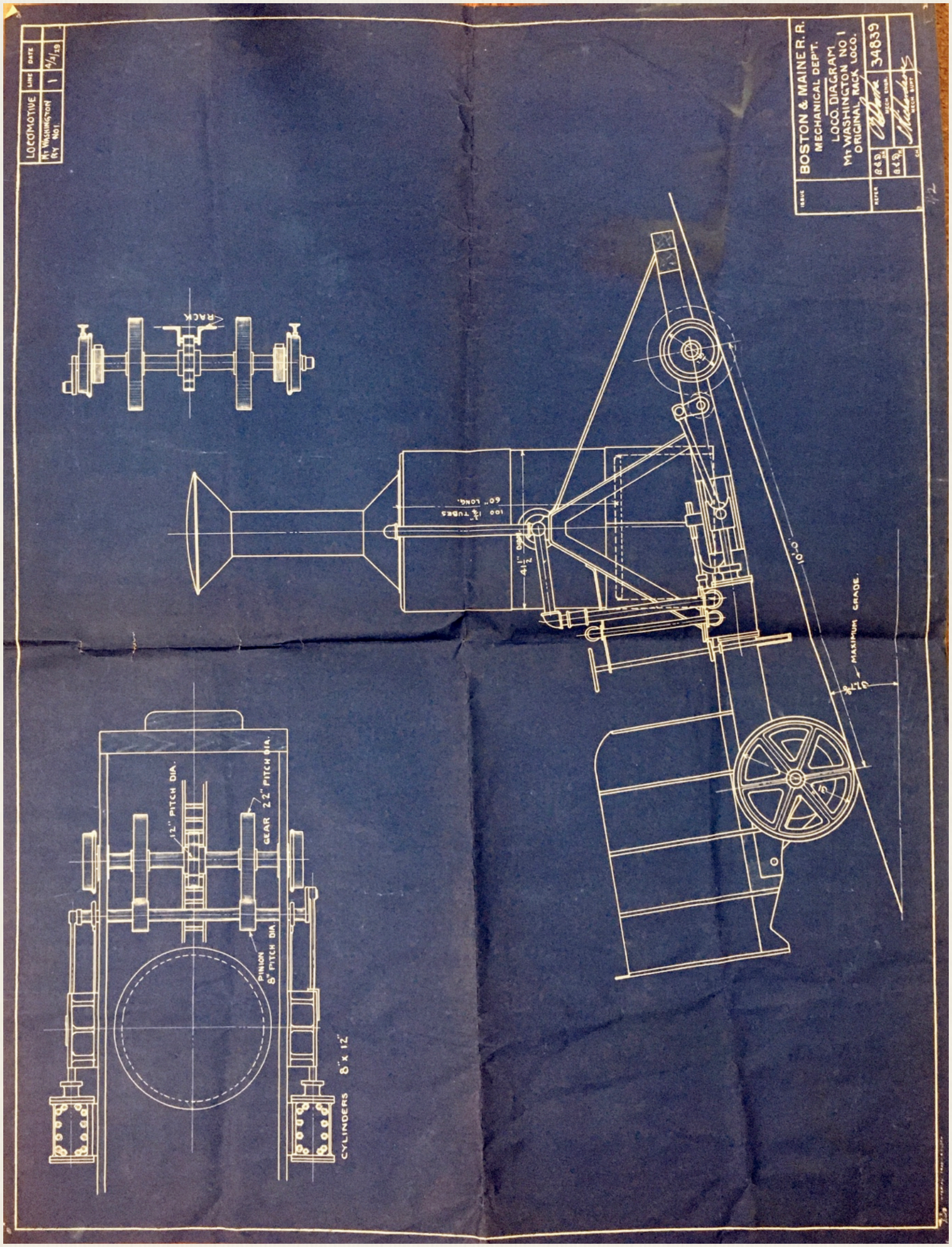
July 30, 2017 - 149 miles / 298 round trip
Lowell Folk Festival - Lowell National Historical Park, Lowell, MA

August 11, 2017 - 200 miles roundtrip
League of N.H. Craftsmen's Fair - Mt. Sunapee, N.H.

August 19, 2017
Steampunk Festival at Cog Railway, The Mt. Washington Cog Railway Mt. Washington, N.H

September 2017 - 436 miles roundtrip

Eastern States Exposition - West Springfield, MA *(next page)*


LOCOMOTIVE
MT WASHINGTON RY NO 1.
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1
DATE
8/21/29
BOSTON & MAINE R.R.
MECHANICAL DEPT.
LOCO. DIAGRAM
MT WASHINGTON NO 1
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RACK
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60" LONG.
41½" DIAM.
10'-0"
MAXIMUM GRADE.
9'7½"
12" PITCH DIA.
GEAR 22" PITCH DIA.
PINION
8" PITCH DIA.
CYLINDERS 8" x 12"

Sec. 24 - *Hero's* Odyssey

Conservative estimate of total miles traveled thus far on the *Hero's* on-going odyssey through 2017:

9,563 miles est.

PEPPERSASS
No 1
Mt W.R.
2
1866
CAM
SUPERLINE

Sec. 24 - *Hero's* Odyssey

2019 *Peppersass* Birthday Schedule

Since 2016, *Peppersass* has been visiting railroad and tourism related events and museums in New England and beyond to promote The Cog's 150th anniversary in 2019. Here are the details of *Peppersass'* summer appearances:

Thursday, May 25th to Saturday, June 10th: *Peppersass* will be welcoming visitors at the New Hampshire Welcome Center at the Hooksett Rest Area, Everett Turnpike Northbound.

Saturday, June 10th and Sunday, June 11th: *Peppersass* is helping the town of Ashby, MA celebrate its 250th Anniversary. Ashby is the hometown of one of The Cog owners, Susan Gummerus Presby. On Saturday from 4 pm to 7 pm at the 873 Café (on 873 Main Street), visitors can see *Peppersass* and watch the Emmy Award winning documentary about The Cog, called *Climbing to the Clouds.* On Sunday, *Peppersass* will be in the 250th Anniversary Parade that starts at 11 am from Allen Field, down West Road onto Main Street (Rt. 119 eastbound), ending at the Town Common.

Saturday, July 15th and Sunday, July 16th: *Peppersass* is participating in The Cog's 2nd Annual Handcrafted in NH Fest at The Cog's Base Station in Bretton Woods, NH. For this event, The Cog is partnering with premier New Hampshire organizations to celebrate New Hampshire's innovation and finest handmade craft and products. Visitors can shop for New Hampshire-made products at booths featuring fine craft made by renowned craftsmen and a variety of food, clothing, jewelry, household products and more. Free admission. Rain or shine.

Friday, July 28th to Sunday, July 30th: *Peppersass* will make its first ever appearance at the 30th Lowell Folk Festival in Lowell, MA. More than 150,000 people are expected attend to enjoy the finest folk music, craft, food, and more in downtown Lowell.

Saturday, August 4th to August 13th: *Peppersass*, which was handcrafted in New England, will be part of the Annual League of NH Craftsmen's Fair at Mount Sunapee Resort in Newbury, NH. Friday, August 11 is Cog Day at the Fair, with special activities in store.

Saturday, August 19: *Peppersass* is the centerpiece of the 2nd Annual Railway to the Moon Steampunk event at The Cog – an event where the Victorian Era meets the Wild West meets Jules Verne. Visitors are encouraged to wear their Steampunk best to win prizes for the best costume in the fashion show parade. There will be Steampunk art, antique bicycling, steam exhibits, including a demonstration by steam artist Todd Cahill and his Steamachine Sculptures. The Cog is featuring a special ride to the moon on the "Steampunk Express", engine number 9. Call 603.278.5404 to book train tickets for the 3:30 pm steam ride. Admission to the event is free.

1936 - Food Service

John Granger spent one summer and one winter at the Mount Washington Cog Railway working for his uncle in the Boarding House kitchen. The time at the Base made an impression on the young man. He would later write a story about that time called "Sojourn at Mt. Washington." His daughter, Sally Granger Barrett found a copy of the story in his papers in June of 2016. It had been typed up by his brother, Jason in February-March 1991. John used the real names of his relatives but created pseudonyms for other real-life characters. Col. Henry Nelson Teague became Col. Henry T. Winslow*. Real-life Coggers G.G. Dowling became G.G. Darling*, George Stevens became Steven St. George*, while Talmadge and Molly McCormick became Milly* and Terry O'Halloran* and so on. There remains several names we are unable to transform back to the actual characters at this point - Alice and Billy Hollingsworth*, Bascomb Little* and Mr. Oliver* at the Summit. An asterisk (*) will be used when these pseudonyms first appear. Even so, John Granger captures aspects of Cog life that brings further details to the overall picture. Jitney remains bummed that Steven St. George's* comfortable barber chair got tossed over into the dump in 1952. A discovery of a John Granger snapshot in April 2018 resulted in the O'Halloran's being unmasked as Talmadge and Molly (Rivers) McCormick. Here is an edited version of Granger's "Sojourn."

"When I arrived on the scene in 1936 the Base Station was home for thirty or forty men who came each summer to work at the cog railway. They slept and ate at the big boarding house with its large kitchen and larger dining room with bedrooms overhead. Nearby was the round house and machine shop. Maintaining about 3-miles of track, plus furnishing engineers and firemen and making repairs at the machine shop kept them busy. It was the height of the depression. The Mt. Washington gang considered themselves lucky to have jobs.

Since leaving high school I really hadn't amounted to much, not getting a substantial income from any of my small undertakings including a summer at a bakery and working off and on for my father. So when my uncle who was a chef at the Base Station called, offering me a job, I decided to leave the home fires in Vermont.

Uncle "Stub" had been a chef on the Boston and Main Railroad. Years later he became the chef at Williams College. Rather short and stout and a little asthmatic he was inclined to be a little impatient and brusque at times, but he could whip up a fine meal whether it was a simple lunch or a banquet.

My job was definitely not an important one, nor did it pay much. Ten dollars a week plus room and board seem small as I look back. Nevertheless I guess I was fortunate to have work. There were few places to spend money. I actually saved enough to send some home to my

folks. I even managed to send for a small Sears Roebuck radio which relieved the monotony of the evenings.

My duties were to wait on my uncle, wash dishes, wait on tables and help clean rooms. Two women had similar duties. Alice Hollingsworth*, short, plump, animated, always ready with a sassy quip, did most of the chambermaid work. Molly McCormick (Milly O'Halloran*) in her late forties handled the dining room tasks. She was diligent but a little erratic in her behaviors, sometimes pleasant, often grumpy. Her husband, Talmadge McCormick (Terry O'Halloran*) was the head carpenter and a good one. Alice told me Molly and Talmadge didn't get along very well. She said Molly had been married before.

My father's brother, my uncle P.N. (Pliney) Granger was an engineer as was his son "little" P.N. (Pliney Jr.). "Little" P.N. grew to be a size larger than his father. His brother, Al, was a fireman, I think. So all-in-all our clan was well represented.

We never knew when the owner of the cog railway might show up. Colonel Henry Teague (Henry T. Winslow*) (I wondered if he had ever been a real colonel) was an imposing figure, tall, over-weight, red of face he was apt to be impetuous. He demanded high standards of work. He had the money to pay for it. He was quick to praise and quick to reprimand. We all paid more attention to our duties when he visited.

He called me "Boy." One day his private flush toilet plugged up. I had the unpleasant task of swooshing one of those rubber plungers on a handle up and down in the stool while the colonel watched. "Don't think it's going to clear up," I said after about fifty swooshes.

"Keep at it, Boy", said the colonel. "Henry Ford once said in the bright lexicon of youth there is no such word as fail." So I continued. Finally when it seemed my arms were about to break, the darned thing let go. The colonel's toilet was unplugged.

"Good work, my boy. Before you go back to the kitchen I want you to put my rubbers on for me. My damned back is so bad I can't bend over." He stuck his feet up while I struggled to put his rubbers on. I couldn't help but think of some old story in history where Andrew Jackson rebelled at putting an officer's boots on for him.

I forgot to mention there was another relative working at the Base Station, my good friend and cousin George Welch, Uncle Stub's son. George did not resemble his father either in appearance or temperament. George was lean and rugged and of a more placid nature. He performed his duties capably,

but he had one characteristic that often made him the butt of jokes. He was the slowest walking man I ever knew. His long deliberate strides in a ponderous forward progress made it look as though he hated to move out of his tracks.

One day while George was strolling unhurriedly by the machine shop, Billy Hollingsworth* stuck his head out a window. "Hey, George, move it. How do you know which way you are going?"

"Go to hell," George answered with a grin. "I'll get there. Don't you worry."

And mouthy little Alice Hollingsworth* got after George one time. "You are the slowest man I ever saw. I'm short and stout, but I bet I can beat you in a race. Come on. I'll race you to the gate and back. I challenge you."

It was quite a race. I can still remember George with his long, loping strides while Alice buzzed along like a bumble bee. Trot, trot, trot. Plunk… plunk… plunk. You guessed it, Alice was back to the boarding house before George had even turned around to come back.

I really enjoyed this my first job away from home. All the personnel were good to me. They were a hard working crew, some of them rough and uncouth, but they all seemed considerate of each other. As in any big family there were arguments and disagreements, but in general they were a decent, likable lot.

A few individuals stand out in my memory, George Stevens (Steven St. George*), the superintendent of operations would have been known as a section foreman on an ordinary railroad. He had charge of the machine shop as well his main job the upkeep of the cog railway. A big, thickset man in his sixties he was respected and a little feared by some. Rather moderate in his speech and actions, he tolerated no slothfulness as a newcomer soon found out. When Stevens looked at you from under his bushy old brows you knew he meant business.

Old Stevens worked hard all day. In the evening he relaxed by sitting in his second-hand barber chair he'd purchased just for himself. "he's got the most comfortable chair in the place," Cousin George told me. "You better not get caught sitting in it. He's got one habit that wouldn't bother you since you're inside most of the time. He don't' have any teeth, but he chews big cuds of Redman tobacco. Sort of gums it until it's more like a horse biscuit then lets it go, no matter where he is. I've got hit twice working under the trestle when he's up on top."

While Stevens was ruggedly masculine, our company bookkeeper, Bascomb Little* was stooped and slight of build. He appeared frail, almost delicate. He kept to himself not readily mixing in the conversation and jollity of the others.

Helping Uncle Stub kept me on the run. We both got up early to start breakfast. At six, Molly McCormick arrived to tend to the dining room. Then came the onslaught of hungry men. Plenty of coffee, eggs, bacon, home-fried potato soon disappeared. They were a hard-working lot. Almost every one ate a hearty breakfast.

Sec. 25 - 1936 Food Service

Cleaning up after breakfast kept Molly and me occupied until about nine when we joined Stub for a breather with coffee and a bit of gabbing. Stub was a great storyteller with anecdotes recalled from his years as a railroad cook. Molly joined the conversation often with complaints about her headaches and ailments. Then it was back to work.

Real-Life Crew: (L-R) Cook Stub Welch, Alice ???, Molly McCormick & John Granger (1936)
- John Granger Collection

The continual regimen of preparations, cooking three big meals a day, planning a varied menu or ordering kitchen supplies was apt to make Stub rather testy some days.

One afternoon he had concocted eight large custard pies and shoved them into the oven. Let me tell you his custard pies were out of this world. No worry that eggs were used - cholesterol and saturated fats had not yet been heard of.

After ten minutes he opened the door to see how the pies were doing. An immediate explosion of profanity filled the air. Two pies had broken through their crusts. The creamy contents were running all over the hot oven. I though for a moment Stub was about to have a stroke the way he raved and swore. Then he glanced at me. "Don't stand there pickin' your nose. Get a pan and spatula!"

I was aghast at his tirade. Then I lost my temper. "That's a hell of a thing to say. I'm not picking my nose. It's not my fault your dam' pies run over. Here's your spatula – you know what you can do wit it!"

He gave me a surprised look. "See here don't you ever mouth off like that to me again."

"Well, don't you talk like that to me either. Just tell me what you want me to do."

We both calmed down. Finally Stub said, "I didn't mean to sound off like that. Dam' pies got me going. Sometimes I get a little hot under the collar."

There were never any more words between us again, for which I was thankful. Stub was a good man and good to me.

Colonel Teague employed six college men from North Carolina to serve as trip guides on the trains. Having returned for several years they were well versed in cog railway facts and figures. One man to each carload of passengers explained how the cog railroad worked and called attention to the natural features of Mt. Washington. They were an intelligent, affable group of young men and well-liked by all of us.

I had never met anyone with their pronounced southern accents, but I should have known better than to ask big, easy-going G.G. Dowling (G.G. Darling*), "Where do you get your peculiar accent?"

At once I realized what a tactless question it was. G.G. Dowling lost his pleasant smile. "What do you mean – peculiar accent? We don't have any accent. It's you Yankees who murder the English language!"

I had been at the Base Station three months before there was a chance to ride up the Cog Railway. One day Stub received a call from the manager of the Summit House restaurant. One of their waiters was incapacitated. Did the Base have anyone who could help for one day? Stub thought of me. I was eager to ride the train but not enthusiastic with the prospect of being a waiter.

If you have never been on the journey to the top of Mt. Washington the first time is something to be remembered. We hadn't gone very far when the birch trees and firs began to be shorter. Our first stop was at the Waumbek tank for water. It was a brief opportunity to step out of the car. The view was already spectacular. The fir trees were now tiny crawling plants covered with moss – something like Spanish Moss. Traversing steep Jacob's Ladder gave an unreal impression as we looked out. Were we moving in a sharp incline while the mountainside had flattened out, or was it the other way?

Then we left the tree line entirely. The only plants were diminutive grasses and a few flowers and lichens struggling to survive in the vast jumble of rocks and stones. I had thought there would be solid expanses of granite cliffs. But no, the whole mountain-top had been covered with rubble left when the last glaciers melted.

On nearing the top the Summit House and the old Tip-Top came into view. The train stopped long enough to permit passengers to visit the restaurant and gift shop in the Summit House.

On a clear day a wonderful panorama spreads out around you. The strange Lake of the Clouds is nearby from which the Ammonoosuc river gets its start. The surrounding peaks of the Presidential Range seem close at hand. To the east one can make out the Atlantic Ocean. To the west you can see New York's Catskills and Camel's Hump in Vermont.

I mentioned the views can be seen on a clear day. Unfortunately many a visitor starts out in what appears to be sunny weather only to find old Mt. Washington is shrouded in fog at its summit. Weather is occasionally born here. If you watch one of those fat summertime clouds in the low

lands you will notice they are nearly always melting slowly away. But I have seen a tiny wisp of vapor hugging the top of the mountain gradually grow larger until the entire area for miles is covered with clouds often accompanied by rain.

At the Summit House I was introduced to a Mr. Oliver* who put me to work at once. "Glad you're here. Just need a waiter for today. I expect you know how to wait on guests." I was issued a white jacket and black bow tie.

The diners looked to be well-off, probably used to fancy restaurants. Certainly the menu was fancy enough but far too expensive for ordinary folks. I was a mite nervous but got along fairly well with but a few criticisms from the head waiter.

Presently a party of five descended at one of my tables. They were obviously of the upper class… the "Four Hundred" as my folks used to say. The lady was bedecked with bracelets and a bejeweled necklace. She was a big buxom and very much the imperious mannered "boss" of the family. An elderly, dreamy-eyed man with a tired expression probably was her husband. Two elegant young ladies and a soft snooty young man made up the party.

Apprehensively I encountered the old matriarch who proceeded to order for the whole table. I remembered to serve from the left. In placing a skimpy salad in front of her I accidentally brushed against her hand which she had been waving around as she talked. "Watch what you're doing, young man." Then to her son, "How clumsy help is nowadays."

I was determined to make no more mistakes. Everything went along well enough until the lady ordered cream for her tea. The kitchen didn't have cream. "Giver her some evaporated milk. She won't know the difference."

Needless to say she did know the difference. "This is not cream. I definitely said cream. I know what cream is if you don't." I tried to placate her by explaining the kitchen had run out of cream. Plainly she was unhappy with the restaurant and me in particular. I think there was a tip of a dime when she left.

The summer was drawing to a close. Already some of the men had left. I had no idea what I would do come winter, probably return to Vermont and scout around for work. The cog railway usually operated through Labor Day. This year warm weather held out like summer was forever. Colonel Teague decided to run the trains through the autumn leaf season. We'd close the second week of October.

October 10th we held a big farewell banquet for the Colonel. Uncle Stub really extended himself. I never saw so much food, turkey, vegetables, dessert and all the rest. The day of the banquet I was up at 4:30 to work with Stub, Molly and Alice who often helped on special occasions. It seemed the day would never end. Finally the banquet was nearly over. The colonel was finishing off his roast duck, something we always prepared especially for him. He made a grand speech thanking the crew for their part in a prosperous year. Billy Hollingsworth* was to respond for the

men. We didn't know he had imbibed five bottles of beer while he ate. His speech was colorful, a little too much so as he told several risqué stories including an inappropriate joke about the colonel, who brushed it off gallantly.

Afterwards the men insisted they would clean up the place and wash the dishes. "Stub, you and Milly and John take it easy, settle down and have a good supper."

"Don't forget me," cried Alice. "I'll have you know I worked hard, too."

Colonel Teague was about to leave when he called me aside. "We need a helper to stay all winter with the McCormicks. Take care of the place… make repairs. How about it? Think it over." Then as he was about to get into his Packard, he said, "boy, run up to my room and bring down my Scotch. I forgot it."

The scotch was expensive Teachers Highland Cream. "Don't ever get hung up with alcohol, my boy. It's bad, bad, bad." He took a hefty gulp. "I have it for my health."

I decided to stay. There wasn't much doing back home. The McCormicks would be great to work with.

By the middle of October everyone else had left. We three had the place to ourselves. I liked Talmadge. He was a first-rate carpenter. He had dark, intense eyes and a thin, hard, muscular body. He was constantly on the go.

The moderns would have considered Talmadge a bit weird the way he held forth with pugnacious diatribes at least three times a day. The evils of the World, the state of the Union, the plight of the working man evoked wild declarations.

It was hard to keep a straight face listening to this. Molly had her moments too. She was forever disputing anything Talmadge said. I soon found she was an excellent cook herself. We had access to a well-supplied stockroom. The three of us had some great old meals.

There was one drawback attending our meals, especially breakfast. Husband and wife argued vociferously while eating. Sometimes Talmadge got so excited he choked on his vittles. Molly displayed her anger by leaving the table and slamming dishes around.

As for me I didn't comment or even try to make peace. I couldn't enjoy my breakfast with the continual war between those two nutty combatants.

One morning they had a particularly virulent exchange. Molly jumped up from the table. "That does it. Talmadge, you can go jump in the lake. I'm leaving right now. To Hell with you." She scurried round, came out of her room with an overnight bag, slammed out the door and started down the hill.

Talmadge showed no alarm. "Don't worry, she'll be back when she cools off. Pass me some more of that sausage. Arguing makes me hungry."

But she didn't come back. It's a long seven miles down to Fabyan. Late afternoon, still no Molly. I could see Talmadge was beginning to worry. Finally he took off in his Model-T.

Eight o'clock that evening they returned. To my astonishment Molly was clinging to Talmadge rapturously as though she was a new bride. And Talmadge? He cooed, "Darling, I love you." Then kissed her like a young lover.

If that was what married life was like I vowed to myself never to get entangled with a wife.

The McCormicks had a dog, old Bessie. She was part German Shepherd. About her jowls was that white look that comes to some dogs as old age approaches. Bessie's tail was scraggily. Some of her hair had come out, and she was the only canine I'd ever seen with bad teeth. Worst of all she smelled. The poor old animal had been with Molly for eleven years. Molly constantly defended her against Talmadge's threat to do away with her.

About the only activity Bessie engaged in was to come out of a sleep with a start, trot over to the door and bark half a dozen times. I suspected she had been dreaming. But Talmadge always jumped to his feet. "That panther is out there again. Even a dumb dog like Bessie can tell. Don't ever go outside at night, John, unless you take my rifle along."

I opened the door and gazed all around. The fresh snow lay in an unbroken expanse. No signs of panther tracks could be seen. "It's out there," Talmadge explained. "Probably snow fell into its tracks."

Then in December Talmadge was ill. For several days I had seen him bending over hanging onto his belly. "Just a stomach upset. Molly's cooking is too rich for me."

The pains persisted. Finally we realized Talmadge was really very sick. He could barely stand. Molly took him to their doctor sixty some miles away in St. Johnsbury, Vermont. I stayed alone at the Base Station with no news for two days. Then Molly called. Talmadge was in the hospital. He had a large cancerous growth in his intestines. He wasn't expected to live.

Three days went by. Molly came back to get clothes and legal papers. "I'll be at the hospital." She began to cry. "I think Talmadge is going to die. I wish I hadn't been so mean to him."

And Talmadge did die. Was it possible the so recently lively, excitable Talmadge was gone? I almost missed the ranting and raving he had subjected us to.

Molly came back for the last time. "I've called Colonel Teague. He's sending someone right away to take my place." She gave me a kiss. "It's been nice working with you, John. I'm leaving old Bessie behind. Take care of her."

It wasn't but two days after that my uncle Pliney Granger arrived. Later his daughter and youngest son came for a few weeks. Uncle Pliney and I got along famously. I must admit it was much more peaceful than it had been during the continual upsetting experience with the McCormicks. Cousin Guy *(right)* and I

worked with his father while sister Mary kept house.

Uncle Stub had seen to it there would be enough provisions to last all winter. One shelf in the store room was laden with big no. 10 cans from S.S. Pierce containing everything from vegetables, to meats and fruit. Poking around one day I found a can of clams. "How would you like some clam chowder?" I asked my uncle.

"Sounds good, but too much bother."

"Oh, I'll make it… recipe is right here in Uncle Stub's cook book." It was simple, just fry a bit of chopped onions and a little salt pork. Add the clams along with their juice. Add a small amount of flour to barely thicken the chowder.

I mixed up the ingredients and heated it up on the big stove. "Smells good," remarked Pliney. "I am a little hungry."

Maybe two-thirds of cup of flour was too much. When I tried to dish out the chowder it was just a quaking mass of swelled-up flour studded with clams. Pliney couldn't eat it. My cousins looked at it and laughed. I gave some to old Bessie, the dog and she smelled of it, then turned away.

Seven miles from the little village of Fabyan, New Hampshire the road climbs steadily until it reaches the Base Station of the Mt. Washington Cog Railway. Here was the scene of my first job away from my home in Vermont.

John A. Granger
March 9, 1991

1938 Hurricane

Hurricane Lashes North Country: Worst Storm Sweeps Over This Area As Terrifying Climax to Rainstorm

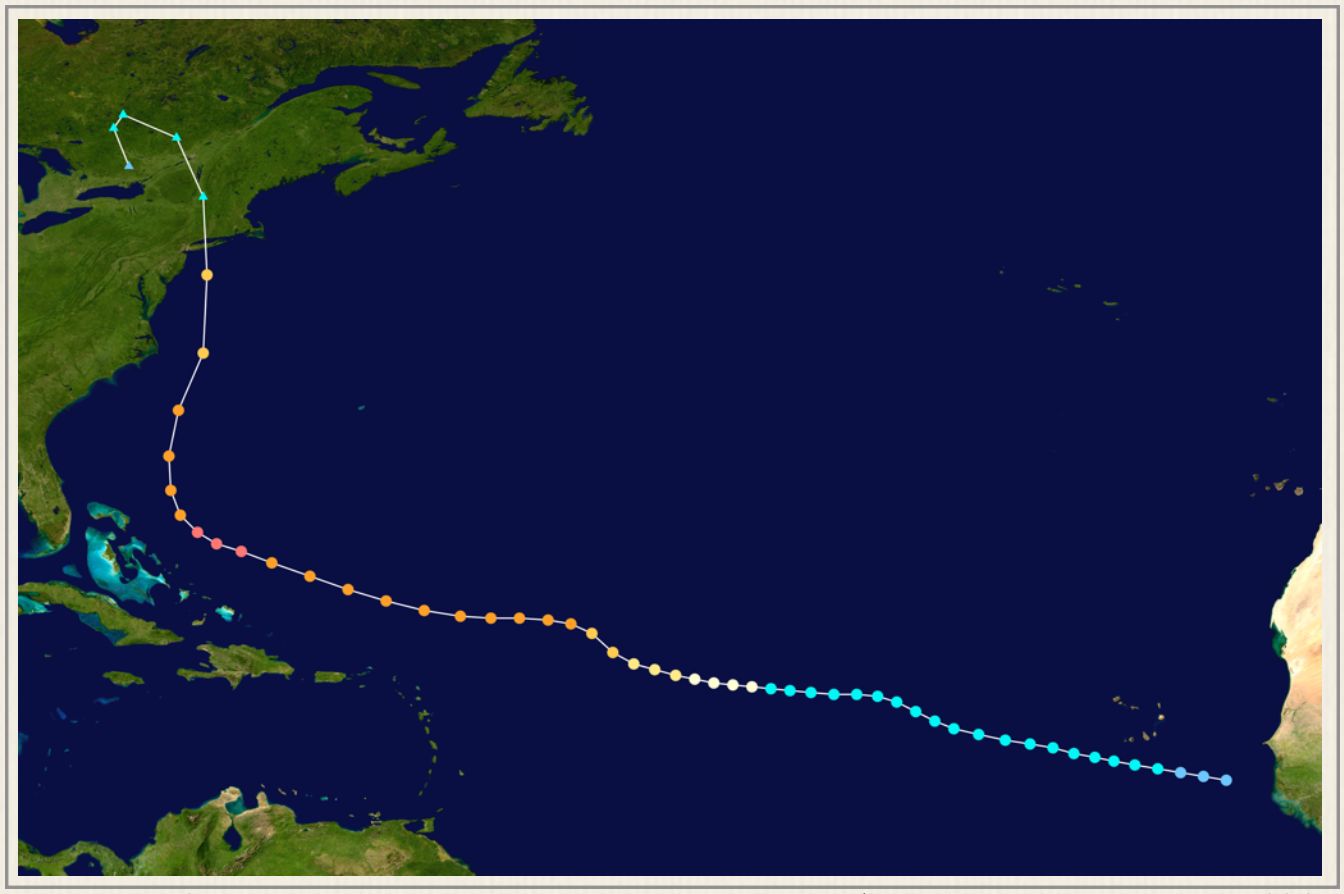
North Country people arose this morning to survey untold damage, and tired workmen continued their all-night labors to clear highways and establish communication with the outside world, following the worst hurricane to hit this section in the memory of the oldest residents. Much more serious damage was indicated in the few reports that filtered in from other sections of New England.

The windstorm, that swept unabated for several hours, starting in the early evening, was a terrifying climax to a three-day rain that deposited over five inches in this area, as compared to the rainfall of 4.42 inches during the three-day period in the flood of November 1927.

The town of Littleton, like many other communities in this area, was cut off from the world as far as communication was concerned. This morning there was no way of telephoning even nearby towns, and the telegraph service had been out of order since yesterday afternoon. The local electric power was shut off at 7:14 p.m. yesterday, and all forms of existence depending upon that source of power stopped immediately. There had been not trains since about 9 o'clock Wednesday morning. Some mail trickled in on special trucks. There were no newspapers, and home electric radios were useless

Crawford Notch, closed yesterday because of a landslide and damaged culverts, was made even more impassable by fallen trees which effectually choked the pass this morning. Thrown together across the highway like jackstraws, this remnant of the high wind presents the barrier that will take some time to clear away. *- Littleton Courier, Thursday - September 22nd, 1938 page 1*

The 1938 New England Hurricane reportedly killed an estimated 682 people, damaged or destroyed over 57-thousand homes, and resulted in property losses of roughly $306-million dollars (equivalent to $4.7-billion in 2016). The most powerful and deadliest hurricane in recent New England history formed September 9th, 1938, and on September 20th - squeezed between a deep trough over Appalachia and high pressure over Bermuda, it headed north picking up speed. On September 21st, Boston meteorologist E.B. Rideout told his WEEI radio listeners, to the skepticism of his peers, that the hurricane would hit New England. That may have been the time, Pliney Granger, Jr. decided it was time to head north as well. The hurricane's eye was about 50 miles wide when it made landfall on Long Island, "and the storm continued traveling northward into New England at more than 50 mph. The east side of the hurricane - the 'dangerous semicircle' - was scouring the countryside" as it traveled up the Connecticut River Valley.



Storm track of the 1938 New England Hurricane. The background image is from NASA. Tracking data from the National Hurricane Center.
- Wikipedia:WikiProject Tropical cyclones

The Colonel Heads to Concord

Bob Varney says Colonel Henry Teague was heading south to Concord on business in late September at the same time the storm moved north. Varney writes after Teague had arrived "landslides closed the roads in both Franconia and Crawford Notches. It was three days before Colonel Teague was able to get word through to the railway, but when he did, his only question was, 'Was anybody hurt?' (No one was strangely enough)" observed Dartmouth senior Varney in his 1942 history paper. Jacob's Ladder he writes "was rebuilt under the direction of Arthur Teague. The cost of rebuilding the railway was almost sixty thousand dollars."

Grangers Assemble !

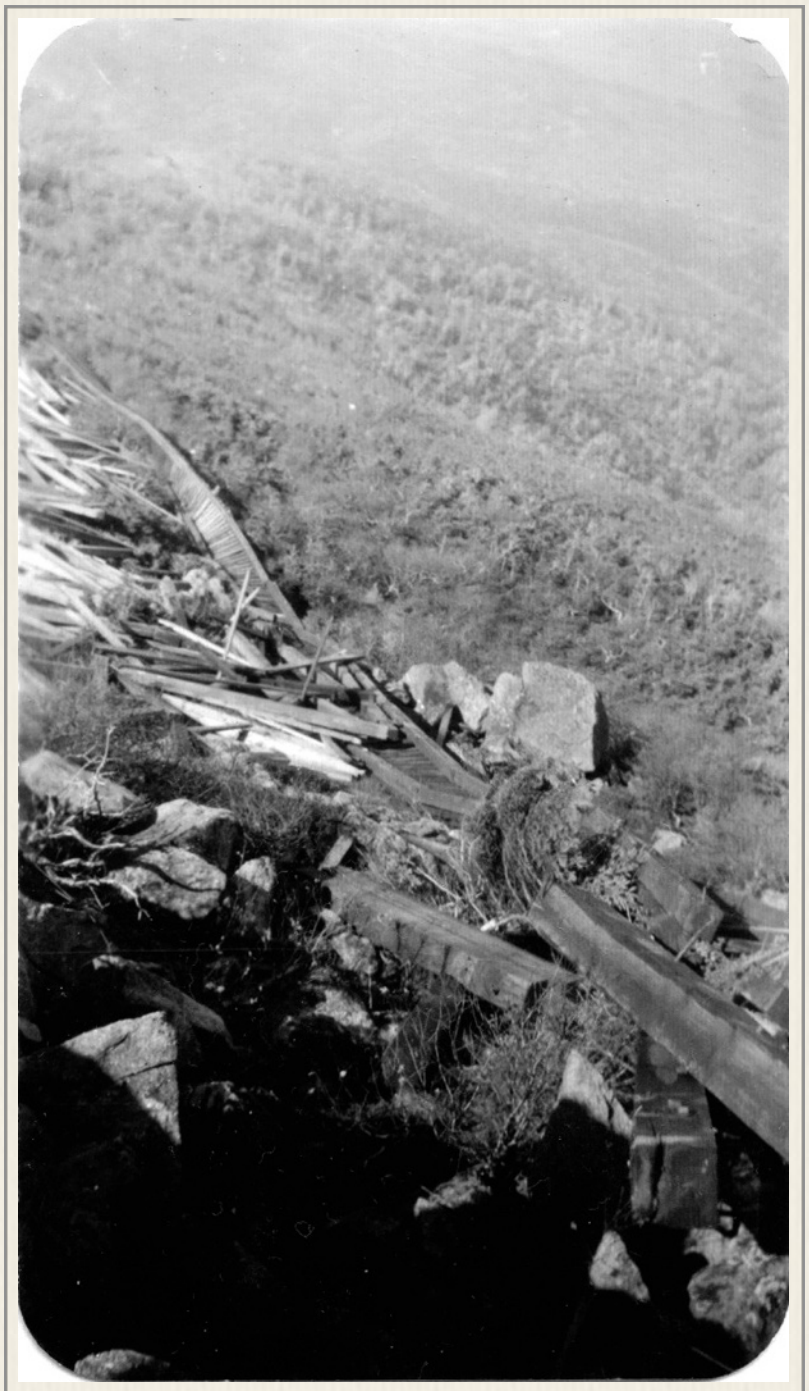
"Pliney had a '38 Studebaker and went up to the Cog," says Dale Granger Eckert in handwritten notes from a discussion with her dad. "(He) barely made it through the Notch. Grandpa was up (at the Cog) and insisted on taking the car back to Lisbon leaving him stranded there. The Base Road was blocked. They had to work both ends to clear it. George Welch (Stubby's son) looked up from the Boarding House and saw there was no longer track along Jacob's Ladder."

The *Littleton Courier's* coverage of the Hurricane continued a week later.

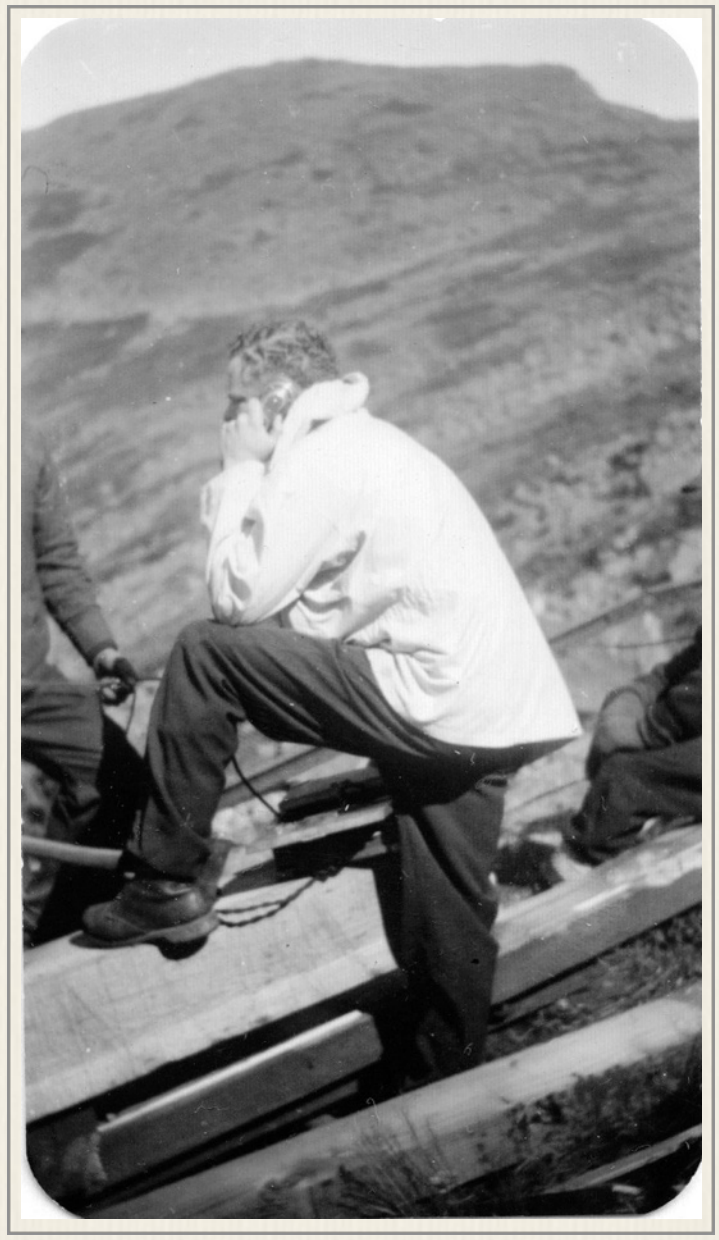
Jacob's Ladder
Victim of Hurricane

Like other New England carriers, the Mount Washington cog railroad suffered a severe loss from the windstorm of Wednesday night. Close to 2400 feet of track was blown away, including the famous Jacob's Ladder, famed the country over. The wind picked up the heavy trestle and carried it nearly 150 feet onto nearby rocks. A crew of 50 men went to work this week on the big re-

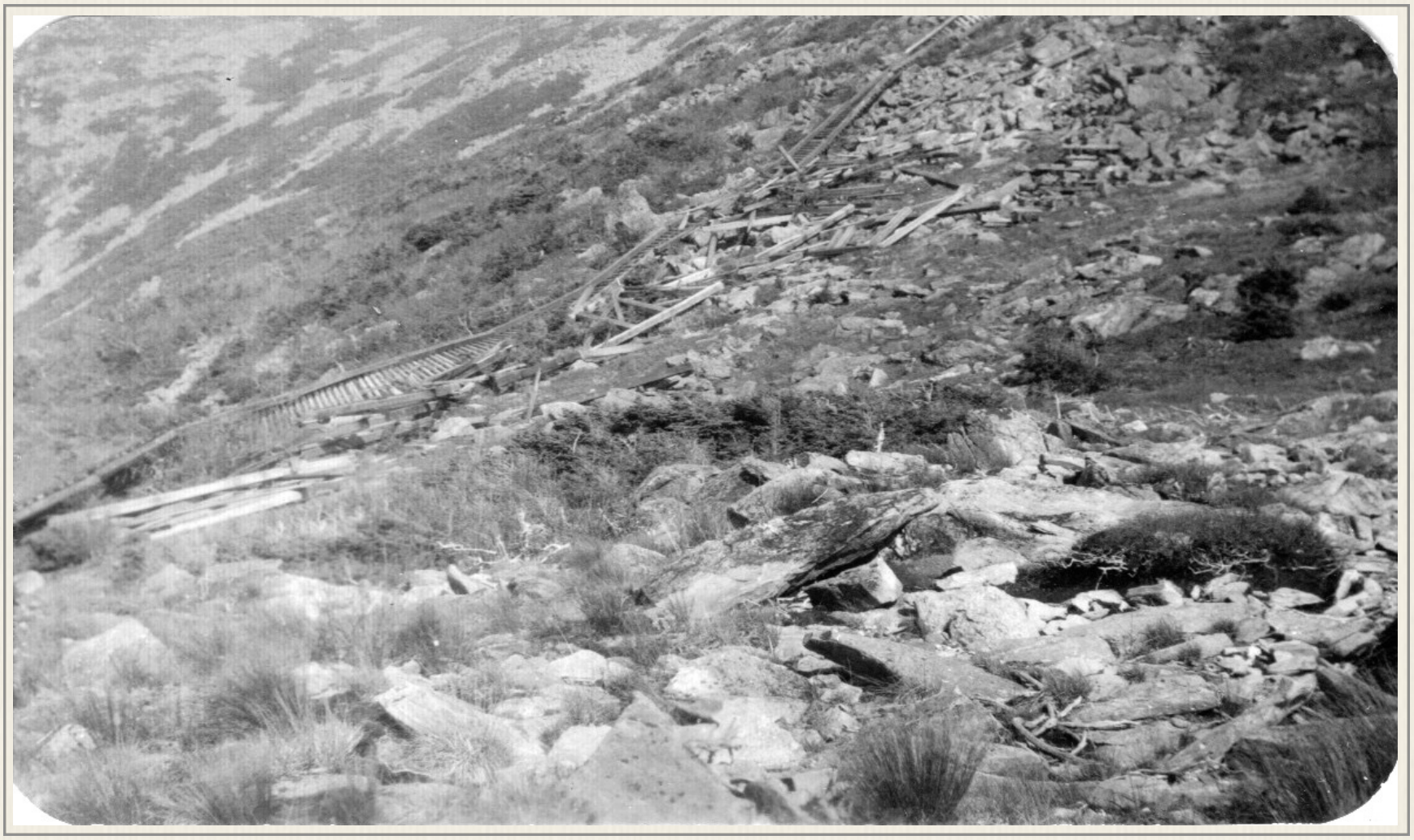
Sec. 26 - 1938 Hurricane



Sec. 26 - 1938 Hurricane



Floyd Williams is in the center of the picture (above) with a team assessing the '38 hurricane damage
- All photos - Beverly Williams Decato Collection



pair job.

But don't for a minute think that the railroad is licked or out of commission for long. Already trains have been operated up the mountain to Jacob's Ladder from which the view is marvelous. Patrons, if in sufficient numbers to fill a train, will be accommodated in this way until the roadbed is repaired, which will be about July 1, 1939.

Dormitory Demolished

Considerable damage was also done at the Base station. A dormitory, recently completed, was demolished while the roofs were blown off two large sheds. The train sheds were moved several feet on their foundations.

Col. Henry N. Teague, president of the railroad, is most optimistic regarding the future and will see to it that repairs are made as quickly as possible. He is building a large new rustic log station at the base which will add greatly to the plant. Work had already started in this addition, and fortunately it was not damaged by the storm. Other changes will be made which will add to the comfort of patrons.

200-Mile Gusts

The Summit House closed on Monday, following a successful season, in spite of the inclement weather all summer with many hours of fog and rain. The weather observatory will remain open all winter. The men there reported that the wind velocity during Wednesday's storm rose to 160 miles per hour and to 200 during gusts. The buildings at the top withstood the terrific wind without damage.

Many college boys are on the railroad payroll during the summer and now most of them have returned to their several schools. They evidently feed well at the boarding house for the average weight increase of the boys was over 20 pounds, which speaks well for Col. Teague's commissary.

- Littleton Courier, Thursday - September 29th, 1938 - Hurricane Happenings - page 1

While the *Courier's* coverage featured a fair amount of hometown boosterism and pluck, stories filed in newspapers further away from the North Country were more measured.

$75,000 DAMAGE TO COG RAILWAY

Damage to the Mt. Washington Cog railway was estimated at $75,000 by Col. Henry Teague as a result of Wednesday night's gale, the results of which became known yesterday.

With the wind blowing at an average velocity of 165 miles per hour, but reaching more than 200 miles per hour in gusts, the railway trestle known as Jacob's Ladder as torn from its moorings and carried more than 150 feet. Between half and three-fourths of a mile of track was torn up.

Windows on the east side of the Summit house were torn out with their frames, and the runway between the old Tip-Top house and the Summit house was destroyed, but the short-wave radio station withstood the blasts, according to people coming down the mountain late yesterday. A 135-foot long ice house near the base station was leveled.

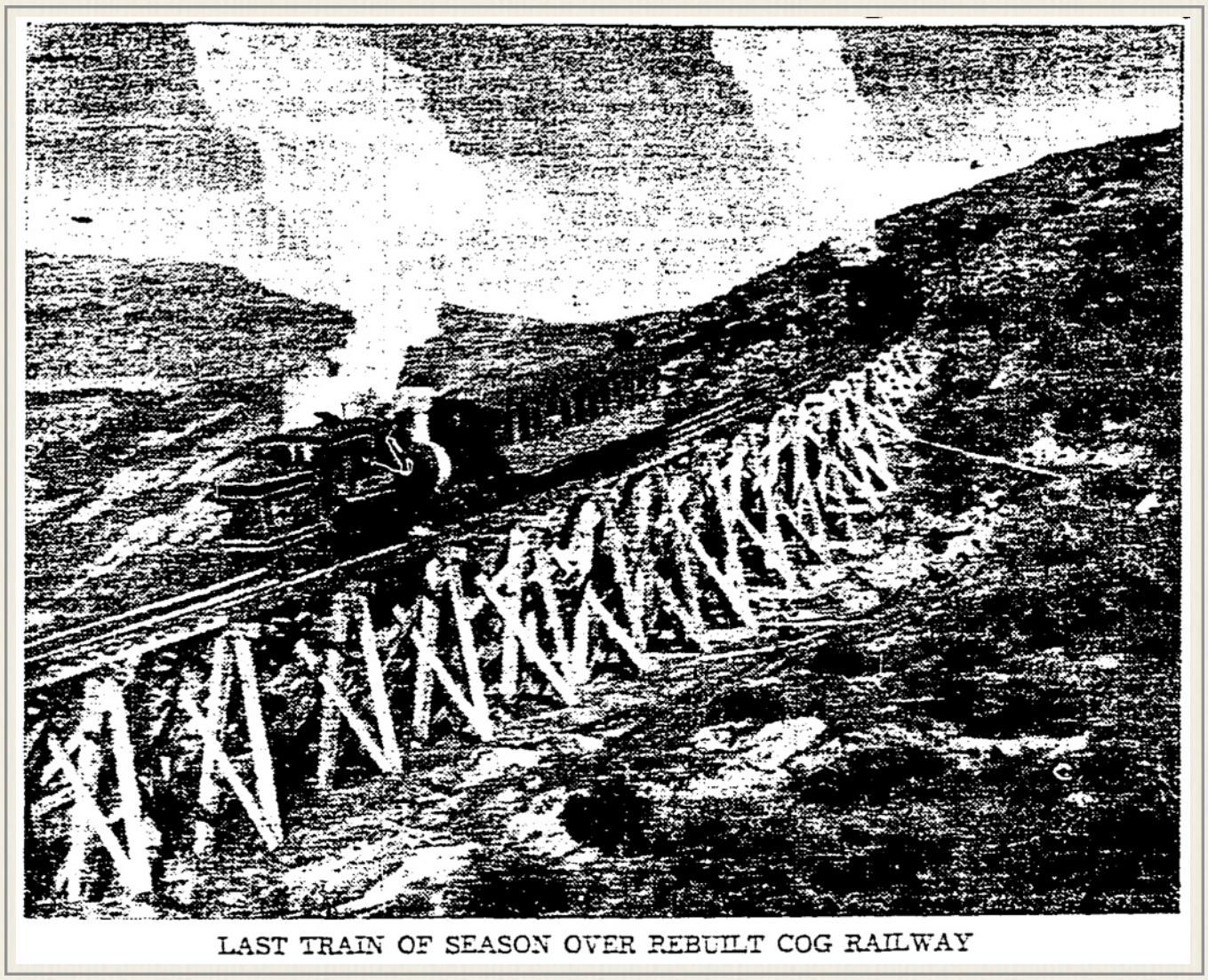
Sec. 26 - 1938 Hurricane

Colonel Teague, proprietor of the cog railway, announced service would be given Sunday from the base station to the Half-Way house. It will be impossible to repair the remainder of the line this year, he said, but reconstruction will be carried out for the 1939 season.

- Portsmouth (N.H.) Herald, Saturday - September 24, 1938 - page 6

While paying passenger runs to the work site began just four days after the storm to generate a trickle of cash for the operation, the real race was on to convince New England the track would be rebuilt, and rebuilt to withstand any future blows from Mother Nature. On Thursday, November 3, 1938, the *Portsmouth (N.H.) Herald* printed a blurb on page 4 likely generated by a press release from the Old Colonel - "The management of the Mt. Washington cog railway has figured out a system to beat even hurricanes, and the new Jacob's Ladder, replacing the one lost in the September gale, is anchored to a solid rock by eight one-inch steel cables hitched with turnbuckles."

Three days later, The *Daily Boston Globe* Sunday edition ran a photo of the "Last Train of Season Over Rebuilt Cog Railway on page B9. The publicity still shows a passenger train at the "usual" spot for a Jacob's Ladder picture and a work train further up obscuring where reconstruction work stopped for the season at the foot of the still-missing Long Trestle *(next page under construction 1939)*. The article accompanying the photo was this.



LAST TRAIN OF SEASON OVER REBUILT COG RAILWAY

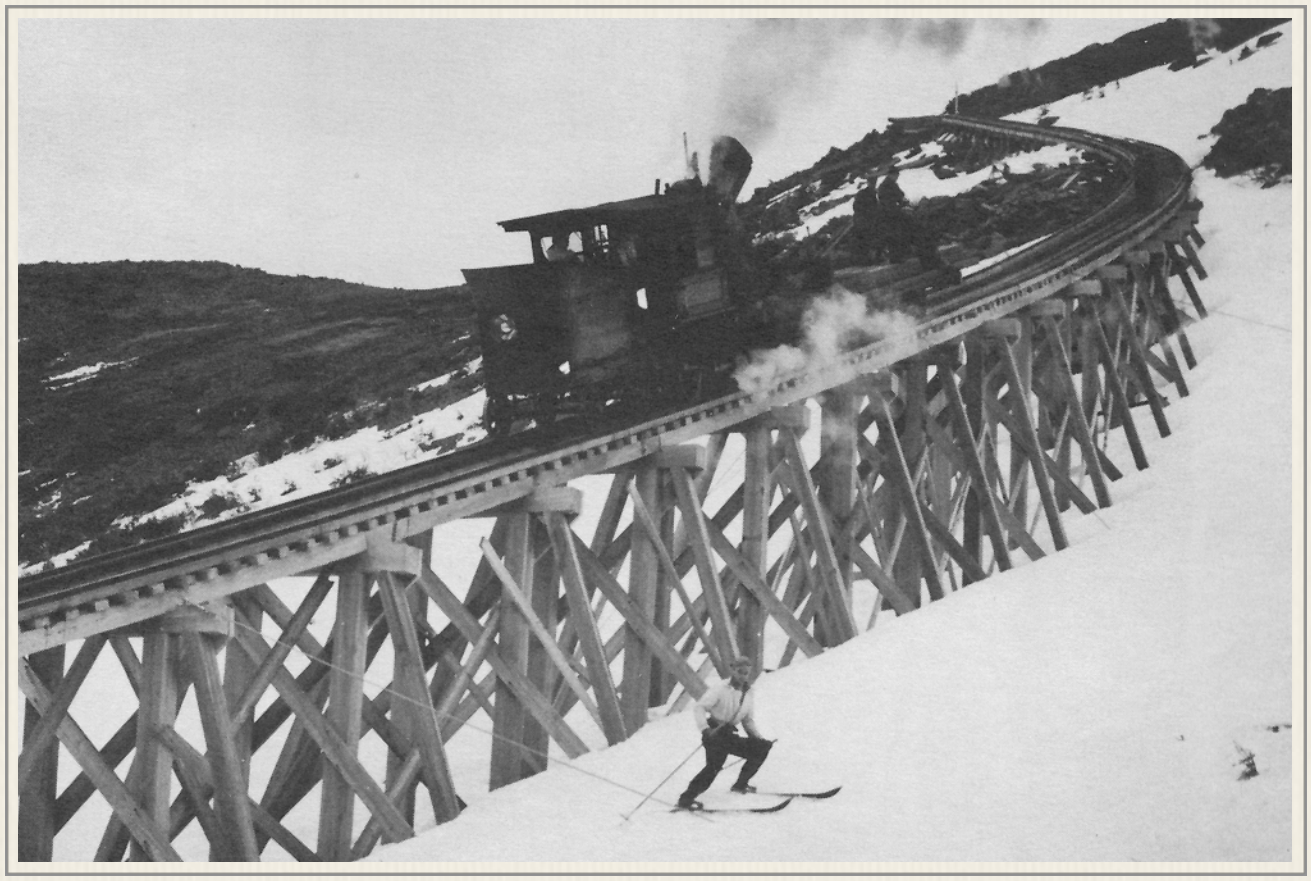
Hurricane-Swept "Jacob's Ladder" Is Rebuilt on Mt. Washington Railway

Destroyed by the hurricane of Sept. 21, the famous "Jacob's Ladder" carrying the steepest grade on the line of the Mount Washington Cog Railway, has been rebuilt after a most difficult engineering job. Twenty-five Georgia hard-pine horses - some of them 30 feet high - are necessary to carry the tracks of the unique railroad over the 360-foot gully on the mountainside, which it traverses. It was entirely destroyed in the storm, with nearly a mile of track above it.

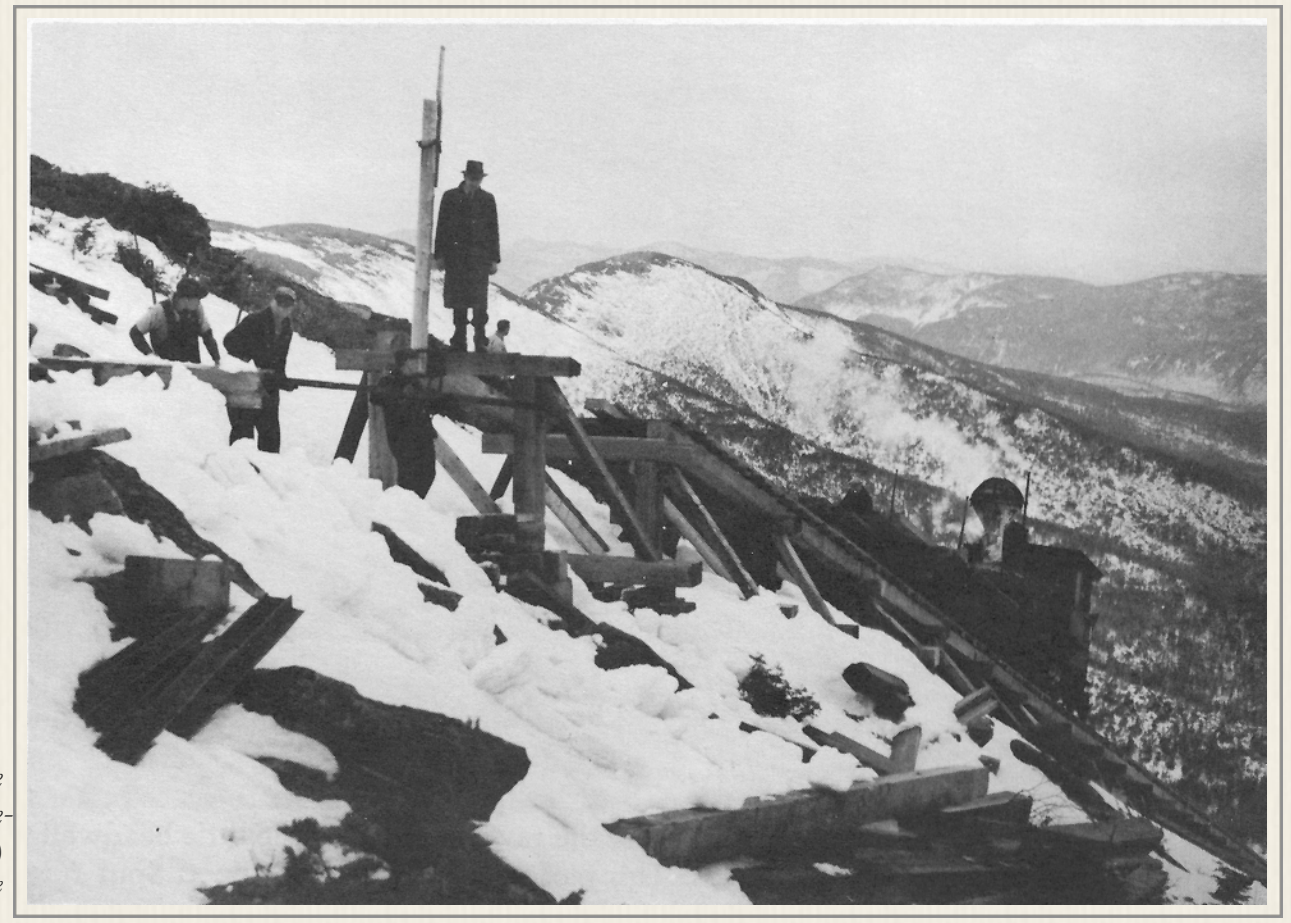
The grade on the trestle is 36.6, which means that the locomotive and its passenger car moves upwards nearly 37 feet every 100 feet it travels. The new trestle has been bolted to the mountainside with huge steel cables. The photograph shows the first passenger train over the newly completed "Ladder."

The cog line, second highest in the world and pioneer of its type, has operated since 1869 without a fatal accident.

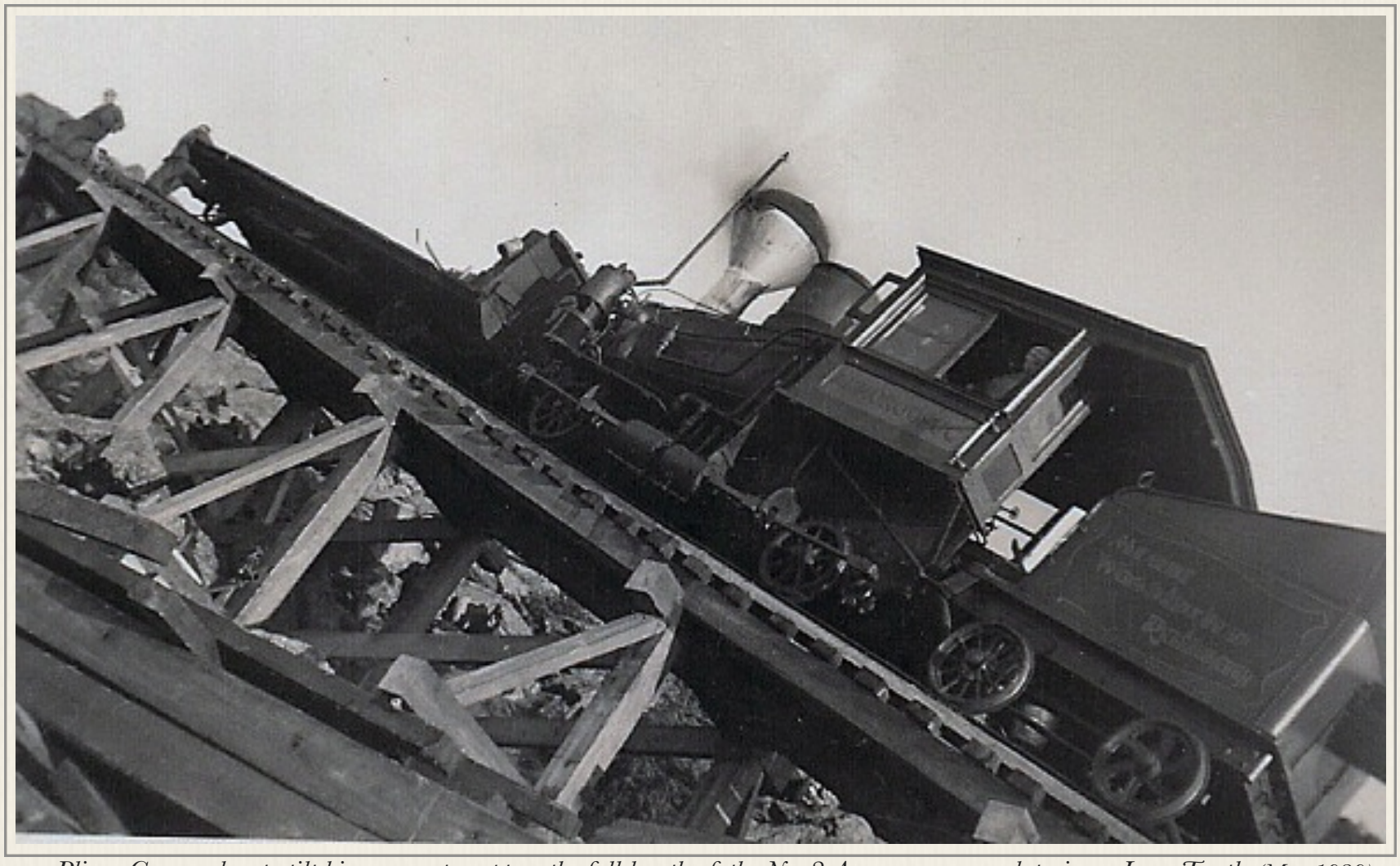
Construction of a new road will be necessary for nearly a mile above the present terminus of the road, located where the locomotive at the left is standing. The hurricane destroyed the road from there to the top of the mountain. It is expected that work will be completed in time for the opening of regular operations next Spring.



Photographer Winston Pote captures the first work train to cross the newly rebuilt Jacob's Ladder in the Spring of 1939. The skier is John Dick of the Mt. Washington Observatory staff. (May 1939)
- photograph by Winston Pote



General manager Arthur S. Teague stands atop a bent literally overseeing track repairs. (May 1939)
- photograph by Winston Pote



Pliney Granger has to tilt his camera to capture the full length of the No. 2 Ammonoosuc work train on Long Trestle (May 1939)
- Granger Family Collection

As the snow melts Long Trestle becomes long again above Jacob's Ladder (May 1939)
- Kent Family Collection

Inspection of Mt. Washington Cog Railway
Winslow E. Melvin
New Hampshire Transportation Director

"On Thursday, July 13, 1939 an inspection of the Mt. Washington Cog Railroad was made. Those present were *(NH Public Utilities Commission)* Chairman *(Nelson L.)* Smith, Commissioner *(William H.)* Barry, Secretary *(James W.)* Doon and Transportation Director *(Winslow)* Melvin. In making this inspection Colonel Henry N. Teague, President, and Arthur S. Teague, Vice President accompanied the inspection party.

"This railroad owns seven locomotives and six passenger coaches, one being a combination passenger and baggage car all of which are used for carrying passengers. Additional equipment is owned for servicing the coaling stations and track and trestle maintenance. In making this inspection five of the cars and engines were used on the trip or examined at the terminals. An inspection was also made of the terminal and various improvements and experiments were pointed out by Colonel Teague.

"An entire section of the trestle several hundred feet in length, including "Jacob's Ladder," so-called and above, was torn up by the hurricane, tipped over and deposited to the north a distance of approximately 300 feet. In this vicinity the track location curves to the right of an imaginary line between the Great Gulf and Waumbek water tanks and the result of the wind damage was to deposit the section of the trestle along this imaginary line. The railroad officials stated that the trestle work and tracks weighted approximately 1100 pounds per foot and that a wind velocity of at least 500 miles per hour would be required to move the trestle. This damage has been repaired with practically all new timber. The bents at various intervals have been securely anchored to adjacent rock ledges with steel cable. This will add a great deal of strength to the trestle and further reduce vibration. Previously all of the trestle work has rested on rock foundations and held in place by proper bracing and the weight of the trestle.

"In riding up the mountain the ties, stringers and bents were carefully noted. None appeared to be in need of renewal. Various locations were noted where new timber has been installed indicating that the usual care has been continued in replacing all bad timber as soon as its condition warrants.

"It was noticed that there is considerably less vibration than usual throughout the entire length of the railroad. This is apparent in the riding of the train but can be gaged more accurately by watching the telephone wires which follow the north rail beds. Experiments have been made in counter balancing the connecting rods by adding weight opposite the crank pins at each of the four wheels. This is undoubtedly the most important change which has been made in a number of years. All of the engines are to be equipped in this manner as soon as an opportunity is available. The ratio of the crank shaft gear is 6 to 1 but the force applied to the piston has always been apparent to those riding in the train as each impulse was given to the piston. The counter balancing is reflected in a smoother ride and proportionately less vibration to the moving parts of the locomotive, cars and trestle.

"Great care must be taken to renew the crank shafts before the possibility of breakage. During the past four years new vanadium steel shafts have been installed but the results did not meet the expectations. Shafts now used are made of nickel allow steel with the hope that crystallization will not occur as was found to be the case with those made of vanadium steel. It is believed that the counter balancing of the crank pins will be of value in accomplishing the desired results.

"In braking the trains while descending the mountain the engine cylinders are used as air compressors and the adjustment of a valve determines the mount of pressure which is released thereby adjusting the speed of the train to compensate for the variation in the grade of the railroad. This in itself is sufficient to hold the train but, in order to distribute the load over a greater section f track and cogs, brakes are used which control the car and the engine, for the most part, performs its won braking. The brake drums and shoes are both metal which results in considerable squeaking. A new and larger brake drum is now under construction to be operated with a fiber brake shoe. This experiment should be carefully watched, when installed, and if found to be successful will contribute a great deal toward the comfort of the passengers descending the mountain by the elimination of the grinding and squeaking metallic brakes.

Sec. 26 - 1938 Hurricane

"New and finer mesh screens are being installed on the smoke stacks of the locomotives to reduce the possibility of live sparks setting fire to the mountain side. One new car was constructed last year (1938) and more comfortable seats of the bus type have been installed.

"A new building has been built known as the New Marshfield Station. This is a very attractive log building designed by Colonel Teague and affords an opportunity for obtaining meals, gifts, etc. Fine toilets are conveniently located near this station and are very neatly kept. With these accommodations and those provided at the Summit House, the patrons of the Railroad are provided with very suitable and attractive facilities

"The locomotive engineers are all experienced men and the brakemen on each of the cars are college undergraduates. Their appearance is of the finest and the courtesies and consideration shown to the passengers is to be highly commended. A great deal of praise should be given to the fine manner in which this railroad is being maintained and operated."

Respectfully submitted,
Winslow E. Melvin
Winslow E. Melvin
Transportation Director

Brakeman - Almost a Spy ?

Researching the backgrounds of Cog employees more than a half century after the fact can be fascinating as one discovers ties that bind Mount Washington to larger, more well-known historical events. This is one of those stories dealing with a 22-year old multi-lingual college student who spent three summers at the Cog before leaving to join the war effort in 1942. Those who worked at the Mountain in New Hampshire knew him as "Jack" Kessler.

Hans Theodore "Jack" Kessler was born on August 15, 1918 in Jena in the Federal Republic of Germany, the first son of 34-year old Gerhard and 35-year old Anna Klara Dorothea (Rauff) Kessler. The couple's first child, daughter Gerhild had been born three years earlier. Another son, Gottfried and another daughter Adelheid would follow in 1921 and 1926 respectively while their father taught at the local university. Economist Gerhard Kessler was described as "an enthusiastic lecturer at the University of Jena (1912-1927)" and moved to the Leipzig University as a sociology professor. "Jack" attended the Königin Carola Gymnasium that had opened in 1902 - the school named after the Saxon Queen who had lost her post that same year of 1902 due to the death of her husband. The three-story school and its gym in the courtyard was destroyed during a December 1943 Allied bombing never to be rebuilt and is now the site of a parking garage in Leipzig.

Queen Carola High School,

As a young man, Jack's dad - Professor Gerhard Kessler was part of the Liberal Party before World War I. In the Weimar Republic (1918-1933), "he was an activist in the Social Democratic Party, fighting for democracy and defending the young Republic against the nationalists and the rising Nazi movement. A member of the regional parliament in Saxony, Prof. Kessler ran for an opposition seat in the Reichstag elections of March 1933 after Hitler was appointed German Chancellor. "Kessler was imprisoned by the Nazis but liberated on the personal intervention of President Hindenburg." Upon his release, Prof. Kessler, his wife and 15-year old son, Jack emigrated to Turkey. Jack would continue his preparatory studies at the German Lyceum in Istanbul. Back in Germany, the Nazi Regime officially erased the Kesslers' German nationality from the books.

Ord.Prof.Dr. Gerhard KESSLER (1883 - 1963)

Radical changes in higher education were underway in Turkey at the same Professor Kessler was released from prison. The Ottoman University in Istanbul was abolished by the new Turkish Republican government on July 31, 1933. Istanbul University was opened on August 1, 1933 on the same campus. Over 150 academics from the old Ottoman university were dismissed and re-

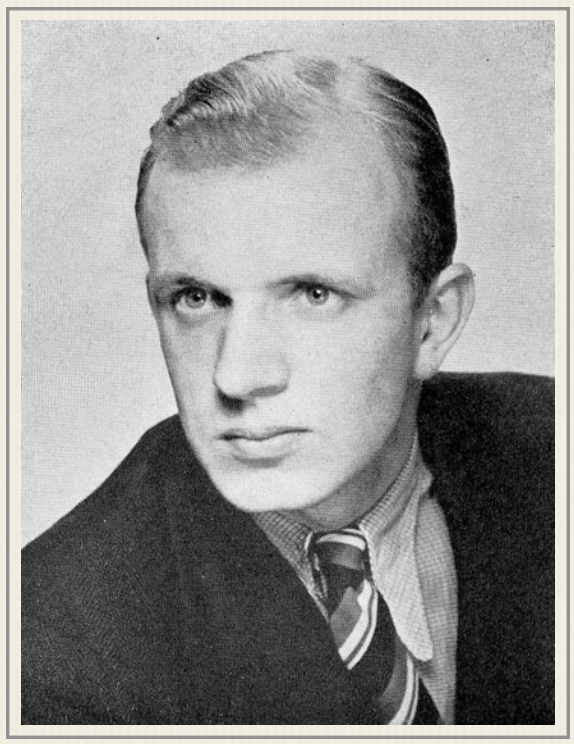
Sec. 27 - Almost a Spy ?

Entrance to the Istanbul University (1940s)
- Margaruite Bourke-White

placed by foreigners to improve teaching methods and research outcomes there. As Ragip Ege & Harald Hagemann write in *The European Journal of the History of Economic Thought*, "the dismissal of academics *(like Kessler)* from German universities for racial and/or political reasons under the Restoration of Civil Service Act, promulgated by the National Socialists on 7 April 1933, combined with Ataturk's reform of Turkish universities to offer the unanticipated opportunity to recruit a substantial number of first-class scholars to create a modern university system in the Turkish Republic."

Prof. Kessler joined the Istanbul Faculty of Law. He would stay in Turkey until 1951. Students described Jack Kessler's father as "deeply liberal in heart and mind… far more lenient towards social policy and state interventionism" in economic policy. Unlike other foreign academics, Prof. Kessler did not have to rely on translators to convert his German lectures for students. Gulten Kazgan, who later became a prominent Turkish economist, listed Kessler among the faculty from who she benefited most because he spoke French well and taught his seminar courses in this third language.

Teenage son "Jack" was learning French and the local language at the German Lyceum until he was expelled in 1938 for refusing to attend a celebration of the Nazi takeover of Austria. Thrown out of school, H.T. "Jack" Kessler contacted two distant cousins (one was Dr. Theodore Moldenka living in Hempstead, New York) in the United States and arranged for them to sponsor him as an immigrant. A young American teacher Kessler had come to know at Robert College in Istanbul suggested he enroll at his alma mater - Hamilton College in Clinton, New York. Hans arrived on the Hamilton campus just two days after landing in New York City. He had only "begun the serious study of English just a few months before leaving Turkey, but soon mastered the language," according to the *Hamilton Alumni Review*, "and earned a solid A from Tom Johnston in freshman English. A dedicated classicist, he took (Prof.) "Bull" Durham's advance courses in Greek, and on occasion was the only student in the class. By the end of four years, he had not only won the Hawley, Curran, and Winchell prizes in Greek, but achieved election to Phi Beta Kappa.



Hans T. "Jack" Kessler (1942)
- Hamilton College

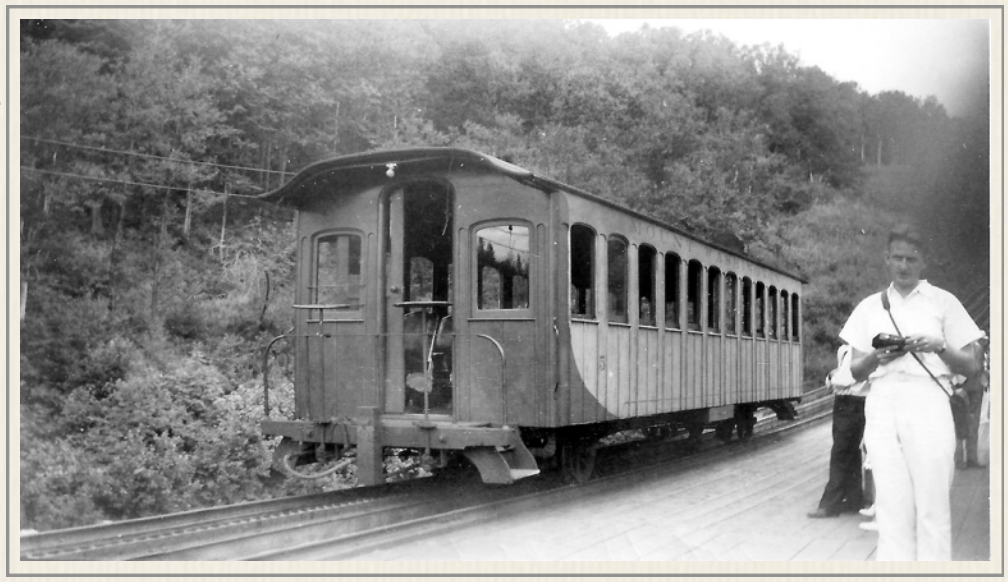
He could converse in German, Turkish, French and English.

Sec. 27 - Almost a Spy ?

"A man of culture rare," wrote the editor of his college yearbook, "Jack has spent most of his spare time since rush week freshman year reading Greek, Latin, German, French, and Anglo-Saxon." In 1940, he won the college's Hawley Prize in Greek, the Curran Greek and Latin Prize along with the Winchell Greek Prize followed in 1941. Away from academics, yearbook editors noted Kessler "took a crack at football, soccer and fencing but gave them up for the good of the team."

Train leaving Base Station for Summit on August 21. 1941 the last summer Hamilton College student H. T. "Jack" Kessler was a Cog brakeman/conductor.
- Robert J. Girouard Slide Collection

Kessler started working summers at the Mt. Washington Cog Railway for Col. Henry N. Teague after his first academic year at Hamilton College. Kessler arrived just as the new Marshfield Station opened in 1939 and Marshfield may have been the first place he worked. The job history entry on his resume for the Mount Washington Railway says he was initially "a cook, then brakeman and then conductor." According to his daughter, Kessler often talked about Colonel Henry Teague and (Teague's) association with Dartmouth. "I don't remember who actually hooked Dad up with (Henry Teague) given that he was from Hamilton," says Elise Wiley "but there was someone specifically who got him the job."



Passenger coach awaiting return of engine (1939)
- Gary Irish Collection

As a brakeman, Kessler was responsible for safely bringing the passengers riding in a car like the one left down the mountain by standing on the rear platform - adjusting the two brake wheels. As train conductor, he would take tickets and give the passengers the speech at Waumbek Tank outlining the sights to be seen and answering their questions along the route. In 1940, the *Mount Washington Daily News* in its Tip-Topics column wrote: "Expert linguist as well as A-1 brakeman is 'Jack' H. T. Kessler, Cog Railway employee. In this country two years he sounds more like a Yankee than do many natives. Jack is studying for an A.B. at Hamilton College, Clinton, N.Y. He plans to take up a career of teaching and research." During his three years at the Cog, he not only saw Marshfield Station come into being but had to learn how to throw the new switches at Waumbek and Skyline.

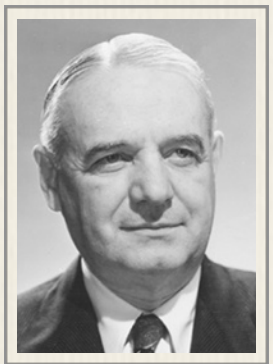
Sec. 27 - Almost a Spy ?

Kessler was on the Dean's List his last two years at Hamilton. A member of the Lambda Chi Alpha fraternity he lived in the house at the bottom of College Hill. "First man in the class to get his diploma," noted the 1942 yearbook editors as Jack decided to enlist at the start of the what would have been the spring semester of his senior year if he hadn't graduated early.

Lambda Chi Alpha house at Hamilton (1942)
- Hamilton College yearbook

That same spring Kessler's story became part of Dartmouth College student Robert Varney's 1942 history paper about the Mount Washington Railway, when Varney discussed the old Colonel's practice of hiring college students. Varney never named his Cog friend Kessler. "One of the boys whom the Colonel has assisted," wrote Varney, "was a German boy whose father fled Germany in 1932. He *(Gerhard Kessler)* had been a professor at Jena and Heidelberg and was mixed in politics in a mild professorial way. He fled to Instanbul and has been at the university there ever since that time. His son *(Jack)* came to this country in 1938, and he went to work at the railway almost as soon as he came to the country, even before he spoke English well enough to be understood. He was at the railway for three seasons, and at the end of the last one, he *(Jack)* said that all of his success and happiness in this country he owed to the Colonel *(Henry N. Teague)* because he had done so much to make life easier for the boy. Yet in all the time that the boy was at the railway, the Colonel almost never spoke to him."

Jack was not yet a citizen nor married and living in Clinton, New York at the fraternity when he went to Fort Niagara Yorktown on February 6, 1942 to answer his draft call and enlist in the Army. He weighed 163 pounds and stood 6-feet 1-inches tall. The records noted he had four years of college and was working as an actor. He went to Camp Croft, South Carolina for basic training assigned to the 37th Infantry, Park Battalion - Co. A. He attended graduation ceremonies at Hamilton wearing his uniform while on furlough. Private Kessler was transferred "per secret letter" from the 8th Infantry Training Regiment at Camp Croft, S.C. to the OSS and arrived at Area "B" on April 14, 1942.



William Donovan

OSS Area B

Training Area "B" in the Catoctin Mountain National Park in Maryland was the first operative training camp for the OSS in the United States. The head of the OSS, "Wild" Bill Donovan *(left)* selected the government-owned site because of its heavily wooded terrain, camps to house recruits and buildings for dining and train-

ing. Special Operations recruits and some secret intelligence personnel would receive basic paramilitary training there. Area B training included knife-fighting and close-combat techniques. Actual urban combat situations would be staged in what became known as the "house of horrors." Recruits would be awakened in the middle of the night, given "a gun with ammunition and sent into the house, where they were told they would find Nazi guards."

Picture of OSS recruits practicing firing a gun in Area B
- National Parks Office of Strategic Services Gallery

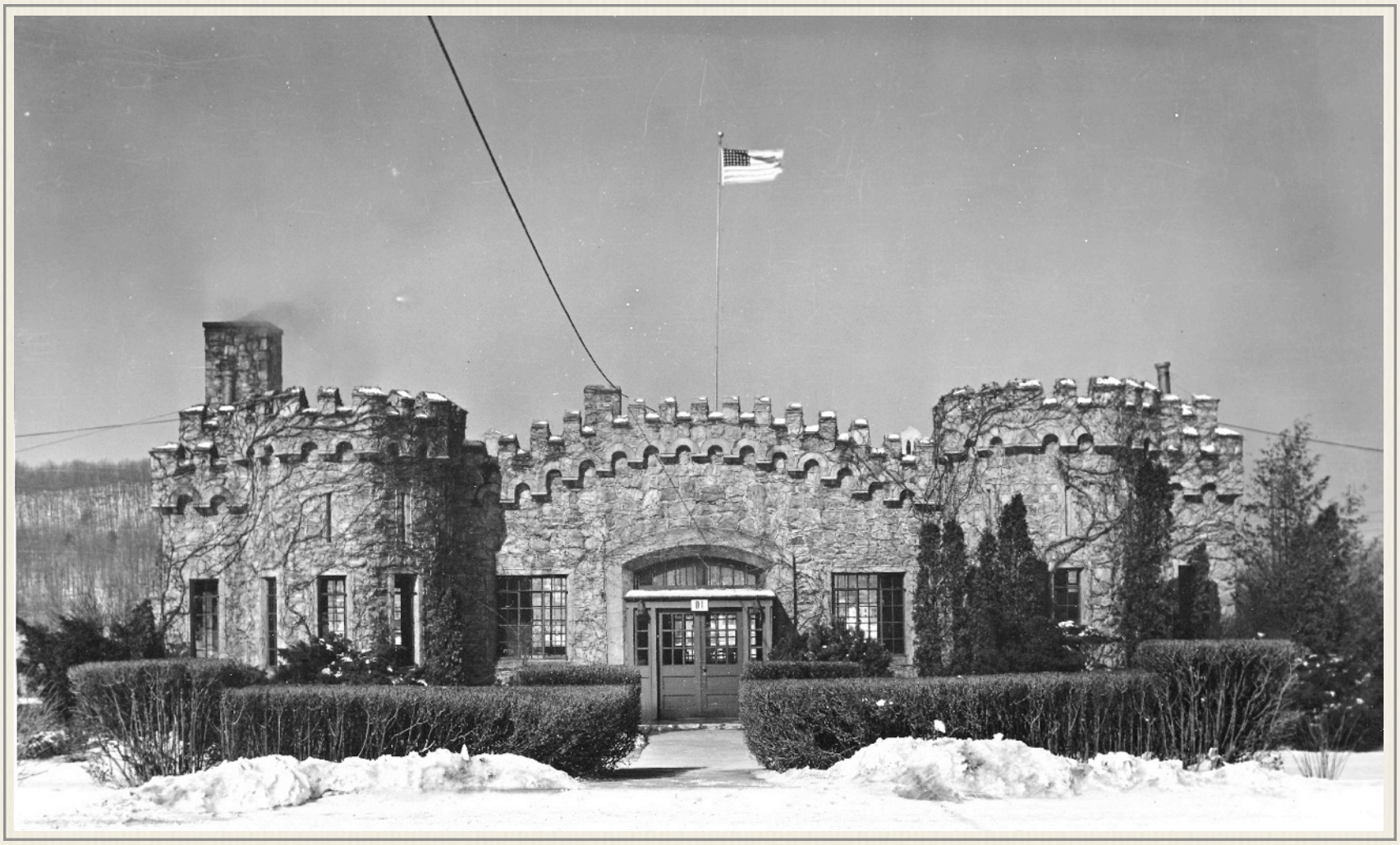
OSS trainee in "House of Horrors"
- NARA

Lt. Col. Shipley Thomas of the security office filed a background report on Kessler on May 19, 1942. Private Kessler, he wrote, is "23 years old, born in Germany. He came to this country four years ago and has taken out first papers. His father was a professor in a German University – a member of the Democratic Party there and was imprisoned for 3 months and his property confiscated (1932-1933). He was released to go to Istanbul, Turkey, to teach. (Kessler) had two sisters who remained in Germany when the family moved to Turkey. The sisters are said to be intensely pro-Nazi and this caused a "rift" with the rest of the family. References all feel that (Kessler) is violently anti-Hitler." Lt. Col. Thomas reported all of the references "were of German descent. These references were carefully checked and are believed to be anti-Nazi and with reason. (Kessler) has been in this country too short a time to permit any satisfactory investigation. It seems important, therefore, that he be carefully interviewed."

The "careful" interview was conducted by Lt. Col. Ellery Huntington Jr. Huntington's June 23, 1942 report found Kessler "is of pure German stock. Two sisters and mother are Nazis. Father opposed to Nazism as is (Kessler). Strangely enough (Kessler) believed to be thoroughly honest in statement of anti-Nazi convictions. Speaks English perfectly and desires infantry duty. Due to connections, should probably be transferred to infantry outfit, where pressure of such connections would not be so dangerous as in case of present assignment. It is believed that (Kessler), if transferred, would be thoroughly discreet."

That August he was promoted to Private 1st Class and became a corporal on November 20, 1942. The OSS personnel officer George B. Riggin found Kessler's character to be "excellent" and his efficiency rating as a soldier "superior" in December 1942 as he was being transferred out

of the OSS to Military Intelligence Training Center - assigned to Camp Ritchie in Cascade, Maryland. Kessler signed a secrecy certificate in January 1943 saying he understood everything he learned as part of the C.O.I. Service Command was not to be discussed.



Administrative offices at Camp Ritchie, Maryland
- www.theritchieboys.com

Camp Ritchie

TheRitchieBoys.com website says Camp Ritchie began as 638 acres of Maryland used as a summer resort by wealthy families from Philadelphia, Baltimore and Washington, D.C. In 1926, it became a training center for the Maryland National Guard and was named Camp Albert C. Ritchie in honor of the then Governor of Maryland. It also served as a summer camp for children. In 1942, the Army leased Camp Albert C. Ritchie from Maryland and its official name became the Military Intelligence Training Center (MITC), or simply Camp Ritchie.

Chief of Staff Gen. George Marshall wanted to improve the intelligence training in the U.S. Army. He sent a team to England to review British Army training methods. Their recommendations led to the centralized school for training interrogators of prisoners of war, interpreters and translators. The State of Maryland and the Federal Government signed a one year lease to let the War Department use Camp Albert C. Ritchie for the new Military Intelligence Training Center on June 1, 1942. It could be renewed on a year to year basis for one dollar, but would revert back to the state within six months after World War II ended.

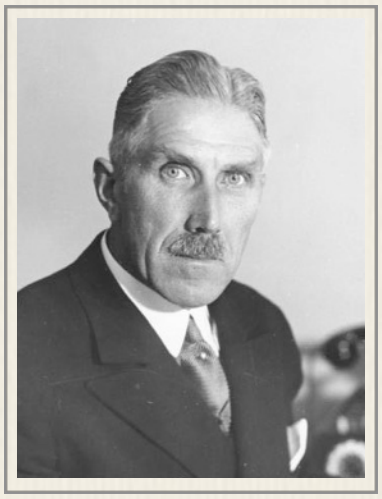
Kevin Aughinbaugh of Gettysburg College says in *The Gettysburg Historical Journal* that the men who graduated from the six-month training at the M.I.T.C. at Camp Ritchie "served their field

commanders well during battle by analyzing situations and providing quick reports on enemy movements. Furthermore, these graduates played meaningful roles following the engagement, as they would work to interrogate prisoners and analyze photographs to provide intelligence for the next battle. The Ritchie Boys were mostly direct descendants from Europeans, or were German Jews who had escaped to America in the years preceding the war. The army preferred these men, as they already knew European languages such as German, which would prove useful in interrogating captured enemy combatants." Aughinbaugh says roughly 19,000 men, including intelligence officers, interrogators, and photographic analysts were trained at the camp.

Corporal Hans T. Kessler arrived in Maryland in January 1943. He was assigned to Section VIII - Close Combat and begins training in the Fifth Class - Section 9. The Section 9 recruits specialize in (not surprisingly) German. Their training began on February 8, 1943. Kessler's final standings show him to be an adept pupil. "Excellent" in languages. A grade of "97" in German Army Organization and a "94" in German Army Identification. He recorded another "94" in Interrogation. "100" in German Army Tactics. A "92" in reading German maps. His lowest score of "83" involved German documents. He is on a list of fifteen Camp Ritchie Assistant Interrogators and Chief Clerks. He graduates on April 9, 1943 and receives Certificate #1061. He speaks German "fluently" - French and Turkish "fairly well." His specialty is the interrogation of German Prisoners of War. Of the 450 classifications handed out to his class, Hans T. "Jack" Kessler is the only one with an Assignment Book Number of "I-64."

While awaiting orders "Jack" becomes a naturalized U.S. citizen in Hagerstown, Maryland on April 21, 1943. His name officially changes from "Herman Theodore August Kessler" to Hans Theodore Kessler. He is attached to the MITC school for a short-time.

On May 6, 1943, Cpl. Kessler is "Ordered Away" by Special Order 109 from Camp Ritchie Headquarters. "Away" is the 3rd Service Command in Baltimore, Maryland which covered the District of Columbia, Maryland, Virginia, and Pennsylvania. As Kessler's Camp Ritchie military intelligence file closes someone cryptically writes "history made" next to his name and service number. Back in Istanbul, Turkey, "Jack" Kessler's father was trying to covertly make a little history of his own by helping with a clandestine German Resistance effort to end the war in Europe by making contact with the OSS and President Franklin Delano Roosevelt..



Ambassador von Papen

"So's Your Old Man"

In 1943 "Neutral Turkey had become an arena in the fight between the Axis and the Allied powers for influence and allegiance. Clandestine activities by all sides had reached historically unprecedented levels," write Holocaust survivors Arnold Reisman and George Wolf in the October 2010 *Jewish Magazine.* The pair say the elder Kessler was part of an "unlikely coalition of anti-Hitler elements of the German Army, German refugees living in Turkey, members of the Office of Strategic Services (OSS), the Abwehr (German military intelligence) and the German ambassador to Turkey,

Sec. 27 - Almost a Spy ?

Franz von Papen" who fashioned a report that went all the way to President Franklin Delano Roosevelt. Reisman and Wolf say FDR rejected the plan after listening to his advisors, "including American Jews, Henry Morgethau Jr., among them counseled against it." The result of that rejection, they write, "was two more years of war, untold destruction throughout Europe, and millions of additional soldiers and civilians being killed" as the Nazi death camps were just starting to operate.

Helmut von Moltke (Jan 1944)

The plan began in July 1943, when Count Helmut von Moltke, and another aristocrat, Wilhelm Wengler, were sent to Istanbul by the German government to secure the release of a fleet of ships interned by Turkish authorities in the Sea of Marmara. While Wengler was working on their official assignment, von Moltke (who was legal advisor to Admiral Wilhelm Canaris, commandant of Germany's military intelligence, the Abwehr) called an old friend, Hans Wilbrandt, a German refugee who was now consulting with the Turkish Ministry of Trade. Wilbrandt was a banker in Frankfurt before 1933 and helped von Moltke obtain financial assistance for his family estate in Kreisau. Wilbrandt arranged a meeting with Alexander Rüstow, an economics professor who maintained ties with both the German Ambassador in Istanbul and contacts in American intelligence. The three met and von Moltke briefed them on conditions in the homeland and the status of the resistance movement. He suggested "a German staff officer be sent to Britain under the guise of an air accident. This officer would have the power to make an agreement with the Western Allies to end the war. Von Moltke sought a meeting with the US Ambassador in Cairo to talk about this idea that became known as the *Kreisau Plan* - named after the family estate and the circle of men who came up with it.

Admiral Wilhelm Canaris

Alexander Rüstow

This initial group became larger as other émigrés and individuals joined making it an effective link between the internal Free Germany Movement (Deutscher Freiheitsbund – DFB) Germans living abroad, and Western intelligence services. Joining the movement were economics professor Gerhard Kessler, Walter Arndt who later became a professor of humanities at Dartmouth, Ernst Reuter, a city planner who became the first mayor of post-war Berlin and Alfred Schwarz, a Czech engineer working in Ankara who was associated with the OSS. As guests of the Turkish government, the émigrés were gambling dangerously. Not only were they forbidden to participate in any political activity, they were risking their lives by cooperating with American and British intelligence. Nevertheless, the group was determined to help the Allies bring an early end to the war.

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By early fall, memoranda about the group, the émigrés and von Moltke, began traveling between Istanbul and Washington. A report filed with the OSS Washington office on September 8, 1943 noted the start of a "Free German Movement in the Service of the Western Allies." Reisman and Wolf write "The report specifically named Professors Kessler, Rüstow, Reuter, and Wilbrandt in a section titled "Personal Particulars of Some Members of the German Freedom Movement (DFB)" and summarized their respective bios and continued with: "They possess valuable contacts with like-minded men inside Germany, with circles in the Wehrmacht and all sectors of German economic life, on the employer as well as the labor side." The inter-German resistance group were given the code name *Kreisau Circle*.

OSS Agent Theodore A. Morde

US authorities thought that Franz von Papen, the German Ambassador to Turkey might be "hedging his bets" by playing several sides by involving himself in this plan. Some worried OSS officer Theodore Morde sent to talk with Ambassador von Papen might be a double agent.

Von Moltke's first try at contacting leading Americans in Istanbul failed. He went back in December for five days and planned a third trip for the start of 1944. However, von Moltke was arrested by the Gestapo in January of 1944 and executed on January 23, 1944.

According to Reisman and Wolf, the so-called Dogwood network operation was terminated by the OSS on July 31, 1944.

Gerhard Kessler stayed in Turkey until 1951. *The German Historical School and European Economic Thought* edited by José Luís Cardoso and Michalis Psalidopoulos said the elder Kessler "contributed greatly to the development of the library of economic and social sciences. In 1946 he was active in setting up together with Orhan Tuna the first postwar official Turkish trade union."

The Son Also Rises

After Camp Ritchie, Cpl. Hans T. "Jack" Kessler went first to the 3rd Service Command in Baltimore in May 1943. He was then assigned to Co. D of the 2nd Battalion of the 541st Parachute Infantry Regiment at Fort Benning, Georgia where he was promoted to the rank of master sergeant. The 541st PIR was activated on August 12, 1943. The men in the unit had scored exceptionally well on their Army Entrance Exams and all were volunteers. In December 1943, the 541st joined the 11th and 17th Airborne Divisions for two weeks of maneuver's in North Carolina to determine whether the Airborne Divisions would continue or become independent Battalions that could be attached to regular army groups "for use in sabotage and deception operations." The so-called Knowllwood Maneuvers kept the Airborne Division concept alive, and the 541st went back to Benning as part of the strategic reserve held in the United States. The 541st never saw combat as the war ended before their planned deployment to the Pacific Theater. However, the 541st with its highly trained and highly educated troopers was used to send trained replacements overseas. Kessler was one of them.

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According to "morning reports" which are the best evidence available that someone is actually with a unit and records changes of activities within the unit, we have a good idea of Hans T. Kessler's service in Europe and what he was actually doing. These show him in early August, 1944 being a member of the 541st Parachute Infantry, Company D, in Fort Benning, Georgia (also known as the First Parachute Training Regiment). Sometime between September 13 and November 23rd, he sailed to Europe and was in the 12th Replacement Depot when he entered the service of the 17th Airborne. He was placed in the Headquarters Company of the 194th Glider Infantry Regiment. He became part military intelligence staff (G-2).

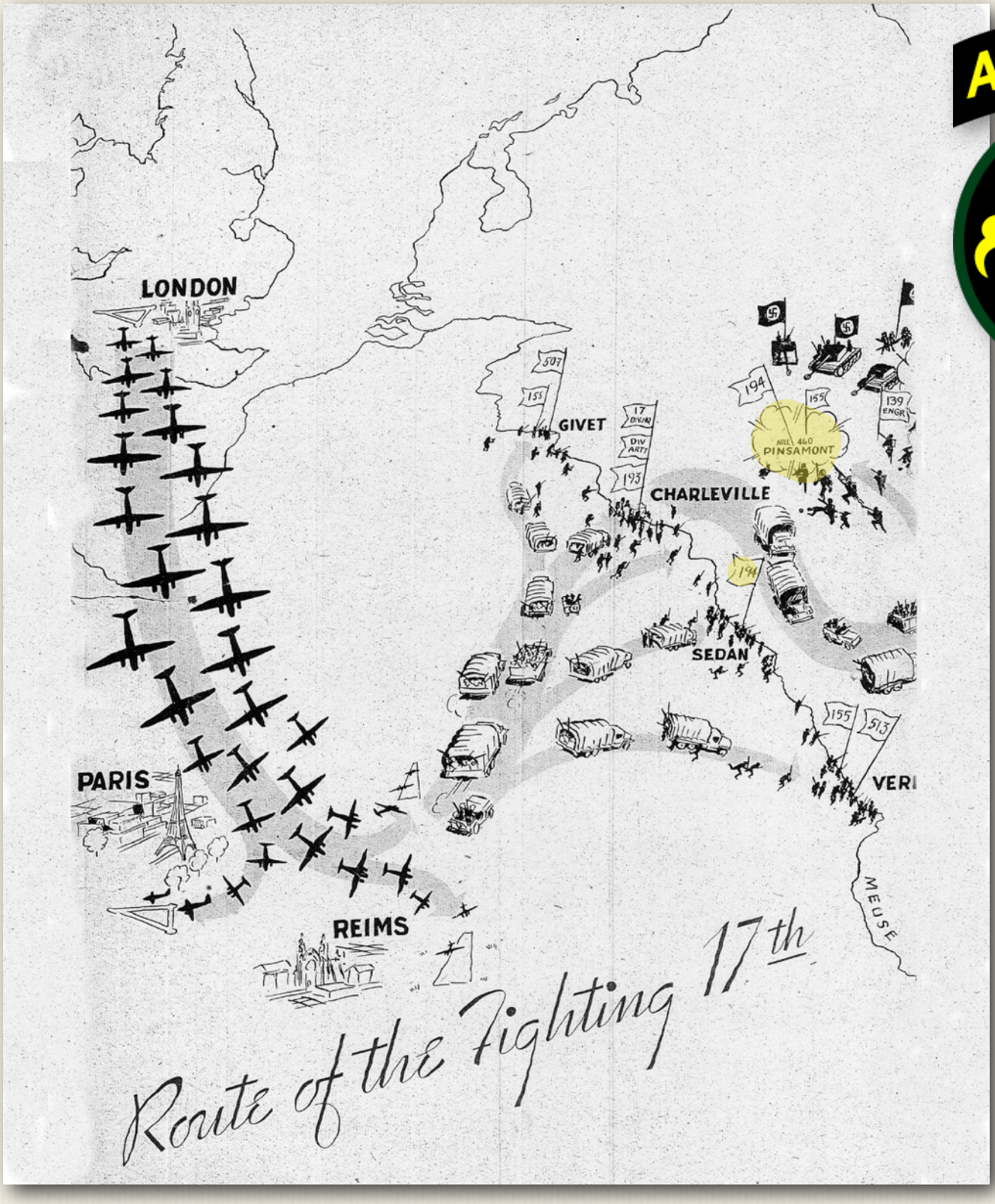
Jack? Kessler: *These guys who strike a pose during Tennessee maneuvers were members of the 17th Division Intelligence Section. Front row(L-R): Raymond JUST, Richard LACEFIELD, Fred DICKSON and George CHARLESWORTH. Middle row: Thomas CONNERS,* ***KESSLER****, Adolph BEYERS, Glen MILLES and Fenton MILLES. Back: Lt. Col. KENT and Major McALESTA.*
- TFH collection / http://17th-airborne-in-the-bulge.eklablog.com/the-17th-a-b-division-c924529

194th Glider Infantry Regiment

The 194th had been ordered to Europe in early July 1944. Final preparations extended into mid-August. The Regiment boarded the Army Transport vessel *Wakefield* at Pier 7 in Boston Harbor. The Wakefield crossed the Atlantic without convoy and was uneventful except for the "numerous abandon-ship drills that were held." The Regiment's official narrative says "The Wakefield docked at Liverpoool, England before noon of the 27th of August." The next morning the 194th moved by train and truck to Camp Ogburn St. George near Chiseldon, England.

Their training through the fall of 1944 involved learning how to fire foreign enemy weapons, officers flew to Holland to see combat conditions as they existed with other Airborne Divisions. *(It was during this period that MSGT Hans T. Kessler became part of the Headquarters Co. specifically on November 23rd).* Veterans of the Normandy invasion and campaign put the 194th through special exercises involving attacks of fortified positions, the technique of hedgerow fighting and the intricacies of street fighting" all common to combat on the Continent. Orientation flights were held in Waco CG-4A and British Horsa gliders. A flight on December 12, 1944 resulted in the unit's first casualties, when 30 officers and enlisted men were killed in a glider crash. Six days later the unit received air movement orders to head to France to assist in countering the rapid German advance in Belgium that became known as the Battle of the Bulge. The 194th was ready to move out on

December 21st, but weather conditions "prevented departure." The same was true on the 22nd, 23rd, and 24th. They spent Christmas Day preparing to move into battle positions in the so-called SEDAN area of the fight. The day after Christmas, the 194th lifted off from Remsbury Airfield at mid-afternoon (1500). They arrived in France two-and-a-half hours later. The 17th had been transferred to Rheimsarea in spectacular night transport landings. Out of the planes and onto trucks, they left the French airfield at 1945 and arrived at Mourmelon at 2130.



Graphic from "a pictorial review of the division's initial action - the Battle of the Ardennes - published by enlisted men of the 17th Airborne Division on the Continent. (1945)
- The Talon

The Bulge

"The 17th was whisked to France by air to help stem the German advance," wrote Combat correspondent Don R. Pay in the Division's newsletter *Thunder from Heaven*. "Leaving Charleville, France, under cover of darkness, the 17th moved to the Southern flank of the Belgian Bulge, after having secured the Meuse River line again Nazi penetration. After trucking through the gray cold of the Ardennes winter, the Division left Neuchateau and established operation headquarters

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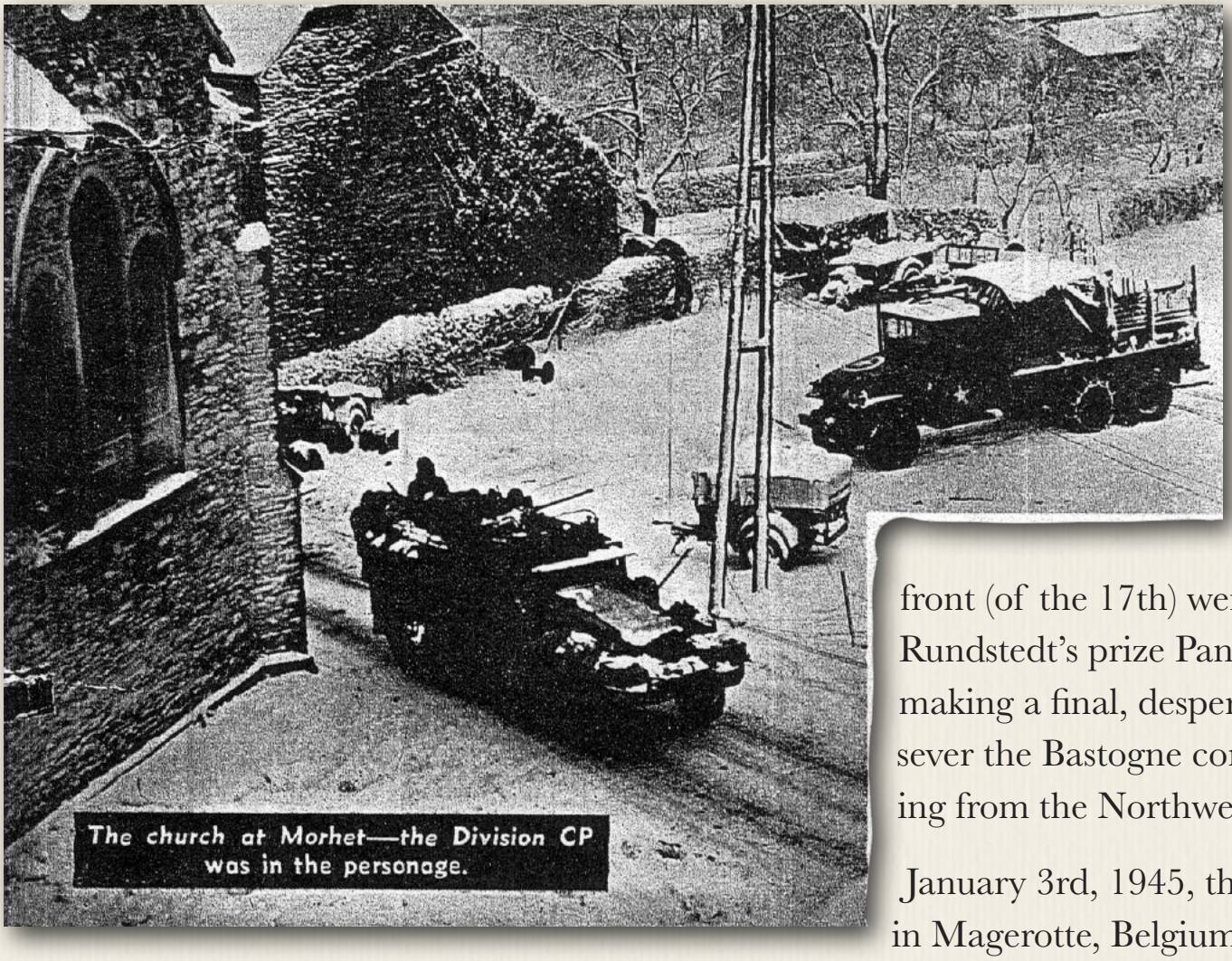
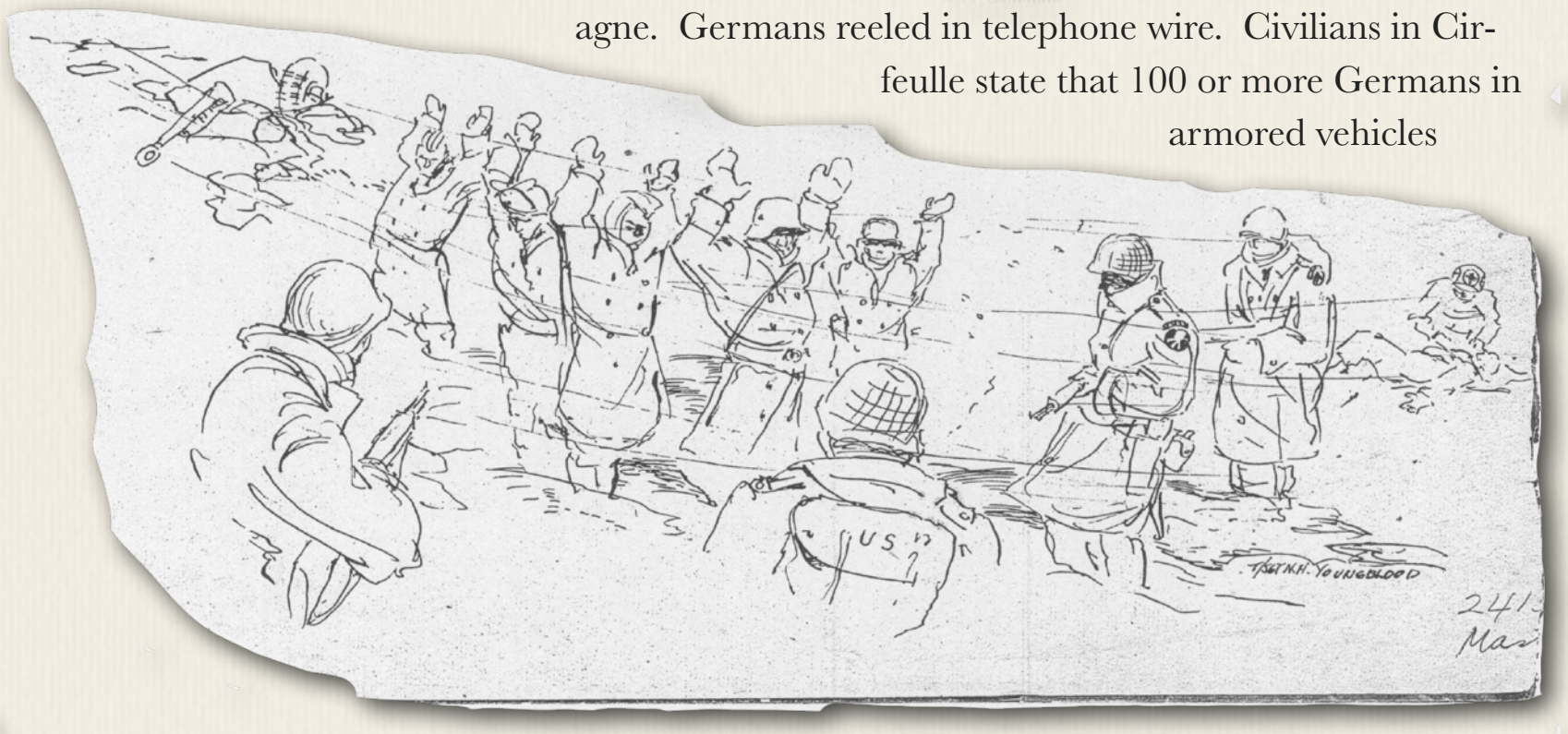


in the war-torn town of Morhet, Belgium. Regimental combat teams moved into position with order to attack at 0815 on the morning of the 4th of January 1945. In front (of the 17th) were Von Rundstedt's prize Panzer grenadiers, making a final, desperate attempt to sever the Bastogne corridor by attacking from the Northwest in force."

January 3rd, 1945, the glidermen were in Magerotte, Belgium ready for an attack on the enemy in the Bulge the next morning shortly after 8 am. The regimental narrative says "It went along well to forward limit of advance then met 5 counterattacks. 2d & 3d Battalions held well." However, heavy tank attacks between 9pm and midnight forced the 3rd Battalion back. The battle surged back and forth. On January 9th, the 194th was digging in near Houmont for a possible German breakout attack. Men on the line were "relieved in shifts to get (frostbitten) feet fixed up."

13 January 1945 - 2145 HQ receives message from **Sgt. Kessler**, S-2: Les Trois Ments 479637: 5 tanks passed thru here about 1900, had muzzle brakes, headed off to Bertagne. Germans reeled in telephone wire. Civilians in Cirfeulle state that 100 or more Germans in armored vehicles



passed thru Bertegne. One German column consisting of about 25 motor vehicles was observed moving toward Salle 4764 by the same civilians. Civilians believed that these Germans moved into wood NW of here. Also reported German Arty moved into positions here, fired, and moved W about 2200, 12 Jan 45. German troops originally stayed in Cirfeulle, but moved E during day light 12 Jan 45. Troops fr W moved in afternoon. Left town about 2200, 12 Jan 45." And at 2200 on 13 Jan, Kessler messaged that "Anyone who wants CO is to call 1st Bn."

The 17th Airborne and the 194th's first battle operation came to an end on 11 Feb 1945. The next month would be spent at Chalons Sur Marne, France preparing for what was known as *Operation Varsity* - a glider-only segment of the invasion of Germany over the Rhine river. The soldiers of the 17th Airborne would employ a number of new weapons. As an improvement over the largely ineffective shoulder-fired anti-tank rocket launcher, better known as the bazooka, the 17th's paratroopers and glider infantry were equipped with a new shoulder-fired 57mm recoilless rifle, as well as a more powerful, tripod-mounted 75mm recoilless rifle. While they still carried plenty of bazookas in combat, the relatively lightly armed airborne soldiers now had weapons that could more effectively deal with German armor. Part of the preparation was a reorganization of the Division on March 1st. The 193rd glider Infantry Regiment was deactivated and the troops from that unit (along with replacements) brought the 194th up to operational strength. As part of the reorganization Kessler was transferred to Headquarters Special Troops of the 17th Airborne.

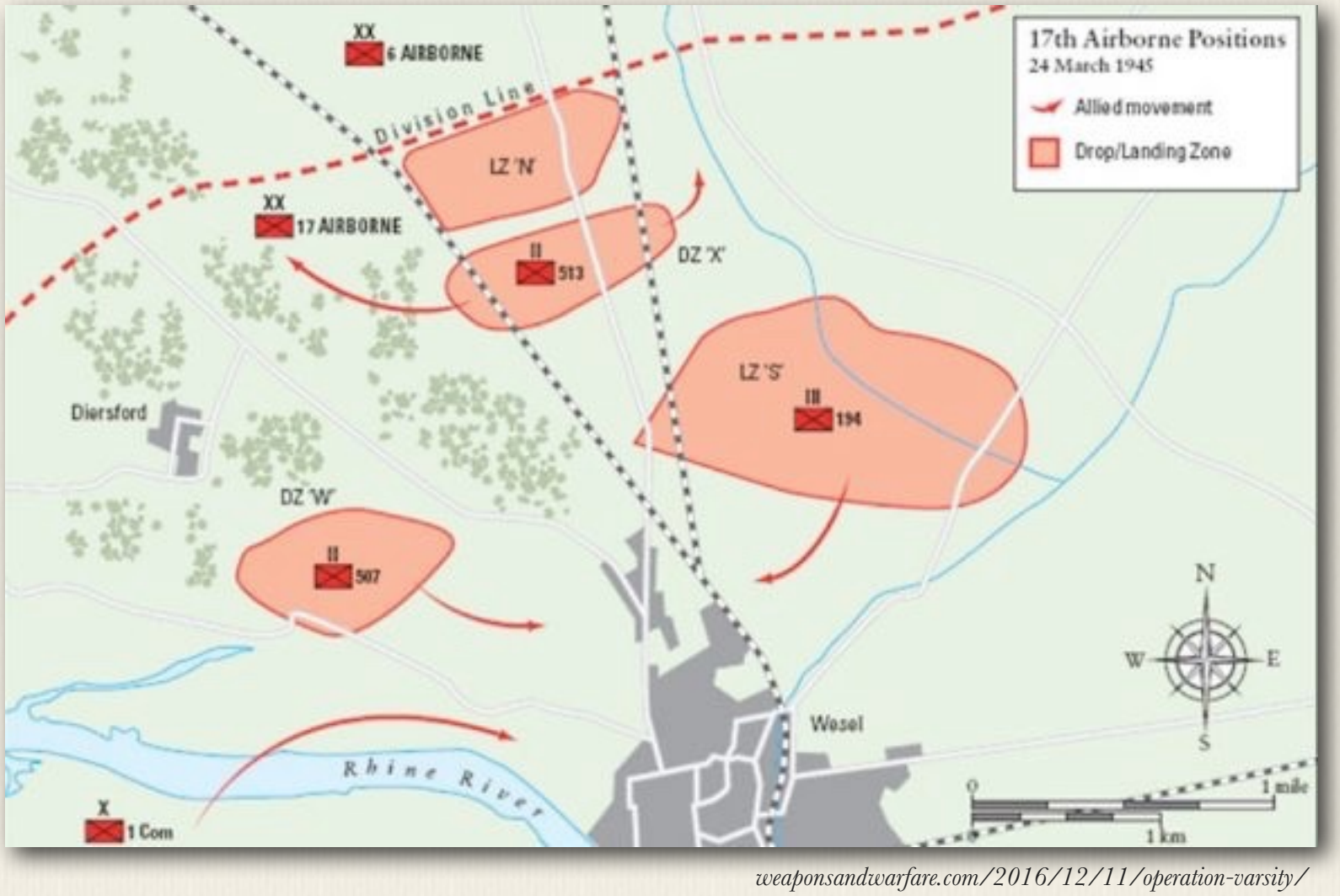
Special Troops

The 17th Airborne's yearbook produced in August 1946 said "The Jacks of All Trades are found in Division Special Troops... to make the blind to see... to keep the engines roaring... to keep commanders informed of the fluctuating tides of battle... to ease the demand for food, clothing, and supplies... to organize and simplify the problems of administration... these phrases barely begin to explain the multiple tasks of the units of Special Troops - Medics, Headquarters, Signal, Quartermaster, Ordinance. As companies they operate individually but in effect they are molded together to provide the necessary functions to keep the Division a smooth running organization."

Hdqtrs Special Troops would be just ten men at the start. Master Sgt. Hans Kessler was one of six enlisted men, a single warrant officer and four officers, including the Commanding Officer Lt. Col. Clark N. Bailey, that made up the initial group. By April 1st in the wake of *Operation Varsity* the Hdqtrs Special Troops unit would number 36 (11 officers, 1 warrant officer & 24 enlisted men). The Headquarters Special Troops performed Base Echelon duties during the campaign. Sgt. Kessler was likely part of the team interviewing the 1153 German prisoners of war captured on D-day and the 229 POWs captured during the second day of fighting D+1

Operation Varsity

The first American glider troops (COL Pierce's 194th Glider Infantry Regiment and LTC Joseph W. Keating's 681st Glider Field Artillery Battalion in double towed gliders) begin arriving at around 1030 on D-Day, with most reaching the correct landing zones despite the haze and heavy



weaponsandwarfare.com/2016/12/11/operation-varsity/

ground fire. German flak took a heavy toll on the 295 tow aircraft–twelve were shot down, another fourteen were forced to make crash landings, and 126 suffered heavy damage. Six CG-4A gliders were shot down, and most of the incoming craft were damaged on their final landing approach. German automatic weapons and rifle fire raked many of the gliders once they were on the ground. Unlike previous air assaults, Varsity marked the first time gliders came down in landing zones not already secured by paratroopers. Eighteen glider pilots were killed and another eighty were wounded or injured in crashes.

Kessler's old unit - the 194th GIR came down on LZ 'S', according to the website Weapons and Warfare.com. "Again the gliders and transports took heavy casualties, the glidermen actually landing amongst an artillery emplacement engaging targets on the western bank of the Rhine. This was duly silenced by the glider-

Glider infantrymen from the 194th Gilder Infantry Regiment, 17th Airborne Division, begin moving out towards their objectives (24 March 1945)
- National Archives

men." The 17th Airborne Division's G-2 section rode in on glider number 80 - the last of Serial #8 that left from Field A-58 near Coulimmiers, France. The after-action report says Kessler's glider was hit in the air by both small arms fire and flak from the German troops below. The glider crashed and suffered two casualties.

As 24 March came to a close all the tasks given to the men of the various airborne units had been accomplished. The German rear had been thrown into disarray and allowed for the consolidation of the bridgehead over the Rhine by the land forces. The routes taken by any potential counter-attack from the German panzer units stationed further to the rear were held and the town of Hamminkeln had been captured. By midnight of 24 March the 15th Division had made contact with the 6th Airborne and armour was starting to come across the river to further reinforce the bridgehead. By the following day twelve pontoon bridges were laid across the Rhine to aid the stream of Allied forces east of the river. The attack had been costly on the airborne forces, with the 6th Airborne suffering 1,300 casualties and the 17th Airborne suffering a similar amount. However the lessons learned from Market Garden had proved to be fruitful, with an airborne army landing in the enemy's direct rear area a swift victory could be achieved. The German defences in the west had been cracked and now the road was open for 21st Army Group to exploit the gap and continue on to the Elbe river, swinging south to join with the American counterparts, who had forced various crossings along the southern part of the Rhine. Within six weeks the war in Europe would come to an end.

Presidential Unit Citation - Aug 12, 1946

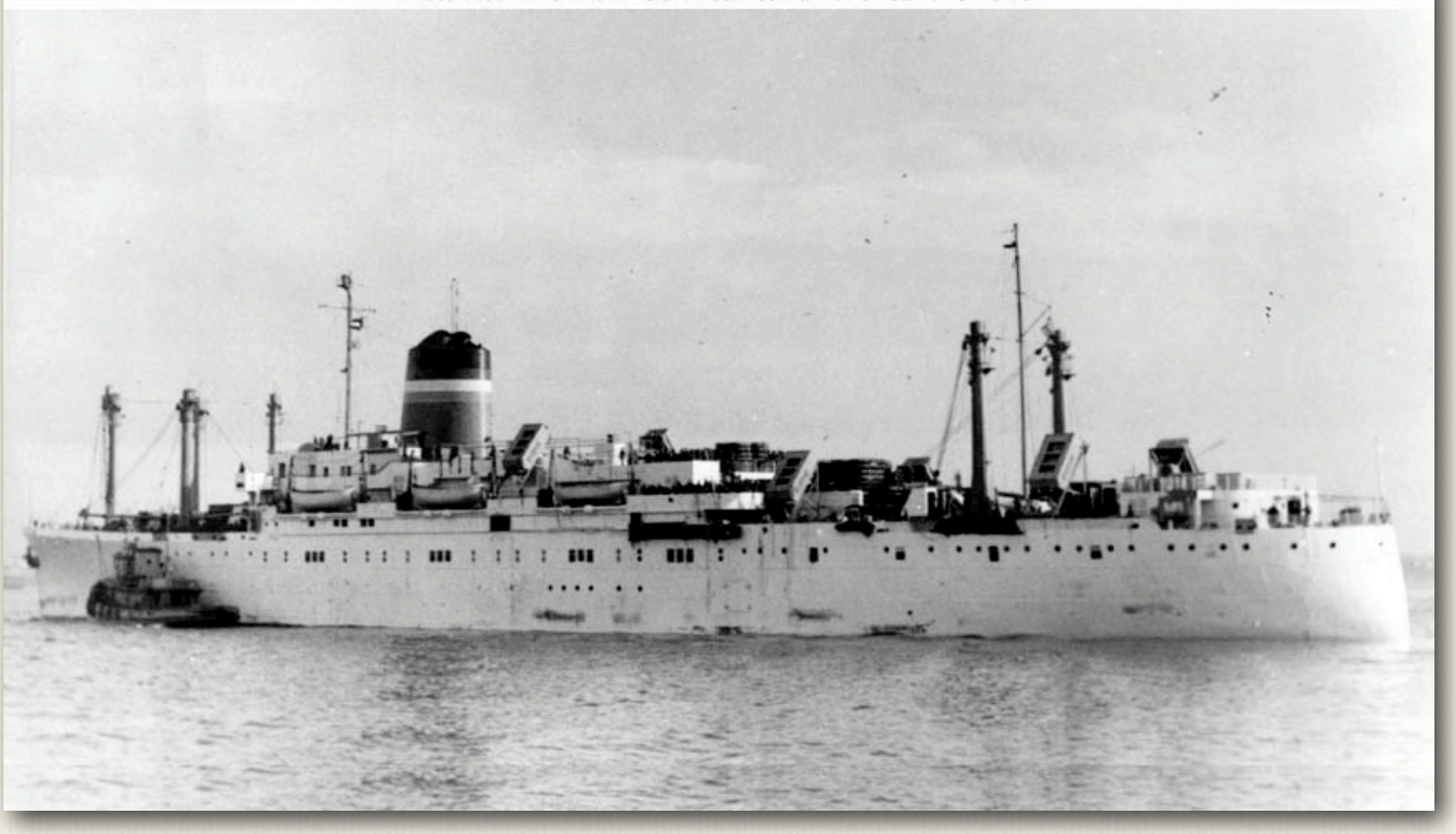
The 194th Glider Infantry Regiment, for extraordinary heroism, efficiency and achievement in action against the enemy near Wesel, Germany on 24 March 1945. After encountering strong flack resistance during the airborne landing, this glider infantry regiment went into action against previously prepared and strongly fortified positions to seize, organize and hold their initial objectives within 2 hours after getting to the ground. In addition to seizing the crossings over the Issel Canal and Issel River, after landing in an area swept by heavy enemy fire and which afforded little cover and concealment, the 194th Glider Infantry Regiment took 1153 prisoners, captured or destroyed 49 field pieces of various caliber, and knocked out 10 tanks of the Mark IV and Mark V class. Planning to the last detail and execution with aggressive leadership and fighting qualities of this glider infantry regiment's officers and men played a vital part in gaining the initial and subsequent success of the airborne and land invasion of Germany.

Letter of Appreciation - 8 Sept 1945 from Gen. Jacob L. Devers "When the German Army drove a huge wedge into our lines in the Ardennes, the 17th Airborne was brought forward immediately and placed in the line south of Bastogne. Despite freezing weather and heavy resistance, your troops assaulted the German salient, forced the enemy to fall back, and by the end of December had penetrated the western frontier of the Reich. After a brief rest, you were called upon to engage in another arduous mission. In one of the most decisive battles of the war, your paratroopers dropped on the eastern bank of the Rhine and touted the enemy so effectively that British and American infantrymen were able to sweep across the river with little delay in the drive which at

last brought about the surrender of all Germany. It is my privilege on the eve of the inactivation of your division, to commend you, your officers and men for your gallant contribution to the cause of liberty."

Master Sgt. Hans T. Kessler stayed with Special Troops of the 17th Airborne until he was transferred to the 28th Infantry Division on July 7, 1945 He returned to the U.S. with the 28th - arriving on August 2, 1945 aboard the USAT *James Parker (below)*. He was honorably discharged on November 4, 1945 at Camp Shelby, Mississippi at the time of demobilization. His final payment from the Army was $594.59.

Photo No. NH 91274 USAT James Parker circa 1945-1946



After the War

Jack Kessler's time in the Army had changed his career path from becoming an academic like his father to working for a company in the Near East, "preferably in the oil business." The *Hamilton Alumni Review* highlighted Hans T. Kessler '42 as an example of what the college's new Job Advisory Service could do for graduates. They said Jack's first "application to an oil company with Near East connections brought no results. So he tried (Hamilton's) Job Advisory Service. Sidney B. Bennett, '28, the director, sent (Kessler's) name and credentials to W. H. Spice, Jr., '22, a consulting geologist, away down in Texas, who wrote Mr. Kessler in New York, advising him where his best prospects lay and how he could most advantageously develop them, and suggesting certain persons for him to call on; at the same time he (Spice) wrote these men to expect a call from Mr. Kessler. That was toward the end of November. By the middle of January *(1946)* Mr. Kessler was happy with a job as junior marketer in the Near East Division of the Socony Vacumm Oil Co., at a much better salary than he ever expected to get as a greenhorn - though he is careful to

note that he is "only a small fry." He expected to start for Cairo in February or March. There is no catch to it, either. Out of curiosity, the man who hired Mr. Kessler made a search for the previous application, and found it buried in a drawer from which it would probably never have emerged except as waste paper. The Spice part of the Job Advisory Service had turned the trick. Clearly it is well worth an ex-Serviceman's while to communicate with Mr. Bennett. The Advisory Service, of course, promises only advice; but those who have applied to it have found that advice valuable, and not a few have gained much more. At last report 146 Alumni, representing 46 occupations had consented to assist the Service. P.S. - Another corporation to which Mr. Spice had introduced him was apparently all set to offer Mr. Kessler a job, too."

Kessler's entry into the petroleum industry at a good salary comes at a time "when British and French influence in the Middle East was in decline." Saint Martin's University professor David H. Price writes "The short-lived Central Intelligence Group, and later the CIA, jockeyed to put the United States in position to exploit the post-colonial hopes for self-determination in the region." They did that by working with various oil company executives - some of whom had wartime ties to the intelligence field.

Ex-Cogger, OSS & military intelligence trained Army veteran"Jack" Kessler arrives in Cairo in early 1946 just five months after the Egyptian government demanded complete British withdrawal from the country and the voluntary transfer of Sudan to Egypt. Kessler's "small fry" job turned out to be as an assistant to the manager for Egypt in Cairo. Three months after "Jack" starts, British Prime Minister Winston Churchill warns the Suez Canal will be in danger if the UK withdraws from Egypt. As tensions in the region begin build, Kessler meets a Junior Leaguer from New York City. At age 28, Kessler married 24-year old Geraldine Paine Conant of New York City who was also living in Cairo at the time. They were married in St. John the Baptist Church in Maadi, Egypt on October 26, 1946. An announcement in the October 30, 1946 *New York Times* said the new Mrs. Kessler was the daughter of Mrs. Geraldine Albert Gallatin Lanier and Melvin Abbot Conant - and the granddaughter of the late Mr. and Mrs. Francis H. Paine of New York City. She attended the Spence School and was a member of the Junior League of New York. It was apparently her second marriage as a May 30, 1943 *New York Times* article announced her engagement to George Osgood Howe, son of Dr. Hubert S. Howe of New York. Over the next four years, Socony-Vacum (which became Mobil) moved

Geraldine Paine Conant (1943) - Conant Family collection

133-KESSLER, HANS THEODORE QUADRUPLICATE CMM

Form No. 87
FOREIGN SERVICE
(Revised October 1939)

AB.

Certificate of Witness to Marriage

(See section 72, title 22 of the United States Code)

FOREIGN SERVICE OF THE UNITED STATES

American Embassy, Cairo, Egypt
November 13, 1946

I, John F. Collon, Vice Consul of the United States of America at Cairo, Egypt, do hereby certify that on this 26th day of October A. D. 1946, at St. John The Baptist Church, in the city of Maadi, Egypt Hans Theodore KESSLER, a CITIZEN SUBJECT of the United States, aged 28 years, born in Jena, Germany, and now residing in Cairo, Egypt, and Geraldine Paine CONANT, a CITIZEN SUBJECT of the United States, aged 24 years, born in New York, New York, and now residing in Cairo, Egypt, were united in marriage in my presence.

In witness whereof, I have hereunto subscribed my name and affixed the seal of my office at Cairo, Egypt, this 13th day of November, A. D. 1946, and of the Independence of the United States the one hundred and seventy-first

Fee [illegible] for Quadruplicate.

John F. Collon
Vice Consul of the United States of America.

(See information on reverse side of certificate)

Sec. 27 - Almost a Spy ?

"Jack" to various posts with affiliates in Egypt.

In 1950, Kessler is transferred to the industrial port city of Haifa, Israel in the newly created Jewish state. During the 1920s and 30s, Haifa owed much to British plans to make it a central port and hub for Middle-East crude oil. During the 1948 Arab-Israeli War Haifa neighborhoods were sometimes contested. Kessler arrives in 1950 as Haifa continues to be a gateway for Jewish immigration into Israel, and as those immigrants start settling into new neighborhoods within the city.

In 1952, he returned to Istanbul as assistant general manager of Mobil Oil Turkey, with the title of vice president. The *Hamilton Alumni Review* reported "Hans T. Kessler is now connected with Sakoni-Vakum Petrol A.O., a Turkish corporation with head offices in Istanbul. He is still a member of the board of directors of Socony-Vacuum Oil Company (Cyprus) Ltd., a corporation organized under the law of the Colony of Cyprus, with head offices in Nicosia." King Paul of Greece had declared in 1948 that Cyrprus desired union with his country. The Orthodox Church of Cyprus presented a referendum in 1950 which found 97% of the Greek Cypriots supported the union with Greece and the UN accepted a Greek petition for it to happen. Turkish Cypriots objected as did Turkey. Kessler's positions with Socony in Turkey and Cyprus meant he was now on both sides of the dispute over the future of the Mediterranean island state.

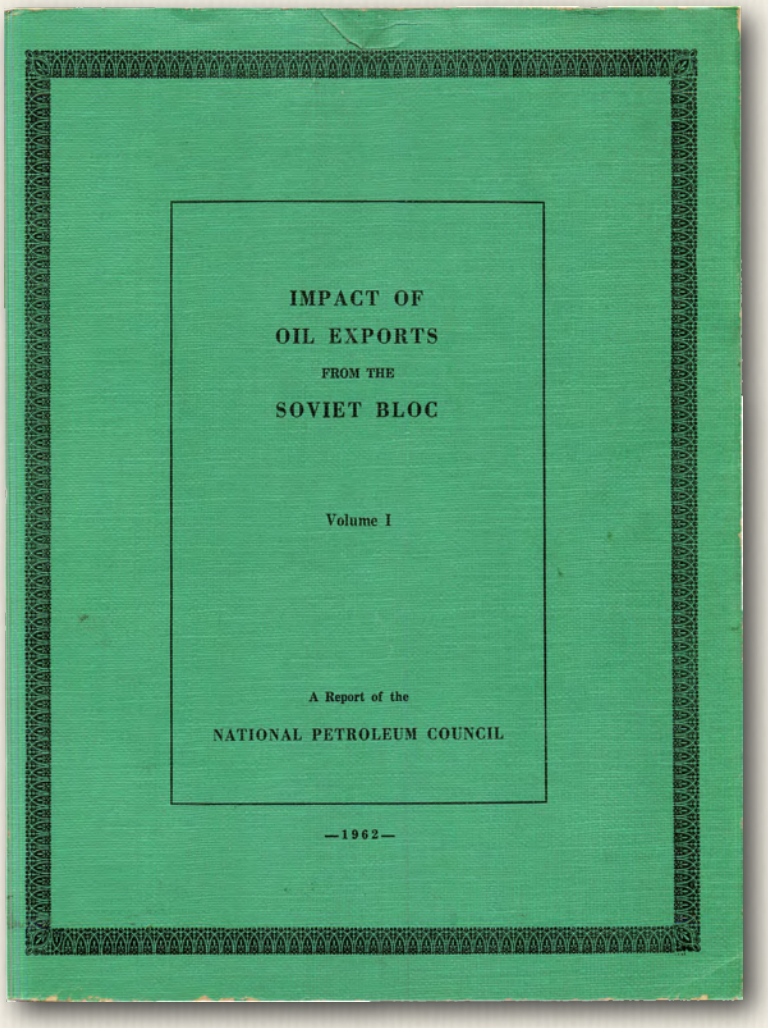
The conflict may have been mirrored in Kessler's personal life. It is in this period that Hans and Geraldine Conant Kessler are divorced. She would remarry in December 1958 to Richard Wurts some four years after Hans took a new bride and a new position in Socony Mobil.

"Jack" Kessler became Mobil's sales manager for French West Africa and in 1954 was stationed in the capital of the eight colonial colonies in Dakar. While there he got married for a second time in Tangier, Morocco to a woman from Illinois. 31-year old Jane H. Sargent had been born in Evanston and grew up in New Trier, Winnetka and Chicago. The couple had a child in 1956 that was duly reported in the *Hamilton Alumni Review*. "A daughter, Elise Ann, was born on May 2 to Mr. and Mrs. Hans T. Kessler in Evanston, Ill. Mrs. Kessler, the former Miss Jane Hodges Sargent, received her B.A. degree at Wheaton College *(1946)* and her M.A. degree at New York University School of Education. In May, she was working at the Harvard Graduate School of Education on a thesis on educational questions in French West Africa. *(She would receive her doctorate in education in 1958).* The Kesslers make their home in Dakar, Senegal, French West Africa, where Kessler is sales manager for Mobil Oil A. O. F., a subsidiary of Socony Mobil Oil. Co., Inc. He is also director of Mobil Oil A. O. F., a French West African Corporation." The new Kessler family was being

Science teacher Jane Kessler (1965)
- St. Hilda's & St. Hugh's School

put together in Dakar as France was moving to give more political power to the citizens of the African colonies. Universal suffrage in elections was granted in June 1956 - the first elections held in late 1956 were at the local level - territorial Assembly elections were held on the last day of March 1957.

In 1957, Jack, Jane and their baby girl headed for New York where Hans worked in Mobil's head office in the city. His wife taught at the Emma Willard School in Troy, N.Y., and at Brearley and at St. Hilda's & St. Hugh's schools, both in New York City. She retired from the latter in 1978.



Hans T. Kessler remained in Mobil's head office in New York as a regional coordinator and division manager for overseas operations, and later as a senior planner, until his retirement in 1980. As a senior planner, Kessler worked on and was a co-author of a 1962 report published by the Northern Petroleum Council. The report, *Impact of Oil Exports from the Soviet Bloc*, was requested by Kennedy Administration's Interior Department which viewed "with concern the growing shipments of petroleum from the Soviet Block to the Free World. Because of the varied but widespread impact of these shipments upon Free World nations and upon international relationships between the United States and other nations, it is greatly in the interest of national security for this situation to be better understood." Hans Kessler was on the 10-member Working Subcommittee which "gathered and studied a vast number of facts and data related to oil exports from the Soviet Bloc." They concluded the Free World Oil Industry is a major target of the Soviet economic offensive, and that Free World trade rules were "ineffective in retarding the flow of Bloc oil or the sale critical equipment from the West that the Bloc procures with oil."

Monterey

When Kessler retired from ExxonMobil in 1980, "he and his wife, Jane moved permanently to their summer and weekend vacation home in Monterey in the Berkshires of Massachusetts. The couple had begun coming to Monterey in 1957." A town with fewer than one thousand residents, it lies at the headwaters of the Konkaput River that is fed by Lake Garfield and Lake Buel. Jane Kessler continued to teach in Monterey and Hans Kessler soon became busily engaged in the affairs of his new community that used an open town meeting form of government. He served on the Monterey Board of Selectmen *(1981-87)*. Monterey was a quintessential small New England town, but small American towns can become contentious. Glenn M. Heller, a stockbroker from

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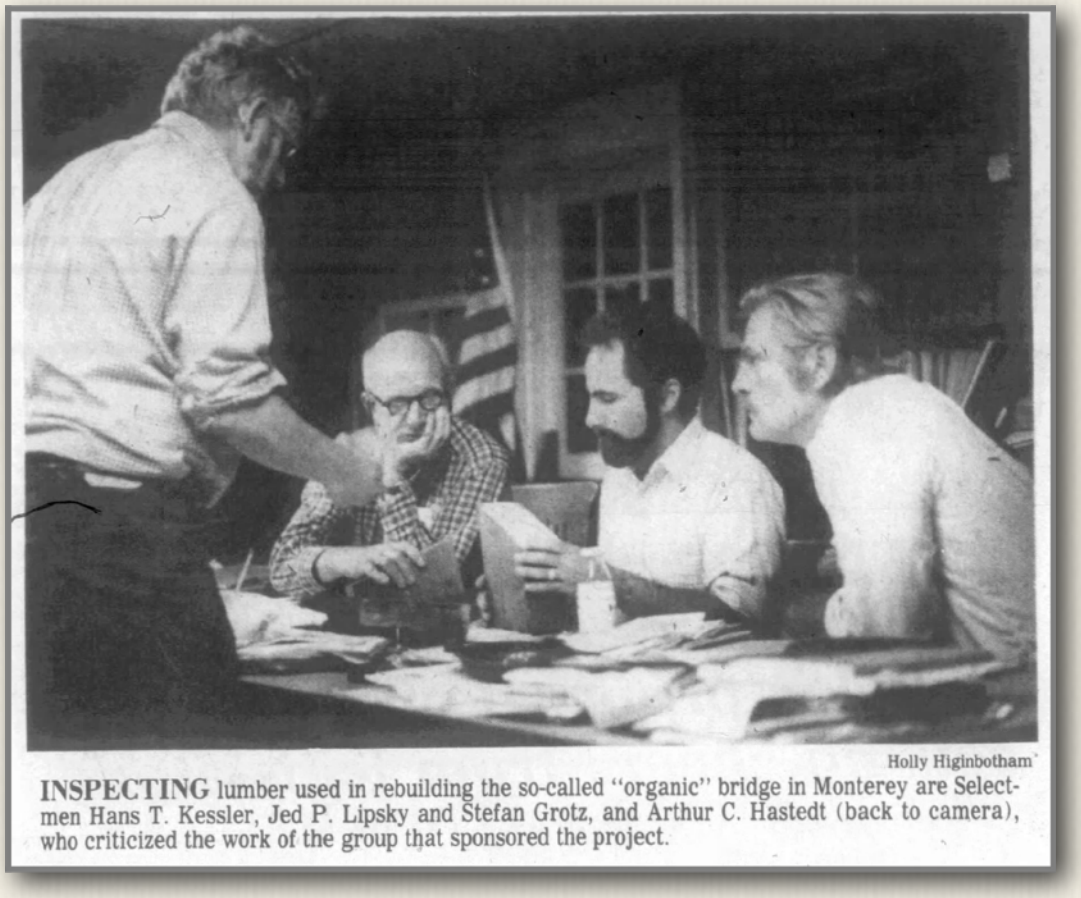


Holly Higinbotham

INSPECTING lumber used in rebuilding the so-called "organic" bridge in Monterey are Selectmen Hans T. Kessler, Jed P. Lipsky and Stefan Grotz, and Arthur C. Hastedt (back to camera), who criticized the work of the group that sponsored the project.

The Berkshire (MA) Eagle - Wed, Sep 26, 1994 pg. 7

Connecticut, lived on Lake Garfield and became the Board's self-appointed citizen watchdog in 1986. Heller charged the board with several violations of state law and town regulations in the course of the year. When Heller began calling Monterey's highway superintendent "seven and eight times a day" with questions in October '86, the Board tried to stop what they saw as "harassment." "He's not an elected town official, and we have asked you to call us if you have any questions," said Selectmen Chairman Hans T. Kessler. "We can't have you calling him all the time and interrupting him." Heller refused. "I have the right to call anyone I want. This is not a dictatorship," Heller is quoted as saying in the *Berkshire Eagle's* coverage of the meeting. "Look, we didn't mind if you call Don once in awhile," said Selectman Jed P. Lipsky. "But eight times a day is harassment. He's complained to us and this is what we've decided." "That's fine," said Heller. "But I'm under no compulsions to stick to your decisions."

Two days after the *Berkshire Eagle's* report, Glenn Heller wrote a letter to the Records Reconstruction Branch of the National Personnel Records Center that was trying to piece together military records lost to fire in 1973. Heller asked to "Please verify for me and send to me whatever... you can pertaining to the following individual in public office in our town. The fellow's name is Mr. Hans T. Kessler. According to Mr. Kessler, from 1943 until 1945 he served in the Army, achieving the rank of Master Sergeant and Paratrooper. He says he fought in Europe with the 17th Airborne Division." Reconstruction Branch chief Deborah Haverman wrote back on November 19, 1986: "Extensive searches of alternate records sources for additional information on Mr. Kessler's service were essentially unsuccessful. We did locate evidence that he had foreign service and was a paratrooper but no additional details are available. His last unit of assignment prior to discharge is listed as Headquarters, 28th Infantry Division. Other organizations with which Mr. Kessler may have served are unknown."

Glenn Heller's research into town officials apparently continued. At their January 12, 1987 meeting, Heller told the selectmen that Monterey's police chief did not have the minimum requirements of formal training required by the Massachusetts Interlocal Insurance Association, the company that insures the town police. Heller said the insurer requires part-time police chiefs "to complete a 12-week training course at the Police Academy in Agawam." "What do you intend to do

if he doesn't have enough (training) ?" asked Heller. Selectman Hans T. Kessler told Heller that the board would then assume responsibility for the police force as commissioners. The Selectmen would not be required to undergo training at the academy, said Kessler.

When the Selectmen met on Monday, February 23, 1987, they had enough and according to reporter Derek Gentile of *Berkshire Eagle* "scolded municipal critic Glenn M. Heller for not following proper procedure in filing several petitions for town meeting articles." Heller had filed a complaint with the state Board of Elections. Heller said he had submitted eight petitions for articles to the acting Town Clerk for verification of the signatures he had gathered. On Friday, he asked the clerk for copies of all the petitions. Heller said the clerk told him the copies were unavailable because the petitions had been mailed to the Selectmen. Heller then went to the Postmaster who told him the petitions had not been mailed in Monterey. "I got a little nervous that they would get lost," Heller said. The petitions were on the Selectmen's desk at the meeting having arrived in the mail. And the OSS-trained former military intelligence officer on the board had talked to the Monterey postmaster, who told him postmasters are prohibited by law from revealing what is mailed at local post offices. "(The postmaster) didn't tell you anything of the sort. You're a liar, Mr. Heller," Kessler said. Heller replied, "Maybe we should get (the postmaster) up here and question him under oath." "I don't think we have to," said Kessler. "Mr. Heller, you called me Friday night and gave me a long song and dance accusing (the town clerk) of dealing illegally with your petitions. But you were not acting in accordance with the law. You are supposed to bring these petitions to us. We submit them to the Registrars of Voters for verification and put them on the warrant. Mrs. Brown was doing you a favor by taking them and verifying them for you." Kessler told Heller his complaint about the matter to the Board of Elections was "Misleading. It's very nasty to alarm the state authorities in this case because Mrs. Brown is doing two jobs as best she can. Your complaint was unjust." "That's your opinion," Heller said. "That's the law," Kessper replied.

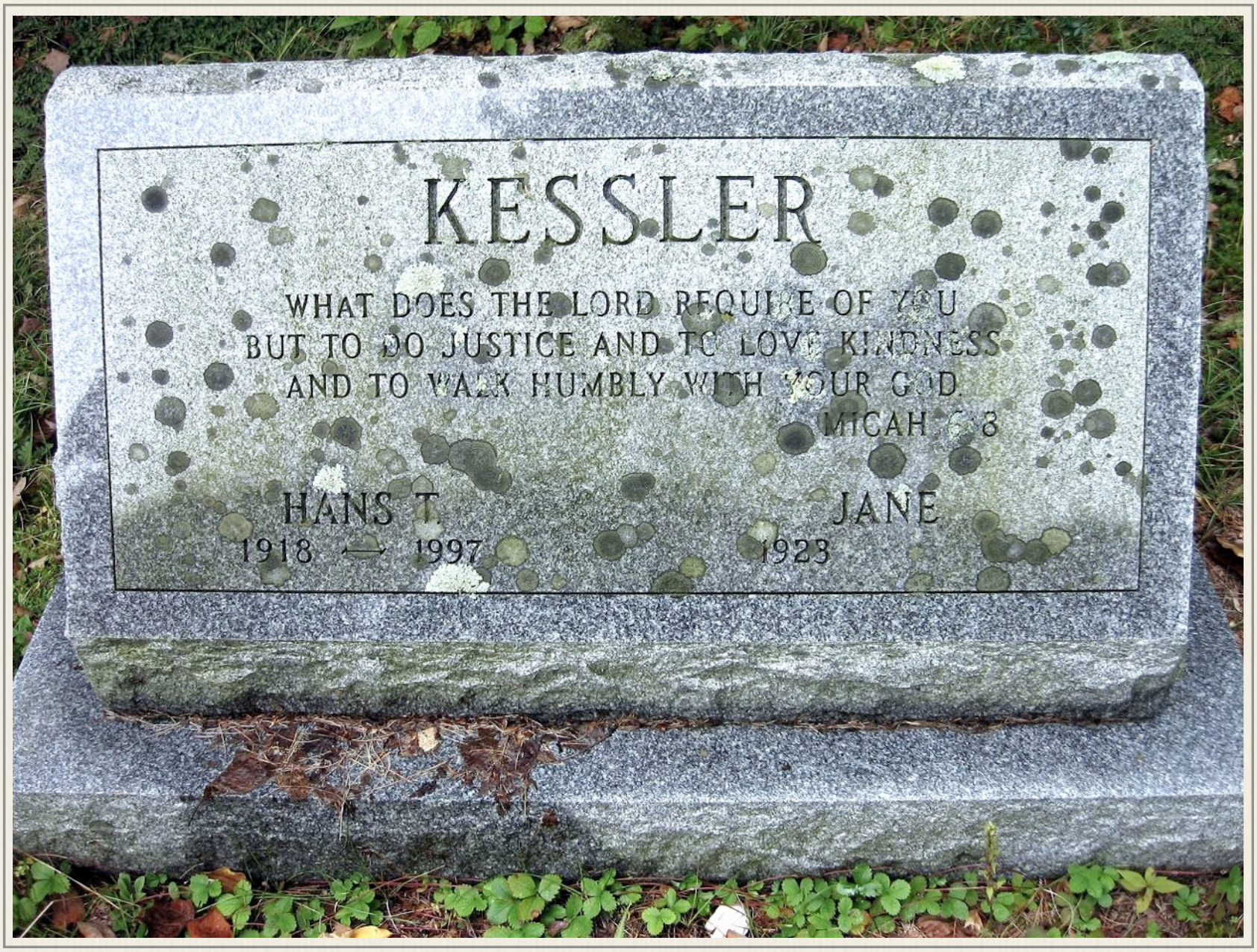
The next month, Glenn M. Heller took out nominating papers to run for selectman. The *Berkshire Eagle* reported on March 16, 1987 that "Heller, who has accused the local board of numerous wrongdoings ranging from illegally bidding road projects to improperly authorizing the drawdown of Lake Garfield, will seek the seat now occupied by Hans T. Kessler. Kessler announced in November he would not seek another three-year term because of poor health."

At the end of 1987, Kessler resigned his position as Chairman of the Town Hall Committee that had been working towards construction of a new Town Hall on 10.7 acres of town-owned land reserved for the project. Kessler said that voters more than 20 years ago recognized that a new town hall was needed. "In the late 1960s, they just didn't want to spend the money to build it," said Kessler. Now Monterey's Affordable Housing Committee had proposed both a new town hall and eight housing units be constructed on the land as well as a village green and kindergarten school. But the housing project would require a land-use change be voted on in early 1988. Kessler said on Christmas Eve that "selectmen promised at the time of his appointment to the town hall committee there would be no affordable housing on the town hall-reserved land. "There

was an agreement made with the selectmen, it wasn't followed and, for that reason, I reason, I re-signed."

However, three years later Kessler was still serving on the Monterey and regional planning board *(1990-93)*. He was also active on the town's Republican Committee and in the United Church of Christ, where he was occasionally asked to give the sermon. In addition, he was a member of the Adirondack and Mountain Club, and for having hiked the entire region and climbed at least 46 of the area's 4000+ peaks, he earned recognition as an "Adirondack 46er."

Hans "Jack" Kessler died July 12, 1997, while traveling to Leipzig on a visit to his boyhood home. Besides his wife, he is survived by their two daughters, Elise Wiley and Gerhild "Hildy" Kessler. He was 78. He was buried in the Mount Hunger Cemetery in Monterey, Massachusetts. The family stone reads "What does the Lord require of you but to do justice and to love kindness and to walk humbly with your God." - Micah 6:8.



SECTION 28

Cold, War, & Diesels

Work In Progress
** Not Final ***

The 1942 Cog Railway summer season ended early in September. The war effort was heating up. Men and material were scarce. New technology needed to be tested and while tourist traffic to the top of Mount Washington diminished the military presence there increased under a veil of secrecy because "loose lips could sink ships." The following is a look at the war years - both hot & cold - at the summit.

An official wartime "cone of silence" for security reasons began to descend over Mount Washington on Christmas Day 1941. Eighteen days after the Japanese bombed Pearl Harbor, the exchange of weather information by radio to and from the Mt. Washington Observatory and the Blue Hill Meteorological Observatory in Milton, Massachusetts "was discontinued by government order." The weather connection between the mountaintops was decades old at that point. A 1905 issue of *Among the Clouds* notes S. F. Fergusson of Blue Hill came to the Summit that summer to suggest a Blue Hill box kite design be used to conduct weather experiments. On August 31, 1905, Frank Prescott successfully flew a kite from Mt. Washington. Blue Hill and MtWObs personnel had been working together to advance weather forecasting and science since the Observatory was established at the Summit in the 1930s. Guy Gosselin outlined the research efforts and the financial impact of that research on the Mt. Washington Observatory budget in the Winter 1999 edition of the *Observatory Bulletin*. It provides a good synopsis of the activities this section will attempt to describe in more detail. "The study of icing which began in earnest on the summit m 1938," wrote Gosselin, "had as part of its impetus the danger of ice formation to the operation of aircraft. Mount Washington offered the best site in the east where the phenomenon of icing could be dependably studied. It was assumed at first that the major factors in icing were temperature, cloud water content, and wind, and while this was true, it failed to take into account the importance of droplet size to the rate and character of accumulation. The earlier collector consisted only of metal sphere that was periodically observed for depth of accumulation and then weight. It was quickly realized that accumulation itself affected further accumulation, and led to experimentation with cylinders airfoils and tapers…

Gosselin's article says "From 1943 to 1945, the Observatory budget tripled to over $10,000 annually due to increased scientific activity mostly associated with icing research, and in 1946, the budget topped $26,000! Even though it was principally "pass through" money associated with the renting of *(Col. Henry Teague's)* Tip-Top building to Northwest Airlines, it must have made Joe Dodge a little giddy.

"The years following World War II and extending into the early fifties confirmed in many ways the hopes of the (Observatory) founders with respect to research. The Observatory became viewed national as a pioneer in the increasingly important field of aircraft icing, and commercial airlines as well as branches of the military, spurred by cold war concerns, sought to pursue their

icing research aims on Mount Washington… Observatory gross income rose dramatically to high of over $54,000 in 1950, approximately ten times the figure for 1944, dwarfing for the first time income from membership and contributions, General Electric, the National Advisory Committee on Aeronautics (NACA), B. F. Goodrich, Northwest Airlines, the Air Materiel Command' Watson Laboratory, the Yankee Network, the U.S. Signal Corps, the U.S. Navy, and of course the Weather Bureau, were all involved in aid contract or cooperative arrangement with the Observatory as were such academic institutions as Harvard and the University of Michigan. The income resulting from heightened research activity did not, however, significantly improve the Observatory's financial health. Much of the income simply came in and went back out to cover the increased expense engendered by research. Though the original contracts are not available for examination, it would appear that too little attention may have been paid to the cost of overhead.

"But it may be that the Observatory had done its job too well…" wrote Gosselin. "That icing money had shifted from research to engineering and testing. The Navy and Air force icing programs – headquartered first in a refurbished Tip-Top building, and then in the Yankee Network building after that entity ceased its FM Transmissions from Mount Washington in 1948 – were "proof testing" operations that were consolidated under the control of Smith, Hinchman and Grylls, a Michigan engineering firm that, in 1954 and 1955, moved into a large laboratory and dormitory complex on Homestretch Flats just below the summit. The new facility had its own tank farm, power generating plant and concrete pads for helicopter tests. (That complex was demolished in 1967, but the helipad remains and is used fairly constantly for Observatory experiments.)" That was a 1999 summary. This chapter now goes back 58 years and picks up the story.

On December 25, 1941 with the nation at war, the Weather Bureau said no weather data could be transmitted except when hidden in "a secret government cipher, and any mention of current weather over the radio, except in code, was strictly prohibited." At the same time, the radio and weather rooms on top of Mt. Washington are closed to the public for the duration of the war.

The uncensored tale of what happens next during World War II begins to be written down for public consumption during the winter of 1945 after VE and VJ Days by Harvard meteorologist Victor F. Clark the Staff Sergeant USAF in charge of aircraft icing research on Mt. Washington at that time. His article - "The War Years on Mount Washington" appears in the AMC's *Appalachia* magazine. He describes the time when the US government discovered that Col. Henry N. Teague's mountaintop was a good place to test hardware and military material.

Carbon Monoxide Testing

According to Clark, it began "in March 1942, a group of scientists (including one girl) under Swarthmore University climbed to the summit to test (for the Army) a Swedish Primus stove for carbon monoxide fumes. For these tests, they dug into the snowdrift in front of the Summit House and set up the Primus stove in a small Army tent." Clark writes, "While carbon monoxide took no toll among the scientists, on the final night of testing, hurricane winds blew down the tent and the scientists took refuge in the (Weather) Observatory." Clark says when they returned two

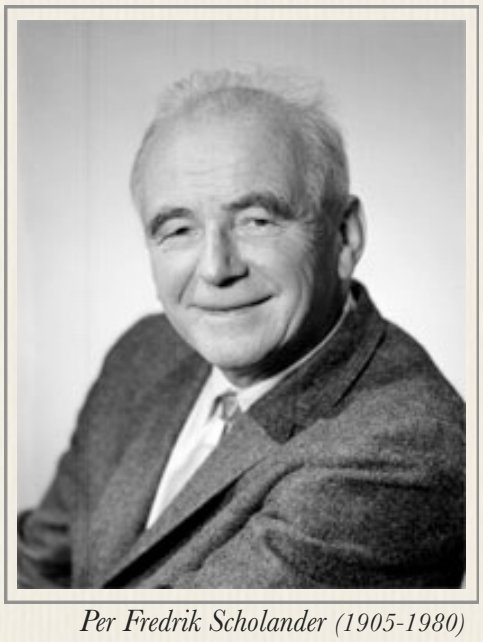
years later for further testing they set up shop at the Halfway House on the Auto Road rather than at the Summit.

Primus Stove CO Test Tent *pitched on snow. One of two low-walled 5x7 foot tent with sewn-in floor and sleeve type entrance allowing the tent to be closed tight while the stoves are operated. (1942)*
- Swarthmore University Collection

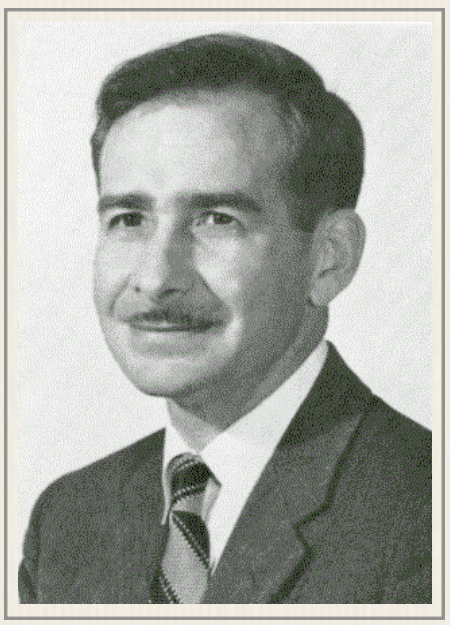
Results from the 1942 Swarthmore University experiments appeared in the October 1942 *Journal of Industrial Hygiene and Toxicology* did not mention its Army connection. The paper, submitted in June 1942 entitled "Experiments on Carbon Monoxide poisoning in Tents and Snow Houses" coyly said instead "at present, there are many men on duty in the North who have not had the long experience of professional explorers, and any question as to the safety of the equipment should receive careful consideration."

Laurence Irving (1895-1979)
- University of Alaska Fairbanks

Laurence Irving *(left)*, Per Fredrik Scholander *(right)* and George A. Edwards *(below right)* of the Edward Martin Biological Laboratory at Swarthmore said they measured "the carbon monoxide in the blood of people who remained in tents and snow houses with Primus stoves burning. In order to simulate the conditions of the northern travel the experiments were conducted in the late winter on Mount Washington, where the kind hospitality of the staffs of the Mount Washington Observatory and the Yankee Network Station greatly aided the investigation." Two identical tents were used except one was made of a light cotton duck, water proofed with paraffin and was still "somewhat porous for air." The other was made of a plastic treated fabric prepared for shower curtains, "and was practically air tight. The top ventilator, which should normally be used in a heated tent, was kept closed." Researchers found that "in spite of the inadequate oxygen supply (in the tightest tent), very little monoxide poisoning was produced. The atmosphere in the tent was so bad from exhaust fumes that under ordinary circumstances a person would soon have thrown open the tent to get fresh air. It also seems doubtful whether it would have been possible to sleep, or to fall asleep, with such bad ventilation."



Per Fredrik Scholander (1905-1980)
- PMS Instrument Co



George A. Edwards (1914-1960)
- NY Health Dept.

While only one tent was pitched at the Summit, two experiments were conducted in a Summit snow bank. "A snow house large enough to accommodate two people comfortably (some 8 by 8 feet floor and 4 feet high) was dug in a snow bank. The entrance was a narrow tunnel. during the night the snow drifted over the tunnel and closed the occupants in completely. In the morning the temperature inside was below freezing when both of the (Primus) stoves were ignited. The candles and the "roarer" burner failed before an hour had elapsed (due to the lack of oxygen), but the "silent" burner continued to burn for 15 minutes longer. The atmosphere in the house was then bad, and both of the occupants felt dizzy. Not knowing how much work they would have to do in order to dig their way out through the drifted snow, the experiment was discontinued. Blood analyses showed about 18% saturation of the hemoglobin with monoxide. Slight dizziness and headaches persisted for several hours, and analyses showed that only a small part of the monoxide had been eliminated from the blood after the first 45 minutes of recovery."

"In another experiment the entrance (of the snow house) was closed as well as could be by a double blanket hanging from a ski pole, and both stoves were burned for 2 hours without giving perceptible amounts of monoxide in the blood. Strong gusts of wind outside gave good ventilation and the candles and burners operated well." The paper concludes "it appears that some monoxide poisoning may occur from stoves of this type as a result of inadequate ventilation. The conditions leading to the serious cases of poisoning which have been reported can not yet be explained. In view of the exposed situation of the northern travelers who may encounter this danger, it seems wise to emphasize the need for precautions to assure ventilation and it is certainly desirable to investigate further the conditions which lead to the release of carbon monoxide in winter shelters."

While Irving, Scholander, Edwards and the still unidentified "girl scientist" were testing Primus stoves on the Mt. Washington, Col. Henry N. Teague was telling news outlets it would be business as usual during the upcoming summer. "Schedules may necessarily be curtailed somewhat" read the page 5 article in the *Portsmouth (NH) Herald* on Tuesday, March 31, 1942, "but present plans are to operate the cog railway, the cabin facilities at Marshfield Station and also the Summit House and the Tip-Top House on the mountain's peak." While the railroad, Marshfield and the cabins at the Base did open for the Summer of '42, the Summit House did not - perhaps because of secret scientific tests underway.

Penetrating the Fog of War

Victor Clark writes that the Defense Research Committee for the Navy conducted the second of the so-called "war projects" on Mount Washington. In the summer of '42, the first year the Yankee Network was operating in its new building on the summit, the DRC conducted tests with searchlights. Clark says the Navy shroud of secrecy around the tests was such that Weather Observatory personnel working just yards from the group only learned that "it involved the penetrability of fog by searchlights." A "few inconspicuous mounts" were placed on the Cog Railway trestle

and could be seen during the day by Summit visitors. The searchlights only came out at night and the "lights could not be pointed to the southeast for fear that they might be seen by submarines off the coast at Portland."

Mt. Washington Observatory & an inconspicuous mount? (1940s)
- Robert J. Girouard collection

At the end of the summer of 1942, Colonel Henry N. Teague made sure the public knew how the Cog was assisting in the war effort without mentioning the summit testing. "Colonel Henry N. Teague has joined the campaign for scrap iron, and this week about 40 tons of material salvaged from the unique vacation spot was being loaded at Fabyan Station," reported the *Littleton Courier* in a page 1 story on Tuesday, September 3, 1942. "Starting about two weeks ago, Colonel Teague directed a thorough search of the Mount Washington Cog railway property in which his employees brought in scrap iron of all descriptions, including one motor weighing about a ton, wheels, rails, water pipe, and other discarded equipment. A special train was sent to the summit of the mountain to bring down what was gathered there and along the cog railway right-of-way. Then Colonel Teague had the scrap, expected to weight at least 40 tons, transported by truck from the Base Station to freight cars at Fabyan station, and it soon will be on its way to be converted into war materials."

As scrap metal headed down the Mountain, scientists from Blue Hill Observatory were heading up to conduct experiments. *Blue Hill Meteorological Observatory: The First 100 Years 1885-1985* by John H. Conover says "simultaneous observations of direct insolation were made at the top and the base of the mountain when the density water-vapor content of the intervening atmospheric layer was measured."

Where the (fake) Rubber Meets the Road

Goodyear Tire and Rubber arrived at the Summit in the fall of 1942. Goodyear wanted to test their newly-developed synthetic rubber tires in the severe cold. Dozens of automobile tires of different compositions were mounted on a test car and then driven around the Auto Road's parking lot. Victor Clark says that usually the tires "would reveal their faults in the first few feet of driving." The secret project made for an interesting dichotomy at a site near the Gorham, N.H. railroad station. The local Tire Salvage Committee was asking citizens to turn in their old tires for the war effort at a salvage pile, while Goodyear representatives arrived to pick-up batches of new synthetic tires brought by train for testing on the mountain. Clark says "one car and some twenty-odd tires were left on the summit" when the toll road closed that year. In early January, Clark says "Joe Dodge and a crew roped the tires together and dragged them to the Halfway

House on the Carriage Road, where they were loaded on toboggans and transported to Pinkham Notch."

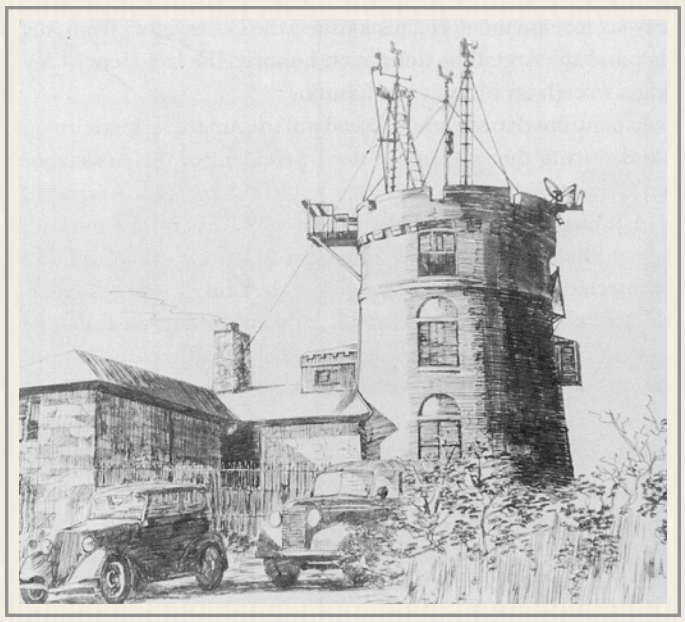
The winter of 1942-43 saw the Navy test some phosphorescent paints at the summit. Researchers at the Naval Research Lab at Anacostia "figured that any paints which could withstand a few months of Mt. Washington weather should be able to stand up under almost any conditions." Clark says conditions above timberline were such that "anything not blasted away in winter (by the windblown snow) will do well not to be baked off in the spring." Clark wrote the weather that winter "was warlike in keeping with the rest of the world (in many ways the worst winter in Observatory history)."

Clark says Observatory personnel, who continued to record the winter weather conditions and transmit their readings to military and civilian organizations by "secret cipher," also helped out testing electric blankets. General Electric wanted to put their blankets and electrically heated flying suits, boots, gloves and goggles through the temperature wringer. The most enjoyable equipment-test that winter, according to Clark, was the prototype GE sun lamps.

A Summer Lull

The summer of 1943 was very quiet at the Summit for both visitors and actual military testing. The Cog Railway did not operate, despite Col. Henry's initial push to keep the trains running. Those who came to the Summit either walked or drove the toll road. According to testimony at a 1948 Senate Armed Service Committee hearing, the Army's Quartermaster Corps made the first of 25 trips to New England for field tests in 1943. From August 1st to August 12th, 1943 experiments were underway in New Hampshire at Mount Washington and in Vermont on Mount Mansfield, Vt. and along the Long Trail. The Quartermaster Corps was testing new cold climate clothing, hand gear, rations, & sleeping gear for the nation's soldiers.

The *Blue Hill: First 100 Years* says modifications were made to the heated number 2 anemometer at the top of Mt. Washington that year. "A new calrod heating element with thermostat was installed in the top. A small cooling fin was also made which attached to the upper end of the anemometer shaft. This was intended to carry off heat from the upper bearing which had previously overheated and failed. Following these changes the calibration was checked at the Harvard wind tunnel. Use of the thermostat was abandoned because of vibration caused intermittent operation and excessive radio interference." John Conover writes in the Fall of '43, Blue Hill *(right)* "was permitted to send its weather by radio to Mount Washington *(in the clear)* but Mount Washington's weather remained encoded."



Sketch of Blue Hill Observatory, MA (1947)
- J. M. Mitchel sketch

Clark says Mt. Washington Observatory personnel spent the summer of '43 preparing for an influx of winter visitors. The Observatory staff was increased to six men. An Army observer from the Army Air Force 8th Weather Squadron came on board. Staff Sgt. George Hansen finally arrived at the Summit on the 29th of November. He explained in his December 10, 1943 status report back to his commander in Presque Isle, Maine: "A delay of several days was necessary at the foot of the mountain because of an unusually heavy snow storm amounting to 54 inches of snow at Pinkham Notch. Upon arrival at Gorham, the next day after leaving Presque Isle, the roads were closed and the telephone lines were down, so that it was impossible to call Joe Dodge at Pinkham." Once on top, Hansen said "the work of the Observatory consists of 30 days of 12 hour shifts for each man, the first fifteen days on nights, and the latter half of the term on days; then 12 days off are granted, which time includes travel up and down the mountain. Observations are taken every three hours which are sent to Portland by radio for transmission on the regular schedule. In addition... the Observatory maintains experimental equipment for General Electric in connection with an investigation for the Air Corps on precipitation static on aircraft. The Yankee Network maintains an FM broadcasting station here in a separate building near the Observatory. As they have a good cook the Observatory staff take all their meals over there which is a great convenience. All the arctic clothing issued has been very satisfactory and every item is well used. The wool trousers with the wind breaker covering are perfect. Also, the similar idea in mittens with the wind breaker covering afford warmth in cold temperature and high winds and yet are not too bulky when using the hands. Regarding the skiis, Mr. Joseph Dodge advised that they are too long and very heavy for mountain climbing. As I had no skins for the skiis and none were obtainable I made the assent on snow shoes which are excellent. Mail is necessarily very slow since it must be carried up and down the mountain when someone is going on leave. In the event any information is needed contact can be made over the Observatory's radio. As the weather observations are sent to Portland every three hours, messages could be relayed to us through the Weather Bureau in Portland."

The U.S. Army Signal Corps also came calling in the fall of 1943 looking to test the performance of wind recording instruments. Clark says the instruments had already served time in the Arctic, but failed to make it through Mt. Washington's gusts. The "worst weather in the world… virtually destroyed all of the test instruments before the first day of winter" that season.

Searchlights & Static & All Weather Gear

The University of Michigan took over searchlight testing for the National Defense Research Committee in late 1943. Clark says they made "extensive fundamental measurements of the amount of light that would pass through various densities of fog (again primarily for the Navy)." A light was projected through a first-floor Observatory towards a reflector in a window of the Yankee Network building to be measured at the Observatory upon its return. Observatory staff would shine the light throughout the winter to take readings.

Sec. 28 - Cold, War & Diesels *1944*

The Army Air Forces contracted the General Electric Research Laboratory to learn more about precipitation static that hindered and sometimes wiped out radio reception when an aircraft flew through a snowstorm. The War Department expected an "invasion by Japan would have to come very largely from air attacks through the Aleutian Islands, across Alaska, and from the North." General Electric's July 1952 *History of Project Cirrus* says icing and the static made flying in the Aleutians very difficult. That intrigued Dr. Irving Langmuir, Associate Director of the GE Research Lab who had been working with Dr. Vincent J. Schaefer to improve gas masks by testing the filters with "smokes" which led to the development of smoke screen generators to provide cover for ships and Army units. Langmuir and Schaefer suspected "the weather" had something to do with the static and determined Mt. Washington's winter weather offered "the proper conditions for a research of this kind. GE set up duplicate experimental equipment on the Mt. Washington Observatory's tower and an Army B-17 airplane. Schaefer conducted experiments at the Summit several times during the the winter of 1943. Clark says the 1943 Mt. Washington tests showed the static to be almost always present in storms, but the storms also grew "frost feathers" on the gear. GE moved directly from the radio static testing at Mt. Washington to an aircraft icing study for the Air Force. The Observatory had been doing wing icing tests of their own, but now GE was on the case and a third organization would join them in the spring of 1944.

The day after Col. Arthur S. Teague waded ashore on Utah Beach in Normandy, Col. Henry Teague's Mount Washington Club, Inc. signed a new $30,000 lease with The Yankee Network, Inc. for a little over 9-acres of land that contained its transmitter building. Teague and Yankee had started working together in September 1937 negotiating a 13-year deal for "the establishment of a year-round broadcasting station on top of the mountain." The first deal covered construction of the station's first 150-foot tower with experimental radio equipment housed in a portion of the Henry's newly completed weather building. In 1940, a tank farm was installed near the Lizzie Bourne monument to hold 25,000 gallons of fuel for the station's generators, and in 1941, the two story, L-shaped building was erected by Yankee on Teague land.

The six-year deal signed on D-Day plus 1, 1944 did not include the weather building that Teague owned, and had leased to the Observatory. Since 1937, the Observatory owed Teague $500 a year under the terms of a 20-year lease. However from time to time Joe Dodge couldn't come up with the payments and Teague was gracious and generous at such times. Yankee would pay the Mount Washington Club $20,000 on New Year's Day 1945, and $2500 on the first day of 1946, 1947, 1948 and 1949. The check to go to the Dartmouth College treasurer *(perhaps to help pay off Teague's 1939 refinancing deal with his alma mater?)* The Yankee Network would also provide the "electric current for the lighting of the hotel and other buildings *(owned by Teague)* on the Summit of Mount Washington" during those six years. Yankee could only "use leased premises for aural and visual broadcasting and receiving and similar uses... no admission fee to be charged *(to the buildings)*..." and the land could not be used "to compete with *(Teague's)* hotel business." *(Lease follows in toto)*

THIS INDENTURE made the 7th day of June in the year 1941, between MOUNT WASHINGTON CLUB, INC., a corporation duly established add existing under the laws of the State of New Hampshire and having a principal place of business at the Summit of Mount Washington in the County of Coös, said State (herein called the Lessor, which expression is hereinafter defined), of the one part, as THE YANKEE NETWORK, INCORPORATED, a corporation organized sad existing under the laws of The Commonwealth of Massachusetts end having a principal place of business in Boston, Suffolk County, in said Commonwealth (herein called the lessee, which expression is hereinafter defined), of the other part,

WITNESSETH: That in consideration of the rent reserved and the Lessee's covenants herein contained, the Lessor does hereby demise and lease unto the Losses a certain tract of land with the buildings thereon, said buildings other than the observatory building being owned by the Lessee, located in Sargent Purchase, County of Coös aid State of New Hampshire, bounded and described as follows, to wit:

RUNNING at a point halfway between the Tip Top House and the Yankee Network transmitter building, measured at the shortest distance between said buildings; thence running westerly by a line parallel with the northerly side of the transmitter building to a point 200 feet beyond the past ten said line intersects the extension northerly of the line of the westerly aide wall of said transmitter building; thence turning at a right angle and running southerly to the boundary of the Lessor's land a distance of approximately 700 feet; beginning again at the original point of beginning and running easterly to a point 10 feet north of the Mount Washington observatory steps; thence still easterly by a line parallel to the northerly side of the observatory building to the border of the parking area, a distance of approximately 200 feet; thence turning at a right angle end running to the boundary of the Lessor's property a distance of approximately 750 feet; thence by a line curving to the right and having a radius of 825 feet, being the boundary of the lessor's property, to the southerly end of the line already referred to as being approximately 700 feet; the leased premises containing approximately 9.07 acres,

Together with the land on which the lessee's tanks, pump house and pumps now stand and sufficient lan adjacent thereto for such larger or additional tanks as the Lessee *(Yankee)* may require for the conduct of its business.

Together also with a right to maintain, repair, replace and construct wire for the transmission of electricity in substantially their present locations, pipe lines between said teaks and the premises above described, and pipe lines for filling said tanks between said tanks and the road hereinafter mentioned, in each case in substantially the location of those now existing, but not to be limited to the number mow existing;

Together also with all the right which the Lessor now or hereafter may have to use, for all purposes for which a way may be lawfully be used in the State of New Hampshire, the road from the base of Mount Washington to Its summit and to the leased premises, subject, however, to payment of such tolls as may be lawfully to charged.

EXCEPTING, HOWEVER, from the leased premises the observatory building and reserving to the Lessor a right of sees thereto.

TO HAVE AND TO HOLD the premises hereby demised unto the Lessee *(Yankee)* for a term of six (6) years from noon of the first day of Jan. 1944, ending at noon on the first day of Jan. 1950, unless extended or sooner terminated as herein provided.

YIELDING AND PAYING THEREFOR rent as fellows, Thirty thousand dollars ($30,000.) on the delivery of this lease, and thirty thousand dollars ($30,000) payable at follows: On January 1, 1945, twenty thousand dollars ($20,000), and on January 1 in each of the years 1946, 1947, 1948, and 1949 two thousand five hundred dollars ($2,500), the Lessee *(Yankee)* agreeing further as part of the rent payable hereunder, during the original six-year term of the lease but not during any extension of the term hereof, to supply electric current for the lighting of the hotel and other buildings owned by the Lessor on the Summit of Mount Washington sufficient to light said buildings in the same manner and to the same extent as the same have previously been lighted.

The Lessee *(Yankee)* shall have a right to four successive extensions of the term of this lease, each for a term of fifteen (15) years. The first extension may be made by written notice given by the Lessee *(Yankee)* to the Lessor at least six (6) months prior to the expiration of the term of the original lease or within thirty days after the Lessor shall, not more than seven months prior to such expiration date, have given the Lessee *(Yankee)* notice of such expiration, whichever date is later, and any subsequent extension by such notice given at least six (6) months prior to the expiration of the extension in force at the time of giving such notice, or within thirty days after the Lessor shall, not more than seven months prior to such expiration date, have given the Lessee *(Yankee)* notice of such expiration, whichever date is later. The yearly rent during each such extension shall be the sum of one thousand dollars ($1,000) payable on January 1st of each year of the extension.

And the Lessor *(Teague)* hereby covenants and agrees to and with the Lessee *(Yankee)* that, during the terms of this lease and for further such time as the Lessee shall hold or occupy the said premises or say part thereof:

1. The Lessee *(Yankee)* will pay the rent then applicable to the Lessor *(Teague)* at the time and in the manner aforesaid during said term and any further time aforesaid (except only as herein expressly provided) at the office of the Treasurer of Dartmouth College, or at such other place as the Lessor *(Teague)* shall designate from time to time, and will punctually perform and observe all things in this lease stated to be performed and observed by the Lessee.

2. The Lessee *(Yankee)* will use the leased properties for aural and visual broadcasting end receiving and similar uses, including scientific experiments sod development in similar fields. No admission fee shall be charged for entrance to the leased premises. The Lessee *(Yankee)* will not use the leased premises so as to compete in any manner with the business of the present hotel on the Summit of Mount Washington, including its dining room, shelter, gift Sop, post office and garage.

3. The Lessee *(Yankee)* may erect buildings and structures on the leased premises as it may from time to time determine, and may in its discretion alter or remove any of said buildings or erect others in place thereof; provided, however, that on the final expiration of the term and all extensions hereof all buildings and structures other than towers, antennas and tanks which were on the leased premises six months prior to such expiration date shall become the property of the Lessor, the

Lessee *(Yankee)* hereby covenanting that it will not remove the same during said six months' period. The Lessee *(Yankee)* shall, however, be entitled to remove all towers, teasels, tanks, pipes, engines and other equipment whether or not the same shall have been attached to any such building or structure.

4. The Lessee *(Yankee)* covenants that it will from time to time duly pay end discharge all taxes and assessments constituting a lien upon the leased premises and not imposed in part with respect to any other premises, before the same shall become overdue. Nothing in this covenant shall be construed as requiring the Lessee *(Yankee)* to pay such tax or assessment as long as the validity thereof shall be contested in good faith and by appropriate legal proceedings.

5. The Lessee *(Yankee)* shall not be liable to anyone for its failure to furnish electricity for lighting, as hereinbefore provided, due to any cause beyond the Lessee's control, to any accident, to the making of repairs, alterations or improvements, to labor difficulties or to trouble in obtaining fuel, service or supplies from the sources from which they are usually obtained.

6. The Lessee *(Yankee)* may cancel this lease or any extension hereof by a notice in writing given to the Lessor *(Teague)* at any time after January 1, 1949 and at least six months prior to the date of termination named in said notice..

7. The Lessor *(Teague)* covenants and agrees that during the term of this lease and any extension hereof, it will not permit any of the Lessor's remaining land on Mount Washington, or other land thereon which may be acquired by the Lessor, to be occupied or used as a radio broadcasting station or for any other use permitted to the Lessee *(Yankee)* by the terms of this lease.

8. Any notice given by or on behalf of the Lessor *(Teague)* to the Lessee, pursuant to any provision of this lease or any extension hereof, and any which the Lessor *(Teague)* may desire to give for any reason, shall be deemed to have been duly given if delivered in hand to an officer of the Lessee *(Yankee)* or if mailed, postage prepaid and addressed to the Lessee *(Yankee)* at 21 Brookline Avenue, Boston, Massachusetts, or any other address as the Lessee *(Yankee)* may from time to time give in writing to the Lessor. Any notice given by or on behalf of the Lessee *(Yankee)* to the Lessor *(Teague)*, pursuant to any provision of this lease or any extension hereof, and any which the Lessee *(Yankee)* may desire to give for any reason, shall be deemed to have been duly given if delivered in hand to an officer of the Lessor *(Teague)* or if mailed, postage prepaid and addressed to the Lessor *(Teague)* c/o Halsey C. Edgerton, Treas. Dartmouth College, Hanover, N. H., or such other address as the Lessor *(Teague)* may from time to time give in writing to the Lessee *(Yankee)*.

9. The parties hereto mutually agree that they will cause a survey and plan of the leased premises to be made at an early date, the expense to be borne equally by each party.

PROVIDE, HOWEVER, AND THESE PRESENTS ARE UPON THIS CONDITION, that if the Lessee *(Yankee)* shall neglect or fail to perform or observe any of the covenants, agreements, provisions or conditions contained in this instrument and on its

part to be performed or observed and such default shall continue for a period of sixty (60) days after written notice of such default by the Lessor *(Teague)* to the Lessee *(Yankee)*, the Lessor *(Teague)* may at any time thereafter (notwithstanding any license or waiver of any former breach or waiver of the benefit thereof or consent in a former instance) and without further demand or notice, in person or by agent or attorney, enter into and upon the leased premises or any part thereof in the name of the whole and repossess the same as of its former estate without prejudice to any of the rights of the Lessor *(Teague)* to recover for arrears of rent or damages for any other breach of covenant hereunder or to the Lessor's other remedies therefor, and, upon entering as aforesaid, this lease shall, if the Lessor *(Teague)* so elects, determine.

All other existing leases or agreements now in force between the parties hereto affecting the leased premises are hereby cancelled to take effect with the beginning of the term of this lease.

In this lease and all documents referring to it the terms "Lessor" and "Lessee" and all expressions referring thereto mean the corporations named above as Lessor *(Teague)* and Lessee *(Yankee)* and their respective successors and assigns and those claiming respectively through them unless plainly repugnant to the context.

IN WITNESS WHEREOF the said Mount Washington Club, Inc. has caused this instrument and two other instruments of like tenor to be signed and its corporate seal thereto affixed by its Treasurer, Henry N. Teague, thereunto duly authorized, and The Yankee Network Incorporated has caused said instruments to be signed and its corporate seal thereto affixed by John Shepard 3rd, its Chairman of the Board, thereunto duly authorized, the day and year first above written.

The Army's Quartermaster Corps returned in late July 1944 for a seven-day test in Tuckerman's Ravine to determine value, utility and limitations of clothing to protect soldiers against rain." On October 17th a five day test on Mount Washington and the vicinity began as the Quartermaster wanted to measure the "efficiency and competence of Freon Aerosol bombs, and testing thermal insulation, comfort, utility of socks, wool, (and) cushion soles."

"In War and Peace: First in Rubber"

The B. F. Goodrich Company was a leader in the development of aircraft de-icing equipment using inflatable rubber bladders. Clark says Goodrich asked the Observatory to arrange (with Col. Teague) "for the installation of an airplane wing section for de-icer tests atop the water tank" behind the Summit House. "In addition," writes Clark "a one-room laboratory and tower were built on the side of the water tank, with a ramp running from the tower over" to the passageway from the Summit House to the Tip Top House for easier access to the test wing from the Observa-

tory. Clark says a special meeting was called in Washington, D.C. in November 1944, to coordinate the Mt. Washington icing research for the best interests of both civilian and military aviation.

Littleton Courier columnist Jack Colby talked about the plans in his Nov 16, 1944 Mountain Musings: "From the top of Mt. Washington comes word that an airplane wing fitted with "overshoes" has been mounted like a weathervane on the summit of N. E.'s loftiest peak as testing apparatus for airplane deicers. The experiment at that forlorn spot, tenanted only by Weather Bureau experts, is being carried out by a physicist for the B. F. Goodrich company, and a great variety of icing conditions experienced by flyers can be reproduced and conveniently studied."

Goodrich handled the main rubber-based ice preventive equipment tests. General Electric worked on development of the main ice-measuring instrument and the theoretical work it involved. Observatory personnel did fundamental ice deposit studies and made basic cloud density and icing rate measurements. A monthly report on the findings (some thirty pages in length) was sent out by the Observatory to interested research agencies around the country starting on January 1, 1945.

A German Winter Offensive

The Signal Corps came back to the Summit in the winter of 1944-45 to test an automatic weather station with the help of the Observatory and the Yankee Network. Clark says the station's "winter supply of heater fuel was exhausted before Christmas, and more fuel had to be transported to the summit in an Army weasel." The weasel "arrived on the summit only after six POW's (German prisoners of war from Camp Stark, near Grafton, N.H.) were employed to do spot shoveling ahead of the vehicle."

A late January storm put the Summit in the local news by toppling a water tank: "High winds in the wake of Monday's *(1/29/1945)* storm piled the new powder-like snow into drifts. Atop Mt. Washington winds in excess of 173 miles an hour toppled the huge water tank used during the summer season to supply water for the Summit House and which had a capacity of more than 3,000 gallons. The heavy oak planks of which it was constructed were strewn about the mountain top, as gales lashed the peak," reported the *Littleton Courier* on Thursday, Feb 1, 1945. It was not reported whether that tank had the wing testing structure on top of it.

In the spring of 1945 with the end of the war in sight, a second Mt. Washington Icing Conference was held at the Glen House in Gorham so site visits to the summit during the meeting could be made. All parties concluded research should continue at Mt. Washington whether the war ended quickly or not because the dangers of weather to flying had "not been defeated."

Cog to Reopen?

In the spring of 1945, Col. Henry Teague was itching to re-open his railroad. He had been unable to find the men necessary to run special trains in July 1944 to take attendees of International Monetary Conference at Bretton Woods up "his" mountain. He told local reporters in late May the Cog would run in 1945. "Memorial Day will once again signal the opening of the summer recreational season in the White Mountains, as resorts prepare to welcome visitors from near and far. A good season appears in the offing. Adding impetus to the belief that seasonal business is on the upswing is the decision of Col. Henry N. Teague to reopen the famous Mt. Washington Cog railroad this season. He announced this intention while in Littleton this week."

- Littleton Courier - Thu, May 24, 1945

The actual operational status of the Cog Railway appears in the July 31, 1945 historical report of the Air Corps' Eighth Weather Squadron officer at the Mt. Washington Observatory. Tech/Sgt Adam J. Eckert, Jr. writes: "Colonel Teague still has high hopes of getting his cog railroad in operation before the season is over. To date they have the water running up the 3.5 mile track and are filling the water tanks up on the summit. Although all of us here feel that they won't have the trains running this season." On the other hand, T/Sgt. Eckert says the Stage Company's "business has been very good so far this year and they are expecting to surpass all previous records in carrying passengers up and down the mountain." The report indicates the upcoming winter will be busy for those left on the mountain. "The program for this coming winter has been enlarged by additional work being done for the Ice Research Base; our work for the General Electric Company as well as B.F. Goodrich and other interested parties will continue only on a large scale," writes Eckert. "The personnel problem is not quite as bad as was anticipated; with the extra man from Eighth Weather this will allow more time for research and still make the routine work for the Weather Bureau a little easier. We will would like to have one more man from the Weather Bureau but this looks very doubtful at present."

"The Tip Top House has been leased from Colonel Teague (owner of the top of the mountain)," reports Eckert "and construction work for a new icing platform as well as a new laboratory with work shop facilities and four bedrooms will be started in another week. Representatives from Northwest Airlines, under contract with Ice Research Base, were here to discuss the necessary construction problems. The new platform will have a streamline design in order to keep the airflow as uniform as possible. We will test the new heated wing as well as other types of airfoils, antennas treated with de-icing agents, cylinders, and many other types of equipment. Our routine icing observations will be made from this same location. The GE cloud meter, which has proven to be very successful in test runs this summer, will also be used as standard equipment. This new platform will allow us more working space than the present tower and give us a much better exposure at the same time. The four bedrooms *(in Tip Top)* will allow any representatives from the different organizations to stay here for any length of time and since our icing at night is just as frequent it will be more convenient to be right in the building where the work will be carried out."

Eckert says they hosted just such a visitor in mid-month. "On July 17th the Air Inspector paid us a visit and stayed over night. This gave us a chance to convey some of our problems and needs. We are in hopes that some of the equipment suggested to him will be able to be supplied. We are hoping that sometime this winter some of the members of the Eighth Weather will be able to come up and see the actual icing program in full operation as well as enjoy the mountain life in the winter." While the mountaintop observers were making their case to the visiting brass, President Harry Truman, Prime Minister Winston Churchill and Soviet leader Joseph Stalin were meeting in Potsdam, Germany to map out the future of Europe.

However no steam or smoke had streaked the summer skies through mid-July of '45 when the Air Inspector spent his Tuesday night at the Summit. Col. Henry publicly remained optimistic. "Col. Henry N. Teague, president of the famous Mt. Washington Cog Railway, was in Littleton this week and said that he still hopes to get the railroad into operation this summer. With good luck in obtaining experienced help he will have the attraction running by the first of August, he stated. The 20 cabins, gift shop and restaurant at the base are now open and many sightseers daily visit the place. Colonel Teague said that if plans can be completed for the opening of the railroad the public will be notified. The mountain line has been closed for the past four years. He added that Lt. Col. Arthur Teague, veteran overseas officer, has arrived back in this country and has been with his family on Cape Cod. He is expected to visit Mt. Washington soon."

- Littleton Courier - Thu, Jul 19, 1945

The Courier's update on the Cog's status came as the Army Quartermaster Corps began "clothing indoctrination courses for Quartermaster officers and nurses" on the Mountain. The training would last through September.

New Tip-Top Tenants for Col. Teague

Cog trains never ran that season. By the fall of 1945, Goodrich and GE had plans for increased activity at the Summit and a new player, Northwest Airlines had come on board. Clark says during the previous winter Northwest had studied "the use of heat for protection against ice, all tests being made in flight around Minneapolis (MN)" Northwest engineers were working to conduct engine exhaust The work was dangerous and expensive, and their flights had found "insufficient icing" from that city. Mt. Washington could provide Northwest with "an almost limitless number of hours of icing without the dangers and expense of flight tests."

Tourist photo from behind Summit House looking south at military test apparatus on water towers and the Tip Top House with test platform porch to the right (1950s)
- Paul Whitney Collection

According to the Air Corps' T/Sgt. Adam Eckert, Jr., modifications for Northwest's winter program started late. Con-

struction work started on the Tip Top house in the second week of August and as expected the weather was bad the last week. The head carpenter can only speak a few words of English and none of us are able to speak French well enough to try to make him understand but so far we have run into very little trouble trying to get across to him our ideas. Work is underway in digging the hole to bury two 2800 gallon fuel tanks to be used in conjunction with the present 35,000 gallon fuel storage supply. Two engineers from Northwest Airlines have been here for the past four days *(30 Aug - 2 Sep)* installing some of the equipment to be tested this winter for the Army."

Blue Hill: 100 - "In October (1945) (Charles F.) Brooks gave a fifteen-minute talk over the Yankee Network home radio station, WNAC. His subjects were aeronautics and the work at the Mount Washington Observatory. During the year he spent considerable time on the design and construction of new facilities to study icing on Mount Washington. This involved the coordination of four government agencies, three universities, one airline, and two manufacturers. Much of the conversation was carried out between the two Observatories (Mt Wash & Blue Hill) by radio. In preparation for a more active winter, the mountain staff was increased from six to nine.

At the start of October, T/Sgt. Eckert reports the push was on to get set for the fast approaching winter. "The construction work on Tip Top has been going very slow due to the problem of trying to get workmen to work under such conditions and there has been some delay in getting the *(Northwest)* equipment delivered. Ice Research Base used a B-17 and C-47 to fly all of their equipment in to Berlin with both of these planes making frequent trips. Six miles of telephone was run from the Base Station out to Bretton Woods where we had expected to be connected to the main line; but now the telephone company does not care to grant permission for us to be connected. *(Ed note: This may be the circuit Ken Randall talked about that ended at the Fabyan Railroad station where agents would answer regular phones then relay messages to the Base in the 1950s)* The Observatory has been used as a hotel for the past month *(Sept)* with as many as ten to fifteen men here representing different companies to discuss the problems for the coming winter. Our years supply of food has been coming up a little at a time and this has kept us very busy storing this away. S/Sgt Ziriax let on that he liked to cook, which was a great help when our regular cook was down on time off and we had twenty one for each meal. During normal conditions each one of us have our share of cooking which is a lot of fun, but when the crew is large it makes it very difficult to try to do your regular work and still prepare meals. Our official opening of the icing season has been changed from 1 October to 16 October (if the Weather Bureau supplies arrive)." This was Adam Eckert's last report. He went down the mountain on October 18th, relieved of duty by T/Sgt. Vernon W. Humphrey.

Humphrey wrote his first historical report on November 5, 1945 saying that he, and Sergeants Clark and Ziriax were "the Army personnel for the coming winter." "The experienced men at the station," Humphrey wrote, "expressed opinions that the army men would definitely need flying boots for the cold periods. The boots were ordered and flying shoes were received. They are very unsatisfactory for conditions at this station so the Weather Supply Office was notified that the fleece-lined boots were needed. A new telephone line was laid down the railroad track to the Base

Station *(where Cog winter caretaker James Webb likely answered)*. The hum of the line was eliminated and at present the circuit is very satisfactory. Due to the variable weather during the month (of October), the *(auto)* road has been closed and opened two or three times. At present the road is open but will not doubt be closed for the winter in the near future."

On the fifth anniversary of the Pearl Harbor attack, Technical Sergeant Vernon W. Humphrey of the 8th Weather Squadron - the new non-commissioned officer in charge of the detachment at the Summit wrote the weather did not make the work easy. "The road is closed with about eighteen inches of snow and drifts up to four and five feet deep. The weasel *(a tracked vehicle)*, supposedly being obtained by Northwest has not arrived and in all probability will not arrive at all. The telephone line to the Base Station and the outside is still in operation although fairly weak at times. The phone line down the road to the Glen House is out at present. The radio sets will be used for communication in case all the phone lines go out. Several re-enlistment bulletins have been received but at present no one from this station has shown any interest in re-enlisting."

The rest of December 1945 was "a cold and windy month on the mountain." T/Sgt. Humphrey wrote "the weather as a whole was such that the station personnel stayed outside only long enough to carry on the regular work and a few odd jobs. Several good icing storms made possible a number of icing observations both for the Observatory and Northwest. Sgt. Ziriax assumed the duties of chief cook during the holidays and made a very inactive Season an enjoyable one. On New Year's Eve Ziriax received notice to return to Grenier Field to prepare for his discharge. By recount Humphrey's score was reduced by eight points. The Monthly Icing reports of which Sgt. Victor Clark is in charge, is being forwarded to your office."

The same Victor Clark's *Appalachia* article says "Half of the Tip Top House was winterized *(for the 1945-46 winter season)* and a large platform constructed on the northwest end of this building to supplement the Observatory tower for the exposure of research equipment and to accommodate a heated wing section and other equipment of Northwest Airlines." This is likely when Col. Henry Teague and the Mt. Washington Club, Inc. leased the Tip Top House to the military through their contractor – Smith, Hinchman and Grylls. Those rental rates of over $13,000 a year were discussed in the 1950 land dispute with the U.S. Navy over its hangar test facility.

Clark concludes his article saying "Thus, at this writing, in the middle of the first post-war winter, the (Weather) Observatory finds itself in the top position in one of the most important and most active icing research centers in the country." Clark predicts Mt. Washington will see "an increase rather than a decrease in the work and its importance in the future."

Staff Sergeant Victor F. Clark followed up his *Appalachia* article by writing the March 6, 1946 Historical Report to the Commanding Officer of the Eighth Weather Squadron at Westover Field, Massachusetts. Clark was now the in charge of the detachment on Mount Washington. "The month of February *(1946)* was far from uneventful... While part of the month found all

three members of the Army staff off the mountain at the same time, by the end of the month all three men were back on the summit, although each was in a different capacity then at the time of his departure." Clark left the Summit for icing research conferences in Minneapolis and Washington and would return to the mountain charged with making plans for the Mount Washington icing research program in 1947.

The day after Clark went down the mountain orders arrived for T/Sgt. Humphrey and Sgt. Larsen to report to Grenier Field prepare for discharge from the service. Sgt. Clark reported "both men have returned *(as civilians)* to this station in the employ of the Mount Washington Observatory. Thus, of the last four men assigned by 8th Weather to Mount Washington, three are now back here as civilians. The first to return was Eckert, who is now in the employ of the Northwest Airlines (under Army contract) here on the summit. All three plan a return to normal civilian jobs in the lowlands at the end of the winter."

Death Trap on the Stage Road?

Humphrey's return made headlines in Boston. *2 ESCAPE DEATH TRAP ON N.H. PEAK* screamed the final edition front page of the *Boston Record-American Daily Record* on Saturday, February 23, 1946. Sgt. Clark's dispatch on the event was a bit more measured. "Ordinarily, the 8 mile trip is made in 3 stages," explained Clark: "...to the Halfway House at timberline by Army weasel, to the 6 mile shelter on foot alone, and then to the summit in the company of someone from the summit who has come down to meet the climber." The climber on Wednesday, February 20th was 25-year old Vernon Humphrey of McFarland, California. 28-year old Marshall Smith of Turner's Falls, Massachusetts hiked down from the Summit to meet him. Clark reported "For the first two stages of this trip, it appeared to be uneventful with the wind velocity below 20 mph and the temperature near 10 F above zero. However, in the few minutes (Humphrey and Smith rested) at the 6 mile shelter before continuing the trip, a cold front passage increased the wind velocity to over 50 mph, dropped the temperature to zero degrees, and filled the air with a raging storm of falling and blowing snow, which reduced the visibility to zero or less. Realizing that it would be dangerous to attempt to travel anywhere above the timberline under these conditions, both men prepared to make the best of their one room tar paper shelter, while awaiting moderation of the elements. They found the small gas heater to be in good shape, but the usual supply of K rations was found to be completely depleted."

The weather got worse the next day. Thursday's wind speed was 115 mph - temperature was down to 29 F below zero. Clark says it was impossible to ring the shelter on the telephone line running down the mountain, but "the line held up so that hourly reports from the men could be received on a prearranged schedule, and it was known that the men were in no real dangers as long as the heater gas lasted." Humphrey and Smith said later that even with the heater going, the snow which seeped through the cracks lay unmelted near the heater and that it was cold enough in parts of the shelter for skin to stick to metal."

On the third morning, an unsuccessful attempt was made from the Summit to reach the men, who had now been trapped at the 6 mile shelter for more than 40 hours. The temperature of 26 F below zero with the wind still near 100 mph turned the rescue party around. In the afternoon, the temperature had risen to -12F, when the party tried a second time through hurricane force winds. They made the two mile descent down the cone. They brought food to the pair. "After this first nourishment in 48 hours," wrote Clark "both men, under their own power, were escorted to the summit. Neither man experienced any ill effects from the ordeal, although fear of freezing had prevented any sleep during the entire 48 hours."

Readying the Rental?

August 10, 1946 – Flatcar loaded with debris from "unused" Tip Top House is blown off Summit and crashes into stopped train at Lizzies during a storm. *(see Appendix Section - 1946 Flatcar Collision)* Many hurt – none killed. Puzzling as stories about this seemed to indicate the Tip Top House had not been used, the roof had leaked and stuff inside ruined and needed tossing. Yet Clark talks about Tip Top being winterized for the 45-46 season? Perhaps a clean out after the lease concluded? Or was it a clean out so the rest of Tip Top could be used as described in newspaper article below?

Aug 29, 1946 - Tip Top Icing Research: "It was learned this week that the famous Tip Top House on Mt. Washington has been leased by Northwest Airlines, Inc., of Minneapolis, Minn., and will be the scene this coming winter of scientific research in connection with aerial ice conditions. At the same time, it was learned that the water tank owned by the Mt. Washington Cog railroad has been leased for use by the Goodrich Rubber company for similar research purposes, working in conjunction with the Mt. Washington Observatory. Northwest Airlines has engaged Francis H. Howe, contractor of Alton Bay, to remodel the Tip Top building, insulate it, install a new heating system and otherwise prepare it for the rugged scientific work scheduled atop New England. The lessees will work with the U. S. Army Air Corps through a government contract to study means of preventing ice from forming on airplane wings, propellers and other parts of a plane. The summit of Mt. Washington is the only place in the United States, it was said this week where the same ice conditions exist on the ground as those encountered by planes in the air, and is therefore ideal for the experimental project. The building is expected to be ready for occupancy soon after October 1. The Army is installing two Diesel generators, and various pieces of paraphernalia will be rigged up on the building to test the ice conditions. It is expected $25,000 will be expending in reading the mountain structure for the important work, and it will be staged by a crew of six to eight men who will make the experiments." *- Littleton Courier - Thu, Aug 29, 1946 pg. 1*

"Systematic icing observations had been made on Mount Washington for about two years by this time (44-46)" writes John H. Conover in *Blue Hill 100*. "The wealth of data revealed a large potentiality for icing and cloud physics research which was eventually realized in the form of a $37,000 contract with the Air Material Command. The Blue Hill Observatory undertook the contract, arranging for research space in Cambridge and communication via blue Hill, while exposure facilities, living quarters, and working space were provided on Mount Washington. ...(Char-

les F.) Brooks continued as director of the mountain Observatory. Victor Clark, who had been in charge of the icing studies on the mountain from 1942-1946, became a voluntary assistant."

The U.S. Navy Lands at the Summit

22-year old mechanical engineer Frans M. van Gelder *(b.1918 d.2004)* began working as a civilian employee of the U.S. Navy in 1940 at the Aeronautical Engine Laboratory. The New York native had just graduated from the Virginia Polytechnic Institute. Six years later, van Gelder was posted to Mt. Washington, New Hampshire to test jet engines in "most extreme conditions of cold and wind found in the continental United States." He and colleague Thomas Dickey wrote a 37-page memoir of *The U.S. Navy on Mount Washington, New Hampshire 1947-1955* that was self-published in 2001. The memoir provides a first-hand description of living and working at the Summit and how the Navy came to be part of that site 6,288-feet above sea-level.

"The test program *(for the Model XFD-1 airplane known as the Phantom)* was conceived in early June 1 1947," writes van Gelder & Dickey, "and was proposed by the Navy at an Icing Symposium held by the Air Material Command (AMC) at Wright Field, Dayton Ohio on June 30 and July 1, 1947, where it received favorable reaction. The AMC, which has been supervising icing research at Mt. Washington over the past several winters, indicated that it would extend the Navy it's fullest cooperation on such a program. However, it was strongly emphasized by many representatives at the Symposium who were familiar with the mountain and the severity of weather conditions which set in early in the fall, that if the program were to be conducted this coming winter, preparations would have to be undertaken immediately. Since failure to get the program underway this winter *(1947-1948)* would mean a delay of a year in obtaining the necessary test data, it was decided to proceed with the program immediately. The limited time available to get the program underway presented a difficult problem. From the unsatisfactory experience of the AMC in attempting to operate a reciprocating engine on Mt. Washington last winter with out adequate shelter for the test set up during shut down periods, it was obvious that some shelter would be required for this program. Further, due to the remote location, it would be necessary to accumulate considerable equipment such as portable generators for starting engines, ground heaters for melting ice between test runs, spare parts, fuel storage facilities, engine control equipment and test instruments as well as obtain personnel qualified in both technical ability to withstand the severe weather conditions and long periods of isolation. Also there would be the problem of transporting a large fighter type aircraft to the top of the mountain, possibly at a time when icing weather and severe winds would be encountered."

"It was decided that the various phases of the program would be assigned in the following manner:

(a) Leasing of land and the erection of suitable shelter and other facilities would be accomplished by the Bureau of Yards and Docks.

(b) Transportation of the airplane to the top of the mountain and the provisions of fuel storage facilities would be accomplished by the Commander, Naval Air Bases, First Navel District, Naval Air Station, Quonset, Point, Rhode Island.

(c) Preparation of the XFD-1 airplane for the test program and the accumulation of all other equipment necessary for the test set up, its operation and maintenance would be accomplished by the Aeronautical Engine Laboratory, Naval Air Material Center, Philadelphia, Pennsylvania.

(d) The conduct of the test program would be accomplished by the Navy's Aeronautical Engine Laboratory *(where van Gelder worked)* with the assistance of the Aeronautical Icing Research Laboratory (a private laboratory being operated for the Air Materiel Command). The Aeronautical Icing Research Laboratory was operated for the Air Materiel Command by Smith, Hinchman, and Grylls, Inc., Detroit, Michigan, whose main laboratory is located at the Wold-Chamberlin Field, Minneapolis, Minnesota, with a detachment at Mt. Washington, N.H.

The rigid time element, imposed by the early onset of severe weather, required that in initiating action to implement the above items, all time consuming formalities of normal procedures be dispensed with in getting underway on the erection of a test shelter and in the preparation of the airplane and supporting equipment. A conference was held at the Aeronautical Engine Laboratory during the second week of July *(1947)* and verbal instructions were issued to proceed with all planning and design phases of its part of the program and to initiate procurement of necessary equipment. The Aviation Facilities Division, Bureau of Yards and Docks was approached informally on the phase of the program involving the erection of a suitable shelter at the test sight, and on being advised of the circumstances involved, agreed to proceed with the design of the building. This was completed within several days. The building design involved the "Butler Building" type of steel frame work with special reinforcement to withstand in excess of 200 miles per hour wind loads. Also the building was designed with open ends forming a natural wind tunnel. The airplane will be mounted with in the building and icing winds will blow through the building and over the airplane. Specially reinforced canvas doors will close off the building between test periods so that the ice accumulated during the proceeding test can be melted and the airplane prepared for the next test.

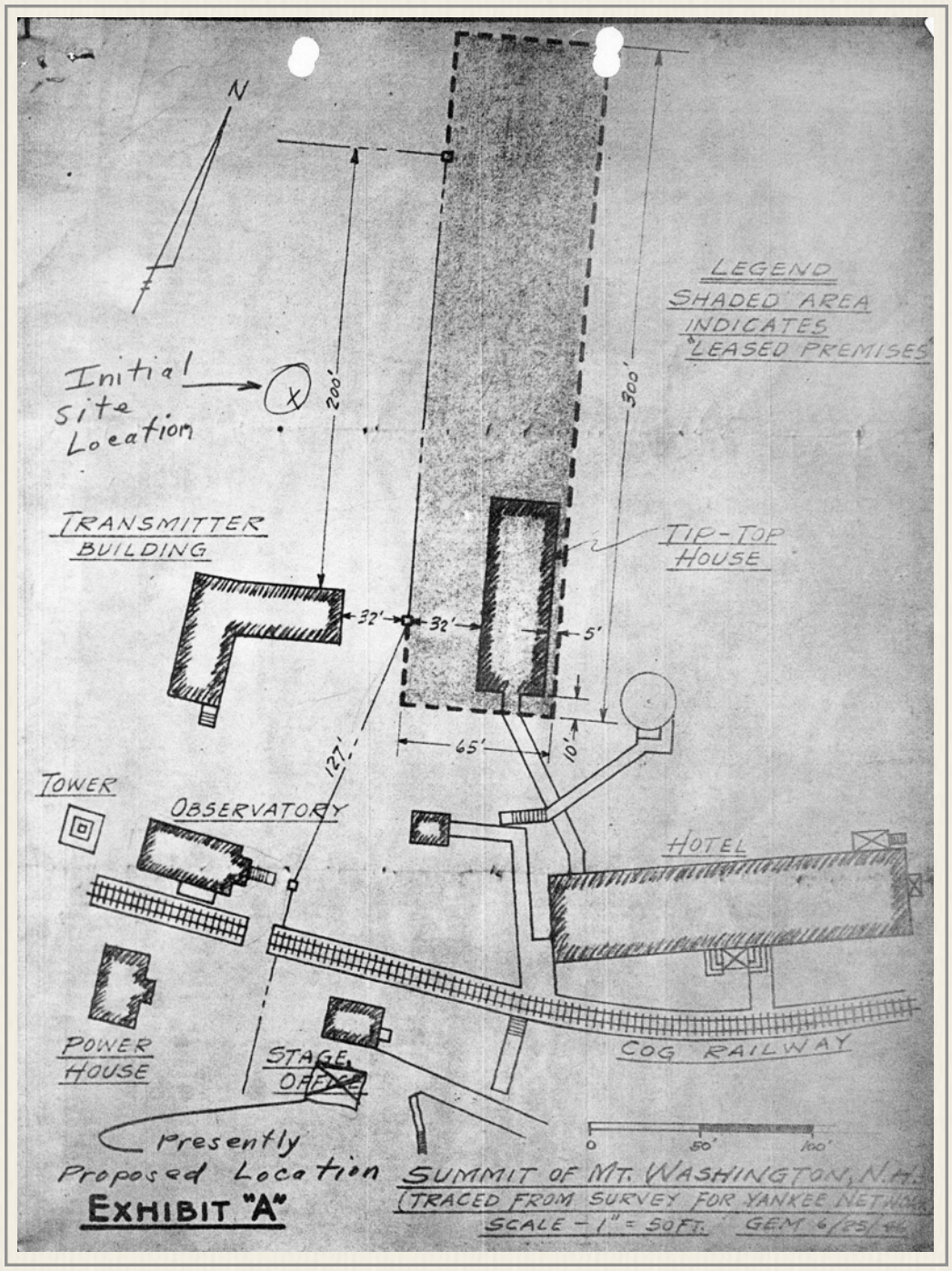
"The third week of July an inspection party representing the Bureau of Aeronautics, Bureau of Yards and Docks; the Aeronautical Engine Laboratory and Smith, Hinchman & Grylls Company, Inc., visited at Mt Washington, N.H. for the purpose of selecting a test sight, determining methods of transportation of the airplane and construction equipment and investigating all other aspects of the program." writes van Gelder in hi memoir quoting a U.S. Navy press release from October 1947.

Victor Clark's prediction in his *Appalachia* article that more, not less, government icing research work would happen on Mount Washington was coming true in the summer of 1947 when the power plant division of the Navy Aeronautics bureau asks on July 11th that the top of mountain

be investigated as a possible test site for a McDonnell Aircraft XFD-1 Phantom jet during the winter of 1948-1949.

Phantoms in the Clouds

Five days later *(July 16)*, an inspection team led by Commander Raymond Lamoreaux of the Aviation Facilities Division of the Bureau of Yards & Docks at the Navy Depot in Washington DC, along with representatives of the Volpe Construction Company arrived at Glen House, and went up the toll road - surveying as they went and toured the top. van Gelder says Volpe Construction was included so "a possible construction contractor would have in advance first hand knowledge of all aspects of the problem and be in a position to undertake the construction of the test building without delay. The Volpe Construction Company was tentatively considered for the construction work not only because it had accomplished satisfactory construction work for the Navy in the past but primarily because both the owner, Mr. John A. Volpe, and General Manager, Mr. Frank Marqucella, had served as Reserve Officers with Construction Corps of the Navy during the war and were known to be actively interest ed in furthering Naval Research and Development. The Bureau of Yards and Docks realized that in view of the late seasonal start of building construction, any contractor would be faced with extremely trying working conditions and the successful and timely completion of the construction would depend primarily on the will of the contractor to see the job through. It was felt that under the circumstances, the Volpe Construction Company could be depended upon in carrying out that phase of the program. Actual construction work started 18 August 1947."



They initially looked at a site near the Tip-Top house *(right)*. But found it "extremely rugged, and impracticable to use, considering the short time available for completion of the project," and cost limitations. No blasting could occur there to protect wells constructed by Yankee Network. In addition it would be be difficult to "move (the) test plane from the railway to the building *(the Cog Railway was the initial choice to haul the*

plane up on a flatcar), and would require several hundred feet of cribbing and false work for temporary wooden platform or road.

The group then looked at another potential site just south of Stage Office. The area was "reasonably level (having been cleared by drilling and blasting prior to the restriction on such activities), is close to the terminal of the Cog Railway, and presents no stupendous problem in site preparation. However, it will be necessary to reduce the size of the proposed test building to a 30 feet width and 35' length (from 40'x40'). The Standard Butler truss model would have to be modified to reduce to the 30 foot site restriction. After inspection of the toll road "it was decided it would be impossible to get the test aeroplane to the summit of the mountain by towing it up the Toll Road. There are restrictions in width of the road, which cannot be improved, together with some hairpin turns which makes towing of the plane up this road impossible, or at least very dangerously impractical. The question was then explored as to whether the plane could be transported on the Cog Railway, and Mr. (Maurice E.) Staples (of the Road Co) assured the party that he was certain that the Mt. Washington Cog Railway would amenable to this proposal, and knew of no limiting conditions which would restrict transportation of the plane from the west side Base Station of the mountain to the summit. Mr. Staples was also asked by the inspection team if he could produce any deeds.

On Friday, July 18, 1947, "the inspection party left Glen House at 0730, and proceeded to the Base Station on the west side of Mt. Washington, and located Col. Henry Teague, who is President of the Mt. Washington Cog Railway," reported Commander Lamoreaux. "A conference was held with Col. Henry Teague, and also Col. Arthur Teague *(Lamoreaux noted: Col. Arthur Teague is understood to be an adopted son of Col. Henry Teague. Col. Arthur Teague obtained his commission in World War II, and commanded a battalion of Infantry in the Normandy landings. The younger Teague appears to be more or less, manager of the railway)*. During the discussion with both Teague's, an effort was made to ascertain exactly the ownership of the land in which the Navy was interested. The elder Teague advised that Mr. Staples was in error in his statement of the Summit Road Co. having leased the desired area, and furthermore stated that even the Stage Office of the Summit Road Co., was located on Cog Railway property, for which the Summit Road Co., had never negotiated a lease. The Colonel had no maps showing detailed location of property lines of his lessees, although one is reported to have been made in 1941 or 1942, and may be in the hands of the company's attorney. The only map *(previous page)* which would be obtained, showing general location of facilities on the top of Mt. Washington, is attached as Exhibit A, the original of which was part of the lease between the Mt. Washington Cog Railway Co., and the firm of Smith, Hinchman and Grylls Co. Inc., Architects and Engineers, with the leasing of the Tip Top House and some of the adjacent land. The elder Teague said he would be agreeable to leasing the desired plot (south of Stage Office) to the Navy, and that he would further allow the Navy to enter on permit, pending completion of final lease.

Lamoreaux's report continued: "After discussion of real estate matters had been considered, the inspection party took up the proposition of hauling materials to the top of the mountain using

the Cog Railway. There appears to be no complications herein, so far as construction materials are concerned, and the Teague's agreed to haul one flat car with a ten-ton load to the top of the mountain for $100 (this charge is not excessive considering that the railway receives $4.00 per person per trip up the mountain, averaging 33 paid fares per trip). The matter was then investigated as to whether there was sufficient clearance on the railway to allow transportation of the test aeroplane, which has a minimum width, with wings folded, of 16 feet. It developed through the conversation that there are two limiting points to operate, where a coal bin is located on the left side of the track, with two water towers on the right side of the track on the way up the mountain. The inspection party rode the Cog Railway up to the first of these locations *(Waumbek left)*, together with Col. Arthur Teague. It was decided that this restriction could be overcome by moving of the coal bin and skidding the plane temporarily away from the water tower side, and then drawing it past the obstruction with the possible necessity that some false work might be required. Col. Arthur Teague agreed to transport the plane to the top of the mountain, and to make the necessary alterations and temporary construction required. The inspection at the site was completed, and the party left for Boston at 1400."

The Site Visit Summary concludes: "It is apparent that fast action is required by any and all parties involved in this project, if the proposed construction is to be completed in time for use this winter. Limiting conditions are the fact that the weather starts to get very bad, beginning about the 15th of September, the Cog Railway ordinarily does not operate after 1 October, and in any event, not later than 12 October, although these dates might be extended for the convenience of the project. Available labor in the area is very scarce, as confirmed by both Teague and Staples, usual weather conditions at the top of Mt. Washington are undesirable from a construction standpoint, and efficiency of the workmen can be expected to be relatively low. The project will probably be comparatively expensive.

Securing the Summit Site

Lt. Jackson of the First Naval District Real Estate section visited Mt. Washington on Friday, August 1, 1947. He arrived back in Boston on Sunday, Aug 3, 1947. A transcript of Jackson's phone call the next day with Commander Ray Lamoreaux in Washington, D.C. indicates gaining use of the Summit test site could be problematic. The phone connection is reported as "scratchy."

August 4, 1947 transcription

Lt. Jackson: *"We ran into considerable difficulties on quotation of their property." Both the Stage Company and the Cog Railway Company will give the Navy a "letter of permit" and both would like the test building after the Navy use is completed. However, "the Cog Railway also wants… $1500 per year rental for the space that it occupies, which is slightly exorbitant."*

Cmdr. Lamoreaux: *"Yes. I didn't think we were going to run into anything like that. Have you been able to rationalize exactly who owns the property that we want?"*

J: *"As far as I can tell… apparently both people have a claim to the piece of property that we own." I guess you found on your trip up there that they are not on speaking terms with each other."*

L: *"That is right.*

J: *"In fact, there is quite a bit of feuding going on up there between them."*

L: *"Yes. They are really competitors, you see, for the interests on the top of that mountain."*

J: *"It would be almost impossible to enter into a joint lease with them. I determined that much. It looks as though what we are going to have to do is accept their letter of permit so that we can immediately get started and enter into condemnation procedure. One marked document they have up there, the one that Col. Teague has, states that he owns the top of the mountain with the exception of the right-of-way… he owns all of the property, but he has to maintain a right-of-way up there for this Stage Company. The original charter (for the Stage Company - as described in 1860 minutes) says the right-of-way shall be 4 rods wide coming up the mountain and upon reaching that section that we are interested in shall become 2 rods wide, which would be 33 feet wide up there, which would take in the majority of the space that we want. The Colonel's idea is that if we just leave a 10-ft. space in there for them to get through – that, as far as he is concerning, he is living up to his terms of his deed. Therefore, he claims full title to the property up there and wants to enter into a lease as if it were his property. However… the Stage Company would have a claim against us and the Cog Railway if they care to force it."*

L: *"Yes, I can see that they (stage company) have an interest in there all right.*

J: *"They have a right of entry in there and we would be encroaching."*

L: *"Do you need condemnation just for a lease?*

J: *"Oh, yes, we would have to have condemnation for a lease to protect our interest. Of course, we get a right of entry from both parties subject to a lease upon their request; that is what I have asked for…. I know the old Colonel is going to request his right off as soon as he can get a copy of his deed down here showing his owning the property. I told him I would have to have that before I could enter into any lease with him; but that I wanted to get up there right away. He gave me a letter while I was there that gives the Navy Dept. immediate authority to occupy what interest he has in the property. I have been promised a similar ltr from the Stage Company; but both letters are pending entry into a formal lease upon determination of proper ownership of the property."*

L. *"Well, that is about the best you can do, I think."*

J: *"What the Colonel wants now is $1500 per year rental AND the building is the kind of a lease he would enter into. The Stage Company would give us the use of the property but they want the building. also. So we are going to have a conflict on settling any lease up there."*

L: *"Except by condemnation."*

J: *"Except by condemnation – the court would decide how much the property was worth, establish a fair rental AND how much each man should receive. The way it is now, each man feels that he should receive all of it."*

L: *"I get it. I see no other alternative except to go ahead on these permits and probably throw it into the court."*

J: *"Of course, the permit that we have been promised by the Stage Company is subject ot approval by their Board of Directors. But (Charles C.) Libby (of the Stage Company) was very much easier to do business with than the old Colonel was."*

L: *"Yes I would imagine that."*

J: *"I went up there anticipating some trouble but not what I did run into. By the way, on your inspection trip up there, did you look at the site down there where the Stage Company had their old stables? There is an old building down… well, I guess it is a 100-ft. below the peak where we want to build now. (third site)"*

L: *"There were conditions of weather that put us up on the point where we are now. We looked at two locations – they seemed to be the only ones that were satisfactory to both the Aero people and the aviators. (Up by Tip Top and Stage Office) A third lower down site – all Stage Company – free with only donation of building. without disassembly was considered but rejected. That unfortunately is around in pretty much of a shielded location… the primary purpose of this whole thing is to get up there where we can get the most icing and the winds and the foulest of weather that they can possibly get."*

J: *"We had some foul weather up there Friday (8/1)"*

L: *"We had it when I was up there, too. It was very difficult trying to get around, you couldn't see through the rain, generally."*

J: *"Well, our trouble the day I was up there wasn't due to vision, we had a nice clear day; but the temperature was down at 28 degrees."*

L: *"Oh! That is pretty cold"*

Moving the Plane, etc.

van Gelder's memoir focuses on the putting a plane on the Summit. "During the first week of August, the problem of transporting the XFD-1 airplane and fuel storage facilities to the top of the mountain was assigned to Commander, Naval Air Bases, First Naval District. An Inspection party from that activity visited the mountain and surrounding area the third week of August to study all aspects of moving the airplane from a suitable nearby airfield to the summit. As a result of this inspection trip, it was decided that the airplane would be flown to Berlin, N.H. Airport, where the outer wing panels would be removed and the airplane transported on a low-bed trailer up the Toll Road. The Cog Railway was considered but it was decided that this would involve more handling problems than the Toll Road. Also if any trouble should be experienced on the Cog Railway, such as high winds blowing the airplane and flat car off the tracks, it would be almost impossible to get suitable equipment in to conduct salvage operations. On the Toll Road, it would be possible to move a large crane up with the airplane to cope with any difficulty that might arise. The airplane with outer wing panels removed is still 16 feet wide from tip to tip of the inner wing panels. Since that is greater than the available clearance along some parts of the Toll Road, it will be necessary to tip the airplane on edge for this part of the trip. Also there are two truss-type bridges on the route between Berlin airport and the start of the Toll Road which present critical clearance problems. It was decided that the fuel storage would be handled by parking two 3200 gallon gasoline tank trailers near the test sight. These trailers are being taken from storage at Weeksville, North Carolina, and are being hauled to the mountain by tractors furnished by NAS, Quonset Point, R. I.. Because of the weight and steepness of grade up the Toll Road, the tank trailers will get hauled up empty and will be filled later from 1000 gallon gas trucks.

August 13, 1947 – Cmdr. Ray Lamoreaux and Bartlett of Aeronautics go to Mt. Washington to determine possibility of utilizing an alternate site for conducting tests.

August 15, 1947 - The Navy receives a permit from Summit Road company signed by Charles C. Libby.

August 16, 1947 - Newspaper article: "The Navy announces one phase of its winter test projects. They're going to bring a Phantom jet fighter plane up on the Cog Railway flat car sometime this fall and the ship will be exposed to an "ice box test" 6288 feet above sea level. The plane

will be secured in a flat-topped "Butler" building to be erected on top of the mountain. The building will be opened at both ends to form a natural wind tunnel when the tests are run. Construction is scheduled to be completed by mid-September.

- Boston Daily Globe, Aug 16, 1947 / Nashua Telegraph, Aug 22nd, 1947

August 18, 1947 – Transcript of a phone call between Lamoreaux in Washington and Cmdr Aubie & Cmdr MacManus in Boston

Aubie*: "I just got a call from Jackson and he tells me that a piece of paper is in giving us the right to go into that area. They have given us that letter but the understanding is that rent will be about $1,000 a year plus the building."*

Lamoreaux: *"Well that is a better deal than we were getting from the Colonel (Henry Teague)."*

Aubie: *"That is right – you should get that over to the Real Estate Section because I think they should know that. The Quonset boys have been up there and left this morning. We are set to go ahead. (A Navy rep) had a chance to see the Colonel but he was going to call in on him on the way by (today) just to advise him that were going down to the lower level. He will have (Teague's) reaction when he gets back here."*

L: *"All Right. I would say now that you are authorized to go ahead and tell Volpe (Construction) to proceed."*

Approximate cost of building to house the XFD-1 aeroplane $20,000 – Butler type trusses for the frame.

August 19, 1947 status letter: "Negotiations were entered into with the property owners relative to obtaining a lease for the property immediately south of the stage office, resulting in the procurement of a letter from Cog Railway Co. granting right of entry. However, it was determined that a dispute between the property owners exists relative to the title to the original proposed site. Lamoreaux and Mr. Bartlett of the Bureau of Aeronautics on 13 August made an inspection trip to Mt. Washington to determine the possibility of utilizing an alternate site for conducting tests. This inspection resulted in negotiations between the Summit Road Co for the site located on the lower parking area immediately south of the originally proposed site.

Road Co. granted the Navy Department permission to enter and erect the proposed building, subject to terms of a lease at a later date. Southwest corner of lower parking area. One year $1,000 renewed annually until 20 June 1950.

August 26, 1947 Navy memo: "It is noted that the proposed rental for the leasing of subject site is $1,000 per year. Seeking justification of said rent."

September 11, 1947 Government Winter Test Plans: Newspaper article: "Mountain Musing: As long as the government does not eventually take over the mountain-top entirely, freezing out summer visitors who come from the far corners of the globe, no one will probably seriously object to the increased expansion of research facilities atop Mt. Washington! A visit to the summit reveals the physical evidence of the expanded program lined up for this winter, when included in the scientific studies will be the "flying" of a two-jet Phantom fighter plane housed in a steel hanger which can be opened at both ends to allow ice to accumulate on the wings and engines. The B-24 which started altimeter-error check flights over the summit last spring will again

be flying over the peak. The erection of the $30,000 steel hangar for the jet plane has started at the head of the Auto road!"

"One of the most difficult problems in the design of the building was that of the doors which measure 18 feet in both width and height," wrote van Gelder. "The large ice accumulations and high wind loads which were anticipated indicated that conventional sliding doors would not be suitable. Canvas doors were finally selected because they could be fabricated in a minimum of time and because it was felt that they would present the easiest handling problems. The design of these doors closely resembles that of large black-out curtains used on aircraft carrier hangar decks. The doors are constructed of two layers of heavy canvas, with vertical steel cables sewn between the canvas layers at 22-inch intervals. All of the wind load is absorbed by these steel cables which attach to rolling trolleys at the top and bottom of the door opening. Special precautions were taken to shield the upper trolley from ice accumulation, while the curtain itself shields the lower trolleys in the closed position. In the event of ice accumulation, the canvas, the trolleys and the tracks may be de-iced almost entirely from inside the building.

"Along one side of the building there are three small rooms which are used to house the control panel, the heaters and the auxiliary power units. Three Herman Nelson aircraft engine preheaters are used to heat the building and de-ice the canvas doors. The ability of these heaters to conduct hot air through flexible ducts to any desired spot in the building has been found highly advantageous. Power for lighting the building is supplied by the Yankee Network FM transmitting station located on the summit of the mountain. For engine starting however, a Waukesha 300 ampere, 24 volt portable generator is used. Unleaded aviation gasoline for operating the turbojet engines, heaters, and generators is stored in two 3200 gallon trailers shown at left. The instrumentation for the test is, for the most part, conventional except for the photographic apparatus. An aerial camera and an automatically controlled motion picture camera were used.

On September 23, 1947, Col. Henry N. Teague went to Coös Superior Court and filed suit.

Mt. Washington Club v. Summit Road Company and Volpe Construction Company
Bill in Equity
Mount Washington Summit Road Company, Gorham, NH
Volpe Construction Co. – 54 Eastern Avenue, Malden, MA

The Mt Washington Club told the court the hanger was on a circle of land 50 rod radius from iron pin set in rock next to stage office. The land had been conveyed by the Mt. Washington Railway Company to the Mt Washington Club in a valid deed of December 15, 1939.

"The defendant, the Mount Washington Summit Road Company, has recently negotiated a lease with the Navy Department of the United States of America, the exact terms of which are unknown to your petitioners, by which the defendant, the Mount Washington Summit Road Company purports to lease to the United States of America a parcel of land within the circular area described… for purposes other than the maintenance and operation of hits carriage road."

Mt Washington Club is "Owner of the fee of the land." The Summit Road Company "has no interest in said land to convey by lease or otherwise except the rights and easements referred to in said deeds. Volpe Construction Company, without permission, has and continues to enter and trespass upon the land purported to be leased to the USA and is constructing a building thereon for purposes in no way related to the maintenance and operation of said carriage road."

Mt Wash Club seeks injunction against both parties and seeks "reasonable compensation from the Summit Road Company. McLane, Davis & Carleton for Mt. Wash Club

On September 24, 1947 a Court date set for Nov 1, 1947 in Superior Court in Berlin, NH.

Friday, September 26, 1947 – "A test airplane was moved up the side of the mountain and is now secured in the building. Also on Friday, 26 September, word was received from Mt. Washington that the Cog Railway had entered a court action against the Mt. Washington Summit Road Company and the Volpe Construction Company… the court order was an attempt to restrain Volpe from trespassing upon the property and further asked Summit Road Co. be order to make reasonable compensation for damages to the Mt. Washington Cog Railway due to the fact that the Summit Road Company gave the Navy written permission "to construct the building upon the site presumably owned by the Road Company.

The McDonnell FH-1 Phantom test bed on its hauler arriving at the Summit after its daylong trip up the Auto Road (1947)
- Mt. Washington Auto Road photo / Dan Szczesny Collection

Transcript of a telephone conversation between Bartlett and Lamoreaux when second court order received as the Phantom jet was going up the auto road that Friday.

Bartlett: *"(Cog) has just served papers. It is a building equity. Cog contends they own the land. It was served on Mr. Volpe and and on Mr. Staple. Staple said, "Well, we are about half way up the mountain with the airplane…"*

Lamoreaux: *"How is the construction on top of the mountain?"*

Bartlett: *"It's very good." Hands phone to John Volpe*

Volpe: *"When the sheriff came out to give me the injunction I thought he was kidding."*

L: *"Isn't the plane up there now."*

Volpe: *"Yes, I'd say it was about three quarters of the way up, it left the half way point about an hour ago."*

L: *"Now, about the building, it must be about ready for them."*

V: *"Well, not too far from it, we are putting the asbestos board on the inside, and they've got the outside pretty well licked, and they'll probably be ready to put the canvas on, I'd probably say Monday."*

L: *"You know you are entirely clear of it, you were directed to go in there by the Navy."*

V: *"That's right."*

L: *"For your part of it - send those papers onto Washington, and they will have to settle up with the old man, the Railway, whoever it happens to be."*

V: *"I don't see that this means at all that we should stop work or do anything to realize somebody is trying to get themselves some dough."*

L: *"That is right, somebody is suing for damages."*

V: *"He'd like to pick up some dough out of it because he lost some dough on the other deal. (Jitney Jr. - perhaps hauling the plane up?)*

L: *"I think that's it – This is just a play by the Railway to get some damages, when they found out they weren't going to get any direct payment."*

AIR MAIL SPECIAL DELIVERY ENVELOPE to Cmdr Lamoreaux with Smith, Hinchman & Grylls return address to their headquarters at the Glen House, Gorham, NH – likely the court paperwork.

Monday, September 29, 1947 – Information has just been received the Cog Railway has obtained another set of court orders advancing the hearings on the first court order to be advanced from the first Tuesday in November to Thursday, the 2nd of October. The second order enjoins the Navy – "if granted would require that all work cease on the project on which the Navy has already spent several thousand dollars and, more important, unless action is taken to set aside the injunction it would mean that the important research data and the tests to be conducted this winter would be cancelled."

OCTOBER 1st 1947 PHONE CONVERSATION: Cmdr Lamoreaux in Washington with Capt. John "Johnnie" Gromfine and Lt. Jackson in Boston. Jackson is about to depart Boston for Concord "with a lot of stuff for the Attorney General." Jackson has been in touch with US Attorney and "the old colonel's attorney," John Roy "Judge" McLane.

Jackson: *"(McLane) was in Boston yesterday (9/30) – I don't think he knew that we were aware of what was going on up there. I think he came around to fish some information. I determined from my conversation with him, yesterday, that he is pretty weak on his claim. His deeds back him up – he recognizes the fact that the other deeds do not back him up."* ***Lamoreaux*** *agrees.*

J: *"His deed doesn't say that the road company has the deed to the property; however, their deed does. (The Road Company deed) gave it to them in fee – for $75,000 they were given a definitely described parcel of ground. The deed (that Teague's lawyer) is speaking of… is the deed by which the Colonel got control of the top of the mountain. That is the main deed that we have had, that is the 1906 one, I believe or 1893 or something like that. That deed is the one that covers it all."*

L: *"Yes, but then, there was a deed subsequent to that which I thought gave Summit Road Company this property in fee."*

J: *"Well, the 1906 deed gave them the building., that wasn't in fee. There was a deed in 1860 where the original Summit Road Company was granted a certain amount of land for $75,000."*

L: *"In other words, the attorney for Colonel Teague thinks he is on rather thin ice?"*

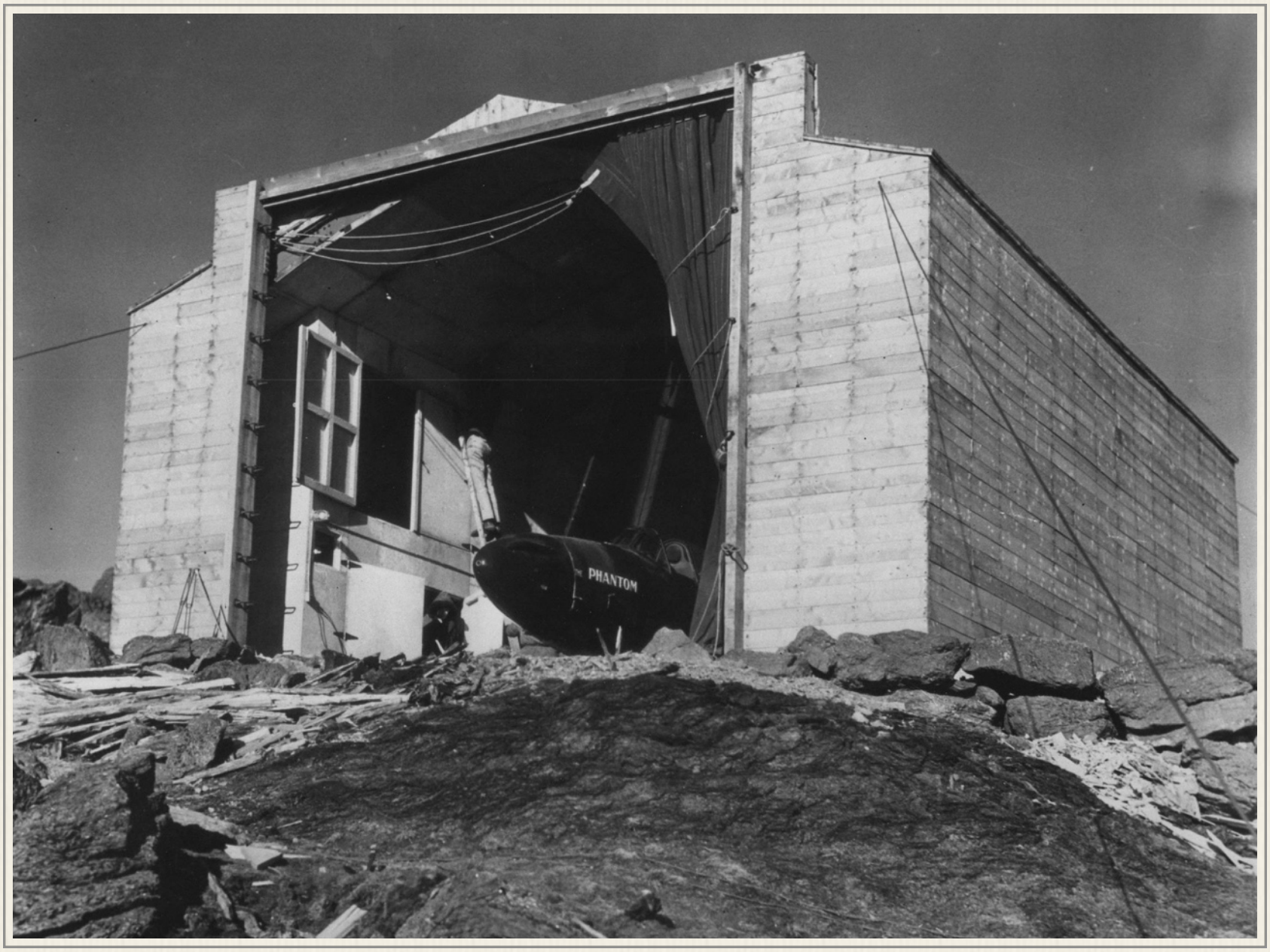
J: *"I drew that impression for my conversations with him."*

L: *"Does he know what action we are going to take now?"*

J: *"Yes, he was definitely told what action we are to take and he was talking to the US Attorney yesterday after his talk with this fellow McLane, the lawyer for the old colonel. The US attorney is of the opinion that he can have the case continued… However in the event he can't talk their lawyer out of dropping it, he wants me to have the information up there to him this afternoon so he can present Notice of Condemnation at that court meeting. In other words, that will save us from losing any time at all."*

L: *"Fine! I think everything is going to work out all right then from the way you have planned it."*

On September 30, 1947 "the attorney general was requested to institute a condemnation proceeding to acquire a term for years in 0.1 acres of land atop Mount Washington, N.H. for naval



The Phantom's Winter Lair: *Icing test hanger atop Mount Washington, New Hampshire, looking northwest, before the winter season closed down. In portion of shed to left, the auxiliary power unit, which is a motor-driven electrical generator, is in the upper level and the ground heater room is on the lower level. This picture shows the steel cables which secured the hanger to the rocky mountainside. Biggest problem was the canvas curtains strung across both ends of the "wind tunnel." (1947)*
- US Navy photo / Lewis Family Collection

airplane test. The condemnation proceeding was not instituted as it developed that temporary permits could be obtained. At the time the request was made of the Attorney General to institute a condemnation proceeding it was thought that the Navy would require the use of the property for a short term only. However, Commander Lamoreaux verbally informed me *(D. W. Agnew)* that the Navy may desire to continue the occupancy of this property for a considerable period of time. We have been unable to reach an agreement with the claimants for a lease. I think it advisable for us to institute a condemnation proceeding."

van Gelder's memoir says "The test program itself was carried out during the period of approximately 15 November 1947 to March 1948. A team of three engineers from the Aeronautical Engine Laboratory *(one was van Gelder)* and a team of three engineers from the Aeronautical Icing Research Laboratory will be assigned to the test program. Each man of a team will be assigned to the top of the mountain for twenty days followed by ten days off. The periods of assignment will be overlapping such that there will always be two men in each team at the test site with the third man of the team down the mountain off duty. The Weather Bureau established a station at the summit in the early thirties. The following are some of the many organizations now conducting research at this location: The U. S. Weather Bureau. the Mount Washington Observatory Harvard University, the General Electric Company, the Aeronautical Icing Research Laboratory and the Yankee Network. The Air Material Command was most cooperative in arranging for the Aeronautical Ice Research Laboratory to provide administrative details, sleeping and messing facilities, and general assistance in set ting up the test equipment."

Living in "The Flying Bunkhouse"

In their memoir, Frans van Gelder and Thomas Dickey carefully detail their first living quarters arranged by the AMC in the Tip Top House. "The first two years on the summit we lived in the Tip Top house. It had two stories at the time and we lived in the top story *(left)*. It had been "winterized" for winter use by a heating system, some indoor living improvements and insulation of blown in Vermiculite. The insulation didn't last long because the first wind over 100 mph blew it out again. AIRL had lived in it previously and got some of its shortcomings fixed. During the time we were on Mt. Washington, the Yankee Network only transmitted FM music. We had a direct wire from their building to us *(in Top Top)* on a 70 volt line. Good music all the time. Sometime a lightning strike would blow the line out but we would fix it as soon as possible. Entertainment in the Tip Top house consisted of reading, writing, or hobbies such as wood or metal shop work, electronics, and photography and of course eating. The dark room and photography was justified by our regular work but available to all. I developed my first color film there but it was a

little disappointing because the wash water gave it a brownish tinge due to the high iron content in the wash water. The shop was well equipped and included a metal lathe, drill press, band saw and many hand tools The "radio shack" included oscilloscope and signal generator. In 1950 Yankee Network built another building and rented us their building so we could move into it. We still had good FM music since Yankee Network didn't convert to TV until 1955 when we left the summit.

Tom Dickey detailed the ambiance of "The Flying Bunkhouse" in a dedicated memoir chapter: "Maybe 'a house is just a house without a man,' but an abundance of men never made Tip Top anything but a house. Even a woman (desired though she was) could not have made it a home. The place is just too uncomfortable. Life in Tip Top in the winter can best be best described as being aboard a leaky submarine stranded on an ice floe in the Polar Sea. The main difference is that Tip Top has no torpedo tubes; instead, the business end of the building is adorned with a hydraulic plat form hoist used to expose models (and people, for as long as they can stand it) to the ravages of the elements.

Tip Top is the oldest building on the summit of Mt. Washington. It looks older than it actually is. It looks old enough to have been built by the Vikings, and the design is not dissimilar to their style of architecture, consisting largely of a loose pile of rocks. It cannot exactly be referred to as a building, since some of the rocks in the wall were obviously not moved at all during its construction. Probably the most accurate definition of the phenomena would be "A natural declivity in the rocks and bits of lumber, entirely without plan."

"Since its original construction sometime prior to 1850 *(Ed note: 1853 actually)*, several brave souls have tried to make something out of it. No one ever succeeded, and each operation served only to maim the poor edifice still more. Originally it was built to serve as a brief shelter *(Ed note: a hotel)* from the wind for climbers and hikers caught in bad weather. In spite of the uses to which it has been put, it has never effectively done more than that. To live in it throughout a winter is to suffer the poor hikers. discomfort over a protracted period. Hikers enjoy that kind of suffering. Not all the inhabitants of Tip Top had quite such a patient and appreciative outlook. As rock piles go, Tip Top is quite formidable. The walls are nearly six feet thick at the base, and taper upward at an angle somewhat greater than the natural angle of repose of the rock. The only reason the rocks stay put is that each was chosen by the eye of some shrewd and calculating New Englander, well versed in the art of building stone fences to encroach on his neighbors land. No mortar of any kind was used. The result is a wall of amazing permeability for wind and snow, in spite of its thickness. Of course, the interior structure of wood keeps out most of the elements. But since the interior has been rearranged several times, there are a great many discontinuities invisible to the naked eye, but immediately apparent to the naked body when the wind is blowing. One phenomena that amazes every newcomer is the large amount of cold air and snow that can come through an entirely insignificant crack. In midwinter, the snow becomes as fine as dust after it has drifted for a while. It is so thoroughly suspended in the air, that the two manage to travel long distances without parting company. There is a crack in the floor of the dining-room-office-living

room which is three feet away from the wall and less than one sixteenth of an inch wide. Snowdrifts often grow around this crack, sometimes to a depth of two or three inches. It produces a peculiar type of despondency on whoever sits and watches the drift grow between his feet. No doubt it has something to do with the idea of defeat in the face of the elements.

"The problem of heating Tip Top house is almost the equivalent to that of heating the interstellar spaces. Whatever air passes through the furnace is heated, of course, but it never stays around long enough to really warm anything. It is cooled in the "warm air" ducts before ever reaching the rooms, and when it emerges from the grilles near the ceiling, it merely hesitates briefly before passing through a crack into the attic, and so on out to the wild blue yonder. People sitting in the room are quite unconscious of its presence, unless, of course, they have inadvertently discovered its existence, in which case they are continually frustrated by being so close to comfort. Every year the building was inhabited, a new and bigger heating system was installed, and a tremendous amount of fuel was burned. But the only-result was that the ceilings became distinctly hot. Sleeping in the upper bunks, one was stifled, while those down below felt only a faint radiation. As a means of radiant heating, it was highly impractical. The engineer who designed the heating system used the best conventional methods. The hot air is introduced near the ceil ing so that no one will experience a draft. The theory is that the warm air will circulate gently about the room and then be with drawn near the floor when it has cooled. The only difficulty with the theory is that it neglects the influence of the frigid blast rushing into the building through the cellar. This air mass buoys up the warmed air as though it were hydrogen, and forms a "Polar Front", or dividing meniscus between the warm and cold air masses. This front is normally about chest height, but it raises and lowers in accordance with the wind velocity. When the wind gets up to a steady 110 miles per hour, and the thermometer drops to 55° below it hits the ceiling, along with everybody else. An average value of the temperature gradient is as follows: ceiling, 85° F., chest height, 70° F, floor level, 35° F. There was one week in January, 1948 during which the temperature on the floor never rose above freezing, and as a result the snow on the floor never melted. (No one took a shower, either).

The sanitary plumbing in Tip Top cannot be called primitive, it is highly mechanized. It was quite inadequate for the number of inhabitants, however. Twelve men all depending on a single toilet raises real problems. Scheduling was tried without success. It just isn't the kind of thing that can be scheduled. Priority systems were worked out, but proved equally ineffective. The only practical scheme turned out to be a strict five minute time limit, with no reading matter allowed.

Sewage disposal on Mt. Washington is a major problem requiring careful planning and special equipment. The ordinary type of system is, of course, impracticable in the winter time, since a septic tank will freeze due to the permafrost if it is placed outdoors. This problem was solved by placing the septic tank above ground in the heated part of the cellar. New problems were introduced, as anyone knows who has ever lived that close to a septic tank. Great efforts were made to seal the top of the tank, with mediocre results. The overflow from the tank led out of the building to a flat area of loose rock, which became commonly known as the "honey farm" for no particu-

lar reason. During warmer weather, it was definitely a good place to stay away from. To some, it was a fascinating though morbid pastime to watch the goofers *(a.k.a tourists)* through the window, strolling around behind Tip Top. Bets were taken when they approached the honey farm as to when they would turn around and walk the other way. Freezing of the honey farm and the discharge pipe submerged in it was disastrous during the first winter. (A description would be out of place here). The system was altered so that the pipe was four feet above the surface of the rocks, and discharge only occurred when a pump was turned on, which emptied a forty gallon overflow tank. The switch for the pump was located in the bathroom wall. It was the responsibility of everyone to operate the pump for a few seconds whenever he had had occasion to add to the contents of the septic tank. Forgetting the pump was a serious matter; but it happened repeatedly. An automatic bell was finally installed to give the alarm in case the situation should become critical. This usually happened sometime after midnight.

Water for Tip Top was originally purchased from Yankee Network. They owned the only well on the summit, and sold the water at six cents per gallon. Although this appears to be an exorbitant figure, it may have been justified considering the initial cost of the well. It is over one thousand feet deep; and the water must be pumped from a depth of four hundred feet. The well casing is heated electrically, to keep it from freezing. Fortunately, the inhabitants of Tip Top did not have to pay for the water individually. The standard of cleanliness would have descended to intol-

erable levels had that been the case. Nevertheless, the fact that someone had to pay about two dollars for every bath one took, was food for thought. That fact combined with the discouraging temperature of the bathroom keep bathing to a minimum.

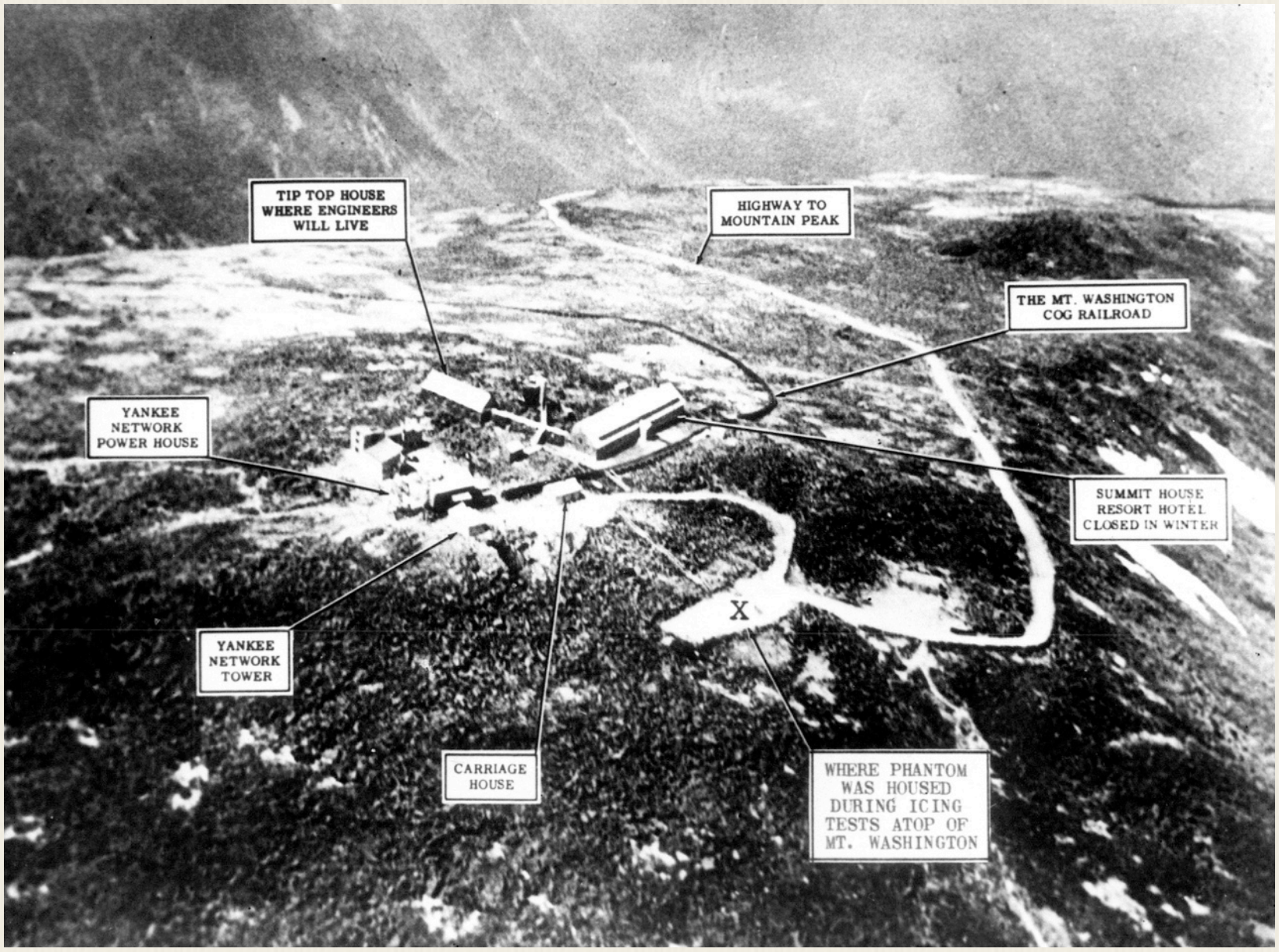
"In a high wind, Tip Top behaves not unlike a large aircraft just prior to becoming airborne. In fact, the impression is so strong, that one often wonders whether this time the old girl is not going to follow through and take off. Everything in the building settles down in its own natural frequency. There is motion everywhere, but certain noises are especially prominent. Each of these starts vibrating when the wind reaches a characteristic minimum velocity. With a little practice, it is possible to determine the wind velocity with surprising accuracy, just by the sounds made inside the building. When the wind exceeds eighty miles an hour, the motion of the building becomes quite pronounced. Double decker beds sway as much as a quarter of an inch, and objects rattle themselves off the shelves. At such times, sensitive persons become quite tense, not as much from fear as from awe at the sheer force of a wind that can shake a heavy building. There is always the comforting thought that the building has withstood a wind of two hundred and thirty miles an hour. The only trouble is that one never knows when the wind is going to blow more than two hundred and thirty miles an hour. It is an inconceivable speed until one had experienced a wind of one hundred and forty miles per hour. From there on, anything seems possible. With the advent of living quarters palatial by comparison, the use of Tip Top in winter has ceased. As with all places where one has lived, there is no leaving that is not tinged with a certain amount of regret, in spite of the discomfort of unhappiness one may have experienced there. If the place is characterized by a unique atmosphere, which Tip Top certainly is, the feeling of regret is enhanced. There is little to tempt one to move back there. But it will be a sad day when the old thing finally blows away."

Obtaining the Permits

January 6, 1948 letter to Willis Dudley Yards & Docks: "forwarding permits from Mt Washington Club for six months from November 19, 1947 and Summit Road Company permit dated August 15, 1947. Henry agrees to a dollar on either parcel A behind Yankee network south of Tip Top and lay fuel lines there. Summit Road says okay to 30' x 35' hangar at the site of the old stable located at the westerly section of such presently described parking area. Good for testing during the winter of 1947-1948 subject to final lease and extending use of the area for two years.

The news of the change in the test jet's transport method to the Summit reaches the public sixteen weeks after the fact.

January 10, 1948 - *Phantom Freight Too Wide for Cog:* The XFD-1 Phantom jet fighter will be taken by truck and trailer "up the Mount Washington vehicle road to the site of the experiment. It was originally planned to use the Mount Washington cog railway. However, this was abandoned because of too many close clearances of buildings on the right-of-way and excessive vibration of the trains on the 25 percent grade." *- The Bradford (PA) Era - Sat, Jan 10, 1948 pg. 9*



Overall view of area where jet engine icing tests were conducted. Purpose of the project was to study icing conditions on both engines and wings. Six men comprised the Bureau of Aeronautics icing study party which worked in staggered 90-day shifts through the winter. Often braving 120-mph gusts and 40-beelow temperatures to gather data on how jet engines operate under frigid conditions. (1948)
- U.S. Navy image / Lewis Family Collection.

January 23, 1948 – Initial permits granted by Mt. Washington Club and Summit Road Company have "not been formerly accepted on behalf of the Government" negotiate a "firm lease covering use of the property by the Navy. This action is desired so that the claimants will not at a future date submit exorbitant claims to the government for rental, restoration or damages." Get one until June 30, 1948 with right of yearly renewal for nominal consideration. In all probability the improvements placed on the property will not be removed from the premises and will represent a valuable improvement to the property so no more than nominal consideration. Tell US Attorney Dennis E. Sullivan in Concord about the intent of the negotiation and ask for help. Do it quickly. Doesn't happen -condemnation proceedings.

February 11, 1948 - Army Quartermaster Corps returns to Mount Washington for "wind chill determinations at the meteorological station on the summit using the copper man (clothed in United States Army Arctic clothing) exposed to natural environments for the first time." That testing was continuing when Major General Thomas B. Larkin the Quartermaster General submitted the list of field tests in New England to the Armed Services Committee on March 1, 1948.

The list was collated to support the construction of a $6-million dollar Research Laboratory in the Boston area.

June 15, 1948 – proposals to enter joint lease with Cog and Road referencing terms of Jan 23, 1948 letter. Have been delivered to both parties as of this date no direct reply received. "Conversations with Mr. Arthur Teague, president of the Mount Washington Club, Inc., and his attorneys, however, indicate that entering into a lease for a nominal consideration is not acceptable to them, and it is therefore recommended that condemnation proceedings be instituted."

Condemnation

August 18, 1948 Navy Dept. letter: "This letter outlines the present and future plans of the Bureau of Aeronautics for use of the test facility. The icing test hangar is currently being used for a comprehensive aircraft gas turbine engine anti-icing system development and test program. The program is one of urgency and of extremely high priority. Further, there is at present no other test facility available giving such natural icing conditions, nor are there other development and test methods economically feasible for conducting the work currently scheduled at this facility. The Bureau… has very definite plans which will require use of the icing test hangar through June 1950. Although definite plans have not been made beyond 1950 because of unknown factors (noted enclosure a) there is every indication that there will be a justifiable requirement for continued use of the icing test hangar. A May 24, 1948 memo says engine icing tests during the next two years. "Continued operation of the facilities beyond a two-year period will be dependent on several factors, namely, (a) status of proposed gas turbine laboratory; (b) status of proposed Air Materiel Command facilities at Mount Washington; (c) success and value of test programs conducted during the next two years.

Cold Comfort: *Cold weather clothing also received an unofficial testing, as well as the icing conditions on jet airplanes. On bright days snow blindness had to be taken into consideration by the study party. This photograph shows two members of the party dressed in cold weather clothing and shows some addition interesting ice formations. (1948)*
- US Navy photo / Lewis Family Collection

September 30, 1948 - Pratt and Whitney is continuing its testing of its Turbo Wasp jet engines on the summit of Mt. Washington, where the best aerial testing laboratory in America permits conditions next to actual flying, with winds of 100-mile velocities, heavy fog and clouds."

- Littleton Courier - Thu, Sep 30, 1948

October 26, 1948 DOJ's Acting Assistant Attorney Gen Robert E. Mulroney sends tran-

script of the condemnation hearing. The petition was filed on October 5, 1948 and an order of court was entered the same day concerning the Government's possession of the property since August 15, 1947.

Navy started condemnation on October 5, 1948 for 0.1 acre of land atop Mt. Washington for a period beginning August 15,1947 to and including June 30, 1949 with the right to renew said term annually. The Navy Department is conducting experimental work… which requires the uninterrupted use of the property for as long as the experimental work continues. The condemnation was sought to make sure that happened as well as determine the rental to be paid and distribution of that money. Jack E. Cochrane closes his Nov 10, 1948 reply to Summit Road Co. "This bureau desires to express its appreciation to you for the excellent cooperation and assistance you have rendered the Navy Department in connection with the experimental work begin conducted atop Mt. Washington."

November 16, 1948 – Mt. Washington Summit Road Co. letter signed by Maurice E. Staples seeking settlement of condemnation at "earliest possible convenience."

December 8, 1948 – "Commitments cannot be made that the improvements placed upon the property by the Government will be permitted to remain and become the property of either of the claimants. Therefore, any agreement reached in relation to the improvements should provide that the Government may, at its option, remove or abandon the improvements and that no restoration of the premises to the condition they were in at the time of the Government's entry into possession thereof will be required. Memo from Jack E. Cochrane at the direction of Chief of Bureau – negotiating strategy within Navy.

December 16, 1948 – Summit Road treasurer Leo E. Ray writes Cochrane to say "to date we have not heard or received any reply to (Staples letter seeking settlement). We hope the letter reached the correct office and that we may hear from you soon." Apparently, Ray wrote a similar letter to the Secretary of the Navy on the same day.

January 3, 1949 – U.S. Navy Secretary John L. Sullivan weighs in with a letter to Lee R. Ray of the Mt. Washington Summit Road Company - "Dear Lee: I have looked into the matter of verification of the permit issued to your company by the First Naval District for installation of testing equipment and building near the top of Mt. Washington, about which you wrote me on December 16th." *(Ed note: Handwritten notes by two people left of opening: Oh Oh Oh! Double underscores under first two)* Sullivan tells Ray about a proposed meeting of all parties at US Attorney's office in Concord after 3 January 1949. "If you have not received a notice of this proposed meeting, I would suggest that you communicate" with the First Naval Headquarters in Boston, "and request that you be fully informed concerning the time and place of the meeting. We are hopeful that this matter can be settled in a manner that will be satisfactory to all the parties concern. With kindest

regards, and the best of Season's greetings, I am – Sincerely yours, *John L. Sullivan*, Secretary of the Navy."

January 7, 1949 – conference of all interested parties held in office of US Attorney in Concord. This was where the $1,500 / $1,000 split came up. "Although the Navy representative at the conference made an attempt to reduce this amount and to guide discussions away from consideration for loss of business by the road company due to occupancy by the Navy of portions of the only vehicular parking areas on Mount Washington, the claimants insisted that this item be given some consideration in the justification of the proposed rental." The Navy figured "The business loss would approximate any value to be gained by the lessors in the event the Navy abandoned the hangar.

January 26, 1949 – Claimants in agreement that the "title rests with the Mt. Washington Club, Inc., and the sites of the Navy installations are on the parking areas for which the Mt. Washington Summit Road Company holds a perpetual easement and that they are agreeable to renting the property to the Navy for $2,500 per annum - $1,500 to the Club and $1,00 to the Board and that the Navy at its election could remove or abandon its installations.

Rental payments "while they seem high, are based on rentals being paid by other tenants on Mount Washington similar property; more specifically by the Army for space occupied for experimental work conducted by Northwest Airlines, Inc. as outlined below: Area of land – 19,500 sq ft / avg rental for five year - $8,600 per year / Value of improvements to revert to lessor on termination pro-rated for five-year period - $5,000 per annum. Total value rental and improvements (to lessor) - $13,600 per annum / Value per square foot - $0.70

Total area of land to be leased to Navy – approximately 3,550 squ ft. / Annual rental at $0.70 per square foot - $2,485 - SAY $2,500.

Handwritten note in margin "2/3/49 Army has no record of lease."

H. E. Wilson recommended that a joint lease be prepared and forwarded to Commandant for presentation to the lessor and that subject condemnation proceeding be withdrawn." Lease to cover site of existing test hanger with 10' wide reserved area on all sides of the building on the lower parking area so-called; an area 20' x 40' on the flat area at the front of the garage building so-called and the right to lay and maintain fuel lines from the hanger to the area in front of the garage building.

May 17, 1949 – agreement with Murphy for appraisal of summit

June 1949 - Property Dispute at the Summit - Again: "One might expect that the summit of Mount Washington would be sufficiently unencumbered to be free of the problems involved in the exact establishment of legal boundaries. Such, however is not the case as the U.S. Navy recently brought suit against the Mount Washington Club and the Mount Washington Summit Road Company - neither of which is related to the other - to determine who owns what land on

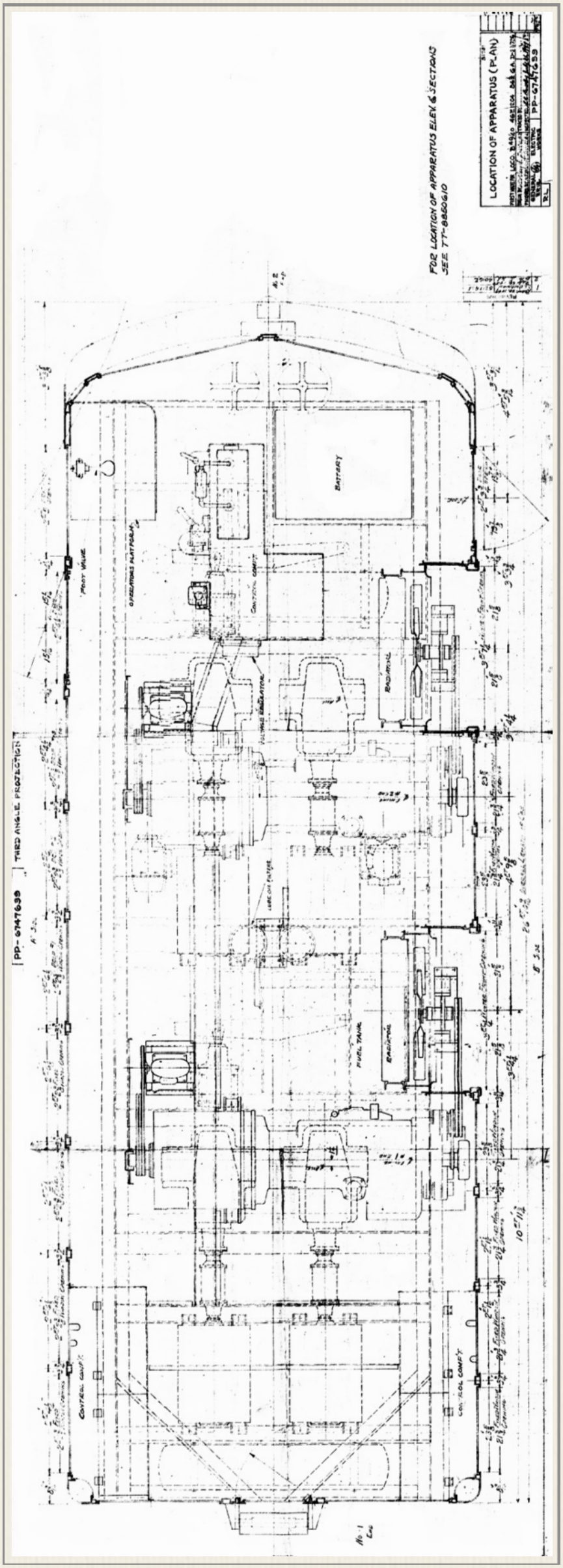
the summit. The problem arose when the Navy erected a large steel hangar and some fuel tanks on the mountain to test the action of its new jets under winter conditions. Unable to locate right on top of the peak, the Navy built near the parking space at the end of the Carriage Road on land which as thought to belong to the Carriage Road company. All went well until the Mount Washington Club submitted a bill to the Navy for rental of the land, claiming that their jurisdiction covered some fifty acres on the summit other than a right-of-way. The Navy has requested condemnation of the land so that they may have use of it until July 1, 1949, with the right to renew their use if necessary. However, it has been reported that the Navy Bureau of Aeronautics does not expect to have men on the summit next winter as the results of last winter's tests were most conclusive." *- Appalachia - Vol. 27 No. 3 June 1949 pg. 365*

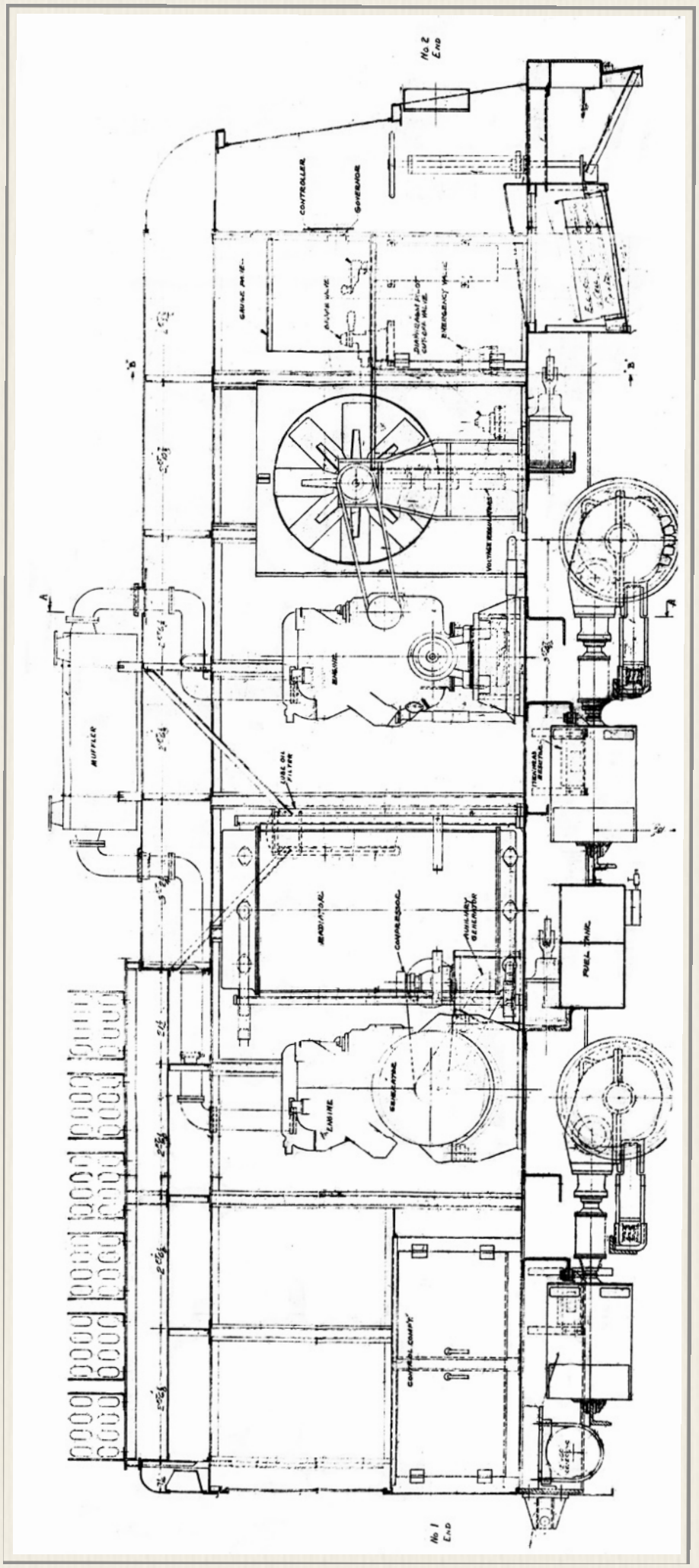
July 1, 1949 first due date for John Murphy appraisal of Summit

July 26, 1949 - GE Cog Diesel – Blueprint July 26, 1949

Historian Rob Bermudes first discovered the blueprint *(next page)* when he was allowed to dig through Cog documents. When Jitney Jr. learned of this blueprint and its date of creation he thought it was attached to the U.S. Navy research lab however they may be drawings attached to an offer to the Cog Railway to build diesel cog engines for $100,000 per unit. It appears to be a modification of an existing mainline traction diesel. However, repeated efforts to track down the genesis of this design through the archives of various subsequent company owners has been unsuccessful. In addition, COVID closed federal government archives ket NICOM, Inc. researchers from track ing down a report explaining why the Navy & Air Force wanted to use the Cog Railway to haul supplies to their icing test facilities on top of Mount Washington.

Work In Progress
** Not Final ***





Seeking A Settlement

August 11, 1949 – Appraisal of Summit sites filed by John F. Murphy who comes up with $600 proper value. He is paid $375 for his work.

August 31, 1949 – Frank Cahill recommends the Navy set aside the $600 called for by Murphy's report.

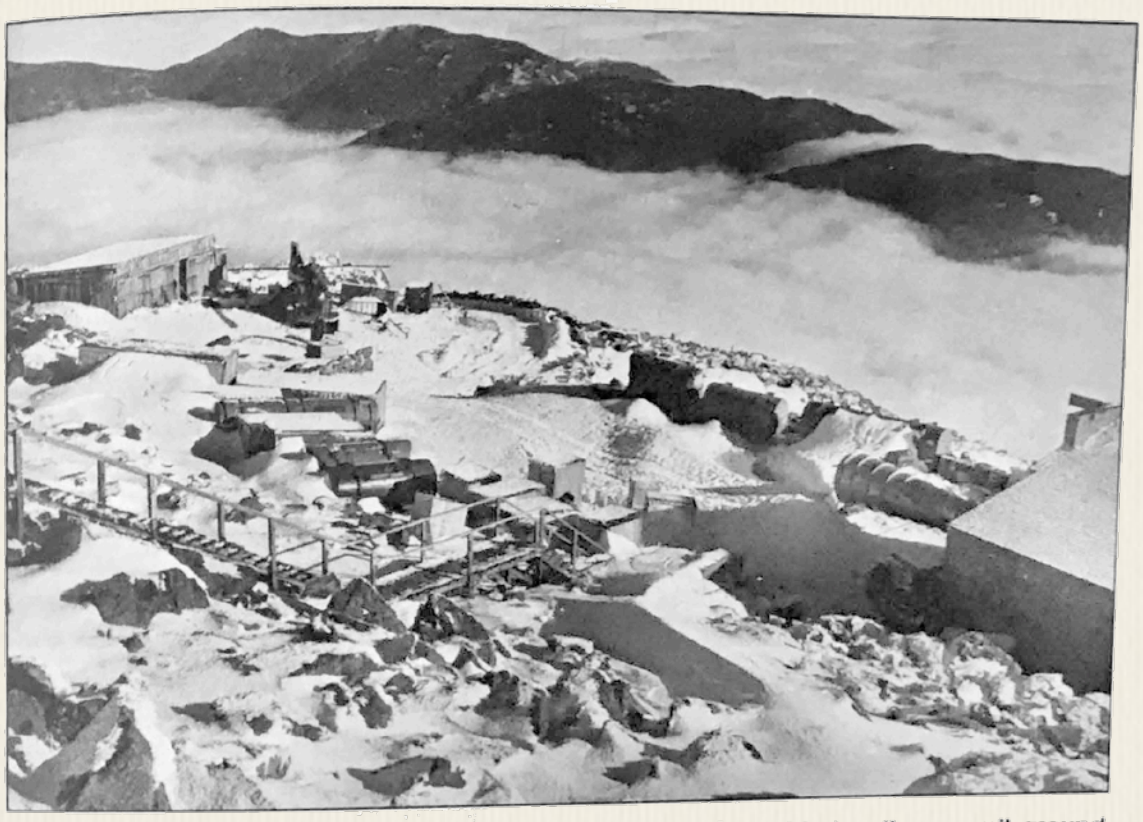
September 2, 1949 – Commandant and Lands bureau in agreement "a further effort should be made to negotiate a lease in settlement of the condemnation case.

September 21, 1949 – Lease negotiating session held in the US attorney's office in Concord, NH. Those present: Attorney John R. McLane, Jr., Col. Henry Teague, and Mr. Arthur Teague, representing the Mount Washington Club, Inc.; Attorney Edward J. Reichert, Mr. W. E. Staples, and Mr. Leo Ray, representing the Mount Washington Summit Road Company; Mr. Dennis E. Sullivan, US Attorney for New Hampshire; and Lt. jg Robert C. Young, representing the Commandant, First Naval District. "After much discussion by all parties of the damages to the lessors, the previous negotiations, and the appraised fair rental value of the property by Mr. John Murphy ($600 total), the Mt. Washington Summit Road Company, through its attorney, Mr. Reichert, stated that the Road Company would accept as a minimum $1,000 yearly rental, would allow 20 free trips, after which regular tolls would be charged, and would granted the Government the option of leaving the hangar building or removing it upon expiration of the lease. After the early departure of Colonel (Henry) Teague, Mr. McLane, the attorney for the Mt. Washington Club, stated he would advise his client to accept (the same terms). Verification that the latter terms are acceptable to the Mt. Washington Club has been received. The above terms are believed to be the most favorable which can be obtained by negotiation. Further negotiations are not recommended."

October 4, 1949 – US Attorney Dennis Sullivan recommends taking the deal to DOJ Lands Acquisiton Section

October 14, 1949 – Claimants now agreeable to $1,000 each. The Road payment would allow 20 free trips after which regular tolls would be charged.

Recommendation for next steps by Navy outlined by H. L. Mathews from the First Naval District – Option 1 enter into this joint least agreement; Option 2 – enter lease with Mt. Washington Summit Road Company under $1k terms and continue condemnation proceeding against Mt. Wash Club or Option 3 continue current proceeding to conclusion. Reasoning for each: Option 1 "only way to settle this case amicably." Option 2 – "probably results in reduction of $1k rental desired by the Mt. Washington Club. This action, however, would undoubtedly result in charges of discrimination and unfair dealings. Furthermore, the existence of two un-identical leasehold interests, one obtained by negotiation and one obtained by condemnation could create awkward situations. The alternative is undesirable because of the necessity for maintaining a cooperative spirit among all parties at this comparatively isolated location and also because both the Summit Road Company and the Mt. Washington Club have indicated that they would require removal of



The U.S. Navy testing complex in the Auto Road parking lot just below the summit around 1949. This outgrowth of Observatory research was itself superceded by the much larger U.S. Air Force testing facility built at "Homestretch" in 1953.

the Government improvements if the condemnation proceeding is continued to its conclusion. The approximate cost of removing these improvements is $2,500."

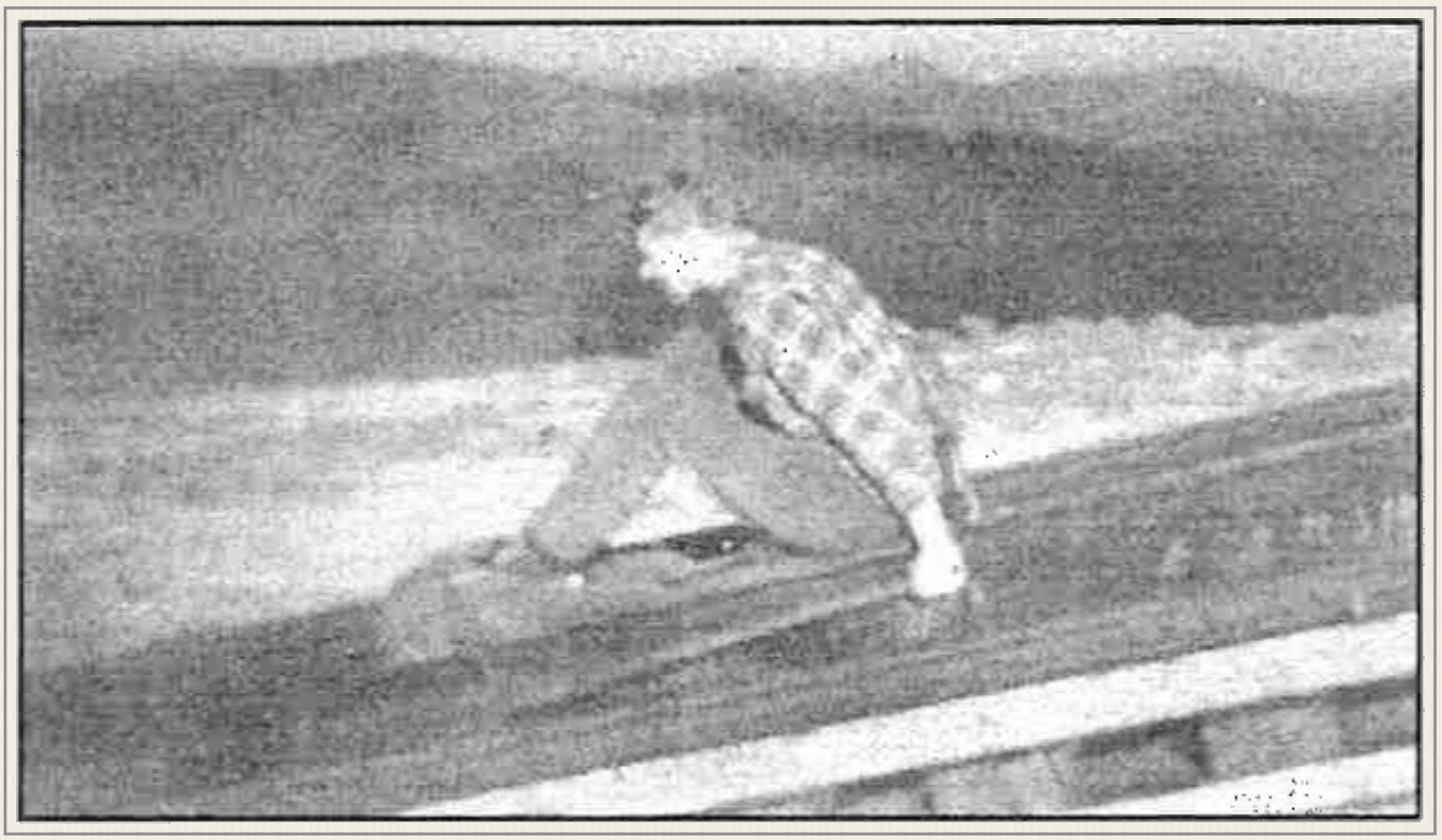
October 20, 1949 – Frank P. Cahill memo recommends "that condemnation proceedings be continued to its conclusion because of $600 rental estimate by appraiser.

November 22, 1949 – Proposed settlement acceptance – No because "The appraisal of John F. Murphy discloses that in his opinion the use and occupancy of parcels A & B has a fair annual rental valued of $500, while the use and occupancy of the road and parking area has a fair annual value of $100. In view of the values estimated by Mr. Murphy it is considered that the offer of settlement of $1,000 yearly rental to be paid to each of the owners is not satisfactory" and the Justice Department has been asked by the Navy to go to trial "in order that the annual rental to be paid for use of the property may be determined by the Court and payment thereof made as early as possible." Written by Jack E. Cochrane by direction of Chief of Bureau – First Naval District in Boston.

February 28, 1950 – The Bureau of Aeronautics has been able to operate an extremely economical research program at Mount Washington attributable to a considerable extent to the cooperative attitude of Mount Washington Summit Road Company officials with Naval personnel assigned to Mount Washington. It is recommended that… acceptance of the offer submitted by the claimants" since legal proceedings "might seriously affect this cooperative attitude to the detriment of the Department of the Navy."

Aeronautical Engine Laboratory mechanical engineers Tom Dickey & Frans van Gelder says their living conditions got better for this winter. "In 1950 Yankee Network built another building and rented us their building so we could move into it. We still had good FM music since Yankee Network didn't convert to TV until 1955 when we left the summit. The move to the Yankee building in 1950 made a big change in comfort. No more snow blown in from numerous cracks. When we moved to the Yankee building we got TV from Boston on channel 4 or 7. We got fair reception by means of a good antenna in the attic. Our first TV set was a B&W GE 10in model we got at a good price of $350. We financed it by selling shares at $20 apiece. At the end of the

season we picked a share from a hat to see who would get the set. A fellow from the observatory won it. Entertainment in the Yankee building was similar to Tip Top except that TV was the big attraction. The favorite shows were those such as "The Honeymooners" by Jackie Gleason, "Hit Parade," "Talent Scout" by Ed Sullivan, Paul Whiteman, Archie Bunker, Sid Caesar and Imogene Coca in "Your Show of Shows." Sports were not very popular except for the world series. In my opinion these shows were superior to what is offered today. The building had a ping pong table in the cellar. Ping pong was popular and we were required to wear hard hats because the ceiling was only six and one half feet in height in this part of the cellar. The experts claimed it was a faster game here because of the rarefied atmosphere at 6200 ft. The shop used the equipment from Tip Top but added more material and included a bending brake. The "radio shack" was better equipped. Building hi-fi equipment was popular and three Williamson amplifiers were built. These were state of the art and electron tube type. One was installed in the dining room and hooked to a big speaker. A 45 rpm record player was used as music source. During dinner twelve people would sit at the long table and listen to the latest hit records. At that time they were all big band or vocalists. When a person arrived on the summit from the valley he would bring the latest hit. We accumulated quite a few records over the years. The only record which was rock that I remember was "Rock around the Clock" by Bill Haley.



"Van" van Gelder on a slide board just below the Summit House (1950s)
- Tom Dickey photo / Van Gelder Collection

An Alpine Slide

One early fall when there wasn't any snow yet and we had a little free time Tom and I spent a little "Goofer" time around the summit. We spied a slide board under the Hotel *(the 1915 Summit House now known as the Mt. Washington Club*). If you are familiar with history of the summit the slide boards were used to get news down to the cog railway base station. The slide board... road on the

center rack of the track. The two handles were the brake handles and they would grip the underside of the rack and also stabilize the board. The conveyance would only work on the steeper inclines and if the rack was well greased with fresh grease. It would coast over the less steep inclines. I understand the record time from hotel to base station was about three minutes. This figures to over 60 mph. I understand some daring rider was severely injured years ago *(See Section 8 - The Devil's Shingle)*. Needless to say Tom and I didn't attempt anything so foolish *(but did pose for a picture)*. Moreover the grease was cold and hard and not very slippery."

Tom Dickey

Frans van Gelder

Thomas A. Dickey *(1917-1991)* Tom obtained a BS degree in Mechanical Engineering from Princeton in 1940 and a MS in 1941. He then obtained a MS in Aeronautical Engineering from Cal Tech under the auspices of the US Navy. From 1945 to 1947 he was part of the U.S. Naval Technical Mission in Germany where he was involved in bringing to the U.S.A hardware and personnel which would be useful in furthering jet engine research. In 1947, Tom joined the Aeronautical Engine Laboratory, Naval Air Experimental Station, Philadelphia, PA. where he was put in charge of jet engine icing tests on Mt.Washington, N.H. In 1954 he took a job with Lycoming in Stratford.CT. where he was responsible for engineering changes to the XT53 engine. He remained there until his death in 1991. He made significant contributions to the understanding of atmospheric icing and development of anti-icing protection for gas turbines and airframe components. ***Frans M. van Gelder*** *(1918-2004)* Frans graduated from Virginia Polytechnic Institute in 1940 with a B.S .degree in Mechanical Engineering. He then took a civilian job with the Navy Aeronautical Engine Laboratory at the Philadelphia Navy Yard where he was involved with reciprocating engine testing in various disciplines including endurance testing, ignition systems, and instrumentation. In 1946 he transferred to work on Project Summit under Tom Dickey. In 1956 he transferred to the Naval Air Propulsion Center Trenton, NJ, where he was involved with data acquisition, instrumentation, icing, and Plant Operation. He retired in 1996. He died in January 2004 in Trenton, N.J. His career with the U.S. Navy spanned 56 years. Dickey & van Gelder's memoir was self-published in 2001.

February 6, 1950 – Impact of Navy operations on Summit business for use in settlement negotiations by government.

"During 1948, fifty-five round trips were made (on auto road) between the base and summit of Mt. Washington with the Navy jeep. In 1949, fifty-three round trips were made. Reimbursement for this use of the toll road was made indirectly by Project Summit personnel by special arrangement with the owners of the Glen House whereby residence at the Glen House would include daily use of the toll road. Transportation on the mountain need not be contingent upon the place of residence of the government employees assigned to work at the summit, and should not be the responsibility of the individual employee. At least 70 trips per year should be provided. Estimates of 20 trips per year previously made by Navy appraisers failed to take account of the fact that the Project Summit Office is necessarily maintained at the base during September and October when frequent contacts with participating engine manufacturers is essential to the integration of all activities. Interference with the use of the summit parking lot is caused by the building (40x30 ft.) throughout the year, and during September and October there is additional obstruction caused by 8 engine boxes (6x14 ft.) and 8 fuel trailers of 4000 gal. each. On average weekdays, there is sufficient space left to park all the cars which visit the summit. However, on week-

ends and holidays, when traffic heavy, there is inconvenience to visitors, since cars and buses must proceed to the stage office area above, (difficult for an inexperienced driver,) or park along the road below the parking lot. As these are days of high revenue for the toll road, it is believed that the loss of business resulting from the inconvenience can be show to be considerable. On Labor Day, 1949, more than 150 private cars and 75 buses are known to have visited the summit."

As a result of the decision to try the case before a jury, Maurice Staples has told Navy Air Materials folks that the Summit Road Company will no longer dispute the ownership of the land and consequent rental rights with the Mt. Washington Club. The Summit Road Company will sue for their loss of income resulting from the obstruction of the parking lot, and when the Government is no longer using the building they will seek the removal of the building as an obstruction. (That would cost $2500)

In addition, F. W. Pennoyer, Jr wrote "The Mt. Washington Club probably will attempt to obtain as high a yearly rental for the land as possible *(Ed note: speculated to be as much as $10k per year)* and will be in a favorable position because of previously established high land values in the immediate area. To a certain degree the U.S. Government has already set a precedent for property values on Mt. Washington by leasing the Tip-Top House from the Mt. Washington Club at between $6,000 and $8,000 per year. This was done through a contractor to the Air Force (Smith, Hinchman and Grylls, Inc., Detroit, Mich.) but subject to approval of a government Contracting Officer. The yearly payments for the land purchased by the Yankee Network, Inc. of Boston, Mass. indicate a purchase price in the neighborhood of $30,000. The exact figures can probably be ascertained from the respective organizations. A court decision requiring removal of the building upon termination of the project might involve additional expense. Originally the Summit Road Company was agreeable to a provision that the government could elect to remove or abandon the building at its own discretion. It is therefore, suggested that the facts and figures contained in the foregoing paragraphs which were obtained indirectly be checked for accuracy. Results of a further investigation would provide a basis for a resumption of negotiations, or at least assist in the preparation of an adequate defense for the trial."

March 21, 1950 memo by Frank P. Cahill: "The terms of (lease) settlement of $1,000 per year for the Mt. Washington Summit Road Company and $1,500 per year for the Mt. Washington Club were satisfactory to all but the Navy" *(Ed note: Some involved blamed that rejection on the professional appraisers hired by the Navy who did not fully investigate "all the aspects of the case.")* Proposed (new) settlement differs from first as is $1,000 per year rental to each. Cahill is of the opinion "that the rental values are not in excess of those show in Murphy's appraisal ($500 for the Club and $100 for the Road). I have also given consideration to removal costs. "Considering all the items including the good will of the lessors, it would be to the best interest of the Navy to settle for $2,000 per annum and not be obligated to remove the improvements."

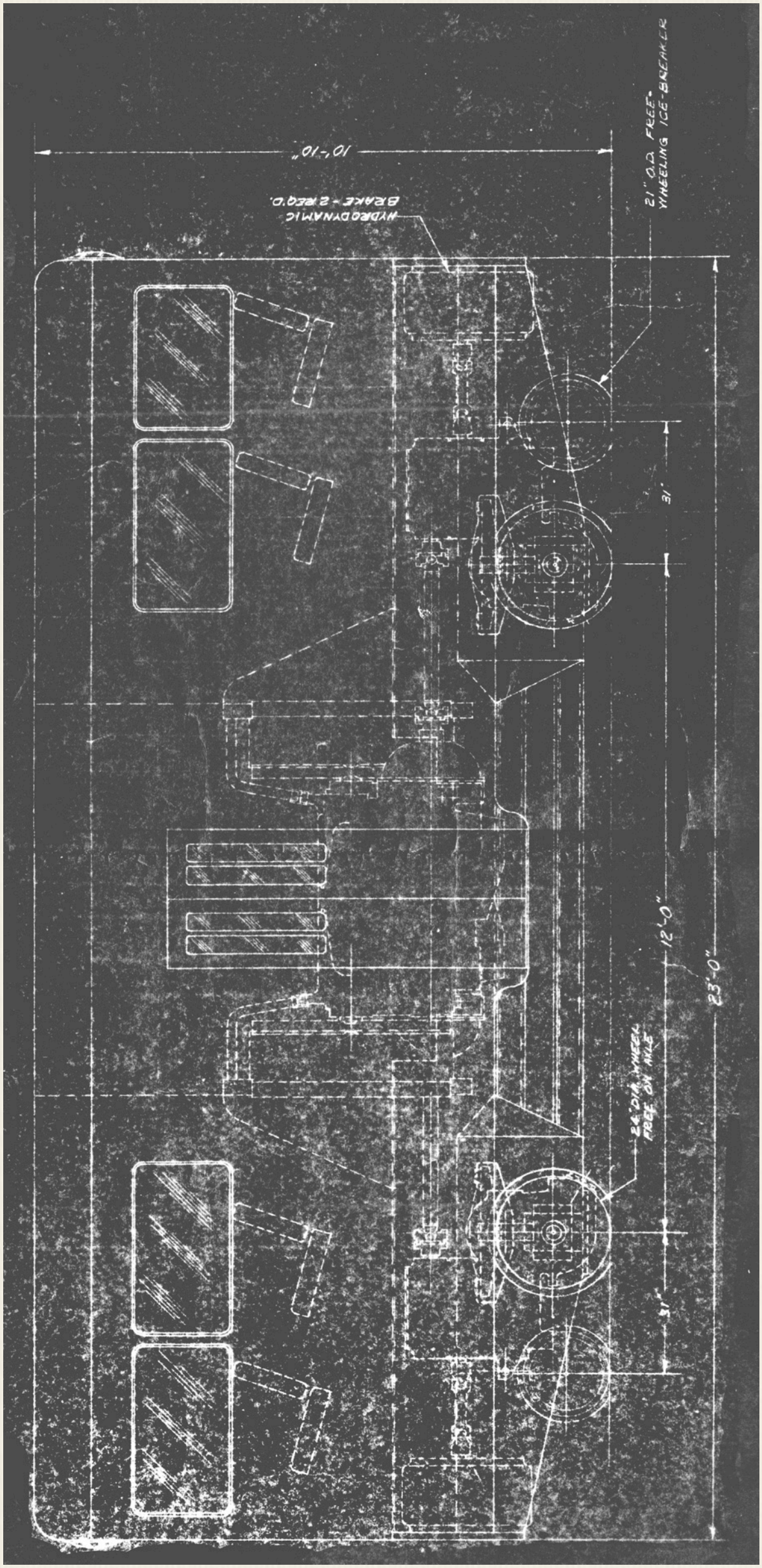
June 27, 1950 – Stipulation by and between Club and Road filed and petition dismissed as to the Volpe Construction Co.

May 31, 1951 - Summit Military Ventures: "Mountain Musing: The summit of Mt. Washington continues to attract Armed Forces departments interested in experimental work at high altitudes. The latest venture will include the building of a laboratory for use by the Air Force. The site location is some 200 feet below the top of the mountain, where below-freezing temperatures have been recorded in all months of the year, and sub-zero temperatures during seven months of the year. Winds of extreme velocities are common at the tip of N. E., and during the summer no month is free of winds in excess of 100 miles an hour. These are some of the reasons why Uncle Sam's forces like our famous Mt. Washington." *- Littleton Courier - Thu, May 31, 1951*

July 19, 1951 - Crowded Summit - Winter Cog?: "Mountain Musing: The summit of Mt. Washington, where the top wind speed ever recorded by the U.S. Weather bureau was clocked at better than 280 m.p.h., is becoming increasingly more popular as the site of government testing projects. The latest activity is noted in the approval by the House armed services committee of $4,223,000 for research, development and test facilities, including the climatic projects laboratory, on Mt. Washington. If the year-round population of the top of N. E. continues to grow, they'll have to winterize the cog railroad!" *- Littleton Courier - Thu, Jul 19, 1951 pg. 4*

August 23, 1951 – Smith, Hinchman & Grills purchase order ($25,000) with Mt. Washington Railway Company to modify the cog rack on the track to be supported by two timbers so that ice and snow could be pushed out. As much as possible to be accomplished before start of winter.

Sept 5, 1951 - USAF Cog Railroad?: In order to transport personnel and material up and down the mountain to the new Aeronautical Ice Research lab, government contractor, Smith, Hinchman and Gryllis, approaches the Mount Washington Railway Company about modifying the track and leasing the rail line on an annual basis for winter operations. In a letter on this date, Vice President Arthur Teague tells the Public Service Commission's Winslow Melvin that despite state and railway objections to some parts of the lease "the Air Corps wants us to go ahead and start converting the track" and will pay the railway $25,000 to begin and conduct some weekend winter tests. Teague wonders whether the state would "have any objection to the railway taking this work on as we will do it in connection with our fall track maintenance" in order to do as much as possible so the modifications (supporting the Cog rail with two timbers instead of one so ice can clear from the rack) could be completed in the spring of 1952. Teague says "The Air Corps is having General Motors Diesel Electramotive Division at LaGrange, Illinois, make up a design for a cog engine to be used by them here on the railway. I hope the 'great white fathers' descend down on us, and we, in some way, manage to get a couple of new engines and cars ourselves someday. During the past 5 years we have spent $135,000 in maintenance of locomotives, cars and equipment and a little over $90,000 in track maintenance. How would you feel if we managed to borrow some money from God knows where to buy a couple of pieces of new equipment? I really think it would be one of the greatest things the state could have done to add to the tourist attractions." *- Teague correspondence in NH Public Utilities Commission files*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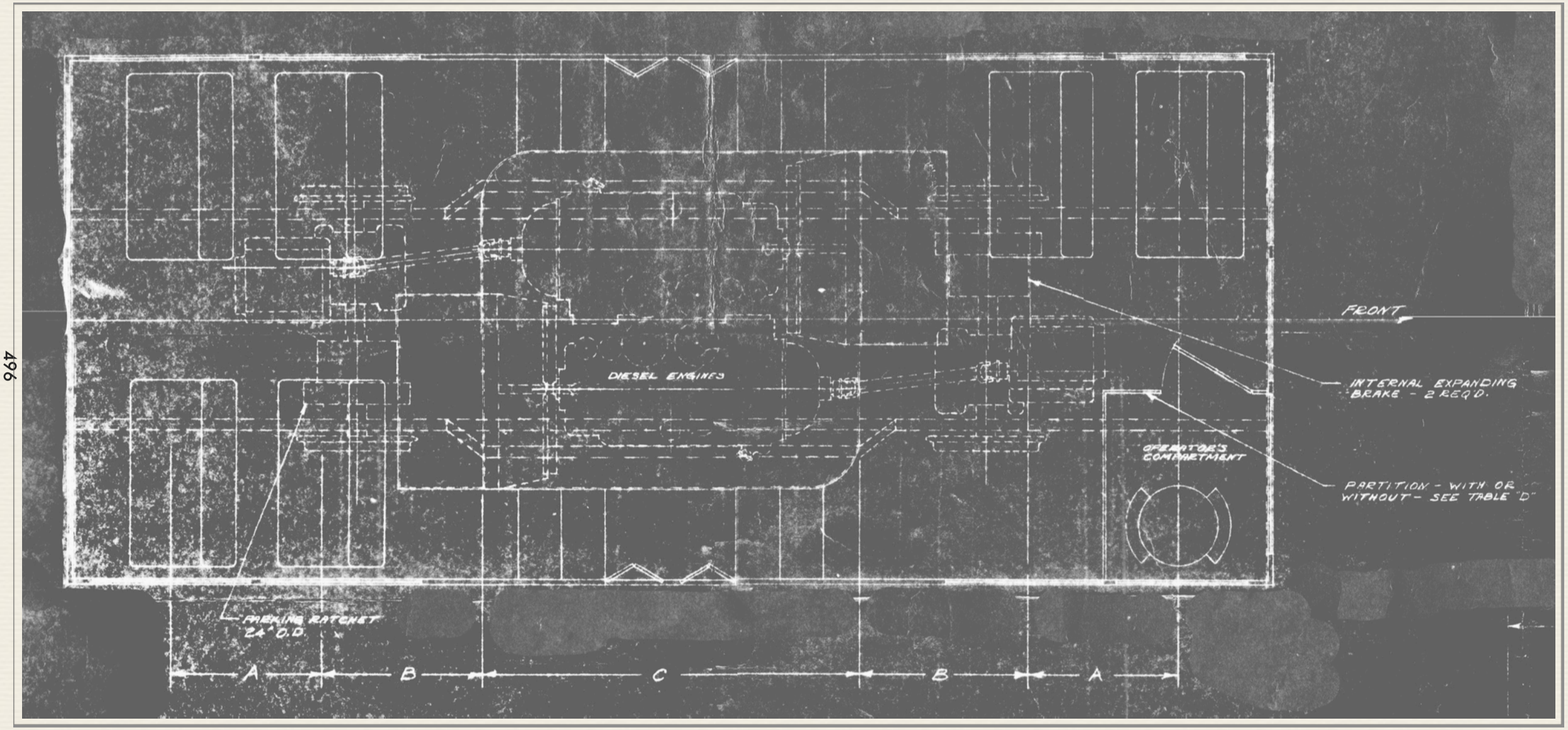

FRONT
INTERNAL EXPANDING BRAKE - 2 REQ'D.
PARTITION - WITH OR WITHOUT - SEE TABLE "D"
DIESEL ENGINES
OPERATOR'S COMPARTMENT
PARKING RATCHET 24" O.D.
A
B
C
B
A

Top View

Davenport-Besler Corporation
Passenger Locomotive

The Mount Washington Project file of the Davenport-Besler Corporation in the University of Iowa archives begins with a $51,950 quote for mountain-climbing cog diesel engine dated September 21, 1951. The locomotive would be built with two diesel engines attached to torque converter drives. Engineers were able to use the company's standard diesel general specification proposal sheet to describe the loco, but there was a special equipment attachment. That list included air actuated internal expanding drum type brake on each axle, and a hydrodynamic brake connected to each transmission to retard speed on the down grade. A deicing sprocket was provided at each end of the locomotive to clear the cog rack for the two cog wheels. It would carry 12 passengers with a single operator. Electric window wipers both front and rear on the operator's side. A V-type snow plow with hand hydraulic lifting control would be mounted on each end of the locomotive. *(Blueprints previous two pages)*

October 2, 1951 – Old Col. Henry N. Teague dies / Dartmouth inherits Teague's mountain-top holdings

On October 2, 1951 - Davenport-Besler sent Major R. A. Barraclough at the Climatic Projects Section of the Wright Air Development Center at Wright Patterson Air Force Base in Dayton, Ohio proposals for both a 16-ton and 18-ton version of the locomotive. The difference came in selection of GM diesel engines. D-B's Chief Engineer Waldo E. Rodler, Jr. told the Air Force "the advantages of the second *(18-ton)* unit compared to the first *(16-ton)* are greater power... higher performance and longer engine life. The disadvantages of the second unit are greater length and greater weight (as well as) higher cost & higher fuel consumption." Rodler explained, "The greater length was necessary to maintain the same amount of passenger space as in the first locomotive... the greater weight caused by the heavier engines and the longer body *(24-feet 6-inches versus 23-feet).*" The longer, heavier version would cost an additional $2,590. Shipment from Davenport could occur in approximately four months after receipt of the order, but that timeframe was based on the Air Force helping Davenport-Besler receive "prompt delivery of the materials required to build these locomotives." A separate letter on October 2, 1951 said it would cost another $1800 to provide a snow plow hookup with hydraulic control at both ends of the engine. The company recommended their 118SP "V" plow be used as the cog diesel contemplated is "not a very heavy locomotive and we would not recommend a larger size plow." Davenport-Besler sent along a photo showing how they hooked up a V-plow on a Canadian engine.

Early the next day, Colonel W. C. Rogers called Davenport-Besler vice president George W. Koch telling him an 18-ton cog diesel was "not acceptable and asked (D-B) to refigure." By the end of the day, this was done. Koch told Col. Rogers' boss Major Barraclough the larger GM 62300 diesel engines can be used *(in a 16-ton version)* by reducing the seat spacing by six inches, shortening the wheel base by a foot-and-a-half to 12-feet to meet a 23-foot overall length. Body sheets and structural members would be made with aluminum, and the original partition for the

operator's compartment removed. Koch closed his October 3, 1951 letter by saying "Since the matter of weight is very important we are writing you immediately as an amendment to our proposal." The new complete specifications package for the modified engine was put in the mail on October 5.

Six days later the Air Force sent the company comments to consider for final specs. The first involved reworking power curves "on the basis of a 16-ton locomotive and 14-ton car (approximately 4-ton weight of cars and 10-ton weight of maximum load)." A battery charging receptacle, fuel and engine cooling system filling ports to be placed on the right side of the loco. They wanted the cab heated within weight limits. The hood covering the engines needed to soundproofed and easily removed for engine inspection and repair. Each engine "should be readily removable" with quick disconnect fittings & wiring. All lubrication fittings should be the same size "so that only one grease gun will be needed." The engineer's controls needed to be moved from the left side to the right side of the locomotive. The Air Force directed the company to contact the Mount Washington Railway for detailed information about the "buffers" required to push the car. Colonel (Arthur) Teague would also help them with design of an "additional emergency safety braking device such as a ratchet and pawl arrangement on the axles." Flangers needed to be installed "to cut and scarify the ice ahead of the de-icing sprocket." The Air Force also asked for a list of "a complete set of tools necessary for the maintenance of the locomotive, estimated spare parts required for one year of operation, including one complete engine-torque converter unit, one complete axle with wheels, and the estimated cost of these items." They wanted these changes finalized "during the week of 15 October 1951."

Davenport-Besler was apparently working with GE Electro-Motive Corporation on the engine design. On October 16, Davenport's Chief Engineer Waldo E. Rodler was in La Grange, Illinois at the GE diesel plant for a meeting with Colonel W. C. Rogers and Electro-Motive engineers. The requested design changes pushed the estimated price of the Davenport unit to $58,525. Hand-written notes indicate the two rear seats needed to be "easily removable (and a door installed) to use as baggage space & door. 750-lbs to be carried." Davenport was pushing for a November 1 delivery of the engine proposal incorporating the new specifications. On October 29, 1951 the spec sheet was ready to go with a ratchet and pawl arrangement "on each axle for parking purposes." The diesel cog locomotive would be insulated. "One course of Fibre-glass will be applied to car roof, sides and ends, except over windows which will be Insulite board. Two heat ducts (will) heat passenger compartment." The recommended spare parts for the first year of operation would cost $26,626.53. Total quoted for project: $85,152.

De-Icing Sprocket

D-B Chief Engineer Rodler now turned his division's attention to the design of a de-icing sprocket installation for a Mt. Washington Cog steam locomotive. The proposal was sent January 28, 1952 to Smith, Hinchman & Grills, Inc. at the Aeronautical Icing Research Laboratories at the Willow Run Lab in Ypsilanti, Michigan. Rodler asked S.H&G to "Check our drawings against locomotives to be sure there are no interferences. This check is necessary because the

drawing supplied us were not complete in all details." Each sprocket and mount would cost $367. Rather than clamping the devices to the engines, Davenport-Besler designed steel mounting plates to be attached with heat treated alloy steel studs.

The estimate went to Smith, Hinchman & Grylls because they were contracted by the Air Force on January 1, 1952 to do some tests to determine if the existing Mount Washington steam engine fleet could plow the track to the summit during the winter. However as of February 18, 1952 had not received any "special funds" for those tests. They apologized in a letter sent that day to Davenport-Besler saying a decision on the de-icing sprocket proposal submitted three weeks earlier would have to be delayed. However, S.H&G had "contacted Mr. Teague concerning possible interference between the locomotive and the (de-icing) installation."

The special funds apparently arrived soon after the S.H&G reply as Chief Engineer Waldo E. Rodler flew in to Willow Airport in Ypsilanti at 8:30 am on February 28, 1952 to talk about the de-icing sprocket design with Ed E. Ratliff of Smith-Hinchman, mechanical engineer Homer E. "Ed" Carley and Ratliff's boss, Ray Potter. The group concluded there should be no "major difficulties with the operation of the ice clearing sprocket" even though it might face "layers of ice as much as six or eight inches thick mixed with layers of snow (to) a total depth... sometimes exceeding three or four feet." They said a track inspection was necessary to "make sure there are no sudden changes in gradient which would cause the ice clearing sprocket to raise from the track or cause the sprocket to support the whole weight of its end of the locomotive." Smith, Hinchman & Grylls thought they could "obtain a snow plow for mounting on the flat car to be pushed in front of the locomotive" for $50 from the New Hampshire Forest Service. The tests had to be "completed by the middle of May or else there will be no snow remaining to make testing possible."

Ed Carley's memo on the meeting noted his concern that "because this (de-icing) sprocket is not connected to the drive cog in any manner... and is entirely dependent on the movement of the locomotive to turn, will it have a climbing action, if the teeth don't match and have a tendency to de-rail the locomotive?" Other Carley questions included; Will it work if there's more than an inch of snow still on the rack? Will vertical dips and rises cause a binding action raising the wheels from the tracks because the sprocket is mounted ahead of the drive wheels in a rigid manner? and will the cross member on the present locomotive carry this sprocket without damaging same? A field investigation is set for March 3-10. Carley also noted that while Ed Ratliff thought the Air Corps was "going to see to a device to clear the tracks for the experiment" but has since been "informed it was our problem." Carley flew to Boston after the meeting on American Airlines arriving at 11:30 p.m. He stayed at the Statler Hotel.

March Site Visit

On February 29th, J. Robert Bowrey of Davenport-Besler received orders dispatching him to Mt. Washington. S.H&G would provide "necessary winter clothing," but Rodler suggested Bowrey have at least "$250 in cash or traveler's checks to cover your expenses on this trip." Bowrey

was to keep a detailed expense account so Davenport-Besler could be reimbursed by S.H&G. Bowrey was to check the snow plow "and prepare sketches of a mount so we can prepare a proposal for mounting it."

While Bowrey was receiving his marching orders, S.H&G's Homer "Ed" Carley was on the 11:30 a.m. Maine Central bus heading from Boston to North Conway, New Hampshire. He got there at 8:30 p.m. and took an hour cab ride to the Glen House in Gorham.

Saturday morning, March 1st, Carley inspected the plow at the U.S. Forestry Station in Bartlett, N.H. Supervisor Thomas B. Johnson said his shop and personnel were available to remodel it to suit S.H&G's purpose. Then it was on to the Base Station. Carley said the party didn't need to use a snow vehicle as they were able to drive within a quarter of a mile of the locomotive sheds. He looked at the cog engines, but because they were different one needed to be selected for the plow. Carley reported

U.S. Forestry V-plow outside Bartlett, N.H. station (Mar 1952)
- Davenport-Besler photo

Close-up of mounting bracket of U.S. Forestry V-plow (Mar 1952)
- Davenport-Besler photo

"After the man from Davenport-Besler gets here and tells us about delivery dates, we are going to have to get in touch with the people who operate the railroad and get one of the locomotives in shape to run, because all of them are in some stage of disassembly."

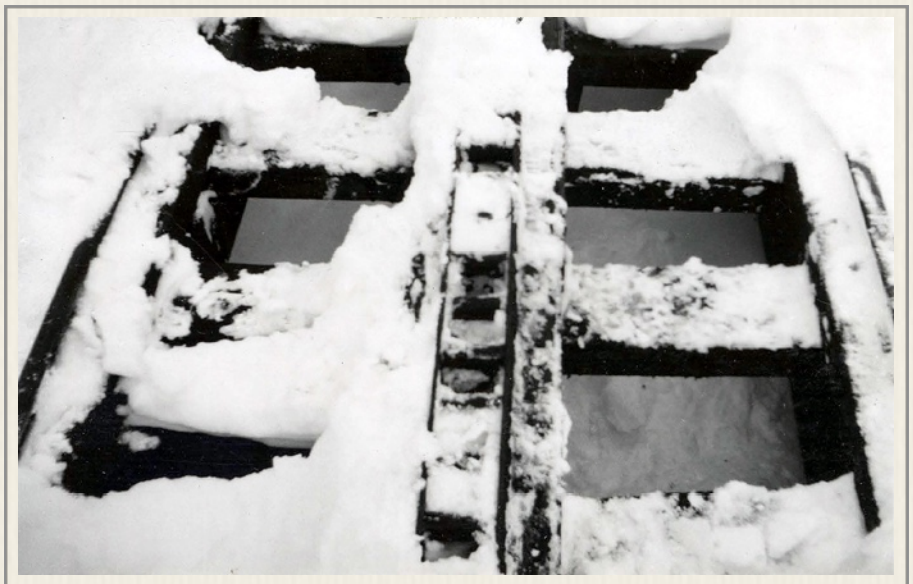
Robert Bowrey left Davenport on Sunday, March 2 on the 10:05 "Rocket" to Chicago. Bowrey then boarded the 2:20 "Eastern States" overnight train to Boston and arrived 20 hours later. Monday afternoon, Bowrey left Boston and arrived at North Conway just before 10 p.m. A Glen House station wagon picked him up, and he "talked over the Mt. Washington situation with Mr. Homer Carley... conclusions were to view snow plow owned by Forestry Comm. and look over the locomotives (6) and, if possible to observe track & icing conditions tomorrow." Bowrey went to bed at 2 a.m.

Ed Carley had started that Sunday by climbing the railroad to meet Lt. Bruce Morrell, USAF, "for purpose of inspecting snow, ice, condition of tracks, ties and trestles." Carley got up about

500 yards up and met Lt. Morrell coming down. Morrell found about 2 inches of glare ice in spots above the timberline, open track a lot of the way, and below timberline the highest drift about 5 feet of light snow. Morrell told Carley "some of the trestles and ties in the upper regions are in bad need of repair. (He) suggested structural man investigate before we try experiment." Carley suggested the track condition means "we go kind of easy in running this experiment so as to lessen the possibility of tearing up anything when we start to plow." Ed Carley also learned past winter experiments had found "if the rack is not almost clear of snow and ice a deposit fills up in the drive gear and causes the axle on the locomotive to bend and break." He headed back to the Glen House to meet "the man from Davenport Besler."

Snow covered track & Ammonoosuc trestle (Mar 1952)
- Davenport-Besler photo

Tuesday morning, March 4th, Ed Carley and Robert Bowrey left the Glen House to go look at the V-plow in Bartlett. Carley's March 10th memo outlining his work on that Tuesday says "Browley assured us that... the snow plow would work reasonably well in snow on the level - drifted snow with the exception of snow drifted against buildings or anything else along the tracks that might tend to prevent the snow from being pushed to the side. He is not too sure about rime or glare ice." Forestry Supervisor Thompson said "because the plow is going on another government project there would be no charges" if S.H&G signed "a form that its going to the Air Force." At the base Bowrey sketched the front of locomotive # 6 - *Great Gulf* for the plow and de-ice sprocket attaching." Carley says existing bolt holes in the frame of the locomotive will be used to hook-up the plow so the frame "can be assembled back together the same as it was before the test. Col. Teague was called in Philadelphia, and told the engineers that there was 2,240 feet of split cog rack supports along the line; all of Jacob's Ladder (240 ft), 1500 feet at the Summit and another 500 feet at the Base. Teague also said the *Great Gulf* could be put in running order with just two days notice. The relatively short distance of split cog rack support wor-



Snow covered cog track showing reduction gear clarance (Mar 1952)
- Davenport-Besler photo

Outside car barn at Base of Mt. Washington preparing for plow tests - Person could be Ed Carley (Mar 1952) - Davenport-Besler photo

ried Carley. "I am of the opinion we are going to encounter considerable difficulty when we get to a spot in the track that is entirely full of ice with no place to push it when the de-ice sprocket passes over."

Robert Bowrey's hand-written notes for Tuesday, March 4 in the Davenport-Besler file read: *"Inspected lower section (from base station up to 2nd ravine trestle) encountered one drift approx 7' deep. Must exercise extreme caution in initial plowing due to track not being anchored to ground. V-plow O.K. in most places... at two places up the mountain V plow can be used with careful handling. 1 at base station refueling and one just before "Jacobs Ladder." V-plow can cut ice above timberline, if done cautiously. 2 to 6" rime ice (refrigerator type) Sketched loco front bumper and snow plow owned by Forestry Comm. (Mr. Thomas Johnson) Sargent #3129 Maine Steel Products Co., So. Portland, Maine. Plow seems to be in good condition. Work necessary to re-vamp plow comparatively easy. Loco push plate w/ swivels and loco riding shoes are necessary (55½ Ga.)"*

Bowrey woke up to six-inches of new snow on Wednesday, March 5th and drove six hours to Boston with Vernon Hoskins, resident engineer S.H&G and Homer E. Carley, mechanical engineer S.H&G for an evening meeting with R. J. Potter, professional engineer of Willow Run and Aeronautical Ice Research Lab at Mt. Washington. Also at the meeting Col. R. J. Hawn, an engineer with Ice Research Lab, and toll road stockholder Morris Staples.

Carley's notes that on the meeting say "it was decided or we were informed:" 1) the state will keep the road open when we request it; 2) S.H&G will supply labor to remove snow so the locomotive and one car equipped with a boom outside; 3) the plow will be re-worked and sprocket in-

stalled by S.H&G labor under Davenport supervision; and 4) when the sprocket and assembly are completed in Iowa, Col. Hawn will see if an Army plane can transport it to New Hampshire.

Waking up at the Statler Hotel Thursday morning March 6th, Robert Bowrey went immediately to the hotel's Western Union office and messaged Waldo E. Rodler back in Davenport: "Mt. Washington Project very urgent. Start ice sprocket. Returning United No. 129 tonite." On hotel stationary he wrote a note to his boss explaining how the sprocket fit into the larger plans of the Air Force.

Waldo,

The de-icing sprocket and snowplow mounting to the cog steamer #6 is an experiment necessary to determine if it is possible to negotiate the grade to the summit whenever it would be necessary to transport men and supplies. The present installations on the top are valued at approx. $5-million. If it is possible to use Cog R.R. they are going to build another test bldg. valued at approx. $2-million and purchase 1 or 2 Diesel Hyd. locos to haul engines & equipment for testing. We are the only bidder on this project in the de-icing and loco branch. Mr. Potter, Project Director, and Mr. Hawn of Aeronautical Ice Research Wright Field want a bid from us as soon as possible (Monday or Tuesday - 10 or 11) to cover ice sprocket, mounting of same to steamer (supervision only) and supervising the mount of the snow plow to the loco. I have phoned Mr. Soule and Mr. Hogkins of Maine Steel Inc., South Portland relative to drawings for their V-plow... Drawings are being air mailed. We will have to make a push plate to go on the loco for mounting the plow and for two riding shoes. The cost of these parts and trans. to Moline Airport is to be included in Bid.

Mr. Potter advises bid to be worded as follows: Provide one (1) de-icing sprocket and mounting for cog loco. #6. Provide suitable parts for re-working and attaching V-plow serial no. 3129 Model 76 (owned by New Hampshire Forestry Commission at present) to Cog loco. #6. Provide supervisory assistance in the field for mounting above equipment and witnessing "test climb" to the Summit of Mt. Washington. Total cost not to exceed $___ (My guess $2,500 ?) Payment to be made according to invoices certifying costs incurred. Invoice to be presented not later than 60 days after the completion of the "test climb" this spring. - J.R. Bowrey

Robert Bowrey's written report of March 11th contained additional details about his time at Mt. Washington: "I made sketches of the front bumper of cog locomotive #6 and checked the relative heights to the top of the rail and top of the rack and noted that the reduction gear clears the tie by approximately 2" making it necessary to remove the snow and ice on the right hand side of the cog locomotive to a distance of approximately 4" below the top of the rail. The locomotive boiler's most forward portion (fire door hand wheel) is 3-¼" behind the front of the bumper. When we provide the hook up for the snow plow and have no parts protruding further back than the front of the bumper we will have no trouble with clearing the boiler. Since it is agreed that the plow should be mounted directly to the locomotive bumper as well as the de-icer it will not be necessary to use the buffer roller since it would be covered by the plow. It is going to be necessary to have a considerable amount of hand labor performed prior to the installation of the snow plow and de-icing sprocket on the locomotive, since the means of getting the locomotive from the storage building is by the use of a manually operated traverse section of track."

Bowrey's report continued: "For mounting the snow plow and de-icing sprocket there is, available at the base station, a jib crane mounted on a flat car with an estimated capacity of one ton. There is also a welding machine and acetylene equipment, drill presses, wrenches, etc. available. The first, and seemingly worst, drift was encountered about twenty feet up grade from the locomotive storage building. This drift *(above)* is of ordinary snow which has been thawed and refrozen to form a semi-crust surface. The drift at this point is approximately seven feet deep. It will be necessary to remove some snow at this point by hand, since it seems impractical that a small V-plow could accomplish the task. Proceeding up grade to the passenger mounting platform the depth of snow varies from two inches to five feet. The places having the deepest snow are usually by buildings or obstructions which cause an angular drift. Upon proceeding up grade further it was noted that some of the trestles have been reworked to provide clearance for the ice and snow to fall through from the rack section. It was suggested that the snow plow be provided with a variable connection to provide for the changes in gradient and the radius of the turns of the track. This could be accomplished by providing our standard "universal joint" push arms. It would only be necessary to allow for approximately a 5° differential in any direction. It was also suggested that we use our standard locomotive riding shoe for each rail to exert part of the side thrust, which will usually result from the V-plow entering snow drifts at an angle, on the rail. It was suggested to make a slight modification in our design of the de-icing sprocket to allow for the "self-cleaning" of the snow and ice compressed in the minor diameter of the sprocket teeth."

Bowrey did not make it to the Summit and discussed the actual ice formations to be encountered with Hoskins and Ed Carley who had been briefed by Lt. Morrell. "The ice observed was more like refrigerator condensation with a thin coating of glaze ice net to the metal parts of the cog and rail; the ties being comparatively free from the glazing condition."

As for the March 5th evening meeting at the Statler Hotel, Bowrey wrote the experiment (one trip to the summit, whether a return is accomplished or not) needed to be completed no later than April 7 of 1952. Mr. R. J. Hawn from the Climatic Projects Section at Wright Patterson told Bowrey the locomotive used on this experiment or any other locomotive equipped with a de-icing equipment will be run for one round trip each day in order to lessen the formation of ice and snow.

Davenport Besler went ahead with the V-plow test plans, but cautioned Smith, Hinchman & Grylls in a March 12th letter: "There is... a possibility that ultimately you may be required to make use of a rotary type snow plow to be able to negotiate the cog railroad throughout all seasons. It may also be necessary that a sort of scarifying device be employed to rake through the crust, which has formed on the snow, in order to get good results from the snow removing equipment." *(Ed note: crude pencil sketches of a dual-head rotary plow and scarifying devices for the cog were found in the University of Iowa archive file)*.

S.H&G officially ordered the de-icing sprocket, riding arms, plow mount and attachments on March 12th. Shop order number 59268 "to be delivered to Moline Airport with the small parts

boxed for shipment, the larger parts loose" as soon as they are manufactured. The parts were completed on March 20. A truck driver was to meet a B-24 piloted by Captain Lamb at 2:00 p.m. at the Moline, Illinois Air Port and help load the equipment. Bad weather in New Hampshire prevented the B-24 from making the run from Detroit until after the night of March 22 at the earliest.

As the official order was being transmitted, Smith, Hinchman & Grylls' mechanical engineer Homer E. "Ed" Carley was back at the Glen House in New Hampshire lining up all labor, material and facilities necessary to install the plow and socket as soon as the parts arrived from Iowa. Carley gave Richardson of U.S. Forestry and Arthur Teague a heads up. Bud Lary of Lary's Garage in Gorham was engaged to remodel the Forest Service plow and move it to the Base Station. The next week (March 16 - March 22) Carley had the state highway department plow the road from Fabyans to the Base Station. Mr. Stephenson drove Carley over to the Base Station to pick up three men (Mr. Hoskins, Mr. Gelman and Mr. Casimiro) who had come down the railroad from the summit "for the purpose of inspecting the trestles and tracks." The plow was dug out of the snowbank in Bartlett and moved into the forestry garage. Carley and Bud Lary went to the garage and made changes to the plow following Davenport-Besler's preliminary blueprint.

Week of March 23 - March 26

John Eckroth of Davenport-Besler arrived at the Glen House shortly after 10 p.m. with the final prints on Monday, March 24th. He and Ed Carley of S.H& G looked them over and strategized how to proceed. The next morning, Carley took Eckroth to inspect the plow in Bartlett. Eckroth realized the push arms would be "too short to pin into the existing location of the transverse member." He said a new member would likely be cut and put in the proper position. It also appeared the front shoe location on the plow would need to be reworked. Next stop the Base Station so Eckroth could see the locomotive and the work area & equipment. Eckroth was not impressed with the Cog shops. "The gasoline driven air compressor is not operative without unreasonable time expenditure. It is hand-cranked and there is no visible means of retarding the spark," he wrote. "We will find other means of drilling the necessary holes. I have never seen a more capricious or insincere shop layout. Tools and equipment were dropped anywhere when the final whistle blew last fall. No would believe this unless they saw it."

The morning of Wednesday, March 26th at 10 a.m., the Eckroth and Carley were waiting at the Glen House for the truck to come from Grenier Air Base in Manchester with the material from Iowa. They planned to go that afternoon to Bartlett and start work to complete the plow. The truck arrived at 1:35 p.m. Thirty minutes later they were off to work on the plow. Five hours and 40-minutes later they were back. Eckroth got the shoes on the plow after some "unexpected cutting and fitting. Mounting looks good and checks dimensionally" he noted. It now looked like tests could commence on Monday morning, March 31st.

The 27th saw Eckroth make a "new push arm bracket from 4" H-Beam and placed it well forward of lateral thrust. A foot was cut from the wings, maintaining good contour" before the plow

was taken to the Base Station on the back of Bud Lary's wrecker. The plow was placed on the tracks and small adjustment was needed for proper clearance on rails. Eckert "located holes in push plate. Lary will take this to Gorham in the morning for drilling. His machine shop has a good radial drill."

Friday, March 28th, they considered moving locomotive from the barn to the tracks outside. But Eckroth reported "the transfer is difficult to operate without proper tools and knowledge, so we dismissed (the idea.)" They did move the plow across the transfer with truck winch, bars and jacks. They started to mount the push plate. "Brake beams not relief in the push plate interfered; relocated with cutting torch. This error due to plate lay-out and not field measurements." The plate was finally "stud mounted in behind roller, impossible to bolt," wrote Eckroth. On Saturday, Eckroth completed the assembly. He said "sprocket elevation exactly as per print. Painted entire assembly. Entire job looks good. Will attempt to learn scheduling of tests and inform Mr. Rodler." He sent the telegram below Monday morning.

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

1201

W. P. MARSHALL, PRESIDENT

SYMBOLS

DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

WU009 PD GORHAM NHAMP MAR 31 850A=

: W E RODLER=CHIEF ENGR DAVEPORT BESLER =

ASSEMBLY COMPLETED TEST SCHEDULE FOR FIRST APRIL
REQUESTED TO STAND BY MORE LATER=

JOHN ECKROTH =

:827A

DAVENPORT - BESLER CORP.
RECEIVED
Referred to
Date Noted
MAR 31 1952
Answered By
Date

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

No. 6 over the Ammonoosuc during plow and Davenport-Besler de-icer tests conducted April 1-2 (1952)
- Roger Clemons Collection

1952 April Fools' Day On The Mountain

The tests of the de-icing sprocket and snow plow were conducted on Tuesday and Wednesday, 1st & 2nd April 1952 at the Base Station. Witnessing the test were Mr. V. E. Rothe (civilian) - Rail Branch T. R. Ads., Fort Eustis, VA; Maj. J. F. Conti - Hq. A.R.D.C., Baltimore, MD; H. G. Smith - Wright Patterson A.F.B., Dayton, OH; Smith, Hinchman & Grylls resident engineer Verne Hoskins; Ralph J. Hawn - Wright Patterson AFB, Dayton, OH; Homer "Ed" Carley - S.H&G, Detroit; a Col. Dexter - A.A.F; one lieutenant (name & address unkown) and Col. Arthur S. Teague - general manager of the Mount Washington Railway.

Four pages of hand-written notes *(by Davenport-Besler test supervisor John Eckroth)* in the University of Iowa describes how the test went. "Upon moving the locomotive from the transfer to the main track the de-icing sprocket bottomed momentarily on its rest diameter; the cog had difficulty in engaging the rack for a second or two because of the locomotive's being supported. The rack at this point is approximately 1¼" above the rails instead of the normal ⅞". A side slip at this time caused the right oilite bearing to pull free; it continued to ride back and forth in the sprocket hub throughout the test but it did not leave the hub entirely until the test was completed on Wednesday and the locomotive was being returned to the round house.

"The plow was attached to the locomotive and the test was begun. The gear clearing plate, set beneath the plow on a 30 degree angle, cause the plow to leave the track immediately. (The gear clearing plate) was cut loose with a torch and a similar device placed on the leading edge. Heel chains were then attached and the plow behaved well in snow approximately 18"-30" deep for a total distance of 200-300 yards. The de-icing sprocket encountered mostly snow and soft ice in the areas where the rack was relieved at the bottom; the sole spot with firm ice about 1½" thick was encountered near the end of the test in an area not relieved. The sprocket action here was to crush the ice over a 1" area, leaving the 3" of ice intact. Because the ice was firmly supported on the bottoM, and had no freedom, the sprocket did not clear the track as it probably would have done had the rack been properly relieved. The end of the test occurred in about 60" of snow, through which the locomotive plowed successfully for probably 50 feet. The locomotive came to an abrupt halt, the cog slipped in the rack and the test was finished. The rack at this point was lower than the standard ⅞" elevation; This condition, along with the upward thrust of the plow, caused the cog to disengage the rack. The present sprocket elevation should be maintained in future installations - ¾" from root diameter to top of rack pins."

Suggestions for Future Reference

1) The rear shoes of the plow should be mounted reasonably close to the leading edge. Test plow shoes were mounted about 36" behind the edge;

2) Rear shoe flanges may require another 1" drop for rugged use. Test plow weight about 1600 pounds, flange drop was about 1". Plow left tracks readily with little side thrust. Heel chains corrected this but deeper flange may increase stabilization;

3) Consider double flange on rear riding shoes. Trouble will be encountered at switches but plow must be raised here anyway. Test plow leading edge was ⅞" from rack - plowing edge over rails was 1" - shoes cleared remaining snow with no difficulty - at these elevations plow still must be raised at least 6"- 8" to allow front-mounted gear clearing plate to traverse rack-junction pins at the switches;

4) Front shoe should be at least 6" wider if suggestion #5 is seriously considered. Present design, even with yaw chains, wanders flush with rack edge on either side on straight track and rides within 2" of outside edge of rack on curves. Test shoe showed probably .012" - .015" wear (due to angle edges) in two mile round trip *(Ed note: that would be roughly up to the Ammonoosuc trestle if measured from shops - Waumbek and back if measured from Marshfield platform)*;

5) Seriously suggest possibility of mounting plow integrally with locomotive if V-plow is given further consideration;

6) (Sprocket) chrome shaft was badly scored due to ashes from stack or other residue. Some type of protection is essential. Oil seals probably indicated with present design. Shaft was fitted to within probably .003" max. and oil ran freely over shaft. (Esso 10-W; ambient temp. probably 35° - 38° F.);

7) The entire sprocket mounting probably should be spring loaded if consistency in rack elevation is not maintained."

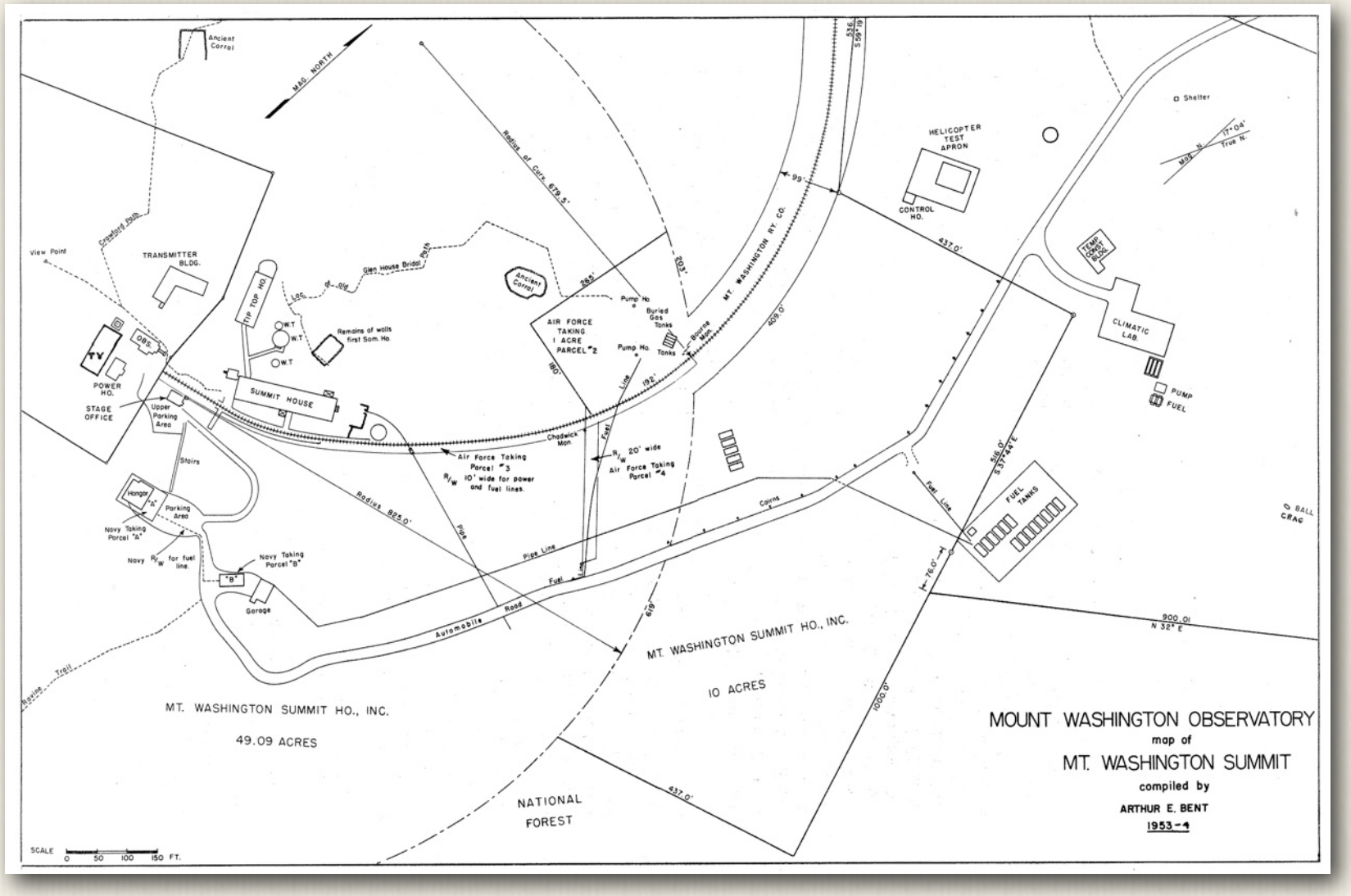
The final batch of paperwork in the Davenport-Besler file involves an interdepartmental bureaucratic dispute over the Mt. Washington order for sprockets as it did not have a "memorandum of Order or a green order to cover it." And according to Chief Engineer Waldo R. Rodler, "we are either to have a Memorandum of Order or a green order on everything we sell." His March 19, 1952 memo Subject: Sales Orders says "At the moment we of course have Memorandum of Orders for all locomotives but it appears that the Mt. Washington order for sprockets is not covered so our method of getting these orders into the factory should be reviewed. With this in mind we are issuing in the Engineering Department an instruction that all matters pertaining to Sales must be written up with copies to Mr. Koch so that there will always be necessary information in Sales to properly issue orders. Meanwhile we will all have to be careful that this matter is properly handled."

Up Top

April 23, 1952 – Public voucher for sum of $3,525 be drawn for just compensation for these lands.

September 17, 1952 – Premises leased "being used for purposes vital in the national emergency."

September 18, 1952 – Lease with Mt. Washington Summit Road Company of Cold Weather Test site known as "The Half Way House" located on the private road leading from New Hampshire State Highway No. 16 to the top of Mt. Washington NH. Initial term of the lease ending June 1953 and renewable each fiscal year thereafter up to the June 30, 1957 at the nominal rental of $1.00 per year. Between November 11th and April 15th no toll fees shall be charged to the Government for use of the toll road. During remainder of each year the Government will pay for the use of this road in accordance with toll rates registered by lessor with the Public Utilities Commission. The Navy will pay for repairs and equipment required to place the house in operating condition for use as a base for Navy field trials. Estimated cost $7,500. Will test low temperature clothing. Actual cost $7,477.74 for installation of a Butane gas heating system, insulation, new kitchen facilities, reinforcement of the foundation, new outside doors, storm window, re-shingling of exterior walls and roofs where necessary, electric wiring, re-covering of floors with asphalt tile or linoleum, construction of work tables, bunks, dining tables and all necessary furniture, improving storage and latrine facilities, and painting both inside and outside of the building. The halfway house is desirable because "at any time of the day or night when the greatest extremes of weather conditions occur, the test subject (human subjects) will be within fifty feet of one of the most exposed areas on the entire mountain. Halfway House consists of a 22'x35' house; a 26'x16' Stable; a 8'x12' Shed and 8'x8' outhouse four miles up the toll road on the east side about 4,000 feet above sea level.



- Charles Bickel Collection

October 5, 1953 – U.S. District Court decision handed down over lease dispute between the Mount Washington Summit House, Inc. and General Teleradio, Inc. (Yankee Network Division).

116 F.Supp. 698 (1953)
GENERAL TELERADIO, Inc. (YANKEE NETWORK DIVISION),
v.
MOUNT WASHINGTON SUMMIT HOUSE, Inc., et al.
Civ. A. No. 882.
United States District Court D. New Hampshire.
October 5, 1953.

John P. Poor, Boston, Mass., Sullivan & Wynot, Edward D. Wynot, Manchester, N. H., for plaintiff.
John R. McLane and John P. Carleton, Manchester, N. H., for defendant Mt. Washington House.
Sulloway, Jones, Hollis & Godfrey, Concord, N. H., for defendant Smith, Hinchman & Grylls.

CONNOR, District Judge.

This action, filed pursuant to Title 28, U.S.C. § 2201, came on to be heard on plaintiffs motion for separate trial under Rule 42(b) of the Federal Rules of Civil Procedure, 28 U.S.C.A., on the issue of whether the first sentence of paragraph 2 of a certain lease, hereinafter set forth, constitutes a negative covenant restricting the uses of the demised premises to those specified in said sentence, as contended by the defendant lessor, Mount Washington Summit House, Inc., or is merely a non-exclusive statement of permissive uses, as contended by the plaintiff lessee. Upon hearing, neither

defendant opposed allowance, and the court, being of the view that the convenience of all would be served, ordered separate trial.

The facts, insofar as relevant to this issue, are as follows:

(699) On June 7, 1944, the plaintiff and the defendant lessor entered into a written lease of certain premises of the lessor on the summit of Mt. Washington. This lease provided for an original term of six years and four successive extensions, at the option of the plaintiff lessee, of fifteen years each, a total maximum term of sixty-six years.

The lease in question provides in part as follows:

"And the Lessee hereby covenants and agrees to and with the Lessor that, during the term of this lease and for such further time as the Lessee shall hold or occupy the said premises or any part thereof:

"2. The Lessee will use the leased premises for aural and visual broadcasting and receiving and similar uses, including scientific experiments and development in similar fields. No admission fee shall be charged for entrance to the leased premises. The Lessee will not use the leased premises so as to compete in any manner with the business of the present hotel on the Summit of Mount Washington, including its dining room, shelter, gift shop, post office and garage."

Paragraph 7 is as follows:

"7. The Lessor covenants and agrees that during the term of this lease and any extension hereof, it will not permit any of the Lessor's remaining land on Mount Washington, or other land thereon which may be acquired by the Lessor, to be occupied or used as a radio broadcasting station or for any other use permitted to the Lessee by the terms of this lease."

The lease contained no restrictions upon assignment or subletting, and the plaintiff entered into a sublease, later amended in its entirety on July 1, 1949, with the defendant Smith, Hinchman & Grylls, Inc. for use of the premises for experiments to be carried on by it for the United States Air Force.

It is the claim of the lessor that this project is a violation by the lessee through its sublessee of the provisions and conditions of paragraph 2 of the original lease relating to the use to be made of the premises, and that such violation constitutes a forfeiture of the leasehold.

The plaintiff denies that such use is prohibited thereunder, and contends that the disputed paragraph is but an affirmative statement of permissive uses.

The plaintiff and the defendant Smith, Hinchman & Grylls, Inc. take identical positions upon the sole issue of law before the court, and hence have joined in a single brief.

In resolving the question here posed, i. e., whether the disputed paragraph is restrictive or a mere statement of a permitted use, it is well settled that the whole instrument is to be carefully scrutinized in order that the true intention of the parties thereto may be ascertained and their purposes accomplished. Thus in determining this issue, examination is to extend to the remainder of the lease. See Boston & Maine Railroad v. Suncook Valley Railroad 94 N.H. 81,83, 46A 2d 773. See also Bovin v. Galitzka, 250 N.H. 228, 165 N.E. 273; Brugman v. Noyes, 6 Wis. 1.

Although restrictions are not to be favored, where they are express or clearly to be implied from the language used, they must be recognized. See Reed v. Lewis; Chamberlain v. Brown; Mutual Paper Co. v. Hoague-Sprague Corp.; Carbon Fuel Co. v. Gregory; Bovin V. Galitzka.

In my view the decisive factor in determining the meaning and intent of the disputed paragraph is to be found in that part of the lease wherein is set forth that "the lessee hereby covenants and agrees to and with the lessor ***." While it is true, as urged by the lessee, that the provisions succeeding paragraph 2 seem to be out of context and continuity with those preceding (700), it does not follow that the preamble and the paragraph are unrelated and the meaning destroyed. Though the draftsmanship leaves much to be desired, there is no cause for rejecting that which was obviously intended and accomplished in the drafting of paragraph 2 and the preamble with which it is captioned. Conjunctively considered, a covenant results. Only two possible constructions can be had of this covenant: (1) that the lessee is required under the lease to engage in broadcasting and receiving and kindred uses, including experimentation and research in similar fields; or (2) that the lessee is restricted to use the premises only for the specified purposes. Manifestly, the first proposal cannot be accepted, for there is no logical reason why the lessor would insist that such activity be carried on or that it would in any way benefit thereby. The other alternative remains as the sole explanation of this proviso. The purpose and intent was to limit and restrict the activity of the lessee to aural and visual broadcasting and receiving and similar uses, including scientific experiments and development in similar fields. No other rational explanation appears. The employment of the terms "similar uses" and "scientific experiments and development in similar fields," likely designed to preclude limitation of the primary objectives, is in a measure suggestive of the recognition of the restrictive use.

It is urged that the language following the first sentence of paragraph 2 undertakes to characterize the complete scope of restriction that is imposed upon the lessee. But I find there is no merit to this proposal. The language chosen is qualificative, and only undertakes to limit the term "similar uses." Understandably, the lessor, In order to protect itself from competition with its own activities, which might conceivably arise from those carried on by the plaintiff, Invoked this safeguard, and such is harmonious and not meaningless when the entire paragraph is considered.

Supportive of the foregoing conclusions is the significant language of paragraph 7, wherein the lessor covenants and agrees that it will not permit any of its remaining land or other land subsequently acquired "to be occupied or used as a radio or broadcasting station or for any other use permitted to the Lessee by the terms of this lease." This is but an additional reason that it was the intention and understanding of the parties that the use of the premises was to be for the purposes defined in paragraph 2 and those alone, and was in a measure a warranty that that activity would be protected from interference insofar as it lay in the power of the lessor so to do.

I am constrained in the light of the foregoing to find and rule that the instrument was intended by the parties to the lease to create an arrangement of use which was limited to the purposes defined and that the activity of the lessee was so restricted.

https://scholargoogle.com/scholar_case?case=74593659194964740 39aqemount+washington+summirahl=en&as_sdt=3,30

December 29, 1953 – Richardson of Littleton figures annual rental value $1500

Jan 21, 1954 – George H. Richardson appraisal of fair value of, or damage to said property from Aug 15, 1947 to June 30, 1954 - Parcels A & B $3,437.58 and summit road parking area $6,834.93

August 19, 1954 – "We are not particularly concerned with the apportionment of the damages as between the Company and the Club, provided they can agree among themselves and we with them as to the total award." Use and occupancy of Hangar 3500 sq ft and garage 800 sq ft – easement of 180 feet for fuel line location. John F. Murphy found annual rental of $600. Geo H. Richardson found Hangar and Garage rental value of $500 and easement in common with others for use of parking area and stage road to be $1,000. Settlement of Aug 15, 1947 to June 30, 1954 would be $10,272.51 according to Maurice P. Bois US Attorney

August 24, 1954 – Gov't studies offer from Club and Road "to accept a sum of $1,500 per year for the interests taken.

November 4, 1954 – review $1500 arrangement?

May 10, 1957 – Work at the Hangar site is being phased out – therefore a new condemnation not justifiable.

June 30, 1957 – Civil Action No. 743 lease condemnation expires and is not renewable beyond this… unless a new suit for condemnation is initiated. However, the land cannot be returned to the owners by 20 June 1957. It is presently planned to move the existing structure to the new Air Force Facility on Mount Washington, in which the Navy has a participating interest.

September 25, 1957 – US Attorney receives offer from Summit House and Summit Road of $7,177.50 to settle term from August 15, 1947 to October 31, 1957. US Attorney says "this offer has been obtained after numerous conferences beginning as early as 1949 and extending through today and it is believed by this office that it is in the best of the Government to accept this offer. We believe that the offer is thoroughly justified because it is not substantially higher than our lowest appraisal and may indeed be lower than any verdict which might be obtained by a trial on the issue of just compensation. It will also be noted that the difference between our lowest appraisal and the defendants' offer is probably somewhat less than the expense of trial. This case has been set down for trial at this term and if it is to be tried at this term it will have to be tried before November 1 when the weather will preclude a view. Therefore anything which could be done to expedite the granting of authority to settle will be greatly appreciated. Maurice P. Bois US attny by ass us attny William Maynard.

Oct 7, 1957 – "due to tight budget situation the Air Force is not in a position to take over the (Hangar) structure or provide a foundation to accept it at their facility. (Moving the building down the mountain to the new facility had been proposed) The structure must be removed from the mountain unless the road and cog would be interested in accepting it and waiving the restoration clause.

October 26, 1957 – removal of hangar discussion – "It is our understanding (the Club/Road) are not interested in accepting the "test Building" so-called in lieu of restoration but have insisted they need the parking area and want the building removed and the parking area restored to its original condition. (Cog/Road) have solicited estimates of cost to demolish the building and restore the premises, and have agreed to accept $1800 from the Government together with transfer of title to the "Test Building" so-called, and would accomplish the demolition and restoration. We estimate the cost of demolition and of salvage and of restoration – our estimate is $3500. It is our considered opinion that if (cog.road) insist upon removal and restoration, transfer of title to the building and payment of $1800 to them would be in the best interest of the Government.

Brief Abstract of condensed material presented by G. S. Wheeler to the Mt. Washington Study Committee on March 17, 1966 on the action taken by the Forest Service to date to effect the removal of the Air Force Dormitory and Laboratory from the White Mountain National forest on Mt. Washington.

Summer 1960

Dormitory and Laboratory buildings vacated and placed under custodial care.

Fall 1960

Air Force indicated no further need of facilities

Spring 1961

Forest Service requested disposition of facilities and site restoration

Fall 1961

Forest Service notified by Corps of Engineers that it might be Spring of 1962 before definite action would be taken on Mt. Washington buildings.

Spring 1962

Air Force indicated cost of installation in excess of $2,500,000. No longer required by Air Force, Forest Service requested removal of structures and site restoration in accordance with terms of occupancy permit.

Summer 1962

Air Force protests removal of buildings citing cost of $160,000 as unjustified public expense. Forest Service pressed for removal. Some indication of State of New Hampshire interest in buildings.

Fall 1962

Corps of Engineers suggested tank farm and wooden structures be removed and Dormitory and Laboratory sealed in "pickled" state with time limit of ten years set for eventual removal to slab. State of New Hampshire still interested in buildings. Air Force requested Corps of Engineers to remove temporary structures, fuel and pickle two buildings. Also to screen with G.S.A. Boston to determine U.S. requirements.

Spring 1963

No action of site cleanup. Forest Service position that facility cleanup and building removal responsibility of Air Force. State of New Hampshire still interested in buildings.

Fall 1963

Removal of wooden buildings, fuel, tank farm removed, site cleanup and two buildings "pickling" accomplished.

Winter 1963-1964

Congressional interest in remaining two buildings. State of N.H. interest in buildings indicated as remote. Air Force attempted to transfer two buildings to Forest Service, based on estimated of $190,000 to remove same, through proposal to abandon structures in place. Forest Service refuses to accept disclaimer of responsibility for buildings.

Spring 1964

Corps of Engineers attempts to transfer two buildings to Forest Service and Forest Service refuses to accept custody. State of New Hampshire still interested in buildings.

Fall 1964

State of New Hampshire doubtful of interest in buildings. Forest Service reiterated position that Air Force is responsible for buildings.

Summer 1965

Governor King indicated that State of New Hampshire can foresee no use of buildings and agrees with Forest Service position to have structures removed. So informed Senator McIntyre.

In the summer of 1964, attorney Jack Middleton prepared a memorandum at the law offices of McLane & Davis in Concord, New Hampshire attempting to sort out ownership of the leases on the summit of Mt. Washington with the entity that began as The Vermont Yankee Network in 1944. Here is the text of that three-page memo.

MEMORANDUM

To: Mr. *(Ken)* Graf
From: Mr. *(Jack)* Middleton
Date: August 11, 1964
Re: Mount Washington - Leases

The basic lease is the lease between The Yankee Network, Incorporated and Mount Washington Club, Inc. dated June 7, 1944 and recorded in the Coös County Registry of Deeds, Vol. 328, Page 330. The following is the history of the lessee so far as can be determined from the records in the Secretary of State's Office:

1. The Yankee Network, Incorporated, a Massachusetts corporation registered in New Hampshire January 6, 1944.

2. On May 10, 1951, the Secretary of State's Office was notified that The Yankee Network, Incorporated was merged into Thomas S. Lee Enterprises. Inc., a California corporation.

3.On June 23, 1952, the Secretary of State's Office was notified that the name of Thomas S. Lee Enterprises, Inc. was changed to General Teleradio, Inc., a California corporation. General Teleradio, Inc. withdrew on September 21, 1956.

4.On September 12, 1955, R. K. O. Radio Pictures, Inc. was registered to do business. On February 27, 1956 the name was changed to R. K. O. Teleradio Pictures, Inc. On July 13, 1960 the name was changed again, this time to R. K. O. General, Inc., which corporation is still registered to do business and is still in existence. According to the leases in our file General Teleradio, Inc. is a successor to The Yankee Network, Incorporated "by change of name and/or merger." See agreement dated January 25, 1955 between Mount Washington Summit House, Inc. and General Teleradio, Inc.

A check of the records in the Registry of Deeds reveals an assignment by R. K. O. General to Mount Washington T. V., Inc., a Maine corporation, on August 30, 1962, which is recorded in Vol. 471, Page 245. This assignment recites that R. K. O. General is the successor to Yankee Network, Incorporated.

There is also an assignment dated June 2, 1964 by Mount Washington T. V., Inc., a Maine corporation, to Mount Washington T. V., Inc., a Delaware corporation, of all rights under the basic lease. This assignment is recorded Vol. 482, Page 344.

The records in the Secretary of State's Office show that Mount Washington T. V., Inc., a Maine corporation, registered June 23, 1953. On June 2, 1964, this corporation gave a letter of consent to the registration of a Delaware Corporation by the same name. On the same day a corporation called GHAR, Inc. was also registered which apparently has something to do with the old Maine corporation.

From the above it would appear that the records in New Hampshire clearly show the change from the Yankee Network, Incorporated to General Teleradio, Inc. There is a gap in the subsequent change in corporate entity to R. K. O. General, Inc. in the Secretary of State's Office but the assignment of August 30, 1962 recorded in the Registry of Deeds indicates that R. K. 0. General was then the successor to Yankee Network, Incorporated. It now appears that the assignee of the lessee's interests under the lease is Mount Washington T. V., Inc., a Delaware Corporation.

The basic lease provides that the word "lessee" "and all expressions referring thereto mean the corporations named above (The Yankee Network, Incorporated) and their respective successors and assigns and those claiming respectively through them . . ."

The provision for extension of the lease appears unclear. The original term of the lease ran from January 1, 1944 to January 1, 1950. The clause relating to extension of the term provides:

"The Lessee shall have a right to four successive extensions of the term of this lease, each for a term of fifteen (15) years. The first extension may be made by written notice given by the Lessee to the Lessor at least six (6) months prior to the expiration of the term of the original lease or within thirty days after the Lessor shall, not more than seven months prior to such expiration date, have given the Lessee notice of such expiration, whichever date is later, and any subsequent extension by such notice given at least six (6) months prior to the expiration of the extension in force at the time

of giving such notice, or within thirty days after the Lessor shall, not more than seven months prior to such expiration date, have given the Lessee notice of such expiration, whichever date is later. .. . .”

1946 Flatcar Collision

22 Hurt in Crash on Mt. Washington

GORHAM, N. H., Aug. 10 - (AP) Twenty-two persons were injured in a train wreck on the cog railway tonight 600 feet from the summit of the 6,293-foot Mount Washington, New England's highest. Mr.s Norman Fagerquist of Worcester, Mass., received fractures of both legs and possible internal injuries. The injuries of all others were minor. A spokesman for the Mount Washington Railway said that a flat car broke loose at the summit and sped down into an up-bound passenger train. The train was carrying twenty-four passengers to the Tip Top Inn. The flat car had been taken up to remove old fixtures from the inn, which was being remodeled. Employees had checked safety brakes on the flat car twice in the past week, the railway spokesman declared, leading them to believe it had been tampered with. *- New York Times - Aug 11, 1946 pg. 1*

Cog Train In Odd Accident
Offer $1,000 Reward For Information Regarding Flat Car That Rams Passenger Car, Injuring Several Saturday - Famous Road Resumes Travel

While officials hoped that a reward of $1,000 would bring to light information bearing on the reason for a flat car to break loose from its moorings atop the peak and plunge 600 feet down the mountain to crash into a passenger train approaching the summit, Saturday afternoon, travel on the famous Mt. Washington Cog railroad this week had returned to normal after the accident which caused the first injuries to passengers in the mountain railroad's 77-year history.

Meanwhile, 17 persons injured in the odd accident were fast recovering and those hospitalized at St. Louis hospital in Berlin were showing rapid improvement. The injured were among 24 passengers aboard the train making its final trip to the summit in stormy weather when the flat car, loaded with junk, left its sidetrack berth at the top and plunged down to smash into the train as it was approaching the last incline on the three-and-one-quarter-mile route up New England's highest mountain.

Mt. Washington's famed cog railway engine chugged to the top of New England's highest peak Monday, two days after its odd mishap, carrying 392 passengers and "business was better than ever." The engine, the same one involved in the accident, was found to be undamaged except for a few dents, and was making peak trips up and down the mountainside. *(Editor's note: apparent newspaper cutline without a picture in pull quote format)*

Safety Reputation Unmarred

While the cog railway's record was unbroken by the mishap, oddly enough it was not through any fault of the tiny train making a routine trip with sightseers, and the road's reputation for safety was unaffected by the near tragedy.

According to Col. Arthur S. Teague, vice president and general manager of the railway, two safety brakes and a ratchet device on the flat car had apparently been loosened and it was believed that winds of gale force which prevailed at the time of the crash may have set the idle car in motion.

It was to learn if anyone had been seen tampering with the flat car at any time prior to the accident that the railroad offered the $1,000 reward for information.

Most Seriously Injured

Reported as the most seriously injured were a railway employee, whose name was withheld and who reportedly had suffered a broken back and shock; and Mrs. Norman Fagerquist, 23, of Worcester, Mass., honeymooning in the White Mountains with her husband, who received a fractured skull, face abrasions, a fractured right leg and facial and leg lacerations. Her husband received a nose fracture.

Employees of the railway, the Mt. Washington Club and the weather observatory worked in a blinding electrical storm and a high wind to rescue the victims from the wreckage of the passenger car and carry them to the summit where they were taken down the winding eight-mile carriage road and thence to the Berlin hospital. All available doctors, nurses and ambulances in the area were summoned, ambulances from Littleton, Whitefield, Berlin and Gorham assisting.

According to officials of the line, the flat car had been checked at intervals prior to the accident and its braking devices found in order. After a thorough investigation by Colonel Teague and Winslow E. Melvin, transportation director of the N.H. Public Service commission, there appeared to be evidence that the safety attachments had been tampered with, either as a prank or through curiosity.

The cog railroad is heavily patronized by summer vacationists, is said to be one of the world's steepest railways. It has known only one fatality, that in 1929 when a photographer lost his life in an ill-advised re-dedicatory trip by the famous "*Peppersass*" engine.

- Littleton Courier, Thursday - August 15, 1946 - page 1

Eyewitness Account

"Eyewitnesses to the crash were Neil Mitchell, 16, of 128 Irving street, Everett, Mass., and Charles Ryan, 15, of 602 Belmont street, Watertown, Mass., both vacationing in the area. They were passengers on the train. "I saw the car as it came rushing down from the top," Mitchell said, "and I yelled at the top of my lungs, 'Duck, Charley.' Both of us buried our heads as the car plowed into our train. It was my impression," Mitchell said, "that the flatcar was carrying garbage, because garbage was strewn all over the scene of the wreck. Some of the passengers were

very badly hurt and Charley and I went around trying to quiet some of the women who seemed on the verge of hysteria. Neither of us was hurt." Mitchell said the train left the foot of the Mt. Washington shortly after 3:30 p.m. and that the wreck occurred before 6 p.m. Help arrived from the summit of the mountain within five minutes of the crash, Mitchell said, and stretchers were put into use with 15 minutes. He said passengers were treated at the hotel on the summit by physicians for about an hour and a half, while those most seriously hurt were taken immediately to the Berlin Hospital. He said all passengers were taken to the Berlin hospital to make sure that no hidden injuries had been suffered. The train had stopped for a moment just before the flat car broke loose, Mitchell said." *- Boston Herald - Sun, Aug 11, 1946 pg. 58*

"The coach was not derailed, according to Berlin Police chief Walter Hines, but was smashed to pieces. He termed it a "miracle" that no one was killed. Chief Hines obtained Red Cross medical supplies at Berlin after hearing of the accident and rushed them to the Tip-Top House, which was converted into a temporary first-aid station for use by four doctors who answer the distress call." *- Boston Globe - Sun, Aug 11, 1946 pg. 25*

Official accident photo by Winslow Melvin (1946)
- N.H. Public Utilities Commission

The following official account is based on, and taken from the October 14, 1947 report to the New Hampshire Public Service Commission by Transportation Director Winslow E. Melvin; an August 12, 1946 interdepartment communication from New Hampshire State Trooper Harold B. Johnson to Col. Ralph W. Caswell, and a November 1946 report to the state by Col. Arthur S. Teague.

"A flatcar was taken to the top of the mountain on Friday, August 2, 1946, with a load of coal for the Summit House. On the following day, the crew employed at the Summit Club moved (the car) about thirty feet downhill to a position for unloading the coal. After this was accomplished, it was again moved nearer the summit of the mountain to a position near the foot crossing leading to a stair way to the Tip-Top House and Observatory, following which the (car's) brakes were applied and the ratchet placed in position to prevent a downhill move. During the period from August 3 to 10 (the car) was being loaded with mattresses, bed springs, bedsteads, metal

washstands, and garbage for removal to the base, a load estimated to weigh approximately 1½ tons and which extended a distance of approximately four feet above the floor of the (two-ton) car."

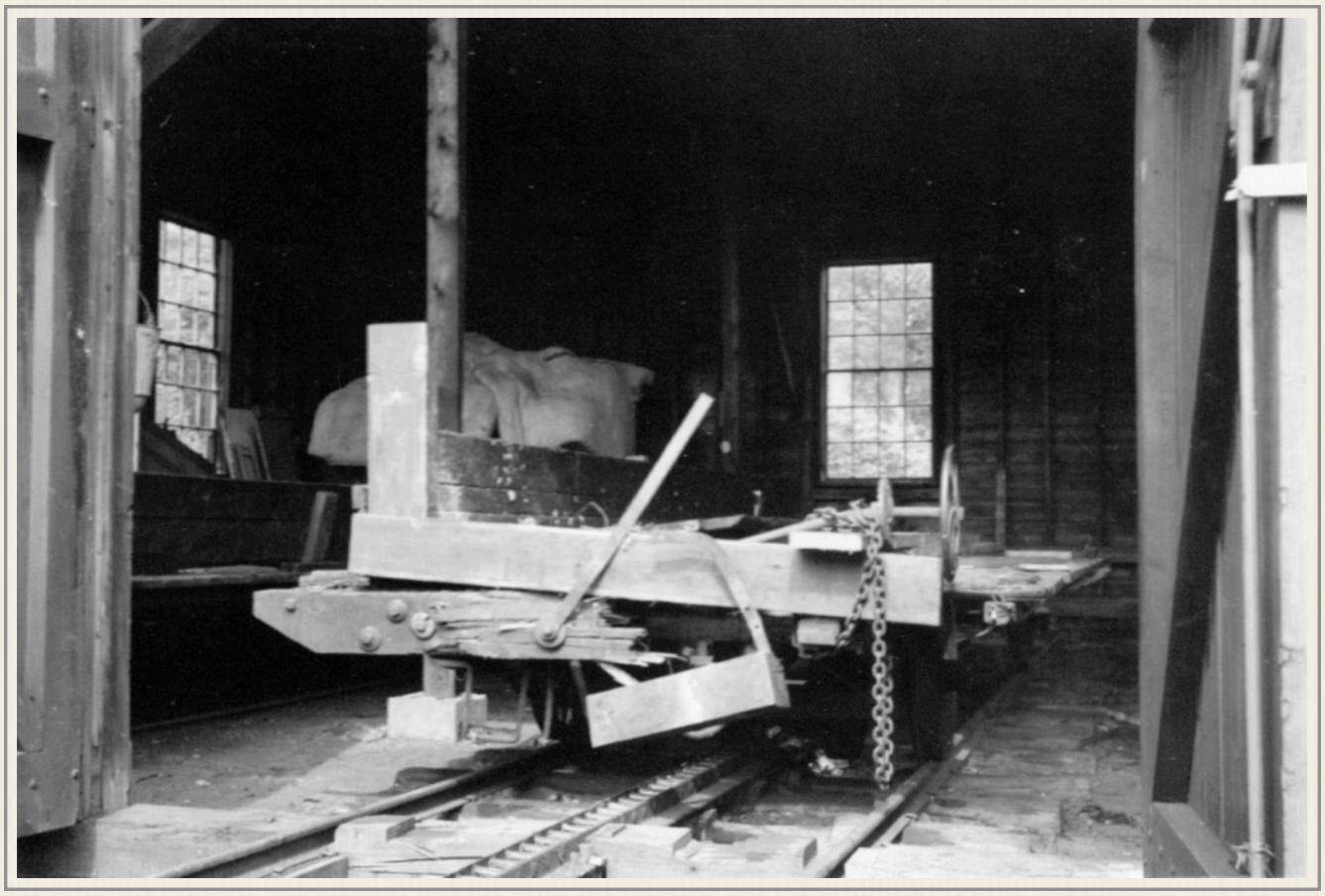
Official accident photo by Winslow Melvin (1946)
- N.H. Public Utilities Commission

"The flatcar involved was overhauled in either 1941 or 1942, at which time new sills, new journals, brake drums, linings and shoes were installed. It was inspected and greased by the brakeman before going up the mountain with the load of coal and oiled again enroute to the summit. Instructions were given to the crew to put the ratchet down and 'brake it' before leaving it there. (The flatcar) was inspected upon several occasions while at the top by railroad employees, and the Summit Club manager. It was inspected by (Hollis Willard), the Superintendent of Maintenance of the railroad on Thursday, August 8, 1946, during the afternoon, at which time he tested the hand brake to see that it was tight and that the ratchet pawl lever was in position to permit the pawl to be engaged. Braking equipment on this car and others of the same type is sufficient to handle loads much greater than that involved in this accident, as testimony reveals that 7 or 8 ton loads have been carried down the mountain and properly controlled by the brakes."

"On the afternoon of the accident there were intermittent showers of rain with strong southwest winds and temperatures in the 50's. The top of the mountain was in the clouds during this period. At about 4:42 pm, the wind shifted from southwest to west abruptly, the temperature fell, and the rain increased from light to heavy. Wind velocities increased from 21 miles per hour up to 65 miles per hour within a period of 23 minutes, or until 5:05 when it decreased to between 50 to 59 miles per hour for the next 40 minutes… Weather Bureau officials stationed at the top of the mountain estimate the pressure from wind at that point is about 80% of the corresponding velocity at sea-level. It is further claimed that the locations of the buildings are such that a westerly wind might be "dammed up" and the funneling effect against the side of the Tip-Top House, the

stone passageway and the side of the Summit House would have the effect of increasing the velocities by approximately forty to fifty percent."

"The train involved in the accident left the base station at approximately 3:30pm in charge of 20-year old Chester "Ted" Beattie of Medford, Massachusetts - Conductor; 24-year old Paul H. Weierbach of Allentown, Pennsylvania - Brakeman; Edmund Higgins, Engineer; and Clifford R. Kinney, Fireman. (Trooper Johnson says a second fireman "a Mr. Bishop" was in the cab as well.) Upon reaching the skyline heavy rain and high winds were encountered. It was necessary to stop (the train) at a point near bent No. 1158, approximately 50 feet above the Lizzie Bourne Monument, which point is about 600 feet from the summit, to work up steam for continuing the trip."



Official accident photo by Winslow Melvin (1946)
- N.H. Public Utilities Commission

"At the time of the accident they were having a terrible storm, and the passengers in the front seats had moved back into the rear of car, which undoubtedly, saved several lives," concluded Trooper Johnson.

Melvin's report said, "No warning of the collision was provided as visibility was very limited and the noise of the storm was apparently great than that caused by the approaching car. (A)t approximately 5:00pm, a collision occurred… involving (the) standing train and (the) partially loaded flatcar which left the top of the mountain unattended and out of control."

"(T)he flatcar collided with the forward end of the passenger coach of (the) train, penetrating (the coach) a distance of about six feet," or as Trooper Johnson observed "as far as the third window… hitting the front wheels and axles, which stopped the flatcar." Melvin reported, "The impact forced the downhill end of the passenger car into the forward end of the locomotive and

raised the wheels under this end of the car off the track. The locomotive did not move backwards, but the cog wheel shaft was bent by the impact."

Official accident photo by Winslow Melvin (1946)
- N.H. Public Utilities Commission

"Twenty-three passengers… were on the train, of whom 15 passengers and 2 crew members were injured sufficiently to require hospital treatment."

Dr. Frances Appleton, who was one of four doctors who treated the injured on the mountain that day in 1946, said the engine was able to push "the telescoped car" with the injured the 600 feet back up to the Summit. (Dr. Appleton would also be on the mountain 21 years later to help tend to the dead and the wounded in the September 1967 derailment.)

However, a November 1946 report by Col. Arthur S. Teague, after two days of testimony by 26 people under oath on August 16th and 17th, said the injured passengers "who were unable to walk were carried by stretcher to the Summit House and all were given first aid and made comfortable."

Trooper Johnson says "four of the (Auto Road's) beach wagons and three ambulances" brought the fifteen patients to St. Louis Hospital in Berlin where two doctors worked until 3:00 am taking "care of all these people."

The Teague report said the "the car was not touched that night and a further inspection was made the following morning… before the wreckage was cleared from the track and normal operations resumed. The metal parts of the passenger car were salvaged, the wooden part was burned up. The flat car and engine were brought down the mountain under their own power."

Sec. 29 - 1946 Collision

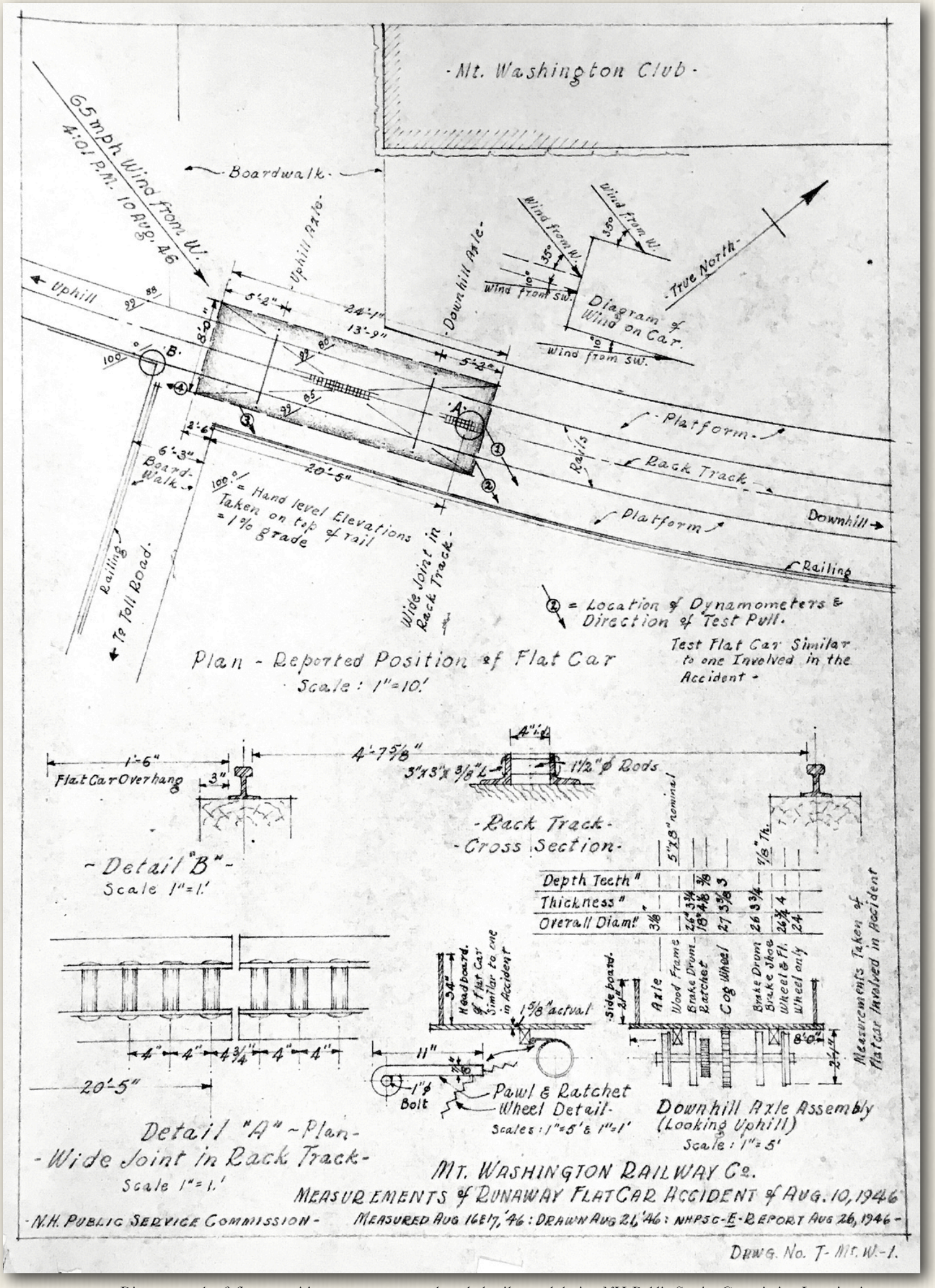


Diagram made of flatcar position, measurement and track details noted during NH Public Service Commission Investigation (1946)
- Courtesy N.H. Department of Transportation

The Railway offered a reward of $1000 for the arrest of the person or persons responsible for tampering with the flatcar's brakes and ratchet mechanism.

A Somerville, Massachusetts plumbing inspector told the *Boston Daily Globe* on August 11th that he had seen a slack chain brake on the flatcar the day before the accident. He talked with both state investigators and the Railway, and both concluded there was little validity to his story. Teague concluding that his "story is a very confused one and because his conception of the car and its safety devices was so completely at variance with what actually existed, little credence can be given his story." Winslow wrote, "Upon questioning, it developed that he was in error as to which end of the car the brake mechanism was located and admitted that he knew nothing about the safety mechanism."

During the accident investigation, the state of New Hampshire conducted tests at the summit *(previous page)* to determine how much wind force would be necessary to blow the flatcar down the mountain. The wind recorded during the August 10th storm was enough IF the flatcar's brakes were off and the ratchet pawl had been lifted. Winslow Melvin's report concluded "a strong wind started the car on its runaway dash at a time when neither the brakes nor the ratchet were set to hold it on a descending grade. No defective condition (of the brakes or ratchet) was found which would contribute to the failure of the safety mechanisms. Therefore it must be concluded that they were released by some unknown person." That unknown person was never identified. The Railway implemented a new procedure such that any flatcar left at the summit would have its brakes set, its ratchet down, and would be chained and locked to the rails.

List of Injured

Chester Beattie	20	Medford, MA	*(conductor)*
Amy Dawson	50	Saylesville, R.I.	
Mr. Norman Fagerquist	23	Worcester, MA	
Mrs. Norman Fagerquist	23	Worcester, MA	
Mr. Charles Goem	41	Peterboro, N.H.	
Mrs. Charles Goem	41	Peterboro, N.H.	
Gail Goldwasser	40	Boston, MA	
Neil Mitchell	16	Everett, MA	

"Neil Edward Mitchell, 16, of 128 Irving st., injured in the Mt. Washington railway accident, is the son of Mr. and Mrs. Maurice Mitchell. He is a junior at Everett High School and a member of the school band. He has been at a White Mountain caddy camp two weeks and took the trip up the mountain as a sight-seer. His family is vacationing in Canada."

- Boston Globe - Sun Aug 11, 1946 pg. 25

Charles Ryan	15	Watertown, MA	
Mr. Richard Schlachter		Devon, CT	
Mrs. Richard Schlachter		Devon, CT	
Mr. Morcellows Valenti	55	Peterboro, N.H.	
Mrs. Morcellows Valenti	41	Peterboro, N.H.	
Paul H. Weierback	24	Allentown, PA	*(brakeman)*
Mr. Merrick Williams	32	Pawtucket, R.I.	
Mrs. Merrick Williams	28	Pawtucket, R.I.	
Frank Zenther	17	Portland, ME	

1949 - A Roving Eye

Rudolph Frank Elie Jr. was reporter/columnist for the *Boston Herald*. He was born on July 29, 1909, in Somerville, Massachusetts, and died on March 11, 1958, in Los Angeles, California, at the age of 48. He covered the Pacific Theater for the paper in World War II. He would come back to Massachusetts, and write a column for the *Herald* called "The Roving Eye." Col. Henry N. Teague, Mt. Washington and the Cog Railway would become subjects of a series of columns in September 1949. The series' genesis came when the railway's publicist, Bob "Mother" Varney read an Elie column questioning the usefulness of weather reports from the summit of Mt. Washington being broadcast in Boston. Elie spent Friday, September 16 and Saturday, September 17, 1949 at the Mountain.

The Roving Eye
Boston Herald
September 20, 1949 pg. 16

"In regard to your column in today's *Herald*," wrote Robert J. Varney of the Mount Washington Railway Company, "it won't be necessary to obtain hobnail boots, alpine stick and knapsack to see what goes on in connection with the weather at the top of Mount Washington. Col. Teague, president of the cog railway and owner of the top of the mountain, would like to have you come up and see for yourself." With this amiable communication at hand, resulting from a peevish speculation in this department some time ago as to what the weather on top of Mount Washington, as reported on the radio every night, has to do with the weather on the bottom, I took off on an investigatory junket the other day sans hobnail boots and alpenstock for quick dash up the mountain on that singular contraption, the cog railway.

"Mount Washington itself, which suddenly pops into vast and horizon filling view on the Colonel's road in from Fabyan (you keep confusing everything else with the mountain until you stumble into it) was a mass of gold and silver above the timber line, a dizziness of scarlets, purples and greens below. The gold presently proved to be ferns; the silver the great granite boulders with their patinas of lichens. It was, as any mountain is, a pretty majestic sight. So, for that matter, was Colonel Teague, who was eating Welsh rabbit in his restaurant at the base station (while casting a critical eye at one of his contraptions outside the window). He's fairly close to 75 now and somewhat bowed down by a leg ailment, but even so he reaches a lofty six feet four and weighs a solid 250 pounds. He also wears thick glasses, through which he burns a penetrating eye, and nobody ever preserved a sharper tongue longer. "How did I get to own the top of the mountain?" he roared (for nothing arouses Colonel Henry Nelson Teague more than learning that people do not know it is privately owned), "Blankety blankety, I bought it, that's how!"

"It presently developed that the Colonel (a private in the Spanish American War with an honorary colonelcy from the late Governor Winant), had made and lost three or four fortunes in real estate, hotels and one thing or another, when the Boston & Maine Railroad asked him in 1931 if he wanted to buy its Mount Washington holdings. At the moment the Colonel was broke and he said so, but the B&M, evidently figuring that if anybody could make money on the cog railway the Colonel could, worked out a deal. "All I knew about railroading," said the Colonel, "was what I'd written as a Dartmouth undergraduate in a theme about the Atchison, Topeka and Santa Fe. But I made $2000 the first year." Today, in a crisp operation under the direction of Arthur S. Teague (no relation), with the Colonel personally supervising and checking every detail, the cog railway, built in 1866, is clearly an exceedingly liquid proposition. Though not as active as he once was, from purely physical considerations, the Colonel sits in his big leather chair in what he whimsically calls his "hut" below the base station. Out of the picture window of this beautiful chalet, he commands a view of the railroad all the way up the mountain, keeps track of every movement on the mountainside with binoculars, and shouts orders through his telephone to every employee he can reach. Most of the employees are college undergraduates (in Earl Blaik's day the whole Dartmouth football team worked for him summers) with a smattering of railroad presidents' sons and nephews; the rest are engineers and firemen, some of whom have been on the road for 30 years or more.

"In his lustiest years, so they say, the bachelor colonel lived on Scotch and cigars and was one of the great hosts. Anybody who wasn't invited to his Miami parties might as well have packed up and gone home. He was also - and probably is - a considerable political influence in Massachusetts, counting among his friends most of the big cogs in the state. "I'm a State of Maine Democrat," he says, "the only one in captivity." But like most who have made fortunes, the colonel keeps his eyes on pennies. "You know how much it costs me to pump water up that mountain?" he cried, pounding the floor with his ivory-headed cane, "Seven cents a gallon! Every time somebody goes to a toilet up there they use three gallons of water and cost me 21 cents. I put dime machines on the doors, but I'm still losing 11 cents every time somebody has to go."

(To be continued)

The Roving Eye
Boston Herald
September 21, 1949 pg. 32

"The domain of Col. Henry N. Teague (in case you missed the first installment of this series devoted to the goings on atop Mount Washington) consists of 95 acres of granite boulders on the peak of the highest mountain in New England. It consists also of a perfectly incredible railroad up that mountain, a half a dozen or so of the weirdest steam vehicles ever conceived, and a large tract of handsome rolling country at the bottom of the mountain. Somehow or other everybody who visits this strange kingdom in the White Mountains - and that would be more than 100,000 a year of whom about 30,000 take the train up the mountain - gets the impression it belongs to the

state, or the country or perhaps some big "interest." But it doesn't; the 74-year-old Colonel is lord of the manor.

"There are four ways to get up the mountain. One is to hike it on the Appalachian mountain trails. Another is to drive your own car up the carriage road (cost: $5 plus a dollar a head). Another is to be driven up in station wagons operated by the owners of the carriage road. And the other and certainly most surprising is to take the Cog Railway. There's still another, which is to walk up the trestle, but this enrages the Colonel and woe be to anyone he catches at it. Anyone, that is, but a favored Dartmouth undergraduate employee, who ran up to the top in 45 minutes for the record. The Cog Railway was the invention of one Sylvester Marsh, who first conceived the idea of a cog railway up to the top (four miles and 4000 feet above the base station) in 1859. The Civil War intervened, but in 1866, with $50,000 of his own money, Marsh built a quarter of a mile of track. His locomotive, also of his own design, consisted of an upright boiler on a platform which had rear wheels bigger than the front, to keep it more or less level!

"This machine, named *Old Peppersass*, is still on view at the base station, and it is second only to the Niagara Falls for being photographed beside of. The present-day locomotives, which develop 100 horsepower, have two engines, each geared to the cog track between the rails. The cars, as quaint as the engines themselves, hold 48 people (at $4 a head round trip), and they too are doubly geared to the track. So if the engine fails, the cars can't go backwards. At least, says the Colonel, they never have for in all its 80-years the line has never had a passenger fatality. During the summer the trains shuttle up and down on very informal - but usually hourly - schedule. Up until October 12 they run whenever they get a reasonable full load. "Takes a ton of coal and a thousand gallons of water to get her up there," said the Colonel, who made the proposition pay by taking into account such statistics, "so we don't run her up for any old Tom, Dick and Harry."

Grant Rode Here: "At first, when the Cog Railroad was opened, people were far too skeptical of "Crazy" Marsh's contraption to take the ride. But Ulysses S. Grant went up during his presidency. After that there was plenty of business. But not soon enough to rescue old Marsh from his financial difficulties. He died broke. The ride of the top begins when the engine, emitting fierce snorts, clouds of steam, belches of smoke, and horrid noises of grinding and clashing, bumps into the car, then up it goes, thundering skyward at three miles an hour. At first the trestle is even with the ground, but a third of the way up the ground recedes below; a sheer drop of 25 feet or more from the car. As it nears Jacob's ladder, which is a grade of 37 percent, the timber line is passed. To stand upright in the car is to resemble a clown with extended shoes leaning forward with his face but a few feet from the ground.

"Here," cries the brakeman above the din of the engine, "is the monument to Lizzie Bourne, frozen to death on September 14, 1855, when she got lost on the mountain. And there, to your left, is the plaque marking the spot where two Harvard students lost their lives in a blizzard." All the way up he tells of the sights and history of the 6300-foot peak. All the way it gets colder and windier. All the way up people get more and more wide-eyed. And after an hour and 10 minutes,

the little I Think I Can grinds up the final grade as those already on top greet it with a battery of open mouths. It's quite a ride."

(To be continued)

The Roving Eye
Boston Herald
September 22, 1949 pg. 34

"The top of Mount Washington, which according to Colonel Henry N. Teague (who owns it) is 12 feet higher than these blankety blankety government surveyors say it is, consists of an immense pile of boulders, a hotel known as the Mt. Washington Club, a peculiar building known as the Tip Top House, a water tank, three miscellaneous buildings housing weather and research gadgets, a tall red radio tower, and about two dozen assorted characters. The characters, aside from those who run the Club (which is a nicely appointed inn managed by an amiable chap named Atwood), are largely young men stationed on the mountain top the year around to observe the weather and, in summer, the young women mountain climbers. All but the best looking of the young women mountain climbers are lumped together under the general title of "goofer." Even the young women become "goofers" if they pay not mind to the weather observers' attentions. *(Elie then talks about weather personnel as it was their observations that prompted this trip.)*

"The other two groups on the mountain top are civilian workers for the Army Air Force and the Navy working on such hush-hush stuff as what kind of ice conks out jet engines, what kind of de-icing gadgets and winter clothes work best, and other related matters. The weather and ice men live in a shack just below the summit, companioned by a mammoth Alaskan Malamute named Nome and a host of pictures of pin-up girls on the walls. The dog, which is as much a

tourist attraction as the view, is reputed to be the father of every dog within 20 miles of the mountain. The weather men are very proud of this. They also are proud - as indeed they should be - of their mountain rescues. Mount Washington, which is considered to have the worst recorded weather in the world, is an exceedingly treacherous place for "goofers" who try climbing it out of season. Even in season, which is July and August, it can be treacherous.

"Although the Cog Railway goes up until Oct. 12, the Club closes at the first freeze (which was this week though they had a snow storm in August), and after that the mountain men are left along with their weather gadgets, jet engines, foul weather fear, television set, beans and pin-up girls. They get 10 days off every month, and take them by hiking down the mountain, blizzard or no, and the only one who likes it is Nome, the Malamute. He thinks the hot weather on the mountain is terrible. It once got up to 68. As to what all the weather information gained on the top of Mount Washington has to do with the weather in Boston, to learn which was the primary purpose of my visit, nobody on Mount Washington knows, either.

1952 J&M Inspection

In 1952, the engineer consulting firm of Jackson & Moreland was hired to conduct an inspection of the Mt. Washington Cog Railway. Dartmouth College had taken ownership of the railroad upon the death of Col. Henry Teague the year before. Based in Boston and New York, the inspection team arrived just four days after long-time engineer Mike Boyce had died from injuries sustained in a workplace accident. An edited version of the Jackson & Moreland report follows:

Inspection Report
Mount Washington Cog Railway
Fabyan, New Hampshire
July 7, 1952

Summary and Conclusions

This report covers an inspection of the roadbed and rolling stock of the Mount Washington Cog Railway made by us during the period June 9-13, 1952, together with a review and evaluation of the railroad's operating practices. The purpose of this inspection and review as to determine whether the roadbed and rolling stock (exclusive of locomotive boilers) were in safe operating condition and whether safe operating practices were being followed.

The design of structures and of mechanical equipment was not included in the investigation, it bing felt that the designs had been amply tested in service over many years, and that performance as therefore dependent on the physical condition of the parts.

We found the roadbed to be generally sound, well maintained and in safe operating conditions, except for a limited number of items, noted in the report and called to the attention of the General Manager *(Arthur S. Teague)* at the time of the inspection, warranting immediate attention. Rolling stock was found to be in reasonably good repair and general capable of safe operation, subject to certain exceptions noted in the report and called to the attention of the Master Mechanic *(Pliney N. Granger)*. Operating practices as described to us by the General Manager were found to be safe.

The body of the report contains suggestions and recommendations concerning inspection, operation and maintenance. Lists of rolling stock and railroad personnel, and sketches illustrating conditions and suggestions are included as appendices. Our inspection notebook, listing and locating all roadbed itms found in other than fully satisfactory condition, will be made available to the railroad's General Manager for his information.

Sec. 31 - 1952 Inspection

Track & Trestle

The following general comments are offered. Our principal criticism of the framed bent trestle construction applies to the bracing, both lateral and longitudinal. Connection details for bracing are considered generally inadequate to develop a reasonable proportion of the strength of the member. Many of them also make contact with horizontal surfaces of sills, forming a lodging place for moisture which has induced decay. Less attention appears to have been given to maintenance of bracing than to the remainder of the structure. A notable exception to the above criticism is the Jacobs Ladder trestle, where the bracing has ben very well handled, and is in excellent condition. Cable guys have been provided in certain locations for wind anchorage. These were found generally too loose for maximum effectiveness. Bracing and guys are important parts of the structure and should receive comparable attention. In a few instances ties were found to have suffered because of the location of the bolt holes. Ties receive the train propelling and braking loads from the cog rail and transmit it to the structure through this attachment to the stringers. For best service, cog rail bolts should be located in the uphill half of the tie and stringer bolts in the downhill half. Loose blocking between sills and ground was found with some frequency. While not dangerous, this condition permits unnecessary movement or "working" of the structure under load, as well as abnormal stress distribution in the bents.

It was noted that locking keys for some of the switch connection pins were missing. We feel that these keys should be provided and used, primarily because insertion of the key gives positive assurance that the connection pin is properly installed. Platforms at various locations received only casual examination during the inspection. We understand that these are scheduled for attention by the railroad maintenance crew in the near future, and agree that this is in order. Creosoted plank is being considered for these structures. It is suggested that salt-treated material also be considered because of its lesser tendency to become slippery and its lower fire hazard during early stages of its life. Track and cog rail were found to be in good condition with only a few minor exceptions noted, none of which were considered hazardous. We understand that inspection of track, cog rail and their immediate supports is made by trackwalker at irregular intervals. It is suggested that this practice be formalized, with an inspection at least once weekly during the operating season.

Rolling Stock

This inspection covered locomotives (7), locomotive tenders (7), passenger cars (6) and work cars (6). A visual inspection was made of mechanical parts of the locomotives. All locomotive parts were found to be in satisfactory condition with the following exceptions:

No. 1 Locomotive

The forward brake bands were damaged because of interference with the ratchet and should be replaced. The interference should be corrected.

No. 3 Locomotive

The rear L.H. wheel was chipped badly in two places and should be replaced.

No. 4 Locomotive

Rear brake band should be replaced. Front brake linings should b replaced. Driving pinion teeth were worn, requiring reasonably early replacement of the jack shaft

No. 6 Locomotive

One front brake band and linings for both brakes should be replaced. Driving pinion teeth were badly worn, requiring replacement in the near future.

No. 8 Locomotive

Driving pinion teeth show considerable wear and will require replacement in the near future.

No. 9 Locomotive

Front brake linings should be replaced. Eyebolt connecting brake operating lever to brake band was distorted and should be replaced.

A visual inspection was made of locomotive tender axles, bearings and wheels. All of these parts were found to be satisfactory.

A visual inspection of passenger car mechanical parts was made. All passenger car parts inspected were found to be in good order with the following exceptions:

No. 1 Passenger Car

Lining of the rear L.H brake should be replaced.

No. 2 Passenger Car

Governor bevel gear drive missing. This will prevent automatic control of the ratchet pawl but does not affect safety.

No. 5 Passenger Car

Rear L.H. brake shoe broken off just blow center and should be replaced. Front and rear L.H. and rear R.H. brake linings should be replaced. Cars with defective brakes should not be operated on the open road until brakes are repaired.

Design Comments and Suggestions

We are favorably impressed by the efforts made in recent years to improve performance of locomotive and car parts through re-design, the use of better materials, and the like, Particularly noteworthy are design changes of use of improved materials for the locomotive jack shafts and pinions, the substitution of cast steel gears for cast iron, the use of better steel and more rugged design for axles, the improvement of brake design, the use of molded asbestos brake blocks instead of cast iron shoes, and efforts made to eliminate stress raisers such as sharp cornered keyways, re-entrant angles and surface roughness from highly stressed parts. These changes have produced marked improvement in general equipment performance, reliability and safety. This practice should be encourage and extended, as should the practice of preventative maintenance.

Sec. 31 - 1952 Inspection

Operating Practice

The normal train crew consists of an engineer and a fireman on the locomotive and a brakeman on the car. Th engineer is in charge of the train. The trains leave from and return to Marshfield Station. Operating speed approximates 3-1/2 miles per hour. Trains operate under definite orders from the dispatcher, who is stationed in the ticket office at Marshfield Station and ho may b contacted by field telephone from any point on the line. Train orders may be changed only by the dispatcher.

Ascending trains stop at Waumbek for water, and proceed to the summit. Descending trains are met and passed as ordered either at Waumbek or Skyline passing sidings, the ascending train taking the siding. If one of the two meeting trains arrives at the scheduled meeting point and the second train is not at the meeting point or in sight, the arrived train calls the dispatcher for orders and proceeds as instructed. Descending trains normally make no stop except as required at passing sidings.

When ascending, the brakeman is stationed at the front (uphill) end of the car, where he watches track and cog rail for obstructions and bad condition, and points out places of interest to the passengers. His front-end station is equipped with a bell cord by which he may signal the engineer. Th ratchet, which prevents the car from backing down grade, is set in the "engage" position but the ratchet pawl is kept up (disengaged) by a flyball governor driven through a clutch and gearing from the car axle. This is done to reduce wear on the ratchet and to eliminate annoyance to the passengers by the ratchet click. The brake wheels, at the rear (downhill) end of the car, are unattended and in the "off" position. If the train stops for any reason, the ratchet dog is permitted by the flyball governor to engage, and the car is thus kept from descending.

On arrival at the summit, the train is stopped by shutting off locomotive power, and car and locomotive ratchets are engaged. Standing orders reduce that no train be left without either the engineer or the fireman in attendance unless the train is chained to the track and the chain padlocked.

The track grade at the summit is quite flat, so that a pull from the engine is normally required to start the train downhill. This is accomplished by chaining the car to the locomotive, the chain being maintained in position until the train has travelled approximately 200 feet, when it is removed.

In order to start downhill after a stop, the locomotive or train must first move uphill a short distance to disengage the ratchets. The ratchet pawls are then locked in the "disengage" position, the train meanwhile being held by the brakes, and descent is begun. During descent, the brakeman is stationed at the brake wheels (two in number) at the downhill end of the car. When descending steep grades, one brake is set and locked, and the brakeman regulates the pressure on the second brake in such a manner as to maintain a space of not more than 2 feet between locomotive and car bumpers. Should this space exceed 2 feet for any reason, the brakeman is required to bring the car to a stop and engage the ratchet. The engine must then return, push the

car uphill to release the ratchet, reverse and continue the descent. On gentle pitches, the car brakes are released to reduce hating and the car is braked by the engine. As previously noted the engineer is in charge of the train. The brakeman may bring his car to a stop when his judgement dictates but cannot resume its operation without the active co-operation of the engineer.

Normal procedure requires the engine to descend using the compression braking effect of the pistons, occasionally augmented on steep pitches by steam pressure admitted in opposition to piston travel. Compression is built up in the locomotive cylinders by means of a throttling valve in the exhaust line. Compression braking may be supplemented by use of the locomotive hand brake if necessary or desired.

If an unscheduled stop is made for any reason, the brakeman is required to advise the dispatcher by telephone immediately, requesting instructions. The telephone wires are strung along the ties and the brakeman may tap in at any point with his field telephone set. In case of loss of the service of one cylinder the engineer is permitted to descend on the remaining three. Should two or more cylinders become unserviceable, the locomotive is required to remain immobile until repaired or returned to the shop with the assistance of another locomotive.

Weather on Mount Washington is a definite operating factor. Contact between the dispatcher at Marshfield Station and the Weather Bureau station on the summit is maintained by the dispatcher, and weather information thus obtained is considered in making operating decisions. Trains are not operated to the summit when wind speeds there exceed 70 M.P.H. Trains operating in fog or mist use lights. Icing conditions cause difficulty by clogging the cog rail, especially when the old style solid center piece is used under it. When ice or snow is reported by the weather station and operating is planned, an engine (without car) is dispatched up the mountain to "break out" the track. When conditions are particularly bad, track men precede the engine to clear the track, with a man of experience, judgement and authority in charge to decide whether trains may be permitted to operate.

Selection and Training of Operating Personnel

The engineer is the key man in train operation. Engineers are usually selected from men who have previously worked on the route as firemen, though in the past occasional engineers qualified on standard railroads have been tried. In general, these men have not proved adaptable to the operating conditions obtaining on the cog railway, and this source has ben or is being abandoned. Engineer candidates are selected from mature men, preferably those with previous mechanical experience. Thy are placed as firemen with experienced engineers, where they remain for at least one operating season, during which time they are given operating instructions. Candidates then spend a period in the shop working under the Master Mechanic and are also given instruction on inspection and lubrication. They are then permitted to operate work trains under observation of qualified engineers, who must certify that the candidates are qualified as engineers before they are permitted to operate alone. No unqualified man is permitted to operate any passenger train un-

der any circumstances, or to operate any locomotive on the open road with a qualified engineer present.

Foremen other than engineer candidates are selected on the basis of the employer's judgement of their physical qualifications and intelligence. The fireman's job is to fire the locomotive, and to apply the locomotive ratchet when directed by the engineer. No special qualification procedure is required before a fireman is assigned to work. An effort is made to train firemen so that they can bring a train to a stop in case the engineer is incapacitated, but firemen are not permitted to operate except in the case of engineer candidates, as described above.

As a general, but not inflexible rule, brakemen are college undergraduates employed for the summer. They are selected for physical ability, good reflexes, and mental adaptability to the work as demonstrated by trial. No brakeman is permitted to operate unless he has ben formally qualified. Candidates are trained for a week to ten days under an experienced brakeman and, when certified by him as ready for qualification, are checked and certified by a second qualified brakeman or by the Master Mechanic, on the basis of knowledge of operating practices and rules and ability to execute them.

Operating Inspection

Trains are inspected for general condition by the engineer before each ascent and descent and as opportunity permits at intermediate stops. These inspections are intended to reveal faulty lubrication (hot bearings), loose or broken running gear parts, and other obvious defects. Shop inspection of rolling stock is made periodically. Boilers are inspected annually by an outside boiler inspector.

Operating Rules

Operating rules have been established over a period of years by experience and judgement. They are transmitted orally to new employees by the General Manager, the Master Mechanic and (presumably) by other experience employees. There is not written operating code, and no formal "rule book". We noted a tendency to relax the general operating procedures described herein on non-passenger operations.

Evaluation and Recommendations

We consider the operating rules and practices described herein to be safe. They should be strictly enforced on work as well as passenger operations. To facilitate the training of personnel and to insure that those concerned are familiar with all the rules, a formal written rule book should be prepared and distributed. Employees should be checked at irregular intervals for knowledge and observation of the rules, and annual physical examinations for engineers should be instituted. Consideration should be given to establishing an age limit for engineers.

The Inspector

The J&M report was authored and signed by Oscar Bray: His bio reads: "Builder - Designer - Management Consultant - Lecturer - Railway Construction - International Design Systems - Foundation & Tunnel Design - Forty-second National Honor Member Nominated by the Northeastern University

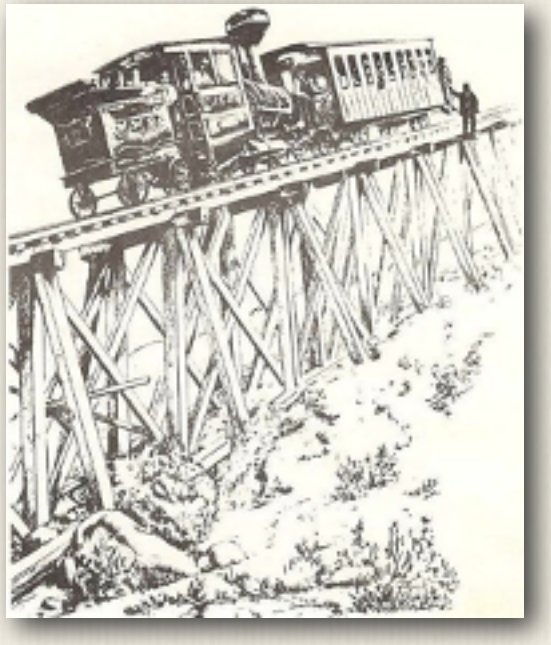
Oscar S. Bray contributed to the practice of Civil Engineering beginning in 1924. After serving as Vice-President of Camp Dresser & McKee International, Inc., Boston, Massachusetts, from 1972 to 1977, he continued his professional practice by being Consultant at Camp Dresser & McKee, Inc. Oscar Bray was born in 1905 in Dover, New Jersey, the son of Oscar S. and Bertha Bray. Prior to college, he worked four years in field engineering on railway construction. In 1932, the University of Cincinnati awarded him a B.S. in C.E. and a professional degree in Civil Engineering. His professional history included: 2nd Lt. U.S. Army (Reserve) 1933; construction Foreman, Construction Camp Superintendent and Engineer, National Park Service, U.S. Department of Interior 1934-40; Project Manager, Structural Engineer, Jackson and Moreland, Inc., 1941-57. From 1958 to 1967, he served as President and Chief Engineer, Jackson and Moreland International, Inc., and was responsible for various projects in Columbia, the Dominican Republic, Haiti, Lebanon, and Venezuela. These projects involved the design of roads, water supply systems, sewage treatment, electric power generation and distribution, and management studies. Mr. Bray was President and Chief Engineer of Bray, Backenstross & Company, Inc., 1968-71. Assignments included advice to the Government of Saudi Arabia on electric power aspects of a seawater desalting-power generating plant and supervision of construction for a $10 million college campus in Lebanon. Our profession was fortunate to have Oscar Bray serve as National President of ASCE during some trying times in 1972. His firm, outstanding leadership qualities were as visible as a lighthouse on the rock-bound coast of New England. His numerous honors included: The Clemens Herschel Prize, Boston Society of Civil Engineers, 1946; New England Award, Engineering Societies of New England, 1966; Distinguished Alumnus, University of Cincinnati, 1969; Citation, Engineering News-Record Construction Man of the Year, 1972. He authored various technical articles on foundation design, tunnel design and construction. He was a Licensed Professional Engineer in Massachusetts and Vermont. Mr. Bray was first elected to Chi Epsilon on December 10, 1971, at Northeastern University, chapter no. 60, chartered in 1965, as a Chapter Honor Member with a general number of 28,060 and an individual chapter number of 279. The Supreme Council elevated Oscar S. Bray to be the 42nd National Honor Member of Chi Epsilon on April 3, 1982, during the 27th National Conclave in the Diplomat Room at the Concourse Hotel in Madison, Wisconsin.

www.chi-epsilon.org/About/NHMBio.aspx?MemberId=42

As part of Oscar Bray's inspection of the Mount Washington Cog Railway he apparently sought to learn more about the history of the railroad. In addition to his factual report about the status of the Cog, he submitted the following to a Jackson & Moreland publication called *The Digest.* A copy of just the article was found in Ken Randall's files in 2022. A review of this "origin" story by historian Rob Bermudes and Jitney Jr has determined it is, at best, ***"truth adjacent"*** as it contains few of the confirmed facts of the Sylvester Marsh story. Something that the editor of *The Digest* warned readers about in his preface to the story: "Last spring, the author *(Oscar Bray)* was asked by J&M to conduct a safety and condition survey of the Mount Washington Cog Railway. Out of that experience has come the following story. For the reader's information, Sylvester Marsh did live in Littleton, N.H. He did invent and build the cog railway that runs to the summit o f Mount Washington, completing it in 1869, with financial assistance from the Concord & Montreal Railroad, later a part of the Boston & Maine Railroad. Beyond this, the Editor certifies only that this is an interesting New England yarn." To Jitney Jr it appears a North Country local sitting at his post on a porch saw someone from the big city who might buy the most fanciful of tales. Historian Bermudes says the part about Marsh being frustrated with the first surveyor of a route up the mountain who started laying out a more traditional traction railroad route that

was limited to a six percent grade is an accurate echo of the early days of the project. Bray's "truth adjacent" article is included here as an example of many Cog tales that exist and must be approached with the utmost skepticism and critical thought.

Yankee Venture



"He sat alone on the drugstore porch, leaning back in his chair against the building, letting the sun warm his ancient bones, and watching the morning traffic on Main Street. The young man came out of the door, a sheaf of post cards in his pocket, another in his hand. Moving across the worn planking, he showed the cards to the old man, asking a question. The old man looked and nodded. "You want to know about the cog road up on Washington?" he asked. "Well, you've come to the right place, son. You see, my uncle, old Sylvester Marsh, invented that road, and built it, and I was in on it, start to finish. Pull up a chair and set down. I'll tell you about it from the beginning. I came to live in Littleton, in this New Hampshire hill country the summer I was eleven years old. My mother had died in the early spring of 1850, and my father, two months later, had sold our farm and most of our belongings, had taken me to his brother's house, and had gone soon after to forget his troubles and to seek his fortune in the gold fields of California. I never saw him after that. He died in September under a wagon on the upper Missouri, a 'Rapaho arrow in his throat. We heard about it in the spring from the wagon master. My uncle and his wife lived in a square, white house on the Bethlehem road, a mile east of town, the house where he was born and the house in which he was to die. They had no children, and I expect having the care of an eleven-year-old boy thrust upon them at the beginning of middle age could be called both a blessing and something less than a bless ing. Uncle Sylvester was a rich man, as wealth was measured in that time and place, owner of the town's busiest lumber mill, and with a finger in local and state politics, the affairs of the bank, the woolen mill and other ventures. He managed these diverse affairs without apparent effort, sometimes from his mill office, but principally in chance meetings on the street, on front porches, in buggies and on buckboards, in the woods camps, and wherever there were people. His driving energy was well hidden behind a broad, bearded visage and an air of lazy good humor. But in contrast to the hardheaded practicality you might expect from his wide participation in worldly affairs, I came to know him as a dreamer of great dreams, saved from embarking on more than one wild venture only by my aunt's tart tongue."

"For him, as they do also for me, the mountains that surround our village held a deep and constant attraction. His timber dealings took him often to the foothills of the Whites, whose great rock masses thrust blue against our eastern sky, and sometimes, when the weather was fine, and business permitted, I was allowed to go with him in the buckboard, sitting proudly erect as we drove through the towns, lounging in comfort along the country roads. Those trips were great events in the life of a small boy, the heady stuff of which juvenile dreams are made. It was through them that I entered that part of the world that is reserved for men - the world of horses, cigar smoke, and hearty laughter, of work and good talk and the animal enjoyment of being alive; the world so carefully barred to women. Those days come back to me now, across the space of 70 years, like the pages of a picture book, slowly turned. I remember a hot July afternoon in 1852, the year John Hale, the Free Soiler from down state, ran for President against Franklin Pierce. We were climbing Washing ton along the Ammonoosac Branch, with Charlie Wood s , who bought ties for the Concord railroad, and George Field, who sold them. Those three were often together, Charlie, George and my Uncle Wes, first for business, and after business, for skylarking, like boys turned out of school. The black flies were bad that day and our necks were well bloodied by the persistent pests by the time we reached the timber line and paused to ease our straining lungs. We drank the icy water from the brook, lying on our stomachs across a flat stone and touching lips to the surface of the tiny pool, each in his turn. Then we sat in that delicious comfort only tired muscles could find among the rocks, looking out to the great shoulder of the mountain to the east and over the northward valley. No one spoke while pipes were filled and lighted and smoked down to the bitter heel, and the cloud shadows dappled the slopes. I think it was then that my uncle first conceived his great idea, the dream he was to pursue for nearly 20 years, the idea of a railway up the mountain! He rose from the rock on which he sat, knocked the ashes out of his cold pipe against his heel, dropped it into his pocket, and stood looking over the tumbled hills, then up the

slope to the crest of the ridge. "Charlie," he said, "there ought to be an easier way to get to the top of this mountain than walking." Charlie grinned, wiping his neck with the palm of his hand, and George Field commented, wryly, "Five years from now we'll all need one," then looked at me and added, "except Billy, here." He and Charlie got to their feet and we started up the steep trail. The idea, born that day on the mountain, stayed in my uncle's mind, itching like a mosquito-bitten knuckle." *(Ed. note: This is well written vignette with striking, dramatic details and five years too early. Marsh's inspiration would come on a hike up Mount Washington in August 1857.)*

Oscar Bray's story as recounted by "Billy" continued: "Little pieces of his thoughts came to light at odd times, a few words dropped here and there in conversation, straws showing the direction of the wind. "That hotel *(the first Summit House opened in late July 1852)* up on top'd make money if folks c'd get up there without killin' themselves on a horse," he would say, as we drove a country road. "Steam's the thing, Billy - a steam engine on rails, like a regular locomotive." A pause - "But she'd slip in the steep places, Billy. We'll have to study on that a bit," and he would fall silent again, looking out across the bobbing backs of the team. Another time it might be the money side. "It'll take a heap, Billy. A hundred thousand dollars, maybe - too much for one man to swing. But she'd make money, no mistake about that." And he would nod his head and reach for his pipe. Or, "There's two sides to this board, Billy. We've got to get her up, and we've got to get her down. Down's the hardest, by a long shot," and he would thrust the whip stock against the revolving buggy wheel, making a noise like a small boy rattling a slat along a picket fence. He took to spending a good deal of his time in the mill, watc hing the sawyer at work and studying the machinery. He cultivated the railroad enginemen, too, and talked learnedly of boiler pressures , water levels , relief valves, steaming rates and similar matters. It was all a piece of the same cloth, evidence of his growing preoccupation with the idea of a railroad up the mountain.

"The year the carriage road was built *(1861)*, the year the Civil War began, was a bad one for him. Whistling in the dark, he freely predicted the failure of the road in spite of the good reports that drifted around the mountain to us from Pinkham Notch. "Those fellows will sing a different tune when the bills start coming in," he would say. Or, with a snort, "Wait till the horses play out and then we'll see." Often he would return to his original thesis with 'Takes an iron horse to make that climb, Billy. The colt ain't been been foaled that can do it as a steady diet." Me,I forgot the railroad that fall, for I enlisted in Colonel Scott's regiment and spent the winter digging trenches in the red clay of Northern Virginia, living on pork, beans, coffee and hardtack in a log hut. I had a long letter from Uncle Wes early in June, in '62. "Billy," he wrote, "I think that I have this this thing whipped," and he proceeded to outline his scheme. The locomotive cylinders would not drive the wheels, but would be geared through a jack shaft to a great iron cogwheel engaging a rack be tween the rails. Thus the locomotive would push itself up the mountain. On the return trip, with the steam shut off, the cylinders would be made to act like an air pump through an arrangement of valves, and by this means develop sufficient resistance to control the speed of descent. The air pump could not be depended upon to bring the machine to a stop, of course, and so he planned a drum-like brake on the jack shaft, and as a safety device, a ratchet and pawl on the cogwheel axle. "I think the mountain too rough and steep for a roadbed, like the Concord & Montreal uses," he wrote, and it was like listening to him think out loud. "Also, and as I expected, the carriage road people have had much work to do on their road this spring because of the snow melt. With plenty of good spruce handy," he continued, "it will be quicker, cheaper and better to build a trestle for the whole length." I was impressed by his seriousness, and a little astonished, too, when he closed his letter saying, "Your thoughts on these matters will be much appreciated by your affectionate uncle." I learned a good deal about soldiering that summer - Bull Run and Antietam and a Washington hospital for me, then home on crutches, after a year of war.

"I started back at the mill office although there was little enough to do. My uncle was away much of the time, arranging with the State people for a right of way up the mountain, and trying to interest the Concord railroad crowd in putting up money for the venture. He had little trouble with the State, but it was hard sledding with the railroad men, and he was pretty discouraged at times. "Those fellows wouldn't invest in Heaven at a penny a share," he told me, "unless the Lord himself guaranteed the dividends." He got AsaLivermore, the machinist at the woolen mill, to build a model of the engine, and Asa showed him how to hang the boiler in gimbals, so it would ride upright on the steep grades. He kept working on the railroad people too, as much as he was able, and in October he got two of them up into our country, to hunt birds, he said, but actually to show them the mountain and to persuade them to take part in his enterprise. Charlie Woods arranged it through his friend and superior, Josephus Webster, the railroad purchasing agent. Webster brought with him Willis Fairbanks, who grew up in St. Johnsbury, made a barrel of money in the lumber business there, moved to Concord,

and finally got to be a director of the railroad. He was a sharp old man, and people said he could see a dollar as far as the next one. He and Webster had poor luck with the birds, but they did get a good look at the mountain and showed great interest in Asa's model of the engine. As they waited at the depot, Fairbanks spoke to my uncle, "Marsh," he said, in his cracked old man's voice, "that hotel will never make any money the way things are. It takes too long to get up there, and people ain't going to come." My uncle nodded and began to fill his pipe. "You're right, Fairbanks," he said, "those fellows'd like to sell right now." He paused to light his pipe, then added, almost to himself, "Some money to be made there - if things work out right." I saw a quick look pass between Fairbanks and Webster, but nothing more was said, and after shaking hands all 'round, they climbed on board the train. Uncle Wes looked at me. "Billy," he chuckled, "I think we did some business today. Yes, sir, I think we did." Uncle Wes was in fine fettle as we drove home after putting the Concord railroad men, Webster and Fairbanks on the train. He felt that he had made real progress in his campaign to enlist their support for his cog railway, and he had strong hopes that Fairbanks had not overlooked his hint about a profitable deal for the hotel. He was right, as it turned out. F our days later a letter came from Concord. Fairbanks wanted the engine model brought to the shops at Manchester, where he proposed to have a working model made. If it proved out, he said, he thought the company might be willing to put some money into the road.

Still better news came through Eli Haskell, the lawyer from Lancaster. Fairbanks had taken an option on the hotel. My uncle did not appear surprised, but he lost no time getting the model down to Manchester. The railroad Mast r Mechanic was a wonder. In a little more than a month, he had cobbled together a locomotive, using the boiler, engine and some of the parts from an old steam winch, wheels from a smashed handcar, and miscellaneous items sorted out of the scrap pile behind the shop. A steep sand hill rose beyond the scrap pile, and up its side he laid a short section of track, a hundred feet, more or less. "If she'll climb a hundred feet, she'll climb a mile," he told me, shifting his tobacco in his cheek and turning to my uncle. "Didn't see no sense to swinging the boiler on this rig, Mr. Marsh. Track all slopes the same, so I just tipped her a little, bolted her down and let it go at that. We'll try her out soon's Mr. Fairbanks gits here. She steams real good," and he pointed to the gage. My uncle nodded absently, his attention fixed on the engine. He looked about as excited as a Coös County chopper picking out a new axe. Fairbanks and his party arrived in a carriage a few minutes afterward. The old man appeared a little ridiculous in a long black coat and stovepipe hat, and the skin over his cheek bones was pink from the cold, but there was nothing ridiculous about the way he climbed out of the rig, all business. He nodded briefly to me, shook hands with my uncle, and introduced him to the rest of the group. He spoke to the Master Mechanic. "Are you ready, Mr. Shorter?" "Yes, sir, Mr. Fairbanks, ready as I'll ever be." "Well, gentlemen, shall we proceed?"

Shorter walked over to the engine and opened the brass pet cocks at each end of the cylinders. "Got to blow the water out," he explained. His fireman, a short, bullet-headed negro with a face wrinkled up like a butternut, opened the firebox door and tossed in a good chunk of birch, looking busy and important. The Master Mechanic took his place on the platform, swept the waterglass and the steam gage with a professional glance, settled his cap firmly on his head, and eased the throttle valve open. Yellow, oily water spurted from the pet cocks, followed by jets of steam. At a nod from Shorter, the black man jumped down, closed off the jets, and climbed back aboard. The throttle was opened another turn, the engine came to life with a suddenness that set the fire man back against the handrail, and the odd-looking machine began its halting climb up the hill! I looked quickly at my uncle. His full, ruddy face was quiet, almost expressionless, and his pipe, thrust into the corner of his mouth, was cocked upward at a rakish angle. As I looked, the bowl dropped, unnoticed, to the ground, the stem snapped off in his teeth! They ran the engine up and down the incline a half-dozen times that afternoon before everyone was satisfied that it would come down a hill safely as well as climb one. Slow, jerky and a bit uncertain in its progress, the locomotive apparently impressed Fairbanks, for he turned to my uncle after the last trip, his face relaxed and friendly for the first time that afternoon. "Marsh," he said, "I think I'll buy that hotel. Come up to town with us for a little something to take the chill off while we talk."

The upshot of it all was that the railroad company agreed to put up the money for the road in return for a controlling interest in the new company to be formed to operate it. My uncle was to have a 30 percent stock interest in exchange for the right of way he had acquired from the State and was to be President and General Manager. It was also agreed that the railroad company would send a surveyor to the mountain in the spring to start laying out the route to the summit, and that in the meantime, my uncle would begin collecting timber and ties for the trestle, this material to be seasoned for a year before being used. The Manchester shop was to start

construction of the locomotive the next winter, following the pattern of the test machine, with some improvements suggested by Shorter, and the car shops in Laconia were to build one flat and one passenger car. *(Ed note: The railroad's first engine was built in Roxbury, Massachusetts by Campbell & Whittier not in Manchester, New Hampshire)*

Things picked up at the mill after that, and I was kept pretty busy the rest of the winter, and by the time the snow melted, the mill yard was piled high with clean, sweet-smelling spruce. You can't get timber like that now, for we cut only the best, and left the trash in the woods. The surveyors came up in the spring, as promised, and began their work. But as their line was projected up the mountainside, my uncle grew more and more dissatisfied with the Crew Chief. "That numbskull's trying to lay out a freight road," he would storm. "Scared of anything over a two percent grade. There ain't timber enough east of the Connecticut to build the line he wants, and it'll take 40 miles of rail to get him to the top of the mountain." He could get nowhere with the man, and finally sent him packing, back to Concord. George Field was put in charge of the crew, and things went better after that. George didn't know anything about surveying, but he had a lot of good horse sense. He and Uncle Wes agreed from the start that the way to lay out the road was to aim it straight for the top. It took all summer to get the line measured and staked, the grades figured and the brush cut. The man who operated the telescope and did the surveying was a young fellow just out of Norwich College, over in Vermont, smart as a whip. He could figure till the cows came home. He worked everything out, neat as a pin in his little brown book, and told my uncle how much material he would need, down to the last tie and spike.

I kind of lost out on the work about then, what with things picking up at the mill, and me developing a pretty special interest up in Whitefield and what not. "You go right ahead," my aunt encouraged. "I know that girl's family, and they are good people. Besides, it takes a married woman to run this house, and with that husband of mine hitched to a fool railroad, I can't hardly claim to be a wife." I was married the spring of '66, the year they started to build the road. We drove over late in August to see how things were going. They had nearly a half-mile of track laid by then, the engine had arrived along with the flatcar, and was being used to haul materials up the mountain to the end of the track. Mary laughed when she saw that engine, its upright boiler topped by a fancy stack. "Why," she said, "it looks just like a pepper sauce bottle." Jesse Bozarth, the carpenter foreman, who was standing nearby, overheard. His lean brown face crinkled into a smile. "Plenty of pepper in that old pot, too, Ma'am, if she gets her wood regular. You just watch *Old Peppersass* shove up the mountain." And so the engine was given the name she carries to this day.

Three years it took to build that railroad, with the tiny station and the roundhouse at the foot of the mountain, the water tanks, the train shed at the summit *(Ed note: first railroad shed at Summit was built in the late summer of 1870)*, the platforms, and the dozens of odds and ends that go into such a thing. A hundred and fifty thousand dollars it cost, and toward the last the money came pretty hard. Fairbanks, I think, sometimes regretted his bargain, as did some of his fellow Directors, but he was stubborn as well as sharp, and having put his hand to the plow, he was determined to finish the furrow. My uncle and George Field, who had become his right-hand man, grew lean and tired and a little grey that last spring, driving to finish the work and open the railroad for the Fourth of July. The last rail was laid, the last spike driven and the last bolt tightened by lantern light the night before, and the crew rode down the mountain in the summer dark behind *Old Peppersass*, too tired from a solid 14 hours of work to feel any sense of accomplishment. But they were all on hand the next morning when, at ten o'clock, the first official trip to the summit was to be made. Marshfield Station - named by my uncle, with sly humor, for himself and George Field - was a crowded place that holiday morning. Every surrey, buckboard, runabout and cart for miles around had been pressed into service, and a half-dozen omni buses hauled loads of passengers from the hotel at Crawford Notch. People stood in little knots and talked, or sat quietly in picnic groups along the grassy brook bank. Children were everywhere.

Old Peppersass, her polished brass gleaming in the sunlight and a wisp of blue wood smoke curling from her stack, was the center of attention as she stood with her nose thrust hard against the buffer block of the car. The regular passenger car was still in Laconia, getting its last coat of paint, so Jesse Bozarth had taken the work car, fitted it with eight high-backed wooden benches and a canopy to keep off the sparks, and made it into a passenger car for the occasion. Brightly painted and decked with flags and bunting, it added a note of gay festivity to the gathering. Most of the people, I sensed, had come to see, not to ride, and at least half of them were mighty skeptical. "Climb that track, steep as it is? I'll have to see it to believe it." "Are you planning to go to the cop, Mrs. Summers?" "I should say not Mrs. Jones. Mr. Summers may try it, if he likes, but I shall stay right here. One fool to a family is enough, I al ways say." And so it went. The Directors, headed by Willis Fairbanks, had

come up on a private car to Crawford Notch the night before, and were to ride the first train. The Governor had sent a representative, and two members of the Legislature were also on hand. This group, my uncle, George Field, Jesse Bozarth, myself, and a half- dozen local notables made up the balance of the party. Luke Shorter, who built the engine , was the driver. My aunt had been invited to go along, but had declined. “When I want to climb that plagued mountain I’ll walk,” she said shortly, settling the matter.

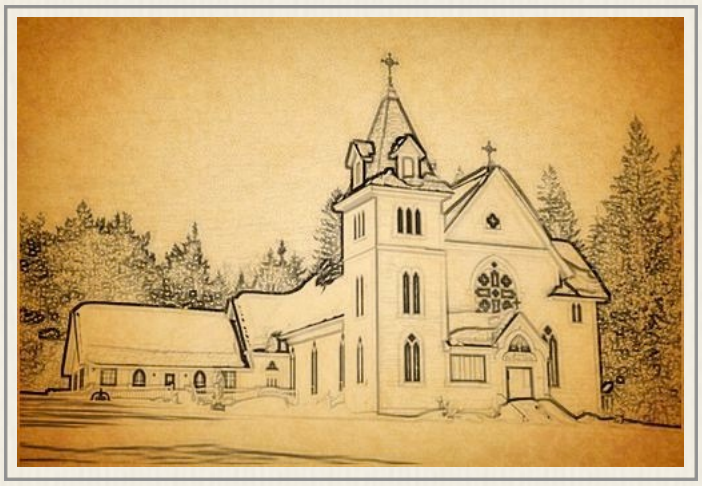
The great moment came at last, after short speeches by Mr. Fairbanks and my uncle, a long one by the Governor’s representative. The crowd stood back, silent, while Shorter blew the cylinders clear, closed the cocks and opened the throttle. As the train started to move, he blew a long blast on the whistle, the crowd cheered, and the small boys responded with a salvo of cannon crackers that sent the tethered horses into near panic. Looking off to the right, I could see the spot, just above the timber line, where the railroad idea had been born so many years before. Nearly two decades had gone into its creation, 20 years of working and planning, so that the many could ascend a mountain in comfort and en joy what until then had been reserved for the few. It gave me a good feeling.

1961 Missing the Train

Jack Lynch followed his college roommate, Dennis Buss, to the Mountain in 1961. Before Jack joined the train crews in 1962 *(see Ch. 9 Sec. 9)* he worked as a waiter at the Summit House. In 2007, Lynch wrote a short story based on an incident during his first year of summit work that might explain what the experience was like to those unfamiliar with the Cog - a memoir of sorts, like John Granger's story of his 1936 experiences *(Appendix - Sec. 12)*. Here is Lynch's story entitled "Missing the Train."

Colonel Teague stood on the rough platform, one hand on the railing of the wooden passenger car he was about to board. His worn woolen pants fluttered in the sharp wind as he strained to finish his brief conversation with Jack, the new Summit House waiter. Teague shouted over the wind and train noise, "No, you can't go."

Jack's plan had been to take the last train down the mountain Saturday evening in order to attend 6:00 AM Mass the next morning at a church near the beginning of the six-mile-long base station road. He would then take the 7:00 AM work train back to the top, arriving in time to serve breakfast at the Summer House. Earlier, Jack had asked his Summit House manager about going to church. The manager had been reluctant to make a decision on his own since he considered Colonel Teague a tough boss and feared making a mistake.



Shrine of Our Lady of the Mountains - Carroll, N.H.

The whistle blew and the engine snorted white steam as Teague climbed on board. The train lurched backward for its descent to the base station. Jack stared in disbelief. He had missed Mass only once when he was quarantined with whooping cough. Even at his secular college, he and his lanky roommate, Stretch, had always started their study-filled Sundays with early morning Mass.

He was glad he wasn't living at his parent's city home this summer because he had been growing self-confident after two years of college and didn't think he could handle his father's criticism, orders and anger. Now here he was with a new boss who wouldn't let him go to church on Sunday morning. *I don't have to take this*, he thought.

Jack had wanted to work on the trains. He loved all things mechanical. From an early age he was able to figure out how things worked. He discovered that he could count on machines. A person needed to maintain them and sometimes fix them but they always came through for you. There were no surprises. People, on the other hand, were a nightmare of surprises. They could turn on you in a flash.

Sec. 32 - 1961 Missing the Train

It was Stretch who had found these offbeat summer jobs on the Cog Railway. Stretch worked as a brakeman on the trains while Jack was hired as a waiter at the half century-old Summit House. Colonel Teague, the owner and manager of the railroad and the Summit House, said that if Jack did well that summer, he would have priority for a job on the trains next summer.

As Jack continued to stare at the descending locomotive, he wondered how he had gotten into this muddle. Stretch's mother had driven them to the base station in New Hampshire from her home in Vermont. The friendly Green Mountains were a sharp contrast to Mount Washington, the tallest mountain in New England. From a distance, the barren upper part appeared to be devoid of all life. Cars drove in between the White Mountains, not over them. He had felt naive showing up at the Summit House carrying a small suitcase and the tennis racquet his mother suggested. There were no tennis courts on this windy summit, only at the fancy inns below.

When Jack heard two different shrill steam whistles he guessed that two trains were passing at the Skyline sidetrack. He was pretty sure that Stretch would be the up-bound brakeman, so even though he was shivering in the brisk wind, he walked down the track to meet him.

Soon the engine came chugging by at a fast walking pace. Hopping on the passenger car was easy and Jack stood on the cinder-dusted platform explaining his predicament to Stretch. They decided that Jack should ignore Colonel Teague's "suggestion" and go to church anyway. Stretch made arrangements with Pliney, a third-generation Cog worker with the same name who lived in a makeshift boarding house at the base and regularly drove to early Mass every Sunday. He had assured Stretch they could go to Mass and make it back to catch the 7:00 work train. Pliney said that Teague ate breakfast with his family and was never around the base station until the first passengers left at 9:00. He would never know that Jack had come down. The Summit House had few guests that first Saturday night of the season. Randy, the other waiter, was happy to finish serving the inelegant dinner alone so Jack could catch the last train down the mountain. That night, after

he joined Stretch and a few other trainmen on a trip to Littleton to do laundry and go to a bar, Jack slept in an empty room in the boarding house at the base.

Stretch and Jack readily heeded their unwelcome 5:15 alarms the next morning, inserted themselves into stiff jeans and started searching for Pliney's room. Within minutes they were speeding down the base road in Pliney's repainted Dodge. Mass was longer than expected. After the final Amen, but before the priest left the altar, Pliney motioned to make a break for the door. They peeled out of the parking lot and rocketed down the highway to the base station road. Pliney did not slow down when they reached it. He drove sixty on ready-to-burst screeching tires up the winding, hilly road to the base. Jack recited the Our Father more fervently than he ever had in church. Of course, he wanted to catch the 7:00AM train but he didn't want to die trying.

Just as they started up the last steep, bumpy part of the road to the base station they heard a whistle—a shrill *wha-oooh wha-oooh wha-wha oooooo-ah*. It was Chase's signature style of pulling on the cord that opened the steam whistle valve. The 7:00 AM was just leaving the base station.

As the car entered the large base station parking lot they could see the escaping train. Pliney said, "Jack, I'm sorry. You'll have to wait two hours for the next one. There's no way anybody could catch that engine on such a steep grade."

It was a sickening sight to Jack. Less emotional eyes would have glimpsed a portal into the country's industrial past. At first glance, an observer wouldn't even notice the steam engine and the single passenger car it pushed up the steep hill like a baby carriage. Instead, he'd see an immense, coal-black plume towering over the engine and, beside it, an equally enormous, drifting, cotton-white steam-cloud. The engine also spewed white billows of steam out of pistons set close to the ground. Oddly, these white puffs did not rise. They instead formed a private, translucent fog bank that appeared to follow and envelop the train. The monster roared deeper than a jet plane taking off. It was not the pleasant *choo-choo* of flat-earth steam engines but a menacing proclamation of an industrial-strength mechanical mountain climber.

Jack yelled to Pliney to let him off at the closest point to the train. He was going to run to catch it before it got too far. He didn't know that the train didn't simply climb Mount Washington; it went up the "fall line"—the steepest ascent to make the trip shorter than the hiking trails that go up the mountain. He sprinted at first, hoping to quickly catch the train but soon discovered how steep the grade was. After two minutes he had only halved the distance to the train and was too winded to continue. He had to walk. He looked up and saw the engineer and fireman in the cab. Then a third person; it was Colonel Teague.

Jack was breathing heavily, a controlled, even breathing. His face and hands were a dull red, a condition that in others might warn of physical collapse but were simply his routine reaction to hard work. Although he was now moving at the same speed as the train, he was sure he'd never make it all the way up the mountain at this pace. He then remembered that the steam engine had to stop for a few minutes roughly a third of the way up the mountain at Waumbek to take on wa-

ter. He figured about a twenty-five-minute climb. He'd have to get there before they left. It was his only chance.

He was now calm, confident he'd catch the train at Waumbek. That calmness soon gave way to dread when he started thinking through his dilemma. He was sure Teague would fire him for disobedience. It didn't seem fair. He was, after all, following his conscience.

As Jack reached the stopped train at Waumbek, the young fireman was still monitoring the flow from the huge water tank. Chase, an experienced crafty engineer was greasing one of the pistons and showing something to Colonel Teague. Chase glanced up at Jack and growled, "Didn't think you'd catch us. Usually, you book-sense college kids can't handle the mountain."

"Nice walking," Teague said. "Do you want to ride in the cab with me?" Chase gave Teague a dirty look but wasn't going to question his stern boss. Soon underway, Teague took some time to explain to Jack how the engine worked. Jack could hardly hear him. The soft coal-burning boiler made a roar that was extraordinary when the fire door was closed but impossible to speak over when it was open. The engine rattled raucously and the pistons hissed steam on each stroke.

"Hear that rhythmic clanging?" Teague shouted. "That's the ratchet on the large cog gear that engages the cog "ladder" that sits between the two rails on the cross ties. That ratchet has to be strong enough to prevent this twenty-ton engine from going backward if we were to break a steam line and lose all pressure to the pistons. The engineer wouldn't be able to grab that large brake wheel fast enough if we broke a steam line. We'd then jump the track and fall off the trestle. That ratchet keeps us safe."

Soon the train neared what Teague called "Jacob's Ladder," the steepest part of the trip—an outrageous thirty-seven percent grade. Teague became silent and Jack looked around the cab. Chase and his fireman were covered with coal dust and smeared with black grease. They looked as if the coal dust and grease were part of their skin. It was hard to believe the worn wood floor and cab walls could stay intact given the violent vibrations of the moving train.

After Jacob's Ladder, the train reached Skyline, a short flat stretch. Since the steam engine was not working as hard, the cab was quieter and Colonel Teague finally moved closer to Jack. Jack turned pale, looked at the floor and took a deep breath. Now he would be fired. In a deliberate voice, Teague said, "I understand that going to Mass must have been important enough for you to disobey my order. I respect your principles but I have a railroad to run. Part of that operation is serving breakfast to the guests at the Summit House. I need you to do that.

"Hell, son, you should have known that the summit of Mount Washington is out of range for attending Sunday Mass and if it's that important to you, you shouldn't have applied for the job in the first place."

Jack realized that Teague was right, but he didn't want to admit that he was a city kid with no idea what a real mountain was.

Teague said, "Catholics the world over are sometimes prevented from attending Mass. I believe in an understanding, loving God. Of course, you have to do what you think is right."

Teague asked, "Do you need the job? I mean do you need the money to go to college?"

Jack was hoping that with the tips and a small salary and free summer lodging and meals, he could pay all his room and board for the next year. He said, "Yes, sir, I do."

Jack recalled struggling with the decision whether to attend a Catholic university or to attend what some people said was the best engineering school in the world. A kind Jesuit visiting his parish had told him that if God had given him the talent for math and science, then He would expect him to use that talent for the best that he could, even if that meant attending a nonreligious school.

Teague told Jack that he would forgive his disobedience this time, if Jack would promise not to do it again. He wanted Jack's decision by the time they reached the summit. Jack didn't have to wait. He spoke up, "Yes, sir, I'm sorry. It won't happen again."

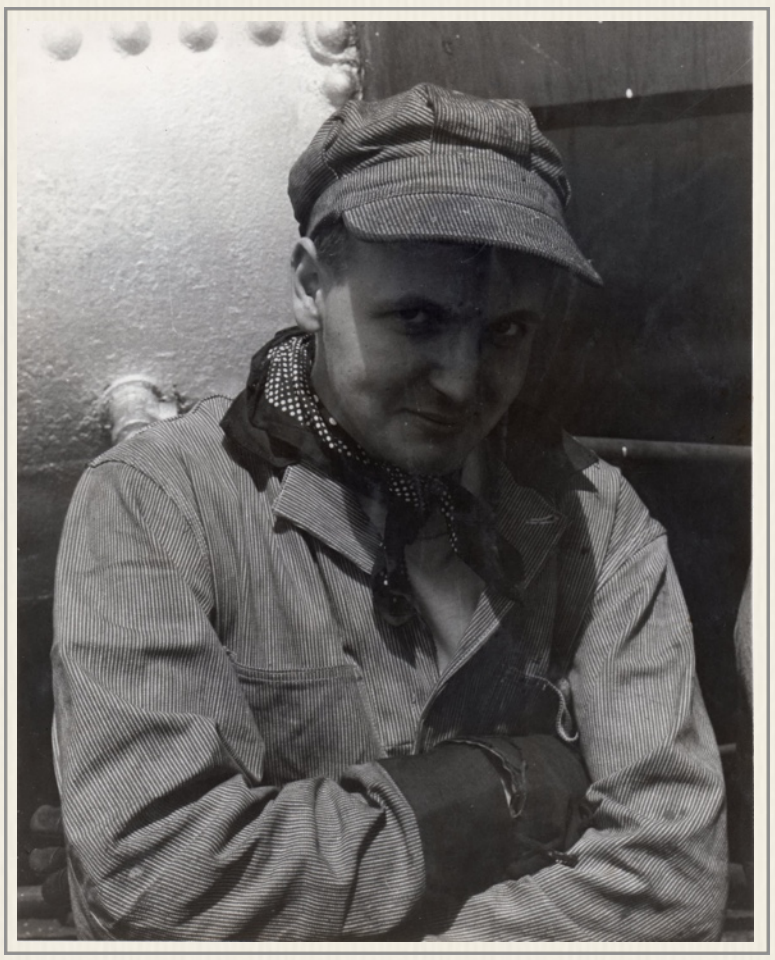
"Okay, we have a deal. Welcome to my mountain."

A Taylor "Day's Work"

Coggers are often asked what was the job like? A complete and nuanced answer is difficult to craft. Jitney's first draft of his "Day's Work" (Chapter 5) made it only as far as Waumbek on the first trip before running out of steam. The remainder of the day was recollected/recreated fifty years later. Doug Taylor's attempt to answer the same question also stopped short - before the engine even moved, but his first draft contains details not observed by Jitney and is included here for a more complete record of "a Cog day."

So you want to know what a typical Cog Railroad Engineer's day is like? Well, I'll tell you

It's five-twenty four in the morning. The sun is just barely crawling up over the mountain. Temperature outside is around 40-degrees, and even though it's July, the inside of your unheated boarding house is mighty cold. You're lying in bed - under 3 blankets if you're lucky. You are dreaming - dreams not connected with railroading - things are even getting interesting... It's now 5:30 with a satanic click, your monstrous, two-belled alarm clock starts its hideous chatter. You groan - your pleasant, warm dream world is yanked out from under you. Still half-asleep, you blindly grope for the elusive stop button. You fumble, you grasp the clock, it slips and falls out the window. You sit up.... "Yes, Mr. Jesus, it's going to be a good day!"



- Doug Taylor Collection

Now you search for your clothes... underwear here, ah – clean socks here, blue cotton work shirt, blue denim pants, bloused at the ankles, safety boots, overalls; red, no today it's blue bandana, and railroad hat, Finally you find your leather gauntlet gloves in the litter, grab your pocket watch, and clomp wearily down the stairs to work.

The cold of the morning bites through your lined frock as you hike down the steep bank in front of the boardinghouse to the Shop. You turn up your collar, and with hands jammed in your waste-filled pockets, you cross the transfer table, and tie-at-a-time you paddle up the shop lead to your engine.

You're second out this morning - due out of Marshfield at nine AM with the morning *Flyer*. You are now passing the lower lineup of the trains on the main below the coal bunker... *Tip Top* or

the mighty 8; *Waumbek*, or the 9, *Mt. Washington* or the one. You gleefully note that Chase has lost his fire for the fourth straight time.

Now you're walking the rail over the ash pit, jumping off to kick the cinders lower so you won't fill your gears like Chase had just obviously done. There's the deuce on the back of the switch and there you are proudly - number 6, The *Great Gulf* with the aluminum coach (the Cog Railroad's answer to the *Super Chief*), waiting quietly for you.

You climb into the cab. Oh yes, there's the hissing of that leaking stay bolt in your left side sheet. (What do those birds in the shop do that they can't fix that??) First you check the water... open bottom valve first on the glass, then the top one, just a turn of the wrist if you please - it's easier to shut off if the glass breaks. Ahh - there it is, the clear column of water, just below the number two gauge cock. You flush the glass to make sure. Yes, it's still there. How's the steam - just barely five lbs. Good, just enough to start the blower after breakfast. The bank glows redly from the open firebox door. You shut it, reach over by the fireman's seat, and work the shaker bar once or twice. There - That ought to hold it until after breakfast. You dig out a piece of waste, wipe your grimy hands and climb off the engine to chow.

As you go into the kitchen, you stop at the coffee, long enough to grab your first cup of coffee - first in about fifteen. There you are, standing in front of the serving counter, staring at the variety of fruit juice cans in front of you. They stare back. You grab the V8 and gag slightly as the eight different juices rush through your numbed system. You look at the cook. The cook looks at you from behind his bottle of Ruperts . What'd ya want? Eggs. 3? 4! Uh...

You sit down, and huddle over your coffee. Your fireman comes in "Morning Doug?" You look up and mutter some unmentionable obscenity back, as per usual. The rest of the meal is eaten in monosyllables.

1963 Dartmouth's Title Search

By the end of 1963, Dartmouth College had owned the summit of Mt. Washington for more than a decade having inherited the property from their alum, Col. Henry N. Teague - Class of 1900. In 1962, the College had sold the Cog Railway properties to Col. Arthur Teague. Now the state of New Hampshire was considering using taxpayer dollars to buy the property at the top. The *Littleton Courier* provided its readers with background on Thursday, December 5, 1963.

"In the following story *(John F. Meck, treasurer and vice president of Dartmouth)* outlines the history of the mountain from the time white men first visited the North Country. The information was contained in a talk at a recent public hearing on the proposed purchase of the summit by the state, held at Dartmouth:

I am here at the invitation of Governor King to explain how Dartmouth college acquired the summit of Mt. Washington and to present the college's position with respect to the state's interest in owning this property. As Governor King pointed out in his remarks, the college is not urging the state to purchase the summit of Mt. Washington but if the state does wish to do so, the college is prepared to discuss a sale of the property to the state. This has been the college's position ever since 1955 when the then governor expressed interest in state ownership of the mountain. On the other hand, should the state decided not to purchase this property, the college is prepared to pursue other alternatives.

The summit of Mt. Washington is undoubtedly the most unique piece of real estate in the entire State of New Hampshire, if not in the eastern United States. In effect it is an island of arctic weather, and a base from which to study arctic flowers and animal life down in the Alpine Garden, all in the midst of a temperate climate.

In brief, the weather conditions at Mt. Washington represent the most severe combination of wind, cold, icing and storminess accessible outside the deep polar regions. Thus the summit is, in effect, a tremendous scientific laboratory and has been and is continuing to be used extensively for scientific purposes. Despite the rather forbidding climate, the summit of Mt. Washington has over the years attracted millions of tourists. It is readily accessible by automobile via the carriage road and also by the way of the cog railway. The Mt. Washington Study committee *(1958)* estimated that approximately 150,000 people annually visit the summit. P. T. Barnum is said to have described the summit of Mt. Washington as "the second greatest show on earth." It is undoubtedly New Hampshire's greatest tourist attraction and also perhaps one of its most valuable assets from the point of view of scientific research. As the highest peak in New England, it has a unique value which Mt. Adams and other mountains almost as high do not possess.

Apparently the State of New Hampshire once owned Mt. Washington, since the legal history of this area actually begins approximately in 1832 witht he conveyance by the Land Comissioner

of the State of New Hampshire of some 25,000 acres in what is today the White Mountain National Forest to Jacob Sargent and others. This area became known as Sargent's Purchase and included the summit of Mt. Washington. Because of rather vague conveyancing in the early days, there arose a number of disputes as to boundary lines and prolonged litigation ensued concerning the land in the vicinity of the summit of Mt. Washington. Eventually the Estate of David Pingree, a wealthy merchant from Salem, Mass., who had acquired great tracts of land in Maine and New Hampshire, purchased the interests of other claimants to this area. The Pingree heirs retained titled to the summit of Mt. Washington until 1894 when a circular tract on the summit of Mt. Washington containing about 49 acres was conveyed to the Mt. Washington Railway Co. The center of the circle is an iron pipe at the northeast corner of the stage office, a small wooden building just south of the Cog Railway tracks at the summit. This deed reserved to the Mt. Washington Road Co. a right of way to the summit and certain rights in this circular tract of the passengers and employees of the Road Co.

In 1910 the Mt. Washington Railway Co. acquired a 10-acre tract of land on the northeast side of the summit from the Conway Co. this tract of land is nearly a rectangle adjacent to the 49-acre circular tract and is located in the area of what is colloquially known as the Home Stretch, the flat area just north of and below the summit proper (near the Lizzie Bourne monument). Shortly after the acquisition in 1910 by the Mt. Washington Railway Co. of the property of the Conway Co. on the summit, the United State Government, under the Weeks Act, condemned virtually all of the land in the vicinity of Mt. Washington and created the White Mountain National Forest. The summit tracts of land which were owned by the Mt. Washington Railway Co., however, were specifically excepted from the condemnation and remained the property of the Mt. Washington Railway Co.

The ownership of the Mt. Washington Railway Co. was acquired by the Concord & Montreal Railroad from the Estate of Walter Aiken *(who died in 1893)*, a long-time majority stockholder and operator of the railroad. Subsequently the Concord & Montreal Railroad became a part of the Boston & Maine Railroad. The Boston & Maine Railroad in 1931 sold its stock in the Mt. Washington Railway Co. to the late Col. Henry Teague, Dartmouth Class of '00, who owned the Mt. Washington Railway Co. until his death on October 2, 1951.

Dartmouth college first obtained a financial interest in the Mt. Washington Railway Co. and the summit of Mt. Washington in 1939. The 1938 hurricane had done tremendous damage to the railway and completely destroyed large sections of the railway trestle. Col. Teague succeeded in obtaining from Dartmouth college the financial support which he needed in order to rebuild his railroad. In 1939 the railway company conveyed the summit properties, together with certain of the properties at the base of Mt. Washington, to a real estate corporation then called "Mt. Washington Club, Inc." Mt. Washington Club, Inc., in turn borrowed $135,000 from Dartmouth college secured by a mortgage of this real estate. Subsequently the name Mt. Washington Club was changed to "Mt. Washington Summit House, Inc." and this corporation continued to own the

real estate at the summit of Mt. Washington until that corporation was liquidated and the summit was conveyed to Dartmouth college in 1962.

The will of Col. Henry Teague left his stock in the Mt. Washington Summit House to Dartmouth college. Under the provisions of Col. Teague's will this property was to be used to establish, in part, a loan fund for students in the Tuck School at Dartmouth college and, in part, a fund for the general purposes of the college. There have been suggestions in the press that Dartmouth college should give Mt. Washington to the state. This cannot be legally done because Col. Teague left it in trust to Dartmouth college for the purposes specified in his will.

Dartmouth college remained the owner of the stock of Mt. Washington Summit House, Inc. and, therefore, also the owner in fact of the Mt. Washington Cog Railway, which was a subsidiary corporation, until 1963 At that time the property of the railway was sold by Dartmouth college to Arthur S. Teague's corporation, Marshfield, Inc. The college also leased the Tip Top House, Summit House and certain related facilities to Teague's corporation, but title to the real estate on the summit was retained by the College. Over the years there have been a number of leases of the real estate at the summit to various persons and corporations and also conveyances from time to time of certain easements and rights of way in this real estate. As noted earlier, the deed from the Pingree heirs to the Mt. Washington Railway Co. reserved a right of way for the Carriage Road. That same deed granted the Railway the 99-foot strip of land on which the Cog Railway tracks are located from the base of the mountain to the summit. Subsequently, the deed from Mt. Washington Railway Co. to the Mt. Washington Club reserved for the railroad a right-of-way over the summit real estate.

In 1937 Col. Teague constructed the building which is occupied by the Mt. Washington Observatory and this building was leased to the Observatory for a period of 20 years. This lease was renewed for an additional period of 20 years in 1957. The observatory building is located at the northwesterly end of the Cog Railway tracks. The building proper is 22' x 44' and stands two stories high.

In 1937 Co. Henry Teague leased a portion of the summit to the Yankee Network Inc., for a period of 10 years. In 1944 the Yankee Network leased about nine acres on the northwesterly portion of the circular tract for a period of six years with the right to renew the lease for four consecutive 15-year terms to the year 2010. The Yankee Network in 1941 constructed the L-shaped wood and steel building near the Observatory building and a steel FM transmission tower. Presently the lessee pays an annual rent for this land of $1,000 per year. The Yankee Network abandoned its FM transmitting facilities at the summit in the late 1940's. By certain mergers and corporate reorganizations the Yankee Network, Inc. became General Teleradio, Inc. In 1953 General Teleradio sub-leased this same property to Mt. Washington T. V., Inc., the owner of Channel 8, WMTW-TV. WMTW-TV has constructed, at the rear of the Observatory building, a small structure housing its television transmitting facilities. In 1962 Mt. Washington T. V. purchased its sub-lease from General Teleradio and has now become the direct lessee of this tract of land.

After World War II the federal government became vitally interested in Mt. Washington as an outdoor laboratory to do research on the icing of airplane wings and later jet engines. At first the government's contractor leased the Yankee Network building then subsequently this area was condemned for short periods of time by agencies of the federal government. However, the government's interest in those so-called "takings' has long since reverted to the owner of the summit, now Dartmouth college. Eventually the federal government constructed the aeronautical laboratories on the National Forest land just north of the rectangular tract of land at the summit. These two structures are not on either of the summit tracts presently owned by Dartmouth college.

Over the years there have been various rights of way granted for the purpose of running electrical cables and pipelines and for the construction of tanks for fuel oil at various locations on the summit. In addition certain rights were conveyed in 1962 by Dartmouth college to the Cog Railway. As mentioned earlier, a right of way was granted to the Cog Railway across the summit tracts. Also, the Summit House and Tip Top House were leased for a period of 10 years with a right to renew for two additional periods of ten years each to the year 1993. This lease reserved the right to sell the summit to the State of New Hampshire, or any other person, and provided that in that event the Summit and Tip Top leases were to terminate and Dartmouth college would convey to Mr. Teague's corporation a strip of land measuring 80' x 200' east of the Summit House and adjacent to the Cog Railway for the purpose of constructing a passenger station.

It might be interesting to recite briefly the history of the Cog Railway and Carriage Road. The Carriage Road actually preceded the Cog Railway. Construction of the Carriage Road was begun in the 1850's and the Carriage Road was opened for business on August 8, 1861. The Cog Railway was the idea of Sylvester Marsh, a native of New Hampshire , who had made a fortune in the meat-packing business in Chicago. The Legislature granted Mr. Marsh a charter for his Cog Railway in 1858. Actual construction of the railway began in 1866, and it was opened first in 1869. Actually it was the first cog railroad in the world, and its design has been copied by similar railroads in the United States and Switzerland.

The present Summit House was constructed in 1915 after a prior hotel constructed in 1872 was burned to the ground in 1908. The Tip Top House, the oldest building on the summit, was constructed in 1852. Over the years, general remodeling has been done with respect to both the Summit House and the Tip Top House. Today the Tip Top House is used as quarters for hikers and to house the employees of the hotel. Other than the small stage office, we have previously mentioned all of the other buildings located on the summit. The only buildings actually involved in any sale of the summit to the State of New Hampshire are the Tip Top House, Summit House and Observatory building, since the other buildings on the land owned by Dartmouth college are in the Yankee Network lease.

Since Col. Henry Teague's death in 1951 when the Mt. Washington properties were left to Dartmouth college under his will, a number of studies have been made of the Mt. Washington area. In August 1953 Governor Gregg established a study committee under the chairmanship of

Sec. 34 - Dartmouth's Title Search

Russell B. Tobey, then director of the New Hampshire's Recreation Division, to advise on problems of public use and concern on Mt. Washington and the Presidential Range. In 1955 Governor Dwinell appointed another Mt. Washington Study committee under the chairmanship of Judge Peter Woodbury, which recommended in its report of October 1958 that the State acquire ownership of the college's Mt. Washington property.

In light of this recommendation Dartmouth college has felt a responsibility to continue to hold title to the summit of Mt. Washington pending resolution of the state's interest, and the college has not considered alternative disposition to third parties which might have made it more difficult for the State to acquire the summit. However, Dartmouth college is not in a position to develop and improve the summit. If the State of New Hampshire should decide not to purchase the property, then Dartmouth college will undertake to sell it otherwise , in order to realize a cash value to devote to the educational purposes stipulated in the will of Henry Teague as it has done in the case of the Cog Railway and base station properties."

A New Landlord...

In April 1964, the State of New Hampshire purchased all but eight acres of the Summit of Mount Washington from Dartmouth College. The College had inherited the property from its Col. Henry Teague '00 as settlement for its financial arrangements with its graduate. However, the idea of state ownership of Teague's mountaintop and his Cog Railway had begun much earlier.

≺1934≻

Report on Proposed Scenic Highway Along the Presidential Range in New Hampshire

December 14, 1934

Physical Characteristics of Range.

The Presidential Range extends for a distance of approximately twenty-five miles through the heart or the White Mountain region in new Hampshire. It consists of a chain of closely connected peaks near the center of which Mt. Washington rises to a height of six thousand two hundred and eighty-eight feet above the level of the sea. To the north and south are the lessor peaks of the range similar in shape and formation, and varying in altitude from five thousand to fifty-five hundred feet with intervening saddles from two hundred and fifty to five hundred feet below those levels. The flanks of the range are indented by deep ravines carved by glacial action and with their slopes scarred by avalanches.

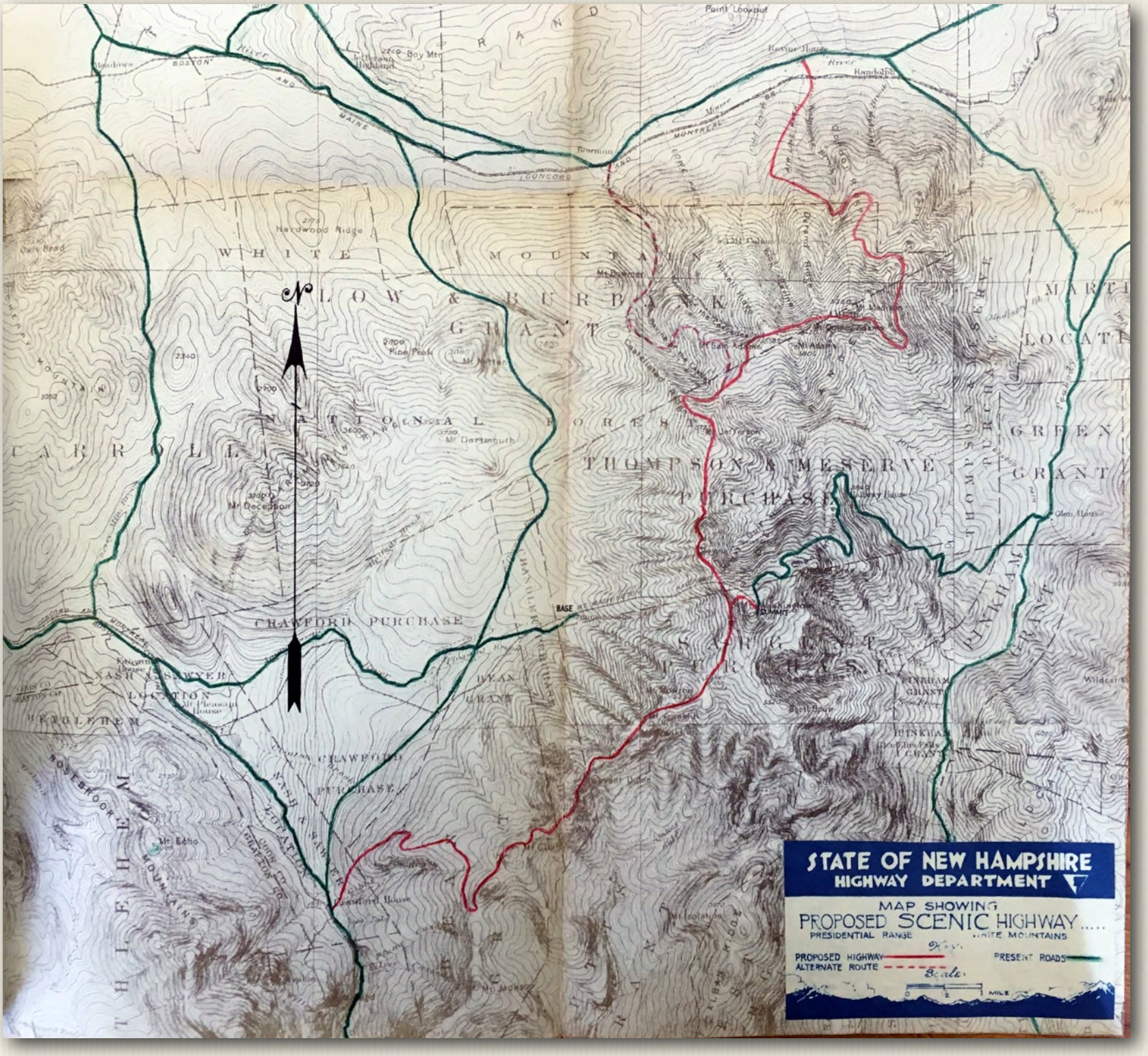
The base of the range is covered with second growth timber of mixed hard and soft woods terminating in a dense stunted growth of spruce at the forty-five hundred foot contour. Above the timber line rock formation predominates, the northern peaks being covered with a mass of loose boulders ranging in size from one-half to two cubic yards, while the southern peaks run to boulders of greater size with numerous outcrops of gray schist ledge along with occasional patches of earthy material and moss. Through the valley bordering the range on each side winds a trunk line highway.

Present Means of Access to the Range.

The range is traversed throughout by foot trails which lead up through the several ravines from the valley below. In addition to the trails, an automobile toll road ascends to the summit of Mt. Washington along its easterly slope, starting from the Glen on the Pinkham Notch highway. The summit is also accessible from west by means of a specially constructed railway of the rack and type which climbs along a spur of the mountain from the Base Station in the foot hills. The trails have been laid out by the National Forest Service and by the Appalachian and Associated Mountain Clubs. They are marked through the timber region by blazed trees and above the timber line by cairns.

The toll road is somewhat narrow and of irregular width, but nevertheless is used for two lane traffic. Its surface is principally gravel but with indications that crushed native stone has been used to a limited extent. Tho road ascends throughout its length of about eight miles, holding in general to a maximum grade of 12% except for occasional stretches where the grade steps up to about 18%. At the lower levels and for about one-half of its length, it follows a reasonably direct course; then for a distance of two miles in order to conform to the topographical characteristics of the region, it assumes a tortuous trend. For the remaining two miles however, its course flattens out and continues to the summit in three long, sweeping curves.

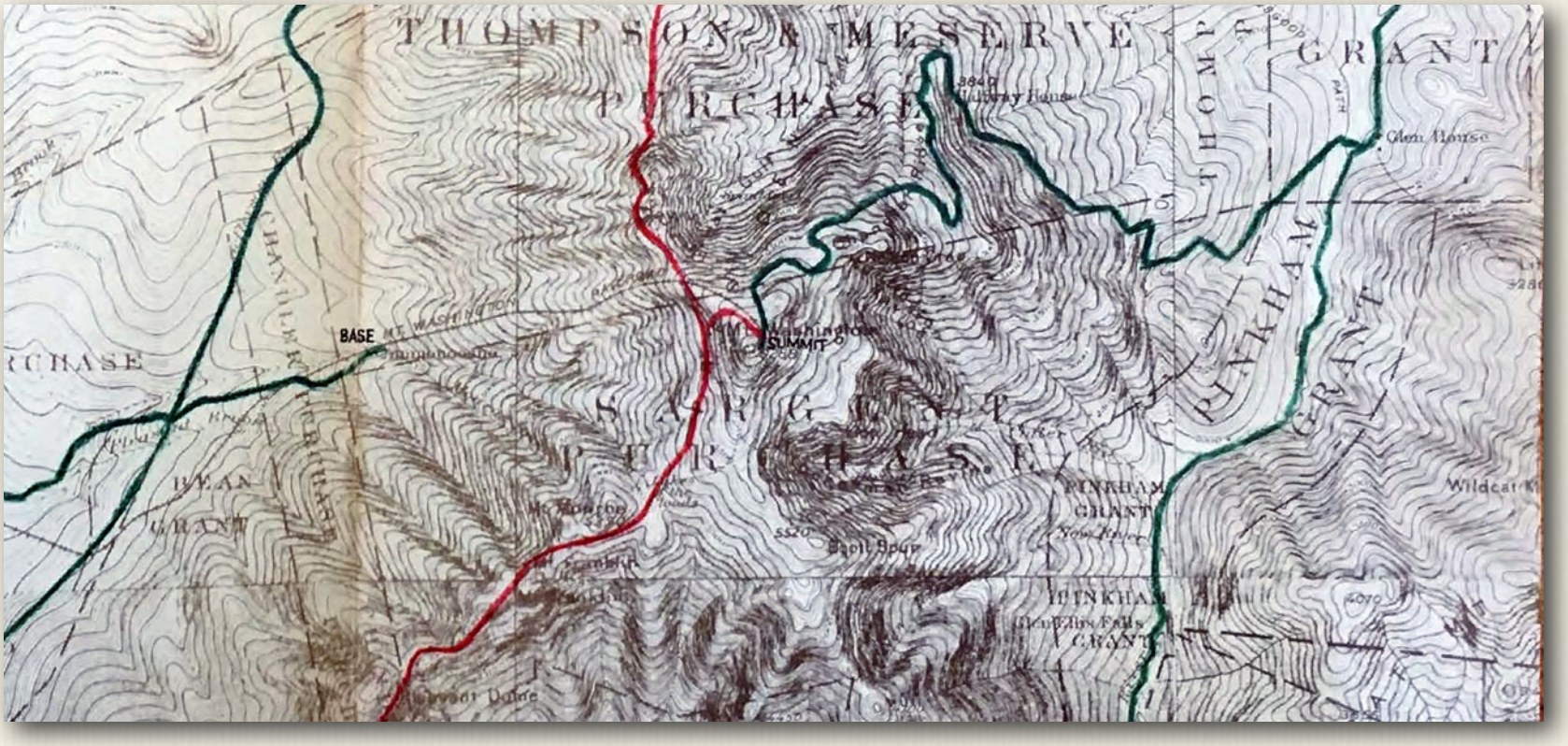
The railway, due to its more direct course, reduces the distance from the Base Station to the Summit to three miles. The general grade being approximately 25% with a maximum grade of 37%. The Railroad Company owns an area of about fifty-nine acres on Mt. Washington, a portion of which is at the summit where the



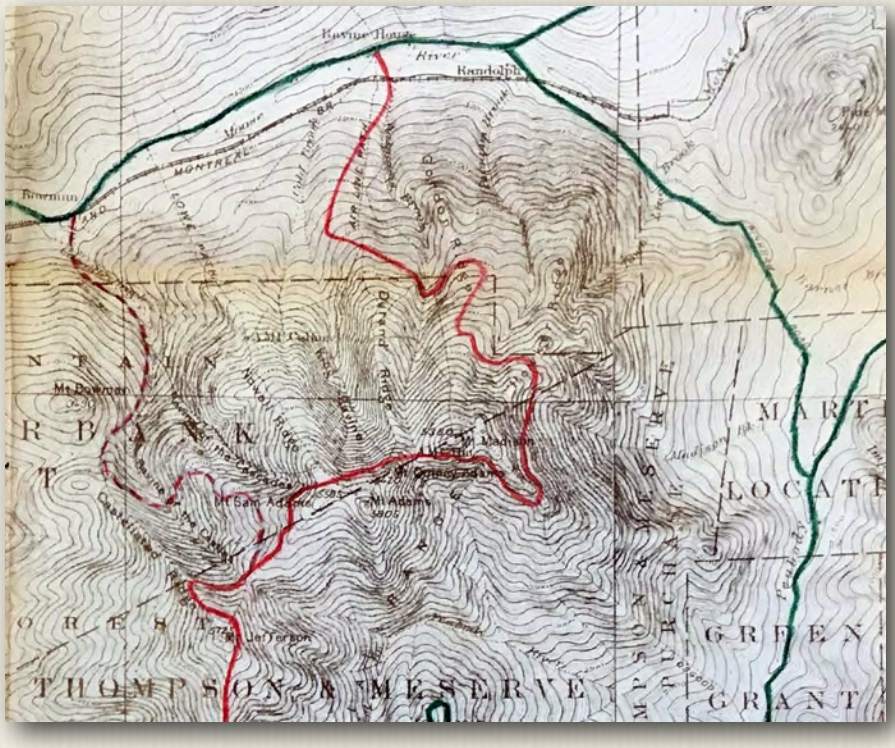
Company operates a hotel during the summer season. Except for such property rights as are held by Toll Road and Railroad, the Range is the exclusive property of the Federal Government.

Route of Survey.

The route selected for the survey has its beginning at a point on the Crawford Notch highway at Saco Lake, nineteen hundred feet above sea level. This location was selected as it offers the easiest approach to the crest of



the range from this side, and in addition its natural setting makes it especially appropriate as the entrance to a mountain road. From Saco Lake the route ascends the western slope of Mt. Clinton and proceeds along the range, weaving in and out among the peaks of Mts. Pleasant, Franklin, Monroe, Washington, Clay, Jefferson and Adams to Mt. Madison, where it then begins its descent to the valley and its northern terminus on tho Jefferson-Randolph highway. The route purposely avoids the mountain tops and skirts the bases of the cones crossing the saddles between the peaks and alternating from the side of one peak to the opposite side of the next. This procedure permits a wide variety of views at constantly changing angles and at the same time keeps the route above the steep declivities of the ravines and from two hundred to five hundred feet below the summits. The flat spaces in the saddles offer opportunities for parking areas for automobiles from which the ascent to the summits can be conveniently made through the construction of foot paths. The route reaches its highest elevation *(next page)* at its intersection with the Toll Road on the easterly slope of Mt. Washington, six thousand one hundred and fifty feet above sea level and ten and one-half miles from Saco Lake *(below)*.



The survey shows that it is possible to construct an automobile highway along the Presidential Range without encountering conditions that would be inimical to mountain travel until the northern end of the range is reached. Here the descent by way of Mt. Madison involves such extremes in grade and alignment as to preclude consideration unless further reconnaissance in this area discloses a practical route. The topography indicates however that it would be feasible to leave the crest of the range at Mt. Jefferson *(below)* and proceed to the valley from this point over a line and grade comparable to that on the ascent from Saco Lake. The working season on the range proved too short to permit an actual survey of this alternate route, therefore no definite data is available in regard to it. Such a route however would have its disadvantage owing to the fact that its scenic value would be greatly led by reason of its location. In establishing a route through a mountain region, the topography dictates the selection of line and grade. In order to gain altitude and at the same time obtain a suitable grade, the alignment must of necessity be tortuous. Except for the Mt. Madison area previously referred to, the route elected holds to a maximum grade of 12% with the exception of a few places where it steps up to 15%.

In these cases they extend for short distances only, and it has been possible to alleviate the steepness somewhat by placing much lesser grades at each.

Consideration has been given in locating sharp, horizontal curves to select either flat or greatly reduced gradients for this purpose in the interest of traffic convenience and safety. It must be born in mind that this survey is preliminary only, and that certain refinements in both grade and alignment doubtless will be possible as a result of further study.

Design.

In designing a highway suitable for mountain travel, consideration must be given in addition to line and grade to a width of roadbed and a type of surface sufficient to meet traffic requirements under a variety of weather conditions. Consideration must also be given to those features which will permit the full enjoyment of the scenic attractions along the route and most essential of all, the roadway must provide complete safety tor the motorist. The width selected. in this case is sufficient to accommodate two lines of traffic and the surface recommended is the type obtained through the incorporation of bituminous materials with the native rock of the range, the main object being to secure a reasonably durable pavement and one possessing the greatest non-skid properties. Protection is afforded on steep embankments by means of stone walls, lined on the traffic side with a timber fender rail in the interest of greater safety and security. Provision is made for developing some of the flat sections which occur at intervals along the route, so that they may be utilized for parking areas where motorists may tarry and enjoy the panoramic vistas with which the range abounds. Special attention has been given to the natural features of the landscape, in fact the construction of such a highway as proposed can be conducted so as to enhance the attractiveness of the mountains instead of marring it. The conventional highway structures of steel, concrete and painted lumber have not been considered for this project. Instead the studies provide for the utilization of rock and timber native to the range int he construction of retaining walls, bridges, cribbing and embankment guards.

Estimate of Cost.

The route as surveyed covered a distance of approximately twenty-five miles in its course from Saco Lake to the Jefferson-Randolph highway. The project has been divided into two parts for reasons which will be apparent later in this report. Section (a) includes that portion between Saco Lake and Mt. Washington, a distance of about ten and one-half miles. Section (b) the portion between Mt. Washington and the northern terminus, a distance of about fourteen miles.

1. Estimated cost of Section (a)	$1,086,800
Average cost per mile	103,500
2. Estimated cost of Section (b)	1,507,480
Average cost per mile	112,500
3. Total cost of Sections (a) and (b)	2,594,280
Average cost per mile	108,600

In addition to the original construction cost, consideration should be given to maintenance charges which for estimation purposes may be taken at one thousand dollars per mile per annum, or a total of twenty-five thousand dollars an dollars per mile per annum, over the entire route. It is granted that these estimates may appear liberal as compared with similar types of highway construction conducted under more favorable conditions, but it is believed the difficulties incident to the high altitudes and the remoteness from sources of supply for certain materials, together with the probable necessity for housing and rationing the workmen on the range for at least a part of the time justify the above figures.

There is a possibility however of reducing the cost by about 30% if instead of a two land highway the initial construction should contemplate limiting the traveled way to a single lane width and the placing of turnouts at convenient distances where they would be visible to traffic approaching from opposite directions. The turnouts might even be reduced in number in case it should be desired to construct a single lane road to be used for either one way traffic only or for two way traffic, if controlled by an adequate signal system. The single lane plan if adopted would doubtless meet traffic requirements for the present und the roadway could be increased to two lane width when future demand becomes urgent. Attention is called however to traffic conditions imposed by single lane construction, which would not be present on a two lane road.

Recommendations.

The surveys and studies which have been made, indicate that the construction of a scenic highway such as is proposed, is entirely feasible provided this route leaves the range at Mt. Jefferson instead of proceeding northward to Mt. Madison. Such a road is not in itself a novel undertaking as is attested by similar developments in other parts of the country, notably the Cadillac Mountain road in Maine, the Ascutney Mountain road in Vermont, the Pike's Peak road in Colorado, the scenic road through the Great Smokeys in Tennessee and North Carolina, the mountain roads through the Sierras of California and the present automobile toll road to the summit of Mt. Washington from The Glen. Before definitely adopting any route to the north of Mt. Washington it is recommended that consideration be given in the following plan.

1. Construct roadway from Saco Lake to Mt. Washington, connecting with existing toll road.
2. Purchase toll road and railroad property provided this can be accomplished at reasonable figures.
3. Improve toll road to meet modern traffic requirements.
4. Abandon railway and lease hotel facilities at the summit.

This arrangement would furnish a scenic route eighteen miles in length, connecting the Crawford and Pinkham Notch highways and traverse the most picturesque portion of the range. It would offer all the thrills that could be obtained by the more lengthy route among the northern peaks and would increase rather than detract from the opportunities for pleasure offered by the hiking trails. While not attempt has been made to appraise the privately owned property referred to and no estimate of the cost of improvements in the toll road has been made, it is believed that a substantial saving would result by the adoption of this plan.

Meteorological Data.

Information obtained from records kept during the past five years at the Mt. Washington Observatory, indicates that for the four months from June 1 to October 1, foggy conditions at the high altitudes frequently accompanied by wind or rain or both, occur on an average of twelve times a month or forty-eight times during the above period. This condition would tend to limit the use of the road to an average of eighteen and one-half days per month as compared with an average fair weather expectation of twenty-four days per month at the lower altitudes for the same space of time.

Traffic Census and Toll Rates.

From records as are available, it appears that approximately forty-five thousand persons ascended the Presidential Range during the 1934 seasons. About seventeen thousand of these were pedestrians and the remainder represents the number who took advantage of the facilities offered by toll road and railway. The charge on the toll road is on the baseis of $5.00 per automobile and driver and $1.00 additional for each passenger. The fare on the railroad is $3.00 per passenger. In addition there is a charge to all who desire to enter the hotel except to those who arrive by rail. It is assumed that such a road as proposed, if constructed would be operated as a toll road and the revenue received applied to maintenance and amortization charges. No attempt is made at this time to suggest a toll charge or to anticipate the revenue from the enterprise.

December 18th

Build Scenic Road - Buy & Close the Cog: "At the meeting of the Governor and Council, State Highway Commissioner Frederic E. Everett submitted the complete report on the proposed sky line drive or scenic highway over the crests of the presidential range, estimating its cost as $2,594,280 for 25 miles. His recommendation was for the purchase of the existing toll road and cog railway on Mount Washington and the discontinuance of the railroad. The hotel at the summit would be leased. the present state administration decided that this was too important a matter for them to act upon at this stage of their official existence and will refer it to the incoming rulers of the commonwealth."

- Littleton Courier - Thu, Dec 27, 1934

Sec. 35 - A New Landlord

≺1935≻

To Build or Not To Build?

Journal of the NH House of Representatives

Thursday, May 2, 1935 pg. 725-726

"Mr. Hunter of Hanover for the Committee on Rules, reported the following entitled bill, House Bill No. 427, An act to provide for the acquisition by the State of the summit of Mount Washington and other properties, with the recommendation that the bill be referred to the Committee on Appropriations. The report was accepted, the bill read a first and second time, laid upon the table to be printed and referred to the Committee on Appropriations."

HOUSE BILL No.427
Introduced by the Committee on Rules
(Referred to the Committee on Appropriations)
In the year of Our Lord One thousand nine hundred and thirty-five

AN ACT

To Provide for the Acquisition by the State of the Summit of Mount Washington and Other Properties. Be it enacted by the Senate and House of Representatives in General Court convened:

1. The Governor, with the advice of the Council, is hereby empowered to acquire on behalf of the State by purchase, if in their judgment they can be purchased at a fair valuation, the tract of land on the summit of Mount Washington now or heretofore owned by the Mount Washington Railway Company and also in their discretion all or any of the other assets of said Railway Company, including the cog railroad, so called, and its right of way and equipment,. and the land, buildings and appurtenances at the Base Station, so called, and the right of way, including the fee so far as owned, of the abandoned railway leading from Fabyan's to the Base Station, and to accept deeds thereof in the name of the State. In connection with such acquisition, authority is hereby given to acquire the stock and charter rights of said Mount Washington Railway Company

2. In case the owner or owner of any such property deemed necessary by the Governor and Council for the purpose aforesaid shall decline to sell the same for a price deemed reasonable by the Governor and Council, the Governor and Council are hereby empowered to take and appropriate the same for the use of the State by causing a survey or location of the same to be prepared under their direction and filed with the Secretary of State, and by applying by petition to the Superior Court for Carroll County int he name of the State to assess the damages occasioned by such taking. Upon such petition notice shall be given as ordered by the court, and either party shall be entitled to an assessment of damages by jury; and judgement shall be entered on the verdict of the jury, subject, however, to the right of the State, in the discretion of the Governor and Council, to discontinue proceedings at any time before final judgment, but upon such terms as the court may find that justice requires. On the payment of the value as finally determined, the title of the land so taken shall vest in the State. Such proceedings shall be prosecuted by the Attorney-General under the direction of the Governor and Council.

3. For the purposes of this act the sum of seventy-five thousand dollars, or so much thereof as may be necessary, is hereby appropriated; and the Governor and Council are authorized to accept contributions for said purposes.

4. To provide funds appropriated by this act, the State Treasurer is hereby authorized under the direction of the Governor and Council to borrow said sum of seventy-five thousand dollars or any portion thereof on the credit of the State; and to issue bonds or certificates of indebtedness therefor, in the name and on behalf of the State, at a rate of interest and on other terms to be fixed and determined by the Governor and Council;

5. All property acquired under the provisions of this act hall be held by the State for the purpose of a public reservation; and the care and management thereof shall be vested in the Forestry Commission, who may make contracts for such care and management with the approval of the Governor and Council. The Forestry

Commission, with the approval of the Governor and Council, may sell the cog railroad with its appurtenances and equipment or the stock and charter rights of said RailwayCompany (but retaining in state ownership all the property hereof except the railroad, railroad buildings and equipment) or may lease said railroad and may lease the facilities at the summit and the Base Station, all on terms approved by the Governor and Council. All net income derived from the property shall be disposed of in the same manner as other income received from state forests and forestry reservations.

6. This act shall take effect upon its passage.

May 16th

"The menace of state ownership of railroads is on us, and guess where? Right north of here in hard-boiled and individualistic old New Hampshire. A bill has been filed at Concord for purchase and operation by the state of the Mt. Washington Railway. This historic affair of cogs and catches will, if the plan goes through, become part of the property of the state forestry department! Mt. Washington, in brief, may be the camel's head thrust into the tent of political control of railroads."

- Lowell Courier-Citizen reprinted in Fitchburg Sentinel - Thu, May 16, 1935

Wednesday, June 5, 1935 pg. 1017-1018

"Mr. McLean of Plymouth for the Committee on Appropriations, to whom was referred House Bill No. 427, An act to provide for the acquisition by the State of the summit of Mount Washington and other properties, reported the same with the following resolution:

Resolved, That it is inexpedient to legislate.

The report was accepted and the resolution of the committee adopted."

≺1952≻

Mount Washington: What To Do?

December 12th

Mt. Washington's Possibilities: "The alumni magazines of both Dartmouth college and the University of New Hampshire this month had well illustrated articles upon the same subject, Mount Washington. The top of the mountain is now owned by Dartmouth college, along with the cog railroad, gifts of Henry Teague, who graduated from the Hanover Institution at the turn of the century. Before Dartmouth acquired the highest plot of land east of the Rockies it had already become something of a laboratory of sorts. It had a weather station, radio experiments were being carried on, and its arctic conditions were being tried out on various types of fighting equipment by federal agencies. The University of New Hampshire, no less than Dartmouth, now looks upon the mountain as a laboratory where students in some of its classes an learn first hand things which they otherwise would have to take on a basis of hearsay. This transition of New Hampshire's highest peak from a scenic place and recreational and sports paradise to a laboratory serving numerous branches of modern science, both in the educational and business fields, is relatively recent and suggests that the mountain's utility in this regard will increase which is all to the good. Dartmouth college, as a sort of trustee of the mountain top, has a considerable responsibility in its further development and study. That the college does not intend to make the mountain a private domain or classroom is obvious from its continued accessibility to the public, and its use by numerous other private and public agencies for desirable purposes. It is impossible to foresee just what form further development of the mountain top may take, but that some major over-all plan will evolve is not at all impossible. Dartmouth has had considerable experience in the development of remote classrooms in the White Mountains, being responsible for taking Moosilaukee from an isolated category long ago. With this background the college probably will rise to meet the peculiar challenge Mt. Washington offers once it become thoroughly familiar with its possibilities. Possibly the mountain top's random collection of present buildings, new and ancient, will one day give way to some consolidated structure or structures serving many purposes, to which access will be by tunnel and elevator which pierce the core of the mountain and thus add to knowledge of the mountain and the history of this earth. We would suggest that some of the great national foundations through which corporate profits are being kept from seizure by Uncle Sam as taxes might better become interested in the full development of Mount Washington than in many of the ephemeral and poorly thought-through projects upon which great sums are now being wasted."

- Concord Monitor via Littleton Courier - Thu, Dec 18, 1952 pg. 12

≺1953≻

Mount Washington: What To Do?

December 24th

Dartmouth Will Retain Summit - Cog? Eh..: "Dartmouth college plans to retain title to the summit of Mt. Washington when the property is turned over to it, according to Robert S. Monahan, manager of College Outing Properties. Monahan, who is a member of the study committee, told Chairman Russell Tobey of the Governor's Mt. Washington Study committee that he and college officials believed it would be helpful to the operation of the committee to have on the record the college's intentions with regard to the summit property and the cog railway. Both were left to Dartmouth as the residuary legatee of the estate of the late Henry N. Teague, '00. "The property," Monahan pointed out, "is still under the administration of the executors of the Teague estate. Disposition of the Mt. Washington Cog Railway, also included in the Teague estate remains unsettled, although consideration is being given offers by qualified operators with proposals for long-term lease or outright purchase" He said that to dispose of the summit property would violate the moral obligation due by the college to its benefactor, "who clearly intended ownership by the college of this parcel in his estate" The college cannot legally, as has been suggested in the public press, gratuitously donate any of these properties to the state of New Hampshire, said Monahan. About nine acres of the Summit tract are occupied under a long-term lease made during Col. Henry N. Teague's lifetime and will not be subject to the college's control while this lease is in effect. In retaining title to the summit of Mt. Washington, the college intends to keep the public interest consistently in mind. "The college is not unmindful of the many present and contemplated uses of various types for which the Mount Washington summit tract is peculiarly adapted. It is supporting the work of the Mt. Washington Study committee appointed by Governor Gregg in the hope that the committee's work will result in protecting the interest of the general public, and of New Hampshire in particular, as well as that of Dartmouth college from detrimental uses of the summit area," said Monahan. Concentration of the Defense Department research activities on National Forest land adjacent to the college property should help to reduce the present congestion on the actual summit. New projects will be carefully considered on the basis of educational, scientific and recreational benefits. In particular, Dartmouth college is anxious to further the use of the summit for television broadcasting. Faculty and students have found on Mt. Washington many opportunities for high-altitude research at this unique outdoor laboratory. A group of faculty members recently prepared a list of possible projects that could be undertaken advantageously on the summit property. Use of this tract figures prominently in the development of the college's Northern Studies program."

- Littleton Courier - Thu, Dec 24, 1953 pg. 1

≺1954≻

REPORT of the STUDY COMMITTEE
established August 1953
by Governor Hugh Gregg
to advise on problems of public useand concern on
MOUNT WASHINGTON
and the
PRESIDENTIAL RANGE
****
December
1954

We have consulted with representatives of the U. S. Air Force, U. S. Navy, Mount Washington Summit House, Inc., Mount Washington Railway Co., Mount Washington TV Inc., White Mountain National Forest, N. H. Aeronautics Commission, N. H. State Board of Health, Mount Washington Observatory, and other groups concerned with the use of Mount Washington and the Presidential Range for recreational, scientific and educational purposes, in addition to the major proprietary interests and developmental organizations represented on the committee.

We are convinced that such a study was necessary. In fact, it was overdue since several of the most difficult problems concerning conflicts of use which threatened to jeopardize public access to the summit and despoil its appearance originated prior to the formation of this committee.

The current stage of scientific research on the summit started in October, 1932, when the Mount Washington Observatory occupied the Stage Office on a rent-free basis from the Mount Washington Summit Road Company with three voluntary observers, aided by a $400 grant from the N. H. Academy of Science and with the active support of various New Hampshire organizations, including the State of New Hampshire, Dartmouth College and the Appalachian Mountain Club.

Scientific tests and studies on Mount Washington have developed from this modest beginning to the point where, in the winter of 1955-56, the investment of one Agency alone, the Department of the Air Force, will reach approximately three million dollars with a staff of about fifty technicians and engineers conducting their experiments in the Mount Washington Climatic Project Laboratory, to be completed in 1955. Other Federal agencies now utilizing the Mount Washington area for testing and research purposes include the Department of the Navy and the Quartermaster Corps, Signal Service, and Corps of Engineers in the Department of the Army.

In the winter of 1932-33, the public was free to visit the Mount Washington Observatory and to accommodate themselves at no charge in Camden Cottage provided by theWashington Summit House. This winter, however, with the exception of the Observatory, there is no public refuge on the summit and "No Trespassing" signs are displayed on all buildings occupied by a Federal agency.

The committee does not question the need for some security precautions in the immediate vicinity of such tests but it is increasingly aware of the trend toward limiting the public enjoyment and use of Mount Washington as a result of these and other operations. The natural features of and public access to the summit have obviously deteriorated during these developments of recent years.

Although there are many other fine peaks in the White Mountains unmarred by artificial blemishes upon the landscape and although a certain amount of disfigurement must take place in connection with such intensive use of a congested area, the committee feels that due regard for the interests of the public, an occasional compromise in its behalf and a greater spirit of cooperation between using agencies can substantially improve the present appearance of the summit. Because Mount Washington has long been regarded as a tourist mecca of the Granite State, the committee feels the State of New Hampshire has a direct and continuing interest in the developments on Mount Washington and elsewhere on the Presidential Range.

≺1956≻

REPORT for 1955 of the
ADVISORY COMMITTEE
Appointed January 4, 1955
by HIS EXCELLENCY LANE DWINELL
GOVERNOR OF THE STATE OF NEW HAMPSHIRE
To Advise on Problems of Public Use and Concern on
MOUNT WASHINGTON
and the
PRESIDENTIAL RANGE
February 1956

(picks up on page 4)

6. The Committee's hope that the Yankee Building might be available for at least some use by the public grows more dim with Air Force reports that the new Climatic Project Laboratory has proved inadequate to house all its needs and that the Air Force will probably continue to operate the Navy hangar near the summit, thereby requiring personnel quarters in that locality such as provided by the Yankee Network. The hoped—for concentration of all military housing, testing and other activities at the new site on "Home Stretch Flat," thus

relieving the summit tract of congestion caused by military occupation, appears unlikely in the foreseeable future. *(No. 6 — 1954)*

7. Mount Washington TV now permits visits by the public to the limit of its available space. *(No. 7 — 1954)*

8. Unsightly snags were removed during 1955 in connection with the reconstruction of the Spruce Hill grade on state highway Route 16. The pending reconstruction of Route 16 south of the Dolly Copp Forest Camp should provide outstanding views of Mount Washington and the Great Gulf from the mouth of the West Branch of Peabody River. *(No. 8 - 1954)*

9. Numerous discussions have been encouraged with representatives of agencies and organizations operating on the summit to make sure that the needs of the public are recognized. The Mount Washington Observatory continues to maintain an "open house" for visitors, despite its cramped quarters and the largest Staff in its history. *(No. 9 - 1954)*

10. The U. S. Forest Service in 1955 built with funds provided by the Air Force an excellent alternative route for the upper terminus of the Gulfside Trail, thus diverting all trail travel from the immediate vicinity of the Climatic Project Laboratory. This relocation also provides for the first time in history a common terminus of all foot trails to the summit at the south end of the Summit House platform. *(No. 10 - 1954)*.

11. The base facilities discussed under Committee Action #3 will not supplant the low-elevation maintenance center using quarters in Bartlett provided by the U.S. Forest Service. The Bartlett unit will continue to be an important adjunct of Air Force operations on Mount Washington, as well as a welcome economic asset for Bartlett and vicinity.

Major Recommendations

1. Representatives of the Air Force and Corps of Engineers should keep the committee fully advised on site plans and design for proposed new structures at the lower terminus of Summit Road and opposite Half Way House because both buildings will be clearly visible to Summit Road traffic and they should, therefore, interfere as little as possible with normal travel on the road. Such representatives should respect the opinions of the officers of E. Libbey and Son with reference to the first installation and the Supervisor of the White Mountain National Forest in regard to location, construction and maintenance of the proposed structure opposite Half Way House.

2. Continued emphasis should be given the need to remove all remaining debris and unused structures on the summit.

3. This Committee should cooperate fully with the special committee appointed by the Governor to determine if the State has a concern with the future on this mountain, especially by providing background information as may be desired on the history, current status and responsible officers of the various operations underway on the summit.

The Committee is pleased to report that during 1955 settlement was reached in the long-standing litigation between the administrators of the Teague Estate and General Teleradio (successors to Yankee Network) regarding the 8.5 acre lease, thus helping to clarify the status of that important parcel of Mount Washington real estate. *(see Vol 1 State Documents for copy of settlement)*

We reiterate our belief that a public refuge on the summit, available during periods when the Summit House and Stage Office are closed, is urgently needed to replace Camden Cottage, no longer available for this vital purpose.

≺1957≻

Governor & Executive Council Action

"Mount Washington - SJR 10 Study Committee appointed by Governor in 1955 authorized to continue its investigation of State participation in some form in operation of Cog Railway and Summit House and $2,000 appropriated to finance the study." *- Littleton Courier - Thu, Sep 12, 1957 pg. 1 & 12*

September 14th

Packard Urges Private Sale: "State Sen. Norman A. Packard said yesterday *(9/14)* the state should step aside and pave the way for "private interests" to buy the cog railway and other Mt. Washington property from Dartmouth college. Packard charged last week that Dartmouth was seeking to "unload" the property on the state for more than a quarter of a million, even though it might bring relatively little in the open market. College have since confirmed the state has been given a price of $274,000 for the picturesque cog railway, the Summit hotel and some acreage on the summit of the mountain. John Meck, vice president and treasurer at Dartmouth told the Sunday News the college's financial investment in the property is limited to the $100,000 mortgage it held at the time of the death of Col. Henry Teague, who bequeathed it to the Hanover institution. But Meck said college officials feel it is their duty and "legal responsibility" to get full value for what was left to Dartmouth, and that $275,000 would represent what the property is worth. He added the college had received "several nibbles" for the property from private interests but wanted to give the state "first refusal." "I think the state should decline the privilege," Packard said, "and pave the way for private interests to buy it." He gave two reasons: "First, purchase by an interest other than the state would assure that the taxpayers wouldn't get stuck to a tune of more than a quarter of a million dollar," Packard said. "Secondly, operation of the cog railway by a private interest would set up a comparison that would serve as a very good yardstick to measure the efficiency of the state Recreation Department's operation of the tramway at Cannon mountain and other facilities." Packard declared that the Recreation Department's "paper profit" in the operation of the tramway at Cannon Mountain is "misleading" because there is no capital investment involved. "The same would be true at Mt. Washington if the state bought the Dart- mouth college property," Packard said. "The Rec- reation Department would no doubt show an operat- ing profit once the property was turned over to it." Packard said the purchase and operation of the cog railway and other Dartmouth property by a private interest would benefit the state without any risk to the taxpayers. He reiterated that he will lead a fight in the Senate to block any appropriation for the pur- chase of the Dartmouth property by the state. Fail- ing that, he said, he will push for an independent valuation of the property "before the state lays out as much as one penny for it."

- New Hampshire Sunday News – Sun, Sep 15, 1957 pg. 22

≺1958≻

REPORT for 1955 of the
ADVISORY COMMITTEE
Appointed January 4, 1955
by HIS EXCELLENCY LANE DWINELL
GOVERNOR OF THE STATE OF NEW HAMPSHIRE
To Advise on Problems of Public Use and Concern on
MOUNT WASHINGTON
and the
PRESIDENTIAL RANGE
June 1958

Recent Changes in Organization

The Committee has recommended and you have subsequently appointed to represent Mount Washington TV, its president, John W. Guider of Littleton. This extension of Committee composition not only recognizes the relatively recent importance of commercial broadcasting from the summit but also carries with it the hope that the Yankee Network Building, currently sub-leased by Mount Washington TV, may be effectively used particularly for purposes benefiting the public.

Except for the addition of Mr. Guider, the composition of the Committee remained the same since its report of February 1956, but numerous changes have occurred among its cooperating groups.

Dr. Charles F.. Brooks, longtime president of the Mount Washington Observatory and principal guest of the Committee at its August 20, 1957 meeting, passed away January 8, 1958. His Loss was formally memorialized by the Committee at its next meeting on March 27, 1958. Wallace E. Howell was elected successor to Dr. Brooks at a subsequent meeting of the Observatory Trustees.

Sec. 35 - A New Landlord

The contract, which continued for ten years between Smith, Hinchman & Grylls Associates and the Air Force, ended November 30, 1957. The civilian contractor (Aeronautical Icing Research Laboratories) since that date has been Patterson & Duprey of Intervale. The senior partner, D. M. Patterson, was the Committee's principal guest at its meeting of March 27, 1958.

Camp Dodge, headquarters in Pinkham Notch for the Mount Washington Test Detachment of the Quartermaster Research and Development Field Evaluation Agency, was placed on an inactive basis on March 15, 1958. The Committee at its March 27, 1958 meeting formally expressed its appreciation for the many services provided by the detachment and particularly the cooperation furnished on numerous occasions by its three Commanding Officers, Major Peterson, Captain Meshy and Major Donald P. LaCroix.

Selection of a site in Hanover and appropriation of substantial sums for the construction of a Cold Regions Experimental Laboratory brings to New Hampshire a new Federal research agency whose relationship to Mount Washington is presently uncertain.

Major Changes in Physical Aspects

Completion of the dormitory int he fall of 1956 to serve personnel associated with the Climatic Project Laboratory eliminated the need for Air Force occupancy of the Yankee Network Building and localized Air Force test operations on the Home Stretch Flat, thus making available for public use more space on the summit tract.

The Mount Washington Summit Road Company razed the "Old Barn" near the upper terminus of the road and developed its site for a much-needed parking area. The Road has been considerably improved by construction of more turn-outs; night maintenance, which not only lessened conflict with daytime public traffic but provided a better surface; lifting restriction on some fluid-drive vehicles; and continuation of establish rates. These improvements have been reflected in a considerable increase in traffic.

Recent relocations of substantial sections of the Pinkham Notch State Highway (Route 16) between Jackson and Gorham have provided safer and faster driving conditions and also greatly improved roadside views of the Presidential Range.

The Committee is impressed with the steady growth of traffic in recent years on the three highways circling Mount Washington and the Presidential Range: Route US 2 from Gorham to Jefferson. US 302 thru NH 16 thru Pinkham Notch, These traffic increases are shown graphically on the Traffic Flow Map prepared by the N.H. Department of Public Works and Highways from which the following tabulations is copied:

Year	US Rt 2 at Jefferson	US 302 at Bartlett	NH 16 at Jackson
1954	330,538	265,655	229,578
1955	262,435	267,937	243,763
1956	338,846	285,064	253,413
1957	349,482	297,750	256,978

Elimination of several dangerous curves on the Base Station Road from Bretton Woods net: provides safer and more enjoyable travel for the heavy traffic using this access road to the lower terminal of the Cog Railway, but further betterment is needed.

Extension of power service from Twin Mountain to Bretton Woods brought public power that much closer to Mount Washington. Consolidation of numerous telephone wires into a single cable serving customers on the Pinkham Notch Highway improved the road-side appearance of this scenic route.

Construction of the Edmands Col Shelter by the White Mountain National Forest provides a long-needed refuge for climbers crossing the exposed Gulfside Trail on the Northern Peaks.

Installation of several emergency shelters on the Summit Road contributes to the safety of winter travel on that route.

The Signal Cores abandoned its installation at the Horn under special-use permit from the White Mountain National Forest. The Navy is less active at the Half Way Huse property but still retains its lease.

Both the White Mountain National Forest and the Summit Road Company have installed more adequate signs more durable, legible and attractive design.

Completion of the Wildcat development provides still another major public attraction in the Mount Washington area for both summer and winter visitors, which has already been reflected in the increased use of related public and private facilities in that vicinity. The superlative view from Wildcat Mountain of Mount Washington and the Northern Peaks has promoted even greater public interest in those landmarks.

Formal designation by the Secretary of Agriculture of the 5,000-acre Great Gulf Wild Area should protect this undeveloped basin in the White Mountain National Forest from incompatible uses.

Mount Washington TV has added FM to its broadcasting program.

General sanitary conditions have been effectively improved at the various summit installations and are now acceptable to the N. H. Board of Health.

Improved late-season accommodations for the public have been provided by renovations in the Tip Top House by the Summit House Company and in the Stage Office by the Summit Road Company.

The Committee, having recommended at the request of the Air Force Installations Office a standard color for exterior walls and for exterior doors and trim, is proceeding as maintenance requires additional painting to make sure that this neutral green-gray color is adopted. The appearance of the Dormitory after receiving this treatment of "Mount Washington Green," encourages the Committee to hope that all other structures on or the summit be given the same harmonious color to blend with both the landscape and the skyscape. The present civilian contractor has assured the Committee, by letter dated June 10, 1958, that this policy will be followed.

Pending Propositions

The Mount Washington Observatory proposes to erect a 47-foot tower at the West end of the Tip Top House to provide better exposure for its various instruments. Present plans provide for a public observation platform with entrance gained through the Tip Top House, which might well be transformed into a unique museum of Mount Washington relics as well as a display of current Observatory activities.

Assurances have been given the Committee by the Air Force Research and Development Command that an appropriate exhibit will he displayed in the Summit House during the summer of 1958 to give the public a better understanding of the non-security phases of the testing program conducted at the Climatic Project Laboratory.

The long-contemplated base facility near the Glen House, where each of the work might be performed which is now done by the Air Force civilian contractor at the Bartlett Service Area under lease from the White Mountain National Forest, is still pending.

The recent abandonment of several military projects in the area and the possible termination of others raises a serious problem as to the ultimate disposition of the remaining structures and equipment. When the Committee was first formed, one of its major concerns was the protection of the public interest in the construction sad operation of these various military projects. It now becomes the Committee's responsibility to take what steps it can within its advisory character to make sure no "white elephants" are left on either public or private land used by the public

The Committee is continually concerned with the maze of abandoned pipes, wires, conduits, cables, etc. cluttering the summit tract and feels that whenever a facility is discontinued such utilities should be promptly and completely removed from the Landscape.

Summary

No reference is made in this report to the pending studies authorized by Senate Joint Resolution, No 10 of the 1957 Legislature with reference to properties on Mount Washington now owned by Dartmouth College and currently offered to the State of New Hampshire. We feel this question is the province of your Study Committee rather than this continuing Advisory Committee.

However, we most earnestly hope that a solution to this difficult problem may be reached and accepted by 1959.

This Committee, since its establishment in 19549 has observed with growing appreciation the importance of Mount Washington to the recreational and commercial growth of the state's economy. This influence is now generally accepted. Of less popular recognition are the educational and scientific roles which belong to Mount Washington because of its unique geographic character.

To make sure that all these and other interests of public concern continue to develop with changing times and to limit the effect of all inevitable conflicts requires the continuing surveillance of a group of public-spirited individuals with personal knowledge of the changing situation and with a desire to advise the Governor whenever its opinions may be helpful.

Report of the Governor's
MOUNT WASHINGTON STUDY COMMITTEE
October 1958

LEGAL HISTORY

Mt. Washington, and the area surrounding it, was originally part of the public lands of the State. In 1832. pursuant to a resolve of the New Hampshire Legislature, James Willey as Land Commissioner, gave a deed to Jacob Sargent and others of an ill defined tract of 25 000 acres of land including Mt. Washington, later came to be known aa Sargent's Purchase. This conveyance triggered a long series of events which resulted in prolonged litigation over the title to the summit properties. For present purposes it is enough to say that through various purchases a large area on Mt. Washington came into the hands of the trustees of the estate of one David Pingree of Salem, Massachusetts, and his son, David, in 1894 deeded to the Mount Washington Railway Company a 49-acre circular tract having a radius of 825 feet from an iron pin set in a rock near the northeast corner of the Stage Office, plus a 99 foot right of way centering on the railway from summit to base. By the same document the Mount Washington Summit Road Ccompany was given the right to maintain its highay and to use certain buildings on the summit.

In March, 1910, the Mt. Washington Railway Company acquired a 10 acre trat rectangular tract on the flat area just below and northeast of the summit adjoining its circular tract. Subsequent to this the United States under the Weeks Act, so-called, acquired all the surrounding area, except that occupied by the automobile road, as part of the National Forest. Thus since the Summit Road Company owns no land on the summit, the property on the summit and the railway right of way, now owned by Dartmouth College under the will of the late Henry N. Teague, stands as a privately owned area in the midst of the National Forest.

RECENT DEVELOPMENTS ON THE SUMMIT

Until the early 1930's, except for the year-round maintenance by the Army Signal Corps for a short time during the early 1870's of a weather observatory, the summit was used exclusively as a tourist attraction during the summer months. In 1932, a weather observatory was established on the summit for the collection weather data the year around and with some interruptions it has been in operation ever since. In 19375 Col. Henry Teague, then the owner of the summit properties, built the present structure occupied by the Mount Washington Observatory and gave tbat organization a twenty-year lease from November 3 of that year. Other uses for the Mountain soon developed.

In 1937, a 10-year lease was given to the Yankee Network, Inc., the terms which are not of record, *(see Jitney Years Vol. 1 State Documents for terms)* but on June 7, 1944, the Mount Washington Club, then the holder of legal title to the land on the summit, leased to the Yankee Network, Inc. an area of about 8 acres roughly rectangular in shape, including the Yankee Network transmitter building, the land surrounding the observatory building, the diesel power house and the land on the steep southern slope of the mountain down to the boundary of the 49-acre circular tract. The term of this lease was for 6 years, but it provided for four successive extensions of 15 years each. It was agreed that the premises should be used for broadcasting purposes and that the lessor was not to use any of its remaining land on the summit for that purpose.

During the 1940's the United States became active in research on the summit, continuing to the present time. The Navy entered into an agreement with the road company for the use of part of its parking area to erect a so-called hanger, for use in testing airplane engines, including jets, and this led to litigation, subsequently settled by stipulation between the Mount Washington Club and the road company, in view of which the Navy by condemnation took the property it wanted for a term of years. The Army and Air Forces have also used the summit for the moat part for the testing of Arctic clothing and de-icing airplane wings, but those activities, now somewhat curtailed, are now carried on in buildings erected off the summit on land of the National Forest. Furthermore, the television antenna of Station WMTW which has its broadcasting studio at Poland Springs, Maine, is now located on the Mountain top.

USES FOR WHICH THE MOUNTAIN IS PECULIARLY ADAPTED

Its importance as a weather station is amply proved by time and does not to be emphasized. Its importance commercially, aside from its value as a in attraction, is, relatively speaking, in its infancy. That it has value for broadcasting purposes cannot be doubted for a moment. What the value be in the future is not wholly certain, but it is safe to predict that its dominating position over a wide area will increase its importance for the sending of radio signals in the years to come, unless technical developments in the field obviate the use of antennae on major elevations.

Perhaps the Mountain's recreational use is of the most immediate and direct interest to the people of New Hampshire. It has been 10 used now for a century a half and is visited yearly by thousands, some climbing on skis during the spring and early summer months or on foot during the summer and fall, over the network of paths maintained by the Appalachian Mountain Club and the Forest Service, others in motor stages, and still others by the cog railway. These visitors come from all over this country and from foreign countries as well and there can be no doubt that they have an impact upon the economy of the state, particularly in the White Mountain area.

To determine that impact your Committee, in conjunction with the Governor and the Forestry and Recreation Commission, employed the Bureau of Business Research of Boston University College of Business Administration to conduct a survey primarily, a) to indicate the role and importance of Mount Washington in the vacation economy of NewHampshire and the Mount Washington area, b) to analyze the effects of such conditions as exist upon the Mountain on the vacation economy of the State and the area, and c) to make recommendations based upon the finings as to restoration, development, improvements or other action. This survey was ably conducted during the summer of 1956 by Prof. John P. Alevizos and a staff which he recruited and organized, and a full report was made in December of hat year. A copy of that report is submitted herewith. Also submitted herewith is a condensation of that report prepared at your direction by Mr. L. Franklin Heald of the University of New Hampshire which, we respectfully suggest, be printed for general distribution throughout NewHampshire and particularly the White Mountain area where it would seem the value of Mount Washington as a tourist attraction is not fully appreciated.

We shall not undertake herein to analyze the Boston University survey once more. It will suffice to say that it provides a factual basis for the conviction that Mount Washington, even in its present state, is a primary, perhaps the primary tourist attraction which the State has to offer, and that its potential is by no means yet fully developed.

This brings us to the present state of the Mountain and its means of access, other than on foot.

P. T. Barnum is reputed to have characterized the view from the summit of Mount Washington at sunrise as "The Second Greatest Show on Earth." Yet the summit today lacks many things that would make it exceedingly attractive. The overall layout of the parking area, roads, railway and buildings has grown in haphazard fashion. Sanitary conditions are inadequate. Two artesian wells are said to have been polluted with kerosene. This general condition developed long before Dartmouth College became the owner.

These comments are not to belittle the work of your Advisory Committee on Mount Washington and the Presidential Range. That committee over the years has done yeoman's service in improving conditions on the summit. But it has and can have no authority to command, and while it has had highly commendable cooperation from the various interests on the summit, it can do no more than suggest and advise. Also, the present management has been doing what it could with the small means available to make the surroundings more accept-

able. The past summer Col. Arthur Teague has made benches on which visitors may sit at the summit, and has begun construction of a path around the top for what he describes as a "15-minute guided tour, with explanations of what may be seen."

The situation up there is admittedly not all that it should be. It's a situation which, like Topsy in *Uncle Tom's Cabin*, "just growed up."

SCIENTIFIC AND EDUCATIONAL USES

Dartmouth College has had offers for the cog railway and presumably the summit, and has given the State first opportunity to buy or lease. The College wishes to retain space available for laboratory use, either for itself alone or with other colleges or scientific institutions. Mount Washington, in the opinion of Dartmouth faculty members and others, is the best place in eastern North America for some branches of research. Educational institutions, it is believed, may combine projects, sending students to stay a month or two on polar studies or others for which Mount Washington's atmosphere is especially good. University of New Hampshire has conducted experiments in the observatory the past few years. Antioch College has been regularly represented by students on six months furlough to work in the observatory. Other colleges have shown great interest.

Dr. Vincent Schaefer met with the Study Committee on September 25, 1956, and told of research work for the War Department at the summit in which he participated in 1943. Success of the project influenced the Army and the Air Force to establish testing programs. The now accepted method of seeding clouds was one of the fruits of the studies carried on by Dr. Schaefer, the late Irvin Langmuir and other noted scientists on this Mountain. A new scientific organization, SIPRE, is being established on college land at Hanover. It will carry out experiments in the study of snow, ice and permafrost. Mount Washington may become their nearest natural laboratory.

REPORT OF THE SUB-COMMITTEE ON FINANCE

The following are based on figures made available to the Committee by the present management showing operating experience for five years (1953-1957, inc.)

	Road	Cog Railway	Summit House	Total
Income	$390,790	$705,400	$712,800	$1,808,990
Expenses	*186,397	640,200	704,900	1,531,497
Operating Profit	*$204,393	$ 65,200	$ 7,900	$ 277,493

*Before charges for Administration Cost.

Assumed Operation of Mt. Washington
Summit road, Railway, and Summit House
Under State Ownership for a Five-Year Period

Based on the Above

	Summit Road	Cog Railway	Summit House	Total
Income	$363,808	$783,776	$712,800	$1,860,384
Expenses	161,767	756,200	656,200	1,580,161
Operating Profit	$196,047	$ 27,576	$ 56,600	$ 280,223

*Before charges for Administration Cost.

Recently the legislature of one of New Hampshire's border states was asked to act on a bill appropriating $400,000 for advertising the state's facilities. The reasoning went this way. If the tourists who now visited the state on their way to some major vacation spot could be persuaded to spend only one more day, the total revenue for business and service establishments would amount to more than $4,000,000 annually. Thus the $400,000 was regarded as an investment designed to bring a tenfold return.

This study may not be discussing a project of the magnitude of $4,000,000 -- or maybe it is, but it does follow that to develop and promote an attraction like Mount Washington has the prospect of helping the vacation economy of the Mount Washington area as well as the whole of New Hampshire.

DARTMOUTH COLLEGE OFFERS

Governor Dwinell requested of Dartmouth College, terms under which the state could acquire their property on Mount Washington. In order that the state could consider alternate courses, it was requested that the college provide offers in the following manner:

(1) To Sell All - The Cog Railway and The Summit Property.
(2) To Sell The Summit Only.
(3) To Lease All - The Cog Railway and The Summit Property.
(4) To Lease The Summit Only.

The offers which the college made are in the following pages and were to expire with adjournment of the 1957 Legislative Session or June 30, 1957, whichever date came first.

The trustees of Dartmouth College have since taken action to renew these offers until June 30, 1959, with the provision that the offer to sell or lease the Cog Railway Property is subject to cancellation by the collage at anytime prior to June 30, 1959, on fifteen days written advance notice to the Governor of New Hampshire

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To Buy or Not To Buy?

January 4th

Grave Risk to Rejecting Purchase Recommendation: "The state would subject itself to "grave risks" by rejecting the proposal of a special study committee that it purchase from Dartmouth College the summit of Mt. Washington and other holdings, according to federal Judge Peter Woodbury. The properties include the pic- turesque Cog Railway that runs up and down the mountain, about 50 acres of land on the summit, the Summit House, a number of smaller structures and the base station. Woodbury, chairman of the committee proposing the public purchase, cited the possibility that, if the state rejects Dartmouth's offer to sell the property, a private interest could come along, buy it in the open market and set up a "honky-ton" or "Coney Island." He said he favors, instead, acquisition and improvement of the recreational facilities – at substantial cost – to attract economy-expanding tourist trade to the Mt. Washington area. Judge Woodbury said he also favors: (!) The purchase of the coach road, only access to the summit beside the cog railway, by the state. The road is owned by the Glen House and it is not known what price tag would be placed on it. (2) Whatever expenditures may be necessary to improve the coach road, the cog railway, the Summit House and other facilities at Mt. Washington – all with a view to attracting enough addi- tional tourists to expand the area's economy (would be worth it). The judge conceded he has no idea of what these expenditures – above and beyond the $275,000 acquisition price asked by Dartmouth – would amount to, but said he felt they would not be excessive. A fair indication of the vast outlays that would be necessary has been advanced by John O. Morton, state commissioner of Public Works and Highways. Morton has estimated the cost of replacing the coach road – which isn't even in the package but would have to be purchased separately – would run to about $850,000.

Meanwhile, Col. Arthur S. Teague recalled last night (1/3) he once offered Dartmouth $125,000 for the picturesque Cog Railway itself. Colonel Teague, a win- ter resident of Philadelphia, has for 25 years managed the Cog Railway, a major property in the group of hold- ings the college is reported ready to sell to the state for an overall price of $275,000. Early last month, prior to official announcement of the price tag Dartmouth hung on the properties. Teague told the Sunday News he did not consider the Cog Railway worth $250,000, at that time the reported asking price for it and the several properties that go with it. But yesterday, Teague in a written communication to the Sunday News, recalled his offer to purchase the Cog Railway alone for $125,000, if the state bought the other summit properties involved.

- New Hampshire Sunday News – Sun, Jan 4, 1959 pg. 1 & 19

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To Buy or Not To Buy?

August 30th

N.H. Summit Purchase Considered: "Possible state acquisition of the top of Mount Washington (was) discussed Thursday, August 30, at a joint meeting of the advisory commission of the State Department of Resources and Economic Development and directors of the White Mountains Region Association. The meeting... was an informal session designed to exchange views on ways to improve the recreational facilities of the North Country. During the discussion, present and future plans of the department were explained and region directors were asked for suggestions. Following the meeting, the commission spent the night at the summit of Mt. Washington, as guests of Arthur Teague. The discussion of the summit of Mt. Washington was highlighted by the disclosure by Arthur Teague, who has been associated with the cog railway and Summit House for more than 30 years, that he is negotiating with Dartmouth college to purchase the railway and to lease the Summit House on a 10-year basis. Formal announcement will come as soon as final details are settled, but in the meantime he reported he has started a program of renovation at the Summit House.

September 6th

State Considers Summit Purchase: "Possible state acquisition of the summit of Mt. Washington, New England's loftiest peak, will be discussed at Franconia today *(9/6)* by state and regional officials. A proposal to provide state aid to construct access roads from public highways to private recreational developments also is on the agenda for a joint meeting of the advisory commission of the Department of Resources and Economic Development with directors of the White Mountains Region association. Both groups will consider the present status of Mt. Washington, its significance to the state, and the problem of unused buildings vacated by the U.S. Air Force since the abandonment of its research program on the summit. The session will be a regular monthly meeting of the DED advisory commission and was located in Franconia for the convenience of White Mountains Region directors. Later this afternoon, the DED commission members will travel to the summit of Mt. Washington on the cog railway as guests of Col. Arthur Teague and reconvened their meeting that evening. On the summit, they will inspect the Mt. Washington observatory and transmitting facilities of WMTW, Channel 8." *- Littleton Courier - Thu, Sep 6, 1962 pg. 8*

September 27th

Private Enterprise to the Fore: "*Courier* Editorial: Possible state acquisition of the top of Mt. Washington, new developments in Crawford Notch, and other matters were included in a discussion held at a recent joint meeting of the advisory commission of the State Department of Resources and Economic Development and directors of the White Mountains Region association. The opinion was strongly expressed that if the land on the top of Mt. Washington should be acquired by the state, private enterprise should be encouraged to participate in making the summit suitable to accommodate the increasing thousands of summer vacationists who visit the area each year. The success which private developers and have achieved in Vermont and other areas has bolstered the belief that New Hampshire's future development as a recreational state lies not in the direction of more state operations, but rather in the encouragement of private capital participation. The state has done a commendable job under built-in handicaps. It is time for private enterprise to play a lead role in further enhancement of New Hampshire as a major playground region." *- Littleton Courier - Thu, Sep 27, 1962 pg. 2 C*

November 20th

Cog Railway Sold: "The sale by Dartmouth college of the Mt. Washington Cog Railway, the Railway Base Station and certain related properties to Col. Arthur S. Teague who has headed the Railroad organization since 1951, was announced Tuesday *(11/20)*. The sale was arranged jointly by John F. Meck, vide president and treasurer of Dartmouth college, and Col. Teague. The sale includes the Cog Railroad and its rolling stock, some 20 acres at the base of the mountain, the Base Station restaurant, gift shop, tourist cabins and maintenance buildings and the railroad's right of way up the mountain. A longtime lease of the Summit House to Col. Teague was also negotiated. Dartmouth college, however, is retaining outright ownership of the summit of the mountain. Col. Teague stated that he would continue to operate the Cog Railroad and Summit House as in recent years. Dartmouth college became the owner of the historic railroad and the Summit properties in 1951 by bequest under the will of the late Henry N. Teague, Dartmouth, Class of 1900, and Tuck School, Class of 1901. In commenting on the sale, Mr. Meck stated that during the negotiations with Col. Teague the state of

N.H.'s Dept. of Resources and Economic Development had been kept informed of the situation."

- Littleton Courier - Thu, Nov 22, 1962 pg. 1 & 2

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New Hampshire Takes Over Some of the Summit

April 21st

State of ***New Hampshire purchases 59.09 acres of Summit from Dartmouth College*** for $150,000 including the Summit House, Tip-Top and Observatory, but does not buy the Cog nor Auto Road. The *Nashua Telegraph* reported "The transaction occurred in Gov. John W. King's office, where John F. Meck, the Dartmouth treasurer, was handed a $150,000 check to complete the sale." Witnesses included "Attorney Jack Middleton of Manchester, counsel for Dartmouth College. The Executive Council recently joined with King in approving the purchase, with funds from the $9 million state recreation development bond issue. The state will immediately continue a lease on the peak's buildings, with Arthur Teague, owner of the Mt. Washington Cog Railway." The *New Hampshire Sunday News* story did not go quite that far saying, "The Summit House will be leased, *probably* to Col. Arthur Teague, who has been operating it for the past few years, and who recently purchased the Cog Railway from Dartmouth College."

- 1971 Mt. Washington Master Plan & NH Sunday News - Sun, Dec 27, 1964

Summit House Inspection
September 30, 1964

Mr. Russell Tobey, Director
Division of Parks
Department of Resources & Economic Development
Room 304 Annex
Concord, New Hampshire

Dear Mr. Tobey:

An inspection of the Summit House, atop Mt. Washington was conducted on September 30, 1964 at which time conditions were found so deplorable that major repairs and remodeling is necessary to assure the health of guests and employees. The following conditions were found to be in need of correction:

Main Kitchen - Bake Shop - Neat Cutting Station

1. Provide smooth washable wall surfaces.
2. Renew kitchen floor which must have smooth washable surfaces.
3. Benches in the dish washing area should be stainless steel and constructed as to be water tight.
4. All work table tops shall be smooth and free of open seams. Masonite covering is not acceptable.
5. All cutting boards shall be of hard wood so as to be immersible for cleaning and sanitizing.

Dining Area - Fountain Section

1. Fountains and back bar section should be replaced with suitable material such as hard plastic, etc.
2. Fountain fixtures and equipment should be of stainless steel for proper maintenance and sanitizing.
3. Provide proper covered waste containers for dining area, recommend swinging door type lids.

Sleeping Accommodations

1. Replace all soiled pillows and mattresses.

Toilet Facilities

1. Renew public toilet facilities so as to provide an adequate number, properly constructed and ventilated.

Employee's Dorm and Guest's Dorms

Sec. 35 - A New Landlord

1. The erection of the hotel, known as Tip-Top should be razed. This area is in such a poor state of repair that it should be condemned for dormitory type use.

Sincerely,

Gilman K. Crowell, Chief
Food and Chemistry Services
N.H. Health and Welfare Department - Public Health Division

≺1966≻

Consideration of Abandoned Air Force Buildings
March 1966

March 18, 1966

Russell Toby, Director
Division of Parks,
State House Annex
Concord, New Hampshire

Dear Mr. Toby:

Apparently your office has investigated the use of the Air Force buildings on Mt. Washington.

I would appreciate it if you would send me any information you have on the uses which were considered and discarded; also the dimensions, capacities, etc. of the two buildings.

Having this information available to our Sub-Committee, at the time we examine the buildings, should be of considerable assistance in our coming back with an early report.

Yours truly,
Peter V. Millham

March 28, 1966

Mr. Peter V. Millham
101 Court Street
Laconia, New Hampshire

Dear Mr. Millham:

This is in response to your recent letter asking for information we may have about the Air Force Buildings on Mount Washington.

Unfortunately we do not have any architectural plans of the buildings. Our judgement as to their adaptability was based upon an 'eyeball' appraisal. Whether or not Jerry Wheeler might have plans of these buildings, I could not say, but you may wish to inquire if they could be made available to you through him.

I have gathered my own impressions of these buildings over the period of years from my first visit to them when the laboratory was in use. More recently, I have looked at them more carefully with members of our staff and others with a view to discerning any possible useful service they could serve. The following is my appraisal of them and their potential. Perhaps you may discern some bias on my part and twill have to admit to it -- at least to a small degree because they are an eyesore in my estimation at this particular location:

- the laboratory is the square building with the venturi tube projecting from it. It is built like a fort -- heavily reinforced concrete, immovable exterior, and interior wells, peculiar layout of rooms due to the specific functions for which it was designed.

- the very peculiarities of the construction and layout in such solid form makes it difficult to consider any reasonable modifications for other purposes without extreme expense -- and to what purposes I cannot foresee.

- both of these buildings incidentally have been long been abandoned to any use or supervision and have to some extent been vandalized. But more particularly they have been greatly effected by weather conditions. As a result, it probably means that all of the electrical wiring would have to be replaced because of dampness, corrosion. etc. Each have been stripped down to the paint on the walls! S o rehabilitation costs would be high.

- the dormitory is a wooden building, very well built, but again with a peculiar layout which would be hard to adept to many uses. It could, of course, serve as a dormitory. It had, at one time, what has been described to me as 'the best outfitted kitchen in the state.' But all equipment is gone and the weather has swelled the doors. Deterioration from condensation would require a professional analysis to determine the operability of the water, sewerage, and electrical systems.

Of the two, the dormitory is less obnoxious and does have a layout that night be useful. However, from word received that I consider reliable, the operating costs (water, lighting, beating, including the heating of the septic field) are very high. Some say the well may be polluted. We looked at this building most carefully as it seemed to have in its obvious aspects a potential for use. But, we concluded that rehabilitation would be very costly; operations very expensive; and at best, a 'make-do' proposition of dubious satisfaction would result. It appears to have a higher capacity of accommodations then would be needed in the foreseeable future and, therefore, the cost of operation and rehabilitation would be disproportionately high to the need.

The condemnation of the Tip-top House for dormitory use by the Department of Health makes it necessary for alternative possibilities. One site that may bear investigation is the so-called Yankee Network building. Whether or not it might fill the need or whether it could be leased or not I do not know. It belongs to the Channel 8 company, I believe. It is well built and was used for a dormitory. It might be a better potential than the Air Force dormitory.

I am personally delighted that the Committee is formed and commencing its investigation. It is going to be quite and challenging and rewarding experience. While we are presently understaffed and we sometimes feel overworked, we will do what we can to assist the Committee in any way. I am looking forward to our association in this endeavor.

Sincerely,
Russell B. Tobey
Director of Parks

Inter-Department Communication
October 4, 1966

From: Russell B. Tobey, Director
Division of Parks

Subject: More About the Summit House
To: Herbert Sullivan / Howard L. Berry

Better sit down before you peruse the attached from the Fire Marshall's office based on recent inspection of the Summit House and Tip Top House at our request.

It reads to me like a maintenance survey for any state park.

Let's get together to see if we can delineate those items which may be basic state responsibilities and those of the lessee. Then, if we dare, we can add to our Mount Washington special *(appropriation)* that the next legislative session is looking forward to receiving.

Sec. 35 - A New Landlord

1967

Inter-Department Communication
February 21, 1967

From: Russell B. Tobey, Director
Division of Parks

Subject: Emergency Steps on Mount Washington Summit
To: Gilman K. Crowell, Chief - Food and Chemistry Services

Following receipt of your memo of May 20, 1965, these matters were discussed with the Governor's Mount Washington Planning Committee. Last summer, with approval of the Governor and Council, we carried out certain remedial action. Later by attached memo to this Committee, we made recommendations to continue steps essential to health and safety on the Summit.

I am pleased to report that a Subcommittee recommended these steps be taken to the Governor and that special legislation has been introduced to authorize bonds to the extent of approximately $214,000 -- authorized on passage of the bill -- that would permit us to take further steps as soon as weather conditions permit, if the bill is successful. I will keep you posted as to hearings on the bill and solicit your support to our program.

When and if this legislation is successful, we will get in touch with you about the particular steps to be undertaken.

Mount Washington - Yankee Network Lease
May 1967

May 24, 1967

Russell Toby, Director
Division of Parks,
State House Annex
Concord, New Hampshire

Dear Russ:

I am sorry that we have not responded more promptly to your letter of April 28, but John Meck has been away and this has been a particularly busy period.

Mr. Meck feels that before the College can make any intelligent decision on this matter we should have more information about the use that the State would plan to make of the Yankee Network building, if the necessary approvals were obtained.

Is the State still operating the Summit House under a lease with Arthur Teague?

Sincerely yours
Paul F. Young
Associate Treasurer
Dartmouth College

Sec. 35 - A New Landlord

May 26, 1967

Mr. Paul F. Young
Associate Treasurer
Dartmouth College
Hanover, New Hampshire

Dear Paul:

The unsanitary and unsafe condition of the Summit House and Tip Tip House on Mount Washington have been a point of concern to the Division of Health and Division of Safety Services and the agencies have criticized in detail the many condition and items which must be corrected -- first, to conform to present State laws, and second, to make them safe for the public to use. Upon receipt of their orders to make changes, we, with the wholehearted cooperation of the Governor's Mount Washington Planning Committee, request Governor King to enter legislation and provide some $214,00 which is now under consideration by the Legislature.

Before this work can be carried out, we may have need to use the Yankee Network Building as a dormitory for Mr. Teague's staff, for the present Tip top House has been condemned for this use. We also may have need for a storage space for Mr. Teague's souvenirs, bulk paper, supplies etc. Thus we are led to find a way that the Yankee Network Building may be used for such good and legitimate purpose incidental to the public interest. Such use, of course, would have to be agreeable to the College as owner and WMTW as lessee. What we are trying to now is to find a way. Will you please help us? Be assured that no use will be made of this building to deteriorate it like unto the Summit House and Tip Top House.

Russell B. Tobey
Director of Parks

Mount Washington - State Fire Marshall
June 1967

June 13, 1967

Russell Tobey, Director
Division of Parks,
State House Annex
Concord, New Hampshire

Dear Mr. Tobey:

This letter is in answer to your request for my opinion as it pertains to fire safety to the public in the two buildings atop Mount Washington. (Summit House and Tip Top House)

A thorough inspection was conducted on September 20, 1966 and it was disclosed that all facets for safety to the public from fire are very poor.

Until adequate means of egress is provided from all floors above the first, the occupancy shall be discontinued for sleeping purposes.

Therefore, it is my opinion that all facilities and services shall be confined to the first floor of the Summit House and in the immediate area of the Snack Bar and Souvenir counters.

Respectfully submitted,
NH Board of Fire Control
Aubrey G. Robinson
Fire Marshall

Sec. 35 - A New Landlord

Inter-Department Communication
June 1967

June 15, 1967

From: Gilman K. Crowell, Chief
Food and Chemistry Services

To: Mr. Russell Tobey, Director
Division of Parks

Dear Mr. Tobey,

Our file indicates that in a letter dated May 20, 1965 we informed you of the gross insanitary conditions existing in connection with the Summit House operation atop Mt. Washington. Since these conditions have not been corrected and with the interest of the State in mind, we strong recommend that no attempts be made this season to prepare and serve meals or snacks at this installation until reasonable conditions are met.

The Tip-Top house should not be used as a dormitory for reasons previously discussed.

June 15, 1967

From: Russell B. Tobey, Director
Division of Parks

To: Donald Ingram
Assistant Attorney General

Some sixty acres on the Summit, the Summit House, Tip Top House, and the attendant water and sewerage systems were purchased by the State from Dartmouth College in 1964. Marshfield, Inc. (Mr. and Mrs. Arthur Teague) had been operating these facilities for the College under a lease which was to expire in 1968. The State, acting on a policy to 'maintain status quo', entered into agreement with Marshfield, Inc. to continue on similar terms as heretofore by a lease which expires in the fall of 1968.

Winter conditions on the Mountain this year have been more unusual than in most. During the month of May, according to the records of the Mount Washington Observatory, over fifty inches of snow fell, thus Mr. Teague was prevented from reaching the Summit to prepare for summer operations at the Summit House until Saturday, June 10. He observed that the main water tank located on the precise Summit (which was on this location when he first became associated with the Mountain over twenty-five years ago) had been seriously damaged by winter conditions, no doubt including the effects of 140 miles an hour blow on May 8, according to the Observatory records.

The age of this tank and the recent damage make it impossible to repair it for service as a water supply. When Mr. Teague observed this, he immediately made contact with Robert Sullivan, Supervisor, Design, Development and Maintenance, who met him on the Summit on June 11 and reviewed and confirmed these conditions. He also has recommended since then the installation of a pump, pressure tank, and necessary accessories to pump water from another but smaller tank located easterly and slightly down Mountain from the Summit House.

Since the Summit House serves the public reaching the Summit by Cog Railway, by Carriage Road, and by hiking trails, we recognize an obligation to make repairs and provide services to them as soon as possible. We, therefore, proceeded to request the Governor and Council to permit us to do this.

A question has been raised which I refer to you. Due to the foregoing, can it be construed that the damage to the main water supply tank which occasions this remedial installations qualify as emergency under RSA 4:19

Sec. 35 - A New Landlord

June 26, 1967

Russell Tobey, Director
Division of Parks,
State House Annex
Concord, New Hampshire

Dear Russ: Re: Marshfield, Inc.

I wanted to get a letter off to you first thing this morning on the matter of repairs. There were other items which I wanted to mention in a separate letter.

Frankly, I was startled to discover that the communications which you received from the Department of Health and the Division of Safety had never been shown to Arthur Teague until I showed him a copy on Saturday. I am sure that this failure in communication was unintentional but none the less, it has had a very adverse effect upon Marshfield. Plans were made months in advance for this summer's operations, and reservations have been accepted. All of these problems which did not just develop withn the last few days. I certainly hope that members of your Department will work very closely with Arthur this summer to be sure that we do not have a repetition of this situation.

I would appreciate it if you would forward to me the copy of the report of Professor Henry. I was heartened to see that this report indicates that 96% of the visitors to the summit have found the service provided by the Lessee to be adequate. I think this belies much recent criticism of the Lessee. I am sure that you appreciate the fact that that is a losing operation and that Arthur should not be expected to subsidize the carriage road and the members of the hikers fraternity. I think it is particularly generous of Arthur to comply with many of the requests contained in Inspector Gilbert's letter in view of the fact that this is a losing operation.

I suggest that in the very near future we sit down once again and review the required improvements and alterations for continued operation of the summit house. I suggest that we also carefully consider the possibility or further modification of the Lease. I want to be sure that we know what must be done in order to provide facilities at least equal to those provided in the past, and that we have a definite understanding with respect to the duties and responsibilities of the Lessor and the Lessee.

I look forward to hearing from you in the near future.

Sincerely yours,
Jack (Middleton)

July 26, 1967

Mr. Jack B. Middleton
McLane, Carleton, Graf, Greene & Brown
Forty Park Street
Manchester, New Hampshire

Dear Jack:

While it is not entirely clear as to what happened during the last legislative session, a few points are known to us now. One of these is that we haven't a nickle[sic] nor have we authorization to spend a nickle[sic] on the State properties on the Summit. A number of good people testified and endeavored to persuade the Legislature otherwise, but to no avail.

So, the last thing we did there - the installation of tank and pump between Arthur's water tank and the Summit House - is the last thing we will be able to do for the Biennium. Fortunately, however, we do have monies for plans and planning we shall do as soon as and as completely as possible. I am hopeful that when the 1969 session is seated, we shall have recommendations for betterments on the Summit which they can act

upon, and with the very best of luck, may be able to start stage construction during the summer of '69. Of course, I have heard about the best laid plans of mice and men.

The above is noted in acknowledging your letter of June 26 which has disturbed me. I would like nothing better than to meet with you and/or Arthur to discuss the points you raised in your letter and as well to discuss the future as we can see it. May I suggest you advise ma when you would like to have such a meeting and with a couple of alternate dates, I will do my best to meet your plans.

Sincerely,
Russell B. Tobey
Director of Parks

Inter-Department Communication
August 14, 1967

From: Melvin L. Wilkins
Subject: Thoughts on Mt. Washington Requirements
To: Mr. Russell Tobey, Director - Division of Parks

I am listing below some of my thoughts relative to what I believe to be the urgent requirements for continued public use of the Mt. Washington area. My thoughts are aimed at what seems to me to be the most salient features necessary to do a good job.

- Terminate the Carriage Road at a lower level on the Summit - possibly near where the air force buildings were located.

- Use of a bus from this level to the Summit House - as the Flume.

- Build a paved walk around the Summit with route for pedestrians.

- Restore the Tip Top House and use it as a museum - display alpine plants found on Bigelow's Lawn - display photographs showing conditions on the mountain in summer and winter - library of books about Mount Washington - relief map of mountains.

- Tower with observatory at end of Tip Top House.

- Restore present Summit House for public use as a hotel with possible one story L shape addition for bedrooms.

- Develop a plan whereby the present and possible future permanent users of the Summit are housed in one building of attractive design and raising of those buildings now existing which are most offensive aesthetically.

- Build a hut in cooperation with the A.M.C. off the Summit - possibly at the head of the Great Gulf for hikers with a section for winter use to take the place of Camden Cottage.

- Build a museum at Marshfield - include Cog Railway features - Cog Railway rack - old sleds used to descend the Maintain on the railroad etc.

- Build a museum at Glen House end of the Carriage road - include all vehicles (horsedrawn and automobiles) used to climb the Mountain - pictures Half Way House, road in summer and winter etc.

- Provide headquarters for uniformed rangers to conduct tours at the Summit.

- Discontinue Cog Railway to the Summit but operate as far as the Waumbek Water Tank and return - has high tourist appeal value.

- Construct a gondola type lift from Marshfield to Summit - advantages - faster trip - less cost to operate thus less trip cost to the public - much safer, smoother and enjoyable ride - greater capacity per hour - can be operated over a much longer period during the year including winter.

- Consider building a hi-tension transmission line in conduit up the Mountain, as up Cannon Mountain which line is very successful. It would provide reliable power - more power for future use or expansion - less cost per kilowatt hour - eliminate the very expensive and hazardous job of transporting and storing fuel at the Summit - eliminate a fire hazard - eliminate costly maintenance and repair bills on generating equipment at the Summit - eliminate the necessity of providing building space for generating equipment - eliminate the necessity of hiring help to operate generating equipment.

- Water supply and storage - consider water catch system on buildings and Mountain-side similar to that used in Bermuda and other arid locations use of all present water wells - are any contaminated and could they be used for other than drinking purposes? - could, it be filtered or distilled and become potable if contaminated— examine present system for getting potable water up the mountain.

- Sewage disposal system and/or systems - use and capacity of existing systems - construction of new system.

Yours very truly,
Malcolm L. Wilkins

P.S. - If you wish me to elaborate on any of my thoughts, I would be glad to do so.

Tip Top House Inspection
August 15, 1967

August 16, 1967

Mr. Russell Tobey, Director
Division of Parks
Department of Resources & Economic Development
Concord, New Hampshire

Dear Mr. Tobey,

Herewith is a report of my inspection of the Tip Top House on Mount Washington which was made on August 15, 1967.

This inspection was made in regards to an area in this building for proposed serving of lunches, snacks, coffee and in all probability for warming up. After going over this building thoroughly I must say that the conditions and situations which exist are about as poor as I have ever seen. Therefore, the following recommendations are made to make the specific area as safe from fire as possible.

The list of recommendations are made in the order in which they should be remedied.

1. Cut off all electric wiring which services the upstairs portion of the building.
2. Rewire all electric circuits in the area to be used on the ground floor. This includes the heating unit room. Do not over-fuse electric circuits.
3. Have a competent oil burner man go over the entire oil burning equipment and have the necessary controls and equipment put on in accordance to New Hampshire regulations on oil burners and equipment.

Deficiencies found in this equipment and to have added for safety as follows:

1. Oil burner to be installed on separate electrical circuit fused with 15 amp fuse.
2. An electrical cut-off switch shall be installed in electric lines above heating unit.
3. Provide fusible valve in oil line at burner.
4. Provide remote emergency switch for oil burner. (preferably in snack bar room.)
5. Fuel oil line from tank to burner shall be anchored firmly and protected against mechanical or any other injury.

6. Covers to be put on controls to keep moisture and dust from rendering the control inoperable.
7. Install new flue pipe from heating unit to chimney. (Present one is practically rusted through.)
8. Remove wood partition from and around flue pipe.
9. Clean out all combustible material from under flue pipe and around heating unit.
10. Install electric cut-off switch in electric line over hot water heater unit.

11. Provide remote emergency switch for hot water heater.
12. Change size of vent pipe on fuel oil tank to pipe size no smaller than 1¼ inches.
13. Line the inside heater room side of the partition (between heater room and snack bar area) and door with transite (asbestos board) or at least ½ inch gypsum board. This would delay a fire from spreading too fast from the heater room into the snack bar area, giving the occupants time to get out of the building.

In the proposed snack bar area there is only one means of ingress and egress (through tunnel). Therefore, a second means of egress shall be provided.

Due to the unusual circumstances on this mountain where means of a second egress can not be compared to the same situation at lower elevations, I am recommending that axes should be installed above each window in the snack bar area. Due to conditions at this level, it would be impossible to have conventional doors or casement windows for egress from this area.

Respectfully,
Aubrey G. Robinson
Fire Marshall

Summit House Wiring
September 19, 1967

From: R. J. Crowley, Jr. - Commissioner DRED
Subject: Emergency Rewiring Summit House - Mt. Washington
To: His Excellency, Governor John W. King
And the Honorable Council

On September 5, Herbert L. Whitney, Deputy Fire Marshal directed the following to the Division of Parks:-

'it has been brought to the attention of this department that the electric wiring now In use at the Summit House is the same as when the electricity was of 32 volt system.

it is therefore recommended that the present electric wiring be completely gone over by competent electricians and brought up to requirements of the National Electric Code before the building is to be used by the public.'

The unforseeable weather conditions at this location make it necessary to move as rapidly as possible in order to complete work this fall to ensure the building can be used by the public next spring. We, therefore, have obtained from E. E. Bigelow, electrical contractor of Littleton, who has just completed the rewiring of the Tip Top House and is familiar with this system, his recommendations to comply with the Code. The lighting fixtures needed will be chained through the usual purchasing procedures for installation after the wiring is done.

I have prepared the attached resolution and request your adoption of it that we may fulfill our obligation.

Sincerely,
R. J. Crowley
Commissioner
Dept. of Resources and Economic Devel.

Public Service Power?

November 2, 1967

Russell Tobey, Director
Division of Parks,
Department of Resources and Economic Development
Concord, New Hampshire

Dear Russ: Re: Mount Washington Railway Co.

As a part of the long range planning of the future development of the Cog Railway we have given serious consideration to purchasing power from the Public Service Company. As you know, the distance from the nearest power line to the Base is over 5 miles and line extension costs are great. They are particularly high when viewed in connection with a business which is operated for approximately 6 months each year.

It did occur to me that perhaps as a part of the long range planning of the development of the summit the State might be interested in purchasing power. The present charge for power on the summit is $.10 per kilowatt hour and should the State's power requirements be great it would seem that some other source of power might be economically feasible. Further, there is always the possibility that TV will not continue to supply everyone on the summit. Finally, it occurred to me that if a power line would be run to the summit, the most logical place for it would be over the land owned by the Railway Company from the Base Station.

I have written to Parker Vincent to see if TV would have any interest in purchasing power. I believe the diesel generators on the summit are well along in years and it might be considerably less expensive for TV to purchase power rather than to replace the present diesel engines. If you think this is something that the State might be interested in, please let me know and we can explore it further. I know that the State's initial requirements probably will not be very great, but it still might be worthwhile to begin to plan for the eventuality of a power line to the summit. I look forward to hearing from you.

Sincerely yours,
Jack (Middleton)
McLane, Carleton, Graf, Greene & Brown

New Summit Boiler

November 14, 1967

Russell Tobey, Director
Division of Parks,
Department of Resources and Economic Development
Concord, New Hampshire

Dear Russ: Re: Mount Washington Railway Co.

Apropos of your recent letter concerning the boiler at the Summit House, it occurs to me that this whole heating system should be reviewed carefully before any additional expenditures are made. For the past 100 years the real problem in opening the Summit House has been the problem of ice in the basement. Most years we have had to take steam hoses and melt the ice out of the basement before any heat could be generated. This is a terrible job and one which should be avoided at all costs. Furthermore, I think that a good hot air heating system would be much more appropriate for a structure such as the Summit House. The units which they have in modern garages could be placed in the dining room and the lobby and would generate a lot more heat a lot more quickly than an old fashion steam or hot water system. If possible, I think you should try to keep the oil burner, boiler, etc. out of the basement. Best regards.

Sec. 35 - A New Landlord

Sincerely yours,
Jack (Middleton)
McLane, Carleton, Graf, Greene & Brown

Inter-Department Communication
August 14, 1967

From: Robert E. Sullivan, Supervisor
Design, Development & Maintenance
Subject: Mount Washington Summit House - Jack Middleton's Comments
To: Mr. Russell Tobey, Director - Division of Parks

Our plan is to position the new boiler on a concrete pedestal above the concrete floor. Current problem of ice caused by the two-foot deep boiler pit which, naturally, fills up with ice. New pedestal will be higher than door-sill.

I explored hot-air possibilities with both John Cyr and Donald McClarty. Both, experienced heating contractors, ruled out hot air on several counts.

1. The long, narrow shape of the building.

2. The absence of chimney flues anywhere except the present chimney.

3. The extreme length and unsightliness of the duct work that would be required.

4. The high cost of fans and blowers to circulate the air.

Both men feel that the basic steam piping is in fair shape and, with a new modern boiler, should last for years.

Very truly yours,
Robert K. Sullivan, Supervisor
Design, Development & Maintenance

≺1970≻

A Bit of a Clog

November 14, 1967

Mr. Paul Dunn
Vice President and General Manager
Mt. Washington Cog Railway
Mt. Washington, N.H. 03589

Dear Paul:

After your call last Friday afternoon advising that one of the toilets in the men's room at the Summit was blocked and that you would be forced to close the room to visitors, I arranged with Jack Cyr to go up the Mountain Saturday morning to repair it. I also asked him to give me his opinion as to why this blocking occurred. His report this morning indicates that someone disposed of articles of clothing viz. - men's shorts, which the system was not designed for and which the system would not take!

However, in view of previous stoppage which occurred to fixtures in the women's rest room, he indicated that if more frequent inspections and cleaning were performed, that major breakdowns could be avoided. The difficulty Saturday was overcome by a hand auger.

This leads me to make the strong request of you that you have your staff make frequent inspections of these facilities and that they have at their disposal a hand auger suitable to extract anything but a permanently blocking object.

This responsibility appears to fall on Marshfield, Inc. according to paragraph two on page three of the current indenture. We are not provided money in our budget to take care of 'housekeeping' costs at the Summit.

Sincerely,
Russell G. Tobey
Director of Parks

A handwritten note on the State's copy of the letter says: *"Russ - I'm distressed that we have payment for $107 not budgeted and not anticipated. How do we go about getting money - $107 - back?"*

1965 - Marooned on the Mountain

(Note: Winter struck hard and early last week *(10/8)* on Mt. Washington, the state's tallest peak, often described as "an Arctic island in the Temperate Zone." Amid five-foot snowdrifts which clogged the carriage road, *Sunday News* staffer Linnea Staples found herself marooned on the summit. She writes of an eerie night in the Summit House and an unforgettable "rescue" via the famed Cog Railway. The story appeared in two parts on subsequent Sundays in the *New Hampshire Sunday News* in October 1965.)

"The last we'd heard the temperature was down to 6 above zero, but to the 14 other passengers and myself seated in the little Cog Railway car waiting to go down Mt. Washington as we had been for nearly an hour, it seemed as though it must surely have lunged to 60 below. That was because of the wind. It whipped around the end of the Summit House and took the little car in its fists and shook it violently, until the windows rattled with a constant racket and the roof billowed with each gust until it seemed it would surely life off and sail away down the mountainside. Someone overheard a crewman say it was gusting to 96 miles per hour. Snow sifted in through the tiniest cracks, settling over everything and everyone. You could feel the tension but though some passengers must have been frightened, no one let on. It was the crewmen everyone was most concerned about as, hunched against the wind covered with snow, faces purple with cold, they labored to thaw car and engine from the ice-coated tracks so they could bring us down the mountain. We scraped peepholes through the white frost on the windows, but all we could see was more white – thick white cloud and heavy white snow. Only faint traces of the looming bulk of the Summit House were discernible 60 feet away. "Everyone sit on this side!" had been the order from a crewman as he indicated the windward side of the car when, at 4 p.m. we left the security of the Summit House and filed out to the Cog Railway train, the only one to run that day. When a man had questioned "why all on one side?" a woman turned to him, grinning broadly, and explained matter-of-factly, "to keep it from blowing over, of course!" Then a man seated about halfway up, commented: "No one will ever believe me, when I tell about this!" Another, up front, turned quickly and asked: "Who are you going to tell it to? The Angels?" A roar of laughter swept the car. That was the way it had been ever since we had settled into our places. Laughter; joking; speculation; concern. But underneath it all tension and a measure of fear. Fifteen passengers, closed in together in a tiny sphere of our own, in this most unique "world on top of the world" which is Mt. Washington. There was a sense of "closeness," of familiarity, most of us would likely never know again and, as the man said, "No one will ever believe this."

"For myself, I knew a confidence perhaps none of the others were able to feel, for they were all strangers to the Mountain, come from far places to see what it was all about. I tried to impart it to the, for my confidence was based on this fact: Col. Arthur Teague himself was the engineer in charge of this train. And Art Teague knows the Cog Railway as no other man alive can possi-

bly know it. And he knows Mt. Washington, as well. If he felt we could get down off the mountain despite the wind and weather, then we would get down. In one piece. I had come up the day before planning a quiet spell of rest and perhaps some hiking around the mountain. But it was raining, and the Summit was socked in by a cloud so dense you could, as the saying goes, "slice it with a knife." Amazingly, trainful after trainful of people went up to the mountain that day despite conditions, but when the last went down at 5:30 p.m. only myself and one other guest remained along with the five-member staff. There was William Bromlee, hotel clerk; Roland Blaney and Edgar Gagne, his assistants; Thomas Williams, chef, and Mrs. Frances Stewart, one of the most useful persons you can imagine: snack bar attendant, gift shop saleswoman, chambermaid, fireplace tender, and many other things. The other guest was David E. Woronecki, a student at the University of Massachusetts at Amherst, Mass. His dog, Duchess, was with him. Dave, I soon learned was collecting specimens of small animals for Dr. William Sheldon of the Wildlife Unit at the university, who was conducting studies for the U.S. fish and Wildlife Service. He had set traps at various spots along the *(auto)* road coming up, and I wonder if he found any of them again after the storm that struck that evening.

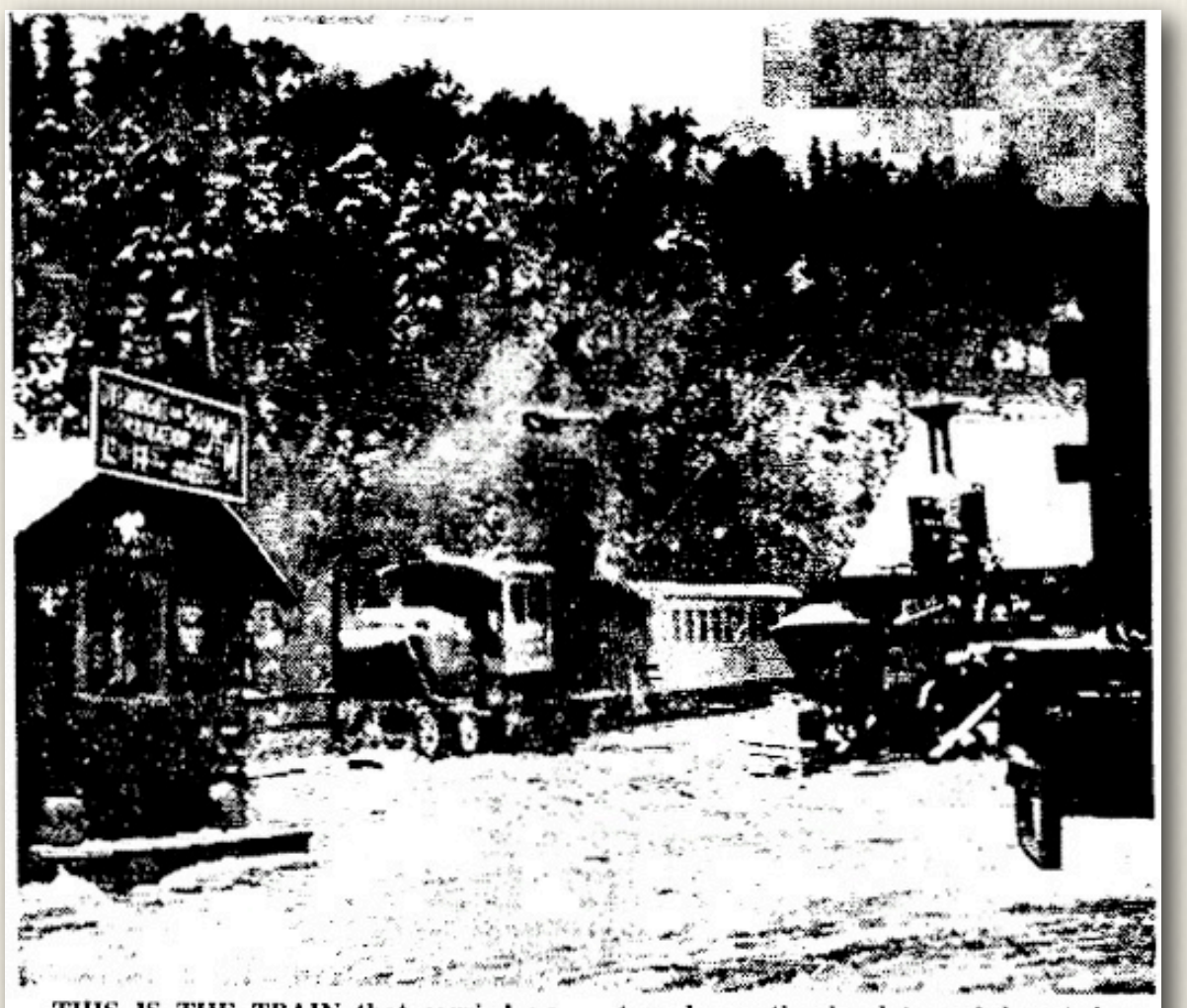
Part 2

"By the time I went to bed at about 10 p.m., the wind had risen to hurricane force and sleet was lashing the windows unmercifully. Later the sleet turned to snow, and what must have been chunks of ice slammed into the building. So now I know what it's like to sleep with the wind sweeping across the summit of Mt. Washington at 95 mph, and the bed a-rockin' and a-rollin' and the furniture sliding back and forth. And a banging and creaking and wracking going on outside such as you could never imagine unless you've been there. But sleep I did, except for several awakenings during the night which were brief. And I awoke the next day to find the furnace had gone out and there was no water. So, I donned the clothing I had brought with a hiking trip in mind – which I never got to take. But there was a fire in the fireplace and a warm kitchen and breakfast was waiting. A phone call to the Mt. Washington Observatory produced this information: Wind, 70 mph; temperature 11 degrees above; forecast, more of the same. The wind had reached 95 mph during the night. Col. Teague, at the Base Station, had requested the weather bulletin, so phoned this down. Conditions were bad at the base, he said, everything ice and snow and slippery. He added: "We'll be up to get you later in the day, but we'll have to send an engine up first because of the ice on the track. Then we'll send on with a car." However, I had him soon convinced since I was the only one going down, to just send something to cover my clothes from the coal dust and let me go down on the engine. "This is terrific," I thought; thrilled with the prospect. My dreams were dashed somewhat when someone named Cliff (Kenney) told me, via phone, that: "We have to send a car. We have 14 people here who have bought tickets and are waiting to go." Outside the fog was thicker than ever, and snow still fell from time to time. Took a walk over to the Observatory; a step, stop to regain your breath and balance; a few more steps, stop again, start out once more only to find yourself running so you all but squat trying to stop. Then haul yourself up the stairs hand over hand. Had a brief visit with Guy Gosselin, the chief observer, and a visitor, Herve King from Milton, Mass., who is a lawyer. At 80, King still "Walks

up the Mountain" several times a year. Wanted to visit the television station, also, but was afraid I'd miss the arrival of the train which I knew was then on the way up.

"When I returned to the Summit House the train was coming in; the passengers cold and the crew practically frozen through. A half dozen crewmen, snow-encrusted over the coal soot which covered them from head to foot, crowded around the fireplace and greeted mugs of hot coffee with heartfelt gratitude. It was 4:55 p.m. when, as we sat in the wind-wracked car, that one of the crew came through and said, "Somebody stand up and brace themselves against each window," and one intrepid woman observed: "So they won't blow in when we leave the lee of the building." Nothing but whiteness outside; only quiet waiting inside as the train edged its way down the mountain. Very little talk. We had no way of known whether we were over Jacob's Ladder as yet; the dreaded trestle where some fully expected to be blown over the edge and down the mountainside. But gradually the whiteness thinned, and we could see a bit of the outside world. And we saw the halfway house. We were past the trestle and down in the shelter of the trees. Just then we were told, "you can sit down now." A sigh swept the car, rather 15 sighs in unison, and everyone relaxed. The worst was over. As we approached the Base Station a short while later, someone cried in dismay: "After all we've been through, there's no one out here to meet us. Not one single person!"

"And with those words each person on that train must have realized with an infinite futility that never could this experience be truly shared, or ever really told. How could it be told, so it would be understood? But each, surely, must have come away from that trip with varying feelings about this rugged, indomitable, magnificent, beautiful and cruel mile-high mountain. Fascination; determination to visit it again; interest, at least. And fear. For some, perhaps, even hatred. But each must, inevitably, have felt something definite; something every new to them. Of the 15, however, I have no doubt I was the one most thoroughly enamored of "Agiachook," so called by the Indians who were convinced it was "the



THIS IS THE TRAIN that carried us safely down Mt. Washington's Cog Railroad through bitter cold and snow and brutal, lashing winds. Everyone scattered the moment the train stopped at the bottom, hence the desolate and deserted appearance of the Base Station area as a snowy, early-October dusk settles over the North Country.
(Linnea Staples Photo)

place of the Great spirit." Call it enthralled; cast under a spell; bewitched; call it whatever you wish – But whatever you call it, it adds up to one thing: The mountain has claimed me. And I have , in turn, claimed the mountain as my own. I had thought this to be true before, following other visits to this inimitable mount, but now little I knew…. There are those who claim that far too much has been already written about Mt. Washington. But in reply I can only ask: Can there ever be? It was dusk when we came down to the Base, a few minutes past 6 p.m. Lights were showing in the buildings, ice and snow covered everything. Including my car, where I found I had four inches of snow to clean away, and a coating of ice beneath that. At this point there was one certainty in my mind overshadowing everything else. I shall never be content unless I can return to "the top" again and again. And then again. As long as I am able."

- Linnea Staples

(Editor's note: The rescue train in this story will figure in another harrowing trip down the Mountain in September 1967. A trip that did not end as well and is detailed in the next section.)

1966-67 On the Track Phone

The *Cog Clatter* weekly employee newspaper at Mt. Washington had its own gossip columnist who would write quick blurbs based on happenings in and around the railroad. The "columnist" was based at the Half Way House where the party line of Cog track phone was theoretically tapped. While those reading "On the Track Phone" each week likely knew exactly what was being hinted at... reading the selections nearly sixty years later leaves the Clatter publisher scratching his head, wondering what the "Old Troll" was talking about.

Hi and thumb's up to you. This column is allocated 'specially for just plain gossip --- so let's get on the track phone. FLASH ••• Cliff and Klop announce new type of ticket printed in Braille for a certain colorblind brakeman ••• Pete says will bug the waitress' table in dining room with a microphone to supply this reporter with the latest material ••• Word from the shop is that Paul, Ray and Harold have the necessary equipment for anyone who wants to hang around the shop, in fact I hear they may chalk up a Mark anytime ••• Latest "IN", Honeybucket rides… Pete to sell round-trip tickets and Cliff has given the boys who drive the marvelous machine the necessary pamphlets ••• Well, till next time this is the Old Troll on the track phone at Half-way House.

- Cog Clatter - Jul 6, 1966 v.1 n.1

Here's your reporter on the Track Phone again---FLASH ••• Pete says Janet Zimmerman is a good girl .... Mrs. Murdock says by Cog Party Charlie should really give out with a trumpet solo; Charlie had no comment ••• From informed sources on top, Walter is off drinking man's diet and has joined the Carrie Nation Club; but, now, Walt, they don't use alcohol for making stamp-glue so you certainly couldn't have licked yourself into that hangover… Can't you come up with a better story next time, Walt? ••• Jimmie Harris is glad his dad is on a diet, otherwise he couldn't lift the lunch bucket to take to work. ••• Tip- Top House has taken a new look, because for best room a prize of $50 worth of Gift Shop Merchandise- is given (at cost, of course) ••• H. Q. Bear was last seen in woods after a fight with a certain Polecat who was chasing him ••• Big Question at the top,-- Where, is it · hidden, Norman? ••• Late CASA (Cog Aeronautic and Space Administration) Report -- an identified flying object going "tick-toc" seen coming out of window on top ••• The Summit House is fortunate to have a Forest Ranger who is also a Great White Hunter and Fireplace Manager ••• Don't want to be disappointing but we don't think there will be a ·Long legend ••• Tese is a real workhorse at chasing Chuck and Koop they say ••• The shooting bug has struck Charlie Teague so badly that he now picks up trash and other odd jobs to earn money for shells - Keeping you busy,: John, heh, heh, heh ••• Mark Jordan said he'd buy this paper if his name was in it and 10¢ is 10¢. ••• That's about all til' next time, this is the Old Troll on the track phone at Half-way House." *- Cog Clatter - Jul 13, 1966 v. 1 n. 2*

Here's, your reporter on the Track Phone again ••• FLASH ••• Barbara Hallman chalks up another - Boy - What a gal ••• Ginny Merrill has made a new sweater - Is this true or just a yarn? ••• At the top, Who is Winterfred Gobles Seny? Or was it Seny Gobbles Winter? Would you believe Fred? ••• John Klopp, has FM in his car.

Of course, in John's car that stands for Female Modulation ••• Everything is on schedule, Grumpy Club held the first meeting of the Ugly seasons – Next meeting officers will be elected. This paper will announce the slate ••• Grace reports Harvard agronomy extension has setback as prospective graduate turns sour – oh well, just a little Rusty ••• Was it a hoax? Seventy-nine accommodations on the bunk floor, so Boris has to entertain in the bunk room ••• George not satisfied with the Summit girls – but Good News, John is working so camping will be less hazardous ••• It has been reported when Bud Nye was low on steam he quickly got to the Root of the problem when he found a silver clinker and a note which read, "This will explain everything I!" ••• I think Jane and Carolyn know where the Boys are--- If you want to know, in Choir of them ••• Freddy is: learning a lot on the No. 1 – how to play with poker--eleven, I hear I! ••• go down – Sharon said she needs more cents! Oh, Well! ••• Did anyone hear the crash of personalities at the girls' dorm? ••• Mark 8¢, Mark 9¢, Mark Jordan ••• That's all til next time, this is the Old Troll on the track phone at half-way House.

- Cog Clatter – Jul 20, 1966 v.1 n. 3

FLASH ••• Trouble in the can at the Girls' Dorm--right John—Clumsy Klopp ••• Dew must be heavy on the rocks as Summit is advertising a boat trip to the Lake of the Clouds -- could be too much Mountain Dew on the rocks ••• Pete Rusinski is planning Canadian trip--run up the flags ••• Little Larry Hanke has birthday party and mother (Mrs. Hanke) has shower – Larry is looking forward to the new arrival ••• BIG NEWS---Janet and Carolyn clean room ••• Summit employees enjoy buffet – added punch was courtesy of Colonel ••• Congratulations, Dalmation Cindy – 8 new pups! ••• Sharon is going on a Bowen-arrow hunt – something cagey about this line and I smell trouble ••• Suggested "Bunny Brakeman" with a club at Half-way House – I think somebody will put the brakes on this idea ••• Carl Nevers just completed a cabin – he says it was the worst building he had ever seen – why it was the first shadow he had ever resurrected ••• That's all for now, this is the Old Troll on the track phone at Half-way House. *- Cog Clatter – Jul 27, 1966 v. 1 n. 4*

Here's your reporter on the Track Phone again ••• Wayne Howland has to assure people the American flags were not made in Japan ••• This is a friendly notice -- Dave Cureton's girl friend will be here August 12 for the Cog party. ••• Tim Bemis had a rendezvous -- Charlie Hansen had one, two. ••• Cog plague is a sore throat and a slight headache -- could be from a short copper coil and low beam. ••• Tip-toeing Bill Whiteley-- ballet, no less--yes--much less. ••• Dave Gordon -- girls' dorm appreciates good night salutes. ••• Charlie Heneson-- you can't put pressure on this paper. ••• Why does Gordy need so many new packs of cards? ••• Overload at the Summit required Griff to return to Skyline - cause of overload was summit help coming down on days off. ••• "Giggle" wakes "Wiggle" ••• Sorry Mark can't mention you this week. ••• July 27-- record number carried on railroad--do you suppose this was due to the return of the crew to the Summit house? ••• Tim Bemis sprained his ankle after 3 days off -- just can't tell when something will happen. ••• Norm Koop narrowly missed serious injury when tail-gate suddenly came loose. ••• GRUMP CLUB MEETS: The Grumpy Club held its traditional first meeting August 1. There was not an ugly quorum present so no official business could be transacted, however, Pete Poltrack was appointed temporary chairman of the club. Bud Nye and Griff Harris are close to being eligible for the Board of Directors according to John Klopp who is in charge of credentials. This reporter noted the conspicuous absence of its last year's president, Paul Philbrick. Also upsetting was the resignation of Barbara Lewis as secretary who had held the post under three presidents - Dave Saunders, Dave Woodbury, and last year's - Mr. Philbrick. ••• Carolyn Poltrack and Jane Teague have been singing so much -- their names have been dropped from the active list. ••• Ed Griffin loaded Gordon Chase's train with garbage but to no avail --

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Fred Kent smiled the whole crew even including Gordon Champion right off John Klopp's list ••• The Old Troll will keep you in touch with the growls in later issues. *- Cog Clatter – Aug 3, 1966 v.1 n.5*

Calamity Clobbers Clatter: ••• PAPER LATE DUE TO FIRE - Your crisp and wet troll reporting. I wish to thank the No. 1 and No. 4 crews for letting me know my business office was on fire. After thus being informed over the track phone I managed to escape the raging inferno by deftly diving out the door only to be squirted in the head by some efficient brakeman holding a hose on the house. Although this interruption did not cost me my notes taken for the day. It did sorta burn me up to where I am in the running for the 1966 elections for Grumpy Club President and will move to higher altitudes unless I am recognized by waving and whistle tooting. Still holding my composure I would like to close with a few words ••• (EDITOR'S NOTE: After reading the closing statement I hereby cast my ballot for Mr. Troll and scratch his statement to begin the column and voting with an open mind.)

FLASH ••• Masquerade party great success at Top--it was a "Come as you are" affair. ••• Bud and Judy must return to Carolina. ••• There is a case at the Berlin drive-in --- 0000 counter girl's brother was called to handle this – it was not just an open and shut affair. ••• Sticky's accounting experience helps – only seven cents over after three days in the Ticket Office – how's that for change – a natural. ••• Borris is sick in bed – doctor not sure what it is – something about things at the Summit. ••• Chuck and Walt made error on speed and drive and made the 7:30 train, Judy and Bre stayed at the Lake of the Clouds -- hiked up and down -- wanted to hike down and up but found that they could not start from here to do that. ••• Pete Poltrack wanted Grumpy Club meeting Thursday – Immediately following any derailment or any other trouble on the line. ••• Operators Benjy and Maurice from the Top make connections with operators in Littleton. ••• Rusty making crushed stone for the Base Road?? ••• Tese knows how to camp at the Summit. ••• Waitress wanted for evening work – apply at Marshfield House. ••• Ruggles and Poltrack to start contest to see who can design a cab for Cog engine I may be inclined to enter ••• Mark catches two pounds of fish to get his name in the paper ••• Gloomy Monday. Elephant revolts while Koop and Poltrack make other observations. They should keep their eyes on the train not trained on you-know-what. ••• This is the Old Troll on the track phone relocated to the white sign.

- Cog Clatter – Aug 11, 1966 v. 1 n. 6

Things were pretty quiet as the new week started out, although by Sunday everybody was on the-phone ••• With all this commotion I decided that I'd better take the next train down on Monday to have a look-see. At about Waumbek Curve the faint thumping of a drum was heard, then you could hear guitars and the hlgh notes of an organ. Not knowing what to expect, I carefully shinnied down the Marsh House chimney. From this vantage point the following is my report. ••• COG PARTY: Although the Checkmates: were going full-blast, so was the bar! It was nip and tuck trying. to get John, Pete or Griff's attention in the melee, although they must have been doing a good job from my observationsl Whup, there goes another! ••• After observing inside, the scene would shift outside where the two racks of chickens were barbequeing. Good job, Wally, all I got was the leftovers and there weren't many ••• After dinner. and a couple of songs by the Checkmates, Mrs. Teague read a prayer of late Peter Marshall and Colonel Teague welcomed all aboard. Then Jitney took over (I just happen to have some of his notes: and a list of some of the people who visited the party: Gen. and Mrs. Ruggles, Mr. and Mrs. Billi Liveson, Dr. Sutliff, Mr. and Mrs. Richard Riff, Mr. and Mrs. Champion, Mr. and Mrs. George Carter, Mr. and Mrs. Bob Hamilton, the "Bashful, Car-Bumping, Broom-breaking" Bob Bradley, Peter Bradley, and also Gordon Champion, Mark Jordan and Dean Deakins – just to mention a few! ••• Gifts were presented:

Colonel Teague received a 40 x 40 picture of my office and Jacob's Ladder; Willie and Kevin received a wedding gift--eh, Jane?; Bob the Bookkeeper got a piston valve (whoops now I've done it, Pete, but never fear, he doesn't subscribe and those who do won't tell him!.); the Shop crew was presented a box of cigars; · and Pete and Grace received a gift to sweeten the kitchen! ••• Celebrating birthdays were Anne Teague, Ruthie and Wally Berry (caterer). Cakes with the traditional candles and beautifully decorated by Gracie were presented Anne and Ruthie by Norm Koop. FLASH ••• Judy Long left Sunday to go back to the South ••• Linda doesn't seem to know that John has gone ••• Famous Cog Party words: "Take me drunk I'm home," or "Set me up another bartender, Beer" ••• Ice cream at the Boys' camp? ••• Latest drink around the Hut – Rocks on Water ••• Nice to see Tim (Lazy Bear) Bemis with same girl three days in a row ••• Matt Jordan is a real master of terpsichore ••• Nowadays only the waitresses know – Griff uses Koop's hair for waste ••• Charlie uses brakemen to collect dimes from the ladies' toilet ••• Gordie says after Fred Kent cleaned fire, it had pretty hairy clinkers ••• When the wind changes on the summit most brakemen are blind ••• Joe long May have a Billy Budd pulled on him at Jacobs. Pendulum Joe will help the tourists estimate the incline ••• Late arrivals at the Party: Paul Philbrick and Ed Griffin ••• Now that the Party is over, and we can all get back into the rack and mesh of the Cog ••• we are only 17 days into the Ugly Season without a president – remarkable? ••• Congratulations to the new qualified firemen, Mark Sweeny and Mike Claypool. ••• POST SCRIPT: Old Troll Reports: After last week's introduction to my column, I thought there would be action in putting a new roof on my office. But after many disheartening trips to my old place of work, I am very disappointed. I would like very much to be a happy club president, but incidents are forcing me the other way, so watch out – things may start to happen!

- Cog Clatter – Aug 17, 1966 v. 1 n. 7

FLASH ••• Jimmy Harris didn't think his father could fly until he walked by the shop, and saw him in the rafters - I think he was launched by a Gilman-Adams mechanism ••• "L. B." Bemis says he wouldn't have put on weight if he hadn't fired the better engines, ••• Cass White says if he walks to the right instead of straight ahead, it's going to be a long first step ••• Borriss says he gets 8 or 9 letters a day! From his Mother? ••• I asked Pete · Martell why he kept carrying that yellow piping up and down the mountain.. He says the maintenance crew is building a yellow submarine · to go into competition with the Broadbent Transportation Co. during foggy weather ••• Margie has been helping her mother make Peppersass Jelly and now she's all Stickey ••• Wish l could have got a picture of Larry Goodin (track foreman) astride the new sign at the bottom of the Base road ••• John Ruggles' Double Dilemma: Shaft and Draft ••• Matt's magic number is now 7 ••• Sneak look into the shop gave this. reporter a view of a strange looking stainless-steel item that Mr. Smith and Mr. Gilman had produced. Paul thought it was a bath tub for the woman in the Metracal ads; Mr. Adams thought he could use it on beaver ponds fishing; Griff Harris, from his high hanging vantage point, thought it looked like the top of a bomb shelter; Mr. Cone put a vase of flowers on it in case they all were wrong ••• Now in the shops, there are no fans to change the air so they just stir the flies ••• Mark Sweeney, even your barber doesn't know ••• Matt you'd better brush up on your wood ••• Have you seen Joe McQuaid's new conservative hat? Brewster says he needs one to drive the tractor ••• Next week we will print the names of people who owe us money ••• That is all till the Labor Day Special. This is the Old Troll on the track phone STILL located at the white sign

- Cog Clatter – Aug 24, 1966 v.1 n.8

FLASH ••• Jim Morris holds art exhibit at the summit, big success and now "They're coming to take him away, ha, ha" ••• They have a new Counselors cabin at B. C. (Boys Camp). Right, Jane? ••• Is it true Brunettes have more falls, Bobbi? ••• Yellow truck is back in action, better than ever ••• AMC Field Day, Mizpah and

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Lakes arrive ••• Roger Miller's #1, no, sorry, he's on the One ••• The elephants on the Cog seem to like the engineers, Splash!! ••• Mark Sweeny is: going to start a car rental service called Coghurts ••• Matt is going into the air-jeep business featuring the honeybucket special. The air jeep will be · designed by Carl Nevers: who feels it will be safer for the people on the ground with Matt in the air ••• The kitchen and counter boys are hunting bear ••• Is ·Camp Duncan gone? From the songs I hear still echoing, I guess not ••• Carolyn, is Boston really the quickest way home for you? ••• In closing, I would like to thank Larry Goodin for finally repairing my office ••• So this is it for this summer. This is the happy, Old Troll at the new Half-way House.

1967

Hello again! This is the Old Troll at Halfway House, let me tell you about my winter. I first want to congratulate Larry Goodin on his marvelous roof which didn't leak and was also constructed so I could look out without getting cinders in my eyes. You know, during the fall on weekends those schoolteachers would keep coming back. I think they really love this mountain--why, one night they didn't go by 'til 11:3O ••• A little later I'd look out and see a bearded Crawford walking around over the snows and with the departure of Paul and Harold I knew I could settle down to a snug winter. In all it was very peaceful except for the occasional sputter of a Ski-Doo ••• With the arrival of Paul and Harold things began to get a little louder-- the clanking of hammers and such and with this I waited the passing of the first work train ••• Right now, I have progressed into this season quite peaceably, however if I am not tooted at or recognized I will be raising havoc with Paul's machinery and in all the Grumpy Club will have a great membership roster ••• FLASH••• Blooming Bud to return from Bloody England -- Fran says it's Nyetime ••• Card games in full swing at Boarding house ••• Summit House opens under a "Stickey" management? ••• Would like to congratulate John Ruggles on doing such a fine job on the No. 1 car in restoring it to original model ••• Tim Bemis says the dust gives him heartburn, just the dust, Tim? ••• Talk about weird brakeman, self-sealing spleens, erratic eyeballs, bird calls and ecstatic ears ••• About Bonnie going to the summit, it's really a Long story but it may become a legend in its own time ••• I've heard of koops capturing chickens, but I wonder if they can cage a Lark? ••• Say, Gordie, do you know any language besides French? ••• Here's hoping Max doesn't turn Blue on those midnight bike rides ••• Word has it, the Graumanns are coming ••• that's about all from here till next time, this is the Old Troll at the Halfway Shelter••

- Cog Clatter – Jun 29, 1967 v.2 n. 1

The Old Troll had Tom McCabe put new batteries in the track phone, found it worked much better. In fact, it worked so well I rang all the way to the shop and listened ••• Steve Christy reports that the terminology in the shop is somewhat similar to that which he learned on the track under Father Goodin, except that Uncle Paul puts comma's in with cigar smoke rather than tobacco juice ••• Frank Thompson said he had a growl in his engine. Roger Miller hurried down to tell Uncle Paul. Paul rushed to the scene, "What's the growl in your engine?" (Thinking Earl would have to make new boxes) "I haven't got one in it now, it's in Marshfield!" answered Frank. "What the red-hot-poker you talking about?" torched Paul. "My fireman, Joe Long, he always growls!" replied Frank ••• Bob Kent has offered to tutor Rusty Aertson during the summer. According to Bob, Harvard will give Rusty two credits in the liberal school of acting-out sciences. ••• John Klopp reports all hands win at Boarding House-- guess that must be a Navy saying. Bud Nye may lose his girl due to mechanical difficulties ••• Neil Elliott thinks his fencing experience has been a big asset on the track crew---parry, thrust, wind change---tobacco juice missed ••• Ray Clarke has established a funny schedule, but the two ladies who do the beds at the dorm aren't laughing ••• Cliff Kenny has made arrangements for the Chaplain to be at the Base each Wednes-

day, so Cliff says to keep all the problems for the Chaplain because he can't give sympathy and sell tickets ••• Carolyn Poltrack visits Cog, Counselors from Boys' Camp visit the same day---coincidence? ••• Joe McQuaid learned to hook the fire backwards so he can look and wave at the office. Nye got confused, thought he was going down the mountain instead of up, so it looks like the Six will need a rearview mirror. Can anyone figure out why Joe McQuaid tore up the order that · Ken Randall made for curtains in the office? It's not Claire to me •••• Did you hear about Jim McLaughlin? He drank a bottle of Windex and now he's the only brakeman who can see forever! •••• The party in the clearing was a big success --- at least, we found out who is dating whom --- well, at least who is interested in whom --- well, at least who is willing to be interested --- well, at least some people and some people are interesting to watch --- well, at least we had better watch some people ---well-l-l-l ••• the Old Troll has had difficulty digging up old ties since one of the publishers, Tim Lewis, is on a Scouting expedition to New Mexico ••• Marshall Faye has sent for a large suction cup so when the altitude gets to his biscuits, he can raise them by hand ••• Mr. Rouleaμ .says. he can fix the women's toilets at any time because he is a doctor of plumbing and doctors, of course, do not embarrass women ••• This is the Old Troll listening in at Half Way. *- Cog Clatter – Jul 7, 1967 v.2 n.2*

This is the Old Troll at Halfway bringing you more news from on the track phone! ••• FLASH••• IMPORTANT ••• a report from the Lucy Crawford Fan Club at the summit: --a list of officers:

Honorary President---Mike Haney
President---David Dexter
Vice-Pres.---Walter Mitchell
Secretary---Franny Drake
Treasurer---Tese Lefebvre

••• Is there a Broadway Play at the Summit? Someone reported a fiddler on the roof, eh, Tom ••• Who is the new employee called Pebbles? There's something a little rocky here ••• SOCIAL SECTION: Tea Parties in the Crystal Room ••• Mark pours at lunch ••• TWO smashing parties on top ••• MEANWHILE… Really, Tom, April Fool's in July, Holy Blackout ••• New flavors introduced at the Base, need we say more. ••• The education of Ronnie Rhoads has been completed, hurrah for scholarships or shall we say scholar HIPS ••• D. C. al Fine from last year --- Jane is still singing, scores available, inCHOIR of her ••• From what I hear there's alot of ___ -cats up at the top ••• 12 to 12, who can tell? It must be _____ ••• Sale on doughnuts, compliments of eh, stony, boulder, eh, rocky, ah yes, PEBBLES ••• MARSHall is not a bad name for Mr. Faye. They are all "knee deep" up there. ••• Norm and Bonnie didn't make cardinal at recent party ••• ANNOUNCING FROM THE "8", opening of a Sauna Bath --- Norm put on the Rat Patrol Goggles and went in to find a steaming Bear (HQ of yesteryear). There he was, the first customer, so Dave used bird calls to get him out, much to the amusement of the two Gordons ••• guerrilla warfare is going on at the Boardinghouse and probably the guerrillas should be taught how to do it after all----Confucious say, "He who throw, not well, lit firecracker, is liable to get same with big Boom-boom!" ••• Want to soar like a Lark? Well, have your money and, by Christy, you will be able to fly this Koop ••• When Bud's nye on gas, you can be sure flower girl, Fran, sends for help ••• Bat invades dining room lamp, gets killed---Charlie, what's the price of chimneys these days ••• What's the major attraction on the Mt. Washington Hotel Water Tower?. Perhaps a kooped-up bird? ••• EL GORDO gets new slicks, the rain tires guaranteed traction up to 10,000 passengers or Paul cheerfully recaps---But there are no green stamps at the shop ••• Not much gossip from the Base ---call it the midseason slump, so let's get going---- you're making it hard on me!!!! ••• That's about it from here, so ••• So Long! ••• This is the Old Troll of Halfway House with the red light for any Graumanns nearby, signing off! *- Cog Clatter – Aug 2, 1967 v. 2 n.3*

Sec. 37 - 1965-1967 On the Track Phone

Well, here I am back again, your Old Troll with news from the track phone ••• FLASH ••• Koop Rent-A-Car to go into competition with Broadbent Transportation Co, however, no trips to Lakes of the Clouds. Dave says no spongers, at least 25¢ ••• Wayne Howland, have you received any more gifts from Frannie Drake? If not, hear no evil, speak no evil, see no evil ••• Gay came down the ladder — trip -- the brakeman got away. ••• The Lucy Crawford Fan Club plans its next meeting in the Great Gulf, engine or ravine? ••• Warning for "Sugar" Kenison, your frappes may attack ••• Marshall Faye, where are you ??? Accident, hmm? ••• It's been rumored that they're giving lessons at the Crawford House on how to bounce off walls, Interested, Rusty? ••• Anne Smith, where did you get the green hair? ••• Lake at the Clouds has become a real attraction this summer - something like bears drawn to Honey ••• The reincarnations of the two "greatest" presidents: Warren G, Harding (Walter Mitchell) and Millard Fillmore (David Dexter) are running for President and Vice President on the "Think Big, Vote Whig!" ticket in '68. ••••Interested in purchasing a T.V.? Don't say a word to T. B., it might turn into a stickey affair •• •• two new dishwashers in Marshfield •••• Maybe singed eyelashes do rob you of sex appeal--but, by the looks of things Julie doesn't seem to think so •••• New cardinals: Ronnie, Pat, Norman, and Bonnie. Try again, Walter and Frannie! ••• Bill must find Cog girls not to his liking but I suppose we should give him Leeway ••• Edna spent her night keeping watch over the girls' dorm, or did she really fall asleep upstairs? ••• Walt and Dave have openedthe Mt. Washington Public Library -- Mrs. Rothenburger really has them where she wants them!$$ •• Another cycle, in the dorm at night •••• David, did you notice the new fence they're erecting at the entrance to the boys' camp? • Is Norm Timberlake on the wagon or is he drinking · on the s1y away from Methodist eyes?.,. Zebras arrive by parcel post- the byword is "watch out for Charlie" Although Charlie's leaving for camp •••• We realize it takes a certain style to eat in Marshfield kitchen, but Bill, white gloves? •• Frannie Drake continually coming up with new money-making schemes--shades of Miss Boucher... This is for you, Floyd: Eat now, Uncle Sam doesn't know the meaning of second helpings •••• First Irish crew (train, that is) in a hundred years--McNye, McQuaid and McLaughlin •• Racing Report from Bunker Speedway: Dick Tirrell, timekeeper; Lew Buzzell, flagman; Bill Oedel, pit man Champ wipes-out on top, loses machine and load over the embankment, no injuries because he leapt out before the crash. At start of the race, Root and Champ took off in staggered positions and Champ lost his load in the middle of the track. After being refueled, he proceeded a tricky corner maneuver to avoid Root but found himself too far over and lost control. The wreckage was then removed and Champ went on to dump his load in the traditional up; over, and away… Tidal waves hits the Irish as Claire lashes out with H20 and gets it nye on the return... Til next week… The Old Troll

However, there would be no next week for the Old Troll or the *Cog Clatter*. The next day, the publisher's sister, Miss Jitney was injured in the accident that killed Lucy Teague. Jitney Jr's reporting career would not resume until the Spring of 1976 at WDEV Radio in Waterbury, Vermont.

1967 Skyline Switch

New Hampshire Public Utilities Commission Transportation Director Winslow E. Melvin arrived at Marshfield Station at 12:45 AM on Monday, September 18, 1967 to begin his investigation of an accident that occurred seven hours earlier resulting in the death of eight persons. His preliminary report of the *"Derailment on the Mt. Washington Cog Railway at Skyline Switch"* delivered to the Commission and released on Friday, September 22, 1967 would later become the official final report. What follows is an edited version of that document illustrated with New Hampshire State Police photographs taken at the scene. This aerial photo was not part of the investigation but gives a good overview of the segment of the railway involved.

Aerial photo of Skyline Platform and Switch area. The descending train upper right has taken the Switch and is awaiting passage of ascending train to the left with its car on the Skyline Platform. On Sunday, September 17, 1967, the No. 3 Base Station derailed at the Skyline switch and fell off the track. The Chumley passenger car then derailed at the switch and traveled downhill across the platform before leaving the tracks at lower left

Sec. 38 - 1967 Skyline Switch

"Gentlemen:

"On Sunday, September 17, 1967, at approximately 5:30 P.M., a Mt. Washington Cog Railway passenger train descending the Mountain was derailed at Skyline, resulting in the death of eight persons and injuries to passengers and crew...

"The equipment involved consisted of Locomotive No. 3 *Base Station*, and an aluminum car *The Chumley No. 11.* This train left the summit in the vicinity of 5:10 P.M. The locomotive preceded the car. It was in charge of Engineer Gordon Chase of Lincoln. Charles Kenison of Jefferson was at the engineer's controls, and was under the instruction of Mr. Chase. The fireman was Peter H. Carter of 361 Centre Street, Milton, Massachusetts, who was riding on the fireman's seat and with him was Mr. Guilliaem (Rusty) Aertsen. Mr. Aertsen fired the train on its uphill run. In the car as brakeman at the manual brake controls was Nathaniel Carter of S. Woodstock, Vermont. *(editor's note: New Hampshire in newspaper reports)*

"Before leaving the summit, an announcement was made that there would be another train coming up to take any other passengers who wished to remain on the mountain. A number of people entered the car which has a seating capacity of 56 persons. It was intended to meet another train at Skyline, where the standees could be transferred in accordance with the usual custom. The steepest part of the grade is below Skyline.

"There are 13 rows of seats, two are seated each side of the center and at each end is an individual seat for accommodation of two persons. Nathaniel Carter stated that just before leaving the summit he counted 25 persons standing. He assumed that the seats were all occupied. There was no actual record of the number of passengers because the tickets were to be collected at Skyline. Based upon his count, there were approximately 83 persons in the car.

"Mr. Carter stated that on the trip from the summit toward the Skyline switch he operated the left hand brake wheel which controls the brakes on the rear axle (uphill) of the car. This control is at the down hill end of the car, approximately mid-way between its center and the left side, based on direction of travel. He stated that this control worked properly and that he controlled the speed of the car in accordance with the usual practice until reaching a point when the grade lessens near the switch, at which time he fully released the brakes so that the car would follow the engine into and through the switch. He further stated that after the engine entered the switch he saw it "Pop up and down." He noticed that it was derailed, at which time he immediately applied the left-hand brake wheel and another man located nearby started to operate the brake wheel on the right-hand side, which operates the brakes on the forward or down-hill axle. The individual who operated this brake was unknown to him, both before and after the accident.

"He stated that the engine started to pull away until the car went up over the obstruction on the switch. The car appeared to slow considerably and nearly stop, following which it went over the obstruction and proceeding down the trestle off the rails out of control to a point where it tipped off of the trestle. He stated that the right-hand brake wheel was not used from the time he

left the summit until reaching the switch because it was not necessary to do so in controlling the car. He further stated that the speed down the mountain was normal, that the train was slowed before entering the switch in accordance with usual practice. He estimated the speed of the car when it left the trestle at somewhere between 20 to 40 miles per hour.

"The four persons in the locomotive were interviewed. Peter H. Carter was riding on the fireman's seat and as the train approached the Skyline switch he was facing crosswise of the cab from right to left as the train was proceeding. The first he knew of anything wrong was when he felt the locomotive bounce into the air and return again to the trestle. He noted that Mr. Chase and Mr. Kenison immediately grabbed the brake handles and applied the hand brakes on the locomotive. He stated that the locomotive slowed down and then it appeared to him that the car pushed it off the trestle. He remained in the cab as it overturned, following which he got out and helped people out of the car.

"Rusty Aertsen was riding in the cab of the engine beside Mr. Carter. He fired the locomotive on its up-hill trip. He stated that as the engine proceeded down the mountain toward the Skyline switch he looked at it to make sure that the rails were O.K. and that the flags indicated that the

switch points were in proper position. He also stated that he saw Nathaniel Carter at the end of the car in position to operate the brakes. As he looked at the track it appeared to him that the switch was in proper position for his train to pass over.

"Charles Kenison, who was at the locomotive's controls, was interviewed at Weeks Memorial Hospital in Lancaster. He stated that he started firing locomotives on this railroad on August 27, 1967, previous to which he had been employed as brakeman starting to work on June 20, 1967. At the time of the accident he was being instructed in the handling of the locomotive by Gordon Chase. He stated that the descent was made with the air valve controlling the speed of the locomotive and at the usual speed of approximately 4 to 5 miles per hour, although on entering the switch he stated that the speed of the train had been slowed to 2½ miles per hour for passing through this mechanism. He stated that from his position he could see the switch and that he examined and determined that there were three straight lines through it, meaning that the two rails and the cog rack indicated that they appeared to be lined for a straight movement. He stated that the visibility was good, that there was "some dusty fog" at the time, but this did not interfere with the visibility of the switch. He felt certain that Mr. Carter and Mr. Aertsen also looked at the switch to determine its position. He adjusted the air valve to compensate for the reduced grade in passing through it, because of the less severe grade at this position.

"As soon as the first cog of the locomotive hit the obstruction he and Mr. Chase operated the brake handles to apply the brakes. He also opened the steam valve slightly for the forward position to assist in retarding the movement of the locomotive. He stated that he had operated locomotives several times down the mountain, that on this particular trip the train was in complete control, that there was no unusual load which required any different control of the engine than in a normal run, that everything appeared to function as usual.

"Engineer Chase was interviewed in the St. Louis Hospital in Berlin and appeared to be more severely burned than any other person occupying the locomotive. He stated that he looked at the switch before the train passed through it and could not understand

why he did not see any obstruction there. He stated that the train was handled normally in accordance with his instructions. He further stated that during his employment with the Cog Railway he had found, on occasion, at least two such, when switches were improperly lined; one of these was going up the hill, the other was going down the hill.

"There are 9 separate operations which must be followed in throwing the switch. Five of these involve 'flipping the rails', two are sliding of cog rack sections, and two are hand thrown targets which operate the switch points very similar to a conventional railroad switch.

"An examination subsequent to the accident clearly indicated that a section of the rail was across the cog rack at an angle of approximately 9 degrees, resulting in a lifting and a sideways movement to the right of the cog wheel as it encountered this section of track. This section was called the 'long bar rail', is a 5' 4 and 3/4" in length and when set for a side track movement it is placed over the main line cog rack extending 2½ inches above the top of the rack. This section of track, when struck by the cog wheel of the locomotive and car, was bent approximately 2 inches out of line. The cog rack was torn on the right hand side as the cog was lifted and forced to the right, resulting in the derailment. The riding wheels of the locomotive and the car struck a section

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of the cog rack on the side track switch between the rack and the left rail. From this point the cog traveled just inside of the right-hand rail through the switch points. The engine continued down the track structure with its center just inside the right hand rail. The engine tender had no appurtenance which would strike the misplaced section of track, but because the locomotive was derailed it began to jack-knife with its rear extending over the left hand rail. It continued in this approximate position a distance of approximately 68 feet until it tipped off of the trestle landing at appropriately a 45° angle against the track work supports.

"At the point where it (the engine and tender) left the trestle the distance from the top of the rail to the ground is 8' 8". It came to rest on the ground with no evidence of sliding after striking the ground.

"The car with the passengers continued on past the engine with its left hand wheel riding the cog rack with the cog wheel itself just inside the right hand rail gaining momentum until reaching a point approximately 516 feet below the initial point of derailment. During this time its speed increased. A left hand curve was then encountered and the force against the rail finally was sufficient to spread it to the breaking point. This let the car proceed off the right hand side of the trestle tipping on its right side and sliding down the hill adjacent to the trestle until it stopped in a

combination of earth and stones. At the point where the car left the trestle, the grade was approximately 24%. The top of the rail was about two feet above the ground but the mountain slope was steeper than the trestle, so that where the car came to rest the ground was approximately 5 feet below the rail. The car traveled a distance of approximately 60 feet along the rough terrain of the mountain before coming to a stop.

"The main force of the collision appeared to be caused by striking a jagged rock at the right front corner of the car. The right side of the car was damaged and windows broken. The front end remained intact with two windows to the right of the center broken and the two to the left of the center remaining un-cracked.

"It is indicated that some of the passengers, 6 or 8, may have jumped from the car before it left the track work.

"From the facts obtained from the train crew there is no evidence that the number of passengers occupying the car affected the speed or control of the train prior to its derailment. In the braking of the car only one of the two systems was in use between the Summit and the Skyline switch. The location where the car left the trestle was at a point where the structure was almost at ground level. It was only 5 feet lower than the trestle where the car came to rest. The terrain was a gradual slope and not a gully, as described in some reports.

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"It is apparent from the testimony taken from the involved persons that the switch was properly closed for main line use after the last train movement was made through the side track. It is also apparent that as engine No. 3 approached just prior to the derailment that one of the flip rails was in a position across the cog rack as it would be for a train movement to the side track.

"The immediate cause of the derailment was the location of this 5' 4 and 3/4" section of track. The failure of those on the engine to notice this, in view of the fact that they looked at it as the train approached is very difficult to explain. Had it been noticed and the train stopped before striking it the accident would not have occurred.

Respectfully submitted,

Winslow E. Melvin
Transportation Director

All photos in this section, except the first, were taken by George Hester of the New Hampshire State Police Criminal & Photographic Laboratory on September 19, 1967
- From N.H. PUC files

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List of Passengers Injured & Status

The Casualty Roster with their injuries & conditions as published in Thu, Sep 21, 1967 *Littleton Courier.* Hospital Key: **MH** - Mary Hitchcock in Hanover, NH; **LTN** - Littleton Hospital; **STJ** - Brightlook, St. Johnsbury; **BER** - St. Louis hospital, Berlin; **LAN** - Lancaster Hospital; **COT** - Cottage Hospital, Woodsville; **BAR** - Barre City Hospital, Vt.

LTN	Bailey, Floyd P.	40	New London, N.H. - discharged
LTN	Bailey, Kenneth P.	12	New London, N.H. - discharged
LTN	Bailey, Louise H.	41	New London, N.H. - discharged
LTN	Belovitz, Ronald T.	45	Agawam, MA - discharged
MH	Blackburn, Frances M.	67	Memphis, TN - back injury and fractured ribs, Fair condition - wife of Norris
MH	Blackburn, Norris	68	Memphis, TN - fractured right shoulder, fractured right arm, fractured right hand, fractured right leg, fractured ribs Critical condition - husband of Frances
MH	Buxton, George	49	Clifton, N.J. - head injury, right should injury Satisfactory condition - husband of Marie
MH	Buxton, Marie	47	Clifton, N.J. - back injury - Fair - wife of George
STJ	Cardin, Rita	42	Newmarket, N.H.
STJ	Cardin, Roger E.	47	Newmarket, N.H.
STJ	Cardin, Roger E. Jr.	21	Newmarket, N.H. - discharged
LTN	Casparius, Jennie W.	60	Falmouth, ME - discharged
LTN	Casparius, Richard E.	62	Falmouth, ME - discharged
LTN	Croteau, Bertrand, Jr.	6	Thornton, N.H. - discharged
LTN	Croteau, Bertrand, Sr.	32	Thornton, N.H. - admitted - burns of face, hands, arms and scalp, back injury
LTN	Croteau, Debra Ann	11	Thornton, N.H. - discharged
LTN	Croteau, Edmae	30	Thornton, N.H. - discharged
LTN	Davies, Carol Ann	9	Hampton, N.H. - discharged
LTN	Davies, James T.	33	Hampton, N.H. - discharged
LTN	Davies, Lorreta	5	Hampton, N.H. - discharged
LTN	Demeritt, Everett W.	30	Wolcott, VT - discharged
LAN	Dixen, James B.	12	Portland, ME
LTN	Dixen, James I.	55	Portland, ME - admitted - bruises of right shoulder (severe)
LAN	Dixen, Natalie	44	Portland, ME
LAN	Dorsey, Carol A.	26	Woodstock, VT
	Drury, Phyllis		Essex Junction, VT
	Drury, Robert E.		Essex Junction, VT
COT	Everbeck, June	22	Newton, MA - discharged
LTN	Everbeck, Richard	25	Newton, MA - discharged
	Frigon, John W.	22	Gardner, MA
	Frigon, Ruth A.	22	Gardner, MA
LTN	Gaines, Clifford	33	Lockport, IL - admitted - lacerations and contusions, ribs, right shoulder, right wrist
LAN	Gaines, Jeffery	2.5	Lockport, IL
LTN	Gaines, Norma	33	Lockport, IL - admitted - minor injuries

	Gaines, Tom	5	Lockport, IL
LTN	Gothreau, Ovide	64	Putnam, CT - admitted - fractured ribs and right shoulder
LTN	Gothreau, Pauline		Putnam, CT - admitted - multiple back injuries
	Greene, Michael	28	Rockaway, N.J.
MH	Gross, Charles	31	Brookline, MA - lacerations of scalp, fractured left arm - Satisfactory - husband of Gaby
MH	Gross, Gaby	34	Brookline, MA - facial abrasions - Satisfactory - wife of Charles
MH	Gross, Melanie	3	Brookline, MA - contusions and lacerations of face Satisfactory - daughter of Charles & Gaby (Mr. and Mrs. Gross are the parents Monica Gross, 2, who was killed in the accident.)
LTN	Gula, Carol A.	19	Williamansett, MA - discharged
	Herrmoin, Bruno	40	Bridgeport, CT
	Johnson, Ann	27	Parsippany, N.Y.
STJ	Kaloceris, George	27	Lynn, MA
BAR	Larendeau, Carol		Barre, VT
BAR	Larendeau, Joseph	34	Barre, VT
MH	Larendeau, Linda	3	Barre, VT - lacerations of face and fractured jaw Fair
MH	Leslie, Nancy	41	Madison, OH - multiple body abrasions. Satisfactory wife of Richard
MH	Leslie, Richard	49	Madison, OH - head injury, right eye injury. Critical husband of Nancy
COT	Meister, Peter	32	Boston, MA
LTN	Morrow, Michele	19	Springfield, MA - admitted - fractured pelvis
LTN	Pichler, Klaus	32	Acton, MA - discharged
LTN	Provencher, Daniel R.	9	Biddeford, ME - discharged
LTN	Provencher, James	5	Biddeford, ME - discharged
LTN	Provencher, Jeanne	32	Biddeford, ME - discharged
LTN	Provencher, Linda J.	7	Biddeford, ME - admitted
LTN	Provencher, Robert	31	Biddeford, ME - discharged
LTN	Provencher, Susan D.	10	Biddeford, ME - discharged - scalp laceration
LTN	Rasicot, Paul	28	Woodstock, VT - admitted - back injury
LTN	Raymond, Kenneth P.	20	Springfield, VT - discharged
MH	Reimer, Donald MD	33	Georgetown, MA - fractured ribs, possible head injury Fair
	Reimer, Robert	6	Georgetown, MA
MH	Reimer, Susan	10	Georgetown, MA - possible head injury, multiple body abrasions, fractured right arm. Satisfactory - daughter of Dr. Reimer
COT	Remington, Susan	23	Springfield, VT
LTN	Richmond, John	13	Putnam, CT - admitted - multiple lacerations, fractured humerus
LTN	Rodgers, Dean	4	Campton, N.H. - discharged

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LTN	Rodgers, Frances	24	Campton, N.H. - discharged
LTN	Rodgers, Harold	34	Campton, N.H. - discharged
	Roemisch, Harry		Fort Devens, MA
	Roemisch, Paula		Freemont, N.H.
STJ	Schoop, Greta	33	Bridgeport, CT
STJ	Simmon Christina	*child*	Lynn, MA
LTN	Valliere, Joseph V.	59	Methuen, MA - discharged
LTN	Warren, Beryl M.	27	Craftsbury, VT - admitted - spine injury, laceration left shoulder
LTN	Warren, Patrick	*14 mos*	Craftsbury, VT - discharged
LTN	Webster, George	35	Campton, N.H. - discharged
LTN	Webster, Jeanette	21	Campton, N.H. - discharged
	Witmer, Elsie Ann	20	Roxbury, MA
	Witmer, Jay Earl	21	Roxbury, MA
	Woodward, Sumner	*husband*	New London, N.H.
	Woodward, Joan	*wife*	New London, N.H.
	Woodward, Kate	*child*	New London, N.H.
	Woodward, Kim	*child*	New London, N.H.

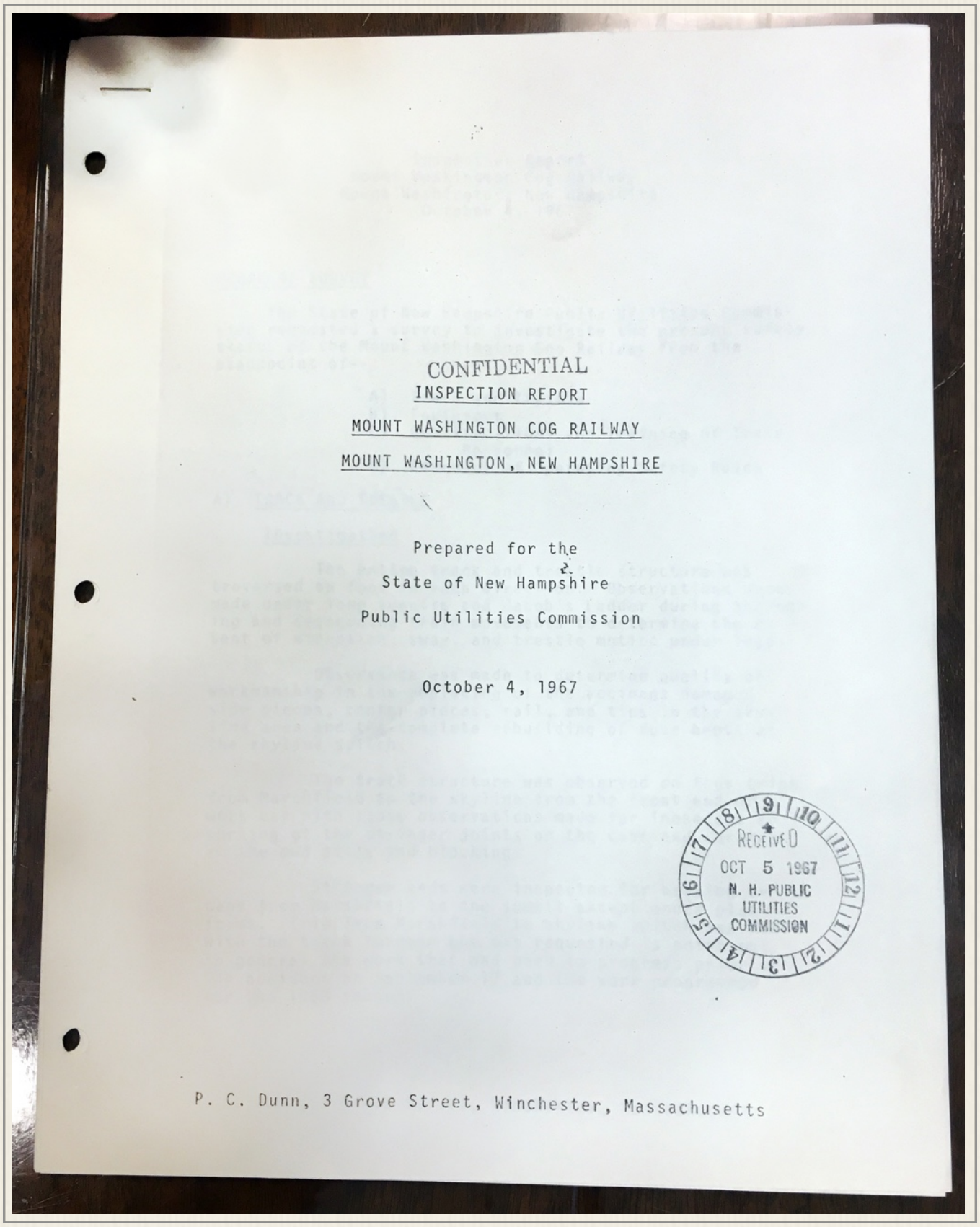
Two more passengers were admitted to Littleton hospital for checkups Monday morning and two more were taken directly to St. Louis Hospital in Berlin. They included Anthony Bertelli, 47, and Mrs. Jeanne Bertelli, Haddam, CT

Crew Injured & Status

LTN	Aertsen, "Rusty"	19	Buck's County, PA - abrasions & contusions discharged
	Nate Carter		shoulder & nose injuries - discharged
BER	Chase, Gordon	56	Lincoln, N.H. - severe burns (3rd degree) - critical
LAN	Kenison, Charles	18	Jefferson, N.H. - burns

CONSULTANTS' REPORTS

The New Hampshire Public Utilities hired two consultants in the wake of September 17, 1967 accident to review and report on the condition of the Mount Washington Railway's track, equipment and operations. The organizations were both run by long-time Boston & Maine Railroad personnel - one had also worked on the unique Mount Washington Railway before beginning his B&M career. Thomas K. Dyer, Inc. of Lexington, Massachusetts was founded by B&M's retired chief engineer Thomas Keane Dyer who worked for the B&M from 1946-1963. Paul C. Dunn started working at the Cog as a Dartmouth College student in 1930. Dunn entered into an apprenticeship with the Boston & Maine and in 1939 he began full-time as a mechanical inspector. He took over as the railroad's chief mechanical officer in 1960. Over the years, he had helped direct spare parts & equipment to the Cog. Dunn's familiarity with the mountain-climbing railroad allowed him to submit his review less than a month after the accident. Thomas K. Dyer Consulting Engineers' report would arrive in March 1968. This group was specialized in mainline, traction railroads. Dyer's report could be found in the N.H. PUC's public files. Dunn's was stamped "CONFIDENTIAL." It is reproduced here *(with annotations)* in its entirety. An edited version of the Dyer report follows.



CONFIDENTIAL

INSPECTION REPORT

MOUNT WASHINGTON COG RAILWAY

MOUNT WASHINGTON, NEW HAMPSHIRE

Prepared for the

State of New Hampshire

Public Utilities Commission

October 4, 1967

RECEIVED
OCT 5 1967
N. H. PUBLIC
UTILITIES
COMMISSION

P. C. Dunn, 3 Grove Street, Winchester, Massachusetts

Inspection Report
Mount Washington Cog Railway
Mount Washington, New Hampshire
October 4, 1967

SCOPE OF SURVEY

The State of New Hampshire Public Utilities Commission requested a survey to investigate the present safety status of the Mount Washington Cog Railway from the standpoint of --

A) Track and Trestle
B) Equipment
C) Qualifications and Training of Train Personnel
D) Adequacy of Operating Safety Rules

A) TRACK AND TRESTLE

Investigation

The entire track and trestle structure was traversed on foot in each direction. Observations were made under long trestle and Jacob's Ladder during ascending and descending train movements to determine the extent of vibration, sway, and trestle motion under load.

Observance was made to determine quality of workmanship in the replacing of the accident damaged side pieces, center pieces, rail, and ties in the Skyline area and the complete rebuilding of four bents at the Skyline switch.

The track structure was observed on four trips from Marshfield to the Skyline from the front end of a work car with close observations made for looseness or working of the stringer joints on the caps and working at the mud sills and blocking.

Stringer ends were inspected for bearing on caps from Marshfield to the summit except under platforms. Trip from Marshfield to skyline switch was made with the track foreman *(Larry Gooden)* who was requested to point out in general the work that had been in progress prior to the accident on September 17 and the work programmed for the 1968 season.

Field observations were cross checked with a Timber inspection and l968 Timber renewal program made on August 9, 10, and 11, l967.

Findings

The Timber inspection made on August 9, 10 and 11, 1967 *(by Gooden & Ops Manager Jitney)*, appears to have been carefully made. The 1968 Timber renewal program developed from this inspection is adequate to maintain the safety of the track and trestle. Timber for the program has been ordered with some of it already received.

The cog rack and rails are safe and securely fastened. A welding program has been in effect for several years to help retard the cog rail wear with good results. This should be continued.

Some longitudinal and lateral bracing and side posts are missing or deteriorated. However, no undue vibration or trestle movement was evident at these locations while under train movement, indicating a substantial and well-constructed structure adequately bolted so that the entire trestle works or is held together as a unit. The very nature of the terrain with its rugged rock outcroppings holds the trestle from side or downhill slipping or movement.

Two of the wind protection cables installed after the 1938 hurricane were disconnected and one was slack. These, however, were not installed to hold the track from a safety standpoint, but merely to protect against a complete destruction of the trestle in a high wind.

Track line and surface is in need of attention through a program of blocking and shimming under the mud sills. This condition was not found unsafe; however, it does add materially to the maintenance expense of the locomotives and cars, in as much as these are un-sprung with fixed rigidly held journal bearings which do develop wear if not operated on a fairly even plane.

Workmanship in repairs and rebuilding the track and trestle at Skyline and the l967 program work completed was good. The track foreman *(Gooden)* has an intimate knowledge of the track and trestle and can be expected to recognize and correct a condition requiring attention before a safety hazard develops.

No condition was found in the track and structure which is considered unsafe or critical.

B) EQUIPMENT

Investigation

Only two locomotives, Nos. 8 and 9, were under steam at the time of the inspection. These locomotives were given both a standing and running inspection. Locomotives Nos. 1, 2, 4, and 6 were inspected while in their various stages of repair and standby conditions. They were not tested under steam. Locomotive No. 3 which was wrecked on September 17 was inspected after its arrival at the Base Station shop.

The boiler of locomotive No. 1 was being given a new front flue sheet, smoke box, and tubes. This boiler was entered through the dome for an internal inspection of the boiler barrel, crown sheet, crown stays, and the back head bracing. The front flue sheet bracing was not inspected as it had been removed in order to install the new flue sheet.

The locomotive log record was checked for pertinent repair data, particularly as to boiler status

Passenger car No. 12 and a work car were observed and brakes tested in actual train operation. Passenger cars Nos. 1, 4, 5, 6, and 7 were given standing inspections with particular emphasis on the brake systems. Passenger car No. 2 was observed in the process of being completely rebuilt with a new steel frame and braking system. Passenger car No. 11 which was wrecked on the mountain was inspected for conditions other than those which were accident caused

Machine shop and repair shop practices were checked for quality of workmanship with particular emphasis on internal parts not readily visible for daily inspection.

Findings

The locomotives, Nos. 8 and 9, which were observed while under steam and under working conditions appear to be well maintained and steam tight as to boiler and piping. The other locomotives not checked under steam likewise appear well maintained. No exceptions from a safety standpoint could be taken.

The lack of damage that locomotive No. 3 sustained in its drop from an eight-foot trestle speaks well for the ruggedness of these engines.

The Mount Washington Railway is fortunate in the caliber of its maintenance personnel, particularly as to welding *(Paul Philbrick)* and boiler work *(Ray Gilman)*, evidenced by the boiler work being performed on locomotive No. 1.

The locomotives are vastly improved over what they were when acquired by the present company in l931, even though they are 36 years older. Redesigned crank shafts, main shafts, journal boxes, crank shaft bearings, counter weighted cranks, cast steel wheels, cast steel cog gears, cylinders, and valve mechanisms, along with forced feed lubricators, molded asbestos brake lining, electric lights, new tenders, and a complete new system of steam piping are some of the maintenance saving and functional improvements engineered, developed, and installed by the present company since 1931. *(Ed note: Dunn would know. He was working on the Cog when Henry Teague assumed ownership from the B&M in 1931.)*

New fire box side sheets have been installed on all except one locomotive during the past several years. A new boiler has been purchased and frames are in process of construction on which this boiler is to be installed. When complete, this will be the first new locomotive built since No. 9 in 1908.

The adequacy and soundness of construction of the new style aluminum cars were apparent from the slight structural damage sustained in the accident by car No. 11.

Workmanship in the rebuilding of one of wooden cars appears good. Cars have been modernized in the past few years with improved brake drums, molded asbestos brake linings, and cast steel wheels.

No conditions were found on any of the locomotives or cars or exceptions taken in maintenance practice could be considered as constituting a safety hazard.

C) QUALIFICATIONS AND TRAINING OF TRAIN PERSONNEL

Investigation into the qualifications and training of the engineers, firemen, and brakemen could only be made as to the limited force currently *(late Sept-Oct)* employed by the railroad. Most of this group of employees leave after Labor Day. It is the customary practice after this date to have available one or two crews during the middle of the week and augment this during weekends with returning summertime employees who are able to get back for weekend duty. Interviews and observations were made with one regular engineer, two weekend engineers, and several weekend brakemen and firemen. All of those observed working in their capacities as engineer, fireman, or brakeman on passenger and work trains indicated a complete understanding of their jobs with due regard to safety. Some of these observations were made under rather difficult circumstances, including the critical locomotive movements made during the re-railing operations at Skyline and the braking of the work train which held back its usual load plus the damaged car *(see Vol. 3 Timeline)* on the descent from Skyline to the Base.

Discussion with the train dispatcher *(Cliff Kenney)* and several engine crew members indicated that the normal practice was for new brakemen to be instructed and qualified by the senior fireman. This process of teaching and qualifying might take up to six trips, depending on the prior experience of the individual. The engineer must also give his approval of the braking ability of the trainee brakeman before he is considered qualified.

Brakemen who desire to are usually promoted to fireman, the firemen in turn are promoted to engineers, after they have gained sufficient experience in the operation and care of the locomotive under the tutelage of an engineer.

No age limit or length of service for any one of these positions before promotion is standard, this being entirely dependent on the capabilities of the individual. Except for the few regulars and a few local school teachers who work regularly in the summer and come back for fall weekends, most of the other engine and train crew are college students.

The maturity, ability, and interest of the person involved and the thoroughness of the training are more important for this work than an established age limit or years of service criterion. If these factors are carefully observed in selecting men for this work and the qualification rules are firmly enforced, the system is adequate and safe.

D) ADEQUACY OF OPERATING SAFETY RULES

The railroad does not have a book of operating rules governing the movement of trains, nor a code of safety rules governing working conditions and the traveling public. Such rules have been handed down by word of mouth and have been considered as part of the training process.

Since the accident on September 17, 1967, new rules have been established governing the operation through switches, the number of people allowed in the cab of the locomotive, and the braking responsibilities of the brakemen. The current train personnel have been instructed on these rules and it is understood that all returning train personnel will be instructed on the rules before they are allowed to work on a train.

These rules are proper and adequate for safe train operation. Supervision must see that they are observed.

CONCLUSIONS

The track and trestle structure is safe for operation and if maintenance, as programmed is carried out, it will continue to be safe.

The locomotives and cars are adequately maintained and have adequate holding and braking power to do the job required. The equipment is safe and suitable for operation.

If the selection and training of personnel is carried out as programmed and the train operating safety rules are observed, there should be no question as to the safety of train operation.

RECOMMENDATION

One recommendation only is given with this report because of its definite relationship to future safety of operations and restoration of public confidence. The individual recommendations, for long range improvement, which could be made in the maintenance and operations will in the normal course of management be handled through the fulfillment of this one recommendation.

It is recommended that an experienced manager or superintendent, well-rounded in maintenance, operations, and employee supervision, be employed by the Mount Washington Cog Railway.

Respectfully submitted,

Signed: P. C. Dunn

Report
on
Mount Washington Cog Railway
for
New Hampshire Public Utilities Commission
October 1967

Received by PUC: March 4, 1968

SCOPE OF SURVEY

The New Hampshire Public Utilities Commission retained Thomas K. Dyer, Inc. to investigate and report on th adequacy of the trestle, equipment, and operating practices of the Mount Washington Cog Railway after the passenger train derailment of September 17, 1967.

A field inspection of the trestle indicated 8% of the timber was poor and needed replacement. Track surface was poor in some locations due to crushing of timbers. Downhill movement of the trestle, due principally to inadequate longitudinal bracing, has resulted in poor track alignment. Computations of stresses in the trestle showed stresses higher than considered allowable in normal engineering practice in some members.

Operating mechanical equipment was in a satisfactory condition at the time of the inspection. Braking systems were found to be adequate to control and stop the trains under operating conditions. No written instructions exist concerning the inspection of equipment.

Train operation was studied to determine operating practices. No written instructions were found other than those issued by the Public Utilities Commission in October 1967. Recommendations resulting from this investigation are summarized as follows:

a. Eight (8) percent of the trestle timber needs replacement and longitudinal bracing fasteners require replacement. Overstressed members should be maintained in good condition.

b. The track requires surfacing and lining.

c. Written instructions should b prepared by the Railway and submitted to the the Commission for approval covering equipment inspection and operating rules defining responsibility, duties, train operation and qualification of personnel.

d. The Railway should furnish the Commission annually a statement from a qualified and responsible employee that the trestle, track, and equipment has been inspected and is adequate for operation.

FINDINGS

Track and Trestle Structure

The inspection findings are summarized as follows:

Running Rails: The running rails consist of 25 lb. rail (approximate) from the Base Station to the Summit. From the Base Station to the Shop, the rail was 50 lb. (approximate). The rail is old and worn but in satisfactory condition except for a few rails broken in the joint area. Four hole joint bars were used without lock washers. Many loose bolts were observed. The joining bars were in satisfactory condition. Running rails were fastened down on every other tie with one track spike and one bolt. Spikes and bolts were in satisfactory condition. Rails in general were butted up tight due to no anchorage and general downhill movement. There were marks on the rail under spike heads showing evidence of rail movement apparently due to expansion and contraction from temperature changes. The movement was not excessive.

Cog Rack: The cog rack assembly is 12'-0" long. Th cog rack is fastened with two ¾-inch bolts through every other tie (ten bolts per 12' section). Angles were corroded and, in some locations on curves, worn by the gar teeth. The general condition was satisfactory. A considerable number of loose spools were observed. Other spools had been welded to the angles to correct a loose condition. Spacing of spools between two cog rack assemblies was frequently poor, up to 1" too wide.

Switches: There are three switches on the Railroad located at the Base Station, Waumbek Tank, and Skyline. The switches are considerably more complicated than conventional Railroad switches due to the cog rack assembly. Nine separate moves are required to line the switch. Due to the many movable parts in the switch, the switch, both cog rack and running rails, is very flexible in the sidetrack move. Gauge was poor and evidence of wear where various members of the switch had been struck by equipment was apparent at all three switches. The condition of the various members making up the switches was satisfactory.

Line, Surface and Gauge: The horizontal alignment of the running rails and cog race was generally poor due to downhill movement of the trestle structure. Track surface was poor in many locations principally due to crushing and settlement of supporting timbers. The gauge of the track was general satisfactory except in a few locations on curves and through switches.

Trestle: Approximately eight (8) percent of the timber was found to be in poor condition and in need of replacement. Considerable crushing of caps and sills has occurred which has resulted in poor track surface at these locations. Longitudinal bracing of the trestle was consistently poor except for Jacob's Ladder. A portion of the shims were in poor condition and in need of replacement. Additional shimming is required at some locations to improve track surface.

Equipment

An inspection was made of the equipment operated by the Mt. Washington Cog Railway with emphasis on braking systems and maintenance procedures. The equipment consists of seven (7) passenger cars including two aluminum cars, two (2) work cars and six (6) steam locomotives.

Braking Systems - Cars: At the time of inspection, all cars capable of operating had braking systems in adequate condition. Axles, wheels, and car frames were also inspected and found to be adequate.

Braking Systems - Locomotives: Observation during operation showed all three (braking) systems (brake, ratchet, cylinder compression) were capable of stopping thE locomotive independently. The general condition of locomotives at th time of inspection was satisfactory. It is understood a full hydrostatic test is made of the boilers annually before locomotives are put in service. We were also advised that each locomotive is inspected after each run.

Operating Practices

Operating procedures were observed during train operation and additional information obtained by interviewing Railway personnel. No written operating rules, procedures, personnel tests, or personnel rosters appear to exist (except for instructions issued at the request of the Public Utilities Commission during the inspection period.)

ANALYSIS OF FINDINGS

The general condition of cars and locomotives in operating condition at the time of inspection was satisfactory. Braking systems were found to be adequate to stop trains under operating conditions. In order to insure a continued satisfactory and safe condition of equipment, written instructions for the frequency of inspection, methods of testing, and equipment components to be inspected for locomotives and cars would be desirable. Car inspection instructions should place a particular emphasis on periodic inspection of the hand brake system in detail, axle, wheels, pawl and ratchet, and provide for brake tests.

The problem of obtaining steam locomotive maintenance personnel will be increasingly difficult as men who railroaded in the Steam Era become more scarce. It would appear necessary to train a nucleus of young men in this work to insure adequate maintenance forces in the future.

The long history of successful operation of this Railway indicates operating procedures have been largely satisfactory. The investigation of procedures revealed, however, that no written instructions or rules, other than those recommended by the Public Utilities Commission recently *(see below)*, have existed. The absence of written instructions defining responsibilities, duties, train operation and crew qualification increases the possibility of man failure.

- Thomas K. Dyer, Inc. - Lexington, Massachusetts

To All Engineers, Firemen and Brakemen:

The following rules have ben adopted by the Mount Washington Railway Company upon the order of the Public Utilities Commission:

1. **Trains ascending** the mountain must stop before passing over any switch, following which the brakeman shall examine the switch, and the train will proceed upon his motion only after he is satisfied that it is properly set. During the passage of the train the brakeman shall observe the movement of the train over the switch making certain all parts are in proper condition, and to report any excessive movement or other condition indicating that maintenance attention should be provided. **Note:** The brakeman shall stand beside the switch during the movement of the car and engine over the switch and shall not return to his post until the entire train has cleared the switch.

2. **All descending trains** shall stop before passing over any switch and both engineer and fireman shall make a physical inspection, acknowledging to each other that it is properly set for passage and that passage through the same be made at a very low speed not to exceed 1½ miles per hour. **Note:** The fireman shall get out of the cab and actually look at the switch before the train goes over the switch. If due to darkness or weather conditions, he cannot see the switch, he shall make whatever examination is necessary on th ground in order to be sure that the switch is in the proper position before the train proceeds over the switch. Until the fireman has completed his examination the train shall not proceed over the switch. It is the responsibility of the fireman to examine the switch, but it is also the responsibility of the engineer to look at the switch from the cab since he is the person primarily responsible for th safety of th train, its passengers and crew.

3. That the brakeman while ascending the mountain shall be stationed in the forward end of the car in a position to observe and ascertain that the cog rack, rail and structure is in normally safe condition without obstructions.

Sec. 38 - 1967 Railway Rules Memo

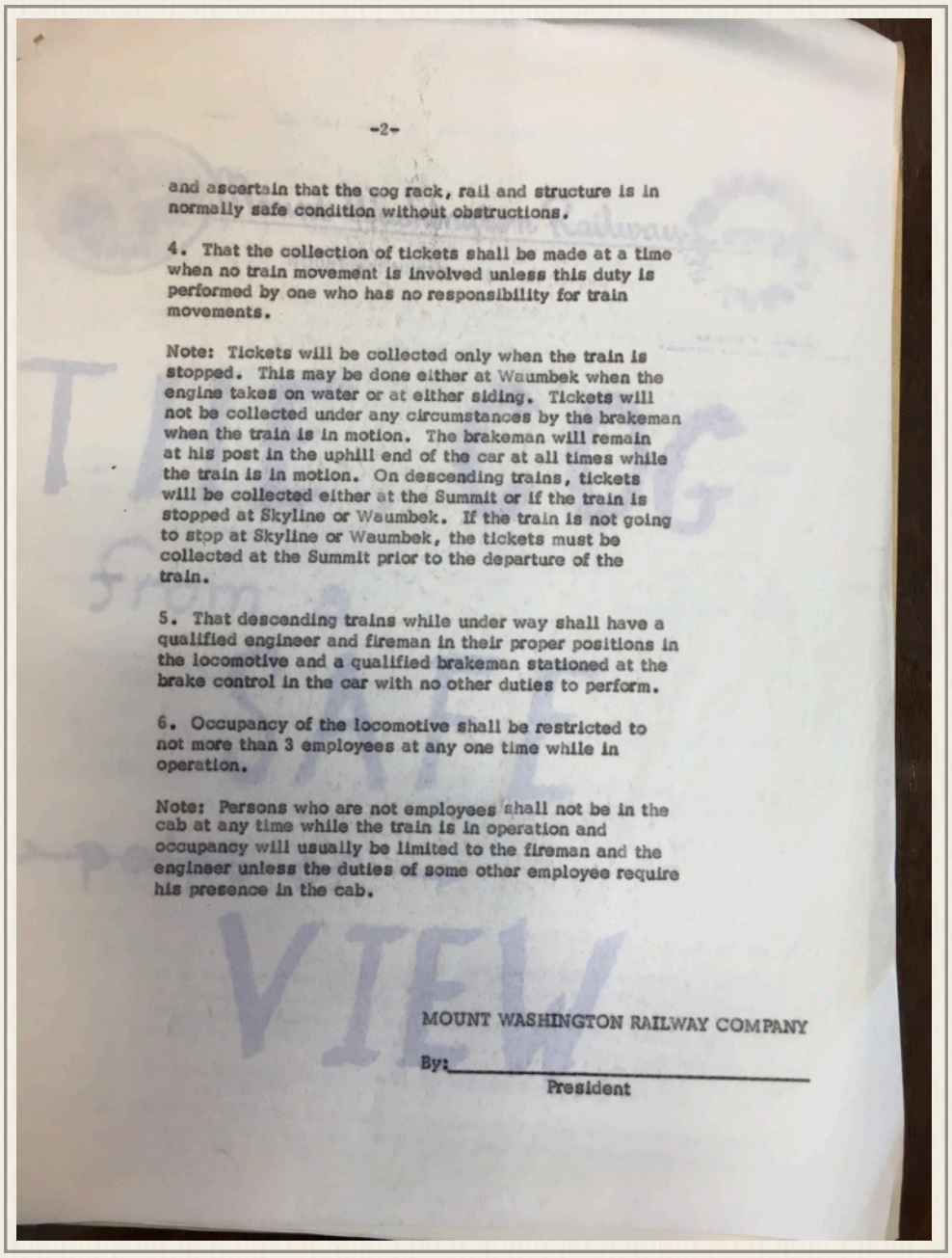
4. That the **collection of tickets** shall be made at a time when no train movement is involved unless this duty is performed by one who has not responsibility for train movements. **Note:** Tickets will be collected only when the train is stopped. This may be done either at Waumbek when the engine takes on water or at either siding. Tickets will not be collected under any circumstances by the brakeman when the train is in motion. The brakeman will remain at his post in the uphill end of the car at all times while the train is in motion. On descending trains, Tickets will be collected either at the Summit or if the train is stopped at Skyline or Waumbek. If the train is not going to stop at Skyline or Waumbek, the tickets must be collected at the Summit prior to the departure of the train.

5. That descending trains while under way shall have a qualified engineer and fireman in their proper positions in the locomotive and a qualified brakeman stationed at the brake control in the car with no other duties to perform.

6. **Occupancy** of the locomotive shall be restricted to not more than 3 employees at any one time while in operation. **Note**: Persons who are not employees shall not be in the cab at any time while the train is in operation and occupancy will usually be limited to the fireman and the engineer unless the duties of some other employee require his presence in the cab.

MOUNT WASHINGTON RAILWAY COMPANY
By: Ellen C. Teague - President

Editor's note: In late 2018 a copy of this memo was found in a file attached to copies of The Cog from a Safe Point of View and Brake - Fire - Run produced in the early 1960s which outlined in writing some of the responsibilities, duties, train operation and crew qualifications the Dyer report said was lacking. The photo below of the memo to Engineers, Firemen and Brakeman records this.



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Note: Persons who are not employees shall not be in the cab at any time while the train is in operation and occupancy will usually be limited to the fireman and the engineer unless the duties of some other employee require his presence in the cab.

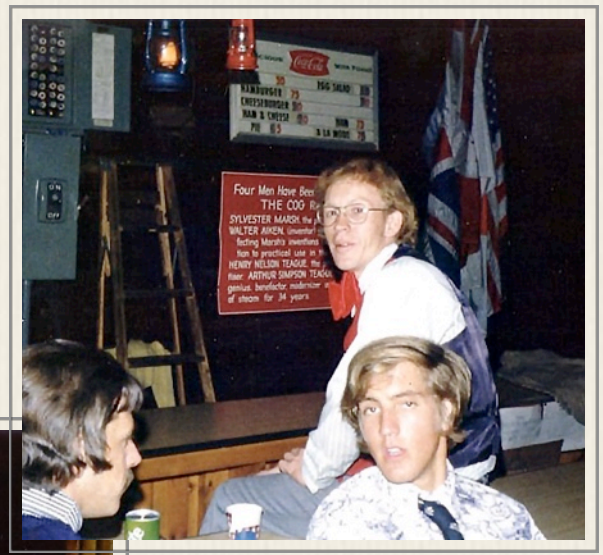
MOUNT WASHINGTON RAILWAY COMPANY

By:_____
President

Post-1967 Cog Parties

Despite Col. Teague and Lucy Teague's deaths that August, secretary Claire Dwyer says the 1967 Cog party did occur. "Mrs. Teague's feeling was that things had to continue on as normally as possible and that the employees needed a 'break' from the tragedies," says Dwyer. "I had made the arrangements earlier. It was held in Marshfield. We had one again in 1968 with the Checkmates. That one was at an outside venue somewhere. That was the last one as far as I know." However, Ellen Teague's executive assistant Faith Bencosky-Desjardins' Cog archives and Coggers' images posted online reveals that the Cog Party tradition did resume and continue. Here are some glimpses into some of those post-Jitney Years parties through paperwork in the Bencosky-Desjardins files.

1973 Cog Party
August 1973



1975 Cog Party
August 16, 1975 – 9 pm to 2 am
Band: Fox *(contract $300)*

Ed. Note: The In-House Entertainment Script found in the files appears to be a radio station script with questions for various Coggers to be answered by snippets of various popular songs - some with their lyrics adjusted.

TITLE: **WCOG Presents Interview with Coggers**
Opening song: Brother Louie
Closing song: Ain't No Mountain High Enough

Cliff: Just what do you think to yourself when you come to work in the mornings only to find a long line of people standing at the window?

"People, People who needs people..." *(B. Streisand)*

Sec. 39 - 1975 Cog Party

Marla: What are you always hearing about Bob LaRiviere??
"Oh, what a lucky man he is..." *(Emerson, Lake & Palmer)*

John: We've heard you've been up to a lot this season, but just what would you say you've been (up to) the most? "Man on the run, Man on the run..." *(Wings)*

Hey ***Greg*** heres a little advice from the girls, "Hey Lady, take a walk on the wild side..." *(Lou Reed)*

Sach: What are your departing words to Bruce as you leave the summit?
"Catch us if you can um, um, now we gotta run un, um..." *(Dave Clark 5)*

Charlie T.: What will be your Birthday wish this year?
"Keep the Cog rollen, Keep the Cog rollen..." *(Frankie Laine)* Guys the name of the, set game is work. On you mark, get set, let the kiss start. So keep the cog rollen, baby bang it to my heart.

Mrs. Teague: Just how would you describe your kitchen crew this season?
"Pick a little, talk a little, pick a little, talk a little – pick, pick, pick..." *(The Music Man)*

Bobby T: Just what do you feel the girls are saying about you?
"I wanna be Bobby's girl, I wanna be Bobby's girl..." *(Marcie Blaine)*

Henry: What will you be doing during the fall?
"I'll do anything for the Cog, yea anything for the Cog. Yea anything at all..."

Dave Brenner: Tell us what you have to say when you comin' on the weekends, only to hear about all the breakdowns?
"They say that breaking down ain't hard to do now I know, I know that it is true..." *(Neil Sedaka)*

Buddy: We've heard a lot about you but could you please explain to the rest of the Coggers just what it is you do when you've got a lay over at the Base? "I dream the impossible dreams..." *(Man of La Mancha)*

Arthur P.: Just how do these trains run? "Wooo, Wooo, it's magic, you know..." *(Pilot)*

Steve: What are your functions as a fireman?
"I'm a girl watcher, I'm a girl watcher..." *(The Okaysons)*

Mike: After a hard days work, all covered with soot and cog grease, how do you feel?
"I feel good, da da da da da da da da..." *(James Brown)*

Dann: How would you describe yourself?
"Six feet two – eyes of blue, hootchy kootchy koo, has anybody seen my purse..." *(Art Landry)*

Dana: What do you have to say after a hard days work at the Cog?
"They read my news today, oh boy, and I had to pick it off the floor..." *(Beatles)*

Walter: Well, just how can you account for all the attention the girls seem to pay you?
"Please Mr. Postman look and see, oh yea is there a letter in your bag for me?" *(The Marvelettes)*

Dave M: If someone offered to do anything for you one morning, what would you ask them to do?
"Come on Baby light my fire..." *(The Doors)*

Pete: How did you react when F Troop took your license away?
"I shot the sheriff..." *(Bob Marley)*

Cal: Thank you for bringing us... "Strangers in the night..." *(Frank Sinatra)*

Travis and Cal: What have you got to say about this season?
"It's been a hard days night, and I've been working like a dog.." *(Beatles)*

LA Charles: What do you think of New Hampshire?
"California here I come, right back where I started from..." *(Al Joslon)*

Charlie T: What did do after you accident?
"Tip toe through the car shop, to the kitchen, stuck my toe in the sink..." *(Tiny Tim)*

Andy: Everyone has been asking, just how old are you this season?
"I am seventeen going on thirteen..." *(Sound of Music)*

Rouleau: Just what do you wait to see every morning?
"Here comes the sun, do do do do… here comes the sun, and I say 'It's a nice day!" *(Beatles)*

Kathy: What are you always thinking about, we've often heard that it just isn't work?
"Matchmaker, matchmaker, make me a match..." *(Fidler on the Roof)*

Girls: What is you impression of Pete Richter's new brakeman?
"He's so vain, I bet he knows this song is about him don't you, don't you!" *(Carly Simon)*

Debs: What do you love about the Cog? "Food glorious food..." *(Oliver)*

Mike: What do you think of the 9 now that she's been remodeled?
"She's real fine my number 9..." *(Beach Boys)*

Sach: What's the feeling you get when you're running your engine down the mountain…
"Good… good… good vibrations..." *(Beach Boys)*
By the say what's the name of your engine?
"Little deuce coupe – you know what I got..." *(B. Streisand)*

Sec. 39 - 1976-77 Cog Party

You Are All Invited to the 1976 Cog Party !!!

DATE: Saturday night, August 14, 1976
TIME: 9:00 PM til 1:00 AM
PLACE: Marshfield Lobby
BAND: Sweet Dream
COST: $10.00 per person

All money must be in by Saturday Morning the 14th. This is a must. Also, those planning to bring a guest must notify me as soon as possible. Thank you for your co-operation. - Faith

Sweet Dream band *($325 for the night)*

1977 Cog Party

Ed. Note: The 1977 Cog Party saw the debut of the annual employee awards ceremony. The awards give some insight into some of the things that happened at the railroad during the season.

Mr. Cog Railway
Winner: Tom Gosselin
Runners Up
1) Dwight
2) Tom Hydorn
3) Sach

Railway Award - Michael Kenly
Marshfield Award - Betty Ann
Most Likely to Succeed - Charlie Teague
Most Likely Not to Succeed - Alex
Cog Flirt Award - Bob Dole
Cog Know it All Award - Alex
Cog Bullshit Artist - Hayden

Frolic Fart Award - Tom Hydorn
Rob (Mississippi)
Mark S.
Engineer who Does it up Right - Danny Dodd
Best Body - Dave Moody
Life of the Party - Bobby Trask
Mr. Gentleman - George Bootner
Jack of All Trades (Master of None) - D. W.
Mr. Shy - Les
Crispy Award - Barry
Most Creative Cog Kitchen Giver - Clem
Mr. Persistance Award - Cal
Three Musketeers Award - Buddy
Moody
Newman
Cal
Brooke
Bobby

"Hoping all those nights out on the town at least brought you three!!"

Charlie Kenison Most Likely to Tie the Knot - Susie & Michael
Early Bird Special (tie) - Tom Gosselin & Steve Newman *(split the worm)*
Picky Eater Award - Barry
Messy Plate Award - Artie

1978 Cog Party

Notice

TO: All Employees
FROM: Faith Bencosky
DATE: August 13, 1978
RE: 1978 Cog Party

1978 Cog Party will be held Sunday night August 20 – from 9 PM to 2 PM.

The band, Express *(left)*, will play from 10 PM to 2 PM *(contract: $350)* – open bar and snacks from 9 PM to 2 PM.

Dinner Menu for that night is –

Fruit Salad
Steak
Baked potato / sour cream
Corn on the Cob
Surprise punch
Surprise dessert

The price person, which includes dinner is $8.00. Dinner ONLY - $4.00.

All money must be by Friday night, the 18th of August.

Sec. 39 - 1978 Cog Party

Inform Terry of all guests for dinner by Friday, the 18th of August, by noon.

Ballots for Marshfield and Railway gifts can be filled out in the Ticket Office. All votes must be in by Friday night. Your cooperation on all of the above will be appreciated. Thank you.

1978 AWARDS

Mr. Cog Railway Nominees: Bobby, Jim, Sparky, Stu, Rob, Chris

Winner: Bobby Trask
Runners Up 1) Mississippi
2) Sparky
3) Stu

Cog Flirt Award - Karl Emde
Frolic Fart Award - A. C. (Mr. Wimp)
Best Body Award - Incognito
Life of the Party Award - Clem
Mr. Gentleman - Jimbo
Jack of All Trades (Master of None) - Peter Neil
Mr. Shy - Bruce
Mr. Persistant - Steveman "Sorry try again next year for Best Body

Three Muskateers Award - "Your guess is as good as mine!"

Charlie Kenison Most Like to Tie the Knot - Linda & Dave
Early Bird Award – Bruce & Jim
Picky Eater Award – Debbie Die
Bitchy Eater - Jim Lochner
Messy Plate Award - Artie
Cog Know It All Award - Tom G – when he's drunk / Barry – when drunk or sober
Most Likely to Succeed to Stardom - Danny & still have room for Nancy, his ego & himself
Bull Shit Artist - Aaron
Tie for Muscleman - Steve & Brook – Steve would have won it but his left muscle is still smaller than rest
Mr. Macho Award - Peter Neil
The Clam that Came Out of his Shell Award - Les for coming out of the ocean and turned into a real steamer

The "I need a man" Award - Betty Ann
The Red Badge of Courage Award - Nurnette
Cog Sweetie Award - Chris Knight
Breakdown Award - Artie Poltrack – he'll do anything just to get to shop & shop will do anything to get him there.

Dr. Jekyle & Mr. Hyde – Dana
Cliff Kenney Gossip Award - Walter Mitchell for knowing the inside story on everything & everybody!
Invisible Man Award - Buddy cause he's never around when you need him.
Our Favorite Coffee Break Club - The Coffee Crew – Clem, Buddy, Sach
The Most Innovative & Enthusiastic Grass Cutter this place has ever seen - Stu

1980 Cog Party

Notice
TO: All Cog Employees
FROM: Faith C. Bencosky
DATE: August 19, 1980
SUBJECT: 1980 Cog Party

The 1980 Cog Party will be held Sunday night August 24, 1980. Dinner will be served in the kitchen from 4:30 til 6:00 sharp. The Cog Party will start at 8:30 PM in the Marshfield Lobby. The band, Glass Mountain, will play from 9 pm til 1 am *(contract $400)*. Price per person including guests is $7.00. All money must be received from all employees and guests by 6:00 PM Friday, August 22, 1982. There will be no paying at the door for any persons unless arrangements have been made with me first.

Dinner Menu

Steak
Corn on Cob
Baked Potatoes (sour cream)
Fruit Salad in Watermelon
Surprise Dessert

1980 AWARDS

Mr. Cog Railway Rob Maclay

1) John Bolton
2) Jon Mies
3) Andre Desjardins

Who's Going Award - Dottie Harriman
Frolic Fart Award - Nat Putnam
Best Body - Karl Emde
Mr. Gentleman - Charles Teague
You're Not Getting Older, You're Getting Older – John Bolton
Charlie Kenison Most Likely to Tie the Knot - Faith & Karl
Picky Eater - Faith, Patty
Bitchy Eater - Derek
Cog Know it All - Alex Hamilton
Bullshit Artist - Sean Brodrick
Cog Sweetie - Chub Kenison
Dr. Jekyl & Mr. Hyde – Dave Moody
Cliff Kenney Gossip Award - Colleen Z.
Cog Clown - Andre
Most Likely to Follow in Crawford's Footsteps – Clem
Accident Prone Award - Steve Giordani
Most Likely to Succeed - Mike & Gretel
You Mess'em I Clean'em Award - Bettyann
You Shit'em We Clean'em Award - Kris, Meg, Dottie
Mr. Bashful Award - Jon Mies
Light My Fire Award - Walter Mitchell
Most Likely to Fill any Position Award - Clem
Leader of the Pack Award - "Dingle" Barry w/ Daron, Steve, Sean, Andre, Derick, Meg, Dottie
Macho Crew Award - J.B. / Barry / Derek
Most Reliable Crew Award - Bruck / Joe / Peter
Everything But the Kitchen Sink Award - Terry

Sec. 39 - 1981 Cog Party

Anti Awards

Life of the Party - Bruce Houck
Mr. Gentleman - Derek Waite
Early Bird Award - Dave Moody
Dedicate: "Good Girls Don't" by The Knack – Dottie Harriman.

1981 Cog Party

Notice

TO: All Marshfield and Railway Employees
FROM: Faith C. Bencosky
DATE: August 9, 1981

There will be a meeting in the Reck Room of the Boy's Dorm on Wednesday, August 12th, 1981 for all those employees interested in having a 1981 Cog Party. Attendance and co-operation will determine whether or not we have a Cog Party. Meeting time – 8:00 PM !

Notice

TO: All Cog Employees
FROM: FAITH C. BENCOSKY
DATE: August 20, 1981

The 1981 Cog Party will be held Sunday night August 23, 1981. Dinner will be served in the kitchen from 4:30 til 6:00 sharp. The Cog Party will start at 8:00 PM in the Marshfield Lobby. The band, David Dodge Quintet, will play from 8:30 PM til 12 midnight. Price per employee is $8.00. All money must be received from all employees and guests by 6:00 PM Friday, August 21, 1982. There will be no paying at the door for any persons unless arrangements have been made with me first.

1981 AWARDS

Mr. Cog Railway Ken Chadwick
1) Chris Tilton
2) Chris Knight
3) David Kurz

Best Body - Jon Mies
Chip & Dale Jon Mies & Chris Knight
Mr. Gentleman - Peter O.
Cog Know it All - Dick Martin
Macho Crew - Spare #1 – J.B. / MacLay / Andre
Most Reliable Crew - #2 – Gorski / Oeschle / Milliken
Jack of All Trades (Master of None) - Dick Martin
Cliff Kenney Gossip Award - Dottie Newman
Bullshit Artist - Steve Bourassa
Accident Prone Award "Captain Chaos" - Steve Giordani

Life of the Party - David Kurz
The Candyman - Steve Newman
Jr. Award - Bob Milliken
Cog Sweetie - John C.
Cog Clown - Chris Tilton
Picky Eater - Faith
Bitchy Eater - Steve Bourassa
Most Likely to Succeed - Jim MacDonald

Mr. Cog Railway & his court: *(front) Gretel Datz Kenly & Pam Gertz. (middle) Meg Machell, Ken Chadwick, Dottie Harriman & Patty Hartman. (top) Faith Bencosky & Patty Lawson (1981)*
- Machell Corey Collection

Breakdown Award - Nat Putnam
Most Loved - Mike K.
The Teddy Bear - Bud

"We can dance if we want to
We can leave your friends behind
'Cause your friends don't dance
And if they don't dance
Well, they're no friends of mine..."
- "The Safety Dance" - Men Without Hats (1982)

Sec. 39 - 1982 Cog Party

1982 Cog Party

Notice

TO: All Cog Employees

FROM: FAITH C. BENCOSKY

DATE: August 17, 1982

The 1982 Cog Party will be held Sunday night August 22, 1982. Dinner will be served in the kitchen from 4:30 til 6:00 sharp. The Cog Party will start at 8:00 PM in the Marshfield Lobby. The band, Driver *(below)*, will start playing at 8:30 PM and will play three fifty minute sets (contract: $. Price per employee is $8.00, Guests are $10.000. All money must be received form all employees and guests by 6:00 PM Friday, August 20, 1982. There will be no paying at the door for any persons unless arrangements have been made with me first.

1982 AWARDS

Best Body - Gretel and Susie
Mr. Gentleman - Bruce Houck
Cog Know it All - Dan Huber
Most Macho Crew - Spring Track Crew
Jack of All Trades (Master of None)- Steve Giordani & Steve Newman
Most Reliable Crew - Shop Crew
Captain Chaos - Dottie
Life of the Party - Faith
Bullshit Award - Bob Millikin
Jr. Award - Jimmy MacDonald
Picky Eater - Steve Couture
Bitchy Eater - Steve Bourassa
Breakdown Award - The Three, the Two, The One
Most Loved - Rob MacLay
20/20 Vision - Sean MacDermott
You Shit'em You Clean 'm Award - David Gendron

Most Likely to Succeed ('80) - Mike & Gretel
The Frolicking Fart - Faith & Andre
Dr. Jeckyl/Mr. Hyde - John Colorusso
Mr. Vanity - Peter Harriman
Best Dressed - Sean McDermott *(needle-thread)*
The Happy Couple - Barry Steward, Steve Giordani
The Lonely Hearts Club - Kathy McSweeney / Marie Emde
The Moody Award - Kenny Chadwick
Bashful Girl Watcher - Steve Couture
Mr. Paranoid - Peter Oeschle
Most Dedicated Cog Employee - Steve & Levi
Race to the Base - Ellen & Andre
Cog Sweetie - David G.

Cog Party 1993 Candids: *(L_R) ????, ????, Mark Coulter, ???? & Tommy Bonnet (1993)*
- Allen Haggett Collection

Sec. 39 - 1988 Cog Party

1988 Cog Party

Notes & paperwork found in Cog corporate files in 2023 indicate that the 1988 Cog Party was held on August 19, 1988 at the old Marshfield Station. Caterer Fred Underhill of Chef's Market/Corner would prepare a Chicken Barbecue with corn on the cob, coleslaw, potato salad with milk & soda for $700 to be served from 7 to 9 pm. The Bethlehem, NH based band, Magnum Force would provide the music for dancing from 9:30 pm to 1:30pm for $750. The group's Facebook page in August 2019 featured the logo below and said the band was made p of "North Country musicians dedicated in spreading the power of music and bringing communities together." It was the most recent post. The sample set list for the Summer of 1988 is found below.

	GIVE ME ALL YOUR LOVE	WHITE SNAKE
	HERE I GO AGAIN	WHITE SNAKE
	TALK DIRTY	POISON
	NOTHIN BUT A GOOD TIME	POISON
*	WON'T FOR GET YOU	POISON
	FALLIN ANGEL	POISON
	HYSTERIA	DEF LEPPARD
	POUR SOME SUGAR	DEF LEPPARD
	BRILLIANT DISGUISE	BRUCE SPRINGSTEEN
	DANCIN IN THE DARK	BRUCE SPRINGSTEEN
	PINK CADILLAC	BRUCE SPRINGSTEEN
	ROCK IN THE USA	JOHN COUGAR MELLENCAMP
	PAPER AND FIRE	JOHN COUGAR MELLENCAMP
	MIDNIGHT BLUE	LOU GRAMM
	READY OR NOT	LOU GRAMM
*	I CAN'T HOLD BACK	EDDIE MONEY
	I WANNA GO BACK	EDDIE MONEY
*	CANDLE IN THE WIND	ELTON JOHN
	KISS ME DEADLY	LITA FORD
	IN THE NAME OF LOVE	U2
	STREETS HAVE ON NAME	U2
	GET IT ON	POWER STATION
	JUST 17	TIFFANY
	ONLY THE YOUNG	SCANDAL
	HANDS TIED	SCANDAL
	GOOD-BYE TO YOU	SCANDAL
	DANCIN WITH MYSELF	BILLY IDOL
	WHITE WEDDING	BILLY IDOL
	REBEL YELL	BILLY IDOL
	MONY MONY	BILLY IDOL
	KEEP YOUR HANDS TO YOURSELF	GEORGIA SATELLITE
	SMOKIN IN THE BOYS ROOM	MOTLEY CRUE
	GIMMIE ALL YOUR LOVIN	ZZ-TOP
	SHARP DRESS MAN	ZZ-TOP
	TWILIGHT ZONE	GOLDEN EARRING
	DON'T SHED A TEAR	PAUL CARRACK
	ADDICTED TO LOVE	ROBERT PALMER
*	MY HOME TOWN	BRUCE SPRINGSTEEN
	WALK THIS WAY	AEROSMITH
	THE HEART OF ROCK-N-ROLL	HUEY LEWIS AND THE NEWS
	DARKSIDE	JOHN CAFFERTY
*	CLOSE MY EYES FOREVER	OZZY OSBOURNE & LITA FORD
	SOS	POLICE
	SHAKEN	EDDIE MONEY
	TURN ME LOOSE	LOVERBOY

(*) SLOW SONGS

AND MORE

1993 Cog Party

Eggy Pop: *Allen Hagggett: "Eggy's first Cog party. The band C.C. and the Groove let him sing Sweet Home Alabama. Tommy Bonnet (center) played guitar. PRICELESS MEMORIES"* ***Marc Roberts:*** *"That was a fun night"* ***Brian McMinn:*** *"The Black Strat!"* ***Barbara Coussons Lennon:*** *"I remember that! (1993)*
- Allen Haggett Collection

Cog Party 1993 Candids: *(sitting L-R) John Kurdzionak, Cathy Plummer, Jennifer Lint, Meredith Sanborn (State Parks) & Tommy Bonnet. (standing L-R)) Allen Haggett's friends, Melissa Cox & Brian Fox, and ace vocalist Joe "Eggy" Eggleston. (1993)*
- Allen Haggett Collection

"Dear Ken..."

By 1970, bookkeeper Ken "High Pockets" Randall had been the Cog Railway's day-to-day numbers/money guy for a dozen years after coming back to Mt. Washington after spending time in the service. He had started in the gift shop under Mike Haney, and then transferring upstairs into the office. Ken Randall had personally conducted the inventory of Summit House, Marshfield and Railroad property just ahead of the sale of the business from Dartmouth to the Teague's in 1962... He said he had counted every piece of silverware up on top, and every part in the shop. Randall worked for every Teague... Henry, Arthur & Ellen. While Ellen Teague and her son, Charlie continued as paid advisors to the new ownership group after the 1983 sale, Ken Randall did not. He told Jitney Jr he was let go because he "knew where all the bodies were buried." Many times Randall's intel came from letters that simply started, "Dear Ken..."

Feb 15th, 1970 *(handwritten on 1969 Cog Railway letterhead by incoming Cog general manager Paul Dunn)*

"Dear, Ken – Hope you have wintered well and plan to return to the Cog Railway this summer. Understand you plan to bring your family this year. This is good. I am anxiously looking forward to my return after an absence of nearly 30 years. When there last, I built the little Cottage where Harold Adams lives for my bride. This year I am going to put an addition on cabin #16 for the same bride. We picked that location as it has the best view at the base. As you can see, I have to write my letter the hard way as I don't have a home-grown secretary at my beck and call as does Lionel. Please let me know if and when you will be coming.

Sincerely, *Paul*"

February 25th, 1970 *(handwritten on Paul C. Dunn personal letterhead)*

"Dear Ken - Suppose at this season you are knee deep in town financial matter and politics. Ours start next week. Forecast is for a $10 tax increase or 20%. Don't know as I need to ask if you are returning this year. Didn't you say something last year about a purchase having been consummated? Claire will not be back – so she says now. Do you know of any one for the office? I have told Ellen that we only need one girl this year but should have an extension on the phone somewhere so it can be answered when no one is in the office. I have also told her that I want to hold to 46 on the railway (incl AST Co) payroll compared with the 52 last year at the peak. Thus, she should go easy on commitments to new boys. Did you take some of the checks with you to set up in a form that will satisfy the bank? If you did perhaps you could set them up for me to handle with Joe Richards or if you prefer would be glad to have you handle. Regards to Bonny. Hope I see her more than once next year.

Sincerely, *Paul*"

February 8th, 1970 *(typed on Cog Railway 1969 letterhead from Ellen C. Teague)*

"Dear Ken: Hope this letter finds Bonnie, Kathy, and you all fine. Again it is that time of year to start the ball rolling. We have been back in Pennsylvania one month and Jane is doing fine, but moving slowly. This rehabilitation takes time. I think we are pretty well set up for the 1970 season. Jack Middleton and Paul Dunn met with me several times in Hanover and we got our list and company fairly well organized. Paul, at present, has a form letter which he is commencing to send to the Railway group; and Jane and I are doing Marshfield. Jack

Middleton returns from Austria tomorrow, February 9, and we will go on then on our decision with the Summit. The state wants to lease us the Summit House, and I guess we have won out on the insurance deal with Roger Crowley as he has put in writing Marshfield will only be responsible for fire insurance and liability for its time of occupancy. I have written Bob Wood if he has settled yet with ARA; and then I will make our decision on the food concession so we can notify the State Parks. Jack and Marnie Morgan I believe will be running the Gift Shop. Mike is doing most of the ordering, and I have been checking the specialties and proof sketches for the imports. Next week we are going to order Lederhosen form Emory & Company, the importers in New York; also Blair Cedar will be in New York February 22 week, and Mulenberg Leather; so I feel with Mike helping us on the side, Jack and Marnie can help me with the inventory and can get there early for checking in May. Margie and Tom will come up to help them before Tom goes into the Army in Belvoir, Virginia for nine weeks and then out to Missouri for two years. Margie will be helping off and on until August. Tess and Cass White will not be back this year, and I guess in a sense you will be relieved. Mr. & Mrs. Mason from Jefferson, I believe will be running the cabins with Ramona Frye the full season. He is a former caretaker of Gov. Hugh Gregg, and at present works for the state and was up at the Base last summer. He is a state trooper age 63 and his wife, 58. They will be with us the full seasons; and if the weather turns cold and we have to close the cabins, they can work in Marshfield. Mrs. Granger, Pliney's wife & Dale Ann's mother, will be working with us this year also full time. I shall write Ray Gilman and see if he can set up our boilers up for us and do part time work; and I will drop Harold Adams a line to see if he can come in early to set our dams up with Niles. At the present I am in on a deal with the state in making them responsible to pay us for the water supply to their territory on the Summit. It will be a five-year lease and we can go from there. Anne & Norman will be back, and I can offer you and Bonnie Margie & Tom's cabin which is the warmest cabin and really the most comfortable. Bonnie will have a warm bathroom, stove, and icebox. You will have to tell me what sleeping arrangements – I have a double bed or I can get two singles whichever is agreeable with you and Bonnie. How has everything gone this winter? I myself am fine and just beginning to work out of the mess, but we always get there. Looking forward to hearing from you and hoping that you, Bonnie and Kathy can be with us at the Base this summer. Please let me know your plans at your earliest convenience.

Most sincerely, *Ellen Teague"*

February 13, 1971 *(typed on Cog Railway 1969 letterhead from Ellen C. Teague)*

"Dear Ken, This is just a hello letter and to remind you that the 1971 season is coming and that we are counting on you being with us this season. This sure has been a severe bitter year and with the snows it has made it very hard for many people. Cliff Kenney has been in a wheelchair off and on and is going to the White river Junction Veteran Hospital. This cold has been too much for his arthritis. I think the colds have been hard too. How have you and Bonnie and Cathy fared? I hope that you have been one of the lucky ones and that your teaching classes have gone well this year. Margie and Tom had a little girl on January 4th and are now in Indianapolis, Indiana and will be there until March 10th and then go to Fort Leavenworth, Kansas for two years. Anne and Norm are working hard on their degrees and will not be at the cog this summer, but Norm will be with us two weeks in the Fall. Fanny I a senior in college this winter and she and Anne will be doing student teaching in the Fall. Fanny and Charles will be with us at the Cog this summer 1971 and Jane and I and we are looking forward to a very good business year according to reports. Hope the weather will be as good as the reports. Charles gets his driver's license next month, providing he passes his driver's license. I am lining up the crews for the summer and so is Paul. We will have to train a lot of engineers and brakemen but then that is half the fun! Jane has been pretty good considering all as winters have been hard for Jane the last several years. Our

love to you all and looking forward to a new season.

Your friend, *Ellen"*

March 9, 1971 *(handwritten on 1970 Cog RR letterhead from Paul Dunn)*

"Dear Ken, Would appreciate a little of your knowledge re: the pay and hours of the gift shop and summit people. The 1969 employee list shows Summit gift counter people at $140 per month and the Base people $1.60 per hour. Were meals included in both cases? In 1970 the rates were $1.60 or $1.70 plus meals for a 56 hour week this gave them an effective rate of $192 or $202 (assuming they don't eat on the 7th day). Bonuses would add another 15 to 25 cents (symbol) per hr. For example Brian Driscoll got $2.25½ per hour meals and bonus included compared with Boswell $2.07 Crandall $2.08 Long $2.24 Christy $2.32 Thompson and Harris with meals got $2.64 & $2.67. Some of the boys got $1.60 and no bonus. The pay scale is crazy.

How did we get into this mess of including meals for the gift shop people? Minimum wage law allows credit for meals. The rate should be around $1.30 with meals included. Do you have any suggestions for backing up on this inequity? Or must we raise the railway wages by around 30 cents (symbol again) for meal equivalent (and go broke doing it). Do the gift people work more than 56 hours in 6 day but you only sow this total?

Confused, *Paul"*

April 11, 1972 *(typed on 1971 Cog letterhead with a 2 written over the one)*

"Dear Ken: I hope that Bonnie and you and Cathy have had a healthy winter. The winter has been cold and icy but with less snow, perhaps we are lucky. Jane, Fanny and I took a Christmas cruise to the Caribbean and Charles went to the farm and ski-dooed and saw Jackie (Kenny). Fanny and Anne both have their degrees in special education and have both good paying jobs and signed their contracts for next fall, which sure does help. Norman finishes Theological Seminary next month and he and Anne will be with us this summer. Charles has done well at school and missed the deans list by one. He is growing up fast and will be up to the Base around June 4th. I flew to Boston Monday of Holy Week and stayed with the Wymans. Also Paul Dunn and I drove to Concord and had time to go over things for this summer. I signed a 120 day note so that I can start making improvements on the Boarding House. I now have several bids and as things now stand expect to have the renovations finished by June 6th. I am removing the third story of the Boarding House and extending around the N.E. side toward the engine shop and facing the Mt. on the ground floor. This building has been deplorable to me for a long time and to mt is now or never. Paul is worried where to put the boys in May, as he has 15 boys coming into the Base, having two work train crews and I have five men in the car shop to put the coaches in shape for the season. Billy and Shirley are leaving July 1st, so Paul wishes to clear the track, which is good. I expect our labor expenses will be very high for May and June but we will tally off in July. But I would rather get things done this year as I am going to follow a ten year construction plan for the future. Any possible chances for you to help the Co. on some week-ends in May and early June? Paul will have some cash and keep record but you could if possible write some checks perhaps and mail to me in May so I could sign or do you think this is not good? When do you feel that you can come in for the season? Enclosed is our new brochure and I have been sending them out since early January. We now have 13 tours lined up and two in June. The Safety Control (600) will be in Bretton Woods June 20th and we have (gratis – two train /wives/ loads) Canada and thirteen states. I was called from Concord Highway Dept. and made the arrangements. It will be good advertisement for us anyway.

It will be good to get up there (N.H.) to stay. Janie is doing find and so far has had a good winter and Spring. The salt bathing did her a lot of good. Fanny will be working in Marshfield and so will Ramona in July. Charles will be track and brakeman. Anne will be a PRN – ticket office etc. Norman will cover the engine shop. Gene and Ruth Mason will start working 20 May painting cabins and distributing folders around the State for me. Grace and Pete will be into the Base three days after Paul. I now have an advisory engineer, Robert Tinkler who will assist Paul on the repair program. He will be up and down on week-ends during the summer. He works for the Penn-Central. Earl and Lila Cone were here last week and spent the night and are now back in Nashua. They both look fine. Please let me know how you all are and we send you our love from all of us to you all. *Ellen T.*

p.s. Marnie & Jack Morgan went to England for 3 weeks. They will go into the Base around May 10? Had a letter from Mary & Ray Gilman – they are fine – Ray will be over to the Base in May! To check # 6 tubing - our # 10 engine is moving along, but <u>damn</u> <u>expensive</u>. Hope to have running this July. Ray will help check the boiler – E.T."

1968 Lionel's Whistle Quest

Work In Progress
** Not Final ***

May 1, 1969

Canadian National Railway

Attn: Mr. Gordon Soutter

Gentlemen:

This railway has been attempting to obtain three small steam whistles and several Hancock #5 injectors for some time. I have noted in the June issue of Railroad Magazine that your Reclamation yard in Halifax has some small steam locomotives presently on hand and wonder if by chance there are parts that we require on them.

With regard to the whistles, the tapped hole in the steam dome for our whistles is about 1 ½ inches. Many of the whistles from large steam locomotives are much too heavy for use by us.

With regard to the injectors, because of the steep grade on which we operate (maximum grade 37%), it is necessary that we have a lifting injector and the only injector that seems to meet our bill is the Hancock. Unfortunately, the patterns for the Hancock were sent to the Canadian Locomotive works a few years ago and were later destroyed so it is impossible to obtain either new injectors or new parts.

We operate seven steam rack locomotives and are presently engaged in building an eighth. You may be interested in one of our booklets which is enclosed.

Any assistance which you can give us in obtaining whistles and injectors will be sincerely appreciated.

Very truly yours, Lionel M Rodgers – General Manager

Rodgers apparently also wrote to a former Cogger now at steam railroad in Alaska

August 1968 – Philbrick letter

"I've had a few letters from Mr. (Lionel) Rodgers asking if White Pass might be a source of supply for needed parts of Hancock inspirators and K-2 Pile National 32-volt steam turbine generators. I found several #9 Hancocks marked OK and in scrap & saved them out for him – now it's about 4 months later and will save them no longer as he does nothing about it. Thought perhaps the Cog might be able to use them on the Fireman side of their locos if they could not find parts for the #5's in use. We offered them a price of 50-cents a pound if he would pay cost of packing & shipping. Stupid people at the Cog don't realize these are worth a lot more than that. Lots of parts, new, in stock for #5's and one new body & I've told them this but here they still are as the W.P. priced them with 1910 prices and the Cog can't afford them? Rodgers seems not to understand that this is the only supply that I've found since Hancock quit in Canada. Plenty of K-2 parts, new, here also and they still are. One of these days as the WP is rapidly growing, they are going to need the space in the storeroom and all this obsolete junk that they will never need again will be thrown in a scrap car and sold for a few cents a pound."

July 4, 1969

Dear Mr. Rodgers:

Your request regarding purchase of small steam locomotive whistles and several Hancock injectors has been referred to me for a reply.

Since it has been a long time since we retired steam locomotives from our equipment, we have none of the Hancock injectors available from any of our Reclaim Yards. However, we do have some steam whistles as these are kept for possible resale to Railway Collectors.

From the description given in your letter of May 1st, it is impossible for us to know if the whistles we presently have on hand are suitable for your purpose. In this regard I wonder if it would be possible for you to provide us with detail photographs showing the requested whistles from different angles.

Our Mr. Auger, Storekeeper, who has been examining our whistles says they are by no means small and they respectively weigh approximately 40 lbs: furthermore the measurements vary from 1-1/4 to 1-3/4 inch at the base of the whistles.

Yours truly, Yves Breton – CN

1973 The Troubles

When the Jitneys set out to complete the *Operating Manual* in May 2015, it was decided they would stop writing their narrative at the end of 1967 - their last summer at Mt. Washington. It would be up to someone else who was there to pick-up the story. But eighteen months after Jitney's death no volunteer had stepped forward. Jitney Jr. decided to tell the story of another tumultuous Cog summer through documents collected over three years of research and the testimony of those who were there. What follows is that effort.

Five summers had passed since the Cog Railway's *"Annus Horribilis."* Lionel Rodgers had been Ellen Teague's General Manager of the railroad for the first two. Former Boston & Maine Chief Mechanical Officer Paul Dunn had replaced him in 1970. Niles LaCoss replaced Paul Philbrick as master mechanic and was now leading the shop crew. Veteran engineer Bob Kent took over daily train operations management from Jitney. But it was now Mrs. Teague's railroad. She had to make the calls that her husband had handled for 38 years when it came to maintenance budgets for both the Cog's track and the Cog's trains.

Her concern for the cost of railroad upkeep surfaced early. In a memo to the New Hampshire Public Utilities Commission about an April 10, 1968 meeting with the new Cog management team, Transportation Director Winslow E. Melvin said "The point which seemed to bother Mrs. Teague most was the amount of timber which is required *(by the Commission's post-accident order)* to be purchased each season for renewing and maintaining the track work and trestle. It was pointed out that in the Dyer report and the Commission's Order that the material already ordered last year *(1967)* would amount to approximately 40% of the total needed to replace or renew the work recommended by Dyer." Melvin said "the same amount (ordered in 1968) could continue for the next two years" because the 1967 order for track material went in late, and didn't arrive in time to be installed that season.

Material that did arrive in time in 1968 was metal to fix the *Chumley* car. "After the wreck - the idea was the aluminum car would be rebuilt," recalls car shop foreman John Ruggles. The namesake son of Arthur Teague's wartime colleague, John Ruggles had worked three summers under Col. Teague's railroad management style. A hitch in the Army took him away from the Mountain for 1967 - the Cog's summer of sorrow. He returned in 1968. "What I did is I made an inventory of all the materials (needed for the *Chumley*). All that was delivered in '68, (and) from '68 to '71 it just sat out back of the car shop (while the Number 2 car rebuild was completed). One of the things that I heard about (from Mrs. Teague) was 'Why hasn't (the *Chumley*) car been rebuilt? All the material has been sitting there since '68." Ruggles tried to explain, 'Well, we had another (passenger car) in there that had to be rebuilt.' That wasn't good enough." Ruggles says the new railway president did seek counsel on some decisions. "People would give her an idea which sounded good to her and when it didn't work out, guess who got the blame? The person who came up with the suggestion or the idea that she attempted to put into practice that didn't work." Ruggles says her management style quietly soured relations with other northern New Hampshire tourist operations. "She created a lot of ill-will with the White Mountain Association because a lot of things (for her) were black and white instead of shades of gray. (For) guys like Art Teague… everything was a shade of gray. He was making the best out of the material he had to work with." Ruggles says Mrs. Teague didn't do that. "Ellen Teague was a very authoritarian and controlling person. She wasn't a person who was a natural leader... You didn't see that in Ellen Teague when Art was still alive. She had definite opinions on

things (then). It was easy to see that." But now, the widow Teague was in charge of the railroad, and the Mount Washington Railway's 100th anniversary in 1969 was fast approaching.

Ellen Teague's 1982 memoir makes it clear the Cog's Centennial was a top priority for her in 1968. A grand party was in her wheelhouse. She had been planning and attending social events in Philadelphia for years. Manager Lionel Rodgers' "personality, honesty and sincerity" and "his watchful eye on the little steam trains" allowed her to concentrate on the year-long party. "He was a railroad buff," she wrote, "and that was reflected in the way he made certain the cars were swept, the windows washed and the exterior of the coaches kept clean, too. I felt free to leave the railroad in Lionel's charge as I accepted invitations to speak before various organizations - valuable preparation for the year to come."

Lionel Rodgers stepped down as General Manager after the 1969 Centennial season. Gift Shop manager and Railway corporation board member Mike Haney also left. Haney had been at the Cog since 1946. He told Jitney in a letter that winter, "I have given up the Cog Railway. It was most difficult to even finish last season *(1969)* with the state of affairs at the Base. I did, however, and vowed I would not return for another season." Financial records indicate 1969 may have been boilermaker Ray Gilman's last season as well.

With Rodgers departure, Ellen Crawford Teague needed to find someone to oversee the railroad for her. She hired Paul C. Dunn. Her book, *I Conquered My Mountain* never mentions his name. "The new man did a good job his first year *(1970)*, although he was not the ideal man, having a very cold personality. He did tell me when I hired him that he always stopped work at five to have his before-dinner drink, but that did not concern me. He was evidently interested in his career, for he asked if he could buy stock in the company. I had to tell him that was impossible, as all the stock was to remain in the Teague family." Dunn's interest in owning a piece of the operation may have run deeper. The Dartmouth man had worked at the Cog for the B&M, and then for Henry N. Teague in the 1930s. Dunn was part of Henry's management team starting the first summer of the Old Colonel's ownership in 1931. Arthur Teague and Paul Dunn were on Henry's board of directors in 1938 before Dunn left to begin his full-time career at the Boston & Maine Railroad. There Dunn was in a position to help Arthur with his railroad by sending spare and used equipment to the Cog as the B&M wound down its steam engine operations. Paul Dunn knew how to run and maintain a railroad. Ellen Teague maintained strict control of the railroad's purse.

"Paul Dunn was the operations manager and Paul couldn't do anything on his own really," remembers car shop foreman John Ruggles. "The final arbiter on anything was Ellen Teague. I went to them and said we need to do something about repairing the insides of the cars and taking care of the paneling and getting everything ship-shape for the upcoming season." But replacing the paneling in the *Thelma* aluminum car would be time consuming without a new specialized tool. "When (Ed) Chumley had built the cars, everything was hand riveted and getting the rivets out to replace any of the structural parts or any of the aluminum paneling was a real problem." The solution? "It was as simple as saying, we need a very specialized pop rivet gun, which at the time *(1970)* was relatively new for large pop rivets on the order of a quarter of an inch, which is an industrial grade… You couldn't go to the hardware store and buy this stuff. It was probably a couple of hundred bucks for everything. The answer (from Mrs. Teague) was, 'We can't do that. You've got to spend money on other things.' I'm not sure what the other things were," says Ruggles, "(but) if the inside of the cars are falling apart that's a real problem. It was general maintenance. You just couldn't get the money for… or the permission to do (it)."

When John Ruggles left after the 1970 season, the job of rebuilding the wrecked aluminum passenger car was advertised. Bob Kent almost found someone to fix the wrecked *Chumley*. Dick Bell was teaching with Bob in Essex, Vermont. Bob told him about the job. Dick's background in vocational arts was a good fit. He went

to the Mountain for an interview. Mrs. Teague offered him the job. But Bell turned it down. The job stipulations were too much. His wife, Nancy would have to work in the Gift Shop, and the couple had four kids that would be left with no supervision.

Ellen Teague writes in her book that Paul Dunn's attitude changed during the 1971 season. "I watched our employees carefully and could see the changes which had taken place in their attitudes. He began playing up to the employees and hosted frequent beer parties at the cabin where he and his wife lived. Soon two of our employees who had always been very friendly to us hardly spoke to me or other members of the family. Then another employee began to treat the manager with marked deference, and I began to wonder what he as telling them. One day I found out. He had been telling the employees that I used the Cog money to take winter trips, and they believed every word he told them. All of this upset me very much and made my work and (daughter) Janie's most unpleasant." Business during the 1971 season was good under Dunn's direction - an estimated 50,000 people rode the trains. However, the former Boston & Maine vice president saw problems on the horizon. "This is a private enterprise working in the old steam era," Dunn told reporter Erma Perry of the Copley News Service. Dunn said he was having problems finding steam locomotive builders and boilermakers. It was the problem forecast in the 1967 Dyer report: "The problem of obtaining steam locomotive maintenance personnel will be increasingly difficult as men who railroaded in the Steam Era become more scarce. It would appear necessary (for the Mt. Washington Railway) to train a nucleus of young men in this work to insure adequate maintenance forces in the future." The other problem Dunn saw was literally on the horizon - the plumes of black coal smoke coming from the stacks of the engines as they pushed their load of tourists to the Summit. "People forget when they talk of pollution what the old steam engines used to do," he said.

In 1972, the New Hampshire Air Pollution Control Commission ordered the Cog stop polluting the air with coal-burning locomotives, and the coal-fired water pumping station sending water to the Summit. Paul Dunn told reporters the railway would request a hearing on locomotive operations and seek a year-long variance to avoid closing. "There's no way to fix a steam locomotive so it won't put out smoke," said Dunn. "We're not polluting any more now than we did 50 years ago. The cog railway is quite an important part of the economy of the North Country." Dunn said the railway didn't need the pumping station for their operations. "We're running it for the state park on the summit. If the state wants water at the top, it will have to find a way to get it there." Ellen Teague says lawyer Jack Middleton advised seeking the variance, but she wanted a permanent political solution. "I would have to (seek a variance) every two years, and the winds of political change could disqualify us at the whim of some politician," she wrote. She started working the legislature seeking an exemption from air quality rules. The exemption for "steam railroads which operate entirely within the state" enacted in early 1973 covered the Cog and the wood-burning steam train at Clark's Trading Post at North Woodstock.

While the Cog's public focus was on the skies in 1972, other problems were developing closer to the earth. State Transportation Director Winslow Melvin and inspector Walter W. King went to the Base Station on Friday, September 15, 1972 to conduct an inspection of equipment and the track. King reported, "Due to lack of available maintenance crew there has been little routine type of work done on the track structure. However, safety has not been neglected; if repairs were necessary to insure safe operations, they have been completed. Most of the crew returned to fall and winter activities early this year. There are enough men available to make up three train crews and a small force for repair." It was King's opinion "that the one factor in the highest of priority expressed by the General Manager (Paul Dunn) and members of the crew that were interviewed (during the inspection) would be safety of the passengers."

Ten days later, Ellen Teague presided over the gala roll-out of the Cog's newest engine, the No. 10 *Colonel Teague*, named for her husband. Niles LaCoss and Steve Christy had assembled the engine while former B&M shop execs, Paul Dunn and Earl Cone oversaw the effort from their positions on the Cog payroll. Cone, like Dunn, had worked for Henry Teague back in the day, had a long career at the Boston & Maine, and had worked for Arthur Teague.

Twelve days after that, inspector Walter King filed a report listing the specific trestle timbers he found needed to be replaced as he walked the track on August 17, August 22 and September 5, 1972. In addition, King found the rack and rail needed work as well. "There was no welding done as a maintenance feature this summer *(1972)* due to the lack of labor. The same could well be said of the routine up-keep of the track and trestle. Only those areas that were found to be in need of immediate attention were attended to. However, the track was not neglected." King reported General Manager Paul Dunn said "the overall replacement of (track) timbers schedule was delayed" due to lack of qualified personnel and the early departure of the college students and teachers for school.

Simmering maintenance issues came to a head in June 1973 as the shop crew prepared the engines for the new season. It was time for the annual pressure tests on the locomotive's boilers to make sure they would not fail while pushing paying passengers up the grade. "We used to 'hydro' those boilers," Steve Christy explains in 2018. "We took 'em to just 180 pounds (pressure - 25% over 'pop-off' or safety valve release) with cold water. You figured if you had 40 more pounds on (the boiler) with cold water... everything shrunk up... you're going to see a leak (if there's a problem) and you're also stressing the boiler and the stays (stay bolts) and everything (flues, welds)." Steve vividly recalls testing the engine (No. 3 *Base Station*) that had been that spring's work train. Half of a new arch had been installed in the firebox (two fire bricks with a key placed in front of the flues to roll the fire over before it exited through the boiler to the stack.) The arch cost about $120, so they didn't want to knock it down and remove it for the test. That meant someone had to get in the firebox, get up over the arch with a trouble light and monitor for leaks around the firebox flues. Steve was elected to go inside.

"I was a little thinner in those days," Christy says. He could hear the old leaky hand water pump bringing the water pressure up. "I don't know how (the pump) ever got the pressure we needed, but (it) did." When they made the pressure, the boiler reverberated with a large report. "It was like somebody took a 16-pound sledge-hammer, and just struck the firebox," says Christy. "I can't hear anything. And I started hollering... to stop... something had happened. I thought a stay (bolt connecting the inner firebox wall with the boiler wall through the water jacket) might've broken. I said, 'Something's happened to her and we better figure out what it is.'"

But the necessary test pressure thad been reached before the loud "CLANG." Technically, the boiler had passed. "Niles (LaCoss) was upset," says Steve. "I said 'Let's drain the boiler... pull the dome cover and see what's going on." The boiler was emptied and the dome cover removed just before noon. "It was early in the year so everybody was still going up to Marshfield for the hot lunch," says Steve. When the rest of the crew headed for lunch, Steve stayed at the Shop. "I climbed up on the boiler, took my boots off and took a trouble light and some dental mirrors with me and went down in. The stays all looked fine. All the sheets looked like they were good. But I had noticed in the inside of the firebox on the throat sheet, inside of the (firebox) door, it looked to me like that throat sheet had distorted. Somehow I was able to turn over in there, and got my head and shoulders as far as I could up to the crown sheet. It's the damnedest place to be, particularly if you're claus-trophobic. I stuck a trouble light up to the butt of the boiler and shown it down. Then I took a mirror and reached as far as I could. And what I saw, I still remember... the hair standing up on the back of my neck... every stay in that locomotive from the firebox side back looked like you'd taken and put it in a pencil sharpener.

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From the outside of the boiler going towards the fire box about an inch and a half, about half of (each stay) was full integrity. The first third of (each stay) was virtually not there."

When the crew got back from lunch, Christy pulled LaCoss aside. "Look, I know what our problem is. If this locomotive is indicative of all of the rest of them. We're probably not opening here in a couple of weeks," remembers Christy. "I told him what I'd found. I said, 'I think what we need to do is cut out a stay underneath the throat sheet where I think the one failed... and see what we got.' And that's what we did. We had these little round bindle mirrors, you know, you could just get one of those through there with the light up above, you could see (the problem.)"

Christy says at that point, the owner of the railroad Ellen Teague became involved. "Somebody had telephoned her, or spoken to her at some point (and) communicated to her we had a problem with the boilers... There is going to have to be some extensive repair work before they could go up on the mountain, and it might delay the season. Well you can imagine how that set with her. She came up from Philadelphia. The first place she stopped virtually was my cabin. I remember I heard something in the driveway. And I looked... it was her," recalls Christy, who was cleaning up after the work day. "I'd just gotten out of the shower... and she comes in. She says, 'Somebody tells me that you think we've got a problem with these locomotives.' And I said, 'Well, I don't think it - I know it." She said, 'I'm going to tell you these trains, this railroad's been around here for over a hundred years and it's run every season through World Wars and everything else. And it's gonna run again this year!"

Mrs. Teague describes her return to the Base in 1973 this way - with no mention of the boiler problem: "When (daughters) Janie, Fanny and I arrived at the base in early June, we found it difficult to understand why the Railway employees seemed so cold in their attitude towards us."

The opening of the 1973 season was fast approaching and a worried Steve Christy drove down the mountain to the nearest payphone, and dropped a dime. "I went to Fabyan and with directory assistance, I found Walter King... who was the inspector for the (New Hampshire Public Utilities Commission) who lived out in West Canaan. I didn't know him other than seeing him up there" remembers Christy. "I called him and I told him the story. He came up (on June 11) and we showed him what we'd found."

Walter King's inspection report for that June 11, 1973 visit found the following: "According to Paul Dunn, General Manager, the insurance company has requested that all boilers be retested at 50% above capacity... This request excluded No. 10 because it has a new boiler. As near as can be determined... the boiler on No. 3 was new in 1909. It was further noted that this was the last boiler to be replaced." That meant the *Base Station's* failed boiler was the newest one in the fleet other than the *Col. Teague* went in service in 1972. "Niles LaCoss could not give an estimate as to how long this engine (No. 3) might be out of service. He claimed that 25 staybolts might be replaced per day providing no problems arise. As the situation is now, locomotive No. 10 is operational. No. 1 will be after other repairs are completed. No. 3 is out of service until 149 staybolts are replaced and it is retested at 216 lbs. (50% over pop-off). No. 4 passed the 216 lbs. hydrostatic test, but failed the visual. No. 6 has passed visual inspection, but it must have the high hydrostatic test. No. 2 and 9 must be retested at 216 lbs. This brings about the concern as to whether or not there will be locomotives enough to accommodate the passenger traffic. If those engines that are to be retested fail, it would appear the railway has problems. The possibility of other (mechanical) problems could mean an even sharper cut in service, or as the case last year *(1972)*, broken shafts could mean the cancelling of the entire day's schedule. The problem that arises is this: What will the management propose to correct the situation? Repair is the logical solution. How - is a management decision." Dunn and LaCoss told inspector King "they are not boiler experts. They can repair and maintain; however, professional advice as to what is the margin of safety is required. It would appear to

this inspector that as a regulating body concerned with safety of operation and passengers, it would be in keeping with the responsibilities of this Commission to request a boiler expert be consulted with to determine what margin of safety should be set for a minimum staybolt size. It would be further opinioned that a boiler repair or replacement schedule be in order should the finding of the boiler test indicate a problem does exist."

Steve Christy says the PUC ordered the railroad to replace one third of all of the stay bolts in all of the locomotives before they were allowed on the Mountain. "I thought that was pretty generous. Just to replace a third of 'em based on what I'd seen, but Ellen was fit to be tied," says Christy in 2018. "I don't know if she ever knew who ratted 'em out. I mean if it had been left to Ellen there'd not been any work done anywhere. Everything would just roll along. She didn't like to spend money on the track."

On Monday, June 18, 1973, Paul Dunn told the PUC he had resigned as General Manager "effective immediately." Inspector Walter King went to the Base the next day to investigate and reported to Winslow Melvin that Dunn's resignation "was prompted by an order issued by the owner, Mrs. Ellen Teague, that the only back-up locomotive could be used as a regular schedule train, and leave the railway with no back-up power at the Base" and "the boiler inspection problems also have entered into the disagreement" between Teague and Dunn. King found on June 19th "Locomotives No. 1 and 10 were operating a passenger schedule and No. 9 was fired up for back-up power. These are the only engines available at this writing that can be used and No. 9 as back up only. It has not had the new 150% hydrostatic test." King told both Teague and Dunn that the State could not become involved in their disagreement. "However, the (Public Utilities) Commission does have an obligation to the passengers to see that its order, which was issued in 1967, that a qualified manager or superintendent be employed by the railway is upheld. After much discussion separately with both parties involved, it was determined that Mr. Dunn was staying for a few days to act as a trainmaster, and he would make no decision as to maintenance."

King reported to Melvin that "Niles LaCoss was leaving and Bob Kent, trainmaster last year, would not be coming (to work this year) if Mr. Dunn left. As of the evening of June 19, (1973) Mr. LaCoss was gone, Mr. Kent hadn't arrived and probably wouldn't, and Mr. Dunn was officially through as General Manager, though his only concern is for the best interest of the Cog Railway. This was borne out by the fact he was still trying to get the four (4) locomotives repaired before June 30, the beginning of the hourly schedule. Mr. Dunn did succeed in acquiring the services of the Dillon Boiler Service, Inc. of Fitchburg, Massachusetts to begin work on June 20. As of this date, June 20, the railway is still without a general manager."

As Inspector King was writing his report to his boss, Winslow Melvin, Transportation Director Melvin received a noon phone call from Mrs. Teague. Ellen told Melvin a meeting at 9 am that morning *(6/20)* had been held "and she felt things had been worked out between her and the General Manager (Dunn) and employees and that Mr. Dunn was being retained in his position and that he was responsible for train operations and the equipment used."

Paul Dunn called Melvin on Thursday, June 21 to tell him "that arrangements had been made between Mr. Jack Morgan and Mr. Niles LaCoss to have (LaCoss) come back and to do so required an increase in pay. The arrangements had been agreed upon (between Morgan and LaCoss)... however, they had not been authorized by Mrs. Teague so it is questionable at this point whether Mr. LaCoss will come back and whether Mr. Dunn will stay as General Manager. He (Dunn) has agreed... to remain while the boiler work is being performed... at least until the end of June." Melvin told the Public Utilities Commission, "Until then the General Manager is Paul Dunn."

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The negotiations prompted trainmaster Bob Kent to begin work on Sunday, June 24. Niles LaCoss had also returned.

Inspector King made another visit to the Base on Thursday, June 28th, the last day "the Dillon (boiler) people could be there. As of 3 p.m., all boilers had been repaired; that is, as far as staybolts and welding was concerned. Number 1, 2, and 10 were operating with No. 4 as back-up power. Numbers 6 and 9 were tested and ready to be put together. Number 3 had not been tested yet." However, King reported the General Manager situation remained unchanged. "Mr. Dunn claimed his notice of June 30 (resignation) still stands. However, Mrs. Ellen Teague was confident arrangements would be made with Mr. Dunn to remain for the 1973 season."

The management dispute is noticeably absent in Ellen's memoir. Instead, she outlines her impromptu attendance at an employee gathering at the Boarding House during this time period. "Late that June *(1973)* when Janie and I returned one evening from the Weathervane Theater in Whitefield I saw a note pinned to my door saying that there was a meeting at the boardinghouse. I drove there immediately and found many of the Railway employees sitting about full of talk, complaints, and beer. Their abusive talk was sickening and since they would not listen to me, I left. Next I heard that a strike was planned for the Fourth of July. What had happened now? To prevent the strike from working, I secretly contacted several of our former loyal employees - engineers, firemen, and brakemen - enough for three crews to be on hand. I was right." Although she does not say so in her book, Ellen Teague also got in touch with Edward M. Clark, who ran his family's Clark's Trading Post tourist attraction in North Woodstock, New Hampshire which featured trained bears and a wood-fired steam locomotive. She wanted him to take over for Dunn as general manager. "Eddie had an engineering degree from the marines and had served in World War II," she wrote in her memoir. "He had his good and bad points, as we all have, but he came to my rescue..."

As the Cog Railway management storm built towards a weekend crescendo, a real rain storm began pummeling New Hampshire. The *Boston Globe* reported "The 72-hour deluge of almost unremitting rain pushed rivers in the state as much as 11 feet over their banks, causing some of the worst flooding in years." Streams and rivers receded below flood levels on Sunday *(7/1)* leaving behind "millions of dollars in damage to local and state roads. The high waters forced the evacuation of hundreds of residents and the shutting down of roads and bridges in the northern regions of the state. About 70 employees of the Mt. Washington Cog Railway, along with two dozen hikers and tourists spent Friday and Saturday nights in company cabins at the Railway Base Station. A branch of Franklin Brook had washed out three quarters of a mile of the road from US 302 to the base station, and the Ammonoosuc River had flooded the main highway in both directions." On Sunday, people began "hauling hundreds of tons of gravel to repair washed-out culverts, bridges and roads. Said one weary volunteer, grunting over a short-handled spade in a culvert: "Anybody who ain't out here digging ought to be in church given thanks that it weren't no worse." Behind the scenes at the Cog it was getting worse.

Many employees were planning to leave the railway because they felt Mrs. Teague was refusing "to allow the general manager (Dunn) to do his job." Bob Kent sat down with Ellen on Monday, July 2nd for "a two-hour conversation with her, and at that time told her all I thought had gone wrong to bring us to the point where we were." In a letter to Transportation Director Winslow Melvin, Kent said he told Mrs. Teague "what I thought could be done to rectify the situation. She did not take my advice and as a result was left with no men to operate the railway."

The same day as the Kent-Teague meeting, state inspector Walter King was at the rain-soaked Base to see how the engine repairs and tests were going. He found "Engines No. 6 and 9 were being readied for service. No. 3 had been (hydro) tested." King also learned the Dunn matter had not been settled - despite the personal assurances of a solution from Ellen Teague just five days before. King told Transportation Director Melvin key

personnel were ready to leave. "Mr. LaCoss said he was staying until the No. 3 boiler was ready for re-assembly," wrote King. "After that, he was definitely leaving. At least one other man from the shop, Steve Christy, who helps Mr. LaCoss with the internal (boiler) inspection was also leaving." King learned Paul Dunn was going "down the Mountain" the next day. Bob Kent told King that Dunn had "terminated his employment at the Railroad as of June 30 as he planned. (Dunn) was staying on long enough to make an orderly transfer of authority to a new General Manager." Kent told King he and "most of the crew would be leaving also. It would not be a strike of sorts; they would be leaving the employ of the Cog Railroad." Kent estimated no more "than one or two engineers and firemen would stay (after July 3rd). Possibly three or four brakemen would stay, and he was not sure as to how many of the new trainees would remain," wrote King. "This will create a problem with the hourly schedule. It appears that there will be difficulty in putting together more than two (2) crews with no back-up crew if the engineers and firemen do leave."

Tuesday, July 3, 1973 was the anniversary of the Mount Washington Railway sending its first train to the Summit in 1869 after four years of construction. It was becoming clear to state regulators that behind-the-scenes, the Cog's 104th birthday was going to be anything but happy.

During his Monday visit, state inspector Walter King learned the new General Manager would be Eddie Clark. "Mr. Clark has had nearly 30 years experience with steam engines," King wrote. "However, most of this is aboard a steamship. He has a certificate as a third Assistant Engineer of unlimited horsepower. Mr. Clark admitted he did not have any experience with the cog-type railroad or (cog) locomotives. He does have working knowledge and experience with standard (traction-type) steam locomotives." King told Winslow Melvin the new General Manager was assembling a repair team. "Mr. Clark is bringing in a James Moody of Lincoln to be the machinist and oversee the shop. Mr. Moody is presently employed with Oceanside Machine Shop in Plymouth, New Hampshire. He has very little, if any, boiler experience. Mr. Clark feels Charles Kenison can handle any boiler and engine repairs if a qualified machinist is available to prepare the parts. Paul Dunn, Niles LaCoss and Bob Kent are trying to brief Mr. Clark on as much as possible about the operation, safety, track and trestle, and locomotives. He (Clark) admitted he knows nothing of the switches. This is his first concern, to learn the switch and how it operates. He feels he needs to go through a simulated 'engine in trouble on the Mountain' situation. Mrs. Teague feels she has a good manager in Mr. Clark and claims he is highly recommended by several people including Governor Meldrim Thompson. She is giving Mr. Clark the authority and power to make all necessary decisions concerning the operation, safety, and maintenance of the railroad. The authority was denied to Paul Dunn," noted King.

Inspector King may have first met Eddie Clark during a meeting with Ellen Teague as King's July 3rd report concluded by saying, "In discussion of the operation and safety with Mr. Clark alone, he brought out some areas he felt needed attention. Mr. Clark wishes to spend more money on track and trestle repairs. He feels 4 or 5 new boilers are needed, now! He felt that about $300,000 should be borrowed to up-grade the entire operation and all profits from the railroad must go back into preventative and corrective maintenance." King thought Clark's ideas "would enhance the Cog Railroad greatly. However, these same requests have been made by Paul Dunn, only on a smaller scale, and refused by Mrs. Teague as being unreasonable. Taking this into consideration it would appear that (it's) possible Mr. Clark will discover he can't do all he feels necessary and this may jeopardize his position as general manager."

Ellen Teague's book does not mention the July 1st replacement of Dunn with Clark. Her recollection resumes on the nation's birthday: "On July 4 none of the manager's crews came to work, but I had two crews with a reserve on hand. Dr. Bob Campbell took over one of the locomotives as engineer; Joe McQuaid, later editor of *The Union Leader*, took over the second engine; and the spare remained at the base. The railway opened for

business, but no one was permitted to answer the phone at the ticket office. One of the strikers put a plug in the switch at the base. Meanwhile another had called the Public Utility Commission saying that we were operating against rules. I learned of this through a friend at Troop F (of the State Police). Then I called my lawyer Jack Middleton."

Documentary evidence of what exactly happened to settle the 4th of July showdown between the two sides of the Cog family, each deeply and personally committed to the railroad, is not readily available. The solution, however that was negotiated, did result in the return of Paul Dunn, and the crew that wanted him to be allowed to do his job for the remainder of the 1973 season. *(Editor's note: According to Ellen Teague, there was apparently a July 4th meeting between Dunn, Mrs. Teague, lawyer Jack Middleton, and Teague accountant, Bob Wood where Dunn reportedly said "it's either me or Mrs. Teague.")*

Ellen Teague wrote of the solution: "The manager (Dunn) asked for a contract and demanded that Mrs. Teague and Janie leave or he would go. Since the season was already under way, I had no alternative, because without a manager the Public Utility Commission would have closed the Cog. Janie and I decided to go to Kennebunkport, Maine, but Fanny had to stay, since she was in charge of the kitchen (in Marshfield). As soon as I could get her things together, Janie and I left for Maine." They spent the rest of the summer off the Mountain - first in Maine and later at the Teague Farm in Guildhall, Vermont.

Paul Dunn continued to run the railroad for his fourth season. Trainmaster Bob Kent wrote "that under Mr. Dunn the railway has steadily progressed" and "climaxed with (the 1973) season's record-breaking performance. We had the greatest passenger-carried year and the greatest financial year in the history of the railway." Dunn allotted $10,000 to crew supervisor Kent to distribute as year-end bonuses to "the good men who worked hard to produce a record season" - a practice begun by Henry Teague and continued by Arthur Teague during his management of the railroad. However, there would be no timely bonuses in 1973.

On September 14, 1973, Railway President Ellen Teague gave the State a heads up about her plan to terminate Paul Dunn once the trains stopped running that year. "I am notifying you at this time, prior to notifying Paul Dunn, that his services will no longer be needed here with my Company after this 1973 season. It is now dangerous to continue to hire Paul Dunn, who is that kind of a man who thinks nothing can stop him. Paul Dunn has blackmailed this Company, twice to get agreements for his retention here, as manager. He quietly organized a walk out... This was planned against me... to get an agreement that Paul Dunn would get an agreement to work here through December 1975; this would give Paul Dunn his maximum Social Security." Teague said "several of the boys" would back her up. She asked that her letter be read to the New Hampshire Public Utilities Commission and be published. Teague wrote that she asked Joe McQuaid "to keep all (the details of the strike) from the papers, which he did." Teague notes "business has been excellent and trains are running ahead of last year and 1971 because now Paul is making a point to run five and six trains which previously he had not done in 1971 and 1972. Actually we could and should have had seven trains in running order. What Paul Dunn hasn't done is track work and coach work. To have Paul Dunn work for me any longer <u>is dangerous</u>. He was hired <u>to work with me</u>, <u>not against me</u> and my family. It reminds me of long ago, on this Railway, when Mr. Lyon of the B&M, back in the 1890's, took over possession of this Railway from Sylvester Marsh by pushing him out and making him serve only as President and gained control of his stock.* Paul Dunn is now using these same tactics. Paul has become rude, aggressive, and feels he has full control of everyone. Therefore for

* The corporate power-play Teague alludes to was actually done by Walter Aiken, a partner of John Lyon who ran the Boston, Concord & Montreal Railroad. Lyon and Aiken built the Cog's first Summit House in 1872-73. A wealthy man in his own right, Walter Aiken accepted stock as payment for management of the Cog and the engines and cars he built for the railway. John Lyon died in 1878. The next year, Aiken family claims to coming up with the original concept of the Cog Railway surfaced. Marsh said he did not publicly fight with Aiken because his patron on the railway board had died, and he wanted the Cog to succeed. In addition all of Marsh's male heirs had died. When Marsh died in 1884, Walter Aiken took total control of the railway.

the safety of the Railway, Paul's services will no longer be acceptable to me and my family..." Ellen told lawyer Jack Middleton to tell Dunn he was fired on Thursday, October 11 with just three days left in the 1973 season.

On October 11th, Ellen Teague sent a hand-written letter to Transportation Director Winslow Melvin that Paul Dunn had violated PUC orders by leaving the Base with no reserve crew on October 8th and 10th. Niles LaCoss and Frank Kenison were at the shop, but Teague said LaCoss was not a qualified engineer and "neither of them are a reserve crew."

On Friday, October 12, Transportation Director Winslow Melvin was inspecting the railroad to determine its general condition. Melvin went up on the 11 am train riding on the front platform with 48 passengers inside the renovated No. 2 passenger car being pushed by the No. 9 *Waumbek*. They met the No. 10 *Col. Teague* and the No. 4 *Summit* at the Skyline switch. The No. 10 was carrying passengers. The No. 4 was on a test run as it had been completely overhauled. Melvin asked the engineer if the No. 4 was okay. "He indicated everything was working fine," wrote Melvin. But near the Half-Way House, the descending No. 4 lost one of the six bolts that anchored the boiler to the frame. The water drained out. The crew dumped the fire to prevent boiler damage. The *Summit* was stuck on its ratchet. A rescue train was sent up. The breakdown gave Melvin's train one hour ten minutes at the top, and another 35 minute delay on the way down. General Manager Paul Dunn told Melvin "he was being notified in the mail that as of the end of the season he was relieved of his duties." Niles LaCoss told Melvin that "it would be impossible for him to work for Mrs. Teague, and if Mr. Dunn is not retained, Mr. LaCoss will not assume the responsibilities which he has shouldered in connection with making certain all of the equipment is properly maintained for service." Melvin noted in his inspection report, "LaCoss is the only employee at the shop who is qualified and recognized for boiler welding on the locomotives." Parts had already been shipped to LaCoss's Etna, New Hampshire workshop to assemble an eighth locomotive during the winter *(1973-74)*. This was the same shop where the No. 10 *Col. Teague* was built. Melvin concluded his October 15th memorandum: "The railroad will be in a very serious situation if Mr. Dunn's services are terminated. While the Commission is not charged under the statue with managing this operation, it is unique in that qualified men are getting fewer each year and it is very necessary that this operation be conducted by one who is familiar with all of the required procedures. It must be one who can accept responsibility for making certain that the employees understand and perform their work properly. With all due respect to the ownership during the past few years the actions of Mrs. Teague indicates that she does not fulfill these requirements."

Sunday, October 14th - the last day of the Cog's 1973 Season - the last day of Paul Dunn's tenure - was also the day Arthur and Ellen Teague's oldest child died. Jane Teague's diabetes which she had been living with since age six had put her in a coma in late 1969. She lost her eyesight. Jane recovered enough to continue working at the Cog as the Marshfield cashier with a small "I am Blind" sign on the counter - making change and sometimes asking a nearby waitress for help identifying the bills. With her mother at her side, Jane Teague died that Columbus Day weekend. She was buried alongside her father and youngest sister, Lucy in Lancaster. She was 30 years old.

Ellen Teague named Eddie Clark as her new general manager. She reportedly told Mr. Clark he "could do as he wanted" with the $10,000 worth of bonuses allocated to the 1973 crew by trainmaster Robert Kent. Kent was told Clark replied, "the men have been paid and that is all there is to that." Kent warned Transportation Director Winslow Melvin the non-payment of bonuses would lead to fewer qualified Cog train crew returning to the Mountain for 1974. "A good general manager has been fired," he wrote, "many hard working men apparently have been denied bonuses ranging (up) to $500 that they richly deserve, an outstanding master mechanic has terminated his employment - and how will these people be replaced? I wouldn't have any idea except that they will NOT be replaced with the caliber of personnel of 1973." Shortly after Christmas 1973, some men

did receive bonus checks. And some of the crew that had walked out on the 4th of July talked about doing something to "save the railroad." Engineer Bill Oedel, then a Yale senior finishing his degree, told an organizer of the effort: "After half a dozen years I too have grown to love the place and to feel increasingly numb about the (Teague) Family. Perhaps for that very reason I grow increasingly fond of the Railroad, more and more emotional about its imminent demise." But Oedel was also realistic about the chances for success. "(Ellen) certainly had no right owning a railroad," he wrote. "One day a group of enraged drones realized this fact and shouted as much from the rooftops. They were made sterile and replaced - kazam. They had forgotten that (Mrs. Teague) owned the railroad and there was nothing they could do about it. I'm not saying there's nothing we can do; I'm trying to suggest that we should realize our limits and carefully work out our priorities."

On Friday, November 30th, Transportation Director Winslow Melvin finally answered both Ellen Teague's September 14th letter telling State regulators Dunn was done at the Cog, and her hand-written October 11th correspondence that had arrived six weeks prior. "You do not indicate in your letter a replacement for Mr. Dunn as General Manager for next year," Melvin wrote, "or who is to be responsible for the necessary planning during the winter in order to have materials and equipment ready for the opening of the 1974 season. It has been very apparent to me over the past few years that there is personal animosity between you and Mr. Dunn. However, I think, I must in all fairness, inform you that... it has been my observation that he has been completely loyal to the railroad, and has held a high degree of respect and cooperation among the employees responsible for its operations. Mr. LaCoss who is responsible for constructing, assembling and maintaining steam locomotives certainly must be considered qualified to operate them under emergency conditions, with no revenue passengers, in case of breakdowns on other equipment on the mountain, with one such as Mr. Kenison available to accompany him. I believe that I should call these matters to your attention in the hope that in making a change you will realize that the best interests of the Cog Railway must receive the first consideration. It is my considered opinion that Mr. Dunn has performed these services in the best interests of the railway and in doing so has overcome many difficulties and ended the present season with the heaviest patronage in the history of the railroad. This should not be overlooked."

Mrs. Teague answered the following Wednesday. "The episode of Paul Dunn is finished and through with," she wrote. "There is no personal animosity on my part but Paul Dunn has been unfaithful to me as my manager... Now to answer your question on my manager for 1974. The past two managers since Art's death, I tried to study carefully but then man is changeable, and some can do the job better than others. I certainly have learned a great deal, and Art... told me (before he died) he wished he had taught me more. I am certain Art would never have left me if he felt I was unable to carry on. This I shall do and will do until my life's end and do well, even though there are others ready to grab (the) business. There is no one more qualified than Edward Clark for performing the duties of General Manager of the Cog Railway. Edward Clark is my new manager and Governor Thompson said he was a good man for the job." In her book, Ellen Teague wrote: "Eddie Clark was kind to me. The biggest job (of 1974) was to restore the distorted feelings of our employees. We got going slowly and it took time to break in the new employees, but it was worth the effort." *(Editor's note: Clark would leave as manager in the fall of 1976 after three seasons. He, like those involved in the 1973 dispute, remained loyal to the railroad. In 2000, he found two large classic wooden water tanks built in the early 1900s and donated one to the Cog to fill the tenders of the thirsty steam engines at the Base Station.)*

1973 was supposed to be Fanny Teague's last year at the Mountain managing the Marshfield kitchen. She followed in the footsteps of her sisters, Margie and Anne, who had married and moved on. Fanny got married on May 24 just ahead of the 1974 season. She came back to cook that summer when the new chef was fired. The Teague Family now running the railroad after the summer of 1974 was just Ellen and son, Charles.

Speedy & Patriotic

Work In Progress
** Not Final ***

Rochester, New York historian Robert Bermudes, Jr. interviewed Edward Clark about his time at the Mt. Washington Cog Railway in December 2000, 2001 & 2005. At the time, Clark was overseeing the hydroelectric facility in Littleton and was nearly a quarter century removed from the general manager's position he held for Ellen Teague from 1974 to 1976. However, his memories and his story-telling skills remained vivid. Here with Bermudes' permission is an edited version of his conversation with Clark.

Ellen Teague & Ed Clark at Marshfield Station (1983)
- John Rolli Collection

"I became general manager of the Cog Railway because the Teague family and I had been very close," recalled Edward Clark. "I had begun to collect historical steam (at Clark's Trading Post) that dealt with the logging of the White Mountains at the close of World War Two. I always kept track of the Cog Railway and went up there to get boiler flues or bushings or cylinder oil or whatever. It was when I began to run my railroad experimentally to see if the tourists would like it." Clark's master plan was to eventually cross the new interstate highway that was heading north and build a replica logging operation in North Woodstock. "Then I could get onto what has now become 500 acres of land in a mountain surrounding and excellent for commemorating the logging days. I had gone about as far as I could and needed a lot more capital to go up heavier grades and put in a lumber camp and all by the seat of my pants. And it had to be an economic success."

Ed Clark had become friends with the Teagues at the first organizational meeting of the White Mountain Recreation Association in North Conway in the early 50s. "The Teagues were still living up at the Hut and going through Crawford Notch," Clark told Bermudes. "It had to be November or December... I had a 1940 Dodge pickup truck and they had some kind of an old Chevrolet car, '37 or '38 and it wasn't worth the powder to blow it to hell... The Teagues were thrifty and careful not to ground... It wasn't easy money and he didn't take easy money out (of the Cog operation) to my knowledge. However, I'm never interested in whether you got any money or whether you're Catholic or Protestant or Palestine Irishman. Going up through the Notch, I went a few hundred feet ahead because I thought my tires are a little better than theirs. When I got to the Crawford House to the Bear Notch road, I knew that's where they would cut in (to go to the Cog) and the lights on the car were very dim and it was a dismal feeling as the sun was coming down. And they made it up to that last pitch. I stopped my truck and I went back to them to ask them if they were okay and they were... they were a happy jovial pair. Ellen Teague and he were wrapped up in big, heavy a coon skin coats, you know, because the goddamn car didn't have any heat in it."

"They never knew much about me until the White Mountain Recreation meetings," said Clark who went to the Association's organizational meeting to represent his father who was ailing. "(Clark's Trading Post) only had

an admission of a quarter, and Storyland already was (charging) a dollar... when I went to that meeting. They said, 'Now we've got to assess one another before the meeting is over, and in order to make this fly, we should all put in $1,500." Ed Clark remained quiet until the chairman said, "Ed, I didn't hear from you. I said, I am here to report to my father, and we do not have a cash flow where I can say that we will put in $1,500. Arthur Teague said that he couldn't put up $1,500. Bob Morrill, who's a very fine diplomat and good man... said, 'Well, do you think your father would consider $750?' And I thought a little bit and I said, 'Well, I think yes, but I can't speak for him.' It was a late meeting. When I got back, he was in bed. Daddy, said, 'How did things go...' this and that. And eventually I told him what I had semi-committed to..." The elder Clark agreed, and son Ed says "Arthur Teague was assessed in the first few years of the Recreation Association $750 just like we were."

Ed Clark became Ellen Teague's general manager in the late 1973. "I took over in the fall when the last train came down from Paul Dunn, who had been with the B&M in an administrative job, like on right of way... materials... supplies and contracts and so on," said Clark. "But he had the benefit of the old timers" like Earl Cone and Harold Adams. "Paul Dunn really did very well in his own way, but Ellen was a very strong woman and you can even look down on people for being strong and ridicule them. She was very, very strong and could endure any amount of tragedy and hardships and financial return and all of these torments that ran with having about 67 employees, which I think is what was in there when I finally took (over) all of the system.

Why? Economics "when I came to the cog railway, the Treasury was very low if anything. And I took a very modest figure, general manager and unlike other crews all of the years, I would work throughout the winter to bring the equipment up to par. And uh, there was something like 67 employees, counting the girls, taking care of the laundry and the dining room and the gift shop. And like, galley, I finally put all girls in there because I had a lot of troubles with drinkers being cooked and working in the Galley. They couldn't be depended upon to be there in the morning to feed the crew and get the train out at 8:00 but a 63 or 67 is the total amount (of employees). And I had to eliminate all the unnecessary help there was. And I got it down to 37 and the payroll was the same. But I was able to have more contented man because they were getting paid more and they agreed with me if I keep the pay total payroll the same and I could weed out anybody and the other guys. My men would play, as I say, the piano with both hands. They'd work harder. And they did. And we had a good relationship in most cases except those that didn't want to do the right thing. And I had to replace them as quickly as I could. Find a way to train them up and replacing them." According to Doug Taylor, Clark also was interested in hiring at least one of the Jitney Years team. "Ed Clark tried to get me to join him full time at the Cog to run the Car Shops again," says Taylor in March 2020. "I went up and talked to him, but I guess I sensed the management problems at the time, plus the fact *(wife)* Missy didn't want me to leave Dartmouth *(where Doug was teaching technical theater)*, made it easy to turn him down. He offered to match my Dartmouth salary, which was about $10,000 per year. I wonder if he would have been able to get it by Ellen."

"Three Types of People"

Bob Clement: "Ed is fond of stating that there are three types of people: workers, coolies, and drones. Whatever you did, you did not want to be a drone in Ed's eyes. Workers, and coolies had uses; they were able to accomplish things with either their minds or bodies; they got things done. Drones did not. Drones took up space and slowed others down.

It was not only people that fit into these three neat compartments; the equipment you used could also be categorized this way. Clement tells a story of a work crew high up on the mountain that included Ed, in his blue work uniform, replacing wood on some of the three miles of trestle that ran up the Cog right-of-way. "Being miles away from electric power sources, most of the equipment used on the mountain was hand or gasoline powered. Ed was having difficulty starting a gas powered chainsaw. He tried diligently to start it, making all the fine

tuning adjustments appropriate for the chainsaws of the day. As the seconds turned into minutes, his gyrations trying to start the saw became more and more intense. Soon he was just a blur; a whirling dervish frantically pulling the ineffective starting cord. All of a sudden he stopped. He became completely calm. Ed had given the chainsaw every opportunity to start and it chose not to. He turned to the gathered congregation as he started to gently rock the offending chainsaw in an underhand motion. "Gentlemen" he said in measured tones, "there once was a time when people cared about the equipment they made." The pendulum arc got greater as he pontificated on the ruin of the modern working man and his equipment. The entire track crew was now watching and mesmerized by Ed's sermon. He remained calm and under control the entire time. Like an itinerate bible preacher working a crowd, the tempo and rhetoric of Ed's benediction increased as he went on. As he reached the climax, both in the rhetoric and motion of the saw, he finally stated categorically what he thought of the saw. "Sometimes people produce shit!" With the word "shit" he let go of the chainsaw sending it in a big curving arc into Burt's Ravine where it smashed to bits." The service over, Ed and the crew got back to the work at hand.

Clark told Bermudes "There is nothing that I can say wrong about Ellen Teague. Even though there was a conflict there, I never got angry, or ugly or nasty and so on because I was playing with the toys and doing what I wanted and I was there to make modifications. I didn't care about the gift shop or about the restaurant or the bookkeeping. I was there from a mechanical aspect only. It was easy to do all of that... she was very good to me and it was a place to live, and for the first time rebuilding of locomotives went on somewhere in the winter."

The *Yellow Jacket* Speeder

One of Clark's mechanical projects was the development of a small Cog section car to be used when there was trouble on the line. "Breakdowns on the mountain were more frequent, constantly frequent, and things had to be beefed up..." Clark recalled in an interview with Rob Bermudes. "We always had a special train at the Base simmering away... something happened up there and we'd have to stoke her up. The shop crew were former engineers, firemen, brakemen and all, but they were working down there either on coaches or whatnot, and would go be an additional crew if needed. There were times that the crackerjack machinist was running the locomotive and the next best machinist was firing. So we were in need of a quick way to get up and back." Thus the Speeder concept was born.

Clark formally wrote about "The Mt. Washington Speeders" as part of a four page article called Motor Car Memories in 1994. "I became general manager of the Mt. Washington Cog Railway. We ran six engines simultaneously on the mountain and kept a seventh steamed up with an engineer and a fireman in readiness in case of a mechanical failure on the mountain. If one engine happened to stall, all traffic stopped, because there were no sidings convenient to get them off the main line. The machinist would have to travel up the mountain with tools and spare parts to fix any problem that might arise. Revenue loss was severe when any engine was down.

"I made up my mind to design and build me a 'speeder' which could ascend the mountain at a rapid pace. I visited the headquarters of the Maine Central Railroad in Waterville, Maine , and acquired for a very reasonable price two old, decrepit Fairmonts *(section cars)* from which I intended to create my monstrosity. These motor cars didn't have engines, but everything else was there and in good working order.

"I had a wonderful machinist in those days- a good friend by the name of Roger Sanders, - and whenever I said, "Hey! Why don't we build a 'such and-such?' He would start sketching on the back of an envelope or any old scrap of paper, and before you knew it, sure enough, we'd have what ever it was I'd asked for. I knew my speeder would be a challenge for him, but as he thrived on doing the impossible, I had no doubt he could build

it, and, in short order, he did! And, I'm sure it was the most unusual speeder in the world. The first requirement for the speeder was to build it so it could be lifted off the tracks , using the Fairmont's lift off handles. She was double ended with windshields fore and aft, and she had sturdy storm curtains cut for her sides. We built a power plant and mounted it on the sub-frame, which placed the engine and complete power train, including the cog wheel, all in one unit. The whole thing was mounted against heavy rubber trunnions to dampen the heavy beat of the cog wheel as it picked out the spools in the rack. Also a great feature was that the complete power unit could be taken out in minutes and repaired on the bench. The cog wheel, made of carbon steel plate for lightness, was copied exactly from *Old Peppersass* - the world's first cog locomotive. We used a high horsepower snowmobile engine *(with a constant torque clutch brake)*, purchased new, to power the speeder.

"By the time we finished, it was early December. After a month's work, we were ready for our shakedown run on the lower reaches of the mountain. Christening her *The Yellow Jacket*, a name suggested by the loud buzzing of her high powered engine and her flashy yellow paint job, we took her out.

"She performed in a most excellent fashion *(up to Waumbek)*, so excellent, in fact, that we decided to take her on to the summit *(the next day)*. We hurried back to the shop and loaded all the survival gear we thought we might need - Coleman lantern, white gas, matches, shelter materials, and food - along with a generous supply of tools in case of a mis-performance. *(Clark expanded on the survival kit in his Bermudes' interview: "We felt that if we came off the iron, that one of us would be able to get down to the valley. Plus we had a track phone with us and could get Crawford - and Crawford in turn, would call my sons down in Lincoln that their father was in trouble on the mountain with Roger Sanders. And Crawford was told he was not to Yodel or anything if we were late, one way or the other because we didn't need state police and rescue parties.")* At 2:00 on a gray winter afternoon *(November 25th, 1974 according to Mt. Washington Observatory logs)*, my trusty machinist and I headed for the top.

Clark interview: "Going up, she performed exactly like we wanted her to, and we'd never been into the steep grades - Jacob's Ladder at 37 percent. But we worked our way to the summit and then about Lizzie Bourne - I have no idea how fast the wind was, but it was ungodly and we were bundled up... between Lizzie Bourne and the absolute summit, we lost a lot of our body heat. ***Clarke article:*** "As we neared the summit. it became difficult to endure the wind as we hadn't yet installed the storm curtains. Frost feathers were developing rapidly on our clothing. We yanked our sleeves down over our gloved hands. pulled our heads inside our jackets, and persevered on our journey. ***Clarke interview:*** "When we got just above the water tank, the drifting had started on the summit, so there was a wall of three or four feet of snow and you couldn't penetrate through it. We were chilled to the bone so we rammed the *Yellow Jacket* straight into (the drift) and shut the engine down, locked the brakes and through knee-deep to crotch-deep snow, tried to get to the weather observatory in the wind."

Clarke article: "We shoved open the door without knocking, and tumbled inside. We were greeted by the observatory occupants with a stunned silence and stares of disbelief "Where in hell did you come from?" they cried. We calmly replied, "We came up by speeder," *(that's what the Maine Central railroad called them - you get to the job quickly.)* "and we've just about had it!" Of course, they found our story hard to swallow, and nothing would do but for them to go see for themselves. When they returned, they exclaimed over and over that they had never seen the like of the contraption which had carried us up to their high perch.

The Observatory's Side of the Story

"25 Nov 1974 - Ed Clark, manager of the Cog R.R., and assistant, arrive at our door. In a record time of one half hour they made it up the Cog tracks in a converted breadbox powered by a 23-hp snow machine engine."

"Those fortunate folks who have met "Diamond" Ed Clark (manager of the Cog Railway) are left with the nagging suspicion that "That man was putting me on." This was the thought that ran through one observer's tired brain late one cold November afternoon when Ed Clark and Assistant *(Sanders)* arrived at the Observatory front door. The both of them had the appearance of being relaxed and refreshed, not at all that of having just climbed the mountain. They rambled on about a "Speeder" they had built from orange crates and old railroad parts. Powered by a snow machine engine, they had made the trip up the cog tracks in a record one-half hour. We finally admitted that there had to be something to all the talk, and went out into the darkening gloom. There, barely discernible in the afternoon fog, was the Speeder. The whole point of the ordeal of the trip was to see if the machine would dig in enough over the ice-covered portions of the tracks. After a photography session and few free rides, the Speeder disappeared into the dark, thus ending the latest trip up the Cog Railway in any Autumn by a motorized vehicle." *- Mt. Washington Observatory News Bulletin - March 1975*

Ed's Continues His Story

Clarke interview: "Two of (the observatory staff) started to don their outside winter gear and the other two stayed of talk. They were going to go out and see what the hell did bring us up there. In the meantime, (Roger) and I are getting our boots and shoes off.... and trying to get warmed up. We'd depleted any heat we had. Eventually the (two that left) came back and the other fellow said, 'What do they got out there?' 'They got something out at the water tank it's wedged into the snow. That is how they have come up.' We got warmed up and I think that the weather observatory people gave us food or something good to eat. I do know that the apples on the window sill had been frozen stiff and you could crunch them down in a dish with your fork and they would be apple sauce... they were as good as rotten, but the (low) temperatures wouldn't allow them to ferment."

Clarke article: "We went back out into the last of that cold afternoon, fortified and ready to face our descent. We kicked and thrashed about in the snow, finally freeing the speeder from the drift. We each knew what the other was thinking: Are the brakes going to perform the way we planned? The speeder's unique braking system was built with two separate types of band brakes and an other hydraulic brake, made from a 5-yard dump body pump, which allowed us to choke off the discharge, thereby controlling the rate of descent. The system also included a cooler, consisting of 8 feet of steel pipe fitted with fins. The band brakes were taken from a 1926 REO Speedwagon, and they had inside shoes and outside bands of soft woven material. We both knew the true test of our braking system would come at Jacob's Ladder, an especially steep section of the track with a 37-½° pitch. We had to count on our brakes entirely to control our little beast, as the motor would be completely disengaged during the trip down, and we had no other means of stopping.

Clarke interview: "We headed back down... everything was pretty fine. When we got into Jacob's Ladder, we had to learn how to use the braking system *(Article: "using our three brake systems independently of one another to reduce the possibility of any one of them overheating")* in that heavy grade and gusts of wind. The gusts were heavy

enough so a little bit more velocity and she might have lifted, but the cogs would have held her in - she would've come back down. We could stop it right up abruptly, so it would throw you into the end of the rig - it was important to have tested that and that worked very well. Plus we had the uphill band brake and the downhill cog band brake. There were three distinct systems to do the braking and we came down all the way to the bottom, reported to Crawford immediately that there's no more concern... we're home."

"The following weekend my son Tom, who was just a young kid brought with him a college friend from Rutgers who had worked at the Trading Post and wanted to see this mechanical device. He'd taken mechanical engineering and so we decided we would (try a) run. Sanders and I were there... (My son) and his friend came and the three of us, without Sanders who was at the base, went on up... We got above probably about halfway... where there was a solid rack... all those pockets were filled in, but knowing that that could be the case someday, I had a special ice cutter on the first cog set... it was supposed to do magical things *(punch out the ice)* and it did down at the Base and around. It would shatter out that ice and that was a success. ***Clarke article:*** "We made it to the Halfway House where we encountered a great deal of ice and fresh snow, so much that we decided to return to base. Tom and his friend wanted to ride on the outside of the speeder *(to get the view)*, which they did by pulling out the lift off handles and clinging to the aluminum canopy. I sat inside with my feet braced against the downhill end of the car and my back pressed against the rear wall. Their weight should have been cradled between the wheels. As we descended we picked up speed. All of a sudden, because of the pockets of ice, the speeder cog gear bounced up and out of the rack. When it came back down it landed in the rack again. I quickly released all the brakes, and tried to regain control as the cog wheel meshed. Tom and friend leaped off, and I continued downward alone *(Intv: "I wanted to save my damn rig")*, bounding along, up and down like a jack rabbit, gaining speed all the time. Whenever the *Yellow Jacket's* cog wheel would drop back into the rack, I would carefully engage one brake or another, only to have her bounce right back out again. I descended for perhaps 1000 feet in this fashion, traveling at breakneck speed along a trestle about 8' off the ground. I thought about jumping ship, but great granite chunks of Mt. Washington, looking to me much like large, gray tombstones, kept looming up at me. I thought my duck was cooked! ***Clarke interview:*** "I rode her down through past Waumbek tank... down Waumbek hill... it finally got so I was off any trestle... and I jumped off to my right when there were not too many protruding stones in about 18 inches of snow. I got out so my feet were just like this... I thought I would only go 25 or 30 feet and I could come up and begin to run. Well, I didn't startle any of those damn rocks that were protruding or anything. I had a lot of good luck. The Lord's always been good to me. I've had more than nine lives and there's some kind of a guardian angel that always wanted to me around. I've been as great a sinner as any of us. But I skidded a long time like that until I came to a stop and my poor *Yellow Jacket* was going down the mountain with nobody at the controls. ***Clarke article:*** "...Still buzzing, still bouncing , and still gaining speed, disappeared in a cloud of snow.

"Down at the Marshfield embarkation platform waited Roger Sanders, our master machinist. He had waited there for our return and had his camera to his eye , focused on the crest of Ammonoosic Hill so as to photograph us when first we came into view. When the *Yellow Jacket* pitched over the crest, it was traveling at forty MPH or greater, per Sanders estimation. He was so startled that he dropped the camera from his eye without taking the shot. *Interview:* "There's a quick dip right in there, and the thing actually lifted right off and jumped into the river and stove itself all to hell." ***Article:*** "Had it chosen to exit the track on the Marshfield side, Sanders would not be with us now! As it was obvious that no operator or passengers were aboard, he was instantly concerned with our welfare. Fortunately, Tom, his friend, and I were hurrying down and soon came into sight, allaying his fears. Together, we inspected the wreckage and determined the power sub-frame to be unharmed except for a ruined cog gear. The Fairmont super structure, however, was pronounced a complete wreck."

After crash, Clark and Sanders decided "we're never going to make one so light that it can be lifted off by the section crew and gotten off the main line... The next one was much heavier."

Article: "Later that winter, we mounted the same power unit on a heavier frame. We also added an outrigger for lifting up a welder, which we could use for repairs on the mountain. The weight of the new speeder was triple that of the unfortunate *YellowJacket*. Since the canopy on the original speeder had been destroyed, this one be came a "fresh air taxi," with no roof, no curtains or weather protection of any kind."

The *Yellow Jacket's* successor - painted green because we had no more yellow- was christened (what else?) the *Green Hornet*, after one of my favorite radio programs. Due to the two cycle, high power snow machine engine and constant torque transmission, she was successful beyond our expectations."

May 27, 1975 - State Learns About *Yellow Jacket* Trials

View of the up hill end of "Speeder" - Controls are on the uphill end (1976)
- Walter King photo / NH DOT archives

View of down hill end showing suspension, cog gear, brake drum, etc. (1976)
- Walter King photo / NH DOT archives

During the first spring inspection "it was pointed out to (inspector Walter King) that during the early winter months one of Mr. Clark's ambitions became a reality, that was that the railway should have some sort of transportation to be operated on the existing tracks utilizing the cog rack for power to yield a more rapid ascent and descent for not more than three (3) people. Prior to the beginning of 1975 a (speeder) was built by Mr. Sanders and Mr. Clark utilizing the technology of the snowmobile clutch and engine and the safety factors built into the present locomotives. A small vehicle with approximately a 36-inch wheel base was constructed and tried. It appeared to be a very satisfactory operation on an initial run up the mountain in late November. It took 29 minutes to get from the Base to the Summit. It would appear that this vehicle will be a great asset to the railway. The vehicle has since been dismantled *(Editor's note: The State was not told the Yellow Jacket had been dismantled by rocks in the Ammonoosuc river when it crashed)* and will be rebuilt with a longer wheel base with the same type of power unit and a different braking system for added safety."

Side view- Tool box mounted on down hill end (1976)
- Walter King photo / NH DOT archives

- signed: *Walter W. King* – Jun 3, 1975

Sec. 43 - Speedy & Patriotic

The Speeder aka *The Green Hornet*
June 2, 1976

The "Speeder," a section car adapted to the Cog Railway track has been in operation attached to and becoming part of this report are photographs (previous page) of this vehicle - Warren King

"Chub (Kenison) would run the speeder," Ed Clark recalled. "Because he and his wife both had snow machines and this had a constant torque transmission in it and a brand new snow machine engine, but lighter horsepower in those days."

Tender Bumping by *The Hornet*

***Clarke Article**:* "Another memorable speeder adventure took place on a cold, gray October day. Our first train of the day, Engine No. 9, had left with but a few passengers that morning. We could tell that a storm and heavy wind were coming in from the West, which was not unusual on Mt. Washington, whose summit was 6,293 feet above the sea and which had a climate equal to that of middle Greenland. Shortly after the train's departure, we received an emergency call from the folks at the weather observatory on the summit. They asked if any trains were going up this morning, and we informed them that one had left and should be at the Halfway House by now, but we couldn't see the train as the mountain had suddenly closed in.

"You can expect sleet and a gale of 80 miles per hour to come at anytime," the voice on the line warned. It was always policy to shut the Cog Railway down at such wind speeds, as some years earlier a train, light on passengers, had gotten caught in high winds. First the roofing had been torn off, the conductor later told us, and then each gust had caused the car to lift off on one side, then drop back down. It was only the deep teeth of the cog wheels and the quick thinking of the conductor that kept the car from being blown off the trestle. Quickly he had his passengers all move to seats on the windward side, which held the car down, enabling the train to get off the mountain. Fortunately, all ended well.

At that time on the Cog R.R., we had no communication with any train after it had left the station, as radios were yet to come to this mountain line. When a train got into trouble on the mountain, those aboard had two army field phones. With leather cases and shoulder straps, these units looked like ladies purses, except for their magneto cranks sticking out. One phone was on the engine in the seatbox, and the other was stowed in the coach. One of the crew members would step off his stopped train and, with alligator clips, clamp onto two wires suspended on insulators anchored to the ties at ankle level. He would then crank the magneto, and, using the proper ringing signal, he could contact the base or the summit.

Well, now you can see we had no means of communicating with or even seeing the train on the mountain in the storm that October day.

Immediately I though t of the *Green Hornet*, but the line was tied up with five simmering steamers waiting to make the run as needed. The *Hornet* was in her stall at the shop and couldn't get by without clearing the line, which would take too much time. Quickly we got the front end loader from the cooling tipple and dragged the poor Hornet overland to the front end of all the equipment on the line. We set her in the rack, and fueled her up. I donned my heaviest jacket and selected an old timer, Chub Kenison, to come with me. At the last instant, Arthur Minot came running up to us with two pair of new welder's gauntlet gloves for our bare hands. Thus equipped, we headed up the slope.

Now, Chub wasn't just a nobody. Even at his age, he excelled over many others in the shop, but he was my man on this stormy morning for two reasons. One, he was very level headed, and two, he was well experienced

on the snow machine engines which powered the *Green Hornet*, as he and his wife each had their own machine, and he could keep them going.

Running the *Hornet* at full bore, we soon passed Waumbeck Tank, then at Halfway House, we began the ascent of Jacob's Ladder , a grade of 37½°. Here the *Hornet's* constant torque transmission solved the equation of ratio, keeping us going at maximum speed. After Jacob's Ladder, visibility was reduced to zero, and rime ice and sleet began to cover us.

We did not slow down, but moving as far forward as we could, eyes straining into the storm, we watched for the tender of the engine to appear. All the engines had numerals several feet high painted on their tenders so they could be identified with the use of field glasses from several miles away at the Base Station, so we hoped we'd be able to spot it in time. We did not voice our thoughts to one another, but we later discovered that we were on the same frequency. We were both worried about the possibility that the engine crew had determined the danger and were coming down mountain. Should we have had a "cornfield meet," we would have passed right beneath the tender and derailed us all. As we traveled further and further, we couldn't believe that Engine No. 9 could have gone so far up the mountain in such a short space of time.

In spite of the wind doing its best to hold us back, we finally reached Skyline Flats. Peering into the storm, suddenly I thought I could see something ahead. Sure enough, the large number on the rear of No. 9 gradually emerged out of the blowing snow. We were immensely relieved to see that she was still running upward bound and not downward towards us!

Trying to get the engineer's attention, we repeatedly throttled the *Hornet's* engine from idle to full open, stopping just a few feet from the back of No. 9's tender each time. After at least a dozen attempts, we gave this up, as they obviously couldn't hear us in the gale.

Next we tried ramming the *Hornet* into the rear of the tender to make a good thump. Over and over we hit the tender, but the fireman never climbed up on the coal and looked over the back to see what the ruckus was.

Finally I told Chub that if he would bring the Hornet right up tight and push lightly against No. 9, I would try to climb up over the back of the tender. After a bit of a struggle, this was done. When I got into the tender at last, I saw why they hadn't heard us. In addition to the roaring of the gale, the sound of our engine had been blocked by the heavy storm curtains, which the crew had dropped. As I stood in the tender, I could see a shovel being thrust beneath the curtain and into the coal pile at regular intervals, then disappear ing to drop its load into the firebox. I raised the curtain and jumped onto the gangway, startling the two crew members half to death. Immediately the engineer stopped his engine and asked what was up. I told him about the weather fore cast of heavy sleet and 80 mile an hour winds, and he agreed that we must get down off the mountain as fast as possible.

When I asked , "Couldn't you hear our engine?" the crew replied, "Oh, yes, but we thought it was a lost plane running out of fuel. We never expected you guys to be here!"

We then spaced our two vehicles about 100 feet apart and came down the mountain together. The *Green Hornet* was in no danger of blowing off, as she had no cab to catch the wind.

The story doesn't quite end here. A few years ago, I traveled to Switzerland having a great interest in cog railways, I visited a museum to see the Swiss cog engine, which was designed after *Old Peppersass*. While admiring this, I saw set aside in a special place of honor- a speeder built in 1924 that incorporated everything we had done in New Hampshire! It was as if we had seen a diagram of this one when we built ours! Well, you know what they say about great minds.

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Today, after twenty years of daily use, you can still see her - gaunt, lanky and all muscle - buzzing her way up and down Mt. Washington during emergency runs."

Breakdowns

"We had locomotives breaking midway and I would have to lace them together and pull 'em up tight. So that they could limp down and they would get on down to the shop and another locomotive would be there to take the coach. And people don't like that feeling of the locomotive was vanished. And the damn coach is locked on the brakes and 'Wow. You talk about roller coasters.' Some of them get quite concerned and you've got to have a good brakeman who can keep them entertained and talk until the next *(train)* comes up and tell them logical things they want to hear from my section. Then after its all, done they go home and say like, 'Boy, what an experience we had that locomotive went away and another locomotive came up and hooked onto us and we were all alone there and nothing to keep us - just the brakes and like that.' You'll get a lot of talk about that later."

Spirit of 76

"(The reason for) the *(Spirit of) '76* was that we were never getting in the quota of timber (replaced) and the railroad had reached a point where (the trestlework) was decaying faster than you could replace it and this (work locomotive) would get them up there quickly... It had an AC power system to run power tools and augers and electric chainsaws - speed everything right up and you could put it down on the switch out of the way if you'd left off everybody where they belonged to do some work and laid out their tools and their materials and wood and get to have a fireman. And then engineer roosting and non producing in the work train, especially when they had to be off the main line.

We then immediately determined that we had to speed up the track equipment and on the cog railway - the locomotive, the diesel that we put that in, was a masterpiece of minimal investment using components that adapted perfectly to the task - bewildering well and she was to be a work train and so forth.

State Examines New Cog Equipment

On Monday, April 12, 1976, Inspector Walter W. King and the undersigned *(Winslow Melvin)* went to the base of Mt. Washington to examine a new piece of equipment being constructed for use on the Cog Railway. This is a diesel locomotive which is being built on frames of a design similar to those of the steam locomotive. It is carried on flanged carrier wheels and axles quipped

with a cog wheel on the front and rear. Power for this vehicle is obtained from a 225 HP General Motors diesel engine. This engine drives through a hydraulic torque converter with forward, neutral and reverse gear box to a gear transfer box mounted nearly in the center of the locomotive. This gear box has a forward and rear shaft which drives heavy truck rear ends , one of which is mounted just behind the forward axle and the other just ahead of the rear axle, with brake drums and wheel hubs attached thereto.

On the brake drum housing will be mounted a sprocket which will drive the jack shaft which will be geared to the cog on the wheel and carrier wheels. This equipment was taken from a very large truck type vehicle which was used at Pease Air Force Base to tow the large aircraft which have been base at that field. The gearing will be such that with the diesel engine governed at 2100 revolutions per minute and figuring a 10% slippage through the torque converter drive the fastest operating speed will require 40 minutes to travel from the base of the mountain to the summit, a distance of approximately 3⅓ miles. The brake system consists of three different methods plus the use of reversing the engine through the torque converter.

The regular brake system operates by a hand wheel which controls the brakes at both ends of the locomotive simultaneously through a chain and rod linkage similar to the steam locomotives. It is designed to stop the locomotive with very little effort on the part of the engineer. This wheel is located immediately ahead of his operating station. It is provide with a ratchet and quick release and within easy reach.

A second system consists of the air brake system similar to that with which the truck was originally equipped. The air is provided through a compressor mounted on the diesel engine. This applies the brakes on the wheel hubs of the regular truck transmission rear axles on which there are four brake drums. These are effective through the chain drive to the jack shaft and the cog wheel. The third braking system is a brake drum on the drive shaft adjacent to the gear transmission case. This is not considered to be depended upon for severe use although it might hold the locomotive as a sort of parking brake. There is, of course, the pawl or ratchet which will positively hold the locomotive from going downhill from a stationary position.

Mr. Edward Clark also claims that the engine can be used to govern the down hill speed through reversing the engine and using the hydraulic torque converter through the reverse gearing. It is also claimed that it may be possible to govern the down hill speed through a system of compression through the engine by controlling this through a valve arrangement.

This locomotive is pretty much an experimental assembly and is designed mainly for use in maintaining the road bed. It has a running board on either side which facilitates getting from one to the other without having to walk the track. It has a through opening at each end which will carry a heavy beam

which can be extended to support a walkway or to use as a boom for handling heavy material. The cab provides full head room with plenty of window space for good visibility.

One critical situation will be the adjustment of the drive shafts to each cog wheel. This is necessary because they will be on fixed shafts to a single drive and any variation in the tracks between the racks will affect the concentration of the weight of the unit accordingly. Another problem is with respect to the diesel engine. This is mounted horizontally on the locomotive and will undoubtedly require a special oil pan to provide for the inclined position in which it will be placed throughout the working period on the mountain which involves up to a 37% grade.

The workmanship in the construction of this appears to have been performed reasonably well. A test operation is scheduled to be performed during the latter part of this month. This should be followed with a great deal of interest. Mr. Clark was request to obtain specifications relative to the gear transfer unit so a determination can be made as to whether it is designed for the work it will be required to perform on this locomotive. Me. Clark indicates that the locomotive is substantially of the weight similar to that of the steam locomotive, a little lighter if anything.

State Examines Diesel Follow Up

On May 10, 1976, the undersigned (Warren King) conducted a routine inspection of the Cog Railway. The major purpose of this inspection was to make a determination as to the operating condition of the new diesel-powered locomotive to be used as a work train for future years. It was learned from Mr. Edward Clark, General Manager of the Railway that the automatic transmission in the locomotive has developed a problem. It is not known at this time whether the problem is with the transmission, with the way the transmission is piped or with the purging of the air from the transmission. Mr. Clark informed me that an automatic transmission mechanic was being brought in to see if the problems can be rectified.

In discussion the operation of the new locomotive it was learned that a short test had been made and this was when the transmission problems were discovered. It appears that in the process of ascending the tracks from the shop to the coal bunker, that the automatic transmission fluid began to foam and pump out through the breather consequently, all of the transmission fluid was lost. It was further learned that the brakes, both air and mechanical in the brief run operated very effectively. The motor also gave no problems.

June 2, 1976 - Diesel Update

The new diesel powered locomotive is not operation at this time. It has been reported in earlier memos that a problem developed with the transmission and Mr. Clark pointed out that a new transmission has been purchased and will be installed when time is available. It appears that the slippage in the transmission was much greater than expected. The new transmission should correct this situation.

Sept 1, 1976 - Melvin on Diesel - "It seems apparent that Edward Clark is not going to be with the railroad next year. this leaves some question as to the ultimate disposition of the diesel locomotive which was constructed this past winter ('75-'76) for work purposes. It has not been operated since its original trial run when the fluid transmission did not stand up for the short distance between the shop and the Marshfield base station. The linkage consists of a hydraulic torque converter operating from a diesel engine into a transmission which in turn operates two heavy duty differential axles which in turn would be on a chain drive to a cog gear axle. These units were formerly parts of a towing vehicle which handled aircraft tankers at Pease Air Force base. Last May when it was examined by Inspector King and the undersigned Mr. Clark was asked to obtain ratings for these mechanisms for a determination as to whether they are heavy enough to take the load expected of them and also whether the cog wheels at each side were sufficiently independent to distribute the weight over a cog

rack similar to the individual axles on the steam locomotive. No answers have been forthcoming to either of these two problems as yet.

Sept 2, 1976 - King inspects diesel - "The diesel locomotive, which has been the subject of much controversy over the past year, is finally becoming of age. As reported earlier, it was hoped that this locomotive would be available for work trains and possible back up unit for the 1976 season. Several difficulties developed in the mechanical operation, the most important being the automatic transmission could not be kept cool enough to effectively operate the transfer case. A new transmission was installed. However, this was not sufficient. It now appears that an increased cooling area and capacity is required to effective cool the transmission fluid to prevent overheating. A new and much larger fan is being installed which will, hopefully, correct this situation.

There has been some concern that the rigidity of the frame and drive mechanism will cause some problems in the operation of the locomotive. Particular notice was taken as to the amount of "play" between the diesel engine and cog gear. The diesel engine drives directly into the automatic transmission which in turn drives a transfer case via a heavy duty drive shaft. Two separate drive shafts in turn drive a differential at each end of the locomotive. The differential, a heavy duty rear end that was formerly part of a towing vehicle which handled aircraft tankers at Pease Air Force Base, has a sprocket on each end from which a roller chain drives the main cog gear shaft. The differentials are driven by a heavy duty drive shaft from the transfer case. This means that there are three (3) separate drive shafts from the automatic transmission to the differentials. Each of these drive shafts have a reasonable amount of end play in a splined connection at one end of each shaft. The chain drives on each corner of the locomotive also offers a small mount of additional play. As far as the engine to the cog gear rigidity being excessive, it would appear that there is sufficient area for twisting of the frame within the drive shafts and drive chains.

There is a problem, however, that does appear to have developed. It appears that the cog gears at each end of the locomotive are synchronized with one another. This means that the gears are timed to a perfect revolution within themselves. In other words, each time one gear makes a revolution the other must make the revolution in the same time span. If the cog racks within which these gears must mesh were evenly spaced, this would not create any difficulties. Due to wear and design, all cog racks are not even. The largest problem would be at the joints. The normal spool spacing in a cog rack is 4 inches. However, at joints it may range from 3 7/8 upwards to 4½ or greater. With the synchronized cog gears this is going to create a climbing effect for one end of the locomotive as it reaches an unevenly spaced spool. It would appear that this difficulty will have to be overcome before the locomotive can be put into any kind of operational use. As of this date, there has been no available information as ot the rating of the two differentials (rear ends) being used to drive the cog gears.

Clark: 1976 - The year she went into service and never was a successful. We've painted it all up nice and have a logo on the side. By golly, till she got in the tough grades. We were very successful. But all in the past year, because I reminisce for a long time on things and many things I never solve or resolve the torque converter, which made my twin disk and let's say world war two torque converter in a big air force tug. in this past year reminiscing. There's one thing I never took into consideration and that was that the Detroit diesel engine I had would peak out at 2100 and was governed this big Air Force tug had I believe a large Hercules in it and I now surmise that she would have been turning not much more than 1,400 and take 1,400 and six and now you're at 2000 and you've got another 100. So I was 700 rpm more and I believe the twin disk, even with another brand new spinner with a different pitch, but I never told them about the RPMs that she was originally ill when they had the government contract to make a for tugs for big air force bases. Uh, but she would vomit on Waumbek hill and would lose five - six - eight gallons. It would come out as foam, out of the vent of the torque converter

and I believe that I over ran her and she was making frothy whip cream out of the hydraulic oil. So much for her and so that locomotive never went into real service.

Art Poltrack on Ed Clark: "Ed was the GM for 1974-6. I started in 1975. He was very hard to work for and impossible to please, but under that hard shell was a brilliant man. He came back in 78 or 79 to take his flawed (no criticism) M-1 apart for salvage. It was kind of sad. So close, yet so far. Heaven knows what he would have done had he had adequate capital. However, like many thrifty New Englanders, he was a master re-purposer of things. He had mellowed considerably at the 1999 reunion, the last time I saw him."

On Ellen

"in the latter years I would be up here at Burns Pond where Ellen lives, you know where that is. The tracks are only 50 feet away and the freight would go and come. I would go there to see her. When she died and I had been there just a few days earlier and I used to bring her flowers because she was on oxygen, with a little pushcart. She was a strong woman. I can take a lot of bullshit (from a person) if they're great. But they better be great because I can be as mean as a moray eel. I went to (Ellen's) service I wrote to the girls. The girls all wrote to me. She had many daughters. She was my friend in the end really."

Clark Impressions

"The cog railway is unique. There is no train line there. it is a specie, it is not a railroad at all. Nothing is the same except the fire and the water and the people are different too."

Obituary

Edward Murray Clark, 85, of Hydro Boulevard died Sept. 24, 2009, at Lafayette Center in Franconia. He was born Feb. 9, 1924, in Mamaroneck, N.Y., to Edward Pullman Clark and Florence Murray Clark. During World War II, he served in the U.S. Merchant Marines. In June 1944, he participated in the invasion of Normandy. Along with his brother W. Murray Clark, he co-owned Clark's Trading Post in Lincoln. In the early '50s, fascinated by steam-power, the Clark brothers began to rescue steam locomotives from the cutting torch creating "green pastures for iron horses" at the Trading Post. Conceived with a lot of hard work and an impressive collection of locomotives -- including models by Climax, Heisler, Shay and Porter -- the White Mountain Central Railroad was born. In 1963, with his two teenage sons and a dedicated crew in tow, he dismantled a 1904 Howe-Truss railroad covered bridge in East Montpelier, Vt. The team then transported the structure and reassembled it to span the Pemigewasset River adjacent to the Trading Post. He was general manager of the Cog Railway from 1974 to 1976 and then owned and operated the North Stratford Rail Road.

He was an avid collector of steam and log locomotives. A civil engineer by trade, he co-owned the White Mountain Hydro Plant in Lisbon. He was predeceased by a son, Edward A. Clark, in 1998 and his former wife, Joyce Avery Clark, in 2005. Family includes daughters Carol C. Govoni of Lincoln and Anne C. Englert of North Woodstock; sons David A. Clark of North Woodstock and Thomas S. Clark of Lincoln; 14 grandchildren; eight great-grandchildren; brother W. Murray Clark of Lincoln; nieces and nephews.

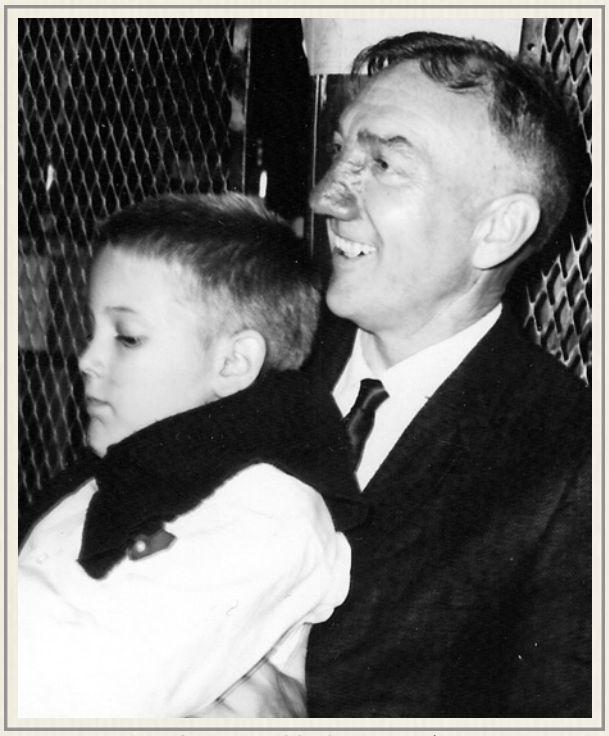
SERVICES: Calling hours are Sunday from 6:30 to 8:30 p.m. at the train station of Clark's Trading Post. A celebration *(next page)* of his life is Monday at 1 p.m. at the Pavilion of Clark's Trading Post, 110 U.S. 3, Lincoln. Burial will follow at Riverside Cemetery, Lincoln.

Edward Murray Clark
1924 - 2009

CLARK'S TRADING POST

Charles in Charge

General Manager Ed Clark's departure in 1976 meant Ellen Teague needed to find a new person for the position. That person would have to be acceptable to the New Hampshire Public Utilities Commission. The new manager needed the know-how to be in charge of Cog railroad operations and its maintenance or the Mt. Washington Railway could not operate in 1977. She had a candidate in mind - her 21-year old son. It was a given in the young man's mother's mind that Charlie would follow his father, Arthur as president of the Cog. Family lineage played an important part in Ellen Crawford Teague's life. Lineage made a difference on the Main Line of Philadelphia. She proudly pointed to her relationship to the Crawford family who were a key part in the development of northern New Hampshire's White Mountains region. Her family tree also earned her membership in the Daughters of the American Revolution. Producing a male heir to continue the Teague name into the next generation had given her a family with six children. Arthur and Ellen's first child was a daughter, Jane. The couple's second pregnancy ended with the still-born birth of a son in May 1944. Four daughters and eleven years later, a male was born - Charles Simpson Teague. As Ellen Teague wrote in her autobiography, "Now that we had a boy at last, Art and I agreed that our family... was complete." The following account of Ellen's three-year effort to put son Charles in charge of the railroad is taken from the files of the N.H. Public Utilities Commission, and public records of the time. It is slightly edited for clarity.



Charles & Arthur Teague (1963)
- Elvira Murdock photo

The management transition from Edward Clark began in late August 1976. New Hampshire Transportation Director Winslow Melvin told the State Public Utilities Commission, he had "received a *(phone)* call from Mr. Lionel Rodgers, who was the general manager at the Cog Railroad during the seasons of 1968 and 1969." Rodgers told Melvin "he had been approached by Mrs. Teague to see if he *(Rodgers)* would consider being retained as general manager beginning in 1977." Rodgers was now working as a consultant with a Connecticut engineering firm, and told Melvin he "did not wish to take on the position of general manager as an individual." Rodgers asked the State Transportation Director if "it might be possible that his firm would be willing to work out a contract whereby *(the firm)* would manage the railroad... that there would be at least three persons charged with the responsibility of proper operations - one being himself, one a mechanical engineer, and the other a civil engineer responsible for the track maintenance. While not all three *(managers)* would be there throughout the season, it would be expected that probably all three would be there during the month of May... from then on one of the three would there at all times, possibly on a staggered basis." Would the Commission accept any such arrangement asked Rodgers?

Following the 1967 accident the PUC made it very plain to the officials of the Cog Railroad that they must have a general manager in charge of the operations, that *(the general manager be)* a person competent and *(able to)* assume full responsibility of the maintenance and operation of the railroad. *(Editor's Note: This was the ONLY recommendation made by one PUC consultant reviewing railway operations and*

infrastructure - former Cogger, and B&M Railroad executive Paul Dunn. Dunn's post-accident investigation report was kept confidential by the NH PUC and appears publicly for the first time in this Jitney Years Appendix - see Skyline Switch)

Winslow Melvin (1967) - Lawrence H. Presby photo

Director Melvin *(left)* told the Commission about the Rodgers call in a Wednesday, September 1, 1976 memo: "During the two years that Mr. Rodgers was *(at the Cog)* he introduced many worthwhile changes, but he had some difficulty with the crew members because he *(was)* the first *(manager)* to require operations *(be carried out)* on written train orders, and other factors which had been more or less carried out as a hit or miss verbal understanding. Frankly, the operation did cause some concern *(to the State)* because of the dominance of the owner, Mrs. Teague, who handles the purse strings and attempts to dictate on matters of policy, including mechanical conditions, about which she knows very little. It is the opinion of Mrs. Teague that eventually her son, Charles, now carried on the records as Assistant Treasurer will be qualified to take over this railroad. He has not displayed sufficient qualities of a type, as yet, to warrant this responsibility. In answer to Mr. Rodger's question as to whether the Commission would recognize *(his engineering)* firm as general manager he was informed that *(the proposed arrangement)* would have to be discussed with the Commission... the answer *(would be)* relayed to him after (the meeting). An opportunity to discuss this is respectfully requested." - signed: *Winslow E. Melvin / Sept 1, 1976*

The day after Winslow Melvin sent his memo regarding the Lionel Rodgers' phone call to the commission, Charlie Teague showed up at Melvin's Concord office "to discuss the possibility of his being recognized next year *(1977)* as General Manager of the railroad." The in-person visit resulted in a second Melvin memo to the N.H. Public Utilities Commission.

Gentlemen:

(Assistant Treasurer) Charles Teague indicates that Mr. Edward Clark is going back into the Merchant Marines next year and will not be filling this position *(of General Manger)*. Mr. Teague indicates that *(the Cog)* would like to save the expense of hiring a general manager by operating the railroad with a competent mechanic to supervise the shop & maintenance work on the equipment. A second person would be responsible for the maintenance of the track structure, and a third person for train dispatching & ticket selling, with him *(Teague)* in charge of hiring the personnel and overseeing ordering of material, planning of the work and other related duties, which have been handled *(in the past)* by the general manager.

"No direct answer was given to Mr. Teague, but *(Melvin)* indicated that his request would be discussed with the Commission and he would be contacted later. This request *(from Teague)* is not any particular surprise as we have known for some time that Mrs. Teague was hopeful that eventually Charles Teague would take over the operation in a manner similar to that of his father before his death in 1967. Inspector *(Walter)* King has been requested to carefully sound out those employees of the Cog Railroad responsible for their various duties to determine what they feel *(are)* the capabilities of Mr. Teague... with respect to his managing the railroad.

Sec. 44 - Charles in Charge

"The general subject of the railroad was discussed with Mr. Teague for approximately ¾ to one hour to obtain his ideas, and to try to formulate a reasonably accurate opinion as to *(Teague's)* capabilities. In the first place it would seem to me *(Melvin)* that the management of this railroad by a 23-year old man, unless that person is a very outstanding type... particularly when that person may be dominated by a member of the family as the owner, is something that we *(the State)* can not tolerate. We have had experiences with Mrs. Teague's desires to rehire personnel who have proven incompetent or who has a considerable lack of judgement because of her peculiar likes. We have also seen instances where she insists on not hiring competent help because of a peculiar dislike that *(she)* has developed.

"The management of this railroad requires a very mature and strong-willed person with a complete knowledge of matters relating to safety, both with respect to the track, and to the maintenance of operations of the railroad equipment. The greatest danger, however, in operating the trains is the possible lack of taking immediate steps automatically to avert a disaster whenever some emergency may arise. The human element, therefore, is much more important in operating trains on this mountain than is required in the operations of conventional trains, automobiles, trucks or buses.

"A previous memorandum has been submitted, relative to a telephone discussion with Lionel Rodgers. It is certain that this problem has to be faced head-on *(by the Commission)*, and should be settled, if possible, this fall so that proper plans can be made this winter for such maintenance, material ordering and other matters which are essential for planning for the next season. (T)hat previous memorandum... requested an opportunity be made available to discuss the matter with the Commission. With the request of Mr. Teague's following as it does *(on the heels of the Rodgers phone call memo)*... this *(discussion with the Commission)* is even more necessary and should *(happen)* as soon as is conveniently possible." - signed: *Winslow E. Melvin / September 2, 1976*

While Director Melvin was talking with Charlie Teague on September 2 about the management situation at the Cog, State Inspector Walter King was at the Base Station over 115 miles north of Concord to look over Ed Clark's *Spirit of '76* diesel locomotive, and get some intel on Charlie Teague's potential as a general manager of the railroad. King filed his report to Melvin on Wednesday, September 8.

"There has been much discussion recently by Mrs. Ellen Teague, owner of the Railway concerning the possibility of her son and Assistant Treasurer, Charles Teague, becoming the General Manager of the Railway. Without mentioning names and the possibility of incriminating any individual, the following information will be of general statements given to this inspector by the various employees of the Railway.

"It is the general feeling of those interviewed that Mr. *(Charlie)* Teague needs an additional two years of practical experience before any consideration should be given to his becoming General Manager. It should be pointed out that there wasn't a single derogatory statement made against Mr. Teague. However, it is felt by those people involved that an additional amount of time would

be required before the desired knowledge and maturity is achieved *(by Teague)*. It was learned by this inspector *(King)* that the present General Manager, Edward Clark will be leaving this position as of mid-October. It is Mr. Clark's intention to offer his services on a limited basis to the Railway in the ensuing year. It is further understood that *(machinist)* Arthur Minot and *(master mechanic)* Frank Kenison will be returning for the 1977 season. It is not known, at this time, if Robert Clement, Track Foreman, will be back.

"Under the circumstances that the Public Utilities Commission requires a competent full-time General Manager well-versed in the mechanics, unusual track structure, train operations and personnel management, it would appear Mr. Teague would have some problems trying to fulfill the position of General Manager, unless competent key personnel can be persuaded to take on additional responsibility in the various areas required in operating the Cog Railway."

- signed: *Walter W. King / September 8, 1976*

One week after Inspector King submitted his report, a meeting was held at the New Hampshire Public Utilities Commission offices at 26 Pleasant Street in Concord to discuss who would be General Manager of the Mt. Washington Cog Railway in 1977. The meeting was requested by Ellen Crawford Teague. Mrs. Teague along with "Mr. Alexander Hamilton, *(who state officials)* understood to be employed at the Cog Railway, Charles Teague, Assistant Transportation Director Donald L. Jackson, Transportation Inspector Walter W. King and (Winslow Melvin)" attended. Director Melvin summarized the meeting for the Commission this way:

Gentlemen:

"This Commission has been requested to approve Mr. Charles Teague as General Manager of the Mt. Washington Cog Railroad to take over immediately because of the resignation of Edward Clark, effective with the close of the 1976 season when operations were discontinued as of October 13. Charles Teague is the son of the late Colonel and Mrs. Arthur Teague and is presently 22 years of age. In questioning his education and experience, it was brought out that he started working summers on the railroad at fifteen years of age. *(Charlie Teague)* has worked on the track work and as brakeman and fireman... is a qualified locomotive engineer on the railroad and has an Associate Degree in welding. During the present season *(1976)* he stated that there were 38 employees having to do with train operations and 24 employees at the base.

"In considering this request it is felt necessary to go back to August of 1967, when Colonial Arthur Teague, who for many years, up to that time, had worked on the railroad with Colonel Henry Teague - no relationship... and upon Henry Teague's retirement succeeded him as owner-operator of this railroad enterprise. During the 1938 hurricane that section of track at Jacob's ladder was destroyed. *(The track)* was rebuilt under a loan obtained from Dartmouth College... *(that)* loan has not yet been completely repaid. While it is stated that Mr. Teague *(both Henry and Arthur)* was the owner during this entire period it is possible that during some portion of time actual ownership was held by Dartmouth College. At present, however, Mrs. *(Ellen)* Teague claims to be owner and has complete control of the finances of the railroad.

Sec. 44 - Charles in Charge

"Following the September 17, 1967 accident, our investigation indicated that *(following)* Arthur Teague's death in August of that year no actual operating head of the railroad had been appointed and operations were presumably conducted under the responsibility of Mrs. Teague. It was acknowledged by her, by her attorney, Jack Middleton, and John Meck of Dartmouth College and Paul Dunn, then with the Boston and Maine Corporation, and (Winslow Melvin), at a conference *(immediately after the accident)* at the Base, that there must be a qualified person with the title of General Manager, to oversee and conduct all operations including the hiring of personnel... the maintenance of track and equipment... said person to certify in writing to this Commission each year before operations were conducted, that the railroad and equipment in use has been examined and is, in all respects, in safe condition to operate.

"The first General Manager was Lionel Rodgers, followed by Paul Dunn, who in turn was followed by Edward Clark. Each of these three General Managers' services *(were)* terminated because of friction with Mrs. Teague in obtaining necessary funds for completion of the work necessary to complete the railroad track and trestle work and the equipment in what they *(each)* considered to be adequate for the needs of the railroad. It should be noted that there is a difference between what is safe as against what is adequate, although over the long term basis adequacy has a direct bearing on safety if deferred maintenance is allowed to occur, either in the track, trestles or equipment to a sufficient degree.

"Because of the financial situation, *(the State)* requested that an audit be made of the receipts and expenditures of the railway for a determination as to whether or not all monies are properly accounted for, and available for replacement and reconditioning as necessary. Because... the books are kept in Connecticut at the place where the accountant *(Tony Poltrack)* resides, further delay in getting this information is being experienced. However, I do not believe that an extended delay should *(occur now)* before responding to Mrs. Teague's request *(regarding Charles as general manager)* because while the financial report may have some bearing, there are other factors which, I believe, are more important to dictate our action.

"The undersigned *(Winslow Melvin)* has had experience with Mrs. Teague continually since 1967 and to some extent prior thereto, although all official contacts *(before 1967)* were with her husband, Arthur Teague during his life time. Arthur Teague, when the operator of the railroad, was intimately acquainted with every phase of its operation and also the details of the maintenance of the locomotives and cars. It was during his *(Arthur's)* employment at the mountain that the three switches designed by Mr. *(Lawrence)* Richardson, then the Vice President in charge of engineering of the Boston and Maine Railroad, were installed.

"A careful investigation has been conducted by discussing with key personnel this problem, as well as to seriously consider the situation from a regulatory standpoint, and to some extent the managerial standpoint because it is difficult to divorce completely management and regulatory functions on this particular railroad. Inspector Walter King has made several inspections of the railroad... his reports on its condition *(are)* in our files and they have been carefully considered.

(King) has also investigated breakdowns as to their cause and these reports are also in the records of this Commission.

"It should be noted that regardless of the good and safe condition of the railroad, track work and equipment, a false move or failure to take immediate action in any emergency situation, places the operations of this railroad on the human element of equal or greater importance than the condition of equipment and the roadbed. This is because an equipment failure can occur under circumstances over which no advance notice is possible, and failure to properly respond... causes the difference between an incident or an accident. Safeguards are built into the equipment to handle this type of emergency, but *(the safeguards)* must be initiated by the operator... who must be expected to take over automatically.

"From the standpoint of public relations the manager of an enterprise such as this at 22 or 23 years of age cannot be considered adequate from a regulatory standpoint... unless that person has outstanding qualifications... which have not been observed or indicated *(in Charles Teague)* by anyone other than by Mrs. Teague, Mr. *(Alexander)* Hamilton or Charles Teague himself. That Mrs. Teague is very successful as a promoter, and claims to do what she feels the late Arthur Teague would do under the same circumstances cannot be denied, but *(those claims)* can be questioned as to *(their)* proper applicability as to the detailed operation of the railroad. She has always exhibited an interest in the employees, and virtually treats them as members of the family, and *(she)* retains this personal relationship *(as a)* priority many times over ability. If she happens to take a dislike to a person even though they hold a key position and cannot readily be replaced, she will insist upon making this change.

"Most of all, however, it is her direct control over the purse strings, and her refusal to permit, at times, the expenditures of money which is essential to provide a prudent use such as having replacement and spare parts... a sufficient coal stockpile, and other material for maintenance of *(the Cog Railway)*. This has occurred with all of the three General Managers which have been employed, and was particularly noticeable with respect to the second General Manager, Paul Dunn whose services were terminated before the expiration of five-year contract, which we understand has resulted in litigation.

"Mrs. Teague claims that Charles as the General Manager will be the owner of the railroad, and will have full authority to make plans, order material and hire personnel. It is most difficult and impossible for the involved members of the Commission staff to feel that her direct efforts will not overbalance any attempts *(by)* her own son to express independent judgment in the overall operations of this railroad. Upon consideration of all of the circumstances and while it is with a great deal of hesitation that this recommendation is submitted, it is, however, necessary to recommend to the Commission that Mrs. Teague's son cannot be considered as having sufficient independence and responsibility to take over as the General Manager of the Cog Railway for the year 1977." - signed: *Winslow E. Melvin / October 22, 1976*

Sec. 44 - Charles in Charge

Five days after Director Melvin signed his recommendation that the PUC would adopt, Ellen Crawford Teague sent a fairly late press release out about the end of the Cog Railway's 1976 season. It was a wide ranging announcement declaring "another successful season" with "about as many passengers were carried as in the 1975 season" and "many personal friends and relatives of the railway staff were included in the crowd." It talked about the TODAY show's visit in June. Then the press release announced management changes: "After more than three years as general manager of the Cog Railway, Edward M. Clark of Lincoln retired on Oct. 15. During his tenure he maintained the tradition of steam operation. Mrs. Arthur S. Teague, chairman of the board and president, has appointed her son, Charles Arthur Teague, as manager, and Lt. Col. Alexander Hamilton of Kennebunkport, Me., as executive vice president. Mr. Teague will handle the mechanical details, and Col. Hamilton the general administration of the Cog Railway. Col. Hamilton has long been familiar with railroading. He learned about operations from old timers on the Berkshire line of the former New Haven Railroad, and train service on the Canadian Pacific. He headed the Seashore Trolley Museum in Maine for its first 20 years and helped to found other museums. He followed Lionel Rodgers, a former general manager of the Cog Railway, as national president of the Railway Enthusiasts. He has been a national officer of the National Railway Historical Society for many years, and is a well-known leader in the field of railway preservation. His other memberships and activities are numerous and varied. The 1977 season of the Cog Railway will begin on June 25, but weekend rides will be offered from late in May as weather conditions permit." *- Littleton Courier – Wed, Oct 27, 1976 pg. 8A*

This would be the last time, the rank of "Lt. Colonel" would appear by Rev. Alexander Hamilton's name in *Courier* stories about the railroad. A week after Ellen publicized her management restructuring naming Charlie as "manager" and Hamilton as vice president, and while the question of State approval of a qualified "general manager" was in doubt, the New Hampshire Public Utilities Commission received a list of breakdowns and trains lost during the 1976 Cog season. In some cases, the State already knew about some of the incidents as inspector Warren King had filed reports. Now state regulators could examine how the November 3, 1976 list from the Cog's new management team lined up with King's reports made over the summer.

Breakdowns of 1976

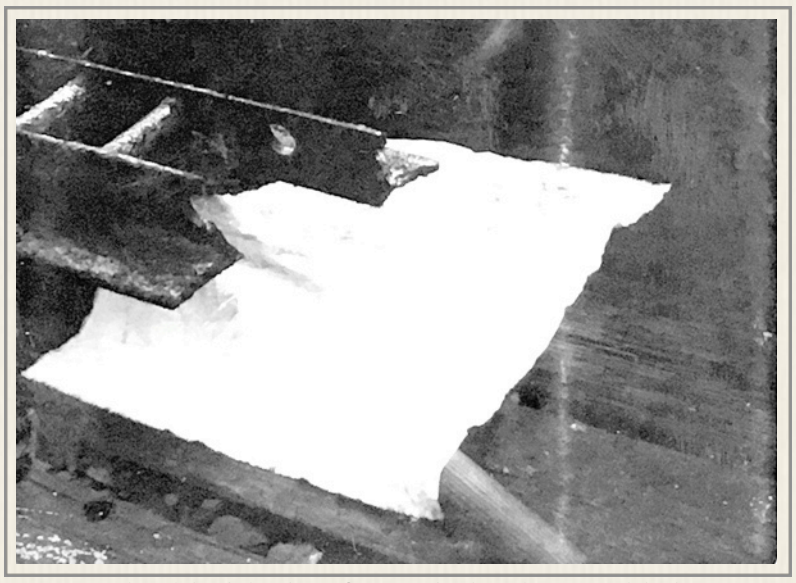
6/13 # 6 broken axle

Broken Axle(s?): Inspector Warren King went to the Base Station to investigate this broken axle as part of a routine inspection visit. He talked with brakeman Dave Moody who said passenger car # 6 was used both Saturday the 12th and Sunday the 13th. Moody told King he "remembers very distinctly greasing the bearing on Saturday, but cannot remember if (it) was greased on Sunday..." and "probably was not greased..." King reported the ascent was normal until the car approached the water tank at the summit, "the engineer claimed he felt a slight lurch as though the cog spool spacing (in the rack) was off... the train continued and upon stopping at the summit it was discovered that the bearing had failed allowing the wheel to scrape against the bottom of the (car) floor pushing the floor in an upward direction." While King was following up car # 6's bearing failure he learned that the No. 6 engine's rear main shaft broke on June 19 shortly after 2 p.m. at Waumbek. "The train had stopped at Waumbek to take on water," wrote King before con-

tinuing up the mountain. However, "when Engineer Dimitri Savchick tried to move the engine forward it would not move off the ratchet... a steam engine on the engineer's side at the downhill end of the locomotive was ***racing out of control***." *(Ed note: the last four words emphasized were underlined in the report with a question mark in the margin.)* "The engines were shut down and help came from the Base to remove the passengers *(back down)* to the Base. The fireman was George (Buddy) Trask III and the brakeman was Arthur Poltrack. The cog gear was cut out of the main shaft and the *(No. 6)* locomotive was brought down with the help of another locomotive." King said the crack that led to the main shaft failure "would have been impossible to detect... due to its location without removing the cog gear from the shaft" which had been in use since 1962. King's report listed the Cog crew as of June 21st and said "the records of engine and boiler equipment will be kept by Mike Kenley who is the spare engineer. The number 9 locomotive has been removed from the Base Station for the installation of a new boiler. Other than this locomotive (# 9) all other locomotives will be operational this year with the exception of the number 6 which will be repaired shortly." The November 3, 1976 Breakdown list compiled after Manager Ed Clark's departure by Mrs. Teague's new management team wasn't clear that the # 6 axle was on a passenger car and omitted the June 19th main shaft break on the No. 6 *Great Gulf*. A photocopy of Mike Kenly's equipment records for the season also arrived with the Breakdowns' list.

7/15 Lost one train, train in shop
7/18 # 4 stopped at Waumbek refunded 13 tickets.
6 dropped ratchet left rear ? *(Ed Note: the question mark was written - engine ratchet is at left front)*
7/19 Lost 2 trains due to trains in shop.
7/28 Lost 4 trains, # 2 in shop, # 4 car jumping rack, # 4 broken brake
7/29 Lost 2 trains, no brakemen.
8/2 Lost 2 trains, # 9 broken frame.

Broken Frame: State inspector Walter King went to the Mountain on August 11, 1976 to investigate the broken frame. Steve Newman was running the No. 9 *Waumbek* that was the noon train on August 2nd. Newman told King he detected a change in the engine's timing on his side of the locomotive as the No. 9 neared the Summit. Newman found the crack about ten inches in back of the center line of the front main shaft while trying to figure out the timing issue. King inspected the engine and observed "a good clean weld." King reviewed the records for the No. 9 that "indicated it was built in 1908 with no frame repairs listed." King told the Commission that "far too much time passed" from when the incident occurred *(Aug 2 at 1:30pm)* to notification letter being written *(August 4)* that wasn't received by the State until 1:30pm August 9th - exactly a week later. King asked the NH PUC on August 17th to order "that the Commission shall be notified immediately by telephone of mechanical failures, accidents, personal injuries and property damage followed by a written notice of same."



Polaroid of broken Cog rack showing spool hole (1976)
- Walter King photo / NH DOT

8/3 Lost 3 trains due to engines in shop.

Track Failure: "On August 4, 1976 a short section of cog rack broke allowing the descending engine and back end of a car to pass, but lodged in the undercarriage halting the car." Engineer George *(Buddy)* Trask III told Inspector Warren King, the train was leaving the Summit about 12:50 p.m., when "he felt unusual lateral movement of the back of the engine near Bent No.

1200. He stopped immediately, but could find nothing wrong so continued the downward trip. The front of the engine passed the area all right as did the rear of the car. However, the car suddenly stopped and the engine began to leave the coach *(behind)*. Upon investigation, a short section of *(cog)* rack was observed up under the car preventing its downward motion. The section was forced down into place and the car passed over the break slowly without problems. It appears that the break is mostly new. Edward Clark, General Manager at the railway indicated that a very small section above the spool appeared to have been cracked prior to failure. The entire break was well rusted by the date of this investigation. Track foreman Robert Clement to the area of the bent to point out the center piece" that had been crushed by the break. This was one of the old-style rack. The actual gage was not determined. The failure may have been amplified by the old-style closed center. The single center piece is being replaced with double centers. This one had not yet been changed." And the incident was not on the November 3, 1976 list sent to the Commission.

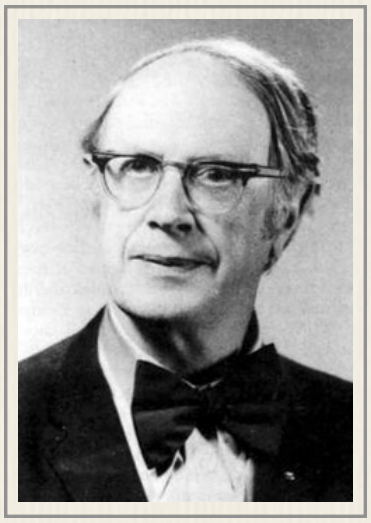
8/5 Lost 1 train, engine in shop
10 steam pipe loose.
8/11 Lost 4 trains due to engines in shop
8/12 # 2 to shop, # 9 broken exhaust line, lost 1 train due to # 9.
8/17 Lost 4 trains due to # 2 in shop.
8/19 # 3 in shop, rear wheel on # 6 broken at summit. *(Ed note: again a coach, not locomotive)*

Broken Axle: General Manager Ed Clark explained the broken wheel in a letter to Transportation Director Winslow Melvin sent the next day. "The cast iron bushing on the rear left wheel of the # 6 car disintegrated. This was noticed at bent 1160, in the area of Lizzie Bourne's monument. After an inspection by the crew a description of the problem was phoned to the Base, they were told to proceed to the Summit slowly. The track Foreman, Robert Clement, walked beside this wheel as an observer during the ascent to the Summit. The passengers of the # 6 car were transferred on to other trains at the Summit, and carried to the Base. A spare wheel was sent to the Summit on the next train that left the Base. The coach and engine arrived at the Base at 3:20 PM.

State inspector Walter King went to the Base to follow up on September 2nd as this was the same passenger car that had a journal failure in June . King discovered the August failure was on the same wheel at the very same place. When the axle was repaired the broken journal "was replaced with a new roller bearing and a bushing was turned from a cast iron blank to fit the worn wheel. In August the new bushing broke. King talked with Cog master mechanic Frank Kenison and both agreed "the material *(used for the new bushing)* probably should not have been cast iron rather a more durable steel."

8/23 Lost 2 trains, # 6 and # 9 broken down.
8/24 Lost 2 trains, # 2 in shop
8/25 Lost 3 trains, # 2 in shop
8/31 Lost 2 trains, # 2 in shop.
9/3 Lost 4 trains, no men and # 6 and # 10 and # 2 in shop.
9/5 Lost 5 trains, no men and trains in shop.
10/2 Lost 2 trains, engines in shop.
10/3 Lost one train due to a triple, lost 2 trains due to engines in shop (# 3 very slow)
10/4 Lost 2 trains, lack of men.
10/5 Lost 4 trains, lack of men.
10/11 Lost 3 trains, lack of men

Hamilton Instead ?



Rev. Alexander V. Hamilton V

Fifteen days after the State received the 1976 Breakdowns report, the Rev. Alexander Hamilton V traveled to Concord to meet with Transportation Director Winslow Melvin and Assistant Director *(Donald L.)* Jackson. Hamilton wanted to discuss whether he might be the Cog's General Manager in 1977. Winslow Melvin briefed the N.H. Public Utilities Commission on that November 18th meeting in a memo almost a month later.

Gentlemen:

"Mr. Hamilton stated that he has had considerable experience as an administrator, that he set up the Trolley Museum in Kennebunk, Maine, and he has become familiar with the Cog Railroad's operations, and that he has just traveled to various other countries, including New Zealand and Australia with Mrs. Teague for the purpose of becoming better acquainted with the railroads in other parts of the world, and in addition to these accomplishments he is also an ordained minister. *(Hamilton)* indicated that he realizes fully the difficulties encountered at the Cog Railroad because of the personality of Mrs. Teague. He claims that he is in a better position than anyone else to deal with her, and to provide the necessary information for allocating the expenditures for maintenance and up-grading of both the equipment and the track work. *(Hamilton)* also indicated that responsibility should be delegated to an individual for the proper operation of the shop, another *(person)* for proper maintenance of the track and its supports, and another *(person)* for the dispatching of trains, all with the express purpose of making certain that all available equipment is ready at all times to assume the proper handling of as many passengers as possible.

"From the discussion with Mr. Hamilton, it is fair to say that there is no question... he understands the situation so far as personalities are concerned involving the railroad, all of which stems largely from the peculiarities of Mrs. Teague in attempting to control, not only the finances, but the personnel engaged for its operations. There was nothing brought out by Mr. Hamilton to indicate that he has any formal mechanical or engineering background nor qualifications with respect to operations of locomotives or other mechanical devices so essential to the safe operations of the Cog Railroad.

"There is one factor, however, that he possesses, at least at the present time on his behalf, and that is the "Proper In" with Mrs. Teague,* which has been so lacking in the previous General Managers, after their initial experience of *(Ellen's support)* not exceeding one year in their work. While this *("Proper In")* is considered to be very essential, it does not appear to be controlling because there is no assurance that it will last any longer than has been the case with the other three general managers - Lionel Rodgers, Paul Dunn and Edward Clark. Information obtained by Inspector King during the past *(1976)* season, and remarks given to the undersigned by Edward

* Ellen Teague would later say in her autobiography, *I Conquered My Mountain,* that in 1974 Rev. Alexander Hamilton V "somehow awoke me to my true self and inspired new feelings..." that made her "alive and happy inside." *See Vol. 1 - Annus Horribilis*

Clark have indicated that during Mr. Hamilton's employment by Mrs. Teague during the past summer, which by the way, was provided without any prior knowledge or consent of the General Manager *(Clark)*, indicates that he *(Hamilton)* was the cause of considerable confusion, misunderstanding and general ill-will... and has very little knowledge of the operating details of the railroad.

"It is realized that this whole situation is quite a delicate matter *(for the State)* because while the Commission is essentially a regulatory agency and should not have to concern itself with details as to the management of the Cog Railroad, it is nevertheless most important, considering the personalities involved, that *(the State)* should insist upon the employment of a General Manager who will have a complete knowledge of the Cog Railroad operations, and can take a strong position in living up to the safety requirements, not only prescribed by the Commission, but in connection with upkeep of the equipment, and even above that, to make certain that the employees are properly instructed and qualified, and know all the factors of the safety requirements... rather than being picked by some one who may give strong reactions as to whether they happen to take a liking to *(the employee)* personally such as has been found to be the case in some previous instances. It is, therefore, felt that the Commission should not depend upon Mr. Alexander Hamilton to be the General Manager of the Cog Railroad." - signed: *Winslow E. Melvin / December 16, 1976*

George Burdick

George Burdick (1967)
- Lawrence H. Presby photo

With Ellen's first two choices as her 1977 General Manager rejected by the State, Cog lawyer Jack Middleton brought a new organizational chart to Concord on Tuesday, March 29, 1977 along with a new candidate for GM - George Burdick. Middleton's meeting with Transportation Director Winslow Melvin, Assistant Director Donald Jackson and Railroad Inspector Walter King also included PUC Commissioners *(Malcolm J.)* Stevenson and *(Francis J.)* Riordan for a short time. Director Melvin summarized the session in a memo two days later. He started by going back to the Fall of 1967:

"It should be pointed out that in 1967 it was agreed by all parties then concerned that there would be a General Manager employed by the Cog Railway who would be responsible for all operations and maintenance of the railroad. The Commission has denied two previous requests since the 1976 operating season closed by refusing to accept the qualifications of Charles Teague and Alexander Hamilton as responsible individuals.

"Mr. *(George)* Burdick is a graduate of Boston University and the Army Engineering course at MIT. He is a registered professional engineer and has served with the Baldwin Locomotive Works... has had a consulting engineering firm of his own and has teaching experience in engineering subjects at Northeastern University. *(Burdick)* is presently connected with the Trolley Museum at Kennebunkport, Maine. Mr. Burdick was born March 30, 1921. He last saw the Cog Railway in operation on August 29 and 30, 1976, although he has very recently been to Lancaster (NH) to view the progress of the construction of a locomotive for the Cog Railway. This individ-

ual is not conversant with the details of the Cog Railway equipment, track or personnel except that he *(Burdick)* has been acquainted with Alexander Hamilton for approximately 20 years.

"It would seem from this discussion that Mr. Burdick is very much qualified as an engineer. He indicates that he has several patents and that he is prepared, if employed, to be at the Cog Railway... through the summer and become fully acquainted with the trestle work, track work and the equipment to make certain that safety requirements will be adequately provided for, and that those who are employed in operating trains will be fully qualified and will check, from time to time, to make certain that they are familiar with all regular and emergency procedures. It is plainly his *(Burdick's)* plan to depend on a responsible member of the organization to carry out the work in the shop and maintenance department, check personnel to see that proper procedures are carried out.

"Attorney *(Jack)* Middleton submitted with his synopsis *(a new)* organization chart which shows the President, Ellen Teague, as in charge with Executive Vice President Alexander Hamilton, the top officer reporting to her. Branching directly from Vice President Hamilton would be annual inspections, communications, electrical engineering on... one side and the comptroller and accounting departments on the other. Directly below Hamilton is full time Chief Engineer, George Burdick, who would immediately supervise the *(railway)* superintendent, Charles Teague, with the locomotive and car shops... track crew... ticket office and train operations emanating from the superintendent *(Charles Teague)*.

"The Transportation Department respectfully disapproves of this organization chart," wrote Melvin. "It was explained rather pointedly to Mr. Middleton and Mr. Burdick that there must be no one to supersede *(Burdick's)* recommendations on safety matters whether it be equipment, track or personnel. It is recognized that Mr. Burdick may have a considerable handicap in assuming this responsibility due to the apparent lack of familiarity with all of the facets of the operation of the Cog Railway. On the other hand, this *(lack of familiarity)* may be somewhat of an asset *(for Burdick)* in getting started without any undue prejudices. An attempt was made to convey to him that there may be times when considerable pressure may be exerted to make exemptions to accommodate additional passengers and thereby accept fares when in reality curtailment would be the better judgement.

"It is realized that time is getting short to get ready for the 1977 operating season and usual conditions require a work crew to begin no later than May 1 to get locomotives, cars and track ready for operation. It is the recommendation of the Transportation Department that Mr. Burdick be approved for employment as General Manager under the condition that he himself must be the General Manager with all other persons responsible for any portion of management and operation reporting directly to him and he be given full authority by Mrs. Teague to make decisions with respect to the operation of trains, the priority of the repair work and the qualifications of trains and train operating personnel. Unless this arrangement is agreed to by Mrs. Teague, it is felt that we should not permit train operations to commence, nor can we feel that the railroad has,

in fact, in its employ a person who can be held responsible for the safety of operations of this railroad." - signed: *Winslow E. Melvin / March 31, 1977*

1977 Season – State Reports

Five weeks after Winslow E. Melvin and the State blessed George Burdick as the Cog Railway's general manager, so long as Ellen gave Burdick "full authority" to run the railroad, inspector Walter King visited the Base to review Spring operations at the Mountain: "On May 2, 1977 the undersigned *(Walter King)* made an inspection at the Mount Washington Cog Railway to determine the operations of spring work as of this date. It would appear that there will be a crew of twelve at the railway by the end of this week according to Charles Teague. Robert Clement has returned and will be the track foreman. He indicated that there would be a crew of eight working on the track, at least until the Memorial Day weekend. (Clement) further indicated that probably the trains will run on weekends after Memorial Day, allowing him to have the crew for work during the week.

"Mr. Teague indicated that George Burdick was at the Base Station last week and intends to arrive for the summer around the 14th of May. It will be at this time that another inspection will be made to discuss the procedures and problems at the railway with Mr. Burdick.

"Mr. Teague indicated that the No. 2 boiler will be repaired and available for use on the new locomotive that was built at the Lancaster shop by Frank Kenison and Michael Kenly. This is a reverse approach as to the decisions made last fall in regards to the damaged boiler. It remains to be seen if the boiler inspector will accept the repairs inasmuch as he condemned it last fall. It has been indicated that he would look favorably on the repair, provide it is done by competent boiler makers. Hopefully this locomotive would then be available for use by early in July.

"The No. 10 locomotive has been tested and fired and is ready for operation on the work train. There has been very little work done on the other locomotives. The crew in the past two weeks has spent most of their time opening the shop and doing routine spring work around the building." - signed: *Walter W. King – May 1, 1977*

The New Hampshire Transportation files examined by Jitney Jr provided no further insight into Cog Railway operations during the summer of 1977.

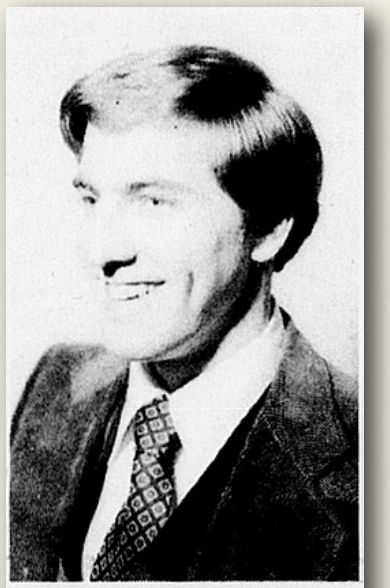
Cog Railway publicity for 1977 found in the nearby *Littleton Courier* consists mainly of pictures featuring the railway's president – accepting a color Cog poster from the photographer, being honored by the Weathervane Theater, hosting a July party for state officials after the ground-breaking for the new Summit House, and a three-photo spread of Gov. Meldrim Thompson's visit in late August. President Ellen Crawford Teague is seen standing next to Thompson in two of the three pictures. *(Editor's note: In late October, the Cog apparently needed a quick infusion of cash. Frank Kenison placed an ad on October 26th saying the "Cog Railway Has Some Things For Sale." The prices quoted on the gas station tanks and pumps, coach seats (3 abreast), Ed Clark's diesel locomotive (whole or in parts), a welder, a used industrial dishwasher and Crane pop valves (air) were good until October 28th.)*

For his part, Railway Superintendent & Assistant Treasurer Charles Arthur Teague sent a "Cog New's Letter" to the crew in late November: "This year the closing of the railway brought a great deal of satisfaction to the winter crew. Locomotive material plus the # 6 coach was moved to the Lancaster Winter Shop. (The) Marshfield roof was roofed by Dwight, Mike, Chub, Clem and myself *(Charlie Teague)*. It took one week. The dump was three quarter buried with cinders and the hikers parking lot was doubled in size. The boarding house received two new windows; one in the third-floor bathroom and the other in second floor left end. Arthur Minot this winter will be machining parts for our new locomotive the #12. Chub and Mike will be building the locomotive frame and running gear, rebuilding the bottom of the #6 tender and making 3 new bonnets. The bonnets will be standard size to go on any engine. They also will be trying to finish Mr. Bates' waterwheel. Clem will be in charge of rebuilding the body of the # 6 coach, building a new running gear of the #2 coach design. In addition to this he will be building 7 shop doors and repairing all the old furniture on base. I am taking another job in New Jersey and am hoping to become a certified welder in another company.

"The spring will bring a new boiler to the railway. It will be of the #10 design but will have 229 tubes of 1 3/4" diameter. This boiler will be at the railway by May 1, 1978. The railway goals this coming year are to put in new track from Lizzie's to the summit and bring down all old wood to the base. I am hoping the #6 coach and the new #12 locomotive will be finished by fall and the #11 locomotive sent into service at that time. By summer the old 22" Pelton wheel should be back in service and maybe even a small museum will be started in the guest house. Did you know that the new summit house is going to be started next spring and plans are to finish it by 1981? I wish you a Merry Christmas and a Happy New Year. Thank you for the work given this year. Sincerely Yours, Charlie." *- Letter dated November 29, 1977 in the Mark Shallin Collection*

The next publicly visible step taken by Ellen Crawford Teague to have the State "officially" give her son, Charles the management reins of the Cog Railway came again came in a press release.

May 15, 1978


CHARLES TEAGUE

"Ellen (Mrs. Arthur S.) Teague has announced her resignation as president of the Mt. Washington Cog Railway Co., effective May 15. She has become chairman of the board of Marshfield, Inc. Assuming the office of president is her son, Charles Arthur Teague, following in the footsteps of his late father, Col. Teague. Mr. Teague's life has been closely interwoven with the Cog Railway and he is familiar with all of its many operations. He holds an Associate Degree in Technology from Manchester Technical College and is superintendent of the shops. He was married in 1976 to Melissa Palmer of Bridgeton, N.J. Mrs. Teague's three daughters are vice presidents of the railroad. They include Mrs. Margaret Baker of Montgomery County, Pa., Mrs. Fanny Blaggie of Bedford, N.H., and Mrs. Anne Koop of Deerfield St., N.J. Executive vice president for the third year is Al-

exander Hamilton of Kennebunkport, Me., and chief engineer for the second year is George Burdick of Hudson, Mass. The Mt. Washington Cog Railway operation has a payroll of more than $5,000 weekly, employing some 80 people for the season. This is the 36th Summer that Mrs. Ellen Teague has been actively identified with the Railway. She has been a driving force in the operation since her husband, Col. Teague, died in 1967. A crew has been at work since May 1 on the track and other physical properties. All six of the unique tilted engines have been hydrotested and given the OK. The rolling stock includes seven passenger cars, with a new one under construction. "We're all looking forward to a good season and if the opening weekend is any indication, this hope should be realized," Mrs. Teague said this week.

- Littleton Courier – Wed, Jun 7, 1978 pg. 7A

1978 Season – State Reports

Longtime New Hampshire Transportation Director Winslow Melvin had retired, and Donald L. Jackson was now in charge of state oversight of the Mount Washington Cog Railway. On July 25, 1978, Jackson received an accident report from the Cog's chief engineer George Burdick.

Burdick wrote Engine No. 6 *Great Gulf* was on its way down the mountain just after 4 p.m. on Friday, July 21. Engineer Dana Kirkpatrick and fireman Tom Hydorn were in the cab. Brakeman Rob Maclay was in charge of passenger car #4. He was on the back *(brake)* platform *(closest to the engine)* with brakeman trainee Chris Knight when a nipple broke "in the left forward steam cylinder which let the locomotive accelerate downgrade until slowed by the hand brake *(in the cab)* to one MPH when it was struck by the car going at two to three MPH. Speed before car and train separated was about 4 ½ MPH." Burdick told Director Jackson "eleven persons reported discomfort and were checked by the nurse on duty at the Base Station. Passenger injuries were minor bumps from being in contact with seat backs, etc. A list of these persons and their symptoms are on file at the railway. Equipment damage to car No. 4 was one broken door glass, a deflection of ¼ inch in steel end frame of car." Burdick reported the car struck the engine "at between one to two miles per hour."

Director Jackson acknowledged receipt of the accident report on July 26, but went on to clarify New Hampshire's strict reporting requirements for the Cog that had been put in place after the September 1967 accident. "Beginning with your *(Burdick's)* association with the Mt. Washington Railway Co. *(Spring 1977)* you have been very prompt in reporting any and all instances involving equipment failure and matters which you considered to be of concern to this Commission," wrote Jackson. "On this basis I am assuming you are unaware of the fact that any accident involving personal injury, loss of life or major equipment failure resulting in interruptions of service must be reported to this office immediately or, in the event of the office being closed, to staff personnel." Jackson attached a list of six Transportation personnel to contact with their home phone numbers and his name at the top. He also directed inspector Walter King to investigate the accident.

King's accident report was submitted July 27, 1978. "The weather was clear and warm" wrote King. "Locomotive No. 6 with Car No. 4 was the downhill train of a double header departing the Base at approximately 2 p.m. The engineer was Dana Kirkpatrick, Fireman Thomas Hydorn, Brakeman Robert Maclay and Brakeman Trainee Christopher Knight. The descending trip from the Summit appeared to be normal until reaching the lower end of Long Trestle which is in the area of Bent No. 770. The brakeman trainee was in control of the car with the Brakeman at his right observing his actions. This was the first trip that the Trainee had complete responsibility of the car both ascending and descending. The trainee was on the Engineer's side of the car with the brake taken up nearly to its capacity. The second brake was in its proper position to allow the even movement of the descending car. Near the lower end of Long Trestle the Brakeman noticed the locomotive begin to pull away at a reasonably rapid rate from the car, a distance of approximately 4 to 5 feet. Before being able to bring the car to a halt or reposition the car in its proper location to the locomotive, he struck the locomotive with a jolt, the force of which broke the lower window in the downhill door of the car and buckled the Brakeman's platform floor. After the locomotive and car came to halt, the Brakeman and Brakeman Trainee consulted with the passengers for injuries *(13 were slightly injured)* and then proceeded to discuss the situation with the Engineer and Fireman at which time they notified the dispatcher at the Base Station of the incident. Upon investigation by the crew, it was learned that a steam line nipple had blown off and allowed the locomotive to accelerate from its normal descent on compression. After further investigation it was discovered that the nipple was intact and could be screwed back on the pipe and allow the train to proceed to the Base. Due to the particular location of the locomotive when it finally stopped *(near or on Jacob's Ladder)*, it was impossible to completely tighten the nipple so a second stop was made at a better location further down grade. The locomotive and car then continued to the base on what would appear to be a normal run."

King then listed the names, addresses and the injuries of eleven people who "were part of a tour group from Pennsylvania… *(who)* all refused hospital treatment." Mrs. Normand Plante from Nashua, NH and nine-year old Deborah Edwards of Miami did go to Littleton Hospital where they "were examined and released, with no injuries listed for the above two." The four crew members signed written statements, and Inspector King interviewed all of them except for Fireman Hydorn. Engineer Dana Kirkpatrick told King "he heard a loud noise similar to a small explosion, indicating something had broken" as the train reached the lower end of Long Trestle. Kirkpatrick first thought it was a crankshaft as "the locomotive immediately accelerated its downhill motion…. He (took) up the hand brake to its fullest extent and... the locomotive was about to stop when he felt a jolt… When the locomotive had completely stopped the ratchet was dropped adding for a safety stop. (Kirkpatrick) estimated that the total travel distance before coming to a complete stop was about 50 feet. He further indicated that (Fireman Hydorn) acted very promptly in assisting on the hand brake. Both he and the Fireman were facing in a somewhat downhill position at their respective posts in what appeared to be a normal trip."

Sec. 44 - Charles in Charge

Brakeman Trainee Knight said "when the locomotive first pulled away from the car his first reaction was to release some of the brake pressure to allow the car to catch up and then he realized that there was something wrong with the locomotive and proceeded to stop the car. Just before coming to a successful stop, he struck the locomotive with a hard jolt and then both the locomotive and the car made a complete stop." Knight thought the maximum separation of car and engine was three to four feet. "He indicated that he thought the car was under full control until the locomotive began to leave it because at this particular location *(heading on to Jacob's Ladder)* the car is supposed to be "Light" on the locomotive, in other words, not pushing hard." Two days after the accident, Knight qualified as a brakeman. King wrote he is "now operating in that capacity very satisfactorily. Brakeman Maclay indicated that he thought (Knight) had conducted himself quite well through the incident… that he (Maclay) could not have done any better… However in hindsight… (Maclay said) had he assisted… on the second brake wheel, the incident might have been averted. This is merely conjecture on his part," wrote King. "The accident was caused by a blown off nipple with a contributing factor of the inexperience Brakeman…. However, the prompt action of the crew did avert more serious injury."

September 1978

A poorly steaming downhill end of a Fall double-header prompted an investigation by state inspector Warren King when a customer complaint arrived at the New Hampshire Attorney General's office in early October. The complaint said the promised three-hour round trip turned into a three-hour, one-way ride to the Summit, and that the railway had disregarded "safety… willfully subjecting the passengers to an unforgivable ordeal." King's report was written up on December 5, 1978.

King found Locomotive No. 3 *Base Station* with 46 people aboard one of the wooden coaches had departed the base at 4:55 pm on the final run of the day. The No. 3 was the downhill end of a double-header. The No. 6 *Great Gulf* had left five minutes before Engineer Dana Kirkpatrick applied forward steam to begin the trip, and Fireman Rob Maclay began throwing coal into the No. 3's firebox. Brakeman Alan Dupre rode on the front platform monitoring the track. King says both trains made "a normal ascent" to Waumbek Switch where they were to meet the downcoming double of the No. 4 *Summit* and No. 9 *Waumbek*. The No. 6 stopped as usual at Waumbek tank to take on water, clean the fire, and make an engine check before moving onto the switch with the No. 3 following it directly onto the siding.

After the descending trains went by, No. 3 *Base Station* backed down to Waumbek tanks for water, fire-cleaning and engine check as the No. 6 came off the switch and resumed its climb upwards. King says shortly after the No. 3 started to follow, (the *Base Station)* "began to experience difficulty in maintaining steam pressure. Several stops were required during the ascent to Skyline Switch, two-thirds of the way up the mountain where an additional meet with another descending train was to be made. At Skyline Switch the descending train takes the siding; the ascending train passes by, clearing the switch to allow the descending train to continue *(down)*. It appears that the No. 3 locomotive by this time had barely enough steam pressure to clear the switch. Engi-

neer Kirkpatrick realized that additional time would be needed to finish the ascending trip and estimated a maximum of one hour *(to cover the last mile to the Summit)*. To this point… the trip *(to Skyline)* had already consumed over one-half of the entire round-trip schedule." Kirkpatrick called on the track phone to the base and told the dispatcher *(likely Cliff Kenney)* about the situation. Kirkpatrick was granted another hour. The trip resumed but "not for long." More stops were made to rebuild steam pressure, and "it was at this time that it was evident the poor condition of the coal was going to a major factor in the delay. The crew informed the passengers of the situation. *(The passengers)* were also polled to determine their desires… continue the ascent or return to the Base. Information as to the results of this poll is somewhat controversial and will be dealt with later *(in this report)*." Engineer Kirkpatrick called the dispatcher again "hoping to receive an affirmative answer on a descending request." The president of the railway *(Charles Teague)* said the No. 3 should continue upwards until the Summit was reached "or all possibility of that goal was expended." Several more stops for steam were necessary, and the No. 3 arrived behind the No. 6 at the Summit at 7:35 pm. After twenty minutes at the Summit, the trip back down began and "was uneventful as far as mechanics were concerned." The No. 3 arrived at the Base at 9:30 pm. The No. 6 and its passengers five minutes later.

King's report then deals with "the poll." "There have been indications that a majority of the passengers (on the No. 3) desired to return to the Base without reaching the summit. Verbal statements have indicated that an actual poll of passengers was taken; however, the results are unclear. The brakeman *(Alan Dupre)* claimed only about ten people desired to return and ten to continue; the remainder made no choice. The *(person who filed the complaint with the Attorney General)* indicates the majority desired to return." When King interviewed the Cog management, they said "no poll was taken."

The poll figures predominantly in the consumer complaint as the person "alleges that the management 'knowingly and willfully subjected the passengers to the subsequent ordeal… *(by refusing)* to grant the request of the crew and passengers to be allowed to cut the trip short." King notes that like other railroads, "the dispatcher has authority as to the time of departure, layovers, and cancellations of any and all trains operating in their territory. The dispatcher in this case had first informed the crew to continue. In subsequent communication with the Base, the dispatcher had been relieved by the president of the company *(Charlie Teague)* who, in turn, made it explicitly clear that the ascending trip was to continue at all cost, barring safety violations. Consideration was given by the president, Charles Teague, to the fact that there were no trains left on the mountain downhill of the troubled train, that there was a spare at the base should the need arise, and that there was sufficient crew available to dispatch that train. This procedure is mandatory, as it is one of the regulations of this Commission that a train and crew be available at all time that there is a passenger train on the mountain."

"The investigation" wrote King "has shown that the safety of the passengers was at no time given as second thought. It was the primary factor in all decisions. The Chief Engineer, George Burdick, has indicated that if at any time the slightest hint of a safety violation had been ap-

proached, the trip would have been cancelled at that particular point and the train ordered to return to base without further delay."

The investigation found the No. 3 made two other trips that day without problem – one hour and 26 minutes up on the first – the second one hour and 40 minutes. "There was no reason to believe that a third trip would be any different," wrote King. "The facts indicate that the operating procedure was correct… that the equipment was in good condition… there was no indication that any problem existed until *(the)* ascending trip was over one-third completed. " King says it appears "the comfort of the passengers may have been slightly abridged by the lack of heat and light in the descending car" due to lack of steam pressure, and "created some discomfort to the passengers." However, King notes 44 mile per hour winds and temperatures in the mid 40s "are the rule for the Mount Washington Cog Railway and not the exception… normal during daylight hours."

The formal complaint desired "a full refund for the 25 listed people, which composed approximately one-half the passengers on this particular trip. The facts indicate that, in lieu of a refund, 25 passes were offered but *(were)* returned by the complainant," wrote King.

Before concluding King says "One other item that requires attention *(by the State)* is the statement made by Kirkpatrick that Mr. *(Charles)* Teague 'directly ordered that I continue until I ran out of water or coal all together.' It is not known if this is an ambiguous statement or if, in fact, it was actually given. It has been denied by Mr. Teague."

"The poor coal," King concludes "is the only tangible factor *(for this incident)* that can be produced at this time. There are no indications whatsoever that there was any willful neglect relative to safety or operation. At this point it appears that only two factors are involved; an error in judgement by the railway relative to the statement, if it was given, that the trip be continued until the coal or water supply was depleted. The second fact, that the car was not lighted or heated, has no bearing on safety features; neither are required… the only factor that is definite is the poor condition of the coal used on this particular trip." - signed: *Walter W. King – Dec 5, 1978*

Those are the only two contemporaneous documents in the NH Transportation files about 1978 Railway operations. However, a list of 1978 Breakdowns was filed with the NH PUC two years later on January 7, 1980. That two-page document gives a more complete mechanical picture of the 1978 season retroactively.

Breakdowns of 1978

6/23	# 2 car broke down mountain shaft
6/25	Crank pins on #2 engine overheated lost one (scheduled) train
7/1	# 9 engine slipped a cam – lost one hour on schedule
7/6	# 9 engine had trouble with cam and eccentric seized lost a half hour
7/7	# 4 broken grease line at Waumbek – no delay
	# 3 dropped arch brick at Waumbek – no delay
7/10	# 4 engine stuck on center at frog rock – 10 min. delay

7/11 # 10 engine lost 15 min due to hot boxes
4 engine late coming out of the shop lost 45 min.
2 car caught up on Skyline main line lost 15 min.
2 engine broken nipple lost 10 min.

7/18 # 9 engine dropped ½ of their archbrick 10 min delay

7/21 # 3 engine broken steam line

7/24 # 6 engine to shop with broken rear guide bar

7/25 # 10 engine broken firebox door at Waumbek
4 engine 15 min. delay due to guide bar adjustment

7/29 *Thelma* car had a broken collar at the Summit – held over an hour while new part was sent to Summit, came down as a double.
3 engine – the car brake cable slipped while on the Summit – one hour delay to fix.
3 engine – engineer refused to run last trip – 20 min delay while another engineer could be found

8/9 The pin at Waumbek Switch was placed in the wrong hole and the coach on the # 4 engine derailed at Waumbek

8/11 # 10 engine 10 min delay in leaving due to break in lubrication line

8/18 # 9 engine lost 10 min in schedule due to bad coal
6 engine lost ½ hour due to stopping for clinkers

8/23 broken cog rack at 845 lost ½ hour in schedule and 1 train
10 engine not ready for 10 am double lost 10 min.

8/25 Lost schedule due to bad coal

8/26 Lost 15 min. in schedule while cars were switched at Waumbek due to broken ratchet
10 injector problem at Base, lost ½ hour

8/28 # 1 trouble with grates at Waumbek – lost an hour in schedule

8/29 # 10 engine broken guide bar – Bad trips all day lost schedule due to bad coal

8/30 Lost 4 trains due to bad coal and bad trips

8/31 # 4 engine lost steam near Waumbek, # 2 engine was sent up to take
4 people to the Summit lost 1 hour in schedule and 8 passengers

9/1 Bad Coal lost an hour

9/5 Lost 2 trains bad coal

9/13 Lost ½ hour due to # 9 engine not ready to go
Lost about 3 trains due to bad coal and 2-hour trips to the Summit

9/23 # 3 engine burnt grates at Skyline, also stuck on ratchet – lost 2 trains

9/24 # 7 coach derailed at Waumbek lost 2 hours in schedule

10/1 # 10 engine injector trouble on Long Trestle – 20 min delay

10/6 # 9 engine lost hand brakes at Waumbek – no delay

Lost 24 trains total

Sec. 44 - Charles in Charge

Ellen Crawford Teague, the "retired" Mount Washington Railway president and now chairman of the board of Marshfield, Inc., made her final push to put "our Charles" in charge in the spring of 1979 - not quite a year after the railway's corporate restructuring. This time the move was not in a press release and came as the General Manager George Burdick's contract was entering its third and final year.

May 8, 1979

It was the second Tuesday of May 1979 when a conference was held at the N.H. Public Utilities Commission office at the request of Ellen Crawford Teague. No longer on Pleasant Avenue, PUC headquarters were now at 8 Suncook Road in Concord. The topic was Cog management personnel for the upcoming *(1979)* summer season. The State participants were PUC Chairman J. Michael Love, along with Commissioners Francis J. Riordan and Malcolm J Stevenson. Transportation Director Donald L. Jackson was there along with his new Assistant Director Walter W. King, and the commission's Secretary Vincent J. Iacopino. Winslow E. Melvin attended the meeting in his new role as consultant to the commission. Railroad representatives at the conference were Attorney Jack Middleton, George Burdick - the current General Manager, and Charles Teague, son of the owner *(Ellen C. Teague)* who carried the title of President and General Manager. While the Cog team updated the State on the construction of a new locomotive, car repairs and money spent to buy new timber for the track, "the real purpose of the conference was to try to obtain the Commission's approval of Charles Teague becoming the person responsible for all of the railroad operations." The meeting resulted in two memos being placed in the State's files - one from consultant (and former Transportation Director) Winslow Melvin, and one from new Assistant Director Walter King.

Melvin Memo to Commission: "The Commission, since the accident of September 1967, has required an individual to be employed by the railroad who is in all respects qualified and capable of determining that the trackage and equipment are kept in safe operations and that all personnel are completely qualified and responsible in conducting operations. It must be understood that *(human)* reaction must be almost automatic whenever any unusual incident occurs and that prompt actions are immediately taken to overcome any event which might otherwise result in tragedy. Complete control of the locomotives and cars must be maintained at all times.

"Charles Teague is approximately 24 or 25 years of age and has been connected with the railroad his entire life, but the last 12 years, which are the most formative as far as his experience is concerned, was without the supervision of his father who was eminently qualified *(as general manager)* and conducted a 100% safe *(railroad)* operation prior to his death in 1967. Since the accident of 1967 the general managers who have been responsible to this Commission for safe operations were Lionel F. Rodgers, Paul C. Dunn, Edward Clark and George Burdick.

"After the first two years or so each one of these *(general managers)* has been relieved of their duties by Mrs. Teague, and a court case resulted in connection with the expiration of Mr. Dunn's service because he served only three years of a five year contract. Mr. Burdick has been quite suc-

cessful in conducting operations during the past two years. He has a third year to go and it was indicated that he *(Burdick)* is expected to be there during the forthcoming season *(of 1979)*.

"The undersigned *(Melvin)* has considerable hesitancy in accepting Charles Teague as a person responsible for the entire operation. This is mainly *(due to)* his failure to exhibit the required leadership in properly instructing and supervising the train crew. It is my recommendation that regardless of the title that he now holds with the corporation... the Commission should insist on a competent person such as George Burdick *(be general manager)* at least for one more year so that more complete information can be obtained relative to the work of Mr. Charles Teague, and the additional experience which he may gain before placing the required confidence in this one individual.

"It is realized that *(the State)* may be treading upon management a little closer than a regulatory agency should, but nevertheless we are definitely involved in safety of operations, and this is of paramount importance when considering an individual and his qualifications as we are asked to do in this case." - signed: *Winslow E. Melvin / May 16, 1979*

King Memo to Director Jackson: "The first portion of the discussion concerning Mr. *(Charles)* Teague's ability and experience to act as General Manager was supported by Mr. *(George)* Burdick, who had the responsibility in 1977-78. Mr. Burdick is under contract with the Railway for one more year. It appears that it is his desire to have most of the Railway *(management)* responsibilities turned over to Mr. Teague. Mr. Burdick indicated he would remain in the employ of the Railway for the 1979 season, at least, more as a consultant than as Chief Engineer.

"Mr. Teague *(talked)* at some length the proposed equipment operation, members of the crew and maintenance staff; and also supplied a list of the executives and officers of the corporation and their experience. During the course of the discussion we received a variety of information and names of people who will fill some key positions with the Railway... the two most important being the Track Foreman and the Trainmaster. The Track Foreman will be Robert Clement, who has been filling that capacity for several years very satisfactorily. The Trainmaster will be George *(Buddy)* Trask who has also been employed by the Railway for several years, working his way to an engineer *(position)* through the normal manner, beginning as a brakeman. Mr. Trask is no stranger to the Railway, as his father was employed there before him, and younger brother *(Bobby)* is following in the family footsteps.

"Since the early retirement of Paul Dunn, former General Manager, who was well acquainted with the Cog Railway and its operation, there have been two subsequent general managers. Both these men were outstanding in their field of mechanics and ability to supervise; however, neither were acquainted with the unique operation of the Cog Railway in a manner that would indicate an overwhelming knowledge of the operation. This required many inspections from this office in an effort to guarantee that the orders were being adhered to, and that safety was uppermost in the minds of all employees.

Sec. 44 - Charles in Charge

"Generally speaking, many procedures were initiated that eventually lowered the down time, or time that trains could not operate for mechanical reasons, as well as labor, which, in turn, increased the passenger count and general financial status of the company. Some of these procedures came about without the consent of the owner of the Railway, Mrs. Arthur Teague. In many cases she actually objected to the procedural changes, but the managers in charge at the time put them into effect over her objections. One of these *(procedures)*, to mention an example, is the magnaflux and ultrasonic testing of the axles. In the opinion of the undersigned *(King)*, this has been the most effective safety procedure that the Railway has adopted in the past ten years. It has reduced the number of broken axle and shaft incidents to zero for the 1978 operating season.

"The question of Charles Teague becoming general manager, and having the final word in procedure and safety is inevitable. It would appear from observation made by undersigned that Mr. Teague has made noticeable improvement in his attitude and *(the)* respect received from employees. During the two years of Mr. Burdick's employment with the Railway as General Manager and Chief Engineer, Mr. Teague has nearly completed the transition from employee to employer in most all aspects. In discussing the management problems in the past with employees of the Railway, most of them have indicated that Mr. Teague's outlook on the Railway operation has matured. It would appear that this may be the year to make the transition of General Manager to Mr. Teague, while Mr. Burdick is available on a daily basis at the Railway for consultation. To wait another year would mean the present chief engineer's contract will expire. In all likelihood it will not be renewed, due to the wishes of Mr. Burdick. It is doubtful that the Railway would consider hiring a new chief engineer as a consultant at a time the entire operation should be conducted by its president and general manager." - signed: *Walter W. King / May 22, 1979*

The Commission went with King's recommendation.

1979 Operating Season

Charles Simpson Teague was now in charge of the Mount Washington Cog Railway with George Burdick alongside for any needed consultation. 1979 was a challenging season according to some state reports and the accounting of breakdowns for that year. Unlike the 1978 Report the 1979 cumulative breakdowns list emphasizes lost trains and lost revenue by underlining those entries. Those ***underlines will be bolded*** in this text. *(Editor's note: On the financial upside, Mrs. Teague was able to convince the Twin Mountain Board of Selectmen on July 10th to let the Cog Railway dispose of its rubbish at the town dump for free - now that the Cog's dump behind the shop was being covered over with cinders.)* The 1979 breakdown list that follows is interspersed with state investigation reports from the New Hampshire Transportation Department files.

Breakdowns of 1979

July 19 # 6 engine derailed at Skyline Switch, due to switch defect, and track damage caused by # 9 and # 10 engine coming down from the switch derailed. No passenger trains were lost, but several fares totaling approximately ***$100 dollars were refunded*** to satisfy unhappy passengers. ***Loss*** is also noted in ***taking 78 persons down the Auto Rd and busing them to the Base Station***, plus on

July 20th and 21st we were ***unable to run trains to the Summit*** so a ***considerable loss*** was evident due to only running to Skyline on these days.

Inspector Warren King told his boss, Donald L. Jackson "the weather was warm and clear" on July 19th when the No. 6 *Great Gulf* derailed at the Skyline Switch. "There were no injuries to crew or passengers. There was no damage to equipment; however, there was track damage." The train left "Marshfield Station at approximately 3 p.m. with Engineer *(Dave)* Moody, Fireman *(Bruce)* Houck, and Brakeman *(Nat)* Putnam with 47 passengers. This was the upper end of a double header, two trains operating on the same schedule, five minutes apart." The No. 10 *Col. Teague* pushing the *Thelma* car followed with Engineer *(Charles)* Morrill, fireman *(Rob)* MacLay, and Brakeman *(Jon)* Mies with 20 passengers aboard. The derailment occurred on the return from the Summit. The two trains *(No. 10 & No. 6)* took the switch allowing the ascending train to pass on its way to the top. The switch was thrown and the No. 10 backed off the switch onto the main line.

"After a very brief period," wrote King "Locomotive No. 6 began its descending trip. Upon entering the switch, a heavy bump was felt by the crew who stopped the train immediately. Upon investigation they discovered that four wheels of their train were derailed; one on the tender, the up-mountain wheel on the locomotive, and both wheels on the car, all on the north side of the train which dropped in on the gage side of the north rail. All cog gears remained in the cog rack. All other wheels remained in a railed condition. Several attempts were made to re-rail the equipment but they failed. The dispatcher was notified and the passengers on the derailed train *(No. 6 Great Gulf)* and the train that *(had)* proceeded to the summit *(at the Skyline meet)* were returned to the Base via the auto road and a bus, at the expense of the railway.

"Upon investigation the crews discovered that the lower end of the double header, Engine No. 10, had also derailed at the switch, which is Bent No. 902, and traveled in a derailed condition to Bent No. 827, which is between 750 and 800 feet. It was learned that the first train to derail *(exiting the switch)* was the previous train to No. 10. This was Locomotive No. 9 *Waumbek* and Car No. 5. It was discovered that the up-mountain wheels of the engine and car on the north or left side had both derailed briefly, and then re-railed, the *(No. 9)* crew being unaware of the mishap. The ascending and descending trains on the main line passed through the switch without problem. It appears the descending trains from the siding are the only ones that derailed; the track having been weakened by the first derailment *(by No. 9)* moved easily under the weight of the second train, Engine No. 10. *(The No. 10 Col. Teague)* traveled a great distance

Photo No. 2: *Up-mountain view of Skyline Switch partially set for siding. Note misalignment at left center (1979) - King photo / NH Transportation Dept.*

and then, becoming re-railed, continued down the mountain.

"It appears that the cause *(of these de-railings)* was a broken weld in a closure rail. This closure rail acts as a base for a hinge for the north rail switch point. With all rails in proper position, the transition from the switch point to the siding can be made without any problems. Photo No. 2 *(previous page)* is and up mountain view of the Skyline Switch closure rail. As can be seen, it is misaligned with the receiving rail in an ascending direction. Photo No. 3 *(right)* is the view of the Waumbek Switch in a descending direction, indicating the smooth transition through the closure rail to the switch point. Photo No. 4 *(below)* is of the same mechanisms at Skyline Switch.

Photo No. 3: *Down-mountain view of Waumbek Switch set for movement from siding (1979) - King photo / NH Transportation Dept.*

Photo No. 4: *Down-mountain view of Skyline Switch for movement from siding. Note misalignment at upper center (1979) - King photo / NH Transportation Dept.*

closure rail to be forced in a northerly direction which, in turn, would allow the wheels to become derailed.

"The investigation revealed that the skyline closure rail weld has been at least cracked, and probably broken, for a long period of time.

Again the misaligned closure rail is visible. Photo No. 5 *(below)* is the closure rail at Waumbek Switch to indicate the proper position and welding. The closure rail at Skyline Switch can be seen in Photo No. 6 *(next page)* close up. It is obvious that the weld along the entire length of the base of the support is broken, allowing the

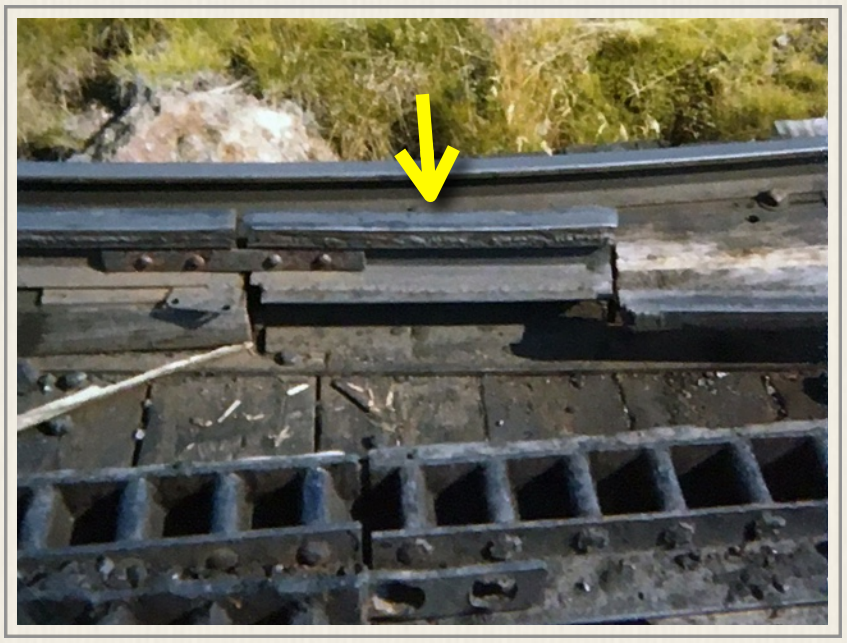


Photo No. 5: *Closure rail at Waumbek Switch (1979) - King photo / NH Transportation Dept.*

There was no newly broken metal visible *(right)* in the entire length of the weld. Upon returning to the Base, this writer *(King)* informed Charles Teague, President of the railway and George Burdick, Chief Engineer, that the switch must be inspected by Mr. Burdick prior to its use, after necessary repairs were made. They were further informed that a weekly inspection of all switches must be made and records of those inspections kept for future reference. The verbal directives were confirmed in writing in the form of an Order dated July 23, 1979. The tardiness of the notification of derailment was the cause of this Commission's Order No. 13,745 setting forth the above-mentioned inspections and reporting of incidences." - signed: *Walter W. King – Aug 10, 1979*

Photo No. 6: *Closure rail at Skyline Switch. Note broken weld at base of support. (1979) - King photo / NH Transportation Dept.*

Jitney Jr has been unable to find a copy of Order No. 13,745 with the guidance for required inspections and incident notification in either the bound edition of NH PUC orders for 1979 in the State Library in Concord or the online collection of 1979 orders. He has found other PUC orders that refer specifically to Order No. 13,745.

Breakdowns of 1979 (cont.)

August 1	# 4 car derailed at Skyline, ½ hour delay in schedule – no passenger service lost
August 3	# 3 broken lubricator line at Waumbek, 15 min. delay in schedule – no passenger service lost
August 7	***Lost 2 trains*** (passenger) due to lack of crews
August 9	# 9 had bad coal 3 hour and 45 min round trip - # 2 derailed at Base Switch 15 min delay – Total of approximately 1 hour lost in schedule. ***Lost approximately 2 trains*** due to loss of schedule, bad coal, and no crew.
August 14	# 3 had bad coal delayed schedule 20 min to ½ hour, no passenger loss.
August 17	# 2 broken forward steam line on Long Trestle, speeder sent up to fix it. Lost one to one and ½ train loads due to delay.
August 20	# 10 slipped linkage on cylinder cocks, stuck on center at Waumbek, ½ hour delay in schedule no passenger service lost

Sec. 44 - Charles in Charge

Vandalism at the Mount Washington Cog Railway

"On August 21, 1979 the Mount Washington Cog Railway experienced … harassment of the crew and passengers on two different trains. This harassment occurred at the Summit and skyline switch areas. There was also some vandalism in the form of objects placed in the cog rack and the Skyline Switch begin misaligned. This investigation *(by inspector Walter King)* began on August 21, 1979 at 11:00 pm.

"The incidents occurred in the mid-afternoon, approximately 3:00 pm. The harassment occurred at the Summit and consisted of a group of apparently young people with an adult leader. The young people were approximately fifteen years old and the adult was in his early thirties. The harassment consisted of offensive gestures with wooden objects in the form of sticks with a cross shape similar to a child's wooden sword, only much longer. These were waved at the crew, in very close proximity to their bodies, and the passengers in a similar manner, accompanied by offensive and obscene words. The main theme of the gestures was to 'remove the trains from the mountain; they did not belong there anyway.' It appears that it was the same group at both locations."

The first act of harassment occurred at the Summit to the one o'clock train at around 2:30 pm. The harassed train descended normally and met a double-header on the way up at Skyline. When that double started back to the Base, the first train down "struck an object placed on the cog rack *(near the Skyline switch)*, causing one of the cog gears of the locomotive to become disengaged with the rack for a brief period. (I)t was discovered that a piece of boiler grate had been placed on the cog rack in such a manner that it could not move when encountered by the teeth of the cog gear. This piece of grate was 9½ inches long. The incident caused the descending locomotive to become out-of-time. It did not affect the descending trip; however, it was necessary to retime the locomotive prior to further service."

"The descending double-header crew met the ascending 4:00 PM train at Waumbek Station," wrote King "and discuss with the *(4 o'clock)* crew the problem at Skyline Switch. Upon reaching the Skyline Switch, the ascending train brakeman noticed the switch had been tampered with and misaligned. (I)t was determined that there was nothing loose or broken, so the ascending train continued on a normal trip. The brakeman indicated that the crossover rail, the rail that carries the left wheels of the train over the cog rack toward the siding, had been placed in the siding position which would have derailed the train had it made contact. *(Ed note: This was the same switch rail that caused the fatal 1967 accident and had become known by Coggers as the "death rail.")* Also the holding pin for the cog rack had been removed and the rack moved a few inches to the left, which would have come in contact with a portion of the undercarriage, the bull *(spur)* gear. It was also noted that one of the switch point throw levers *(flags)* had been moved. After making note of these, the brakeman realigned the switch for the up-hill move. These incidents were all reported to the dispatcher, the chief engineer, and the president of the railway.

"The New Hampshire State Police were called as a protective measure and to investigate the vandalism and harassment. This writer *(King)* made two inspection tours of the of the track on August 22, 1979, the first at 8:00 a.m. in the company of the chief engineer of the Railway *(George Burdick)*, a conservation officer from the NH Fish and Game Department, and two members of the New Hampshire State Police. Everything appeared to be normal throughout the entire trip. The second inspection, at 1:00 pm, was conducted, accompanied only by the brakeman, from the up-hill end of a passenger coach. Again, all aspects of the operation were normal." King made the suggestion to management that "the immediate area of the Skyline Switch be cleaned of metallic waste and scrap, as it appears this is the material used by the vandals. The investigation is not, at this time, completed; therefore, a more precise report will follow."

- signed: *Walter W. King – Aug 24, 1979*

"As a precautionary measure against the return of about 15-20 unknown hikers who interfered with the Cog Railway Tuesday *(8/21)* afternoon, State Police will be stationed in the area until at least tomorrow. "We don't want anyone near the train or the track area," Lt. Richard Tuck, commander of Troop F, Twin Mountain, told the Union Leader this morning. According to Tuck, members of the group interfered with a train going up the mountain yesterday afternoon about 3:45, apparently "hand-waving close to the train." There was no damage to the train nor injuries in the actions Tuck described as a "general nuisance." Tuck stated that State Trooper John Thohl and conservation officer Richard Dufour made a search of the area around the railway yesterday afternoon, but didn't locate the group."

- Manchester Union Leader - Wed, Aug 22, 1979

Breakdowns of 1979 (cont.)

August 22	# 10 bad coal lost 45 min. in schedule and one train of people
	Lost one passenger train due to lack of crew
August 28	# 9 broken forward steam line – no delay or loss
Sept 1	# 3 had broken blower, # 1 was used to replace it, tender was not filled with water – result 20 min delay in schedule – but # 1 had slow trip. ***Lost 2 train***s during the day to lack of crew and schedule
Sept 3	Trouble getting water at Waumbek due to someone draining the tank. ½ hour delay in schedule – no passenger loss
Sept 10	# 9 broken frame on Short Trestle. ***Lost 39 people*** due to refund.
Sept 12	# 3 and # 6 bad coal lost one hour in schedule – but no passengers.
	# 3 hot crank pin, lost 10 min. in schedule.
Sept 15	# 6 bad coal – two hour trip to summit
	# 6 broken valve key – speeder sent up to repair,
	lost approximately ***30 passengers*** and one hour in schedule
Sept 18	# 6 bad coal lost 36 min. in schedule

The more precise follow-up report promised by inspector Walter King in his August 24th memorandum on the Summit harassment and Skyline vandalism incident was not found in the N.H. Transportation Department files. However, there were two pages of a N.H. State Police

Sec. 44 - Charles in Charge

"Continuation of Investigation Report" filed on September 18, 1979 by Detective Robert A. Loven regarding Case No. F-79-282 (*likely the vandalism case though not specifically labeled as such.)*

State Police Investigation Report

Loven *(who would be elected Coös County Sheriff in 1996 & 1998)* wrote in the Fall of 1979 that he had "contacted several persons that have been in a position to know of the operation of the Cog Railway for over ten years. They are responsible and respected by this writer."

"Person #1 – Stated that the condition of the Cog Railway has deteriorated over the years. Mrs. Teague has been in financial trouble and is taking everything she can money-wise. They are not replacing or repairing needed equipment. The only repairs that are made is when the equipment breaks down and cannot be operated. Some of the tracks are over 100 years old. The engines are breaking down several times a year, and they are repaired just enough to keep them running. He personally knows Mrs. Teague, and she has used her political friends to influence the Public Utilities Commission. He believes that the State of New Hampshire has a responsibility to the tourists that ride the Cog Railway. The State of New Hampshire advertises to get tourists into the State and are allowing an unsafe railway to operate. He stated that two things will happen to the Cog Railway. There will be another accident like the one in 1967 that killed eight persons and injuring over 60 or Mrs. Teague will file bankruptcy.

"Person #2 – stated he has known the train crews over the last ten years *(since 1969)*. Several have complained of the unsafe conditions of the railway to him. They have told the management of the Cog about the unsafe conditions, but nothing has been done. They quit their jobs with the railway because of the conditions. This season he has noticed more breakdowns of the Cog than before. Every year there are incidents where hikers put items on the track, but he has not been aware of any large-scale vandalism. He does not understand why the Public Utilities Commission allows the Cog Railway to operate. He has been expecting an accident to happen any day on the Cog Railway that will take the lives of unsuspecting tourists.

"Person #3 – He has been involved with the Cog Railway and personally knows Mrs. Teague for over seven years *(since 1972)*. The railway has not had a maintenance crew for the last several years. He has seen more breakdowns with the engines this year because of the track being out of line. The only repairs made is when the equipment breaks down. Then they patch the equipment to keep it running. This year he has noticed that the switches need a lot of repair. The reason that the passenger car went off the track at the Skyline switch was because the switch needed repair. He believes that the Public Utility Commission is responsible for the condition of the railway. They are not doing their job. The Cog Railway has not had an inspection of any kind. The owner has stated they have political influence on the Public Utilities Commission. He also believes that the State of New Hampshire has a responsibility to the tourists that the State advertises to come and ride the Cog, especially to the children that ride the train. They do not know what dangers are involved in the railway like an adult.

"Person #4 – He worked for the Cog Railway for three years in General Management. While he was employed at the Cog, he was responsible for the maintenance of all the equipment and daily operation. Mrs. Teague was advised the railway needed major repairs. She agreed that he could start a preventive maintenance program. She told him that she was going to sell some property *(Editor: The Teague's Guildhall farm was sold in 1973 for ???)* and put approximately $80,000.00 into the Railway. She never did put the $80,000.00 into the railway. She said she invested it someplace else. The maintenance on the railway was very poor. The boilers on the en-

gines were in very bad shape. Several had cracks and were welded. One crack was approximately 18 inches long. He does not know why the Insurance Company keeps insuring them. The trestle is in a very unsafe condition. The engines have been made heavier over the years. The passenger cars are bigger and heavier. The safety factor of the trestle is now zero. He is surprised that a major accident has not happened this year. He still has friends working at the railway and they have had more breakdowns this year because of the Trestle not being level. Mrs. Teague has a personal friend on the payroll as a consultant at approximately $18,000.00. She has said several times she has political friends that control the Public Utilities Commission. He has expressed his concern of the dangers of the railway to several people in the NH Department of Parks and Playgrounds and they also told him they were concerned about the condition of the railway."

Breakdowns of 1979 (cont.)

Sept 20	# 9 bad coal lost 35 min in schedule
Sept 21	# 9 broken cylinder cock – 10 min. delay
Sept 26	# 3 broken forward steam line at Skyline, delayed schedule one-and-one-half hours, no passengers lost at Base, but 41 people on that train were refunded $7.00 each total of ***$287.00 lost***
	Lost 24 trains total

There were no more documents from 1979 in the NH Transportation Department files examined by Jitney Jr in February of 2020. The single 1980 document in the files was a list of breakdowns for the 1980 season starting on June 7th. However, other public sources shed light on railway operations before that first 1980 breakdown in early June:

May 12th, 1980

Charlie accepted as GM "Mrs. Ellen Teague, chairman of the board, announced this week that the Mt. Washington Cog Railroad will open this Saturday, May 24 for its 111th season. It will operate weekends only until the season officially gets underway on Saturday, June 21, trains running then on the hour every hour. The operation will close on Oct. 15. Mrs. Teague, in her 37th season with the Cog Railroad, said that her son, Charles Arthur Teague, has been accepted as general manager by the Public Utilities Commission as of May 12. Work on constructing a new locomotive, *Charlie's Angel*, will be completed at the Base Shop in time for use this season. The first locomotive built locally was the *Col. Teague* in 1972. A shop has continued in operation at Lancaster making cog tracks and other supplies. During the period of weekend operation, trains will run to the halfway point and return while maintenance continues. The Mt. Washington Cog Railway will employ about 50 people this year, about half of whom will again be college students." *- Littleton Courier – Wed, May 21, 1980 pg. 1*

May 19th, 1980 - the New Hampshire Public Utilities Commission issues a Supplemental Order - No. 14,241 dealing with switch inspections and incident reporting procedures.

Again, Jitney Jr has been unable to find a copy of Supplemental Order No. 14,241 with the guidance for required inspections and incident notification in either the bound edition of NH PUC orders for 1980 in the State Library in Concord, or in the online collection of 1980 PUC orders. He has found other PUC orders that refer to the earlier July 1979 Order No. 13,745 and

this supplemental order. Specifically, they are referenced in a 1983 supplemental order for the new owners of the Cog. *(see end of this section)*

Here's the list of incidents and irregularities sent to the State by the Cog for 1980 with items bolded that were underlined in the typewritten document.

Breakdowns of 1980

June 7th	Engine # 6 engine broken blower pipe. 15 min. delay
June 14th	Engine # 10 no steam at skyline. 15 min. delay
June 22nd	Engine # 9 broken lubricator line. 15 min. delay
June 28th	Engine # 3 broken lubricator at Waumbek, 15 min. delay
July 4th	Engine # 9 hole in ash pan above Waumbek. 15 min. delay
July 26th	Engine # 9 broken exhaust line, no delay
July 27th	Engine #10 cracked forward steam line. Switched engines, no delay
August 1st	Car # 1 broken axle on Long Trestle coming down. Lost 4 trains.
August 2nd	Engine # 2 stuck on center. 15 min. delay Engine # 3 broken grease line. 15 min. delay Engine # 4 - # 7 coach kept derailing from Half-Way House up, needed new collar lost 1 hour and 10 min. in schedule
August 3rd	Engine # 3 broken binder. ½ hour delay
August 4th	Engine # 6 broken grease line in box, switched engines, ½ hour delay
August 14th	Engine # 9 dropped a grate just above Waumbek, switched coaches with down coming train. 10 min delay.
August 18th	***Lost 2 trains due to no coal***
August 21st	***Lost 4 trains due to lack of crews***
August 23rd	Engine # 10 injector trouble at base, switched engines. Delay of ½ hour. ***Lost 3 trains due to lack of crew***
August 24th	Engine # 3 broken valve below Skyline. 1-hour delay, ***lost 3 trains*** due to delay in schedule and lack of crew.
August 25th	Engine # 10 lost lubricator plug. 15 min. delay. Lost 1 hour in schedule due to general slowness of crews all day.
August 28th	***Lost 1 train due to lack of crew***
Sept 8th	***Lost 2 trains due to lack of crew***
Sept 20th	Engine # 6 broken blower. 15 min. delay
Sept 27th	Lost ½ hour in schedule due to bad weather, ***lost 2 trains*** due to no crew and delay in schedule.
Sept 29th	Engine # 3 broken piston rod. ***Lost 4 trains*** due to breakdown
Oct 6th	Engine # 2 packing gland broke. 15 min. delay
Oct 8th	***Lost 2 trains due to no crew***

Note: Lost a total of 27 trains (lack of crew because of 1979 lay offs)

February 1981 – Mortgage with Dartmouth College that underwrote the 1962 sale to the Teagues is paid off according to Ellen Teague in her biography.

March 25th, 1981

Cog Railway is offered for sale by Ellen Teague. Reported asking price $3-million

CONCORD, N.H. The Mount Washington Cog Railway which has taken tourists up and down the Northeast's highest peak for 112 years is up for sale. Ellen Teague, who took charge of the railway when her husband, Arthur, died in 1969, said she decided to sell mainly because of her age. "I feel fine now, but I'm going to be 68 in April," she said Tuesday. "I've been running things for 14 years now and that's a long time." While her son, Charles, has helped manage the railway, he wants to pursue other interests, she said. "We might stick it out this summer and next, depending, but that will be it," she said. Mrs. Teague declined to disclose the price of the railway, which has been in her family since 1962. Other sources said she was asking for about $3 million and offered the state "first priority" to purchase one of New England's premier tourist attractions. But the state has no plans to buy, according to George Gilman, commissioner of the Department of Resources and Economic Development. "We frankly hope it stays in her family," Gilman said. "It's an institution within the state and within the Teague family." The state owns most of Mount Washington summit, including the recently built $4.6 million Sherman Adams Building which houses a weather station, museum, cafeteria and park station. The railway's rolling stock includes about six steam engines and passenger cars. The track, winding up the mountain at sometimes dizzying grades, is in "excellent condition," Mrs. Teague said.

- Manchester Union Leader - Wed. Mar 25, 1981 pg. 1

June 7th, 1982

New Hampshire Public Utilities Commission orders railway shutdown until track between Lizzie's and Summit is repaired. This was the same section of track that railway president Charles Teague had told employees in a 1978 newsletter was scheduled for repair in the summer of 1979.

Re Mount Washington Railway Company, Inc.
DR 81-322, Order No. 15,693
67 NH PUC 375
New Hampshire Public Utilities Commission
June 7, 1982

ORDER requiring certain maintenance procedures.
BY THE COMMISSION:
REPORT

On October 19, 1981, the Mount Washington Railway Company submitted a request for a rate increase of approximately 33⅓ percent, raising, among other things, adult round-trip fares to $20.00.

On April 9, 1982, an Order of Notice was issued setting a hearing for May 14, 1982 at 1:00 P.M. at the Commission's Concord offices. Notices were sent to Jack D. Middleton, Esquire (for publication); Ellen C. Teague, Mount Washington Railway Company; George Burdick, Chief Engineer, Mount Washington Railway Company; and the Office of the Attorney General. An affidavit of public notice was filed with the Commission on May 6, 1982. Hearings were held on May 14 and May 17, 1982. The Company produced as witnesses: Rep. Kenneth Randall, Book-

keeper; George Burdick, Chief Engineer; and Robert Wood, Accountant. The Commission Staff presented Walter King, Railroad Investigator.

SAFETY

The continued safe operation of the Cog Railroad is of prime importance to this Commission. In an attempt to comply with our statutory mandate to assure safe service, this Commission had its Railroad Inspector, Walter King, inspect the railroad three times during the month of May, 1982. The inspections conducted prior to the hearings were conducted on May 11 and 13, 1982 focused on the lower portion of the Cog Railway, its equipment and the personnel.

The inspection that was conducted after the hearings focused on that portion of the track that was under snow at the time of the hearings.

Mr. King testified that the site inspections of the lower portion disclosed deficiencies-tipped bents, incorrect rack spacing and caps out of place. He testified that previous inspections had revealed a need for repairs to the skyline switch to assure continued good operation. He testified that the switch repairs need not be accomplished before the railroad opens for the coming season, but that the bents, rack spacing and the caps were, in fact, safety hazards and required corrective action before opening. He noted that he had been accompanied on the inspection by the track foreman who had recorded the deficiencies and was assured that they would be completed as directed.

The Commission directs the Company to take the necessary corrective action to eliminate the rack spacing problems, to fix the tipped bents and to insure that the caps are back in place prior to opening the railway to the public. The Commission further finds that the safety of operations require that the Skyline Switch be completely repaired no later than June 15, 1982. The Commission will not tolerate any deviation from the highest safety standard possible. Inspector King is instructed to immediately report any safety problem with the railway and to require immediate corrective action by the Cog Railway

Mr. King recommended that the Company direct its efforts in the specific area of Jacobs Ladder. Certain timbers in that area are stated to be in need of replacement, and he noted that the Company has invested approximately $17,000 in new timber for replacing portions of the bents during 1982. Mr. King recommended that the Commission direct a specific maintenance schedule to assure that the approximately twenty (20) bents be replaced in total over a period of ten (10) years, and that the presently available timber be used as a minimum to replace two (2) complete bents during this season. The Commission accepts the recommendation that a maintenance schedule should be ordered. However, our overriding concern for safety leads to a requirement that these 20 bents be replaced over a seven (7) year period and that the presently available timber be used, as a minimum, to replace two (2) complete bents during this season.

Mr. King made reference to a construction practice of installing timber connectors between bents along the rail line. He noted both past and current company practice and testified to the desirability of using timber connectors as recommended by the Commission's consulting study com-

pleted in 1968. The Commission instructs the railway to comply with this study as to the installation of timber connectors.

Mr. King cited the desirability from an economic standpoint of completing construction on a new engine and rail passenger car. Replacement of the engine would provide additional power in case of an older unit breakdown, Addition of the new passenger car would take out of service an older car, which is currently being cited for various minor deficiencies. The Commission orders the railway to place a high priority on placing this new engine and rail passenger car into service as soon as possible. The Commission is far more concerned with safety than economics, and the railway should make every attempt to provide the public with the newest and best maintained equipment.

Another recommendation by Mr. King was to have the railway focus its attention on the Marshfield Siding and switch and to the track between the shop and the passenger line. His testimony was that repairs have been deferred over a number of years, and that although no accidents have resulted, continued negligence will inevitably result in future problems. The Commission is extremely concerned when any maintenance has been deferred with the money that has been made over the years. There is no reason to allow any deferral of maintenance. This maintenance is ordered to be completed during 1982.

Mr. George Burdick was the Company's witness for operations and maintenance. He expressed knowledge of Mr. King's recent inspection, and was aware of the specific deficiencies noted during the visits with the track foreman. He confirmed that the Company would correct the deficiencies relative to caps, tipped bents, and rack spacing before the railroad is open to the public.

Mr. Burdick acknowledged that repairs were necessary to the skyline switch, and indicated that a continued preventive maintenance program was established in lieu of a complete rebuilding schedule. He assured the Commission that public safety was assured by adhering to this repair schedule.

Concerning a reconstruction program of Jacob's Ladder, Mr. Burdick explained that many sections of the ladder date back to the 1930's. As damaged or deteriorated wooden members are identified through inspection, those members are replaced. He confirmed the purchase of new timber as noted earlier by Mr. King, and agreed that a replacement schedule for all bents over a period of years would assure continued public safety. Although he recommended that the replacement schedule be extended over a twenty-year period, he revised his comments upon cross-examination to a time period of ten years

Mr. Burdick concurred with Mr. King's testimony relative to the desirability of utilizing timber connectors and acknowledged that this construction method had been accepted by the Company as a standard construction practice.

In regard to the completion of the engine and passenger car construction, he indicated that the passenger car would be completed this year and would be in service by July, 1982. The engine requires approximately twenty man weeks to complete, and will require the expenditure of approximately $2,500 in materials

Mr. Burdick acknowledged the need for repairs at Marshfield Siding and acknowledged that repairs were scheduled during 1982.

The Commission appreciates the efforts of Mr. Burdick and Mr. King. However, the Commission believes that even a higher degree of safety should be sought. There shall no longer be any deferral of any maintenance unless there is permission received from the Commission by an order signed by all three Commissioners. The Company, as noted later in this opinion, is being allowed a rate increase. The revenues from such an increase should be used primarily to repair and maintain the track equipment and all other factors impacting on the safety of the public. Any deviance from the safety requirements established by this opinion and other decisions by the Commission will result in fining at the very least, ad as we demonstrated last year we will shut down operations anytime we are convinced that there is a risk to the public.

Witnesses Burdick and King have provided certification of safety, and based on these certifications, operations will be allowed to open.

CONCERNS OF THE PUBLIC

The Commission had received a letter from a Charles Brennan of Morristown, New Jersey. a trip on the Cog Railway. The letter revealed that certain improvements are long overdue to assure both safety and basic comfort for passengers traversing the mountain. As of July 1, 1982, the Railway is to have the following on every train that goes up or down the mountain: (1) portable toilets; (2) some blankets; (3) flashlights; (4) water with cups; and (5) signs indicating that passengers should follow the safety instructions of the engineer. Inherent in this requirement is that the Cog Railway management must give the proper safety instructions to each of its engineers and other personnel

RATE INCREASE

At the hearing, several accounting matters were raised by the Commission's Financial Staff. The Company has been capitalizing the cost of materials, while the labor revealed to those projects have not been capitalized. This is improper accounting, as the labor and the related benefits should be included in the cost of fixed assets. Unless all costs related to fixed assets are properly stated, it becomes impossible to arrive at a proper asset value and a proper rate base for ratemaking purposes. By July 1, 1982, the Company is to have filed a revised 1981 annual report reflecting this ordered change. No further deviations are to be made by the Company as to this concern. Proper accounting practices are to be followed.

Secondly, the Company has recorded interest expense as railway operating expenses. Interest expense should be recorded as fixed charges and not as part of net utility operating income. The Company is to refile their reports making this adjustment

Finally, the Commission deems it improper for the Company to make advances to its owners or employees of the corporation at rates far below the cost of the borrowings of the corporation. These advances are not to be made in the future.

The evidence in this case demonstrates that the additional increase to rates may be justified only if the proper accounting practices are taken into account and the safety measures are in fact implemented in 1982. Based on this condition, the rate increase requested is granted for the start of the 1982 season. Our Order will issue accordingly.

ORDER

Upon consideration of the foregoing report, which is incorporated and made a part of this order; it is hereby

ORDERED, that the Cog Railway take the necessary corrective action to eliminate the rack spacing problems, to fix the tipped bents and to insure that the caps are in place prior to opening the railway for the season; and it is

FURTHER ORDERED, that the skyline switch is to be completely repaired no later than June 15, 1982; and it is

FURTHER ORDERED, that a maintenance schedule for replacing the bents at Jacobs Ladder is to be filed with the Commission that will lead to all bents being replaced over a seven-year period and that the railway, pursuant to this schedule, replace at least two complete bents at Jacobs Ladder during 1982; and it is

FURTHER ORDERED, that the new engine and passenger car should be completed and placed in operation as soon as possible; and it is

FURTHER ORDERED, that the repairs to the Marshfield Siding and switch and the track between the shop and the passenger line be completed in 1982; and it is

FURTHER ORDERED, that all trains that go up and down the mountain are to be equipped with portable toilets, blankets, flashlights, water with cups and signs indicating that passengers should follow the safety instructions of the engineer as of July 1, 1982; and it is

FURTHER ORDERED, that the accounting change discussed in the Report are to be complied with and the annual reports refiled correctly; and it is

FURTHER ORDERED, that there are no longer to be loans to owners or employees out of utility funds; and it is

FURTHER ORDERED, that based on all of the above, the requested rate increase is granted.

By order of the Pubic Utilities Commission of New Hampshire this seventh day of June, 1982

Sec. 44 - Charles in Charge

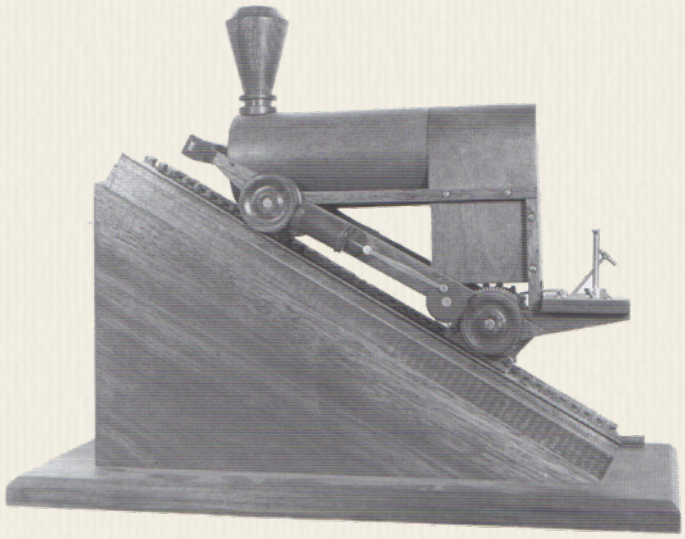
Commissioner Paul R. McQuade will issue his decision at a later point in time. *(Fitney Jr. has been unable to find a copy of Commissioner McQuade's order)*

A year later, the Mt. Washington Cog Railway had been sold and was in the hands of John Rolli, Loxley Ness, Joel Bedor and Wayne Presby. *(see Vol. 5 - State Documents - Littleton Group)*

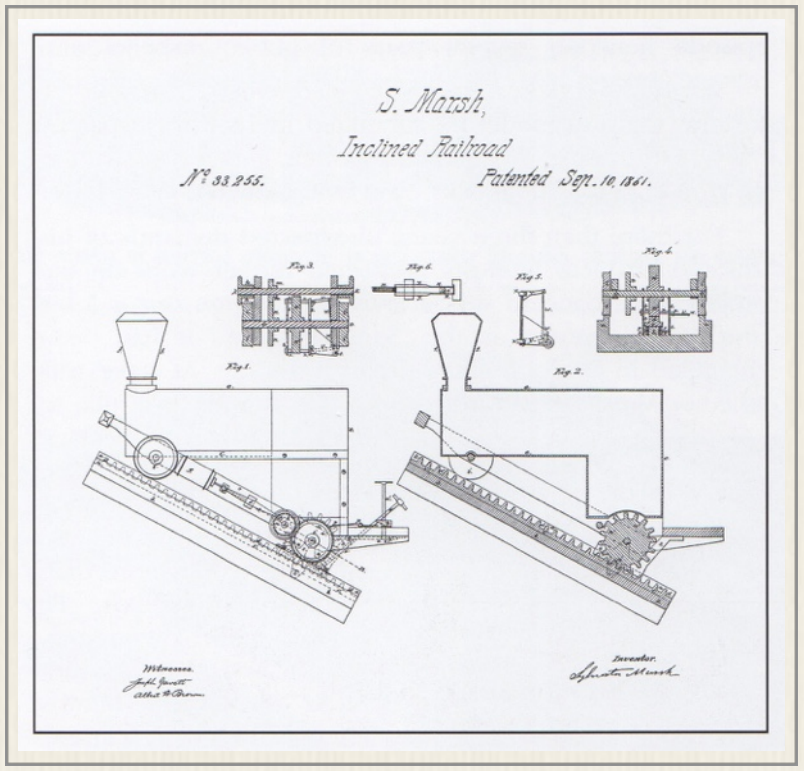
Model Behavior

Sylvester Marsh

The first model of a Mount Washington Railway mountain-climbing engine *(right)* was built before there was a Mount Washington Railway corporation. Sylvester Marsh's model was the three dimensional representation of his drawings submitted to the U.S. Patent Office on August 24, 1858. As outlined in Richard G. Wood's *Appalachia* magazine article, Marsh's original application was deemed too close to similar patents held by five people granted between 1836 to 1849. Marsh submitted an amendment to his original application in August 1861, and Patent No. 33,255 *Improvement in Locomotive-Engines for Ascending Inclined Planes* was granted on September 10, 1861



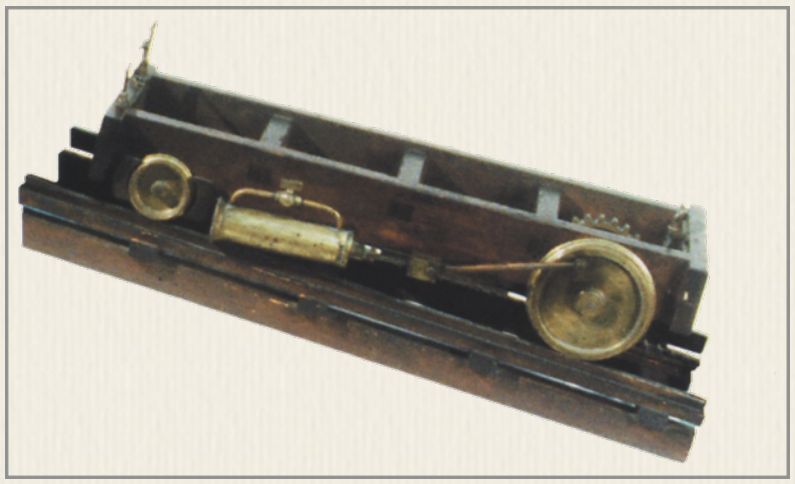
Marsh's U. S. patent drawing and model. (Model in the collection of the National Museum of American History, Smithsonian Institution.)



Marsh's next models were built after he convinced the New Hampshire Legislature to grant him a charter to build railroads to the summits of Mount Washington and Mount Lafayette. As described in the *Philadelphia Photographer (Vol 6 No. 72 December 1869 - pg. 396)* the model was built after he had obtained his charter for the railroad "He (Marsh) then talked it up till the winter of 1865 and 1866 with but little success, until he built a 6tion, and his application to the Legislature of New Hampshire for a charter was granted almost by default, nobody believing that it would ever be heard of again."

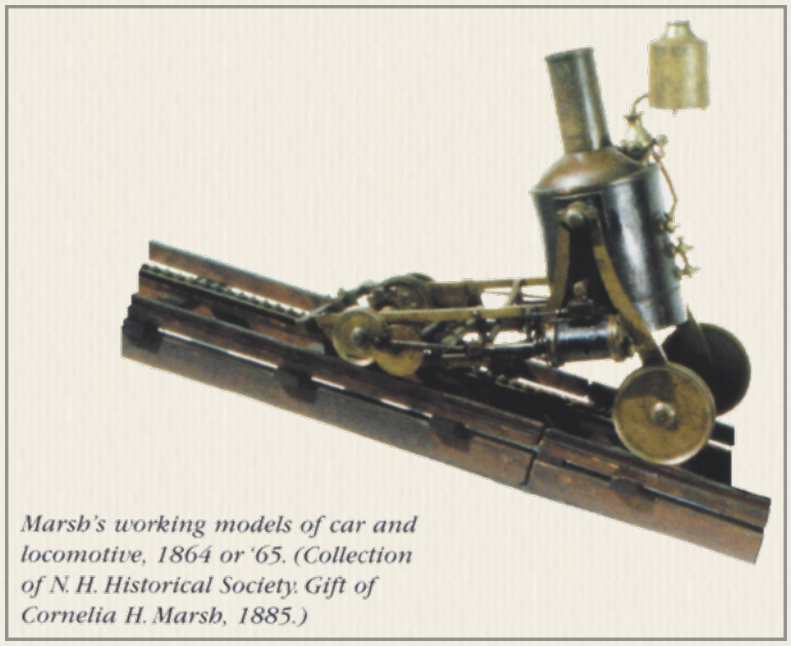
The images seen thus far in this section come from *Sylvester Marsh and the Cog Railway*, a 2000 book by Cambridge, Massachusetts architect and Smith College faculty member Richard S. Joslin. Joslin's book is based on an article by Guy Gosselin in the Fall and Winter 1998 issues of *Windswept, the Quarterly Bulletin of the Mount Washington Observatory.* Joslin brought additional information and illustrations to Marsh's story for very personal reasons - he is a great-grandson of

Sec. 45 - Model Behavior



Sylvester Marsh, and wanted to clear up confusion about who was "the projector" of the world's first mountain climbing railroad.

Walter Aiken



Marsh's working models of car and locomotive, 1864 or '65. (Collection of N. H. Historical Society. Gift of Cornelia H. Marsh, 1885.)

In 1877, Mount Washington Railway manager Walter Aiken wrote a brief history of cog railroads that was printed in the September 1, 1877 edition of *Among the Clouds*. In it, he claimed his father, not Marsh came up with the idea. "About thirty years ago Herrick Aiken of Franklin, N. H., conceived the idea of ascending Mount Washington by means of a cog railroad," wrote Walter. "He built a model of road bed and track with cog rail, and made two ascents of Mount Washington on horseback for the purpose of determining the feasibility of the route, etc. Upon consulting with prominent railroad men, they dissuaded him from the enterprise, as they thought the scheme was impracticable, and that it would not warrant the outlay. I now have the model in my possession at my office." *Among the Clouds* editor Henry M. Burt reprinted the article two years later on August 8, 1879.

Marsh's great-grandson says Aiken never offered any more of an explanation for his claim other than the model at left, and Joslin's book says Aiken's claim at the time "made little impression." He writes, "*Among the Clouds* appears to have been the only publication in (Sylvester) Marsh's lifetime to mention Herrick Aiken's possible role" in the creation of the cog railway. That is not quite right, the contention appeared several times in the *Annual Reports of the Railroad Commissioners of the State of New Hampshire* beginning in 1877. At that point, Marsh is president of the railway company and Aiken is the manager. The 1877 narrative begins to cast doubt on Marsh as projector of railway and also misstates the railroad's opening. "The scheme of running up and down the mountain with steam power by means of cog-wheel machinery was pondered by ingenious inventors as early as 1850, but was treated by railroad men as visionary down to the period when the project was seriously in process of execution, and in fact very generally till the road was actually opened in 1872. The machinery for the road was constructed at the machine-shop of Walter

Aiken's purported 1847 model. (Collection of Rogers B. Johnson.)

Aiken, in Franklin, - Sylvester Marsh, of Littleton, being the patentee of that portion of it which is a new device."

The 1879 *Annual Report* of the Mount Washington Railway further embellishes the Aiken claim and repeats the 1872 start date mistake, "The scheme of running up and down this mountain with a steam-locomotive by means of cogged-wheel machinery was entertained by Herrick Aiken, of this State, so noted for his inventive genius in his day, as early as 1850; and about 1857, having visited the mountain expressly for observation with this conception in view, he built a model to exemplify his plan. Failing health, however, arrested his experimental work. The cogged-wheel device, which was actually put into use on the Mount Washington road in 1872, is, in an important degree, the invention of Sylvester Marsh of Littleton, the traction being effected by a cogged wheel working into a cogged rail firmly spiked to the track. The Mount Rigi Railway in Switzerland, on the same plan, was completed in 1873. Herrick Aiken was regarded by railroad engineers to whom he presented his scheme, from 1850 downwards, as visionary in the extreme, and such in fact was the very general impression among even the more ingenious engineers, down to the very time in which the plan under Mr. Marsh's inventive skill was put into operation, when the Mount Washington road was opened in 1872."

A year later, the Mount Washington Railway narrative for the 1880 *Annual Report* removed the Aiken claim, and corrected the record on the commencement of operations, "This road was completed in 1869, and is the only road in this country running up a mountain-side with an average grade of one foot in three, except it is accomplished with the aid of a stationary engine. It was considered a visionary scheme when the plan was first suggested, and any one with a less indomitable will than Sylvester Marsh would have given up in despair of ever overcoming the unfavorable criticism with which this project was received by railway engineers and others. Time, however, has shown, not only the feasibility of the plan, but also the entire safety with which it can be operated.'

In October 1883, Sylvester Marsh told a U.S. Senate committee under oath, about how the railway idea developed. "Well, I built it for a pastime and to cure the dyspepsia more than anything else. I retired from business in 1855. After living a few years doing nothing, I had the dyspepsia very bad, and was compelled to do something to save my health. I got this idea and worked upon it, and built different models of it, until I worked it out. It was ridiculed a great deal, and was laughed at, but it cured the dyspepsia."

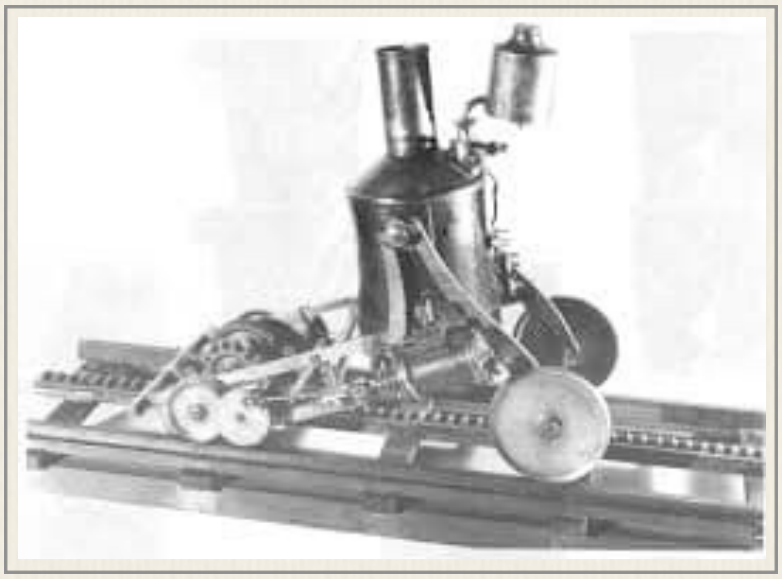
Sylvester Marsh dies in December 1884 and Herrick Aiken is back in the 1885 *Annual Report* to the state. "The merit of originating this novel enterprise in railroad construction belongs to Herrick Aiken, of Franklin, who had conceived its possibility as early as 1850. He subsequently visited the mountain, and in 1857 he constructed a model to illustrate his idea. Mr. Aiken failing in health, Sylvester Marsh took up the project, invented the cog-wheel, and carried the enterprise forward to completion in 1872. The operative power has been improved, and the liability to accident reduced to the minimum by the care and skill of Walter Aiken, son of the originator, and man-

ager of the road." This statement is repeated in the 1886 and 1887 before general narratives disappear from the Mount Washington Railway's *Annual Reports*.

Richard Joslin says an 1878 letter to the president of the Connecticut and Passumpsic Rivers Railroad from Sylvester Marsh outlines his great-grandfather's reaction to Walter Aiken's continued claim. "I built the first engine and quite a piece of the Road before Mr. Aiken knew anything about it." Sylvester Marsh also has a theory as to why Aiken would make the claim. "This may surprise you until you learn that he has always been jealous of my having the reputation for being the originator or inventor of the Mt. Washington Railroad and its appliances." It was a dispute that Marsh did not publicly engage in as it might hurt his only lasting legacy - the railway. Of recognition he wrote, "I care very little about, since I have lost both my sons, and shall have no one to reap the advantage I may be entitled to." Marsh did have a daughter, but this was the late 19th Century.

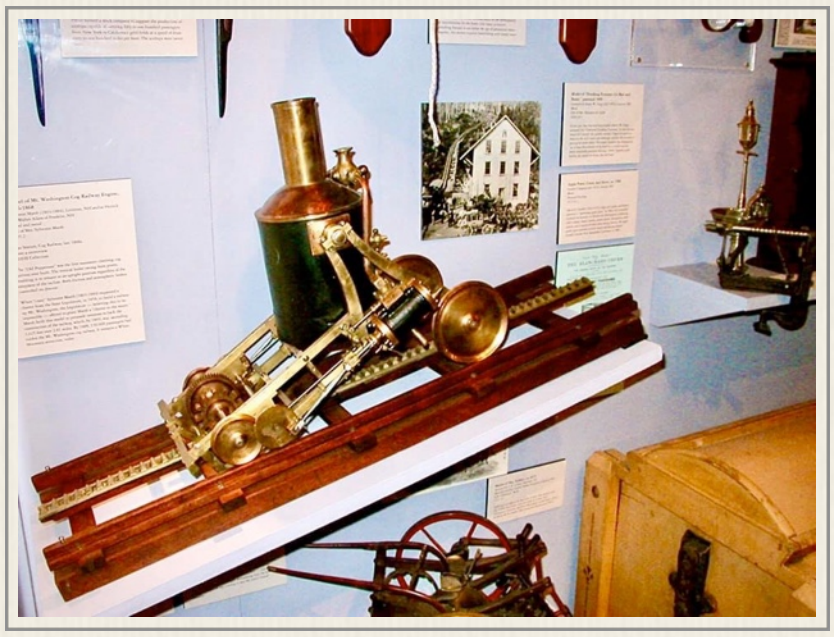
When *Among the Clouds* editor Henry Burt's grandson, F. Allen Burt tackled the issue in his 1960 book he pointed to a 1927 letter written by Herrick Aiken's grand-daughter to support the claim the elder Aiken had originated the Mt. Washington Cog Railway idea. According to Richard Joslin, the letter described Sylvester "Marsh's many visits to (the Aiken) home where he discussed the (Aiken) model and the details of building the railway." Joslin goes on to note the 1927 letter writer was born in November 1867 after Herrick Aiken had died and half the railway had been built. Furthermore, Joslin says the "purported" 1847 Aiken model has the open-rung central cog rack that was developed by Marsh after 1864, and in use on the road in 1877 when Walter Aiken announces to existence of the model in his office. Joslin says "Walter Aiken's assertion has baffled every modern White Mountain historian since."

There may be more Marsh-Aiken bafflement on the way. During research for this manuscript, Jitney Jr. was told historian Donald Bray was working on a manuscript based on "some technical or engineering manuscripts involving the conversion from the vertical boiler and one drive shaft design to the horizontal boiler and two shaft design" that he received from someone related to Walter Aiken. Papers reviewed by the *Clatter* publisher at Dartmouth College contain comments by Sylvester Marsh stating that he conjured the change to a dual-drive design for cog locomotives as well.

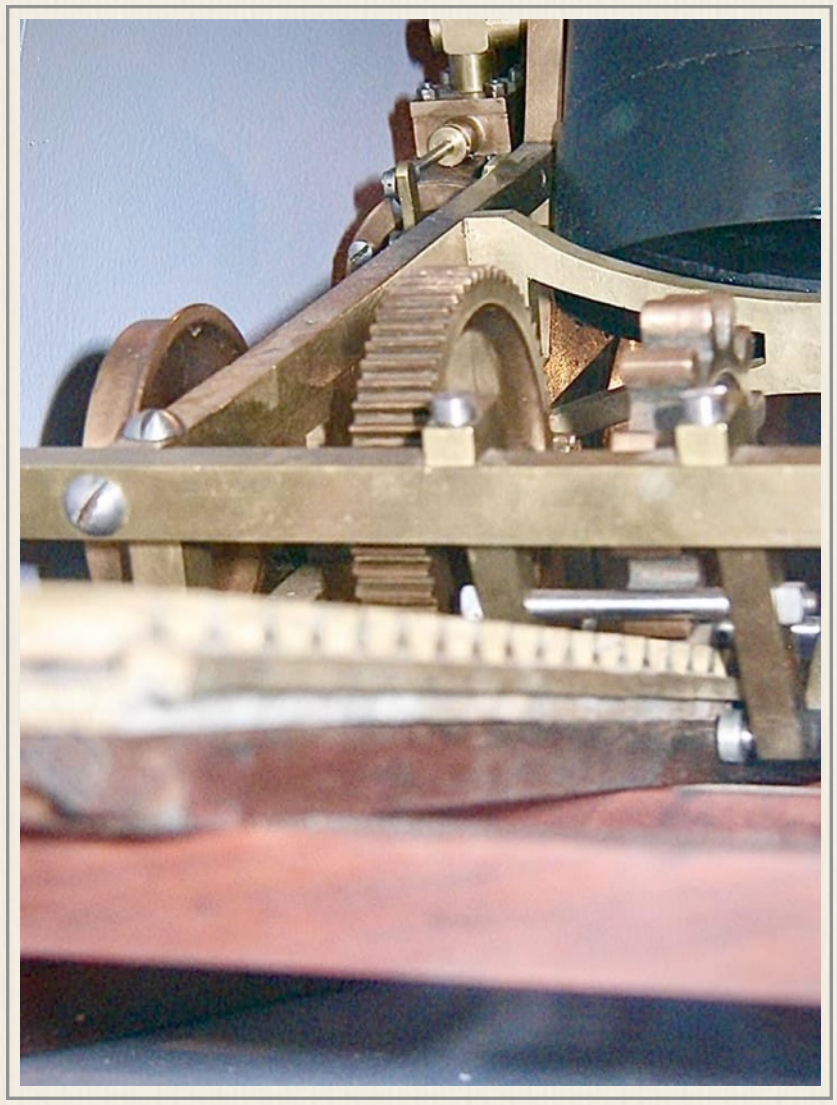


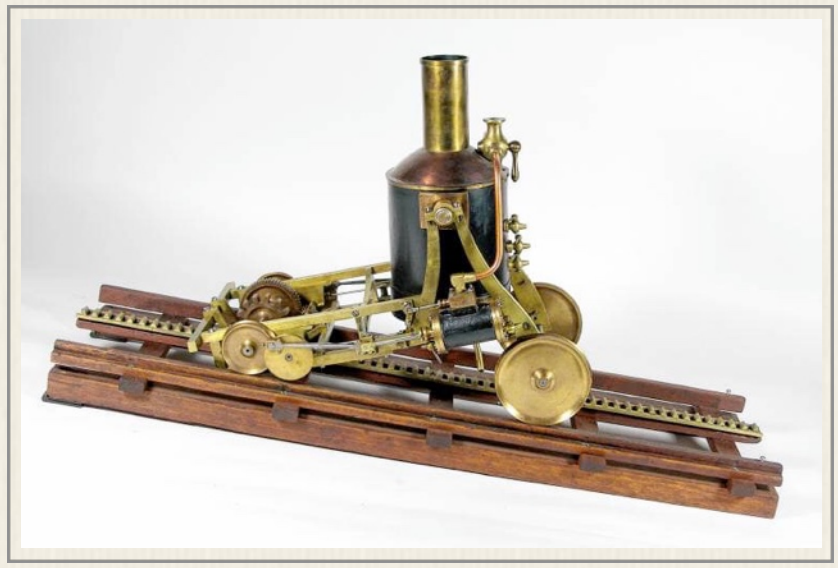
Roger Hahn - August 2 at 9:05 AM: "Back when the *Peppersass* decanters came out in 1978, a small booklet was produced about the locomotive. In that booklet was a photo of Sylvester Marsh's demonstration model used to prove the cog railway concept. I was immediately fascinated by it. The model was displayed at the summit museum for a while, then was moved to the NH Historical Society in Concord, where I believe it still is. A few things are inter-

esting about it. The first photo *(previous page)* shows it with no piping from the boiler to the cylinders. The next, from the NHHS *(left)*, shows it with piping running to the outside of the frame and the boiler angled so the small wheels are on the up-mountain end, like *Peppersass*. When I last saw it in 2005, it had the piping running inside the frame and was displayed *(below)* with the

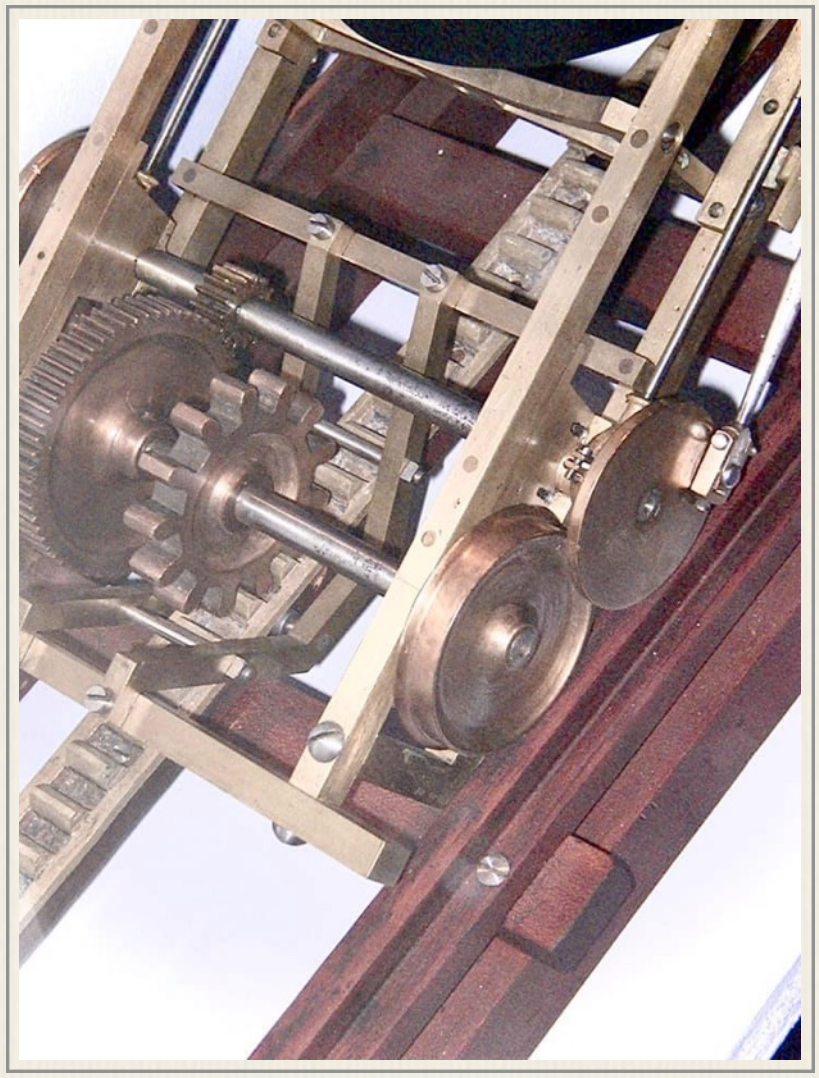


ping mechanism *(right)*, which locked the cog to the rack, meaning it could never disengage.





small wheels on the down-mountain end and the boiler tilted accordingly. Unless I'm mistaken, it is currently displayed facing the wrong direction. I'm assuming whoever last modified it was more familiar with conventional steam locomotives where the cylinders face rear. The other interesting thing is that it shows Marsh's grip-



Paul Forbes: "I have seen it in person on the summit years and years ago. Those are the most detailed pictures I have ever seen of that model. Did you take them yourself?"

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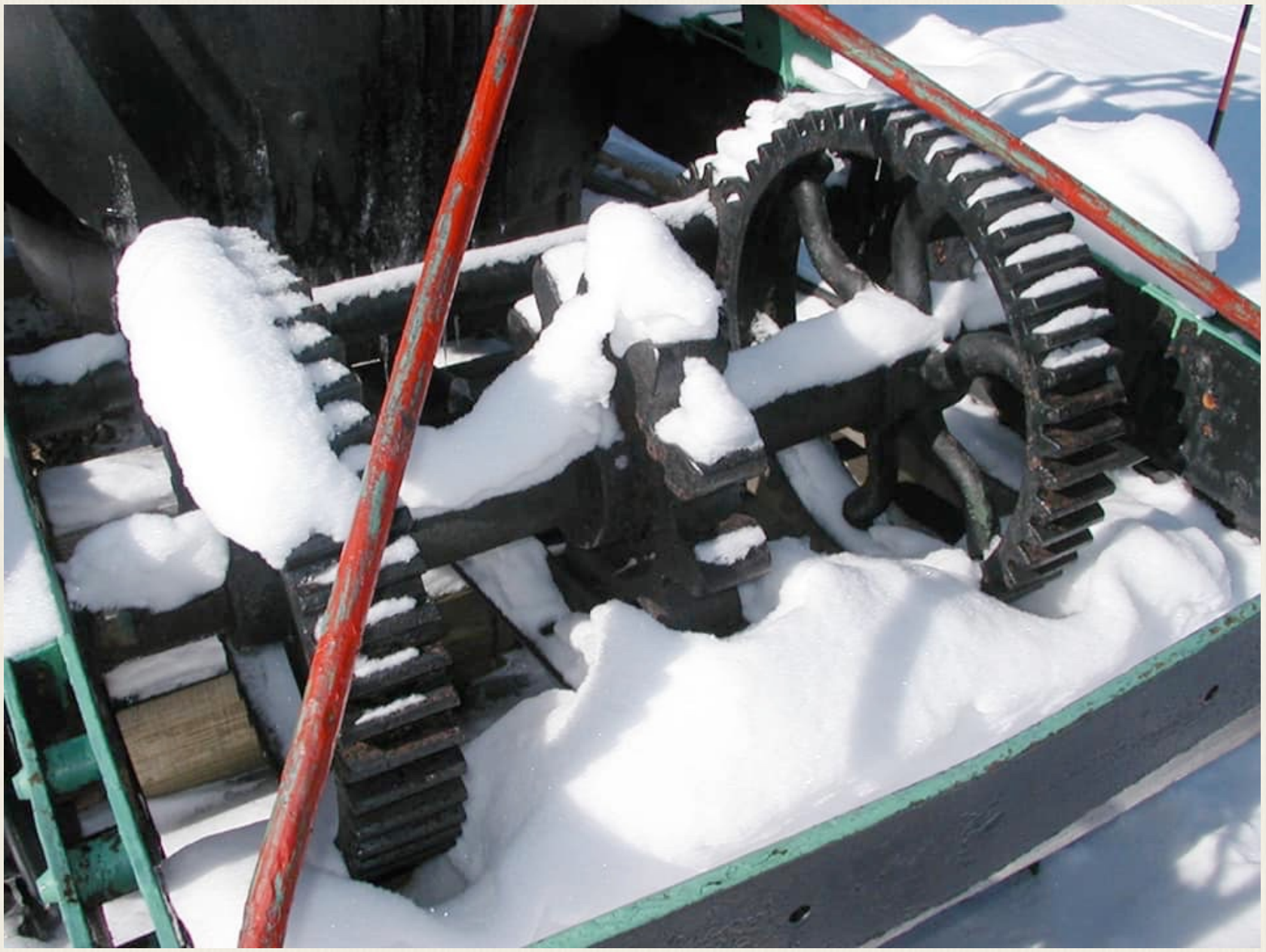
Roger Hahn: "Paul yes, the last three pictures are mine. Tough to get good shots through the glass and relatively low light."

Roger Clemons: "Interesting that the model has the system to brace the Cog gear from disengaging, the original plan. It has been posited that the 1929 accident at the Cog was caused because there was no system to prevent *Peppersass* from "pulling a wheelie." I'm certain that the model is at the Historical Society in Concord."

Art Poltrack: "It's interesting that the model uses a Strub, not Marsh rack. Additionally, the model's crankshaft has one pinion gear. Doesn't *Peppersass* have two pinion gears?"

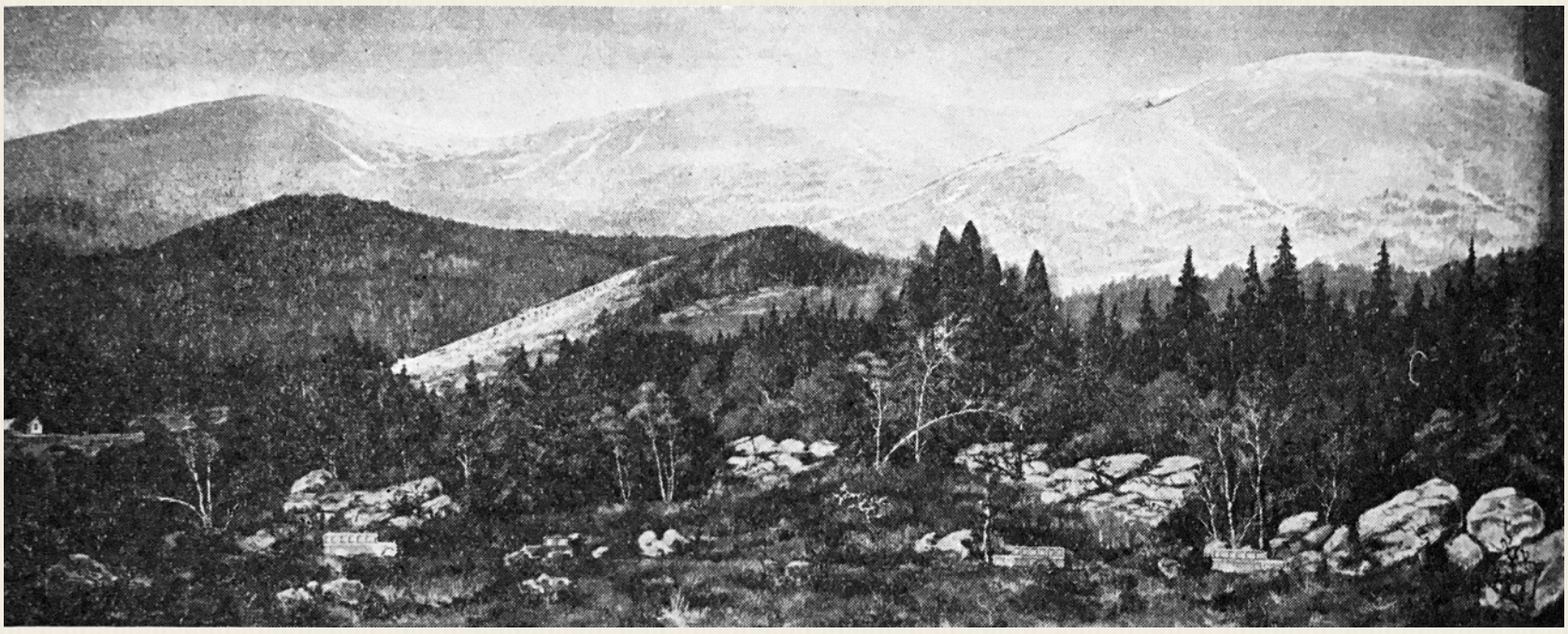
Roger Hahn: "Art yes, two pinions." *(below)*



Roger Clemons: "Is it possible that the rack was re-designed to the present configuration due to the cost of making the Strub rack. The boiler was second-hand, probably for the same reason."

Boston & Maine

August 31-September 4, 1925 - "The Boston and Main Railroad sent to Sherbrooke, Quebec for the 1925 Fair a "Bit of New England," reproduced both as to scenic effect and transportation activities. This distinctive exhibit proved to be one of the really notable features of this year's Fair. The reproduction of Mount Washington and its famous cog railway, with a train climbing to the clouds in the picturesque scenes provided by the green slopes and snow-clad summits of the Presidential Range, is a work of mechanical as well as pictorial art. While the unique train and inclined-engine of the Mt. Washington Railway is toiling slowly up the slope from the Base station to the Summit, the modern motor coaches of the Boston and Main Transportation Company and automobiles are show in motion along the arbored roads in the foothills. The exhibit is 11½ feet long and 5 feet high, and was prepared with an eye to realistic effects. The engineer was not content merely to show the train and the motor vehicles in motion. The train has been made to conform as nearly as possible in size and color with the actual effect as seen from the base of the mountain. In its climb up the two and three-quarters mile rack-rail it changes size and color three



B&M Promotional Diorama: *Reproduction of the Mount Washington Railway. The train is shown in the middle of the trestle at the left center of the picture. Boson and Maine buses are shown in the foreground - B&M Employees Magazine (October 1925)*

times to enhance the illusion of distance. At the top it blends finally with the snow-crowned summit. On the return, size and color are similarly restored by three processes, as drum beats or the gallop of a horse are increased to make stage effects more real. The exhibit was in charge of Eugene S. Jones, official photographer for the Boston and Maine, whose long experience with photography in the mountain country of New England has been combined with the engineering ability of Carl Reinhold of Revere in the development of the reproduction. The exhibit was an interesting feature also at the conventions of the Roadmasters and Maintenance of Way Association, and the Track Supply Association, at Convention Hall, Kansas City, Mo., Sept. 23-24. The reproduction of Mt. Washington shows in miniature the Waumbek Tank, one of two sources of water for the railway engine, the supply of which must be replenished twice on the climb to the clouds; Jacob's Ladder, the long trestle on the slope; Great Gulf, where the second tank is located, and the

Sec. 45 - Model Behavior

Summit House, at the top. In actual service, the trains of the Mt. Washington Railway take 70 minutes to asce6nd the 6,293-foot mountain. the Boston and Main's reproduced train makes the trip in six minutes, and the various topographical features, together with the motion of motor coaches and automobiles are reproduced to scale."

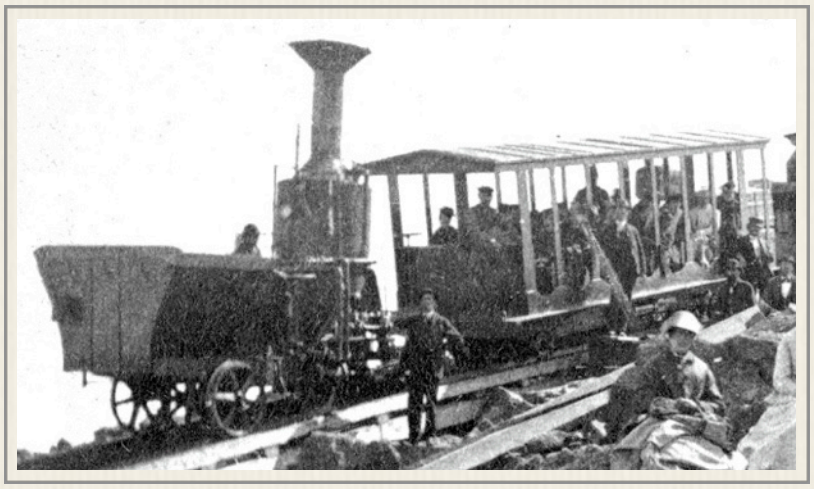
- B&M Employees Magazine

The B&M Mt. Washington diorama would make its way from Kansas City to "the large window of Harrison & Powell's store at Third Street and Central avenue (in Tampa Bay, Florida) in late March of 1926. " The Tampa Bay Times of St. Petersburg reported it was an exhibit placed by the New Hampshire society and the Boston & Maine to promote the state's scenic beauties and tourism. *- Tampa Bay Times - Sat, Mar 27, 1926 pg. 19*

The Mountain in the 1960s
- Photo by Elvira Murdock / Ellen Teague Collection

The Dartmouth *Peppersass*

"Warren Cole of Hanover has recently completed a model of old *Peppersass*, the first cog railroad locomotive on Mt. Washington. It is now on display at the Dartmouth college museum. The model, entirely handmade, except for some gears which were secured from a watchmaker, is scaled at one-quarter inch to the foot and required seven months of spare time to build. We are sure that when Col. Henry N. Teague, president of the Mt. Washington railroad, comes north from his sojourn at Miami Beach Fla., he will be interested in looking over Mr. Cole's novel model." *- Littleton Courier - Thu, Mar 22, 1945*



Doug Taylor says Cole's Peppersass model included the open observation car seen above at the summit in the 1869 stereoview

Former Cogger, rail-fan, and model-maker Douglas Taylor - Dartmouth Class of 1962, remembers seeing the model in the museum as both an undergraduate, and as a professor of technical theater at the College. He also remembers when the museum was cleaned out for conversion into the Hood Museum of Art. The museum's culling of its collection resulted in a mounted moose head and an elk head becoming part of the Jitney Collection in Chester, Vermont in the early 1960s. The impressive trophies were mounted in a low-ceilinged basement rec room at just the right height where Jitney Jr. and Miss Jitney could smack their heads into the animal's noses.

Taylor says Cole's *Peppersass* model was last seen "going out the door of the closing Dartmouth College Museum under the arm of Edgar Mead, who was the head of Steamtown." Nelson Blount's collection of steam engines, cars and other memorabilia was moved from Bellows Falls, Vermont. to the former rail yards of the Delaware, Lackawanna & Western Railroad in Scranton, Pennsylvania. In 1986, the Steamtown USA collection became the core of the Steamtown National Historic Site operated by the National Park Service. https://www.nps.gov/stea/index.htm

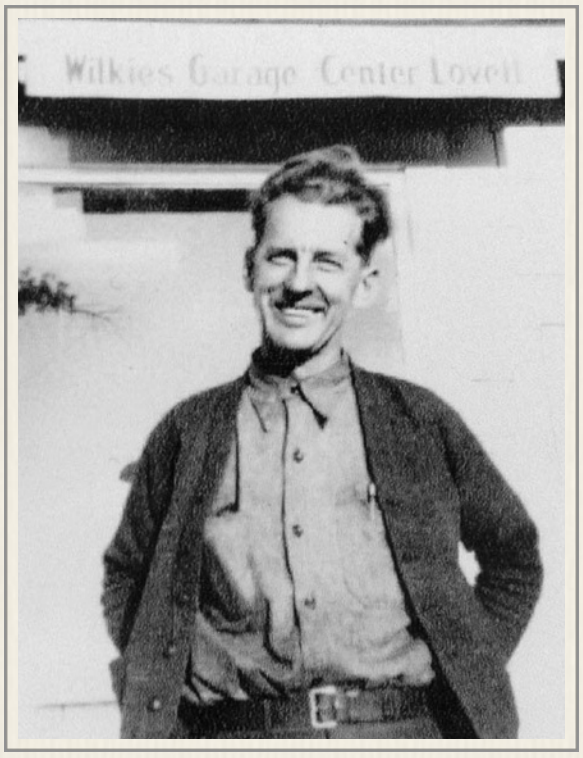
A March 2019 inquiry sent to the site's historian failed to yield a trace of the Cole model from Dartmouth. "I am sorry to say, but I have no knowledge of this model," wrote Richard "Pat" McKnight, "and it shows up nowhere in the property transfer documentation at Steamtown. In addition, the list of objects auctioned by Steamtown USA in 1987 makes no mention of it."

So the present whereabouts of the Dartmouth *Peppersass* model remains a Cog mystery.

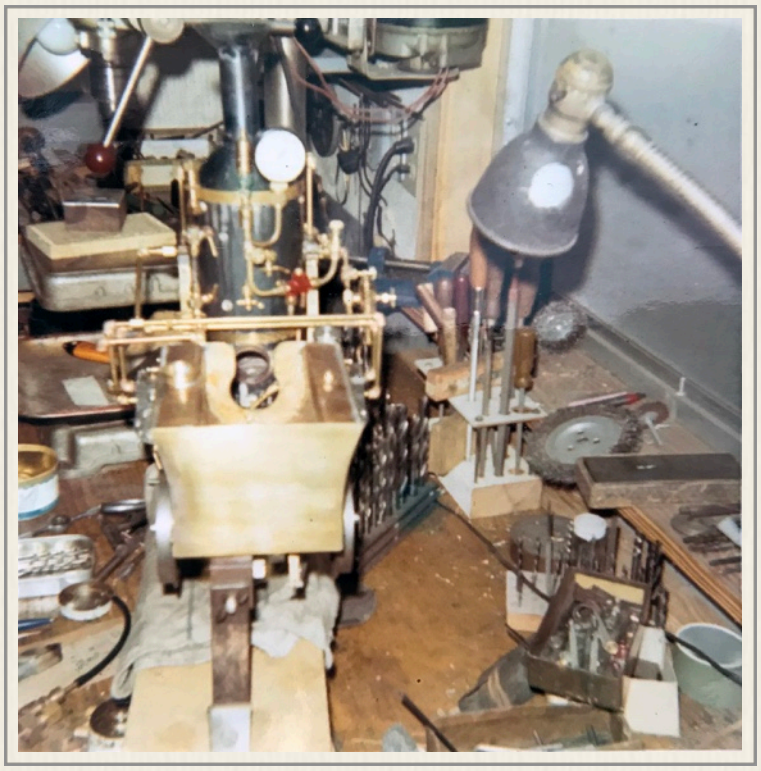
Melvin Richard Wilkinson

Indiana native, Melvin Wilkinson used his skills as a mechanic and his interest in model railroads to create a working model *(above)* of the Mount Washington Railway's No. 1 *Hero* - aka *Old Peppersass* in the 1950s.

Born August 27, 1892 in New Castle, Indiana, Melvin served in World War I. He was married six times and had three sons and three daughters. At age 38, Melvin *(right)* moved his family to Lovell, Maine where he owned and operated a garage for nearly 20 years. That puts Melvin Wilkinson in the same



Maine town as Cog Railway jack of all trades, Carl Nevers, who's paint scheme is accurately reproduced on Wilkinson's *Peppersass* model. In



early 2017, Jitney Jr. contacted Lois Wilkinson Jenkins to see whether her ancestor might have visited the general store where Nevers was a member of the Lovell Loiterers Club? "My very clever grandfather," wrote Jenkins. "He would have been a frequent visitor to the general store in Center Lovell, which is where his garage was located, although not the one in Lovell, as far as I know." But Jenkins says her grandfather's interest in steam engines went back to his days in the midwest. "My grandfather had been fascinated with and building and repairing steam engines for years. He had become a father-figure to Fred Semple of Semple Steam Engines in St Louis, Missouri, as Fred used to summer in Lovell. I have photos of the two of them on Lake Kezar in a small steam boat they built." Lois Jenkins has her own memories of Kimball & Walker's General Store. "That's the store in Lovell village as it's referred to. Across the road from the old Annie Heald school that I attended from the mid- '40s to 1950 when my folks moved to N.H. I recall going in there to buy penny candy."

Jitney Jr. discovered the picture of the *Peppersass* model during an Ancestry.com search. The family description said Wilkinson "made this model of the steam engine that pulled the Cog Railway on Mount Washington, New Hampshire." They said it was featured in *Yankee Magazine* in 1954. But a review of the 1954 issues at *Yankee Magazine* headquarters failed to yield the photo, and in 1953, 61-year old Melvin Wilkinson was in Florida divorcing his wife of two years Ruth Lovell Holt. The move south puts the timing of the model's construction in question. "Even after my grandfather moved to Florida in his later years, Fred would send him engines to work on," says grand-daughter Lois Jenkins. "It could be that he built the *Peppersass* model later than 1954; if my memory serves me correctly, the model ended up in the Wolfeboro, N.H. museum, or at least was on display there at one time. I know my grandfather was living at Mirror Lake, near Wolfeboro, for a period in the mid-to-late '50s which might explain how it ended up in the Wolfeboro museum." Melvin Richard Wilkinson died on January 17, 1978, in Jacksonville, Florida, when he was 85 years old.

Peter Carini Dartmouth April 2019 search of the internet for "*Peppersass* model" turned up this item in the Lovell Maine Historical Society collection:

https://lovell.pastperfectonline.com/photo/712DA3C9-C279-47AB-8894-004335463530 though the model is attributed to Melvin Wilkinson.

Sec. 45 - Model Behavior

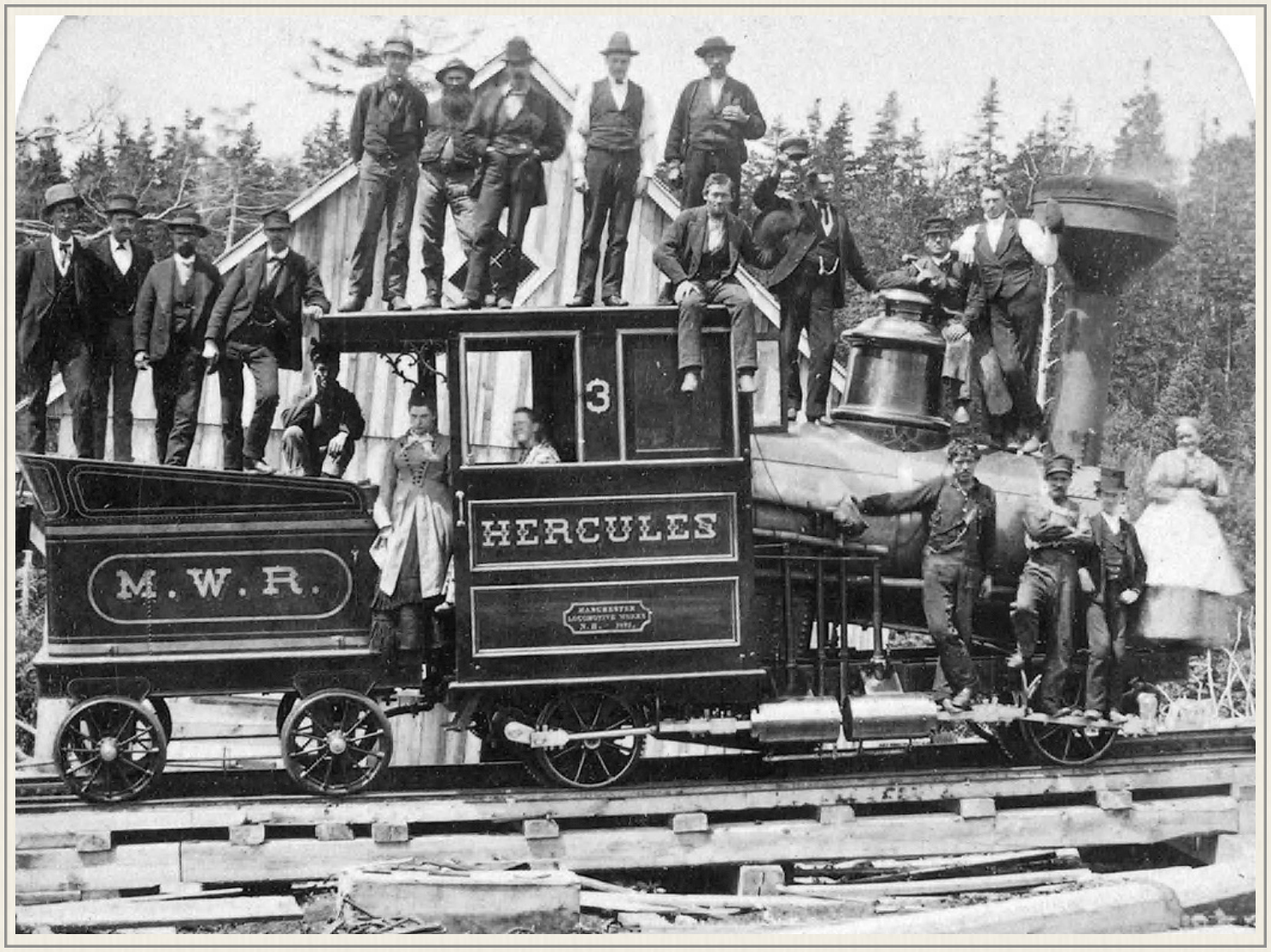
Donald Bray / Paul Forbes

Next Generation Cogger Paul Forbes started uploading photographs of this model to Facebook on January 29, 2010. He explained to his fellow Cog alums on the *Mount Washington Cog Railway - We Were There* page, "I have collected Cog stuff for 40 years. This might be my favorite piece. Engine #3, *Hercules* above the treeline. Scratch built model by Donald Bray. I purchased this from Mrs. Teague's auction."

Donald Bray wrote the 1984 book, *They Said It Couldn't Be Done: The Mount Washington Cog Railway and its History.* Amazon.com describes the book as a "fascinating and detailed history of the construction and operation of the Mt. Washington Cog Railway, from the earliest days through to its continued success as a modern tourist attraction. Illustrated throughout with black and white photos, many of them rare. In-

cludes roster of locomotives, including No. 1 *(1866)*, the Aiken locomotives *(1868-1870)*, the ones that no longer exist, and the ones built by the Manchester Locomotive Works *(1874-1908)*, and the ones built by the Railway itself. Also includes a roster of passenger cars and work cars."

The identification of the model as the locomotive *Hercules* is problematic, and may due to the numbering scheme of the Mount Washington Railway engines over the years. *Hercules* did indeed, carry the number 3 - the first Cog engine with a horizontal boiler built by the Manchester Locomotive Works and celebrated by a group photo *(below)* of Cog employees upon its roll out on the line in 1874.



Sec. 45 - Model Behavior

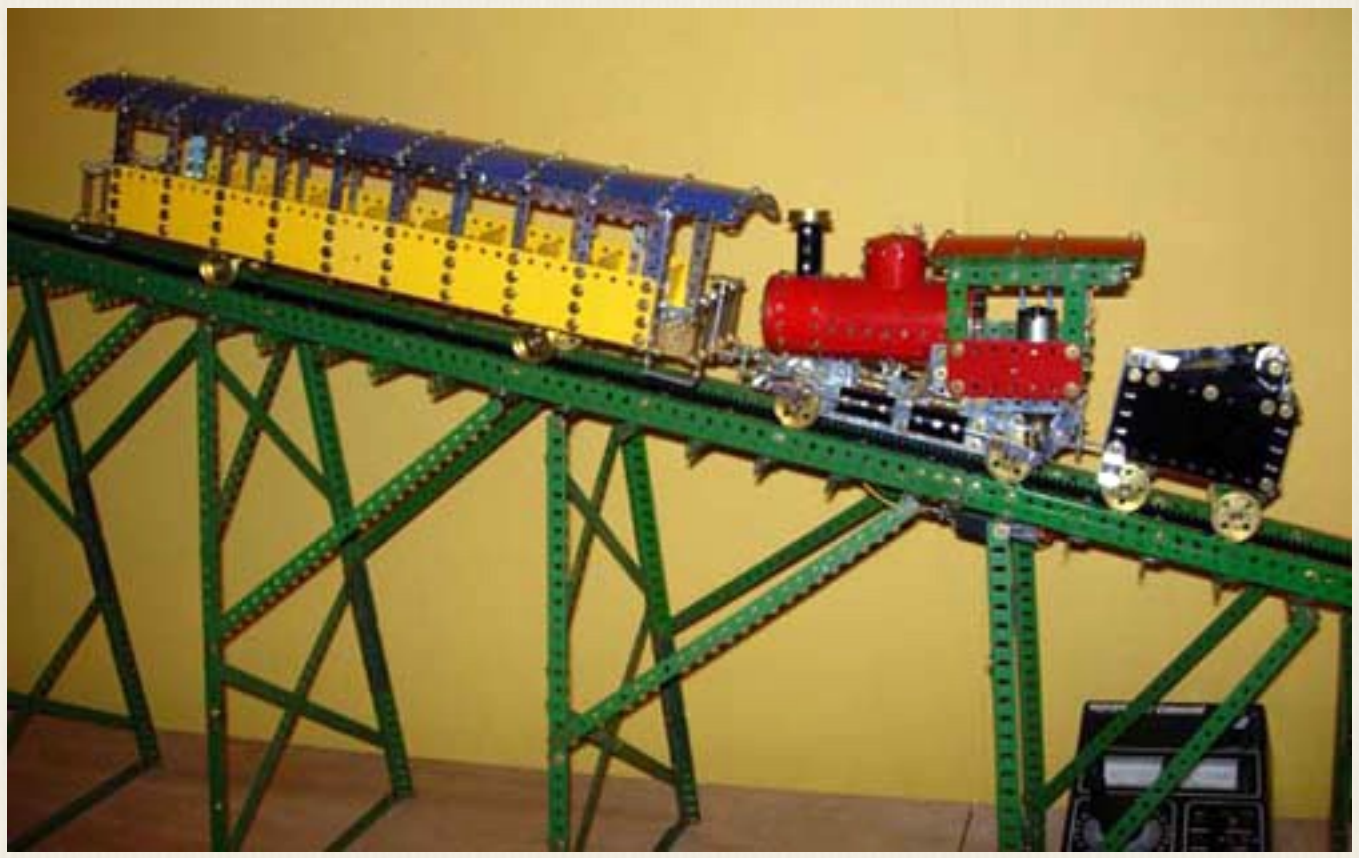
The third engine to be built *(above right)* for the Mount Washington Railway was named the *Geo Stephenson*. It was the second engine to be built by Walter Aiken. According to Glen M. Kidder's book, *Railway to the Moon,* Aiken's first engine was never numbered and never named after it was delivered to the mountain in the spring of 1868. Kidder says this second engine did not have a cab and "did not perform well because the boiler was in a fixed position. This caused the locomotive to steam unevenly, when on a steep grade especially, and thus caused it to operate unevenly. It has been said that milk shipped to the Summit on a train powered by this engine was churned to butter" by the time it reached the top.

So Donald Bray's model of the third (No. 3) engine for the Mount Washington Railway now in Paul Forbes' Cog collection would be the *Geo Stephenson*, not the *Hercules.*

Museum of American Heritage
Palo Alto, California

From their website: "The Museum of American Heritage (MOAH) is the Bay Area's only museum exclusively dedicated to the history of technological innovation from 1750 to 1950. Originally opened in 1990, MOAH relocated to the historic Williams House in downtown Palo Alto in 1997. MOAH is a family-friendly learning environment where visitors of all ages and backgrounds are encouraged to explore scientific and technological history through our unique exhibits, special events, and programs. In addition to our exhibits and programs, MOAH maintains a collection of over 5,000 historic electrical and mechanical artifacts."

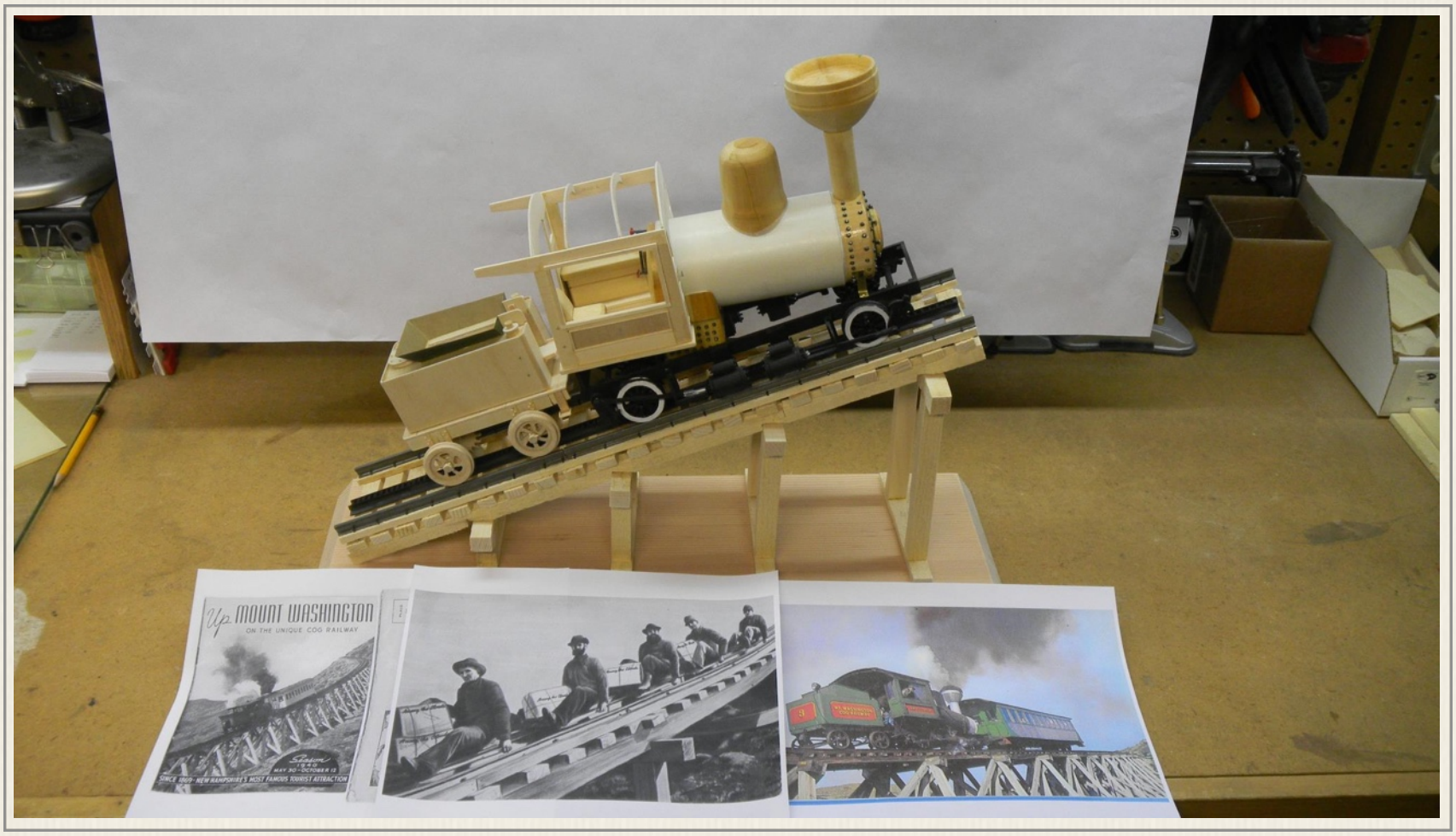
In it's collection is a model of Mount Washington Cog Railway *(right)* train.



"This model, built mostly with Meccano parts made in Liverpool, England, is electrically powered from a hidden outside third rail on the far side. The trestle is 10 feet long and faithfully replicates the 25% average grade. The model contains about 7,000 parts and took about 150 hours to build."

This webpage (http://moah.org/constoysmotion/mountwashrr.html) and image was found during Bing search of "Mount Washington Railway." It was not accessible from the museum's current home page as it was likely connected to an exhibit staged in the spring of 2007 as this page was last updated: April 12, 2007.

The Museum came into being because accountant Frank Livermore spotted a Standard Vacuum Sweeper in the corner of local junk store in the early 1970s and immediately purchased it. "From that day on," the website says "he became a collector, and soon his Menlo Park home was bulging at the seams with his eclectic collection of antique mechanical and electrical devices. Frank's friends joked that he should start a Museum of his own and, when one gave him a sign saying, Smithsonian West, Frank began to take the idea seriously. Frank and attorney Perry Moerdyke began the process of forming a registered non-profit Museum. In 1985 the Museum of American Heritage was incorporated. Frank's collection formed the nucleus of the Museum."



W.T. Frey Style
February 20, 2012

Jerry Kelley: "Here is the first look at my second 3" gauge W.T. Frey style loco. I plan on naming it after Wilbur to honor his name and his great model making talent. Enjoy..."

Kelley posted this notice on the Walker Transportation Collection Facebook page that is maintained by the Beverly Historical Society. He followed it up on January 6, 2013. ***Kelley:*** "This is a photo of my scratch built model of a Mt. Washington Cog Rw. loco. It is built in 3" gauge and named after the master model maker, Wilbur T. Frey." ***Rob Quagan***: "Jerry, you did Wilbur proud. Excellent work. Thanks for sharing this." Kelley posted an outdoor shot *(right)* of his model on his website: https://www.jkrails.net/jerrys-models/

A LEGO Kit Campaign

This LEGO Ideas concept was created in August 2014 in celebration of the 150th anniversary of the *Peppersass* cog engine being built by Sylvester Marsh in 1866. Included in the set is a design for the *Peppersass*, and the *Moosilauke* steam engine. With enough support, the train set could be delivered in time for the anniversary. Also, this set commemorates a significant engineering feat, and is a stylish train to include in any Lego train enthusiast's collection. https://ideas.lego.com/projects/77539

The *Peppersass* engine *(above)* is set on a display stand, similar to how it can be viewed at the base site (grass underneath instead of cement since it is more colorful). There is a small plaque for the name of the set engine to be included.

The *Moosilauke* engine features a "piston" design that is connected to the cogs and wheels of the train. This should allow for additional movement when pushed. The passenger car includes a detachable roof to allow for easy access to the seating area.

Congratulations on 1,000 Supporters! ***Dec 15, 2014***

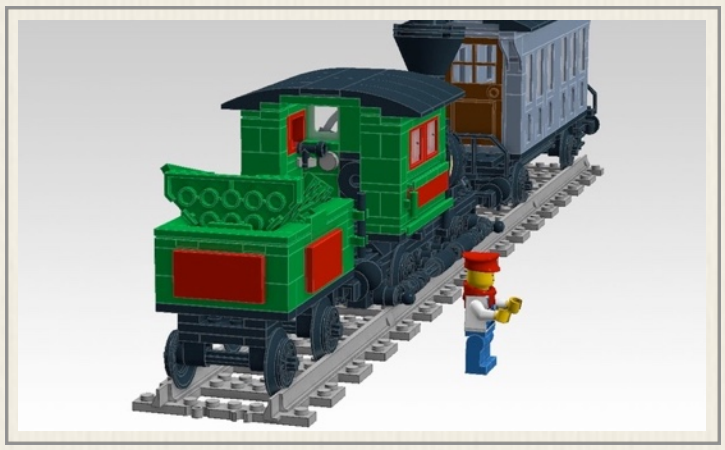
Welcome to the 1k Club! You've reached an important milestone on your journey to 10,000 supporters and demonstrated that your idea is one people like; give yourself a pat on the back. You aren't done yet however, so keep up the good work, and good luck!

Sec. 45 - Model Behavior

Congratulations! Your project's deadline has been extended *Apr 30, 2015*

On April 15, we announced in a blog post that LEGO Ideas is extending the time limit for projects to reach 10,000 supporters. Because your project originally reached at least 1,000 supporters within its first year (365 days), we've automatically added 182 days to your countdown clock, from the date your project was originally posted. If your project has over 5,000 supporters at the time of this comment, you've earned an additional extension of 182 days! Note: since these extra days are based on your project's original post date (and not today's date), you may see less than the maximum possible days reflected on your countdown clock.

For more information, see the time limit section of the Project Guidelines and House Rules. We hope you enjoy the extra time to reach 10,000 supporters, and best of luck on your project's continued journey.



Your project has expired *Feb 26, 2016*

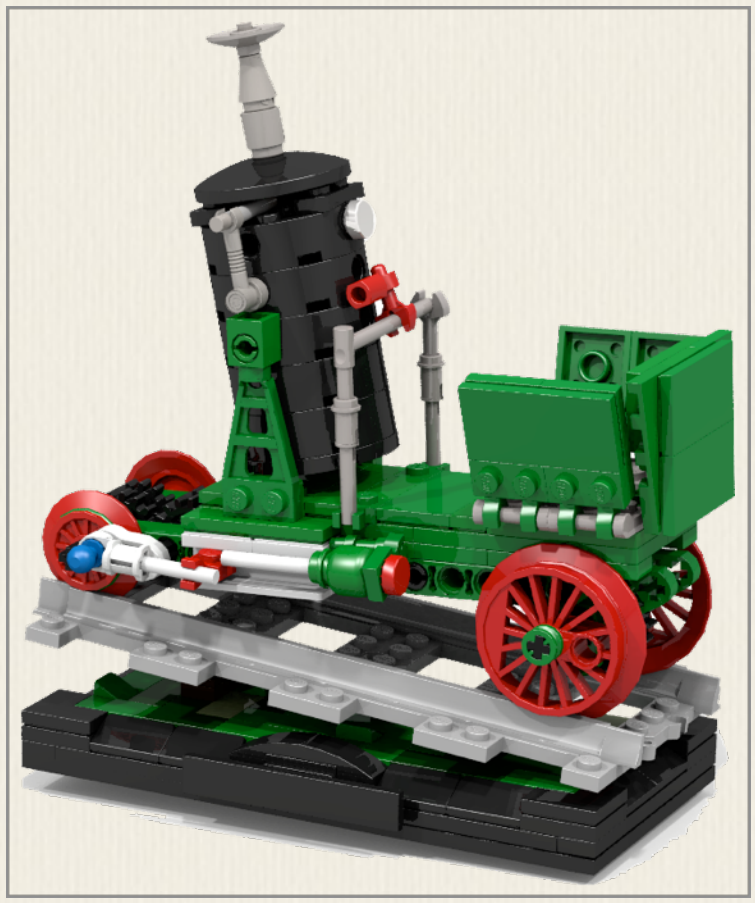
We're really sorry to share that your LEGO® Ideas project didn't reach its supporter milestone before running out of time. Here at LEGO Ideas, we know you had high hopes for your project and put a lot of effort into it, and we understand this can be disappointing. If you still care a lot about this particular project, you're always welcome to submit it again and start over.

We hope you continue submitting projects and hope you have better success next time!

A LEGO Kit Campaign II

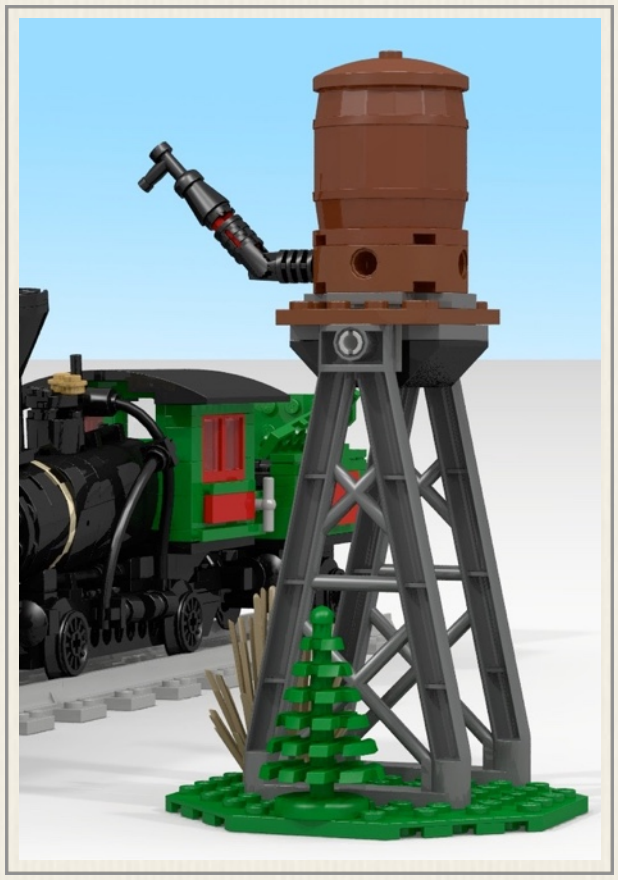
Some eighteen months after the first Lego Concept Project expired, a second proposal was launched on September 23, 2017 by screen name "markisnot."

"In hopes of creating more LEGO Train sets, I designed a version of the *Peppersass* cog engine built by Sylvester Marsh in 1866. Included in the set is a design for the *Peppersass* and the *Moosilauke* steam engine. This set commemorates a significant engineering feet, and is a stylish train to include in any LEGO train enthusiast's collection. The *Peppersass* engine is set on a display stand, similar to how it can be viewed at the base

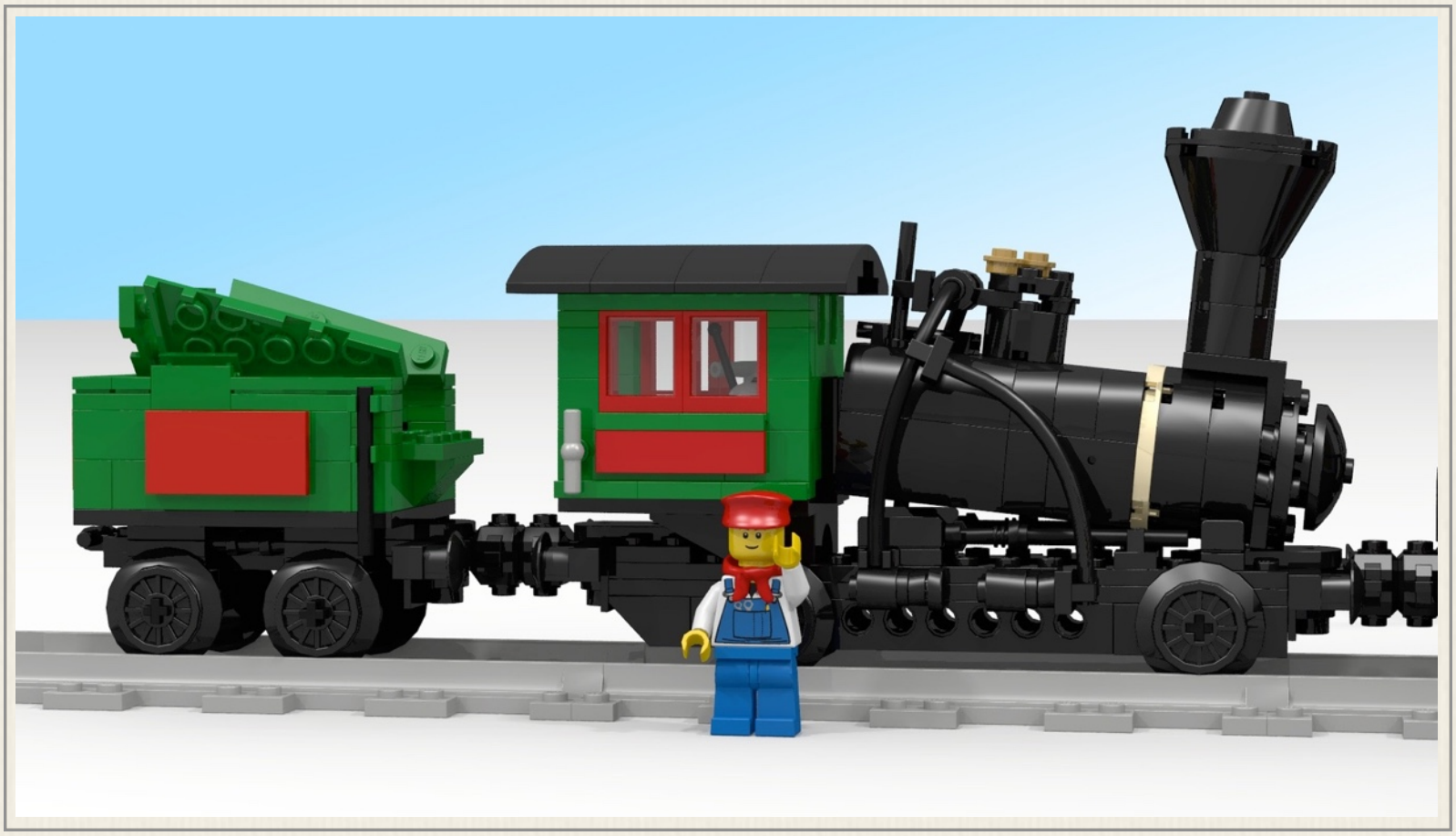


site (grass underneath instead of cement since it is more colorful). There is a small plaque for the name of the set engine to be included.

"I redesigned the *Moosilauke* engine to allow it to be used as a play set instead of the previous design which was more display set. In 1976, the New Hampshire Cog Railway was designated as a National Historic Engineering Landmark. The *Moosilauke* engine was later created (1883) to perform the trip. While not the first train with a horizontal boiler, it was used for many years until retiring to the village of Twin Mountains in 2013. Please help in supporting this project. If you like the design, please share this with your friends and family, so they can help make this set and others a reality. We need a lot of supporters. Thanks"



https://ideas.lego.com/projects/f5a44069-e686-4895-bce0-9f9660ee7c07



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The design needs to gain 10-thousand supporters before the company considers it. “After reaching 10k, your project enters a special phase called the LEGO Review. A review board of set designers and marketing representatives evaluates projects according to our review criteria and hand-picks projects to become new LEGO Ideas sets. We can’t make everything, but every project in review gets a fair shot.”

On October 1, 2017 with 52 days left to reach the goal, 66 people had supported the second Cog Railway concept.

A LEGO Kit Campaign III

The third Cog Railway Lego Concept Project effort began on August 10, 2022 by screen name "603bricks."

603bricks' Pitch: "The "railway to the moon" was built in 1869, making it the first train to climb a mountain. This feat was made possible by the rack and pinion system integrated into the engine and the track. Two cogs on the bottom of the engine lock into the rack in the middle of the tracks. This is where the railway gets the second part of its name. The first part comes from the mountain that it climbs, Mt. Washington. At 6,288 feet tall, Mt. Washington is the second-tallest mountain east of the Mississippi River and the tallest in the northeastern United States. The Cog makes the trip up the mountain at about three miles per hour, and descends at about four miles per hour. Including the one hour spent at the top of the mountain, the entire trip up and down the mountain takes about three hours. Of the three ways to go up and down the mountain (the other two are hiking and driving), the Cog is by far the most fun. Details of the Build

- Track that looks and functions like the real thing
- Decorative base that turns the model into an incredible display piece
- Engine with an angled boiler and two cogs that interlock with the rack
- Passenger car with seven seats
- 1655 pieces
- 9 minifigures
- 69 x 12 x 22.1 studs, 21.7 x 3.8 x 7 in, 55.2 x 9.6 x 17.7 cm.

Congratulations on 100 Supporters! ***Aug 17, 2022***

You've passed the first milestone and reached 100 supporters within the first 60 days. As a reward, here's a boost of one year (365 days) to reach 1,000 supporters. Best of luck as you continue

to rally support for your project. With 313 days left in that year, the project idea had 372 supporters. ***Update:*** With 213 days left in the year, the project had 445 supporters.

Cog LEGO Campaign III arrives on *The Railway to the Moon!* Facebook page on November 28, 2022 courtesy of Peter Smith with the comment, "This is awesome!"

On June 21, 2023, it appeared the Cog LEGO Campaign III kit had arrived with this announcement on Mt. Washington Cog Railway Facebook page: "Great news, Coggers! You know those kid's plastic building blocks you're always stepping on? Well, here's a set that will surely be worth the occasional tortured tootsie– it's a 608 piece Cog Railway Steam Train! We'll have these babies in stock shortly here at Marshfield, or ready to ship anywhere from our online gift shop. But if you just can't wait to be the envy of your podiatrist's waiting room, you can place a pre-order now. Just drop us a line at giftshop@thecog.com

Meanwhile on the LEGO Ideas page on that day the number of supporters for the model below was up to 496 - not quite halfway with 108 days left to reach the 1,000 goal and "the incredible prize of seeing your creation become a real LEGO set" Comparing the two images - particularly engine detail and passenger coach, the 608 piece mini-building blocks Cog train may not really be a LEGO.

It wasn't. ***Mount Washington Cog Railway:***

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"Good afternoon Coggers! Last year at this time, our Gift Shop manager, Erika, was carrying her soon-to-be-newborn daughter. This year, she's carrying a load of the first orders for our newest souvenir sensation– a 608-piece mini building block model of one of our steam trains! We're not allowed to call them "Lego-like" (don't tell anybody that we just did) but that's what they are. Anyway, for those of you who ordered one of these beauties, they'll be headed your way this afternoon.

Among this stack of boxes are 3 model kits going out to the winners of our mini building block contest, announced earlier this week. The contest is now closed, but for 3 focused, competitive women, the fun starts at 12:01 AM on Sunday. That's when the official contest clock starts ticking and Jennifer, Sophie and Holly will open their boxes and start building. They'll race against time and each other to be the first to deliver a completed model back to us for product photography. Only one will savor the thrill of victory, but all my suffer the agony of defeet. I mean, ever step on a Lego?

Once the building begins next week, tune in here for the play-by-play and expert analysis. We'll announce the winner of the $25 gift card once the contest closes on July 9 at 5:00.

Good luck ladies." On ***MWCR:*** "Let's have a drumroll please, Coggers, because WE HAVE A WINNER! Holly *(right)*, from Hinsdale NH just crossed the finish line with her perfectly assembled, 608-piece-mini-building-block model of a Cog Railway Steam train! In addition to her finished model, Holly wins a $25 Gift Card to our gift shop.

If you'll recall, we shipped model kits to the first three respondents to our Call for Entry last week. Jennifer, Sophie, and Holly made the cut and faced a steep challenge: be the first to deliver a completed model back to us for product photography. We thought we were pretty clever doing it this way because we didn't want to have to

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put one of these things together ourselves.

The contest period kicked off at 12:01AM this past Sunday morning. Holly, apparently taking us literally, watched the clock as it ticked past midnight, poured herself an ice-cold Mountain Dew and got right to it. Three hours and three minutes later, exhausted from the tedium but juiced from the MD, Holly and her husband/tecnical advisor Matt sat and stared at the fruit of her labor, then realized it was three in the morning and collapsed into bed.

These very detailed little steamers have already proven to be among the most popular items we've ever had in the gift shop.

Shapeways 3-D Printing

Shapeways is a Dutch-founded, New York-based 3D printing marketplace and service, startup company that began in 2007. Users design and upload 3D printable files, and Shapeways prints the objects for them or others. Users can have objects printed in over 55 materials and finishes, these include: plastics, precious metals, steel and food-safe ceramics, which were discontinued and have been replaced by porcelain materials.

Cogger Art Poltrack posts "Shapeways.com 3D printed model of #10. There is also #9 on their website (below). The scale is HO. How's this for soot, grime and grease free?" on Cog Railway: We Were There Facebook page. Roger M Clemons responds "Pristine; perhaps the ghost of the Col.?" (Sept 27, 2015)

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Warren Disbrow

February 20, 2017, Connecticut resident Warren Disbrow posted pictures and a brief description of his work in Model Cars Magazine Forum. "I finished up my second O scale Cog Loco. I went all out with this one, super detailing and weathering. It started as a Shapeways 3D print by Roger Hahn, printed in FUD. Details added include oil lube lines, control linkage, firebox door, whistle, brake linkage, etc. Thin rope sticking out from the right side is connected to the coach as a way for the crew to signal the brakeman."

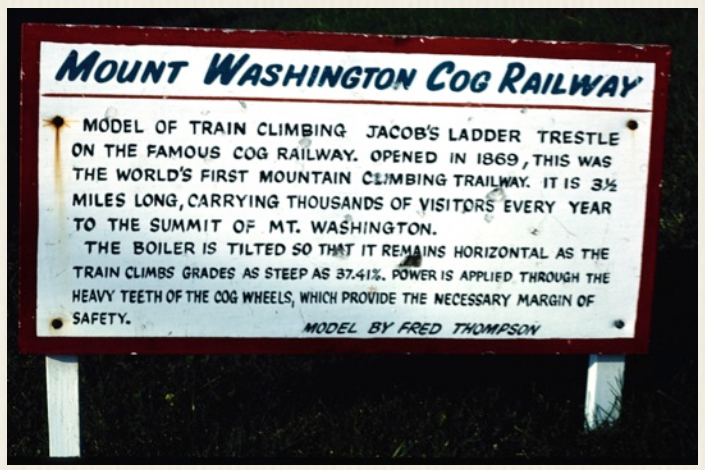
Wiswall's No. 4 Summit

Doug Wiswall posted the first image on the Mt. Washington Cog RY (NH) Facebook page on June 15, 2019 & the second on August 24, 2022.

The posting prompted the following thread: ***Al Huff:*** "Is this a kit that can be home built ??" ***Doug Wiswall:*** "Hand built by my father *(trl: Allan Wiswall?)* back in the late 50s" ***Conrad Ekstrom Jr.:*** "Can I make this the group photo at some point? Nice work!" ***David Huber:*** "This is awesome! Is it a working model? What is it made of?" ***Marc Clement:*** "David - I want to do this. You can buy HO scale cog engines complete with track that will go up a fairly steep incline. I want to recreate Mt.Washington and replicate as much as I can of the Cog and everything that went with it from base to summit. Probably circa 1950's. If anyone else has done this I would love to hear about or see it. This is my first venture into model trains."

Funspot's Landmarks of NH Mini-Golf

Funspot first opened as the Weirs Sports Center on June 27, 1952, in the top floor of Tarlson's Arcade building across from the Weirs Beach boardwalk. It was opened by then 21-year-old Bob Lawton as an indoor miniature golf course and penny arcade with money borrowed from his grandmother. On the first day the center was open it made $36.60 from miniature golf admission and $5.60 from selling soft drinks. A round of 9-hole mini-golf cost 35 cents. In 1964, Funspot was created when Lawton bought 21 acres of land, the same land where Funspot now sits, and moved his entertainment venture there. The first attraction built was a miniature golf course and an adjacent building. This course came to be known as the "Landmarks of New Hampshire" miniature golf course. *(2021)* The news that Bob Lawton, founder of Funspot and the *Weirs Times*, died at age 90 on Veterans Day, Nov. 11, 2021 has spread quickly, with the family receiving an outpouring of condolences from near and far. Born on March 2, 1931, Lawton was a 21-year-old student at Norwich University in 1952 when he borrowed $750 from his grandmother to open a miniature golf course and arcade. With his brother, John, he opened the Weirs Sports Center on the upstairs level of Tarlson's Arcade on Lakeside Avenue. Lawton said they grossed $2,900 during their first year of operation. Twelve years later, they moved the business to its current location, which offered more space, and they renamed it Funspot. At the time, there were coin-operated games and a snack bar in a small building, with a 19-hole outdoor mini-golf course that featured "Landmarks of New Hampshire" - landmarks that included a model Cog train.



Lawton *(left)* was a regular presence at Funspot until his death at the age of 90. "He was like Walt Disney of the North County," Tom 'Bananas' Boriso, an old friend of Lawton's said. "One of a kind, that's all I can say, one of a kind." Lawton had a serious side, though, including serving in the military and later as a New Hampshire State Representative. According to his family, in 1969, Lawton helped push through a bill that added New Hampshire's famously unambiguous state motto to the license plate "That's a tremendous thing for our state," Sandra Lawton, his daughter, said. "People all over the world know what the 'Live Free or Die' state is by the license plates." Despite Bob Lawton's death, the family is keeping the arcade open.

And in 2022, Cogger Brian McMinn visited the arcade and found the Cog model *(below)* still on display, but now indoors. "Fun spot tonight *(6/30)*, I forgot about this," wrote McMinn in his post on the *Mount Washington Cog Railway - We Worked There* page.

John F. Kurdzionak *photo right: "The kids took us to Funspot in Laconia tonight (11/25), and this awesomeness was the decoration on one of the "mini golf" holes, #7 (of 18)."* ***Paul Forbes:*** *"Always a favorite of mine as a kid. I think 7 would have been the Falcon."* ***Lynda Martin:*** *"Used to be outside glad they are in now." (2022 - Kurdzionak Collection / MWCR: We Worked There*

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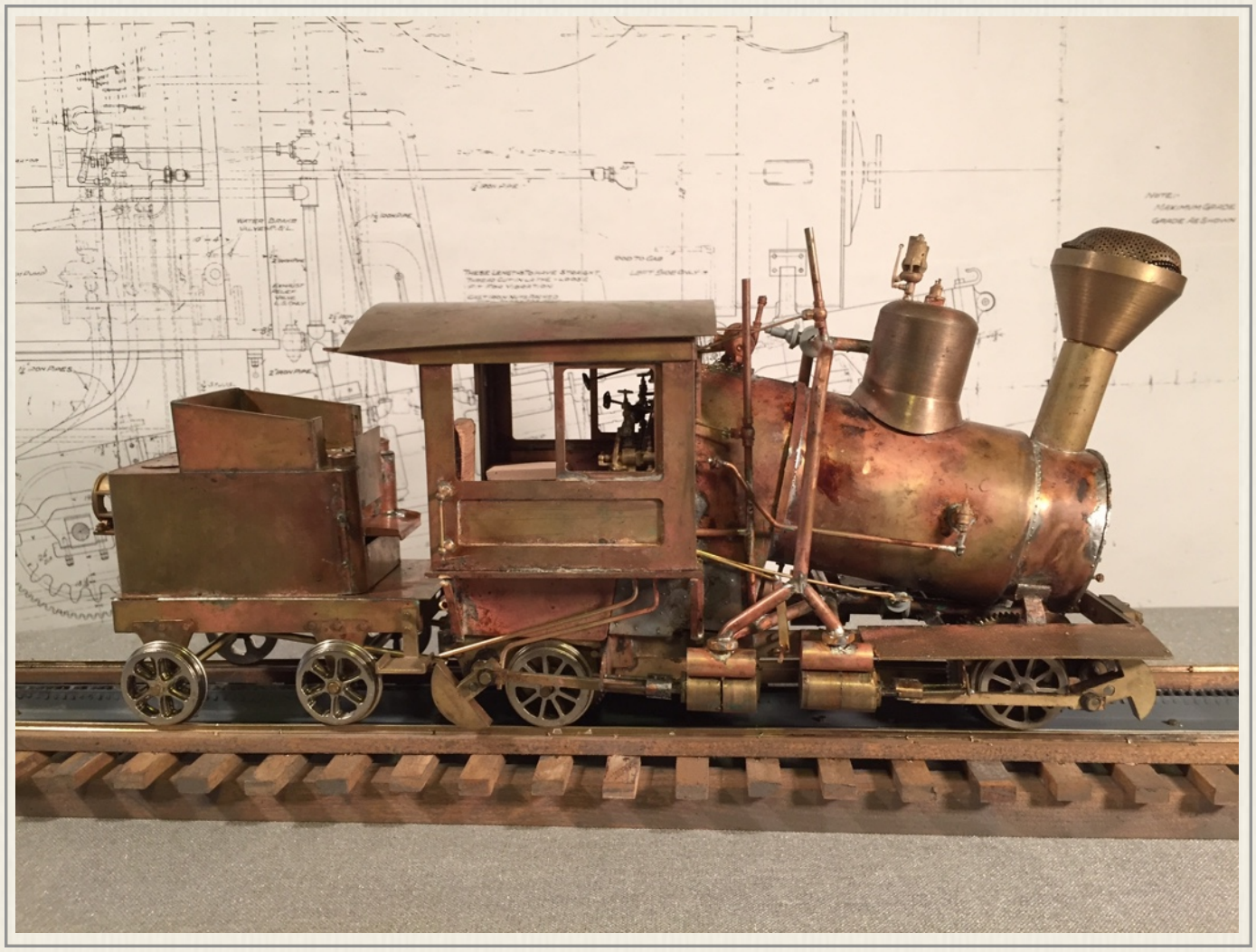

Douglas Taylor

A Doug Taylor email to the Jitneys on Sunday, November 20, 2016 11:28 am read "On the model front, I am about 85% complete on my brass model of a composite Cog engine from the 1960's. Still have to add the valve stems and linkages, Shaker bar and ratchet lifter, cylinder cocks and linkages, and cylinder oil lines and uphill/downhill valves. It has the dome steam throttle of the Six, but a regular frame, and an injector on each side of the cab. Thinking of numbering it #7 so no one can nitpick it, and named JITNEY on the engineer's side, and OLD MIKE on the fireman's. It will be painted and lettered as in the '60s.

"I have a friend with a laser cutter who is going to cut me the parts for a coach (No. 3 - the car destroyed in the trash car collision) in both ¼" and 1/12" scales. Painted in the 1960's silver with green ends and black roof. Cars will have seats.

"I have made three feet of track, and will add bents (horses) to put it at 37.41% gradient. Still have to do the valve stems and linkage, cylinder cocks and rigging, a pipe to the generator, the ratchet lift mechanism & lock, and the all important shaker bar. I am presently conflicted whether or not to leave it in the natural brass, or paint it in the black, silver and green that we know. Probably will go ahead and do it when a friend makes me the decals.

"It is amazing the memories this project has brought back!

"The big news is that a company called Shapeways now makes great Cog models - #10 in HO scale (3.5mm = 1'-0") and one of the big super coaches in that scale. They also make #9 in O scale (¼"=1'-0"). These models are 3 D printed in plastic. I got one of each of them, and will get them painted and add a few more details (cylinder cocks, etc) to the O scale one."

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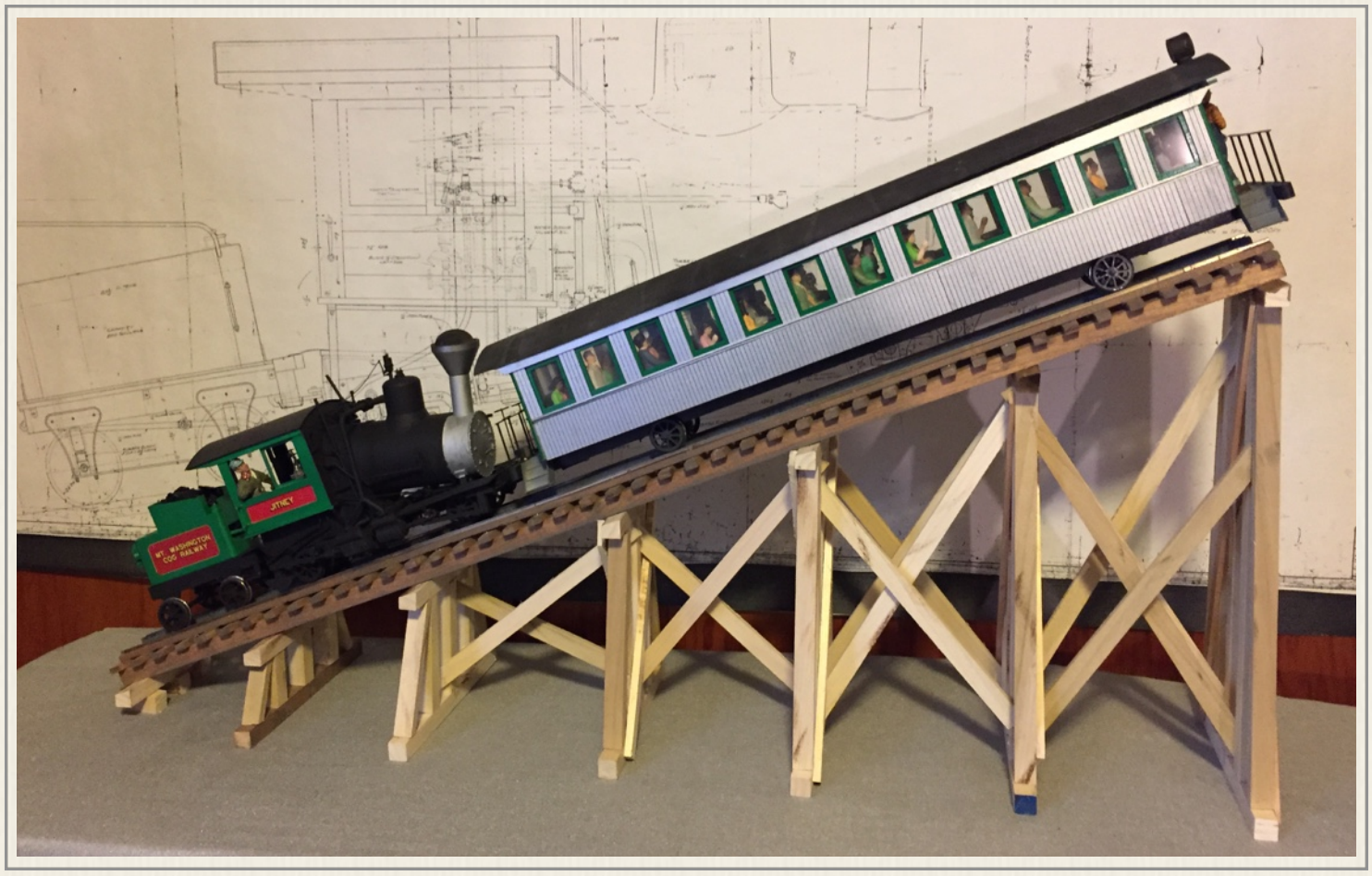
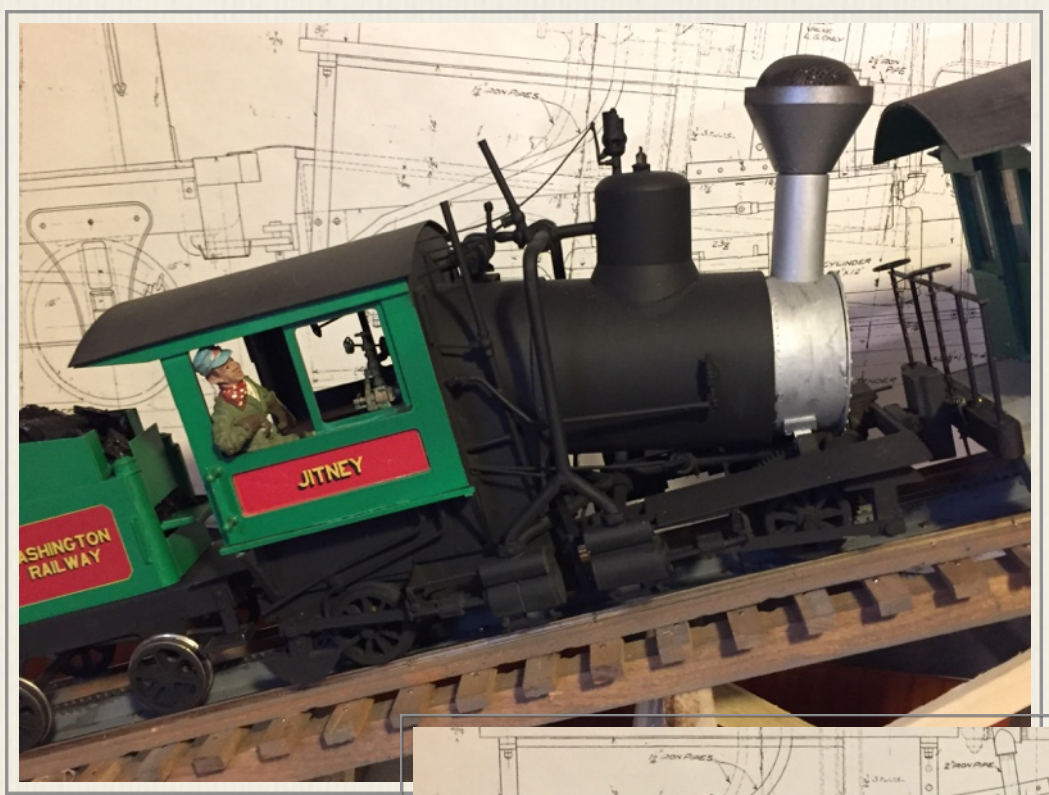
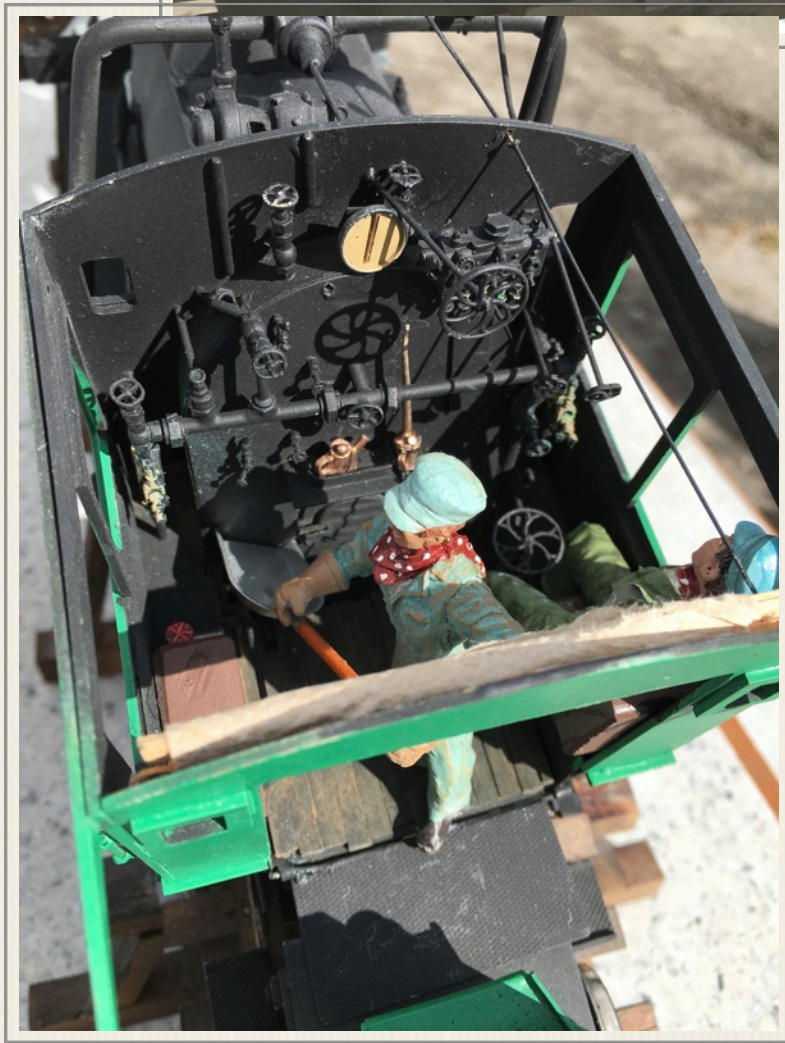




The Models & Maker Visit Jitney Junction

October 8, 2017



Taylor-made Cog models came east to visit Jitney's place. Doug & his Bassett hounds were en-route to visit brother Jeff, and stopped so Jitney Jr could see the fleet. Doug went by the Mountain to refresh his memory about brake chain & oil line placement & visit his old fireman, Dave Woodbury (2017)
- Jitney Family Collection

Sec. 45 - Model Behavior

Roger Hahn

From: Roger Hahn <belpaire@aol.com>
Date: Sunday, July 5, 2020 at 9:52 AM

I am in the process of having a working model of the 9 built for me. I'm thinking of the early 1950's as the time period for it for several reasons. I'm wondering if you might have photos of it around that time. What I am looking for specifically is after the large locomotive style headlights were replaced by the automobile style but before the front cylinders were replaced with the style like it currently uses. If my guess is correct, the cylinders were replaced at the time it received the new tender but I don't know for sure.

On Jul 5, 2020, Roger Hahn <belpaire@aol.com> wrote: "Thank you so much for the images. Unfortunately I'm looking for slightly older ones, prior to the up mountain cylinders being replaced. I believe that happened in 1952 or 1953. The newer style of cylinders would be difficult to make working versions of. I have been collecting images for years and it seems that time period is under represented. I always wondered why the up mountain cylinders were replaced then while the down mountain cylinders lasted until the mid 1990's. In the 1951 photo the slide valve chest had been replaced with retrofit piston valves that bolted on top. Visually these are similar to the original slide valves. I believe this was done about 1940. The 9 then received the all new up mountain piston valve cylinders sometime in the early 50's.

On Jul 6, 2020, at 11:03 AM, Jitney Jr. wrote: "Last February, I got a chance to review the old handwritten Cog Shop Maintenance log. I've now transcribed its pages into another section of the constantly growing manuscript. It will be in the next update of *Vol 1 Operating Manual* later this year. However, I've attached the section dealing with the No. 9 *Waumbek* for your review. Will you have a RC controlled air valve on the way down your hill to control the compression? Also a reminder that the 9 notoriously "slippery" when it came to "compassion" on the way down the Mountain.

Roger Hahn: The locomotive will be r/c. Unfortunately from cation doesn't scale well, especially with small cylinders. In all likelihood it will need a bit of steam to get it and keep it moving downhill. To stop, shutting off the steam will work like closing the air valve. Hopefully the model isn't too slippery.

From: "belpaire@aol.com"
Date: Friday, June 25, 2021 at 7:27 AM

I wanted to bring you up to date on this. The locomotive arrived in November but unfortunately the USPS must have dropped from a height and it had some significant damage. It took over four months of back and forth before the claim was settled. It then had to go back the person who made it to put it right again. Finally I have it and have given it some test runs. I used the plans the B&M Historical Society has for coach #6 and created CAD plans for it. I did lengthen the

coach by two windows to keep with the lengthening of the real one in the early 1930's. I had most of the parts laser cut out of plywood. As it is, it represents a train from 1951. After the big headlights were removed but before the #9's front cylinders were replaced.

https://www.youtube.com/watch?v=7yWP4bgt9XY - video of June 2021 test run - runs: 1:05

You can find a pretty comprehensive build log of the locomotive here https://www.mylargescale.com/threads/mt-washington-cog-rr-build.90900/

Artistés du Cog

The previous section Model Behavior outlined the work of skilled and accomplished masters of the mechanical arts producing pieces inspired by the Mount Washington Railway. However, among the many employees of that railway were other skilled visual artists. This section attempts to showcase the work of some Coggers who not only could serve summertime tourists but also had a passion for the visual arts. The idea for this part of the Appendix was inspired by a March 23, 2020 Facebook post by Dale Ann Granger-Eckert.

"The cog grease and coal dust on the train crews and the burger grease and ice cream stains on the counter crews hid a lot," wrote Granger-Eckert. "Under it all there were lawmen, preachers, educators and writers. There were also artists. Crawford was the best known but I saved two other pieces from I think 1969-70." ***Carin Sillars:*** "So very true. Coggers are a special breed. One summer can change your core."

Janet Cass

"I have tried to find her," says Granger Eckert in 2020. "Did see that she continued as an artist and photographer." She did indeed.

"Janet Cass heads out on the waters behind Seven Mile Island every morning at 7 a.m. She travels by kayak, paddling through calm waters or waves, her camera always with her, looking for inspiration. And she often finds it where the marsh grass meets the water. "Every year the grass is different and the images that come out are all a little different," she said. Her pictures are not the usual landscape shots. She is more interested in how the wind, the light, the moving water and the colors of the wet-

Janet Cass on wood (1968)
- Granger Eckert Collection

lands combine, often in images that are almost abstract or seem more like watercolors than photographs. Beacon Art Gallery in Stone Harbor (NJ) will feature her photo series, "Capturing Rhythm," in a solo exhibition beginning July 29, 2016.

"Cass, of Avalon, (NJ) said her interest in visual art began at age 10 when she was given a camera. She attended Kutztown University to study fine art painting, but ended up putting the camera and paintbrush down while she raised her kids. "I was a single mom and ended up having to work, and I had to put it on a back burner," Cass said. "It wasn't until both of my kids went off to college 10 years ago that I picked it up again."

"When she finally had free time and started taking pictures again, she had already moved from Philadelphia to South Jersey, and she had a new source of inspiration in the nearby natural world. Cass said she finds subjects for art every morning she opens her door. "I would say that art is wherever you are," Cass said. "And I'm not creating shore scenes or pictures of the oceans or sunsets, so it's actually a little bit different than what people expect down here." It took her a while to get up the courage to ask Beacon Art Gallery to show her photos to the public. "I had just been rejected by the gallery next door. I showed them (Beacon) my work and they told me to bring back some pieces. It's been a great relationship ever since," Cass said. Cass said her biggest influences are abstract artists such as Paul Clay — but she tries not to have other artists in mind while she works. "I actually try to not look at too many photographers because I don't want to be influenced by them," Cass said. " I kind of think that artists have to be a little careful when having an exhibit or selling work that they have to remember that they are doing the art for themselves." Now, Cass says she couldn't imagine living anywhere other than South Jersey. She goes to California during the winter and sometimes travels out of the country. But surprisingly, she doesn't take pictures when she travels. "I kind of have to be familiar with my place and understand it and get to know it. I find the best art for me that way," she said. And she finds the best way to know this place, and its art, is to paddle her kayak."

Artist Cass in her studio (July 2016)
- courtesy Press of Atlantic City

The JJ Harrington Callery of Cathedral City, California posted this biography of the Cogger/kayaker Cass on their website where they offer her prints for sale.

https://www.jjharringtononlinegallery.com/photographer-janet-cass

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"Janet Cass is a fine art photographer and painter living and working in Avalon, NJ and Palm Springs, CA. She creates large fine art photographic images that are meant to be felt as much as seen, and each image is essentially an abstract painting. Janet does very little post-production and relies on what comes through the lens. "I like to allow matters to evolve, letting the images come to me, and a remarkable variety of very different images are the result".

The "Song of Solitude" photographic portfolio is the result of Janet's exploration of the salt-grass that thrives along New Jersey's coastal barrier islands. She makes daily treks into the tidal wetlands in her kayak, no matter the weather, and dares to take her camera with her. She paddles deep into the hidden grassland to places most people have no idea exist, inaccessible by motor-boat and completely ignored by cars speeding over bridges. The intimacy of being out alone and so close to the water permits her to see, feel and absorb this vast wilderness. She believes her images are of timelessness, contemplation, and presence.

MUSEUMS and COLLECTIONS

2016 "Jazz" from the portfolio titled "Capturing Rhythm", Palm Springs Art Museum, permanent collection.
2105 New York-Presbyterian Hospital, New York, NY
2014 The National Board of Medical Examiners, Philadelphia, PA
Private collections in New York, Chicago, Philadelphia, Naples, Los Angles, San Francisco, and Boulder

PUBLIC ART

2017 Images from the "Songs of Solitude" Photographic Portfolio have been selected for the City of Indio, California Art, and Historic Preservation Commission programs. Her work will be part of the inaugural exhibition in 2017, projected onto the Coachella Valley History Museum's vintage water tower.

EDUCATION

BFA - Painting Kutztown University, Pennsylvania
Continuing Studies, The Pennsylvania Academy of the Fine Arts, Philadelphia

Martha Crandall

Martha Crandall, a longtime resident of Chicago IL, grew up in the Midwest. Having earned her BFA at The Rhode Island School of Design, she moved to Chicago and pursued a career in graphic design and illustration. She ran her own business, Crandall Design, serving clients in the Chicago area. After a long run it was time to move on. Martha fell in love with mosaic art. She found herself in a new career as a mosaic art instructor at The Chicago Mosaic School. At the same time she became the proprietor of Studio B Mosaic Design to accept commissions. Through CMS or Studio B, she completed several large installations for private residences, a Chicago play lot fountain, a church, a theatre, and the Blind Rehab Center at the Hines VA Hospital in Hines, IL. Her work has been shown nationally at The Society of American Mosaic Artists, the GOCM, and around the Chicago area. As a founding faculty member of CMS, she teaches a variety of classes with a specialty in Glass-on-glass mosaics.

Peppersass *- M. Crandall pencil on paper (1973-74) - Bencosky Desjardins Collection*

EDUCATION
BFA, Rhode Island School of Design, 1977

EXHIBITIONS
Variegations, SOFA, Navy Pier, Chicago IL, 2018
Cuyler's Last Stand, GoCM, Chicago IL, 2017
SAMA Member Invitational, SOFA, Navy Pier, Chicago IL, 2016
Opus Pleiades, GoCM, Chicago IL, 2016
Transformations, GoCM, Chicago IL, 2012
Mosaic Portrait Invitational, Granville Performing Arts Center, Granville TX, 2011

Sec. 46 - Artistés du Cog

GoCM at Navy Pier, Chicago IL, 2010

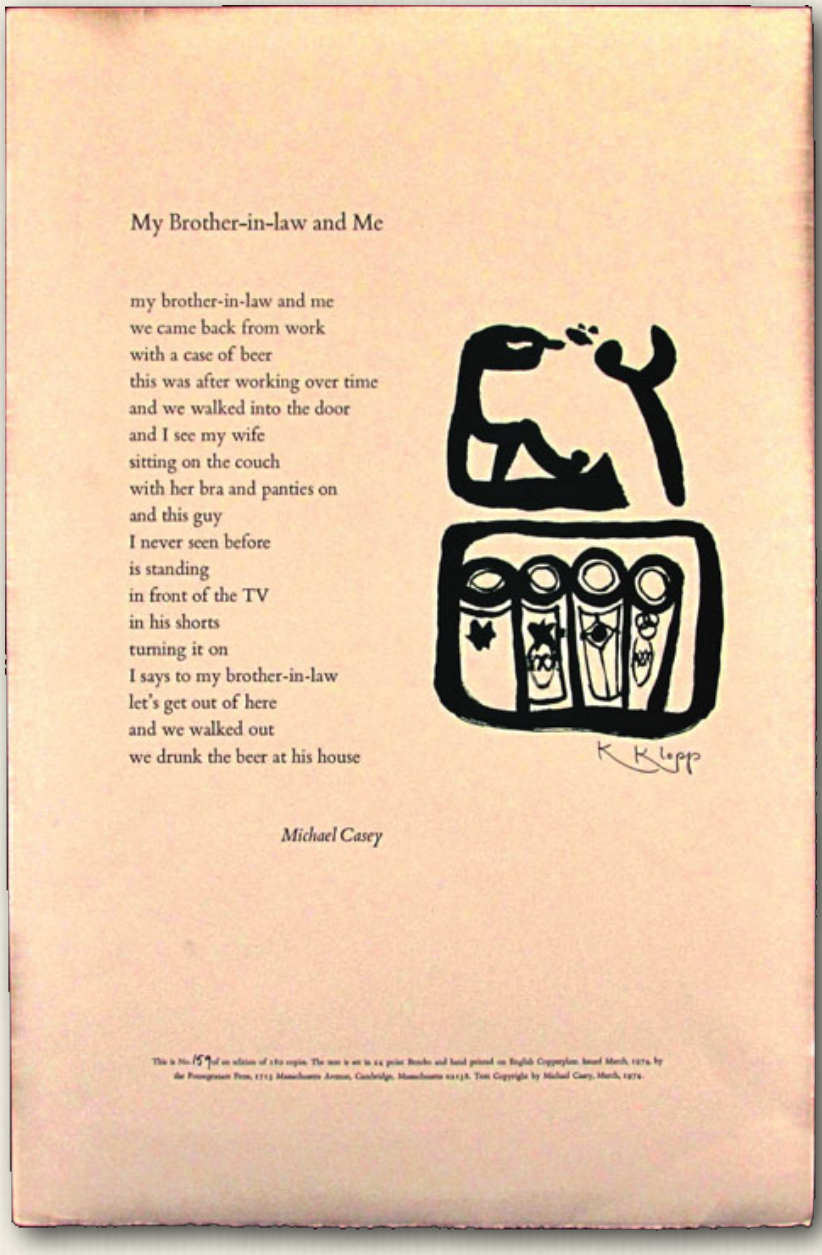
Mapei Logo Invitational, Coverings 2007 at McCormick Place, Chicago IL, 2007

Beneath the Surface, High Risk Gallery, Chicago IL, 2006

In Pieces, TZ Gallery, Chicago IL, 2004

Within: Albert Weisman Park 901 W. Oakdale Ave., Chicago, IL 60657
Location Notes: Spray pool
Artist: Martha Crandall, Chicago Mosaic School
Year Created: 2011

Karyl Klopp

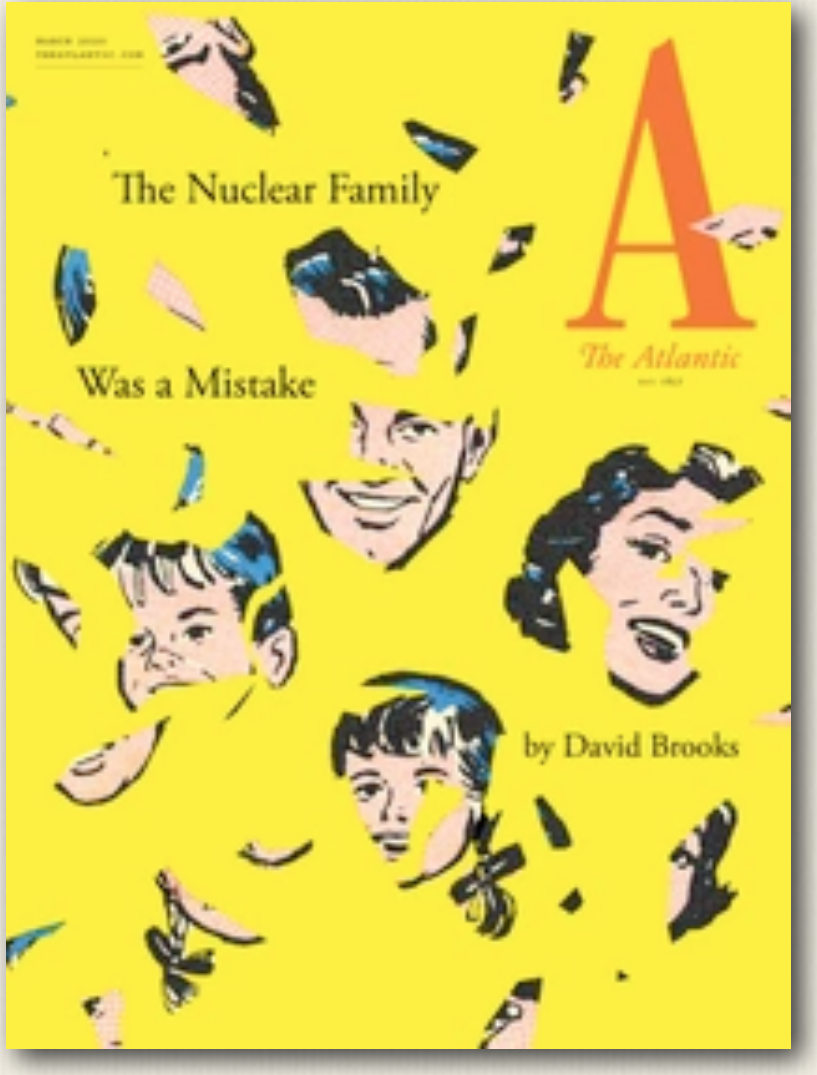


Casey, Michael - My Brother-in Law and Me

Cambridge, MA: The Pomegranate Press, 1974. Limited First Printing. Single Sheet. *(left)* Signed by illustrator Karyl Klopp A broadside (approx. 12&1/2"x19") with the coarse title poem by Michael Casey, the acclaimed poet born in Jack Kerouac's hometown of Lowell, Massachusetts, alongside an illustration by noted artist Karyl Klopp. Hand-signed by Klopp (typically as "K. Klopp") below illustration. One of a limited edition of 180 copies hand printed on thick handmade paper stock issued in March, 1974. This is copy No. 159/180. A bold production, rare & collectible. In near-fine condition with thin borders of charcoal-colored smudging along top, side edges; very minor bumps & creases at corners; a few faint creases on surface; one very faint approx. 1&1/2" vertical line of pencil(?) near upper left edge not effecting text.

Kathleen Spivack, a Fulbright professor in Paris, Pulitzer nominee, author and international writing coach, Ifeanyi Menkiti, owner of the Grolier Poetry Book Shop, the oldest continuous bookshop devoted solely to poetry in the country and Karyl Klopp, an illustrator and designer who founded the poetry publisher Pomegranate Press, are longtime friends whose deep roots in the poetry tradition of Boston date back to the late 60s when they hand- printed the work of poets like Archibald MacLeish in the basement of Lamont Library at Harvard. Their (2007) collaboration is Kathleen Spivack's newest collection of poetry Moments of Past Happiness edited by Menkiti, designed by Klopp, published by Earthwinds Editions Press .

April 1967 Atlantic Monthly Cover *(right)* image by Karyl Klopp



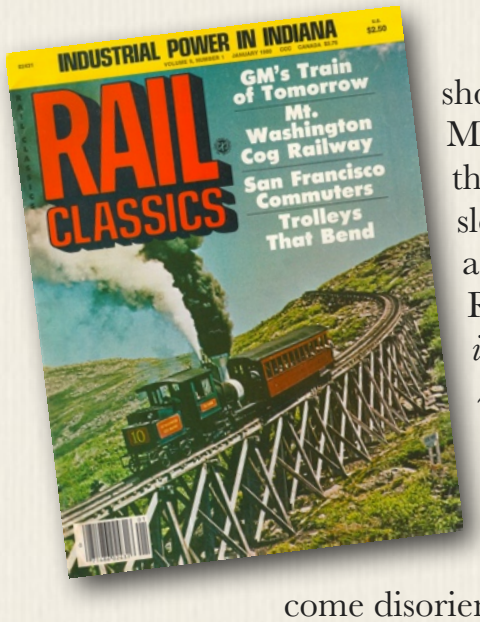
Sec. 46 - Artistés du Cog

Ellen Van Pelt Wheat

"Done on plain cardboard in the girls dorm by Ellen Wheat."

Work In Progress
** Not Final ***

1980 - Clouds of History



If you have read and now reached this section of the *Jitney Years Project*, you should have a more detailed, and profound understanding of the history of the Mount Washington Cog Railway. You have likely noticed how the oral tradition of that history, along with common human errors (misspelling, misunderstanding & sloppiness) by writers and reporters of the day along the way, has caused confusion and tangles for modern historians to sort out. In 1979, writer-photographer-railfan Ronald N. Johnson went to Mount Washington to do research for an article, *Steaming To The Clouds,* that would appear in the January 1980 issue of *Rail Classics Magazine (pgs 38-49 & 74-75).* Johnson made special note of his efforts towards accuracy: "I wish to thank Alexander Hamilton, Vice President and Manager of the cog railway and Mrs. Ellen C. Teague for their assistance in making this article accurate and giving insight as to the inner workings of the Mount Washington Cog Railway." However, even those who own and operate a historic enterprise may become disoriented in the fog bank of "history" passed along the track phone by word of mouth, the re-telling of the old tales without tracking down documents, and rigorous confirmation. What follows is an effort to point out with ***** where, in what is otherwise a pretty good 14-page summation of Cog history through its first 110-years of operation, Johnson may have gone off the rails in the fog.

Steaming To The Clouds
Ronald N. Johnson
January 1980

"Deep in the cool recesses of the wild timberland in the White Mountains of New Hampshire is situated the Base Station of the Mt. Washington Cog Railway, home to the nation's largest active fleet of standard gauge steam locomotives operating on a daily basis during New England's all too brief summer. To witness as many as eight engines under steam at once would in itself be worth a visit even on a flat section track, but this line is built entirely on three miles of trestle, climbing average grades of 25% with some sections reaching 37.5%. The reason for the incredibly steep incline is that the tough, slant-boilers team machines must tussle with a route to the top of Mt. Washington, New England's highest peak at 6288 feet above sea level. To think that this 110-year-old anachronism was built at all, and continues to thrive today is amazing. Before going into detail about current operations there is a fascinating story to be told of how the world's first mountain climbing railway was formed through the great hardships and toil of farsighted pioneering men.

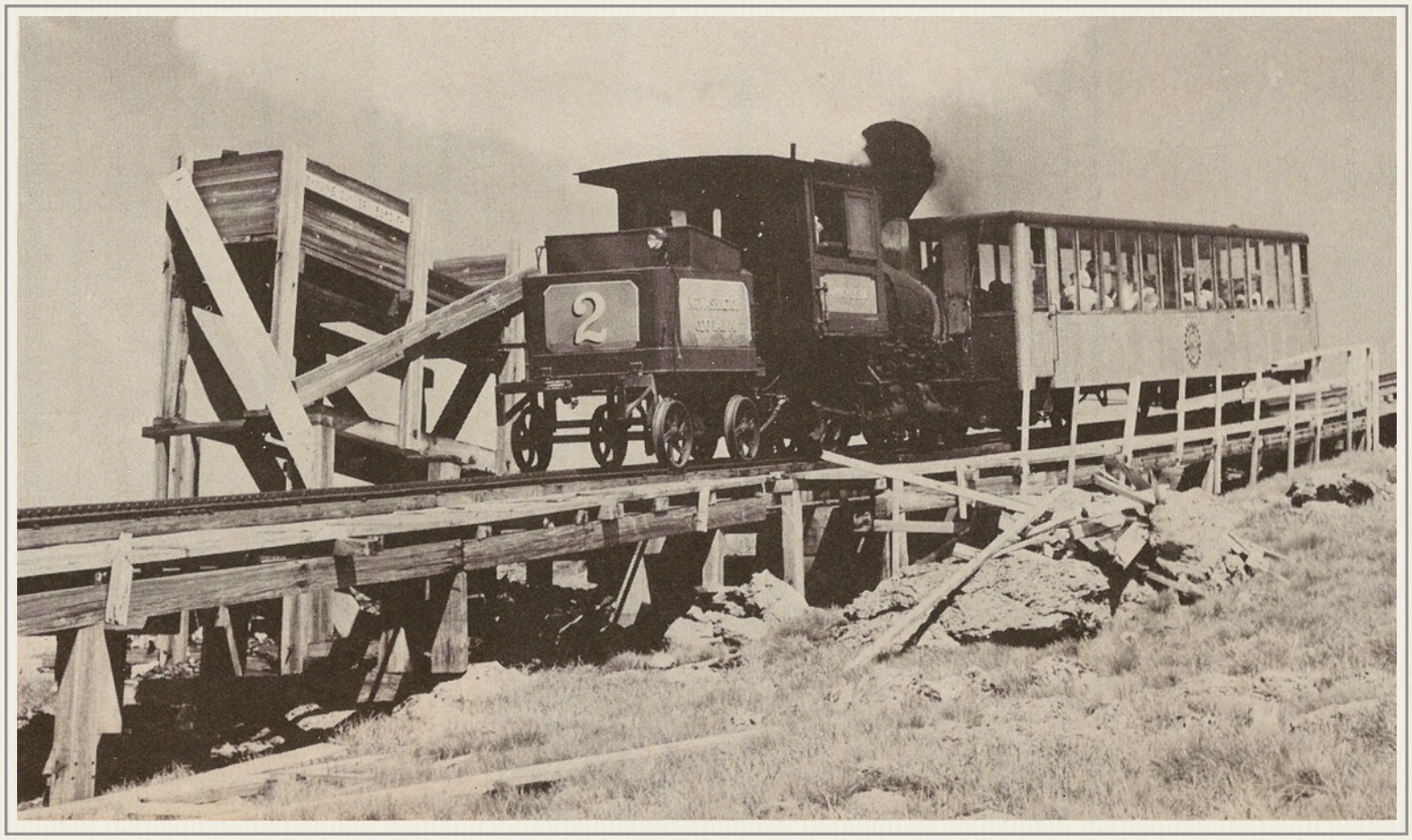
The real promoter and financial backer of the undertaking was a Sylvester Marsh who was born in 1803 on a farm in Campton, N.H. He gained his financial well-being in the meat packing and grain industry in early Chicago, becoming one of the most prosperous and influential men in that city.

Sec. 47 - Clouds of History

In August of 1857, Marsh and a clergyman friend were climbing Mt. Washington on a holiday and became lost in a severe storm. They just managed to make it to the Tip Top House, a stone shelter at the summit, but were totally exhausted. After this harrowing experience Marsh concluded that there must be a safer and less tiresome way of ascending the mountain to witness its great scenic vistas. This thought led to one of the great innovative railway projects ever conceived, that of climbing a mountain by railway. *(Historian Rob Bermudes' documentary research has determined Marsh and Rev. Augustus C. Thompson's hike occurred on August 24, 1857 - see* ***"Crazy Man" Sylvester Marsh an the Origins of the Mount Washington Railway*** *by Robert W. Bermudes Jr. in New Hampshire Historical Society's, Vol. 72, No. 2 (Fall 2019) Historical New Hampshire.)*

The route twists down the mountain side to the bse station, which can be seen far below. (1979)
- Ronald N. Johnson photo/Rail Classics

Marsh was a very practical man and although he had no railroad background, he knew that necessary machinery would have to be developed as had been done in his successful meat-packing business. After exploring several avenues, it was found that the climb was too steep to use a stationary boiler and too long to use ropes or cables even if the line were to be split into

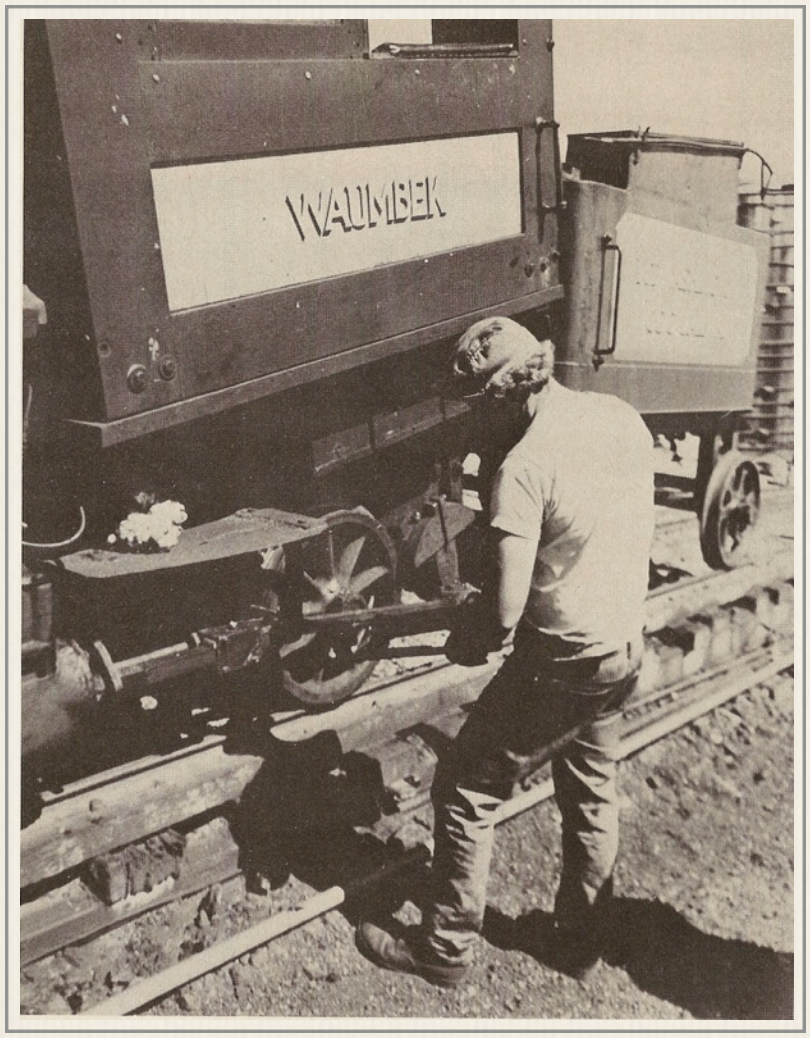


several sections. (Later technological developments in the strength of a long cable proved that cable car rides could be offered to the top of other mountains. (*Ed. Note: Cog owner Wayne W. Presby would revisit the funicular railway idea in 2000 - see Appendix Section 39*) The idea of a cog rail mechanism fit centrally between the rails seemed the most practical means of negotiating steep grades.

**Marsh may have arrived at this conclusion through his acquaintance with Herrick Aiken of Franklin, N.H. This latter visionary had already built a model cogwheel engine, track and cog rail in an attempt to prove to others that such an endeavor was feasible. Upon approaching railway officials of other major lines in New England, Aiken was dissuaded from the project as not worth the tremendous financial investment.

Becoming more and more intrigued with this bizarre venture Marsh contracted a mechanic in 1858 to build a working model like that of Aiken's.** *(Ed. note: This segment of Johnson's article embraces facts still in dispute by Mt. Washington scholars and descendants of Marsh and Walter Aiken (Herrick's son) about the role of the Aiken family in the development of the Cog Railway. Johnson's use of the word "may" hints at the dispute. Research of contemporary accounts of the railroad's construction for the Jitney Years Project did not find a reference to Walter Aiken until 1868 and then only as a contractor hired to build the second engine. Rob Bermudes Jr notes: "There is much information in the newspaper accounts of the time on Walter Aiken that are simply not true. For instance: he was not a founding director (1866), but a later (c. 1870) one. He did get stock instead of cash for his subpar locomotives c. 1868-69, but that did not confer director status upon him by itself." Herrick Aiken's first mention and suggestion of his role in the development of the Mt. Washington Railway comes in a front page article on cog railroads in the September 1, 1877 Among the Clouds written by son, Walter Aiken. In 1879 the New Hampshire Railroad Commissioner's Report dealing with the Mt. Washington Railway contains the Herrick Aiken angle. Again it was a report written and submitted by his son, Walter - now the railroad's general manager. While the Aiken heirs have continued to support this version of the genesis story, Marsh's great-grandson Richard Joslin refuted many of those claims in his 2000 book - "Sylvester Marsh and the Cog Railway" that was embraced by the group that bought the railroad from Ellen Crawford Teague. See Sylvester Marsh entry in Vol. 2 Cog Roster for more details.)*

Sec. 47 - Clouds of History



Sylvester Marsh contracted a mechanic in 1858 to build a working model of his cog railway invention and an eight-foot length of track at a cost of $150. A coiled spring in the boiler provided the necessary means of movement along the track. Taking his model and ideas before a committee of the New Hampshire Legislature in June of 1858 to petition them for a charter, Marsh's statements were dismissed as crazy talk. "Might as well try to build a railroad to the moon," one committee person was heard to say. Their opinions changed when they saw his working model and his plans to use his own capital on the venture and none of the state's money. Governor William Haile signed a bill on June 25, 1858 which allowed Marsh to build to the summit of Mount Washington and Lafayette. This was only the beginning of continuing frustrations. After experimenting for some time in trying to come up with a suitable design, Marsh finally was ready to apply for a patent on his cog railway in 1858, only to find that there were already nine other patents for cog railways on the books. Having been refused on his first try Marsh went back to the drawing board to devise a unique feature of his cog railway, which would enable him to be granted a patent. His breakthrough came in solving the problem of a safe descent of the mountain on the steep grade. These improvements came in the form of two protective safety devices. One of these enabled a light 18-ton locomotive to be used since power was applied to the axle through the use of cog wheels, which increased the power of the engine greatly. The other provided a ratchet or "level Pawl"* *(Ed. Note: "lever Pawl")* to engage with a 19 tooth wheel during the climb which prevented the engine from careering wildly downhill in case of steam failure. Although the clickity-clack* *(Ed. note: "clangity-clang" comes to closer the sound of a ratchet working)* sound is characteristically noise as the engine makes its ascent, one knows that everything is in order. The ratchet is disengaged during the trip downward. In 1864 Marsh patented an air brake for his locomotive, which in effect became a rolling compressor on the descent. The steam cylinder on the engine is constructed so that by shutting off steam and using special valves the locomotive is eased downgrade using compressed air in the four, eight- or nine-inch cylinders. The short 3½" in diameter pistons are of the same construction as any steam locomotive. The top speed for the grade up or down is four miles an hour. This original idea was further extended by a patent in 1870 on an "Atmospheric Car-Brake."

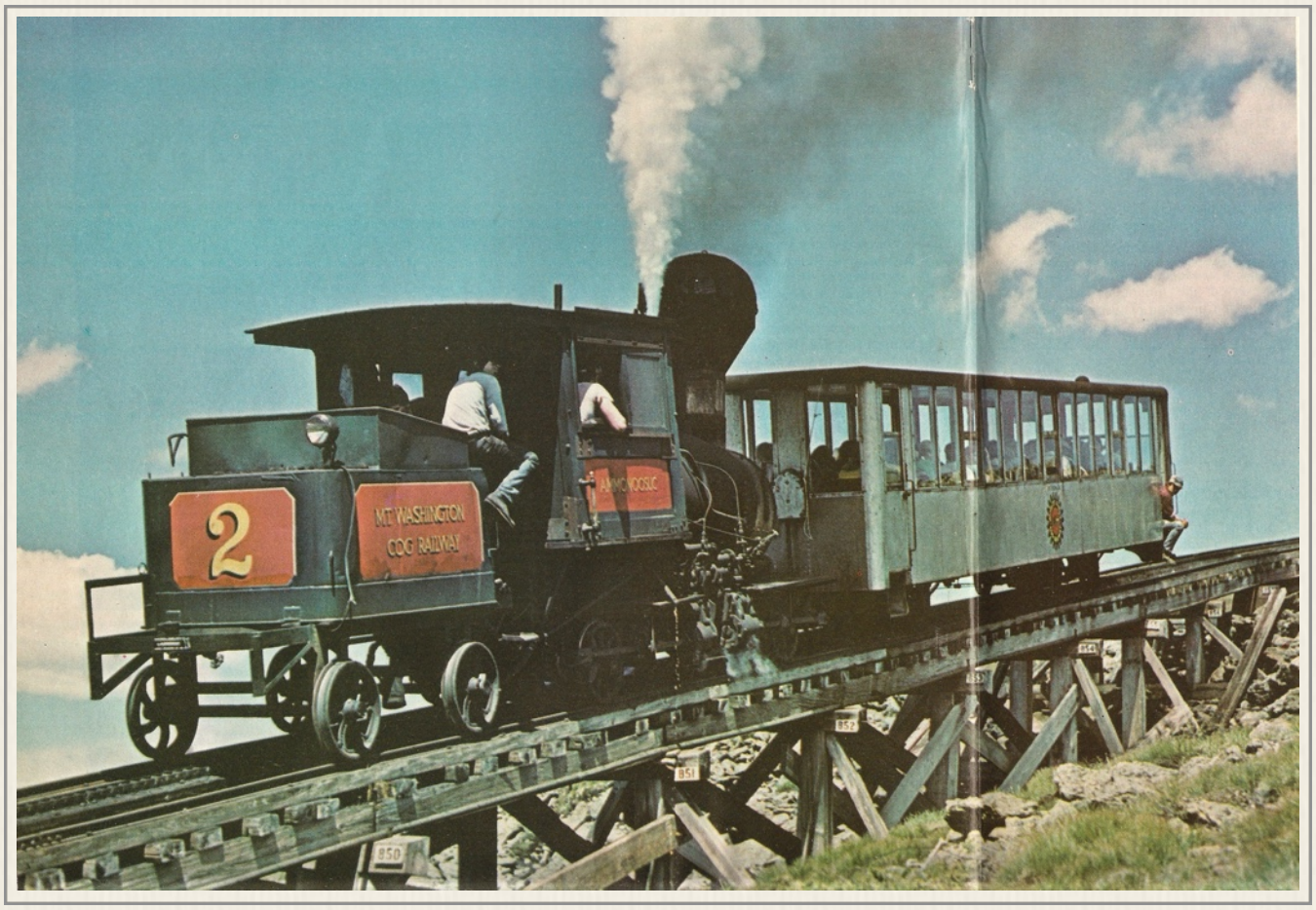
Marsh was confident that a railway to the summit of Mt. Washington would succeed because of several reasons. Mountain climbing was just coming into its own as a sport. As early as 1821 Ethan Allen* *(Ed note: actually Ethan Allen Crawford)* blazed a trail from his inn at Fabyan to the pre-

sent site of the Base Station. He then established a path which the cog railway was to later follow up the jutting western flank of the mountain to the summit. Later in 1840 his brother, Tom Allen*****, *(Ed. note: actually Horace Fabyan)* widened the trail to a bridle path for horses. With trained horses the number of visitors to the summit greatly increased along with a corresponding boom in business for two stone hotels on the summit.

Then in 1861, a group of men could see still more profits involved in the trip to the top so opened the Mt. Washington Carriage Road, the first mountain toll road in the world. It made use of a previously built bridle path in 1853 from Glen House to the summit using an east ridge to ascend. This narrow dirt road complete with hairpin turns is still in use by the state as a toll route for autos.***** *(Ed. Note: During 1853-56 the first summit road company completed the road to about the half-way point. An 1859 company finished the job and opened the road in August 1861. The summit road is privately owned and operated.)*

Bursting with enthusiasm, Marsh cast about for private financial backing for his undertaking. In 1864, he wrote to the president of the Boston, Concord & Montreal Railroad, spelling out his ideas. President John Lyon dismissed the project as sheer foolishness begun by "some crazy man." Undaunted, Marsh began all the more in earnest to push forward the project using $5000 of his own capital in spite of ridicule from just about everyone.

In an attempt to win more support, Marsh invested $500 in a working steam model *(as opposed the the 1858 model which was powered by a spring)* engine and car and 20 feet of track which he installed in his office. He would make the engine go up and down the track fixed at a grade equal to what would be encountered on the mountain. This little gimmick helped to solicit investors made up mostly of the railroads serving the White Mountains who pledged in excess of $20,000 toward the unique railway.



Sec. 47 - Clouds of History

Gradually the odds against building the railway were overcome so that by 1865 the Mount Washington Steam Railway had enough backing to begin construction, with Sylvester Marsh as president and construction boss.

During the winter the first steam locomotive was built under the direction of Marsh by Campbell, Whittier & Co. in Boston, at a cost of $2,000. After shipping it from Boston to Littleton, N.H. in pieces via the Boston, Concord & Montreal Railroad, it had to be shipped overland to the Base Station by ox team. A narrow wagon road was already in place the 18 miles from Littleton to Fabyan, but Marsh had to set about to hack out a roadway the last seven miles to the Base Station, much of it through thick forest.

To give the road some sort of solid support for the heavy equipment which was to roll over it, trees were felled and laid crossways to form a crude boardwalk *(or corduroy road)*. Now every bit of equipment necessary to a successful operation could be lugged in from the outside world by ox team. As the first engine was being carried over the log road at one point, a part of it slipped from the cart pinning one of the workers under its great weight. Even though it took hours to free the man, miraculously he lived proving the rugged capabilities of early pioneering individuals.

In surveying a suitable route to the top of the mountain Marsh rejected one town surveyor's suggestion to make massive cuts and fills, which would have run the cost up to an incredible amount. Instead, to skirt the jagged boulders which covered the landscape from glacier times, Marsh elected to place the roadbed entirely on trestlework. Logs for the unique trestle had to be hand-hewn with three supports required underneath. Two were required on either side to hold up the tracks and support the weight of the engine and car plus a third beam in the middle to hold up the cogged rail.

Many of the needed structures, such as a log cabin for crew quarters and engine shop, were completed during the summer of 1866 as well as a quarter of a mile of track including a trestle bridge spanning the Ammonoosuc River at a grade of 1,700 feet to a mile.

Eager to show off their progress and generate more support, Marsh organized a first trip over the complete quarter mile on August 29, 1866 for stockholders and interested public. After the first locomotive was assembled it was christened *Hero*, but the name never stuck. When a visitor observed the odd-looking vertical boiler seemed to be in the same shape as a old-fashioned peppersauce bottle which led him to say, "There's your peppersass!" and *Ole Peppersass* stayed with the engine to this day.

It was a crude but sturdy machine which served the mountain well for many years. Consisting of just an ordinary hoisting boiler with a wheelbarrow type of tender. Originally the boiler had no water feeding device so that the crew would fill it up when starting, go as far as safety permitted, and then let the steam down and fill up again. After testing, a conventional tender was added along with a pump

The first operation with *Peppersass* and an open platform car for 40 passengers flowed so smoothly that Marsh no longer needed to draw from his personal funds to pay expenses. Instead, as a vote of confidence, the stockholders voted a 50% assessment on the stock so that construction could continue. At this time the officials of the railroads who had pledged their support took over operations and appointed Job J. Sanborn as construction boss* *(Ed note: His given name was John. He was generally called Jarve by his coworkers, Jarvis by his wife, and "J.J." by the press. Rob Bermudes says he has no idea where "Job" comes from)*, an experienced Boston, Concord & Montreal railroad man. He followed Marsh's plans to the letter and completed the railway. Marsh moved to Littleton and commuted on a daily basis by horseback to the Base Station to remain in constant consultation with Sanborn.

Marsh made an improvement in the cog rail in 1867 from the rail laid down in 1866 and a much more substantial improvement over the simple toothed mechanism developed in 1861. The new design which is still used today consisted of two strips of angle iron about four inches apart bolted to the center stringer and connected every four inches by wrought-iron rounded bolts. The cog wheels of the engine and car fit into the strips of angle iron *(Ed note: cog rack)* which provide a rugged safety measure.

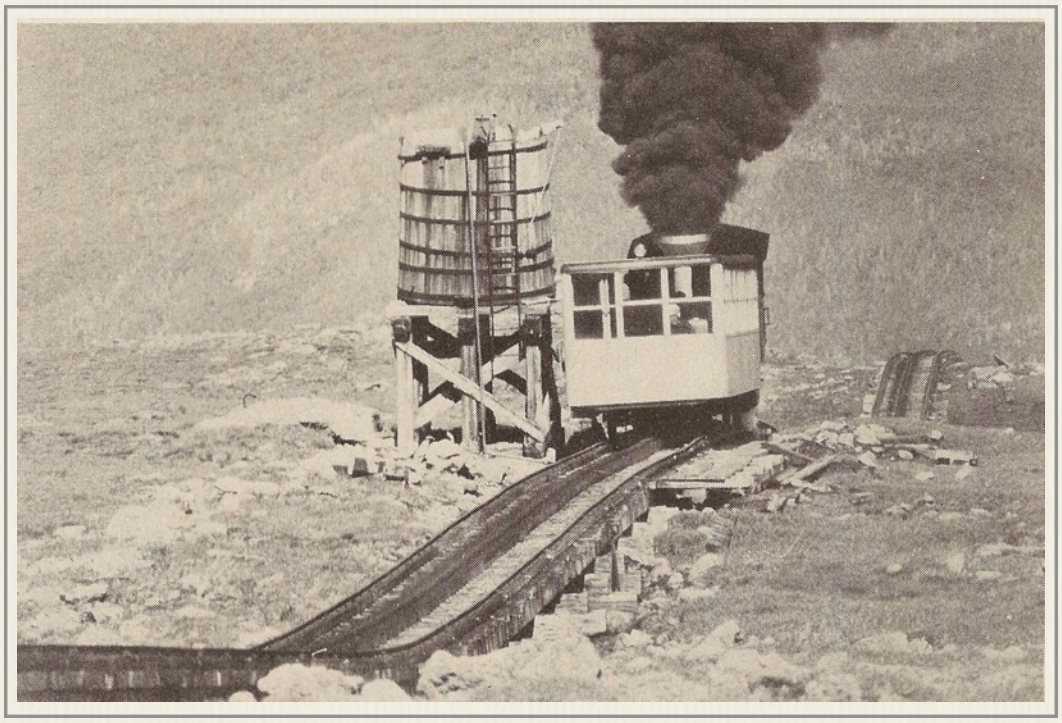
Before the railway could be finished a sawmill had to be set up in late 1867 along the swift running Ammonoosac* *[sp]* River to supply finished lumber to complete the trestlework. This enabled a half a mile more of track to be laid. Early in 1868 the trackwork was pushed on to the completion of Jacob's Ladder, an impressive section of wood trestle where the steepest grade is encountered at 37.41%. It is at this point that the trestle reached 20 feet in the air and had to be anchored by cables to the mountainside because of extremes in weather conditions. A need for more motive power was felt and a call went out to Henry* *(Ed note: Herrick?)* Aiken's machine shop in Franklin, N.H. in May of 1868 to produce another engine similar to *Peppersass*, but with a shorter boiler and cylinders powering the rear axle instead of the front.* *(Ed note: Herrick died in Nov. 1866, so it wasn't his shop in 1868. It is worth noting that Walter Aiken was related by marriage to J. A. Dodge, the BC&M's superintendent. It was via this path that Aiken probably procured work for the Cog.)* This locomotive had no name or number and was replaced by engine #2, the *Geo. Stephenson* in 1869, because it did not steam well.

Sec. 47 - Clouds of History

Work progressed so well during 1868 that by mid-summer the track reached within ¾ of a mile of the summit. A special excursion was operated on August 14 using two trains. Guests rode in a new open top passenger coach, which could be fitted with a canvas awning to protect from inclement weather. Riding as far as they could, the passengers walked the remaining distance to the Tip Top house where they partook of a prepared meal. It was hoped that the railway could be finished by the end of 1868, but a fierce storm blew up on October 16, forcing the workers to literally drop their tools and run for their lives as they were only 500 feet from the summit. The following spring the tools were picked up as they had laid in the snow throughout the winter and the line was finished with the first train making a run to the top on July 3, 1869. The Mount Washington Cog Railway was now an operating entity costing a total of $139,500 to build.

In spite of this seemingly successful venture Marsh was never compensated for any of his personal monetary investment in the line. In fact he was never even listed as a stockholder. It seems the only satisfaction he received was in knowing that he had completed a unique railway in the face of incredible odds and discouragement. His fame spread around the world and in 1869 Marsh turned down an offer by Swiss engineers to be superintendent of another mountain climbing railway in that country. Although informally known today as the Base Station, the cluster of buildings at the bottom was named Marshfield in honor of the founder and a Darby Field who was the first white man to climb Mt. Washington.

Herrick Aiken, with whom Marsh had collaborated in building the cog engines and who had gained considerable power in the board of directors* *(Ed. note: Herrick died in Nov. 1866, before the first organized meeting of the MWR directors. Herrick could not have served on the board of directors. His son, Walter did)*, died soon after the Civil War leaving his son to take control. Walter Aiken had built the *Geo. Stephenson* and three other of the cog engines. He was the third largest stockholder as well as one of the directors. He gained control of the railway from Marsh who still remained president, more or less in name only.* *(Ed note: Marsh did not have control of the Cog after his August 1866 demonstration, Lyon took control.*

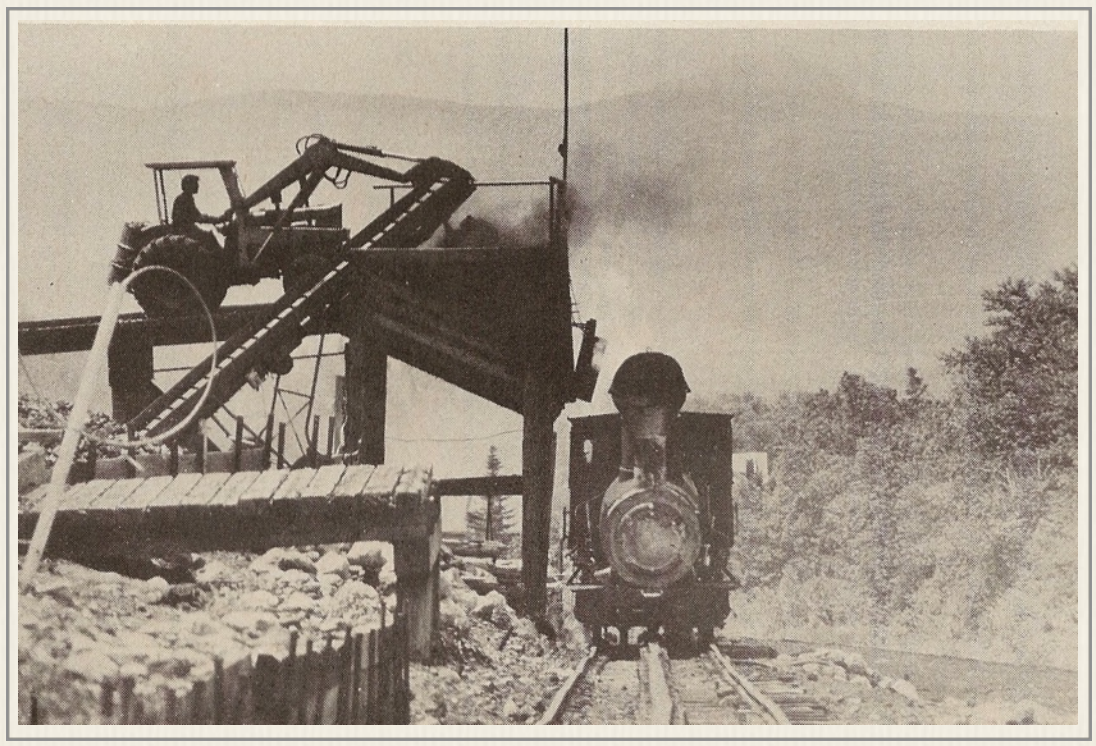


Therefore Aiken could not take control from Marsh, but from Lyon who was the company treasurer). Marsh continued to go to the annual meetings and did not want to express any dissatisfaction fearing it would hurt the railway.

Walter Aiken was a tall, powerful looking figure with red chin whiskers. He was a real manager in the truest sense in that he knew the total workings inside out of the cog railway. When something went wrong, one could be assured if no one else knew how to fix it, Walter would be sure to know how.

One time a couple years after the railway started. Walter spent a stormy night on the summit in the stone Tip Top house, which was not water-tight. All night long the rain beat in on Aiken and the next day he vowed to build a more substantial guest house. In 1872-73 the Mount Washington Summit House was constructed, which stood 2½ stories high, the tallest structure on any mountain of that height.

A total of seven locomotives with upright boilers were built,* *(Ed note: Early engine records and accounts are confusing. The Jitney Years project notes six loco's with upright boilers in order of appearance: Hero a.k.a Peppersass, Aiken #2, Geo Stephenson, Atlas, Cloud & Tip-Top)* the last one #6, *Tip Top*, in 1874 by the Manchester Locomotive Works in N.H. It featured a new design of having four instead of two cylinders powering both front and rear axles. This provided greater power and safety in braking. The first of the horizontal-boilered locomotives arrived in 1874 from the Manchester Locomotive Works. This 2nd #3, *Hercules*, had a distinctive boiler and smoke box, which were tilted so that the front was 18 inches lower than the back. This helped the boiler to stay somewhat level on the terrain it was climbing thus steaming more efficiently.



Marshfield was a bustling little town before the turn of the century. Included in the layout was a station, boarding house, log cabin, locomotive shop and enginehouse. One of the first tourist hotels to be built in the White Mountains was the 2½ story

Marshfield House, which was built in 1871. Three large barns connected the hotel, which many times were crowded with teams of horses from neighboring hotels down the valley. Stage coaches were run from such famous hotels as the Crawford, Fabyan, and Twin Mountain Houses to connect with morning and evening trains on the cog railway. In addition, groups of tourists arrived from the White Mountain House and Bethlehem. Sometimes the terminal area at the Base Station was so crowded with horses that it was difficult to maneuver the engines and coaches.

LOCOMOTIVE ROSTER OF MT. WASHINGTON COG RAILWAY 1979

No.	Type	Builder	Date	Name	Remarks
1 (1st)	0-2-2-0	Campbell & Whittier	1866	"Peppersass"	1
1 (2nd)	0-2-2-0	Manchester	1883	"Mt. Washington"	2
2	0-2-2-0	Manchester	1875	"Ammonoosuc"	3
3	0-2-2-0	Manchester	1883	"Base Station"	4
4	0-2-2-0	Manchester	1883	"Summit"	5
6	0-2-2-0	Manchester	1878	"Great Gulf"	6
8	0-2-2-0	Manchester	1892	"Tip Top"	7
9	0-2-2-0	Manchester	1908	"Waumbek	8
10	0-2-2-0	Base Shops	1972	"Col. Arthur S. Teague"	9

1) Had a vertical boiler and two cylinders 8″x12″. Retired in 1878. Reconditioned in 1929 and wrecked on Mt. Washington on July 20, 1929. Afterwards rebuilt and put on display at the Base Station.

2) Built as the 1st No. 7 "Falcon," damaged in fire at Base in 1895. Rebuilt and renumbered No. 1. Later renamed to "Mt. Washington." Originally had four cylinders 8″x12″, but the front two have been changed to 9″x12″.

3) Originally built as the 2nd No. 4 "Atlas." Damaged in 1895 fire and rebuilt to No. 2. Has four cylinders 8″x12″.

4) Built as No. 2 of the Green Mountain Cog Railway, Mt. Desert Island, Maine. Purchased to replace another locomotive destroyed in fire at Base in 1895 Has four cylinders 8″x12″.

5) Built as No. 1 for the Green Mountain Cog Railway. Purchased to replace a locomotive destroyed in a fire at Base in 1895. Has four cylinders 8″x12″.

6) Originally built as No. 6 "Tip Top," but renamed. Originally had four 8″x12″ cylinders, but replaced by 9″x12″ ones.

7) Originally named "Pilgrim" with a diamond shape stack. Has four 8″x12″ cylinders.

8) Originally had four 8″x12″ cylinders but the front two have been changed to 9″x12″.

9) First new standard gauge steam locomotive built in U.S. in 20 years.

Part of the problem which held back patronage on the cog railway was its isolation. When the Boston, Concord & Montreal Railroad was extended from Littleton to Fabyan in 1874 and the Portland & Ogdensburg Railroad had been completed through Crawford Notch to Fabyan, it made commuting to the Base Station an easy task for visitors. The B.C.&M. made the final *(rail)* link from the outside world when it pushed a branch line in 1876 from Fabyan to about a half mile below the Base Station. The cog line then extended its track down the grade to make connection. The BC&M had three specially made observation cars with wicker chairs installed along with canvas awnings in case of a rainstorm. So that the tourists could get an unobstructed view of the mountains and scenery without smoke or cinders hindering the scene, the engine would push the cars backwards to the Base Station. Then it would be facing in the normal direction for the return trip to Fabyan. The locomotive must have really talked as it covered the 6½ miles to the Base Station at an average grade of 5½ %. *(Ed note: The max grade was 6%. The first half of the road is essentially flat. Once it crosses the Mt. Clinton road the grade does increase. It reaches 6% in the final grade just below the shop area.)*

After the death of Walter Aiken in 1893, the Concord & Montreal bought up his shares in the cog railroad and thus gained control. Shortly thereafter the Boston & Maine Railroad took over the B.C.&M. thus starting another era on the cog line.

Many untimely events were to try the mettle of the Mt. Washington Cog Railroad, one of which occurred in the spring of 1895 when a disastrous fire did considerable damage at the Base

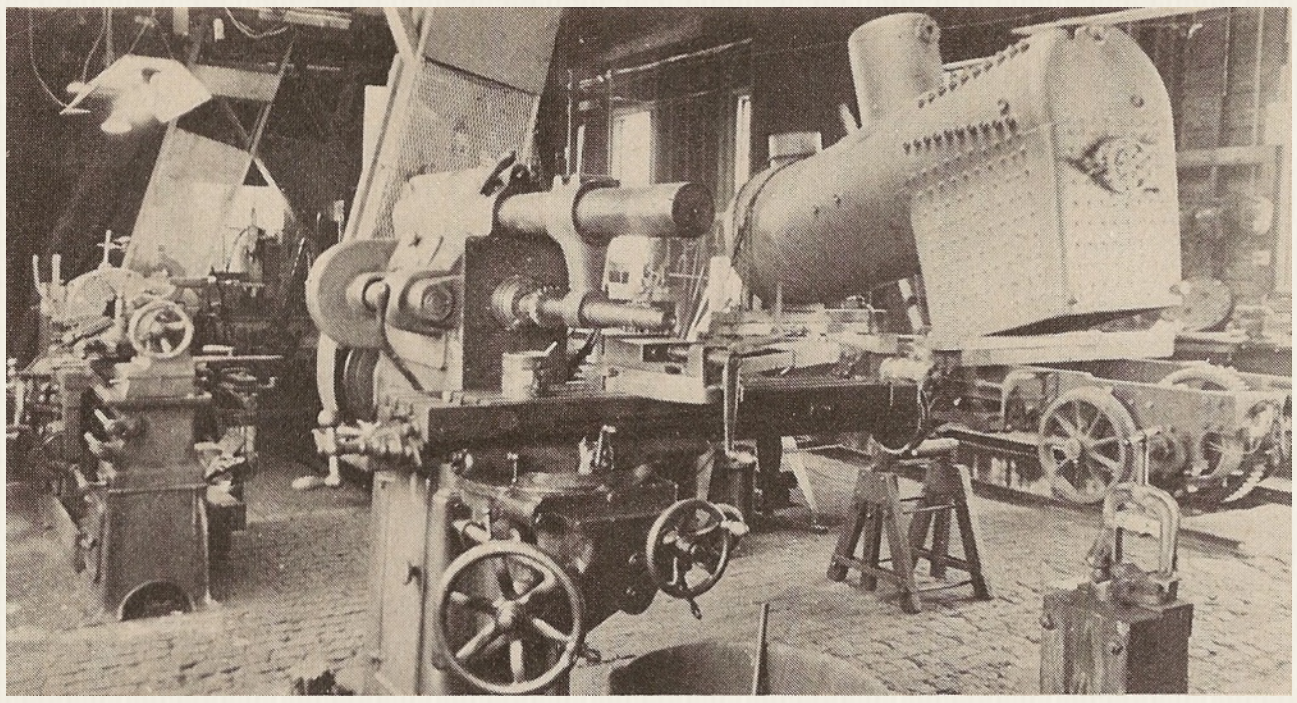
Station. All the buildings were destroyed except for the Marshfield House. Two locomotives were completely destroyed and two had to be rebuilt. This put the line in a terrible dilemma since the operating season was close at hand. The saving grace of the cog line came when they were able to acquire two locomotives from the defunct Green Mountain Railway on Mount Desert Island in Maine. Built in 1883 on what is now called Mt. Cadillac, the GMRR only lasted a few years before it was abandoned due to a highway being built to the top. The engines were stored after the line was abandoned and fortunately the Mt. Washington Cog Railroad was able to acquire them in time to be put into service for the summer season *(of 1895)*.

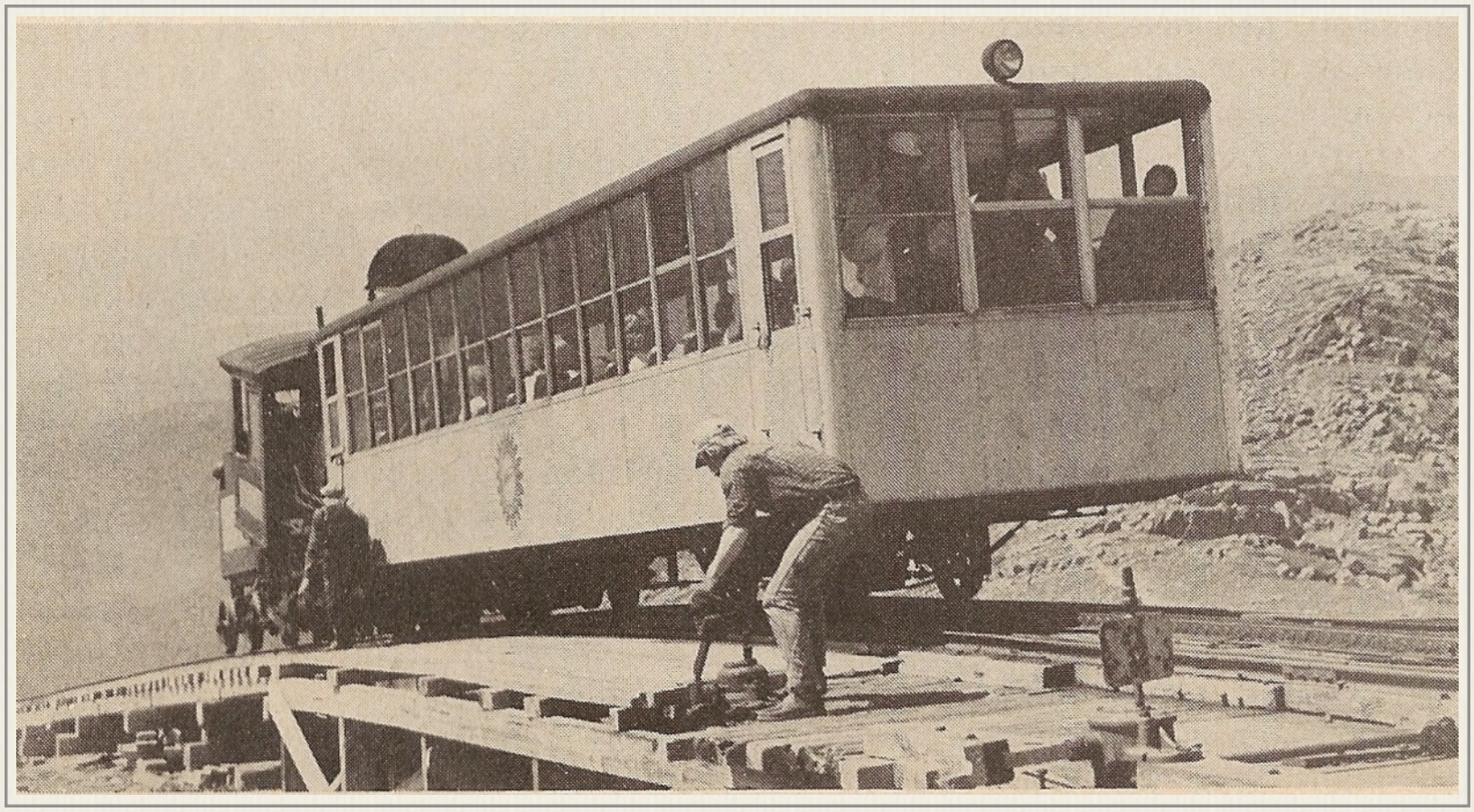
By 1878 *Old Peppersass* was worn out after serving the road well and was placed on display. Replacing it and other earlier vertical boiler engines were ones with canted horizontal boilers to keep water covering the crown sheet while ascending average grades of 25%. Over the next 34 years nine other engines of this type would be manufactured by Manchester Locomotive Works in N.H. and later Alco-Manchester.

In 1893 *Old Peppersass* was shipped off to be displayed at the World's Columbian Exposition in Chicago. Somehow it ended up in the hands of the Baltimore & Ohio Railroad who kept it in Baltimore, Maryland for 20 years. The engine was brought into the limelight again in 1928 to appear at the Fair of the Iron Horse at Halethorpe, Maryland.

When this display was heard about in New England a request was put out by a Reverend Guy Roberts of Whitefield, N.H. to the B&O to return the engine to its New England home. In the spring of 1929 the locomotive arrived at the Boston & Maine's Concord shops where it was refurbished in its old time colors in preparation for permanent display. The shop crew was astonished to find the old vertical boiler met all standards for steam and water pressure. Could she be steamed again? It was decided that this was indeed feasible.

After being sent back to the Base Station, one of the old-time engineers, Jack Frost, was told to get the engine ready to steam. When the boiler was attempted to be fired up it was found that it did not steam well. Upon examination of the interior, several quarts of nuts and clutch were discovered left over by squirrels.* *(Jitney Jr needs to confirm - sounds like adaptation of the 1885 John Horne squirrel story that went nationwide.)* After quickly remedying this situation, the engine was successfully run a short distance up the hill. Several possible publicity stunts were sug-





gested before *Peppersass* was to be retired. One idea was to run it to the summit and put the engine on display. It was decided that hikers might lug off portions of the locomotive for souvenirs over the years.

The other stunt which finally materialized was to run the engine as far as Jacob's Ladder and then coast back to the Base Station where *Peppersass* was to be put on permanent display.

This idea grew into a special day of activities on Saturday, July 29, 1929 which would recognize Yankee ingenuity and the recreational possibilities in the White Mountains of New Hampshire. The Governor of N.H. and the President of the B&M were invited along with many other guests and celebrities. As the ceremonies proceeded one could look on a sea of straw hats. Afterwards six trainloads of persons went ahead to the summit with *Old Peppersass* bringing up the rear blowing her whistle constantly. It is not known just exactly where, but three unauthorized persons climbed aboard the engine in addition to engineer Frost and his *(authorized)* fireman: Caleb Frost, son of the engineer, and two photographers, Winston H. Pote, who was known for his color prints nationally, and Daniel P. Rossiter, who took pictures for the state publicity bureau and Boston & Maine. *(See Appendix Sec. 20 - The Hero's Odyssey)*

The engine had no problem climbing up across Jacob's Ladder to within a half mile of the summit *(Gulf Tanks)*. It went no further because it would have delayed the six other trains already at the top. *Peppersass* started the descent, but only went about a half mile when suddenly a tooth broke out of one of the gear wheels. The engine jumped up and landed to the right of the cog rail out of mesh. Suddenly the locomotive began to gain great speed. The engineer and fireman tried to slow the speed of the engine with no success using the hand friction brake. Frost yelled to his son and the fireman to jump, which they did to the rocky hillside below suffering some broken bones. Still trying to grab one last photograph of the doomed engine, Winston Pote was still focus-

ing his camera* *(See Sec 24 for Pote's account of the accident)* as he jumped head first into mid-air and jagged rocks below smashed his jaw. Daniel Rossiter who was even more panic stricken hung to the engine for over 1,500 feet before it plunged off the trestlework. Rossiter fell to an instant death while *Peppersass* exploded* *(Ed note: boiler did not explode - see Sec. 20 for investigation report)* upon impact scattering debris for hundreds of feet around.

Fortunately, in the cog railway system of operation the passenger coach is not coupled to the engine, but is pushed up the hill resting on a buffer plate affixed to the front of the locomotive. Then it leans against the engine on the downward trip. By the combined efforts of the train crew using the hand friction brakes on the coach, its downward movement on the steep incline was checked. All the more than 50 passengers could do was watch in horror as *Peppersass* disappeared over the trestle in front of them with a mighty explosion.* *(Ed note: Peppersass pushed no coach that day, did not explode and only a handful of people, including Rev. Guy Roberts saw the engine wreck. This description appears to appropriate details from the 1949 accident recounted by Johnson later in the article.)*

The passengers in the coach were able to thread their way along the trestle and climb down to safety. Later on, parts of *Peppersass* were salvaged and put on display at the Base Station.

Another unique form of transport on Mount Washington was the slideboard, a forerunner of today's concrete slides *(alpine slides)* which have been installed on several mountains in New Hampshire and Vermont. Sliding down Mount Washington after a long day's work was a quick way for the track and maintenance men to get back to the boarding house at the Base Station. The slide board consisted of a wood strip about three feet long and a foot wide, which was made to slip over the cog rail. Two friction brake handles with pieces of metal attached to the ends were mounted on either side of the board so that they would fit under the flange of the cog rail. Upon squeezing the handles toward the body one could control the speed at which one descended the mountain.

No one but the workers were permitted to use the slide boards. The average time to cover the 3½ mile route to the Base Station was about ten minutes, but Jack Frost held the record for quick descent at two minutes and 45 seconds.* *(Ed note: A number of Coggers of earlier vintage also claim taking the record-making slide including Dorvigny "David" Joseph Vachon 1891-1892)* This was quite a ride at over 60 mph! These boards required the utmost experience and strength to be operated safely and unfortunately a few fatal accidents caused them to be banned from use in 1930.

During the summer a daily newspaper called *Among The Clouds* was published by Henry M. Burt in a print shop in the Tip Top House for thirty-one years *(1877-1917)* * *(Printing moved from Tip Top to a specially built building in 1884. That print shop burned in the 1908 fire. When publication resumed, Among the Clouds printing was located at the Base Station)*. Twice each summer a special illustrated version of *Among The Clouds* was issued. As a publicity stunt, *(and)* to speed the newspaper to its readers *(for special coverage)*, experienced slide board men were employed to rush the newspaper down to the Base Station where a waiting wagon was ready with a team of horses to speed the papers to Bethlehem and Fabyan to make the first train downgrade to North Conway. Thus its readers had some reading ma-

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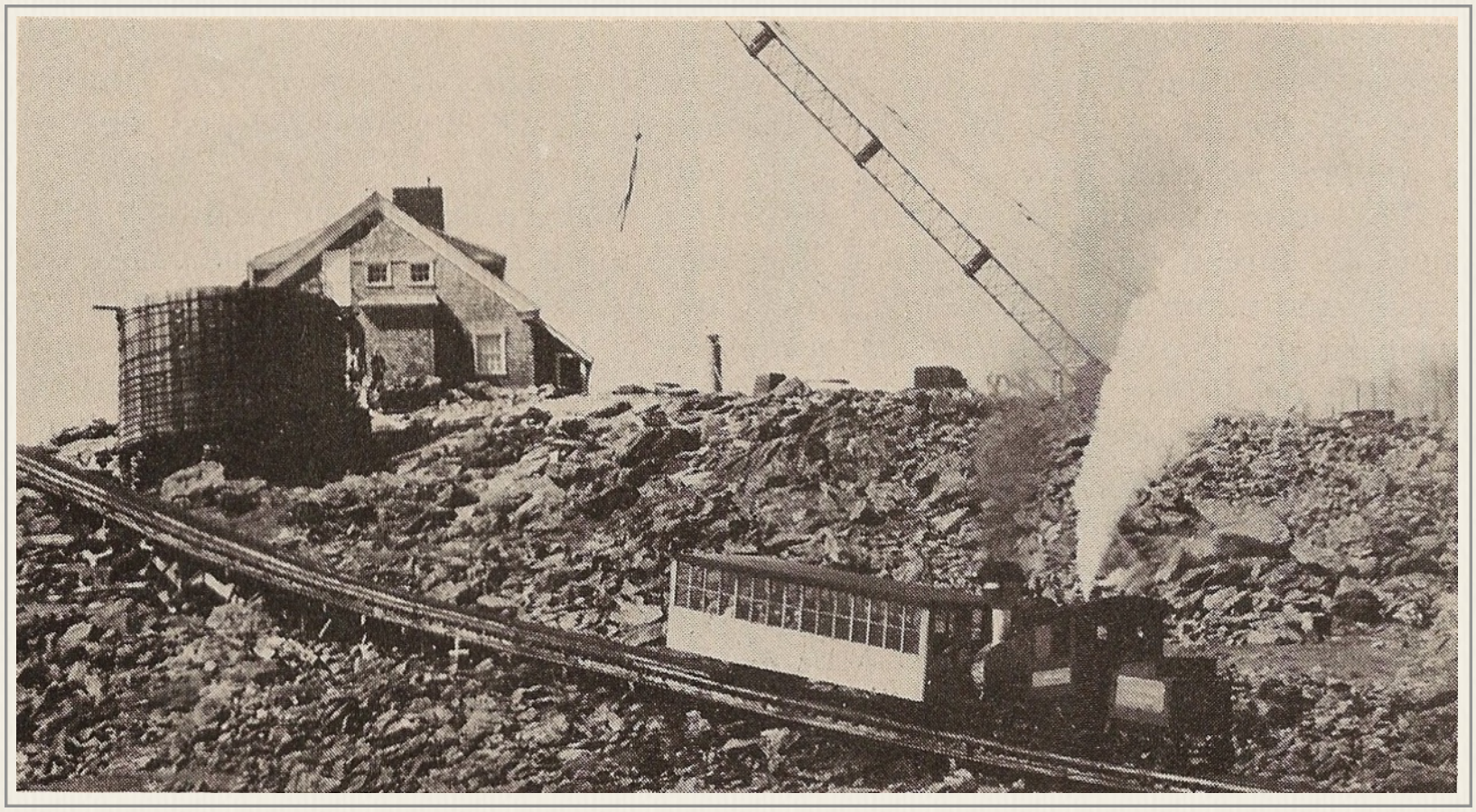


terial before breakfast, gaining an edge over city newspapers.* *(Ed note: the so-called "newspaper train" of slideboards were to speed distribution of the papers to the hotels in towns that held "coach parades" - see Appendix Sec. 8 - Devil's Shingle)*

Over the years many of the famous wooden hotels in the White Mountains have been lost due to spectacular fires and so went many of the original buildings on the summit. On June 18, 1908 after workers had finished their day's preparation for summer visitors and went home, fire broke out in the Summit House destroying all structures except for the Tip Top House and two old barns. That same summer the stage office was rebuilt with bunkroom space. At the same time the Tip Top House was thoroughly renovated. The Summit House III was built in 1915 and remains today *(1980)*.

A fascinating, never realized, pipe-dream put forward by President Mellon of the Boston & Maine Railroad between 1910-1913 was an electric railway circling Mount Washington three times before reaching the summit. This $2,000,000 project was to include a large circular stone and steel hotel capable of sleeping several hundred persons plus a dining room which could feed 300 to 400 persons. Several groups fought this plan figuring it would spoil the scenic look of the mountain. This opposition coupled with the poor financial condition of the B&M led the plan to be permanently curtailed.

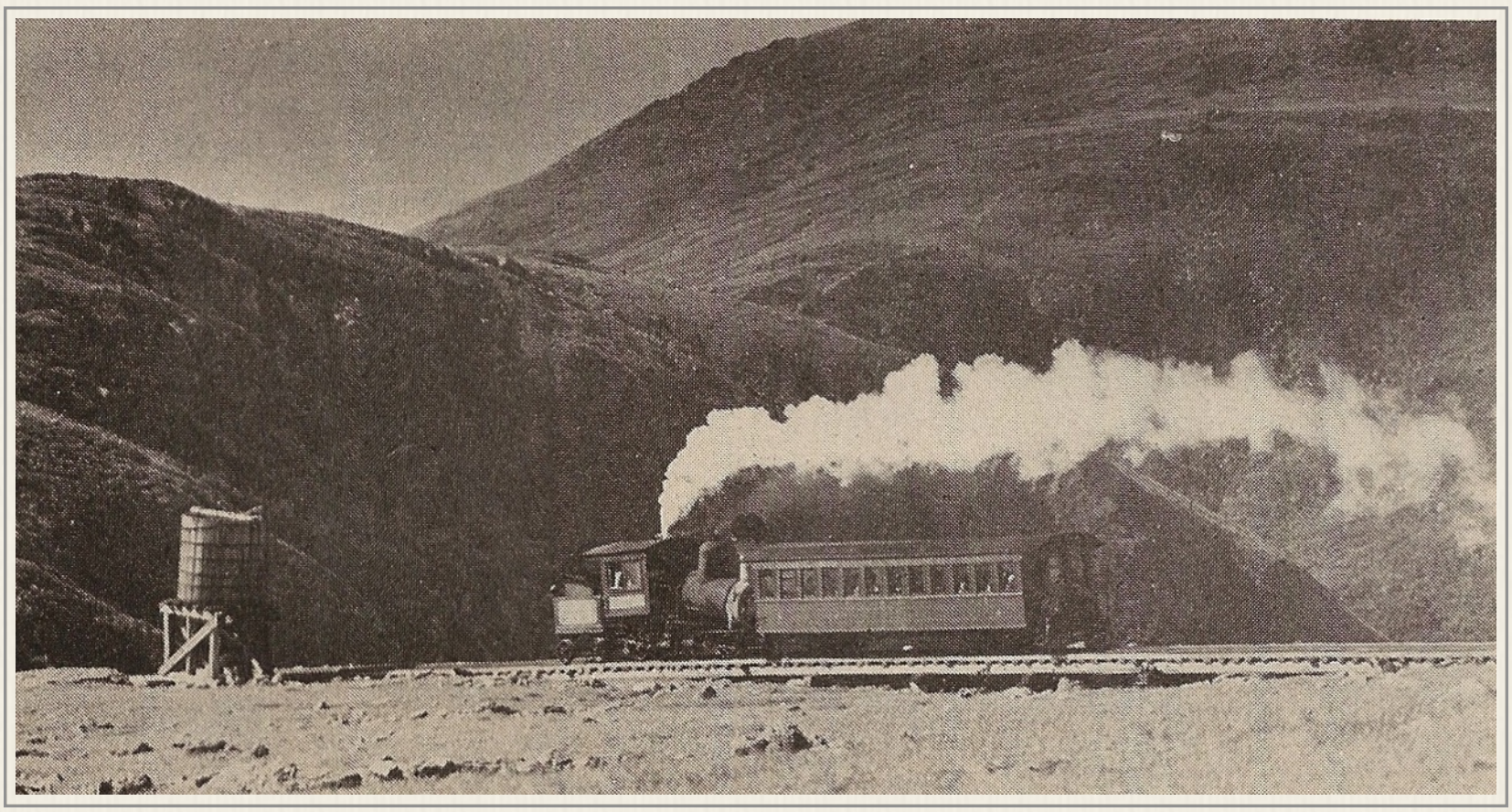
By 1930 the Boston & Main Railroad had had it with the albatross cog railway. Since the line operated only three months out of the year, they found it impossible to show a profit with high maintenance and building costs escalating each year. Casting about for possible operators of the mountain railway an offer was first made to sell it to owners of neighboring hotels. The offer was declined, but the B&M received a valuable lead from the manager of the Crawford House, Colonel William A. Barron, who suggested that they find a "circus promoter"; a man who could

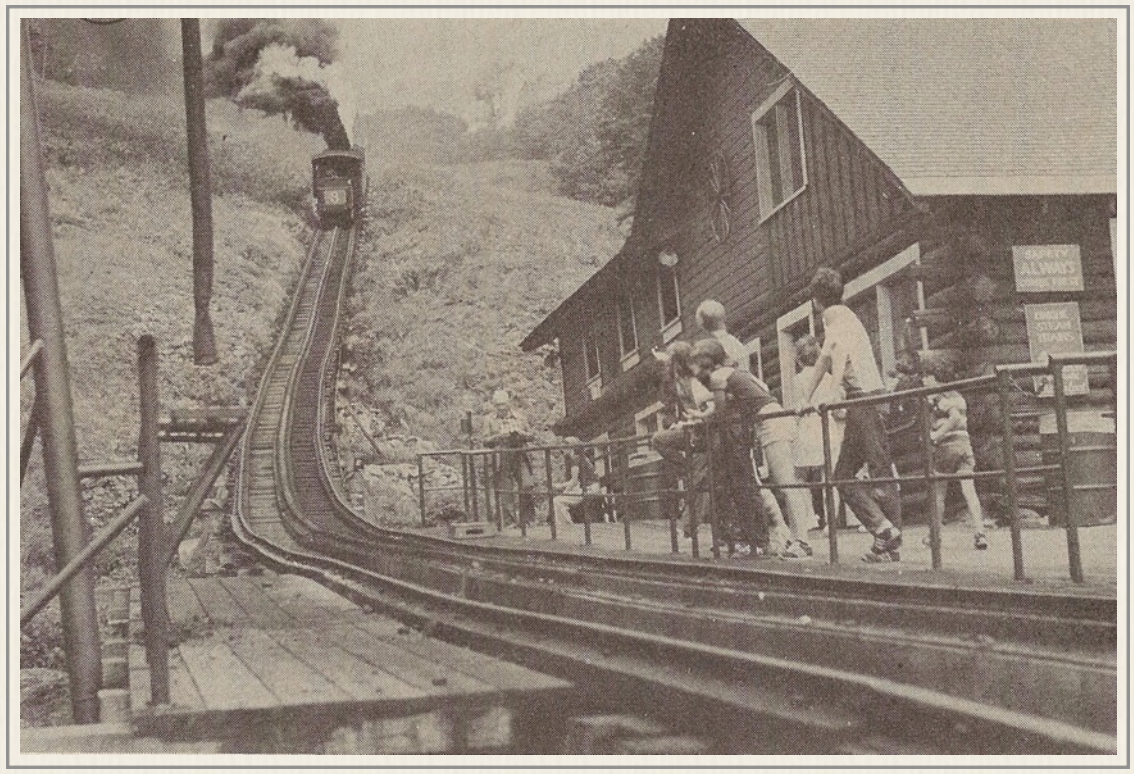
put some razzle-dazzle back into the operation. The Boston & Maine finally found a man who was well suited to the task of putting the railroad back on its feet.

Upon first notice of Colonel Henry N. Teague he seemed an unlikely candidate for the ownership and presidency of the cog railroad, since he had no previous railroad background. The Colonel did have great initiative, courage and foresight. Born on Mount Desert Island, Maine on June 2, 1875, Teague soon gained fame as a skillful financier and speculator. At one time he profited greatly from the Florida land boom of the 1920's, but then in turn lost a bundle when the bottom fell out of the land market. He gained his honorary title of "Colonel" when Governor Winant of New Hampshire appointed him to his staff.

When approached by B&M officials about taking control of the railroad including two hotels, the land on the summit, and buildings and land at the base, all Teague could say was that he was broke. Officials still had great faith that he could turn a profit on the project if anyone could. They even went as far as putting $10,000 in the bank when Teague said he didn't have enough of his own private funds to meet operating expenses. Strange as it may seem the B&M took his IOU note and Teague took title. As soon as Teague took charge of the operations in 1930 the B&M wasted no time in cutting its umbilical cord by abandoning the branch *(line)* extending from Fabyan to the Base Station. Now would the baby survive?

Teague had a monumental task ahead of him in that he had to turn the previous schedule of two trains a day into a train every hour. In addition, he had to train a whole new crop of college age students as engineers, firemen, brakemen, and conductors. In the first few years the mountain railway had to contend with extremely changeable weather patterns. At times the gray clouds, rain and wind drove away many potential tourists, but business greatly picked up on occasional sunny days. To some outsiders Teague seemed very brusque and overbearing, but his rail-





road family knew he had a deep concern for people and in turn desired affection back. "The Colonel", as Teague was known to railroad employees, was a generous man when it came to extra bonuses at the end of the year and many times the extra cash for the college students made the difference between a lean or a comfortable year.

For a short-time public bus service was run from Fabyan to the Base Station, but this was soon dropped as the use of private automobiles came into vogue. With this new method of tourists reaching the Base Station a corresponding way of appealing to the new individual mobility had to be made. Before the depression of the 1930's the visitor was content to spend several weeks at one of the famed White Mountain hotels, but this type of business evaporated, replaced by a much more mobile individual who was more interested in dashing around in his own car sampling as many of the scenic attractions in a short period of time at the least cost. Teague met this challenge by building new roadside cabins for overnight visitors* *(Ed note: B&M leased land to Crawford House owner Col. Billy Barron to build the first tourist cabins at the Cog - the Kro-Flite Kamp - researched & described by Rob Bermudes)*, putting up direction signs along throughways, passing out folders throughout the White Mountains, giving out passes to other tourist attraction owners, and visiting every convention within driving distance. Coupled with a reduction of fares *(in 1927 it cost $6 for round trip Fabyan to Summit and return - in 1931, $3 round trip on the Cog alone)*, the long hours of drumming up new business paid off to such an extent that patronage doubled on one August day in 1936 when 659 passengers were carried on a total of 19 trips.

Just as things seemed to brighten up for the cog railway, disaster struck on September 21, 1938 when a hurricane unleashed a force which closed both Franconia and Crawford Notch as well as destroying Jacob's Ladder and a half mile of trestle. Undaunted by this seeming catastrophe, Henry Teague started the task of rebuilding with a fervor. Using borrowed funds, Jacob's Ladder was completely rebuilt in five weeks so that trains could operate the length of the line* *(Ed note: trestle was replaced so trains could run to the top of Jacob's Ladder, but the Long Trestle would not be replaced until the following spring)*. By Spring of 1939 a new, large log cabin structure had been built at the Base Station to replace damaged structures. *(Ed note: Construction of the Marshfield Base Station was underway in 1938 when the hurricane hit.)*

It remains today containing a restaurant, gift shop, and two of the largest fireplaces in New England. There is hardly a day goes by when these fireplaces are not in use, helping to warm visi-

tors during New England's fickle weather patterns. Thus it was that the mountain railway was able to continue its unbroken record of operation since 1869 except for the war years of 1918 and 1943-45.

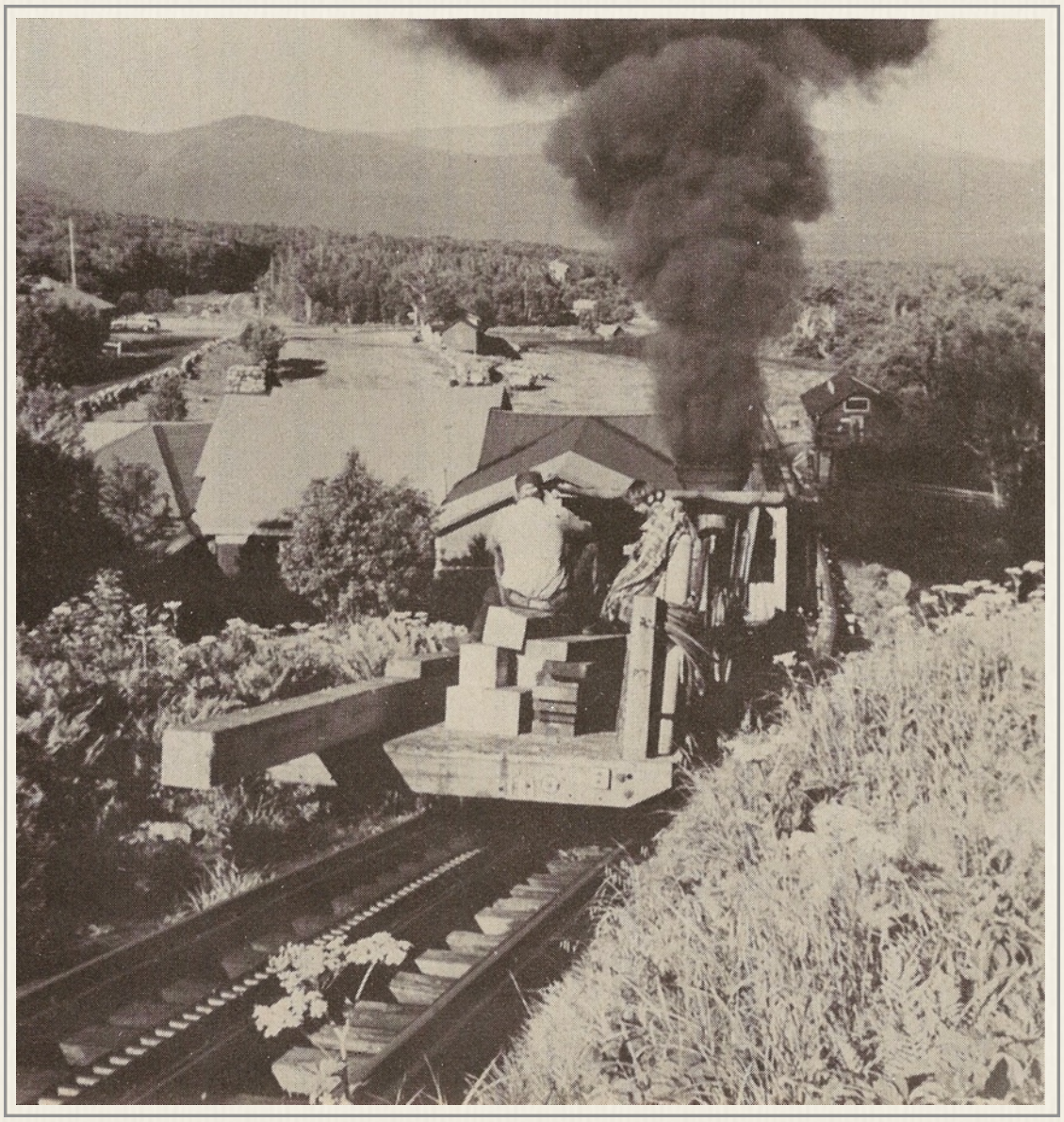
When Henry Teague was traveling south to Florida in 1931, stopping at various colleges to recruit summer help he chanced to meet a bright, talented student named Arthur Teague. Although of no relation to one another the close friendship which developed was to become a great asset to the cog railway. In 1932 Henry asked Arthur Teague to join his operations, and he turned out to be an extremely valuable person and eventually became manager, president, and owner of the railway. Col. Arthur S. Teague gained his rank in World War II. Many labor-saving and cost-conscious projects were forwarded by Arthur Teague. One of the most intriguing developments was the method by which fresh water was pumped to the summit. Previously, a large steam pump in the company shop kept water pumping constantly but consumed fuel at a wasteful rate as well as keeping two men busy stoking the fire. Arthur Teague installed a Pelton water wheel, which harnessed the power of a mountain stream coming down the steep mountainside. A generator was activated by the water wheel which in turn pumped water to the summit tank and in addition supplied all the electric current needed by the Base Station. This same system is still in use today.

Still another maintenance problem was overcome by the younger Teague. It seemed that the twelve-tooth pinion gears meshed to the two crankshafts of each locomotive frequently required replacement because of the heavy strains involved in running. Arthur Teague redesigned the assembly so that now the shaft and gear are made from a single piece of chrome molybdenum steel.

In spite of the relative safety of the locomotives new safety features have been added since the days of the *Peppersass* accident. Devices which dig into the road bed assure the stopping of a runaway engine, although will do considerable damage to the trestle.***** *(Ed note: the "device" was the existing large spur gears on the engines. This part of the locomotives drive train became a "safety device" after the accident recounted next).* This safety feature was put into use on July 14, 1949 when one of the engines descending from the summit a little above Jacob's Ladder broke one of the two rack gears and started to pitch down the mountain at a fearful rate leaving the little coach filled with passengers behind on the trestle. The engine plunged over 1000 feet down the track before it could be stopped *(by the broken ties clogging up under the engine - it had happened just once before on August 22nd, 1978 when the Geo Stephenson ran away on Cold Spring Hill while bringing the broken engine Cloud down to the Base. The so-called safety device helped tip an engine off the track during the September 1967 accident).* Meanwhile the passengers walked down to the halfway mark where another engine took them to the Base Station.

Another innovative improvement came in 1941 when sidings were installed at the Base Station, Waumbek Tank and the Gulf Tank. Previous to this all cog railways had been strictly one track lines. Now a number of trains could be operated safely on the line at once. With the help of 1.awrence Richardson of the B&M engineering department Arthur Teague developed a type

of switch which allowed trains to turn onto a siding smoothly still meshing with the cog mechanism. The switch can be operated by one man and requires nine separate movements of switch components each time a train passes over the switch in either direction. A switching maneuver takes about five minutes to complete.



When Henry Teague died in 1951, Arthur Teague took over as manager and the land and railway was bequeathed to Dartmouth College. This stipulation was included in Henry's will because after the hurricane of 1938 'The Colonel' turned to his alma mater for a substantial amount of rehabilitation funds.* *(Ed note: Teague actually borrowed the purchase funds from Dartmouth in 1938 because that is when he actually purchased the Cog - the B&M had held the stock and reported returns until that year. The Cog crew rebuilt the trestle from lumber (probably fallen or recovered from storm damage) in the area, according to Rob Bermudes' conversations with Pliney Granger - part of the reconstruction team. Bermudes also found a September 26, 1938 letter written by B&M president E.S. French to Dartmouth College president Hopkins as damage from the hurricane was being assessed. "Henry Teague has been in this morning," wrote French "and I think I have him straightened out. His damage isn't too severe. I imagine that a loan of $15,000 - perhaps $20,000 - which can be arranged will undoubtedly put him shipshape, possibly this autumn. In other words, you can dismiss any worry from this source.")* After two years of negotiation the college sold the Marshfield property and the cog railway in November, 1962 to Arthur Teague who became owner as well as manager. The college retained ownership of the summit until March 30, 1964 when the state of New Hampshire legislature voted to purchase the top 56 acres as a part of a scientific and recreational package for future generations to enjoy. Remarkable credit should be given again to Sylvester Marsh and Walter Aiken for designing and building a railway which still uses the same engines, equipment and track installed over a 100 years ago.* *(Ed note: Remarkable in that Aiken now gets credit for the design & construction when his first involvement was building an engine that well and then managing the road)*. Although the equipment looks the same on the outside as it did a century ago the inner workings of each engine and coach have been thoroughly renewed and upgraded over the years. Since it is impossible for the railway to purchase off the shelf parts for its antique locomotives, the versatile shops at the Base Station must fashion all replacement parts on an as needed basis. In fact the Mt. Washington Cog Railway has one of the very few shops left in the U.S. which is ca-

pable of building a full size operating steam locomotive. Inside the Base Station shop there is a fascinating array of belts and pulleys which are used to operate the machinery. Outside, a transfer table shuttles the locomotives back and forth the half mile to the Base Station.* *(Ed note: the transfer table shuttles locomotives from their engine house stalls to the mainline. The loco's then proceed up to the Base Station.)*

The passenger coaches are of the open or closed platform type. In 1938, the first new passenger car was built in 40 years. Also at this time all cars were enlarged to hold 48 instead of 40 passengers. All the original 1870 coaches have been re-equipped with ball bearings. The wooden chassis have been replaced with steel. Inside, the coaches have been restyled and outside repainted to their original gaudy colors. In addition to the six wooden passenger cars the railway also possesses two aluminum and steel cars constructed in 1958* *(Ed note: No. 11 Chumley construction started in 1956 / debuted in 1958 & the No. 12 Thelma (Taylor Made) debuted in mid-Sept 1962)*. The new aluminum cars have rubber bumpers instead of wooden for a smoother push up the mountain. The brake drums are twice as wide as on the wooden cars to provide greater braking power.

As the attraction of the mountain and the lure of its unique form of transport to the top continued to swell the yearly tourist tabulations for the cog railway, Col. Arthur Teague started to cast about for a new steam locomotive to supplant the already overburdened half dozen engines who were struggling to meet the average of fifteen trips per day. When possible Teague would activate the seventh locomotive to handle the overflow, but many times one or more engines would be down for repairs so important fare paying passengers had to be turned away. No American locomotive builder would even consider building a new steam locomotive.

Teague finally went to the Dillon Steam Boiler Works of Fitchburg, Massachusetts to fabricate an all welded boiler to his specifications instead of the standard riveted boiler on all the older steam machines. Although the boiler arrived on the property in 1958, it languished for many years as the shop crew and Teague had no spare moments to give while babying the other old steam relics. At last in 1966 Teague ordered a frame and decided to go full steam ahead with the project. Unfortunately Arthur Teague died in 1967. Mrs. Arthur Teague, widow of the late Col. Teague was appointed president in that same year.

Capable shop hands continued constructing the new steam engine which was to be numbered 10. On September 24, 1972 No.10's firebox was warm for the first time. She was christened, *Col. ~~Arthur S.~~ Teague*,* *(Ed note: Col. Teague name used to honor both Colonels Teague - Henry & Arthur)* and was finished at a cost of $75,000. Today this locomotive provides powerful muscle and is a great steamer.

The present cog railway has not changed much from decades ago. College age kids from over 40 different universities devote their summer's efforts to running the antique trains. Of the 25 or 30 engineers, firemen and track repairmen, all are between the ages of seventeen and twenty-five.

An inside look into the everyday workings of today's cog railway is useful to get an appreciation of what it takes to keep the operation functioning properly.

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The state is building a new concrete visitors center with a glassed front and large restaurant to replace the Summit House, which has withstood the rigors of many harsh winters since it was built in 1915.

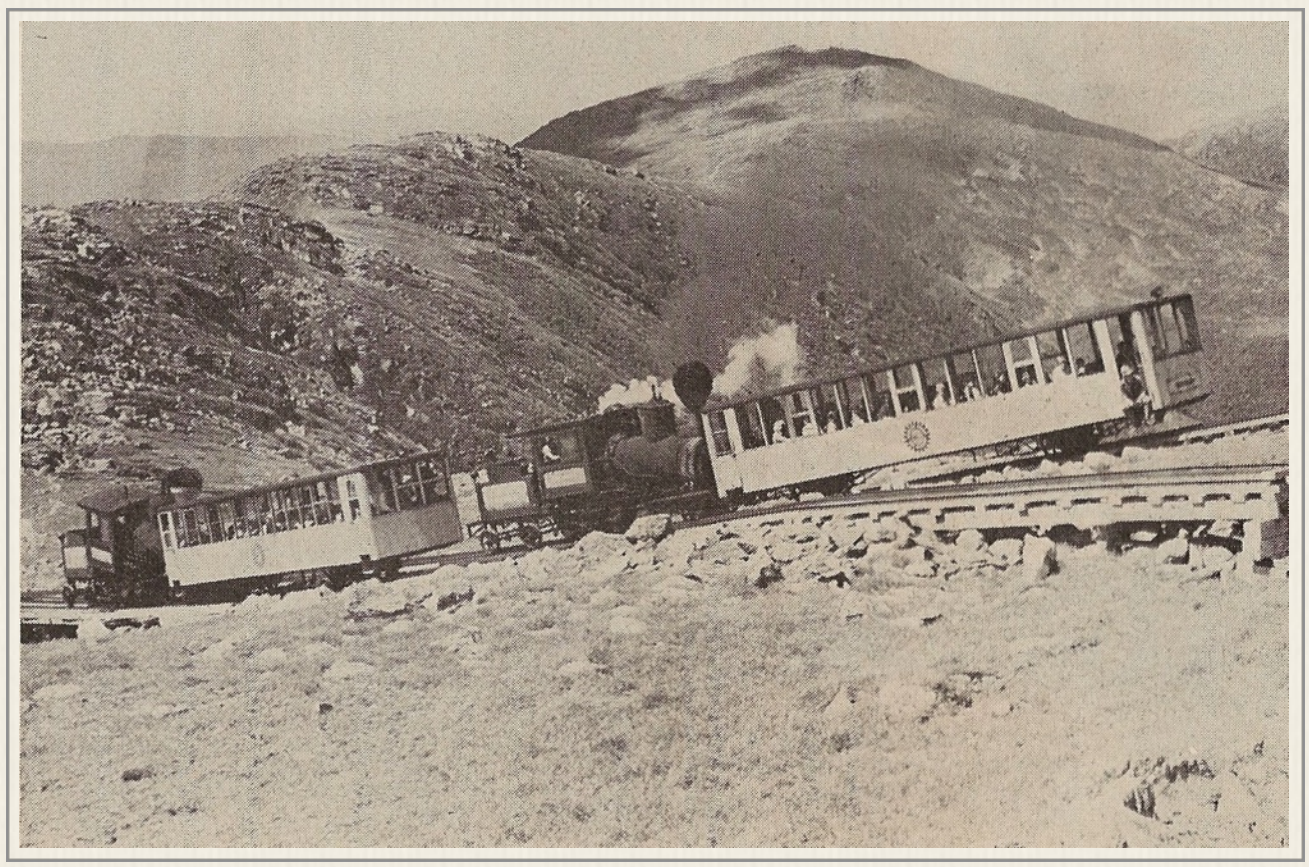
A little-known fact about the cog railway is that it is one of the few trains in the country carrying mail for which it receives payment. Thousands of postcards are mailed each day from the summit using the small post office located there. At the end of the day after the cards have been sorted, the mail bag is put on the last down train.

The cog line also handles some freight up the mountain especially when new buildings are being erected and has three flat cars to handle long loads which cannot be negotiated up the twisting Mount Washington Auto Road.

The 3½ miles of timber trestle is renewed constantly as harsh New England weather takes its toll on supporting timbers. Most of the heavy track and timber repair takes place before or after the main operating season. Beams have to be notched, holes drilled and cut so as to fit into existing trestlework.

The observatory on top keeps in constant touch with the cog railway as to weather conditions. Sometimes the fickle mountain weather can turn sullen at the drop of a hat. On April 12, 1934 the Observatory recorded a wind velocity of 231 mph, the highest ever recorded on earth.

It is quite an incredible sight for the steam-starved fan to arrive at the Base Station on any morning during the summer and see at least a half dozen steam machines lined up on the ready track. The early morning sun glints off the canted boilers with smoke and steam lazily rising from the area in the crisp, cool mountain air. During the last of June through August an 8 a.m. "early-bird" trip is run, with a train departure on the average of every hour afterward. The first crew of



the day is preparing their engine for the climb; tidying the fire, washing windows, boiler and cab, and giving the running gear a careful inspection as well as oiling moving parts.

The first expectant crowd of the day looks in awe at the steeply sloping track and the little engine which will propel them up that fantastic incline.

On the way up the mountain, it is the job of the fireman to keep 140 pounds of working pressure in the boiler with which the engineer can work. Wearing heavy gloves, a fireman scoops up the coal in a small shovel with one hand. In a second motion with his other hand he pushes down on the handle of the firebox door and spreads the coal perfectly into the firebox. For most of the hour's running time to the top the fireman will be flat out shoveling a ton of coal on the trip up the mountain. The locomotive will also gulp over 1000 gallons of water in its efforts up the rocky hillside. Arthur Teague was responsible for enlarging the tender capacities so now it is necessary to take on water only once, at Waumbek Tank on an upward trip.

The conductor-brakeman helps the passengers on board the coach and soon the train is underway. Sometimes two trains will follow one another on the same orders. One would think that the mighty effort up the mountainside would produce staccato blasts of the exhaust from the locomotive, but only gentle chuffs are heard. It doesn't take long to get into the meat of the grade at 25 percent. The tumbling water of the Ammonoosuc River is spanned just as the train leaves the station area and then is engulfed on all sides by stately red spruce trees. Soon these are replaced by wiry evergreens that reduce to twisted shrubbery at the timber line.

Above the timber line at the 4000-foot level a gray lunar type landscape is encountered with huge boulders leftover from the glacier age. The ride is somewhat bumpy as the cog wheel slips into the cog rail, but the visitor's attention is fixed on the peaks of the presidential range as they poke into view. One has plenty of time to feast on the scenic vistas as the train pokes along at a maximum of 4 mph. Traditionally the train stops on Jacob's Ladder at 4600 feet above sea level so that tickets may be collected. At this point the front of the coach is thirteen feet higher than the rear.

If the mountain is in a benevolent mood, travelers may witness vistas stretching for 60 to 90 miles in each direction at the top. No fewer than seventy-four bodies of water, from the Atlantic Ocean to the Connecticut River may be counted. Visible from the summit are numerous mountain ranges including the Green Mountains of Vermont and many of New Hampshire's White Mountains. Innumerable towns and cities are also in view.

It is highly recommended that the railfan spend at least several hours if not the whole day hiking along the cog right of way photographing the steady parade of up and down steam trains. Bring a top-coat as chilly winds can whip up at any time. One of the top spots for action on the half hour is the Skyline siding, a half mile easy walking down from the summit. As one relaxes on the grassy slope, in addition to spectacular mountain backdrops meets of up to three or four steam trains may be photographed. For the more adventurous hiker who does not mind scram-

bling down another half mile over a more rocky landscape, Jacob's Ladder trestlework is the scenic highlight on the line. One's jaw cannot help but drop as these unique steam engines shuffle up and down the tremendous grade with several smoke plumes always visible at any time on the route.

After a layover at the top for about twenty-five minutes the first train starts down after receiving orders from the dispatcher at the Base Station. Each train carries a field telephone which can be clipped onto the telephone wires running along the tracks to inform the dispatcher of the whereabouts of each train or in the case of any emergencies. The first down train usually meets the 9 a.m. up train at the Skyline siding; going into the hole so that the up train may pass. On certain busy times of the summer if there are three trains coming down from the summit the up train has to take the hole because the Skyline siding will only hold two trains. Then the first train will continue downward, holding the main line and meet the 10 a.m. train the Base Station at the Waumbek siding.

Coming down the mountain, the fireman's job is considerably easier physically than going up. He has banked his fire and keeps just enough steam in the cylinders to keep them wet.* *(Ed note: water is introduced from the boiler into the cylinders keep the pistons cool)* Compressed air in the cylinders acts as a brake. His primary job is to watch the track to see that all the safety features are working properly. If a big piece of coal has fallen on the track or some bystander is too close to the train he must be able to signal the engineer in time to stop the train. A signal line is hooked up to a bell in the coach so that the conductor can be warned if there is to be an unscheduled stop.* *(Ed note: the bell is in the engine's cab. The rope is to be pulled by the brakeman to stop the train not the other way around.)* This can happen when an engine has to pause to build up steam on the upward trip.

The conductor-brakeman going down has the hardest job as he is in charge of braking the coach on its downward journey. He constantly tightens and loosens the brake wheel attached to the huge brake drum, keeping the car just touching the engine. A ratchet like that on the engine can be activated if other braking fails, which will dig into the trestle.* *(Ed note: coaches do not have a spur gear that could chew up ties. They do have a ratchet for on the way up, but dropping it on the way down was considered a mistake as it would abruptly stop the axle the ratchet gear was attached to.)*

Arriving back at the Base Station at 10:45 a.m., the first train has just enough time to take on coal so that it can be the 11 a.m. run. Thus a round trip can be made every three hours. Each train crew makes three round trips per day or a total of nine hours working time. During the busy summer months the last train leaves at 5 p.m. or three hours before sunset. If there is a 5 p.m. train, a fresh crew is usually on hand to relieve the first crew from making a fourth trip up the mountain.

Generally a youngster starting out on the mountain railway will begin as groundskeeper *(or in the Marshfield kitchen/counter area)* and then work up to conductor-brakeman and eventually will become fireman or perhaps engineer.

Coal is handled into the locomotive's tender by means of a tractor dumping it from a raised platform. A hopper car of coal usually arrives at the Fabyan siding via the Maine Central Railroad where it is unloaded by conveyor belt and then trucked to the Base Station.

While passengers are waiting for the next run they may tour the small museum of early photos and memorabilia located in a large log cabin at the Base *(the former main building of the Kro-Flite Kamps complex)*.

The shops at the Base Station are capable of machining any part necessary to repairing a locomotive except for the boiler. At the present time, a new boiler has arrived on the property from a company in Pittsburgh in preparation for building a tenth steam locomotive. It will be numbered 8 (the second No. 8) and hopefully will be in operation before the 1979 season is over making a total of nine operating engines. Thus, the claim that the cog railway has the only shop in the free world still building standard gauge steam locomotives.***** (*Ed note: Technically not true. The gauge is best described as 4 feet 8 inches, not 8.5 inches.)*

The cog railway has flourished under Teague ownership and management and will continue to do so as Charles Arthur Teague, son of the late Colonel Arthur S. Teague, is now president and owner of the Mount Washington Railway Co. and in charge of operations. Mrs. Ellen C. Teague is chairman of the board and president of Marshfield Corporation.

Thousands of persons have ridden the Mount Washington Cog Railway over its 110 year existence and all would agree with P. T. Barnum's comment when he witnessed the view from the top: "The second greatest show on earth."

1981 - Selling & An Offer...

Ellen Teague writes in her biography that the mortgage with Dartmouth College that underwrote the family's purchase of the Mount Washington Cog Railway in 1962 was paid off in February 1981. The following month, she offered the property for sale at a reported asking price of $3-million. Mrs. Teague told Joe McQuaid's *Manchester Union Leader* it was time. "I feel fine now, but I'm going to be 68 in April," she said Tuesday *(3/24)*. "I've been running things for 14 years now and that's a long time." While her son, Charles, has helped manage the railway, he wants to pursue other interests, she said. "We might stick it out this summer and next, depending, but that will be it." Teague gave the state of New Hampshire first priority on the potential buyers list in 1981, but they were not interested. "We frankly hope it stays in her family," Department of Resources & Economic Development commissioner George Gilman told the paper. "It's an institution within the state and within the Teague family." Gilman said the state prefers to see the attraction remain in private hands, and that it will not try to outbid anyone for the railway. With State decision it was to find a buyer.

The Process

Railway attorney Jack Middleton enlisted the help of Manchester business broker, Phil Ryan. "I have spent probably five decades... representing various businesses in purchase and sale transactions," Ryan told Jitney Jr in March 2023. "And all of those are... under confidentiality agreements." The Holyoke, Massachusetts-native Ryan earned civil engineering degree at Worcester Polytechnic in 1965 after graduating from Holyoke High in 1961. Ryan got an MBA from Harvard Business School in 1970. He would retire as CEO of the Merchants Automotive Group. But throughout it all he had helped businesses buy or sell other businesses. The Cog Railway property was not new to the long-time White Mountains hiker and wholesale food distributor. "In 1970-71, I ran a company in St. Johnsbury called French and Bean... which was on Route Five between Lyndonville and St. Johnsbury." Ryan had also sold specialty lubricant to the Mount Washington Railway. "I was selling petroleum products for what was then, Standard Oil of New Jersey now ExxonMobil. (The Cog) needed some very special grease for a number of applications. I remember visiting the Cog Railway winter shop in Lancaster, New Hampshire... just off the Main street... where they would do the repairs... they had very specific applications that call for some unique formulations that we would prepare for them. I don't think we made much money on it because the quantities were small, but it was nice to be able to say, we're supporting the Cog Railway." While not naming names, Ryan did outline the process to find a buyer for the world's first mountain-climbing railroad. "We canvassed wide and broad both outside this country and in the United States... virtually everyone knew of the Cog Railway. It was an icon. We contacted a number of what I would call unique railroads... (with) unique experience for visitors and tourists... So that was... one category, and the second category... we contacted were what I would call the... entertainment experience businesses. You know... theme parks, local attractions... you can think of some of the ones... in New Hampshire for sure.... We didn't contact the Penn Central for sure... A few of them said, 'No, this probably really isn't for us.' But a number of them continued with

their interest... they signed a confidentiality agreement, (and) we began to disclose a little bit of the conditions, what capital expenditures might be required, how it's performing financially, et cetera. We didn't actually sell it like you would sell a piece of real estate, but rather it was, "Look, if you're interested... give us a letter. It's a non-binding letter of what your level of interest would be... How much you'd be willing to pay, what would be the terms and conditions, what would be the due diligence that you would have to do in order to satisfy yourself that... what you were thought you were buying was what you were really buying, et cetera. And we (would) negotiate with them... overpriced terms, conditions, and representations. We had a number of them who went... quite a ways along in the process." Ryan says Ellen Teague had some conditions for the sale as well. "One of the key criteria was that she wanted to pass this on to who she thought would likely be good stewards of this iconic New Hampshire landmark. It wasn't just a financial transaction for her. If we look back now, I would say that largely her wish has been fulfilled." Fulfilled by what was known at the time as The Littleton Group of John Rolli, Loxley Ness, Wayne Presby & Joel Bedor. "I'm not gonna say that they paid the most or they didn't pay the most, but... they were the ones who brought what I will call the total package... of price, terms, conditions." A question Ellen Teague, Jack Middleton and Phil Ryan had to gauge and answer during sales negotiations. "You know... try to look 'em in the eye and say, are we gonna feel good about this 10 or 20 years from now?" For Ryan, who owned a condominium in Bretton Woods for 26 years, was involved in and an investor in a lot of the real estate at the Mt. Washington Hotel, the condos, the rebuilding of both the 18 and 9-hole golf courses, the feeling these days is good. "I've been very pleased to see what the Mount Washington hotel, the ski area, the golf course, the residential development, and of course the Cog railway... have become." While Ryan honored the 1980 non-disclosure agreements, the Jitney Years Project has learned about some groups who considered making an offer.

The Ruggles Family

Cogger John Ruggles and his father, retired General John Ruggles, a Lyndonville, Vermont-native who fought alongside Col. Arthur Teague in the 22nd Infantry in Europe from D-Day to the close of the war considered buying the railway after Ellen visited the family in Arizona. "I remember the (sale) figure that my dad got from her... wouldn't sound like much in terms of money today," son John told Jitney Jr. "My dad would have been willing to work with us on it." But it did not come to pass. "My wife Marilyn, who is from Bartlett, N.H. said, "I don't want to be anywhere close to any of the family back east.' OK - end of discussion. We said no, we've got other things to do with life." Nearly a year later at the start of 1982, the Cog was still for sale. Ellen Teague told the Littleton *Courier*, she and Charlie "have plans for the mountain line's operation "this summer *(1982)* and next *(1983)*, depending," but they have a desire to end the Teague association with the Cog that began with the late Col. Henry Teague and continued with Ellen's husband, the late Col. Arthur Teague." *Courier* editor Jack Colby tried to help find a buyer in mid-May 1982 in his column, Mountain Musing: "There have been prospective buyers but no consummation has yet occurred so the Teague influence continues at least for this season. The Cog Railway continues to be a prime New England attraction luring visitors-of-all-ages, and if you know

someone with $3 million (the reported asking price) is all ready to continue its long service." On Monday, September 27, 1982, Ellen Teague met a Vermont couple, Frederick and Grace Herrmann about buying the railroad. Herrmann, a former Petco Oil Company in South Royalton, Vermont and Fairbanks Morse Scale Company of St. Johnsbury, Vermont executive, went home and sent Mrs. Teague the following business plan for her consideration. Two weeks later, Joel Bedor and Wayne Presby were on her doorstep, and Presby took his first ride on the Cog the last weekend of the 1982 season.

The Herrmann Family

Sept. 29, 1982

Dear Mrs. Teague,

Enclosed for your information is the business plan I drafted for the purchase of the Cog Railway.

I've asked Bob Wood to check my assumptions on the operating figures.

Since our meeting last Monday, I filled in some of the names I was missing on the Organizational Chart in your copy, by hand. Will see you over the weekend.

Very Truly Yours,

Fred Herrmann

Acquisition Business Plan For:
Mount Washington Cog Railway
Prepared by Frederick Herrmann

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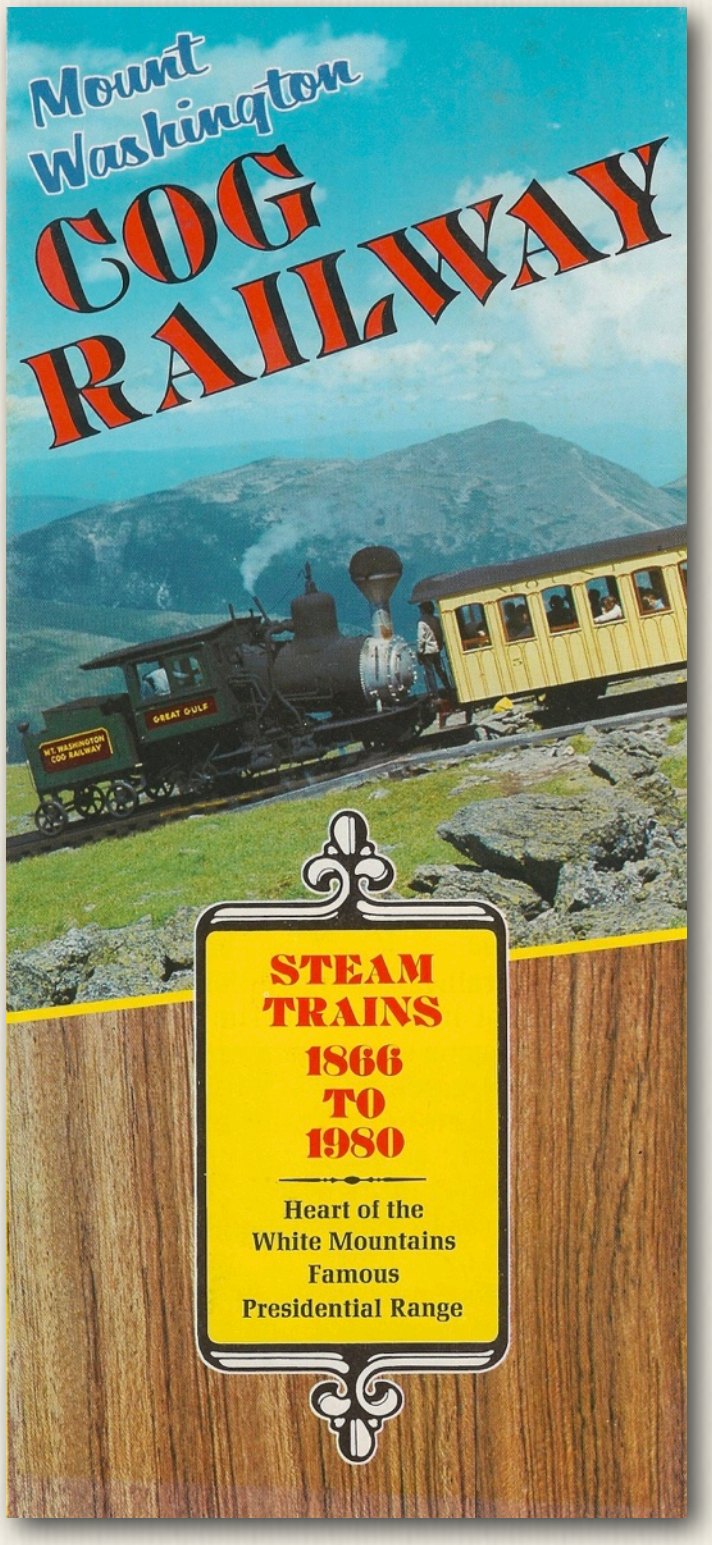

ii. BUSINESS PLAN SUMMARY

The intent of this plan is to convince potential investors that:

A. The Mt. Washington Cog Railway is a worthwhile investment, and

B. Frederick and Grace Herrmann are the right people to own and operate it.

The Mt. Washington Cog Railway has been the keystone of the New Hampshire tourist industry since its beginning 100+ years ago.

Although successful, it has produced only a modest profit in recent years. A review of past financial data would suggest that this was the result of a management style and expectation that consumed much of the money in improvements and staff benefits. Also, debt burden was light. The pro forma budget certainly suggests the gross profit dollars are there to be managed.

An investment of $700,000 capital plus $100,000 operating is required to purchase the corporation at the agreed-upon price of $850,000. The Teague family will retain an as yet to be quantified percentage of the corporation's stock in return for the $150,000 equity.

Section 7 of the business plan provides detailed information on the intended management team. I n summary, Fred and Grace Herrmann will be the on-site general management. Fred Herrmann has a 20+ year management background in the manufacturing and retail industries. Here is their approach to managing the business:

Although no major changes seem immediately necessary or appropriate, minor changes in labor utilization and management style will be made. They will assume control of the business, begin instituting obvious operating improvements (as detailed in Section 6) and accelerate these improvements proportional to their learning.

Although "turnaround" seems too strong a term to apply to a reasonably successful business, each year's plan will be a high-side expectation, planning to allow adjustments as opportunity or adversity dictates.

1. THE COMPANY AND ITS INDUSTRY

Investment Opportunity

One hundred (100) percent of the stock of Marshfield, Inc. and its wholly-owned subsidiary the Mt. Washington Railway Company is available for acquisition at a price of $850,000.00. Mrs. Ellen C. Teague is President of Marshfield, Inc., and 100% of the stock is now owned by members of the Teague family.

As a result of the new revenue act of 1982, signed by the President in August, it appears most desirable to simply purchase the stock of the existing corporation. (The act allows a new set of depreciation standards to be generated as a result of a majority transfer.)

Description of the Business

The internationally known Mt. Washington Cog Railway has operated since 1869 from the base of Mt. Washington, New Hampshire. The Cog Railway is an internationally known tourist attraction, and it is the only wooden trestle, steam-powered cog railway operating in the world. The base area attracts an estimated 300,000 to 500,000 people annually, and approximately 30,000 people choose to take the trip to the summit of Mt. Washington, the highest mountain north of the Carolinas and east of the Mississippi.

The Cog Railway base area, near the historic Mt. Washington Hotel in Bretton Woods, is mainly self-sufficient with water pumps generating electricity and sending drinking water to the top of the mountain. Currently, there are six engines and six coaches used for the Railway (and one engine and other coaches as work-in-process).

Real Estate and Buildings

Real estate and buildings that are owned by the corporations consist of the following:

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1. Thirty-six (36) acres at the base, which was surveyed less than three years ago.

2. Marshfield, Inc. owns 2,700 feet straight up the Railway, with 49 feet on either side of the track.

3. From the 2,700-foot mark, continuing to the summit, the corporation has as exclusive right-of-way for the railroad.

4. A plot 80 feet by 200 feet abuts the new $4 million state-owned Sherman Adams summit building.

5. The Marshfield building at the base serves as general offices, gift shop, and restaurant facilities.

6. Twelve (12) tourist cabins are rented to the public.

7. A two-story home occupied by Mrs. Teague.

8. Two (2) three-floor dormitories used by the summer employees.

A large engine shop with track switching ability, as well as car barn and supplies barn. Also included in the fixed assets are all the dies, castings, machining equipment, etc., which are used to make and repair the rolling equipment.

2. PRODUCTS, SERVICES AND FACILITIES

There is no competition per se. There is no other cog railway in the Eastern United States. Competition exists in the form of other tourist attractions, which all compete for a given tourist dollar. Market share can be heightened, and that is detailed in Section 4.

Here are the revenue producers at the Railway:

A. First, the Railway itself. Approximately 30,000 people ride the train to the summit annually. This figure is the low average for the past three seasons. It is a primary result of the volume of tourism. Weather is also a factor. The number will climb again to 40,000 as the economy and therefore tourism improves. (Gasoline is not now a factor and is not anticipated to be one.)

The railroad (at 30,000+ passengers x $20.00 = $600,000+) is the primary revenue producer and the "core product" of the entire operation. It is unique to the tourist, who is pushed up 3.2 miles of track to the summit of Mt. Washington (el. 6,288 ft) by a coal-powered steam locomotive.

The Mt. Washington Cog Railway is the oldest, mountain-climbing cog railway in the world, and has operated steam trains continuously since July of 1869, with the exception of the periods of World War I and World War II. This railroad is located on the western slope of Mt. Washington, beginning at the Base Station at a mean sea level altitude of approximately 2,600 feet, running along a ridge between Burts Ravine and Ammonoosuc Ravine to the summit of the mountain at an altitude of 6,288 feet. The main line railroad track beginning at the Base Station rises in altitude approximately 3,700 feet to the summit, or at an average of 1,200 feet to the mile. This is the only railroad in the world whose main line is built entirely on wooden trestle work containing approximately 700,000 running feet of timber, and about 60 tons of steel. The gauge is very near standard at four feet eight inches, employing an open central rack rail. The track itself is supported on longitudinal stringers, placed upon stanchons or wooden bents spaced 12 feet apart.

These are numbered from 1 to 1,200, number 1 being at the Base Station and number 1,200 at the summit. The average grade of this railway is 25%; however, many portions of the track exceed 30%. The steepest grade is attained at a point known as Jacobs Ladder, a high trestle, high on the mountain, at an elevation of 4,600 feet which has a grade of 37.41%. There are 3 turnout switches into dead-end sidings to facilitate passing trains; one is located at the Base Station, the second at Waumbek Tank, and the third at the Skyline. These track switchers are the most complicated railway track switchers in the world, requiring nine separate hand movements. From the Base Station the track leads down over a gentle slope about a quarter of a mile to the Engine House and shop area. Along its length is a coal bunker and ash pit, and locomotive service area.

The land extends 49 feet on either side of the railway track, up the side of the mountain as far as the Lizzie Borne monument, a few hundred feet from the summit. This comprises a total of 30 acres. In addition, the land at the Base Station complex is a total of 36 acres. Most of this land is cleared except for a smaller forested area. The standing timber is estimated to cover approximately 10 acres. The total area which includes the land along side the main line track and the Base Station is a total of 66 acres. The 36 acres at the Base Station is suitable for expanded business enterprise and commands a magnificent view of the mountains to the west. All of the land is surrounded by the White Mountain National Forest.

Some distance away are the Engine House, Shop, and Car Shed. The Engine House is approximately 100 feet long, containing eight stalls with large doors for the storage of steam locomotives. The main portion of this building is about 40 feet deep. A Machine Shop is attached to one end of this building in the form of an L, and extends the 40-foot dimension to about 90 feet on one side. This area of the building contains many pieces of machinery. There are two lathes, one of which is approximately a 10-foot bed, used or known as an "axle lathe"; the second is somewhat smaller dimension. There is a large rotary table drill press, a planer, and a milling machine, and two small drill presses. All of the machines are operated from an overhead belt line shaft, propelled by a water wheel. This water wheel also propels a water pump which pumps fresh water to the summit of Mt. Washington at a pressure of 1,800 pounds per square inch. This water wheel also drives a DC generator providing DC electric power for much of the Base Station complex. This incorporates a servo mechanism for the control of the water turbine for controlling generator output. It also has an electrical voltage control. There is an office area in this building along with a small parts room. There is a considerable quantity of tooling and appliances applicable to the machinery mentioned in this shop. There is also a quantity of hand and power tools, such as drills, sanders, air hammers, air drills, and an air-operated winch. There is a gasoline-powered 6-cylinder, 300 amp arc welder, plus a 2-cylinder, 225 amp smaller arc welder usually used on the work train. Also, there is a hot water cleaner unit. There are also many smaller tools such as bench grinder, hand drills, and hand tools.

The Car Shed, located directly opposite the Engine House, contains eight stalls for the storage of the railway coaches. The equipment in this building includes: a table saw, two belt sanders, one finish sander, router, skill saw, hand-operated drill press, as well as spare material for the passenger cars such as paint, window glass, etc. This building is about the same length as the Engine House storage area, about 100 feet long and 40 feet wide.

Behind the Engine House and shop area is the Storage Barn, a wooden structure approximately 30 feet by 60 feet. It contains a small Oliver gasoline-powered bulldozer with plow blade, a hydraulic press of 300 tons capacity, an automatic threading machine for boiler stay bolts and track bolts, and a vertical turret lathe (this particular item is not now in use).

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Behind the Storage Barn is the Pattern House, a one-story wooden structure, measuring 8 feet by 16 feet which contains all of the patterns for the casting of the locomotive and car parts.

Behind the Pattern House is the Pump House, a corrugated metal building measuring 24 feet by 21 feet and containing two stationary steam engines, each fed by a separate boiler. This building and its equipment have not been in use for a number of years. At one time, it was used to pump water from the Base Station to the summit of Mt. Washington.

There is also a wooden building measuring 24 feet by 35 feet, which is used to store material not generally in use. Nearby is another small storage building measuring 15 feet by 20 feet with a cement floor and large doors, containing a pneumatic press and various kinds of small equipment.

The Railway also owns three wooden water tanks. One is located at Waumbek, the second at the Great Gulf area, and the third on the summit. There is a small coal bunker located in the Great Gulf area, which is not now in use. This completes a rather brief description of the real estate, inclusive of the buildings of the Mt. Washington Railway.

Rolling Stock

The motive power of the Mt. Washington Railway consists of six 4-cylinder cog-wheel steam locomotives, which have names as well as numbers. Number 1, *Mt. Washington*; Number 2, *Ammonoosuc*; Number 3, *Base Station*; Number 4, *Summit*; Number 6, *Great Gulf*; Number 9, *Waumbek*; and Number 10, *The Colonel Teague*. Although these locomotives vary very slightly in weight, each is about 18 tons. All but Number 10, The *Colonel Teague*, were built by the Manchester Locomotive Works. Number 10 was built at the Mt. Washington Railway Shop in 1972, and is the newest steam locomotive in the United States. Locomotive Number 6, *Great Gulf*, is not now in service due to a defective boiler. The Speeder is a small, 4-wheel track vehicle, powered by a 25-horsepower gasoline snowmobile engine used for track maintenance and water pipe maintenance. Additionally, there are two track maintenance flat cars.

There are eight passenger coaches, six wooden coaches of varying age, and two new coaches made of aluminum. Each of the six wooden passenger coaches have a seating capacity of 48, and each of the two aluminum coaches have a seating capacity of 54. These two aluminum coaches are not numbered but are named, Chumley and Thelma. The six wooden passenger cars are numbered One, Two, Four, Five, Six and Seven. The Number 1 coach was built in 1870 and much of the original car remains and it's believed to be the oldest in-service railway passenger car in the United States. All are serviceable. There is a partially completed new locomotive Number 8, named *Tip Top*. At the current state, it consists of a boiler on a frame, with a partial running gear; it has no cab or steam fittings and will be completed in 1983.

At the present time, there is a considerable amount of good quality replacement track timbers, which will gradually be depleted as repairs progress. There are also several items that may be classified as interesting assets. The largest and most prominent is the original locomotive built by Sylvester Marsh in 1866, the oldest and the slowest mountain cog railway locomotive in the world, known as *"Peppersass."* This engine has a long and glorious history and is deeply embedded in the history and the lore of Mt. Washington, and now rests on static display at the Base Station. Additionally, there are several artifacts or items of interest in the form of old parts of locomotives, tools, and equipment from the old days such as head lights and old smoke stacks from the vertical boiler engines which are at present in storage.

B. Next is a description of "Marshfield House."

This entity produces revenue from two operations--the restaurant and the gift shop.

The gift shop, at $125,000 in sales, is an area of potential improvement. Grace Herrmann will assume managerial responsibility, thereby reducing the direct labor. In addition, the product line will be expanded from souvenirs to include quality gifts, such as merchandised at the Trapp Family Lodge gift shop in Stowe, Vt. This will increase revenue, as gifts will cater to the dollar not now available.

The restaurant operation, at $60,000 sales, operates at a loss. Part of this can be attributed to employee meals. New accounting procedures will be introduced to more accurately assess this cost and equitably assign it elsewhere, allowing for a better measure of operation. Grace Herrmann will also manage this operation, but no wage reduction is planned here, as there is currently no food service manager.

Another area of improvement in food service is a good cost analysis on the food sold, with the intended result of selling individual food items in line with production costs.

A third area would be to "merchandise" the food offering in a more interesting fashion. Different signs, different food, etc.

The Marshfield House, located at the beginning of the main line, is a large two-story log structure with a gable roof extending to the first story. This building measures approximately 70 feet by 105 feet. It contains a fully-equipped kitchen with large oven, a stove, two grills, two hot water heaters, and a walk-in refrigerator. There is also the gift shop and a cafeteria capable of seating 50 persons. There is a large central lobby extending to the roof, which contains a lunch counter and two large fieldstone fireplaces contained within one chimney.

C. The motel operation consists of a main office and 12 cabins. In Section 6 is an improvement plan to increase the quality (at minimal cost) and hence the revenue potential of the cabins.

The cabins produce $6,000 sales annually at a cost of sales of approximately $3,000. Good, but small and subject to improvement.

D. Additionally, there are two other sources of revenue:

1. Telescopes - $2,000 annually.
2. Water pumping sold to summit - $12,000 annually.

Both these operations are almost sheer profit, as there are no energy and minimal labor costs involved in their operation.

Description of remaining facilities:

A short distance from the Marshfield House is the ticket office. This is a small log structure measuring about 10 feet by 14 feet. Near the ticket office is a lavatory, a one-story wooden structure for use by railway patrons, which measures 15 feet by 15 feet and is the newest building on the property.

The Guest House, *(Ed note: originally Kro Flite Kamps bldg)* a one-story log structure, contains four bedrooms, two bathrooms, a central living area with a stone fireplace. There are nine employees' cabins varying in size and containing from one to four rooms each. Nearby is the Girls Dormitory, a two-story building with clapboard siding. It contains four rooms, one bathroom, and a sitting room. T he dimensions of this building are 20 feet by 30 feet. Nearby is a building known as the

Boarding House, a three-story wooden structure very solidly built, resting on a granite block foundation. It contains 22 rooms, caretakers quarters with a kitchen, a recreation room and a storage area. Near this building is the Teague Chalet, which is a very nice two-story house with six large bedrooms, three bathrooms, a dining room and a large living room with a wood beam ceiling. The living room has a large fieldstone fireplace, and the kitchen is fully equipped with all appliances.

At the opposite end of the property up behind the Marshfield House are two small wooden buildings. One is the motor generator house which rests on wooden blocks and contains a motor generator unit not now in use. The other wooden building nearby is a small 12-foot by 12-foot structure and contains a 55 KVA, 4-cylinder Caterpillar diesel generating unit which supplies AC current. Also there is a Pelton water wheel driving a DC generator. This energy supply, in addition to the DC generator and water wheel at the Engine House, is used to supply DC electric current for the Base Station complex

The Railway also owns various motor vehicles. There is a 1977 Chevrolet pick-up truck, one small International Harvester bucket loader, a small Ford tractor, a small International tractor used to move the transfer table that runs back and forth between the Engine House and the Car Shop, facilitating the movement of rolling stock onto the main line, and a Lindsay portable air compressor.

There is a large Cog Railway sign with a directional arrow, located at Fabyan, at the junction of the base road and Route 302. The sign is electrically lighted at night, and the small parcel of land extending 12 feet around the sign is owned by the Mt. Washington Railway. Near this sign, at the Fabyan Station, is a piece of machinery used in unloading gondola carloads of coal brought in by the Maine Central Railroad.

The Mt. Washington Railway represents a most unique enterprise and is certainly one of the greatest tourist attractions in New Hampshire. When this railway was completed in 1869, it was recognized throughout the world as the greatest engineering feat of all times. Today, it's recognizable as perhaps the greatest engineering feat of the nineteenth century, and was accomplished only 100 short years prior to man's first landing upon the moon. It has provided its patrons with more than a century of magnificent experience. It remains a living museum and represents human endeavor seldom paralleled in the history of this nation. On June 26, 1976, the Mt. Washington Railway was designated an historical landmark by the American Society of Civil Engineers and Mechanical Engineers in the first such joint designation.

3. MARKET RESEARCH AND EVALUATION

Several factors influence passenger traffic. The Railway draws from a summer tourist base of approximately 400,000 visitors. Probably 40,000 travel to the base lodge. Of these, 30,000 ride to the summit. Here follows discussion of these factors and their influence on revenues:

A. Tourism. This is the base we have to draw from. When it is down, we must work harder to increase market share, i.e. advertising promotions, tours. When it is up, we must position ourselves (i.e. readiness of adequate labor force and equipment) to maximize traffic.

B. Weather. When the weather is good, traffic is up. Again, we must be positioned to accommodate the traffic. When the weather is bad, traffic dwindles and then we must control variable costs tightly and "ride out the storm."

C. Customer acceptance of the service offered. Various minor complaints exist as to the round-trip time (3 hours) and locomotives (dirt) and fear (height). Of the three, the only one tar-

geted for correction in the future (3-5 years?) is the addition of one cleaner locomotive- possibly diesel--to make interspersed runs to the summit.

However, the major complaint is the round-trip fare, which turns away probably 10,000 people a year. It is currently $20. It was $15 until this year. The difference is insignificant, because the perceived value is probably $6-9. In addition, the amount may catch a tourist unprepared, and a solution is described in Section 4 (following).

D. The fourth factor influencing passenger traffic is the ability of the company to handle the traffic. Breakdowns resulting in delays and cancellations are a major contributing factor to lost revenue and, unlike items A, B and C preceding, are solely a management problem. The solution is discussed in Section 6 following.

Real available market growth, expressed in numbers of visitors, is a product of GNP and population growth. Gasoline was, but is no longer a factor. Since both GNP and population growth are insignificant, it is reasonable to assume that traffic will not "grow" substantially, but will solely be influenced by the state of the economy itself and the leisure dollars available. However, it is reasonable to assume we are at the bottom of the recession and, considering that the business can operate successfully at present, it has nowhere to go but up.

Regardless of the market, the Railroad's share will increase.

Based on past personal experience of the new management, there will be an ongoing market evaluation to continue to assess customer desires and guide improvement programs and expansions.

4. MARKETING PLAN

The primary goals:

A. Attract more people to the base.
B. Convince more people to ride.
C. Provide more adequate service.

Here are the objectives to attain those goals:

A. Attract more people to the base.

Increase advertising--both money and effectiveness. $28,000 was spent in 1981. This is 4% of sales. This should be budgeted at 6% of sales, and then spent as the season develops. Pre-season advertising is not deemed effective as tourism to a specific spot within a region is usually an impulsive reaction to the on-hand advertising.

Every motel and every restaurant within a 60-mile radius of Mt. Washington should have a "Cog Railway" leaflet in its rack.

Incorporate ads into regional guides that are not being presently utilized. For example, these two free pamphlets came from the convenience store at Fabyan--at the junction of Route 302 and the entrance road to the Cog Railway:

"Vacation Map and Guide to the White Mountains" (published by the White Mountain Attractions Association)

"White Mountains Region" (published by the Littleton Area Chamber of Commerce)
– Both list the Mt. Washington Auto Road.
– Both list the Conway Scenic RR.
– Neither lists the Cog Railway!

B. Convince more people to ride.

An observer at the ticket booth will notice negative comments arising from surprise at the $20 fare. This causes a number of people to elect not to take the trip and is occasioned by one or both of the following circumstances:

1. Emotion (anger) at having come the distance to discover a price exceeding expectation or perceived value.

2. A simple lack of cash on the part of the visitor.

A partial solution to "1" is to increase the perceived value. Many tourist attractions such as the Bunker Hill Monument, Plymouth Plantation and several other attractions in the Boston area have film shows preparatory to the actual event, which in fact enhance the event itself. New Hampshire Educational Television has a ½-hour documentary about Mt. Washington,

⅓ dedicated to the Cog Railway. We will approach them regarding a royalty agreement for the use of this film at the base for all paying passengers.

A partial solution to "2" would be to expand the method of payment. At present, cash and traveller's checks only are accepted. This will be expanded to include credit cards such as Visa, Mastercard and American Express.

C. Provide more adequate service.

As previously mentioned, you can't sell a product you can't deliver! Get the trains up the track! Have standby equipment! Go on time! Details in Section 6.

In addition, tackle the problem of lost business on marginal weather days. Discounts? Maybe. Spot ads on Littleton radio to announce a favorable weather change? Probably.

The current practice of arranging tour bus visits is sound. This will be continued, and improved upon if possible.

Finally, a way must be found to soften the blow of devaluation to the all-important Canadian trade. This may be in the form of a pre-scheduled mid-week fare at par.

5. TECHNICAL CONSIDERATIONS

The acquisition of a 100-year-old property utilizing 20-70-year-old equipment raises questions from potential owners and investors. These questions are certainly valid and have been investigated in large part by the potential owners, who offer the following to potential investors:

A. The area of greatest concern is that of the locomotives. They are coal-fired, steam-driven. They are both maintainable and replaceable.

1. A competent engine shop crew and reasonably adequate equipment are available for repairs.

2. The Railway owns casting patterns that are sent to numerous foundries to produce new wheels, gears, axles, etc.

3. Smaller replacement parts such as gauges, valves and fittings are purchased from plumbing supply houses.

4. In summary, adequate engineering, foundry and supply services are available to not only repair existing engines, but in fact to support the construction of an entirely new engine, at present underway.

To quote a Railroad authority, "Obsolescence is not a problem. Engines, whether coal or diesel, are rebuilt and overhauled indefinitely. There is no such thing as a scrapped engine."

B. The track and trestles are another area which one might associate with aging. They are, on a poorly maintained railroad. On the Cog Railway, wooden elements are regularly replaced by the full-time track crew. The bed structure was designed to be easily repaired with replacement timbers.

C. The passenger coaches are periodically refurbished and overhauled to rigidly-enforced P.U.C. standards.

D. Coal for the locomotives is annually contracted for delivery to the Cog-owned railroad siding at Fabyan and then trucked to the base area.

To summarize, maintenance at the Cog Railway is not a "patch" operation. Regularly scheduled, as detailed in Section 6, it will provide an improvement in efficiency and cost reduction. It is also a vital component to a serious commitment to safety.

6. OPERATIONS PLAN

Fred and Grace Herrmann will "step into the traces" as the general management team of the company, assisted by several members of their family, as described in Section 7 (next) and as per the time schedule in Section 8 (following).

They will immediately conduct minor management changes to accommodate and amortize their presence, but the general style will be to learn and absorb before initiating major changes.

The initial thrust will be to tighten up the entire operation to perform more efficiently as follows:

A. Run trains on schedule. *(Fred Herrmann)*

1. Begin regular, periodic, scheduled maintenance on engines to minimize unscheduled downtime.

2. Maintain one engine in a "fired" state, at the bottom of the track, on standby all the time, to immediately replace a malfunctioning engine.

3. Maintain four engines and crews on-line, reducing as weather and traffic dictate.

4. In total, rotate the six engines as described above until the seventh engine is brought on-line in midsummer 1983.

5. Complete new engine #7, now existing as work-in-process, and place it into service midsummer 1983. Dedicate a crew to this objective.

6. At that time, begin using same crew (2-3 people) to routinely route engines through shop for major overhauls on a schedule of one engine per year.

7. Also manage the relatively minor task of refurbishing coaches.

B. Make food service profitable. *(Fred & Grace Herrmann)*

1. Alter accounting procedure to reassign paper loss on employees' meals more equitably so food service operation can be accurately quantified.

2. Perform a cost analysis on food items to determine profitability with an eye towards price increases.

3. Investigate possible expansion of offering.

4. "Merchandise" the offering.

5. Manage the purchasing.

6. Possibly expand into small "convenience store" operation for motel users, hikers and other visitors. (Second or third year)

C. Increase occupancy and profitability of motel operation. *(Grace Herrmann)*

1. Refurbish--brighten up. Painting, new curtains, minor landscaping around cabins.
2. As a result of "1," increase rates from $20 to $26-28.
3. Alter sign at Fabyan to include motel.

D. Increase revenue and profitability of gift shop. *(Grace Herrmann)*

1. Grace Herrmann to replace existing manager herself.
2. Reduce staff to one clerk.
3. Expand offering slowly to include quality gift items.

E. Increase passenger traffic. (Fred Herrmann)
As outlined in previous marketing sections. Advertising, credit cards, etc.

No major immediate capital expenditures are anticipated to perform the above improvements. The minor supplies can be financed through more tightly managed operating funds.

At this point, the new owners have no visibility of required major capital improvements over the next 5-10 years. At some point, a diesel locomotive should be added (as previously discussed) but timing and means of execution are only tentative at present.

The asphalt paving in the parking lot is beyond repair. The intention is to grade the old asphalt off the surface and revert to a gravel base. This is a minor task in the order of $3-5,000.

The purchasing and inventory control functions for the consolidated operation will be performed by Fred Herrmann. The obvious intent here is to manage the company's assets. Inventories, although not excessive in total at ± $60,000, are centered primarily in the gift shop. This requires management to increase the turns or decrease the inventory.

The labor force, in recent years, has fluctuated from 35 to 52 people. This was in part a management style, to accomplish specific, desired maintenance tasks, and was not necessarily synchronized to revenues, causing fluctuations in earnings inconsistent with passenger traffic. This is certainly the prerogative of a management operating with a minimal debt burden. However, the new owners plan a labor force as follows: (exclusive of management)

Train Crew Personnel	18
Engine Shop Mechanics	3
Car Shop Mechanic	1
Gift Shop Clerks	2
Restaurant Workers	4
Track Crew	3
Maintenance Men	2
Summit Office Clerk	1
Office Clerks	2
Ticket Booth/Dispatcher	2

Coal Bunker Man	2
Total	40

plus the management team as described in Section 7.

7. MANAGEMENT TEAM

A. Organization

Outlined (next page) is the intended general arrangement of the operating organization. It pictorializes a commitment on the part of Fred and Grace Herrmann to perform the line management function of the company. This commitment manifests itself in the form of an on-site presence from spring melt until winter snow renders the facility inaccessible.

George Burdick has served as Engineering and Maintenance Manager for eight years and will remain with the company in that capacity.

B. Key Management Personnel

Fred and Grace Herrmann have been married for 23 years and are in the final stages of raising a family of 8 children. One son is an employee of the Railway and it is expected that several other offspring will become key employees.

Grace Herrmann has devoted most of her focus on raising a family, but her experience is not limited to that. Her periodic involvement in community activities was successful. Although her work experience in commercial enterprise is light, her judgement and maturity have developed as a result of a mixture of activities to render her capable to manage the tasks and workforce of the Marshfield operation.

Fred Herrmann's 20+ years in business and industry have provided him with a broad background. Here is a summary:

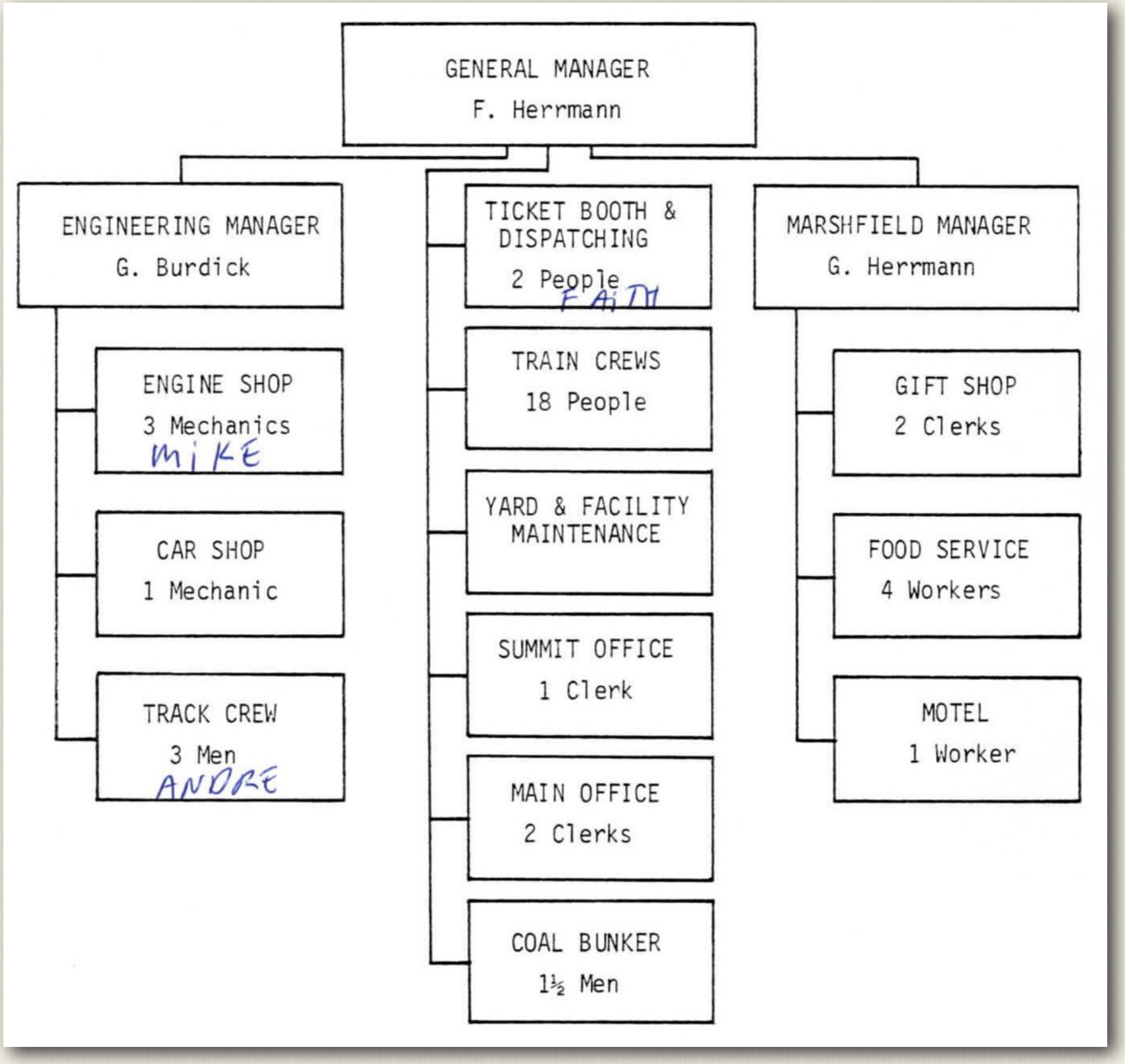
Position	*Years*	*Company*
Electronic Technician	5	Fairbanks Scales
Design Engineer	2	"
Test Foreman	2	"
Supervisor of Test & Installation	3	"
Quality Control Manager	3	"
Inquiry Dept. Manager	2	"
Marketing Manager	3	"
General Manager	3	Petco Oil Co.

A summary of accomplishments and responsibilities appropriate to management of the Cog Railway is as follows:

1. As General Manager of Petco Oil Co., So. Royalton, Vt., he reported to the owner, managed 4 supervisors, 26 managers and ±250 employees. The chain had 10 gas stations, 16 mini-marts, 6 car washes, 1 restaurant and 1 liquor store. The chain was in a two-fold expansion when he started. When he left, the operation was "McDonaldized." He gained experience in hiring, training, motivating.

2. As Marketing Manager at Fairbanks Scales, he has generated numerous business plans that identified, developed and sales-released major new products.

3. As a consequence of several jobs, he has experience in cost accounting, estimating, forecasting, planning and budgeting.



4. In general, his training and experience qualify him for a task that is technical and managerial.

5. As a consequence of purchasing the Cog Railway, he is rapidly becoming adept at entrepreneurial business acquisition and takeover management.

C. Management Compensation

Person	***Proposed***	***Where From***
Frederick Herrmann	$30,000	$31,000 existing officers' salaries.
Grace Herrmann	$ 9,000	$ 9,000 existing gift shop manager.
George Burdick	$20,000	No change.

D. Board of Directors

Chairman - Frederick Herrmann.
Director - Grace Herrmann.
Director - Ellen Teague.

E. Supporting Professional Services

Legal - Moulton, Smith, Samaha.
Accounting - Robert Wood.
Banking (anticipated) -
Concord National
Girard Bank
Lancaster National
Indian Head Bank

Railroad Advisory - Robert Gensburg, Attorney & President Lamoille Valley RR.
Potential Financial Advisor - Carmie Snider, V.P. Howard Bank.

8. CRITICAL RISKS AND ASSUMPTIONS

The Mt. Washington Cog Railway has survived 100+ years, but that is no insurance against future failure. During the years immediately following the transfer of ownership, it will be particularly susceptible to bad judgement, poor tourist traffic and negative outside influences. These are the perceived risks and some contingency planning:

A. A further reduction in tourist traffic. (Gasoline, economy, weather.) The reaction here will be to control and reduce variable costs and spending.

B. Multiple equipment failure. We will plan to have the equipment on-line in a first-class operating condition, back-up equipment ready and spare parts on hand. We assume we can deal with all but a catastrophic circumstance.

C. Failure of coal supply. No coal = no trains = no revenue. Since there is no shortage of coal, the three likely causes of shortage are non payment, rail strike and miners' strike.

1. We will pay our coal bill on time.

2. Rail strikes are historically of short duration, as the President usually files an injunction against the unions in less than two weeks. Contingency will be an approximate $7,000 reserve stockpile.

3. Miners' strikes would not immediately effect operation, as there is a sizable above-ground reserve in the U. S. A long-term strike is not likely nationwide, as again, the President would injunction the miners.

As a last resort, we would contract locally for wood as fuel.

9. SCHEDULE OF EVENTS

Sept. 15, 1982 - Purchase Agreement executed between seller and buyer.

Sept. 20 - Oct. 1, 1982 - Business Plan generation.

Oct. 1, 1982 - Submission of Plan and Capital Request to lending institutions.

Nov. 1, 1982 - Finance commitment obtained from lending institutions.

Nov. 2, 1982 - Application for transfer made to N.H. P.U.C. and other necessary agencies.

Dec. 14, 1982 - Transfer of ownership. ± $100K operating capital obtained. Debt service begins.

Sec. 48 - Selling & An Offer

April, 1983 - Begin seasonal preparation.

Memorial Day, 1983 - Open for season. Cash flow begins.

Note: This schedule is both tentative and fluid. The only "drop dead" dates pertain to the opening. Negotiations between buyer and seller may alter the transfer schedule to minimize tax and debt burdens.

10. THE FINANCIAL PLAN

Following are an operating plan forecast and cash flow projection.

As a result of the fare increase initiated in 1981, the estimated sales on the Railway will increase substantially. The assumptions are described below. In addition, it is estimated that Marshfield sales will increase 120% 1981-1983.

1981 Sales = $482,000 for Railroad (at $15.00 fare).
1983 Sales @ $20.00 fare = 133% increase to - $641,000
1981 Marshfield Sales = $203 x 120% = 244,000
Total Forecast 1983 Sales = $885,000 *(Average of 35,000 Passengers)*

On December 29, 1982, Ellen Teague said she would sell the tourist attraction in January to a group of businessmen from the Littleton area for $600,000. She declined to identify them. Mrs. Teague said 2 years ago she intended to sell the railroad. Reached by telephone in Philadelphia today *(12/29)*, she said she rejected two other offers because the people were not from the North Country. She said the prospective new owners will work to preserve the Cog Railway.

The sale to John M. A. Rolli, Loxley Ness, Joel A. Bedor & Wayne W. Presby would close in mid-May 1983. The Cog's first new manager, John Rolli outlines his memories of the 1983 -1985 operation in *Vol. 1 Operations Manual.* Current owner Wayne Presby talks about the origins of the partnership and the deal made with Ellen Teague in the next section of the *Appendix - An Origin Story*.

The New Hampshire Public Utilities Commission order approving the sale can be found in Vol. 1 in the *State Documents* section.

1983 - An Origin Story...

In early June of 2021, Cog Railway owner Wayne W. Presby sat down for a Zoom interview with Jitney Jr to talk about how he came about being part of the Mount Washington Railroad's history. It is from his perspective. Early partner John Rolli submitted material talking about what he faced while being the first manager of the "Next Generation" of Cog ownership during its first years. You will find that material in Vol. 1 of the Jitney Years project. Unfortunately, Loxley Ness died in January 2015 just four months before this research effort began. Repeated requests to Joel & Cathy Bedor to discuss the Cog story from their point-of-view have gone unanswered.

Next Gen Origin Story – Wayne Presby

"To be honest with you, I had never been on the (Cog) railroad before we first met Mrs. Teague in the fall of 1982. I got out of law school… graduated in May of 1982. I studied for the bar that summer, and when I got done taking the bar exam, I went back to work in Littleton for an attorney… by the name of John Rolli. I'd been given some job offers… like go over to the Middle East and work as a contract guy for Exxon … And Rolli said to me, I'd really like you to stay here and come to work for me. In fact, if you'll stay… I'll make you a partner in the firm… and of course (the firm) was just him. At the same time my father was pushing me because he really liked the idea of having his own counsel around all the time, because he was involved in all kinds of little deals here and there where he was buying and selling property all the time… He just thought it would be handy to have me around still. He didn't pay for any schooling. I put myself through school… he thought he could utilize my talents and… could trust me to do things the way he wanted to see them done.

Historic Properties Rehabilitation

While I was going through law school I was also working part-time with Joel Bedor in his accounting practice. I was majoring in tax and corporate (law)… I really just wanted to get into business. I didn't want to practice law. After I got back (Joel and I) were looking around to try to take advantage of these historic rehabilitation credits that they had available under the tax code at that time, which provided like these 25% investment tax credits on rehabs of historic properties. We had gone to the Eames family that owned the Thayer's Inn and, and they had agreed to sell us the Thayer's. What Joel and I were planning… is we'd go in there and we'd raise some money through investors. We would take and borrow a bunch of money, four times, whatever we raised from these investors go in and do this rehab project, get back the 25% investment tax credits, use that to pay the investors back. And then we would basically have the investors completely taken care of.. then hopefully run this place and turn around and sell it… flip it as it were or continue to run it, you know, either way. It wasn't that I was thinking, we'll just take these things and flip them over and make a bunch of money on them.

Sec. 49 - An Origin Story - Presby

Why not the Cog?

I went back to Rolli and I said to him, Hey, Joel and I are working on this project on these historic rehab credits for blah, blah, blah. I said is that something you would like to be involved with us in? He said, "Oh geez, what are you, what are you looking to do? You know, everybody that's ever tried to do anything with that place has gone belly up and I don't think it's a good investment." He goes, "why don't you do something like buy the cog railway?" I said, "the Cog Railway… I didn't even know what was for sale."

"It's been for sale for like five years and nobody's come along that wanted to buy it." And I said, "well, if it's been for sale for five years and you think it's such a good idea, why didn't you do something about it?" And he goes, "I just never got around to it." John was a terrible procrastinator about many things at that point. He was incredibly fed up with practicing law. I mean, I would come into the office on days and he would be laying on the floor on his back. He had back problems, but besides that I think he was just completely burned out on practicing law. At that time, he didn't specialize in anything. He was just doing everything. He was doing divorces criminal cases, real estate closings, the whole gamut… prosecutor, too. I said, "is there a broker involved?" He said, "I don't know." I said, "if you can find out, I'll start looking into it." A week or so went by and I went back to him and said, "jeez, John, what's happening? Have you checked into the cog railway?" "No, I haven't, I didn't get around to it yet." And I said, "do you want me to work on this? Find out who the guy is and I'll get going." Of course, I was young and full of vigor, 26 years old, actually 25, I want to get going on this thing. You know? Later that week Rolli came back and he said, "Mrs. Teague, who owns it is marketing the property through New Hampshire business sales. I've talked with the local realtor, this guy, Carter Laurie, and he's gonna make some contacts for us. In fact, he may want to get involved in this thing too with us. I've also talked with Ed Clark and… this buddy of mine, Loxley Ness. They're all interested in being a part of this thing."

We talked about the fact that Ed had been the general manager up there before and I went back and talked with Joel at that point. I said, "we should see if we can get in touch with this guy from New Hampshire business sales and arrange a meeting to talk to Mrs. Teague… find out what the deal is." At that point, I think Mrs. Teague was asking $1.2 million for the place. Joel and I arranged that fall to go up (to the Cog) and it was the day before Columbus Day.

Meeting Ellen

I remember walking into the Teague's chalet… She was there… Alex (Hamilton) was there. The moment we walked in, she goes, "okay, who are you?" I said, "I'm Wayne Presby and this is Joel Bedor." She says, "what do you do?" I said, "I'm a lawyer. I work over in Littleton and I live in Bethlehem." She goes, "I hate lawyers." Then she turned to Joel and she says, "what are you doing?" He goes, "I'm an accountant." And she goes, "I like accountants." We talked to her a little bit about the project… and she goes, "well, what have you done before?" We talked a little bit about that and she says, "have either one of you guys gone up the cog railway?" I said, "No, I haven't been up, but I'm planning on going up soon." Joel says, "I haven't been up." She goes,

"if you're planning on going up soon, that better be tomorrow because we're closing after that." I said, "Oh, well then, I guess it's tomorrow."

Taking a Trip Up

I went up the next day and jumped on board the first steamer that was headed up the mountain… rode up in the cab and then rode down on the back of the coach. I remember looking at this whole thing and going this place is frigging dilapidated. Tt was in horrendous shape. I'm looking at the track, I'm looking at all the equipment and, you know, the canvas roofs on the coaches were torn and they were flopping around in the breeze and… I don't necessarily see this as, as the goldmine that Rolli seems to think it is. But then as we were heading down the mountain… going back into the base, I'm looking, and there's a line at the ticket office that stretches two or 300 feet. I said to the brakemen on the coach, "all those people… getting ready to buy a ticket on the 12 o'clock train?" because we were coming back down about noon. He goes, "Oh no, no, no, no. We're sold out till like two o'clock. These people are probably… trying to buy tickets on the three or four (o'clock train)." It struck me right then. Well, geez… regardless of what kind of shape this is in, there's obviously a lot of demand by customers to get on the thing.

The Deal Comes Together

John (Rolli) was the buy and flip guy. He was thinking, we'll go in there, we'll make a few improvements…. then we'll turn around, we'll dump this thing and we'll make a bunch of money on it. I was looking at it and I was going… this is a lifetime project. This is not a buy and flip deal here… Anyway, long and short of it is, I get back to the office and I immediately embarked on trying to negotiate the terms of the deal and come up with a business plan for the place… to arrange a financing method and everything else for this.

Once (Joel Bedor & I) started discussions with Mrs Teague, John (Rolli) and Loxley (Ness) jumped into the fray… went up and started negotiating the terms of the deal with her… At first the deal had been for like all cash. I went down to the industrial development authority… Joel and I worked out this (business) plan and… it called for like three and a half million dollars or something like that. We were going to buy Mrs. Teague out and then we were going to make all these improvements to the property that it needed. I actually got approval for loans through them for like $4 million.

Then on December 31st Congress changed the law that made it so these industrial development bonds, if they were issued for a recreational facility no longer qualified for the tax benefits that they would have to somebody that acquired the bonds. Now the whole financing thing fell apart, right? That threw a monkey wrench in… and… we had to back up and decide how we were going to proceed. What we ended up doing was setting up a new corporation, the Cog Railway, Inc. We set that up with two classes of stock. It had preferred stock… and it had common stock… actually two different types of common stock… Loxley and John went back to Mrs Teague and got her to agree to take $600,000 in cash. The other $600,000 was in the form of two management contracts… one payable to her son, Charlie, in the amount of $300,000 payable, $15,000 a year for 20 years. Then one payable to Mrs. Teague, $30,000 a year for 10 years. And

there was no interest due on those. She actually had made a major concession to enable us to get this deal going.

Finding Financing

John (Rolli) went to a bunch of people that he knew and I think we raised a $130,000… we still needed to come up with a bunch of other money here because the whole business plan called for like $1-million and 800-something thousand… John had gone over to the Indian Head bank. He knew some guys over there … talked them into financing part of this acquisition. So, we went ahead and started negotiations with Jack Middleton because (he) was Mrs. Teague's attorney at the time.

I guess one of the interesting things is nobody in that group had any money. Joel didn't have any money. I didn't have any money. John Rolli really didn't have any money and neither did Loxley Ness. I mean, if they did, they weren't putting any of their money up. What we all ended up doing is the bank (wanted) us to put in a hundred thousand dollars of our own money because they didn't want just the investor's money in there. They wanted money from us. I went to a bank and along with a co-signer my father, I was able to get a loan for $25,000. Joel went to People's Bank that he was involved with. He borrowed $25,000 and then John and Loxley… they went up to the Whitefield bank, they borrowed $25,000 a piece. That's how we raised the hundred thousand along with the investor's money that we raised. Now we had a pot of $230,000 and the bank actually loaned us because Mrs. Teague was taking the $600,000 back, the bank turned around and loaned us another, I don't know, $850,000 or something like that… and it was enough to close the deal and have some money to start operating the place along with Mrs. Teague's management contracts.

Teague lawyer Jack Middleton reviewed the closing documents in June 2021 at the request of Jitney Jr. He provided this synopsis from that side of the table: "Wayne was then a lawyer at Rolli and Presby. He created the buyer corporation, The Cog Railway, Inc. The sellers were Ellen, Charles, Francis, Margaret and Anne, the owners of stock in Marshfield, Inc., the owner of all the stock in the Mount Washington Railway Company. Sale price for the stock $550,000. In addition there were consulting agreements for Ellen - 10 years at $30,000. per year and $15,000.per year for 20 years for Charles. Interestingly Charles agreement was with Rolli, Presby, Loxley Ness and Joel Bedor. The Cog Railway, Inc. bought 500 shares of Marshfield, Inc. for $100. Per share. Thus the purchase price was $600,000. plus the consulting agreements. In addition Ellen conveyed the tract of land at Fabyans. This was probably the old B&M freight shed."

Closing the Deal

We end up closing on the place on May 6, 1983, and that was on Friday afternoon...and we set the company up. Loxley had gone around and artfully cut Ed Clark and this guy, Carter Laurie out of the deal. (Ness) said, "Carter Laurie… doesn't want to be involved. He just wants to get his commission on this thing." So we paid him a commission, he was gone. Loxley says, "we don't want to work with Ed Clark. He's a pain in the, uh, you know, blah, blah, blah. You don't want to work with him." And I knew (Ed) could be a pain in the… A very astute fellow in a lot of ways,

John was already working with him because they owned the North Stratford (railroad) line together… Anyway, I come back in Monday morning and John's got a baseball cap on and he goes, "okay, I'll see you later." I said, "where are you going?" And he goes, "I'm going up to run the cog railway." I said, "wait a minute. I thought we hired this guy, Bob Schaffer to run the railroad… that he was going to report back to us and, you know, we would have board meetings and we would tell him how we wanted (it run)." "Oh no, no, no, no, no. He doesn't have any experience with railroads, I'm going to go up there and help him manage his way through this." I said, "Oh, okay, well, what am I supposed to do with all these law cases as you've got going on?" He goes, "Oh, you can handle those just fine. don't worry about it. If you need anything, you just give me a call." I've been in court like twice in my life. He's got everything going on, divorces criminal cases, blah, blah, blah… it was just an absolute baptism by fire. I mean, I would show up in the morning, lots of times and the secretary would go, "What are you doing here? Aren't you supposed to be… at Grafton County Superior Court this morning for this thing?" Now I'm rushing down to the Superior Court and I'm late and the judge is mad at me… so, (John & Loxley) went up and the great thing about it was, I think everybody at the Cog Railway was looking forward to a new beginning… the entire staff pulled and they did an incredible job. They finished up the number eight, which they'd been building for two or three years, they finished that up, got that online. They actually got most of the locomotives working. I think that first year we were in there… for the first time in a number of years, we had seven operational locomotives, one wasn't in very good shape but we used it as the backup

The Partnership Suffers a Breakdown

I never really knew what the connection was between John and Loxley Ness… Loxley Ness was an incredible character who really led to the demise of the whole relationship between Joel & I, John & him. We were all donating our professional services to get this deal up and running. Loxley was gonna make a bunch of his equipment available to build some new parking lots up there or do some other things that needed to be done. A couple of years after we'd been in the partnership, he submitted a bill for all that stuff. It became a major bone of contention. I said (to John), "wait a minute. this isn't the way this was structured. I mean, we're all contributing our stuff. He was supposed to contribute this, and that was his contribution." And John says "(Loxley) should get paid for his stuff." We had some other projects we were trying to get done up there. And I said, "what are you going to charge us to do this?" (Loxley) goes, "I want… $75,000 to do that work." And I said, "we want to go out and get bids on this and see what somebody else would charge us for it." (Loxley & John) said "fine, but you can't have Presby bid on it." And I said, Okay… because my family owned Presby Construction at the time. We went out and got another contractor to bid on it and he gave me with a price of like $13-thousand.

Then (Loxley says), "I'll, I'll do it for that." Well, you know, at that point, who wants them to do it anyway? You know what I mean? The long and short of it, that was just another black mark in the books there.

Sec. 49 - An Origin Story - Presby

That first year (John & Loxley) do a great job and I think it's primarily because all the employees were so motivated about the change and everything… they set a new (passenger) record. I think Ed (Clark) had had the record before, which was like a 46,000 something people. And they actually, you know, we actually took a 47,000. And so, you know, Rolli is just gleaming going well, "I'm the best manager the Cog Railway has ever had. We took up more people than anybody ever did, blah, blah, blah." The problem was that the next year it dropped from 47,000 down to 44. Then the year after that, it dropped to 38 and, Rolli tried to blame it on the economy and everything else, but whatever these guys were doing up there… Joel and I were like the silent partners. We weren't there every day and I don't know what was going on with the employees or anything else, but the one thing I do know is they were blaming it all on Joel & I, 'cause we weren't there. (Telling the crew,) "We don't want to do this, but these guys are making us and dah, dah, dah," which wasn't the case at all. That led to a big dispute developing between the partners, Joel & I, and Loxley & John. Basically we went to them and said, "Hey, listen, this isn't working out… do you guys buy us out… or we'll buy you out." Originally the deal was that Joel and I were going to get paid like $12,000 a year. And (John & Loxley) were going to get paid like $25,000 a year. Joel and I aggregated that agreement and we started taking the same amounts that they were taking, which I'm sure they didn't like, but nonetheless, we didn't like what they were doing either. They said, "we're not interested in selling, what do you guys want to get out?" We said, "well, we don't know, what are you, what are you willing to pay us?" They said, "we'll give you a $50,000. We'll give you $25,000 a year, this year, 50 next year and 10 the year after."

We said, "you know we're not going to do that. We're getting $25,000 a year. why would we take what you're offering us?" This was in the fall of 1985. We didn't have any discussions for almost two months after that. Then on December 26, 1985, I get a call from John Rolli and he says, "Wayne, we changed our minds. We'll sell out to you guys, but we want a hundred thousand dollars apiece. And we want our company cars or company Cadillacs." I said, "that doesn't sound like it's undoable. let me talk to Joel about it. I'll see what we can do." (Rolli) said, "yeah, but this is the catch. We want the money on December 31st." So he wanted it in six days. At the time I didn't think much about what the rush was… I said, "I don't know if I can do that by December 31st, but let me look into it."

Financing the Buyout

I didn't know how we were going to come up with the money at that point. maybe we could go back to some of the existing partners to get them to put more money in. I went down to meet with my grandfather… my grandfather and I were really close. After I graduated from high school, I worked for him all that summer down on the farm, just him and I… He had a herd of 70 milking cows… I mean, up at five, done at nine o'clock every night, every day, all summer long and he and I had developed a very tight relationship as a result of that. I went down and I was telling him about what was going on up at the Cog. And he goes, "Did I ever tell you this story?" And my grandfather proceeds to tell me this story about this (lumberman). He came down, he rented part of the field across from (my grandfather's) house to put a sawmill in. He cut a bunch

of timber around the area there over the years. In addition to the rent that he gave my grandfather, he also used to let him take the sawdust from the mill for free. So my grandfather, every night after his chores, would take this little … dump truck that he had… go over and he filled (it) up with sawdust… He'd take it around and sell it for two bucks a load to the other farmers in the area for bedding the cows. (Grandfather) said that guy showed up here in like 1950… years after he'd been down there… And he said, "Jesus, Lester… this logging business has been really, really good for me. Look at this." And he opened up his briefcase and he had fifty $100,000 deposit certificates of deposit in there. So $5 million. And during the course of this conversation that he had with my grandfather, he says (to my grandfather), "you know what, I'll tell you something. I'd trade all that in a heartbeat to own that Cog Railway, that thing prints money." And my grandfather says to me, "How much of these guys want to get out of there?" I said, "They want like a hundred thousand dollars apiece and their company cars." He goes, "What do I make the checkout to?" I go, "Why?" And he goes, "Do I make the checkout to him?" I said, "You make it out to the Cog Railway, Inc., I guess," "Can I buy some of the common stock and this?" I said, "Joel and I've got to hold onto the common." I says, "We'll sell you a bunch of preferred shares in this thing. maybe I can make a deal where you can own some of the common, we'll see about that." My grandfather, and my father are very competitive with one another. When my father found out that my grandfather invested a hundred thousand, he agreed to invest $50,000. So now some money comes into play, right? And it all comes from the Presby family. Basically, Joel, doesn't put in any money. We go out and we raise the rest of the money from these (other) investors. But Joel's worried now because… we split the stock, 90% between him and I, 45 and 45… And the other 10% goes to my family. So he's worried that the Presby family is now gonna use that… he actually makes me sign an agreement that I won't use the leverage to oust him which I didn't have any intent of. (Joel) and I had worked together for years. I like to work with Joel he's very down to earth, good accountant, but very conservative too. I would say. And that raised $150,000 of debt. Within a short time, we got a commitment for another $50,000 from investors. I think there might've been some money in the bank too, that we were able to use. And we were able to pull this deal off. I actually closed with those guys on January 9th of 1986.

The Silent Partners Step Forward

The very first thing that we do is we go down and rescue Cog equipment from Loxley's house… down in Bethlehem Hollow… I never really was inside his house, but it was surrounded by a junk yard of construction equipment, junk construction equipment, you know.

One of Loxley's favorite tricks was to buy an old bulldozer that the brakes had gone so he couldn't really steer it… he would take the brake shoes and dump them in a drum of water until they rusted up (then) he put them back on. So when a guy came to test it, it would work and (Loxley) would sell it to him. Then the guy would get it home and two hours after he was running it, (the brakes were gone again.)

Two steam locomotives that he brought down to (his) house to be worked on… were in a shed out front, no doors on it, no nothing in the middle of winter. I think they were paying themselves

rent for that. Yep. They had a coach down there as well. So what we did was… thank God for my family, because my father had bought this big garage down on the lower side of Lisbon…. it was a nice shop. I mean, compared to anything up in the Cog (at the time), it was very nice. We went down and I got Presby (Construction) to come over, load the things on flatbeds, and we took them over there and dropped them off. We started working on the locomotives… we had an inkling that there were problems with the boilers.

We had to go out and refinance the railroad anyway, cause one of the parts of the deal was we had to get those guys (Rolli & Ness) off the notes and to Joel's credit, he actually found this guy that worked over at Casco Northern bank. At that time, the economy was red, hot and banks were loaning money, like crazy. And this guy provided us with enough money to, to get out of the Indian Head note, get rid of those guys…. We got some working capital out of it and we got enough money to do some of the repairs to these locomotives. And I had found out about Hodge boiler works (in East Boston.)

We went down there (to Hodge) and actually met with the guy. I think we had plans for like the old number 10 boiler and the number eight and we took those down. The company works with us and I said, "Can you guys build us some new boilers?" Mrs. Teague had always been very adamant that the boilers had to look exactly like they always looked like, so they had to be a riveted boiler. And nobody was making riveted boilers anymore. Everybody was welding then. (Hodge) said, "yeah, we can do these things." Now, boilers if you wanted to try to get one, a riveted one, it was a hundred thousand something dollars. These guys agreed to build three brand new ones for us… we took delivery of three the first year at $30,000 a piece. They (agreed to) build a couple more for us if we needed them later on. So basically, we got three (boilers) for a hundred thousand dollars, which was great. I think they delivered the first one late that winter… maybe March or April that got delivered.

We needed a, a new loader. We actually bought this Trojan loader, which they ended up using for years, That (loader) got rolled over several times on (the new coal bunker). Locksley designed that whole bunker thing… I didn't know this at the time, but the first time he put it up it collapsed after they filled it with coal, because he'd done such a shoddy job of building it. But then again, Loxley was a shortcut guy. They had cylinders that blew apart and because Mike Kenly wasn't there working anymore. Loxley was down there welding the cylinder heads onto the steam cylinder. At that point, they'd (Rolli & Ness) lost a lot of the guys in the shop…

Snow Problem

"So, at any rate we got this first (boiler) delivered and we bought that new loader. I remember going up (to the Mountain). I called the State (Transportation Department). And said, "I've got to get out to the Base. We got a bunch of work we got to do out there (to) get ready for the season." And they said, "We're not plowing that (Base) road… not yet anyway." I said, "When are you planning on doing it?" "We'll do it the week before you open or something like that." I said,

"That's not going to be any good. I need to be in there sooner than that. So I took a loader up and I plowed the road myself, which pissed them off, but I got it open so we could get out there."

Beyond the Boiler Problem – A Delicate Balance

I got out there and the first thing that I found was they hadn't drained any of the water in any of the pipes to any of the buildings. Every one of the (pipes) was frozen and leaking so we had a major repair. The other thing that Joel and I had to get over right off the bat was all the employees threatened to walk out. We had gotten Arthur Minot to come back as the head of the shop. Arthur was a very talented machinist, but he didn't like having any pressure put on him whatsoever. We were asking him about "how long it's gonna take to get this done?" And he would say, "it will take this long." The deadline would come and go. And (Arthur) wasn't even close to being finished. I know I'm jumping around here a little bit, but…so we got up to the base and after we'd gotten over… the conflict with the employees, bringing them back… Bobby Trask and all those guys… They thought we (Joel & Wayne) were the bad guys, so we had to convince them otherwise. And I finally… got them to come around… I think Rob (Maclay) came… that winter and I know Bobby (Trask) was there and maybe Dave Moody came… and it might've been Johnny Bolton. But there were three or four or five of us… there working on the coach. We put some new walls in and stuff… I know Rob wasn't there because it wasn't as good a job as Rob (does now). But anyway, we rebuild some of the walls of the coaches and got the engines started. When the first Hodge boiler came in on a flatbed… we had taken the other boiler off the frame of a locomotive and I picked that new boiler up and set it down in the frame. It was all of a loader could do to do that. The back wheels were coming right off the ground, as I slid it in the chassis. But… other than putting the boiler in the frame, we didn't really make much further progress (on the engines) other than to get them torn apart and ready for the other boilers when they got there.

Outside Help

So, we get up to the base, we find out that all these pipes had broken and… we've got to get all those fixed (and the boilers). I actually went and found an outside boiler company to come in and like do a lot of the piping work and stuff like to put the headers in on these boilers and everything else. Cause I mean, we weren't going to get it all done by ourselves. That's for sure. We actually succeeded in getting… two or three of the loco's back together that following season with the new boilers on them and everything else. But I was getting ready to open and I hadn't even finished these other locomotives yet, you know, the Eight and the 10 and, you know, a few of the other ones that were there. I said, well, we'll just run these.

Necessary Inspections

The first thing I did was I get in touch with the Hartford Steam Boiler (insurance company). And I said, "We need you to come up and inspect these boilers so that we can operate a train this season." They said, "We're not going to come up and inspect those." And I said, "What are you talking about?" "Where's John Rolli?" I said, "He's not here anymore. Joel Bedor and I bought him out and, we've taken over the operations at the railroad." And they said, "I suggest you go

through your files up there because we've had a lot of communications." I go, "Oh, Right." I started digging through this file and I see these scathing letters going back and forth between him (Rolli) and the inspectors at Hartford Steam Boiler over their demands that repairs be made to these boilers. And now I'm starting to realize why Rolli was in such a yank to get out… Cause he really didn't want us to find out what a desperate condition he'd left everything in. After I get done digesting that I call the guy back at Hartford Steam Boiler, and I said, "I know you guys have some concern about this… We did too… That's why I ordered three new boilers from Hodge Boiler Works." And he goes, "What?" And I said, "Yeah, Hodge boiler works. And he's boss. And we ordered three, two boilers from them." And he said, "I don't believe you… I want to see the purchase order." And I said, "okay." So I faxed them down a copy of the purchase order. And he called me back and he said, "Okay, we'll come up and we'll inspect these things, but only because you've agreed. We just wanted to see somebody doing something about this because these (boilers) were in horrific shape." So I'm over that hurdle. They come up and they approve the Eight and the 10 for operation and maybe one of the other locomotives, but really, we just started out the season with like two (engines) and, and we were working on the other three trying to get those ready to go out.

State Approval

Then I have to call up the (state)… By then, the PUC (Public Utilities Commission) is not involved anymore. They've gotten out like between 83 and 86. It had been switched over to the Department of Transportation… at that point. And so I got in touch with the department… and they said, "We're not gonna approve that thing to operate." Maybe it was the PUC still. They said, "We're not going to approve that the operation because you're in violation of the PUC order that required you to replace like seven bents (trestles) a year in Jacob's Ladder." I wasn't aware of that… Loxley & John didn't say anything about that… They'd been given notice that they needed to get those done. So they said, "You can't operate until that's finished." I ended up going to Dennehy & Boulay… (Jackson Bouley) had been a teacher over at Littleton high school. He was my history teacher. Joel had worked with him when he was a teacher over there and he had started his own, a lobbying firm down in Concord. I still work with him today, by the way, he just talked to me this morning.

Climbing the Ladder

He called the Department together with people from the PUC and… we ended up getting an agreement from them to be able to run to the base of Jacobs, and once we got those bents fixed, we could then roll across. We had to scurry around like crazy and try to find the wood… probably wasn't as good a wood as the wood we were taking out, but we went up there and… with the help of a bunch of the employees that we'd gotten back, we were able to get those bents in… by the middle of June… We were able to start running to the summit again. The department taken over and that's why they had one of their bridge inspectors in involved in that thing. We started our operations around June 15th, I think, of that year. And we kept working on the locomotives over the summer and I think… we had five operational by the end of the season or something like

that… all the ones that we got in the new boilers for. I don't think they were all all back online yet. And, um, in the meantime, we, we went back down to Hodge Boiler works and talked to them about buying the next two...

Lots of Shop Work

By that time I got Mike Kenly to come back. He'd been working over at Isaacson Steel. We got him to come back and head up the shop because Arthur (Minot) couldn't take the pressure and he'd left. And I got this guy… (Frank Clulow)… his son (Frank Jr.) was teaching over at the Community College's diesel and welding… (His father) had worked for the British rail system for 30 years and his son had immigrated over here and (Frank) had come in and he was still on a visa… (we) brought him up to the shop and said, "what I want you to do is I want you to make the parts so we can put the rest of these locomotives back together." (Clulow) walked into that shop and he was Gaga because that was all the equipment that he had learned on… overhead line shafts, the whole nine yards and he was just in love with it. He worked with us for the next two years, 87 and 88, and basically enabled us to get all of those locomotives back together again.. This guy was a genius when it came to turning out parts on those old machines. I mean, compared to anybody else that we'd had there working as a machinist, this guy just ran circles around (them)… He turned out those journals. He had like six of those made in a day or something. It was really incredible

That next year, we took a bunch of the locomotives and stuff back down to the shop that my father owned (in Lisbon) and we worked on them again there… In the meantime, we had taken the ridership back from 38,000 back to 44 that following evening, even only five locos from. And I had started working on trying to find a way that we could stay in the Base year-round… Obviously one of the biggest things was getting commercial grid power in there.

Bringing in Power

I actually set up a subsidiary company and everything to actually own this power line. We were going to construct from Bretton Woods all the way out to the Base. I was able to negotiate an incredible deal with Public Service of New Hampshire and AT& T to extend that line out to the Base and the cost to Joel and I was $60,000. It was in the form of a note that we paid over four or five years… and so by the fall of 1987, we had the power line in and we'd started winterizing a very small section of the shops so that we could work in there. And I got into a battle with the state of New Hampshire over, you know, using one of the roads to get in there. (The State) finally agreed to let us use the Mount Clinton Road, but we had to plow it ourselves to get out there, which was a fiasco in itself, driving back and forth out that thing. In the winter, especially in the spring, once the frost heaves hit… I don't know how many cars I wrecked on that thing going back and forth. By the end of '87, we had pretty much got six locomotives back going and we're approaching "heaven seven" again. During that period of time, the day-to-day management stuff, Joel wanted to have a third party… doing that. He didn't want me to manage it. I wanted to manage it, but he didn't want me to manage it.

Sec. 49 - An Origin Story - Presby

Hiring a General Manager

We'd actually interviewed Bob Clement for that job. The reason we did not hire Bob Clement to do it at the time was because Bob Clement's theory about how to get the railroad back on its feet… was "don't worry about getting all these locomotives running, just run the ones you got and then slowly but surely we'll do this over time." Well, we wanted to get in there and get moving… I've got a lot of respect for Bob Clement and… there was nothing wrong with his theory, but at the time, we wanted to move ahead and really get things moving. So what happened was we hired Brett Williamson. He was there working from the spring of '86 until the fall of '86… He was doing such a horrible job… We ended up terminating him… and I took over during the fall of that year. I spent the whole winter planning, how we're going to do (Cog) operations and stuff. And then Joel says, "You know, I'd really feel more comfortable if we get somebody else in here." So we ended up interviewing people. We didn't hire Bob Clement… and we hired George Trask. He came up and I butted heads with George a lot too because he's a very stubborn guy. He was a pretty good manager… He worked for Weyerhaeuser there for years… One day I came up, I was asking him questions about something and saying, "Why aren't we doing this? Why aren't we doing that?" And he goes, "Look, I'm the general manager here, I'm running this thing, not you." I was basically convinced at that time it was time for (Trask) to go and as luck would have it, uh, in the interim, uh, although we hadn't hired Bob Clement as the general manager at the time. And so what happened was George… I think a year into it… probably the spring of 88. (George) said, "Dave moody has left and I want to hire Bob Clement to come in as the track foreman." And I said, "I think Bob's a talented guy…. That's a good idea. Let's hire him." (Joel & I would) come in to have meetings with George on a regular basis… like at least a couple of times a month… and Clem would always make sure that once he completed his report on the tracks… he would ask if he could stay around and listen to the rest of the (meeting), we'd say, "Sure… come on in." And I later was talking to him. I said, "Geez, what made you decide to come back to work for the railroad… after we had said, we didn't want to hire you as the general manager?" And he said, "When I heard that you guys built that power line in there… that's what convinced me that maybe you guys didn't have your heads up your ass after all… because that's something that needed to be done in the worst way. And then… you've got the Base open in the winter… you're doing the maintenance out there…" He goes, "That was all positive stuff." I think it's in the spring of 88, George Trask came to me and he said, "Listen, I know I got a contract with you guys and everything else, but I've been offered my old job back at Weyerhaeuser, and if you have no objection, I'd, I'd like to take that." I jumped at the chance to have him go do that. I went to Joel and I said, "I think we should make Bob Clement the general manager here… he applied for the job before… he's already proven himself as the track guy… so let's hire him." And Bob Clement took over and… did an outstanding job… I'd go to him anytime and say to him, "I'd like to see this get done or that get done. It was done the next day when I got up there, you know what I mean? He was just incredibly, proactive and responsive. You know what I mean? He did such a good job, got the costs under control and everything. I mean, he, he's a very good at keeping costs under control… That's being polite… I think after he was made the general manager down at the

hotel, somebody put a little picture of a monkey riding a unicycle juggling all these things, sort of like the Cat in the Hat and the caption down below said, "If you think this is difficult, you should try to get Mr. Clement to sign a purchase order." He did such a good job that… Joel and I were very comfortable just having him run the place. So, I took a job working for an insurance company doing claims on construction bonds that contractors had gone into default on. And Joel went down to North Carolina and set up another accounting practice with his son that had just gotten out of school and became a CPA. During that time, Joel was really never around. Bob and I… would get together and meet like every week.

Creating Some Lodging

I'd come home every week and I'd go up (to the Cog) and talk to him and we'd see how things were going so on and so forth. It was the winter of 1990… Joel and I had always thought that it would be a hell of an idea if we built a motel at the base of the Cog. We had started looking into the cost of building a motel... Not that there probably were other things that should have been done at the railroad instead of working on a motel, but that's what we were focused on. I went down and I'd been talking to Bob Clement and I said, "I got these quotes back on this thing and… it's going to cost like a couple of million dollars and we can't use the Mount Clinton road anymore. We're going to have to use like the base station road because they're not coming in there and I can't get the state to do that, blah, blah, blah." He goes, "Wayne, I don't know why you guys want to build a motel up here… why don't you guys go down and buy the Mount Washington hotel…" I said, "Oh Jesus. We're talking about 50 rooms. I didn't know what that is. And besides everybody's ever been in there has gone belly up." And (Clement) goes, "Believe me, I think I can run that place." I said, "Really?" He said, "Yeah, I think I could." I was very impressed with what he'd done at the railroad. We had actually gotten to the point where we were getting more than these puny salaries we've been taken out of it, like $12,000 a year. We were actually making some (stock) distributions to ourselves… that was after 87 because I remember I gotten a distribution in 1988 or something… I think the second year we're in there in 1987, we got the ridership back up to 50 (thousand). Now we had the (ridership) record… called Rolli up on the phone and said "now I'm the best manager… No, (I didn't)" but anyway, Clement got in and we'd gotten the ridership up to 59,000 people. And one of the big things was in 1987, I went off on that whole harebrained thing about the ski trains to Tuckerman's…

Ski Trains & Hotels

"A marketing coup… a marketing coup…" Presby tells Jitney Jr because as the old saying goes "As long as they spell you name correctly" any publicity is good publicity. "Anything short of… murder, I suppose, I guess you're alright. But (the ski train proposal) was making Joel incredibly nervous because he doesn't like any adverse publicity at all. I said, "Listen, what's the worst-case scenario? Let's just keep forging ahead with this thing… if we get too much disruption, we'll just pull the plug on it. In the meantime, look at what we're getting… we got written up in this magazine, this magazine, this magazine, I mean, we got probably a couple of million dollars of free publicity out of that… the ridership that year surged from 50,000 to 57,000. It went up the most

it had gone up in any single year that I had records of. So Bob (Clement) basically had convinced me that… looking into this hotel thing was not the worst idea. And I said, "You know that thing's probably going to sell for a million." And he goes, "I don't know. Wayne look at what's going on out here. That was after the (stock market) collapse. And you saw these commercial buildings going for… 5-cents on the dollar. It was incredible. And so, uh, I said, "You know, I don't know about this." He says, "Listen, I'd go and do this myself, but I don't have the credibility. You guys own the Cog Railway. People will listen to you and you'll be able to pull this thing off." And I said, "Well, okay. But… we're going to have to get Joel back up here if we're going to do this." So Joel came back up and, I said to him, "I think we should look into buying the Mount Washington hotel." He was enthused by that idea. He came back from North Carolina and we went to work on that (purchase). In the meantime, we're still running the Cog and Bob Clement… starts getting more involved in the whole project to open the hotel

Buying Mr. Stickney's Hotel

I put the whole (stock) offering memorandum together… and, we actually ended up raising like… $1-point 3… $1-point 4 million… We offered (the FDIC) $4 million (for the hotel) and that we would pick up $600,000 worth of payables that have been run up by the previous partners of the hotel. And I kid you not this guy from the FDIC Lynn Leffert told me to go fuck myself. I mean, he didn't pull any punches at all because he says "There's no way that thing is going to sell for $4 million, blah, blah, blah, blah, blah. We're not going to entertain this thing from you guys. We're going to sell this back to the Dowd brothers who were the partners that had just failed." So they made an agreement with them. (The Dowd's) went back in there and they missed the first payments they had to make to (the FDIC) and ran up another three or $400,000 worth of payables. Then I got a call back from (the FDIC) and they said, "We're going to give you guys one more chance to buy this place. I want to know what your offer is." I said, "I gave you the offer before… it hasn't changed… I'm not picking up any more payables. I'll pay you what we originally offered." He says, "That's unacceptable. We're gonna fix this place up. We're gonna do a national advertisement for it. And you know, we're going to get 10 million for it." I said, "Well okay, good, good for you." They went out and they did that… they spent $2 million fixing the place up. Then we went in at the auction and offered $3-point 15-million. They had to have a conference because they hadn't agreed to sell it for so little. They had dealt like changed the terms or get some kind of approval s They reopened the auction, they got no advances. So we ended up owning the place for 3-point 15-million. At that point, Bob Clement basically went down (to the hotel) and Bobby Trask got elevated to his position. I think Bob Clement was the best general manager of the hotel of anybody either before or after… He did an incredible job there. I mean he took that over… it was losing $3 million a year. The first year we got in there and he turned it around to a $300,000 profit first year.

Laying Ties to the Mt. Wash

When we did the deal on the hotel, we put right in the offering memorandum that we were going to improve the ties between the railroad and the hotel. We were going to use the ability of

the railroad to get into things like White Mountain Attractions (advertising0 to the benefit of the hotel… we put (the hotel) right in our brochure, everything else. (The Cog) lots of distribution that the hotel wasn't entitled to by itself, and Joel's wife, Cathy had started running the (Cog) marketing department at that point, and she took over marketing down at the hotel. She was the spokesperson… for the Cog and the hotel. That's why you see that, that co-mingling of things. Of course that ended up being a major problem for us in the end, the Eames brothers were not involved in the (hotel) deal originally. It was Joel, me and Bob Clement. (The Eames') came to us and wanted to buy the motor lodge (across from the entrance). And we said, "We're not breaking the property up." At that time, Joel was also a partner in the Bretton Woods ski area with Herb Point. Joel brought him in to do the accounting work and stuff like that over there. I basically handled all those transactions for the (hotel) company… right through the whole purchase and everything… the golf courses after that, because that was a long battle, the golf courses, which we got in like 1993. And then we ended up buying the ski area and all the development land in 1997. And then opening (the hotel) for the winter… that was a big thing.

Meanwhile… Back at The Cog

In the meantime, Bob Trask had taken over for Bob Clement up at the Cog and really ran it from '91 through like '94. I was working with Bobby on a regular basis up there. I've got a lot of respect for Bobby too, but he can't make the hard decisions that a manager needs to make when it comes to fellow employees sometimes. I remember one winter, it hadn't been a particularly good winter and I said, "We're going to have to lay off a couple of these people" and he's going, "I'm not doing that." I said, "You know, we just have to do that. It's not a question." And he said, "I'm not doing it." And I said, "If you won't do it, then I'll go do it." And he goes, "well, look, you know, blah, blah, blah. I can't take this anymore. I got too much stress, so on and so forth."

The Return of Charlie Kenison

"We had to get some new cylinders made and I gotten introduced to Charlie (Kenison) and I'd started having some discussions with him looking to really hire him to take over the shop because as talented as Mike Kenly was, he really wasn't very productive, I mean, extremely knowledgeable guy and everything else, but… I don't know why he would do this, but he tended to do it a lot. A guy would be working on something there and (Kenly) would know that they were doing it completely wrong. He wouldn't say anything until they completed it and realized it didn't work before he'd say, "You really shouldn't have done it that way. You should have done it this way" I nstead of nurturing the guy, you know what I mean? Some people think that knowledge is power, so they want to hang on to it instead of sharing it with folks. Kenison was at a foundry down in Massachusetts – outside of Leominster. We needed some new cylinders made and he had agreed to make those for us. We couldn't get anybody else to do them and he agreed to make those for us. Then I ended up having these discussions with Bobby and I started talking to (Kenison) about it. I said, "Would you be interested and coming up and being the general manager up here?" And he goes, "I was wondering when you're going to ask me that." He immediately agreed to come do it. So I went up and I told Bobby, "I can't take this insubordination thing. I gotta have some-

body here that's going to be responsive to what I want to have done." I ended up letting (Bobby) go and hiring Charlie. I said to Charlie, "It's up to you whether you want (Bobby) back now." And he says, "I'll have him back." I didn't know how that was going to work out between them. It's always a tough thing when you get elevated to that position and then you have to take a step down, you're gonna work for the new guy, what are you going to do? Charlie came in there and once Charlie got in there things started to change immensely. I would say he was like Bob Clement on steroids. Although Bob Clement was very good at certain aspects like the financial and everything else. there's no way that he had the horsepower when it came to like metallurgy and welding and mechanical and electrical that, that Charlie had… because Charlie was a licensed electrician. He had all this experience from working on the fire department with life safety stuff. And of course, he'd been in the accident in '67. So, he was incredibly driven to see the improvements made that I wanted to see there...

Of Switches & Changes

In 1987, the year after we had bought out Loxley and John, I took a trip over to Europe and I spent a month and a half over there. I went to all the railroads over there… I grabbed all their books and everything else. I'm looking at all the technology they've gotten, and I go "Jesus Christ, we are just missing the boat here." I mean, you know, and when you went back and you ever talked to anybody at the railroad, they would say, "Oh, you can't do that here. They've tried it before it doesn't work, blah, blah, blah, blah, blah." And I said, "Well that may be, but… just because it didn't work with those guys doesn't mean that it doesn't work because I've seen it where it works… look at this… look at these switches these guys got… look at this blah, blah, blah." You know, getting culture change is probably one of the hardest things to ever accomplish at a business. But not with Charlie, I mean, Charlie is a very progressive guy, a progressive thinker… and he realizes that basically you can accomplish anything, if you put your mind to it.

Hidden Talents

(Kenison) was aided by the fact that in 1997… this guy comes up to me who had been working in the cross-country ski shop down there at the hotel and says, "Hey, Mr. Presby, my name's Al LaPrade. I'm getting laid off down here. I'm retired." He didn't tell me where he's retired from. He says, "I'm retired. I just like to keep busy, blah, blah, blah." I said, "Well, geez, Al you know I'm sure they'd hire you back in a month or so…. But I mean, if you're really looking for something to do… do you like mechanical stuff?" And he goes, "meh," Coming from this guy that was a strange response. But he became a brakeman for three years… becomes a brakeman before he tells anybody he's a mechanical engineer, which is highly unusual in and of itself. I think that's one of the great things about Al is… he's constantly learning all the time and, he wasn't going to make any suggestions about anything up there because I think he was completely fed up with being a mechanical engineer after being down at the Portsmouth Naval shipyard for 20 years. He got blackballed there. A couple of years after he started they had the subs come in there that… they had discovered a major flaw in the way that the subs were built or a way to reduce their sound signature in the water. So they were rushing all of these subs through and putting some

kind of a coating or something on the outside of thing. They built these big hangers and they were bringing them into dry dock and doing all this stuff. Al was having a hell of a time getting the project done… they were working 24/7 on this. The inspectors would go up and lock the door to their office at four o'clock in the afternoon and wouldn't come out to inspect the work. All of a sudden this guy showed up in (LaPrade's) office with a baseball cap on and a set of overalls. He said (to Al), "How you doing?" And he goes, "all right." And he goes, "How's your project's coming?" (Al) goes and he was just being flippant about this, I think, but he said, "It'd be a lot better if those damn inspectors wouldn't lock themselves in their office at four o'clock in the afternoon. And they'd come down and start inspecting things so we can keep the job moving." (The man with the ball cap & coveralls) was Admiral Rickover (father of the U.S. nuclear Navy). So now all of these (inspectors) thought that Al LaPrade ratted them out because (Rickover) got security in there. They went in and smashed the door down with sledgehammers and yanked the inspectors out there and told them to get their asses down there and go to work. That was a big fiasco. I think Al had to endure years of bullshit after that, you know? Yeah. So (LaPrade) comes up (to the Cog) and when are you going to get a mechanical engineer that is going to, unless he's working for you directly like we have now, who's going to sit there and spend three years, like really learning about the place before they try to (make suggestions). If I hired (mechanical engineers) to do a design, they come up and spend a few days or something and say, "Oh yeah, we can come up with something for that, blah, blah, blah." To his credit, (Al) spent three years (at the Cog) and then he started coming up with designs for things. He's incredibly good at what he does. He's still coming back and consulting with Caleb (Gross) on a regular basis and Caleb's making a lot of strides now, too. He's young, but with Al's tutelage he's really coming around.

Ski Trains Again

Bobby Trask was successful. I think one year he actually got the ridership up to like 64,000 or something like that. But when Charlie came and took it over, he immediately like went to like 70-thousand and then got it up to 76,000, I think just using the steamers. Then, we started running into a decline and we decided to do that ski train thing, which [chuckles] doing it with the steamers didn't make any sense… This winter (2020-21) was awesome. It was just awesome (with diesels). But at that time using the steamers just didn't make any sense. We were thinking… because we're all one resort (Cog, Hotel, Ski Area), we'll be offering something that nobody else in the world has. That'll be a draw for the resort, and it'll get more people there. It didn't make the Cog any money, but it was good publicity. I mean, we got a ton of publicity out of that. I'm sure you've seen a lot of articles about (the ski train).

(Winter operations) really put us behind on maintenance of the steamers because it was taking so damn much time just to operate them in the wintertime, especially using the snow blowers that we had… That didn't really work out too well.

Fuel Conversion

We experimented in '87 (actually 1989) with firing (the steamers) with fuel oil. A guy came down from Maine (Russ of Controls DownEast)… said he could convert it over. He tried a couple

of different burners in the 10 at that time… That was a fiasco. I think it did more damage to the boiler than it did good. Then Al (LaPrade) had been over to Europe, (he) went to the Snowden, that's where he met Nigel (Day). Al said, "Wayne, I think this guy Nigel might be able to convert the steam engines over to fuel oil. He did it with some of the locomotives there. I arranged to get (Nigel) a visa to get him over here. He was living with Al… Al bent over backwards for this guy. They ended up having some kind of a falling out and Nigel hated diesel hated it. That's when Al came to me, because he was so pissed at this guy, and said, " I think I could design and build a diesel for you and this is what we would do, blah, blah, blah." And I said, "Go for it" because I had made up a list back in 1983 of all the things that needed to be done up at the railroad. I wish I could find that damn thing I've been looking for it. (A list) that I'd scribbled out on a piece of paper and one of the things on there - diesel locomotive. I knew that Ed Clark had come up with the design for the M-1 (in 1976) and everything else. That probably would have worked if Mrs. Teagie hadn't pulled the rug out from under him and decided to cut it up. She turned some of the pieces of that (diesel) into a playground.

We sold the hotel in 2006. We started putting the first diesels online in 2008… Joel (Bedor) was a strong proponent of staying all steam… He didn't want to put any of the diesels online at all. I can see where he was coming from, but he was really turning into Mrs. Teague all over again. I can see the benefit of keeping some steam, but if you want to be profitable and you want to be able to move forward with other improvements that are necessary to handle the level of business that we're doing now, we needed to make that change. About that same time (the diesels came online) I had an old college buddy that came to me and was interested in getting into biodiesel business. So, we broke ground on a plant that we built down at North Haverhill, which was the largest biodiesel plant in New England for a long time… at least five, six, seven years. I don't think it is anymore. I ended up selling that (plant) in 2018

Steam got saved because I certainly realized that it plays an integral part in the allure to people to come there. Just to have the steamer sitting there is better than not having it there at all… lots of times people come and they don't even know what it is anymore. The more years ago by there'll be fewer and fewer (steam buffs), but it certainly is a huge draw for customers. The one thing I do know is that… the most important thing that you can do with just business is listen to your customers. And try to respond to what they have for complaints. I sorta follow that philosophy all the time… that's why I love, I love social media. I hate it, but I love it…. because you're getting an unbiased survey every day. There's certainly people out there that clamor for the steam, but you'll go back to like that study that was done in '58. And you see how many people mentioned, "Oh, it's dirty, it's sooty, switch to diesel, do this, do that," but I can tell you that as long as I'm involved with the railroad, that we will always continue to have steam there - operational steam. (When setting ticket prices) I was looking at what they were charging for (rail) lines over in Europe. Have you looked at the prices they charge? It's incredible. They get like 180 bucks unless you've got one of the (rail) passes or whatever, you know what I mean? A round trip ticket and it's eight or nine miles, mostly in a tunnel, but, they've got 900,000 riders a year. If

they're able to get that sort of pricing, we should be able to get it. The other thing we always looked at, what is the ski area charging for a day ticket? And we always tried to price (a Cog ticket) within a few dollars of that. And if you look at the prices for a day ticket now at ski areas, God, it's 80 to $120 a day…

Contemplating the Future

When I first bought (the Cog), I wasn't a train buff. I was just looking at it strictly from a business point of view. The one thing that… has always kept my interest… is just the amount of low hanging fruit… there is for business opportunities surrounding the railway. Even at this point, I don't think we've even tapped into a 10th of what the opportunities are there really and, and maybe it's not that… maybe we were at 50% now, but… I just think about everything, the possibilities that are still available there, and there's a lot of them. This has always been a project to work on, whether it was… putting in the switches or the passing loop or… the new transfer down at the shop or the new shop itself and re-railing the whole thing. I find it astounding, you know… That (first) day I was coming down and I saw all those people lined up at the window, I never would have envisioned the growth that we have seen here. It wasn't long ago at the (Mt. Washington) Commission meeting, they were saying, "Jesus. You're bringing a lot of people up (to the summit) these days. And I said, "Yeah, when we get up to 100,000 that'll probably be it." And now I think that number is more like 190 although I don't think I'll tell them. The one thing… I found out over the years is that every one of these major projects that we get accomplished leads to incredible strides of progress in all other aspects of the operation… like this new shop… it's already like making such a profound change in the operations… the quality of your maintenance goes up, your downtime goes down that increases your ridership further. I mean it's a self-fulfilling prophecy.

1988 - Three Levels of Truth

Reporters learn that stories about events can have a number of versions especially in politics. There is the "official" story that is told to the public, and those who inquire. Then there is slightly edited version for consumption within the extended family, and finally there's story that is told within the inner family circle with very few filters that perhaps comes closer to the truth. That is why good reporters develop their ability to "read between the lines." The Jitney Years manuscript attempts to present the Cog story in the second manner in order to give readers an understanding of this railroad's operations and people by taking them into the cabs of the engines, the front platforms of the cars, and "employees only" sections of the attraction. It is written for the extended family. The "inner family" version rarely, if ever, appears as it would be told with few filters in the Boarding House after those involved punched out and sought relaxation with an adult beverage. However, these days there is an electronic "Boarding House" called social media. It is the reason the three levels of storytelling when it comes to this image can be demonstrated.

The *Ammonoosuc* Freezes Over

Cog Engine Still Stranded: "Officials at the Mount Washington Cog Railway say they are anxiously awaiting a return to better weather so they may retrieve one of their coal-fired train engines stranded on the summit since Saturday. Cog Railway president Joel Bedor said Wednesday that one of this company's engines has been sitting at the summit since Saturday *(10/9/1988)* afternoon when train engineers were unable to maintain the coal fire that fuels the train's engines. A full complement of passengers who had just been ferried to the summit by the engine were forced to remain atop the northeast's highest peak for an extended stay. The train riders were returned to the Cog's base station later in the afternoon by another Cog Railway train. "Needless to say, there were a few unhappy people, both at the summit, and in our management offices," said Bedor. Due to the poor weather of late, Cog Railway workers have been unable to return to the summit to re-start their stranded engine. "Basically, we just have to get the fire going again," said Bedor, "but we can't do that until the weather improves."

- Littleton Courier – Thu, Oct 13, 1988 pg. 9

The Story from the Mt. Washington Observatory
(Spring 1989 Issue of Bulletin - Vol. 30 No. 1 & Logbook Oct 1988)

October 8 Saturday. A little snowy. Cool (~14-15 degrees) WOX S-BSF (Visibility zero miles, ceiling at ground level, light snow, blowing snow, fog). More snow and ice close the road. Auto Road open only to stages, and that only to 6 mile. Cog sends 2 trains – 1 double, then 1 single later. Single gets stuck on summit (lost fire, water…+ froze up? Jammed cog?) Walter Mitchell said it was only ~ the 2nd time in 20 years he has seen such a train. A relief train came up to bring down the stranded passengers.

October 9 Sunday. Yet another wintery day on top puts the finishing touch on a ruined Columbus day weekend. Oh well, as Al [Oxton] would say. 3 ft. drifts along the road hold even the

state truck at bay. Another S-BSF type day. Perhaps this is a record quiet Columbus Day week-end on the summit. No trains up, but the stranded one remains, getting rather rimed. Stages said to make it to 6 mile; not even the State truck made it to the top, claiming 2 to 3 foot drifts by/ before.

October 10 Monday. Winter continues. Worktrain arrives to rescue stranded engine, but is foiled in the attempt. Three lost hikers show up relatively unscathed. Same weather persists, deterring most hikers and keeping Road and railroad travelers from the summit. Work train up to try to get the engine that couldn't going – no luck, it still can't. There seems to be something broken, rather than just frozen.

October 11 Tuesday. Winter continued-continued. [This is a reference to the official weather reporting form - if there is fog already at midnight, and continues through out the day past the next midnight, the form for the day would read "Fog cont-cont."] A very quiet day – no trains, no cars, no stages, no hikers! Another WOXOF S-BSF day, too.

Wednesday October 12. (Shift change day crew up) via TV's Thiokol [snow tractor] from 6 mile. Dead cog train still here….No visitors.

Thursday October 13. Fog +blowing snow all day. No hikers. No trains no stages. Just us and the wind.

Friday October 14. One hiker fights his way to the top. Otherwise quiet. Rich[Anderson] sleds the stairway to the parking lots while Ben Miller [of Mount Washington State Park] skis the east fields. Many pictures taken of dead cog train. Art (Dunlap) from T.V. even shoots some video for the news.

Saturday October 15. Tourists return. Last weekend for State Park folks. Few hikers about and some trains up in afternoon. Auto Road closed but drive-able.

Sunday October 16. Last day of Park. Train + hikers everywhere. No stages though.

Monday October 17. Stranded train finally removed, somewhat the worse for wear. Cog finally takes away their train.

The Cog Version of the Incident
(Slightly Laundered)

The Rest of the Story from Cogger Dave Moody: "One of the engineers was getting married that weekend so ½ the staff was gone (foliage weekend !!!). George Trask was the GM at that time. He had called his son Buddy and me in to help that weekend as "jack of all trades, master of none types." Buddy Trask and I were at Waumbek Switch fixing one of the throw rails when George called us on the radio. He said an engine *(No. 2 Ammonoosuc)* was stuck at the summit with no fire and wanted us to go and get it back and that an empty passenger train was coming to take us up. Only one train was sent to the summit and when we arrived the passengers from the frozen train literally stormed the coach demanding to be brought down off the summit. The weather was brutal with high winds and a temp in the single digits. Buddy and I were trying to pull the engine with a chain attached to the passenger coach/engine (full of people) to free it up while we heated the cylinders with a large propane torch. The chain was not of the best quality and we envisioned it snapping and going into the coach *(Chumley or Thelma)* with the glass front. We stopped due to passenger safety concerns and I remember telling Buddy to go into the Summit House and call his Dad and tell George we couldn't do it and an engine without a coach was the only recourse to free up the frozen engine. Buddy looked at me and said "You call him because he won't listen to me on this one !" I called and George allowed us to bring the folks down and leave the other engine. The engineer was a sore excuse for a man - let alone a Cog engineer. When he arrived at the summit, he had low water in the boiler and no tender water and had been told to run a water hose from the summit house to the tender to be able to inject water to the boiler. He didn't do as he was told and just dropped the fire into the ash pan by opening the grates in the firebox. When Buddy and I arrived at the summit we were told what had happened by the brakeman, and we told him to relay to that engineer that if we saw him we would trounce him. He did appear just before we departed and snuck into the coach for a ride down, I believe he was fired when we reached the base. The weather had turned worse at the summit and no rescue engine was sent back up that day. I frostbit both ears that day as my hat wasn't up to the task. I believe that engine was on the summit for about 10 days before a warm spell came in and a crew went up to get it. The picture Brian posted *(above)* was taken by the summit park staff and they were sell-

ing it as a poster in the gift shop for a few years."

- Dave Moody email to Jitney Jr. - Friday, March 13, 2020 at 11:46 AM

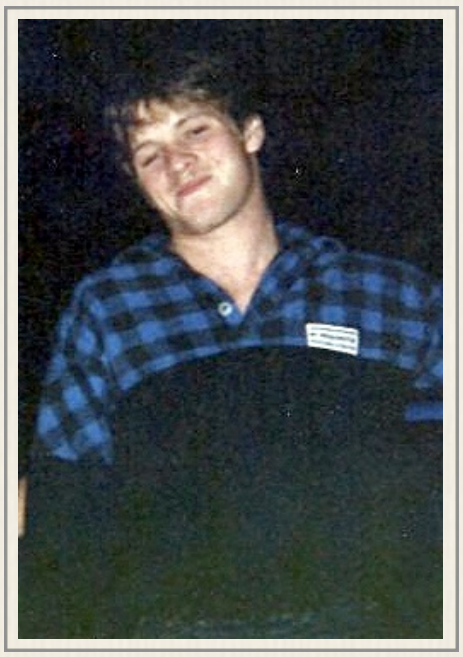
The "Boarding House After-Hours" Story of the Frozen Deuce
(Unvarnished)

John F. Kurdzionak: "What was the story behind this? How'd the fire go out?"

Steven Comeau: "High winds, no coal, slacking engineer."

Peter Steady: "And Clem and I got to ride it down ?"

Michael Kenly: "What are you guys, BURNT? I was there that day. Fuckhead "Shorty" was the valve turner on the #2. Geo. Trask was G.M. and he came tearing down to the shop to tell me that "shitforbrains Shorty" ran out of water in his tender, and that I should talk to him on the summit telephone. Fucknuts *(aka Shorty)* told me that he ran out of water, so naturally I told him to get water from the summit house. Fuckstick *(aka Shorty)* told me that he got water, but didn't have enough boiler pressure to work the injector; so we went up and rescued his useless white trash ass, and took its people down on our train. After the #2 had been up there stuck for 3 wks, it thawed out and we found that "Shorty" had melted the fusible plug and that's why he couldn't get water into the boiler and he froze it up. Operator error plain and simple. You guys think it's humorous, but realize that that piece of shit had totally exposed the crown sheet and the 2 was very close to blowing up. When a fusible plug goes, it's a warning of impending doom, it's not a safeguard; (the plug) isn't big enough to release enough steam to stop the crown sheet from collapsing, and blowing down through the ashpan. Whoever was really on that train is one LUCKY s.o.b. I shit you not, Mike K."



"Shorty"
- Cara Champagne Bujeaud Collection

Barry Stewart: "Yep. Matter of fact, we had a fuseable plug with us when we went up to get it. Why? 'cause I knew exactly what happened before we went up. Furthermore, I moved that engine with a fricken shaker bar after it sat there for 3 weeks. Think Shorty could have? This happened when most of us were at Lenny's wedding ...and it all happened because he was in the Summit House blabbing while his engine was hot and popping off. Don't forget, this is the guy who got stuck on center on Skyline then rammed the engine in front of him… then laughed. Also had "Metallica rules" on the side of his car in electrical tape."

Michael Kenly: "Hi guys, I was always sorry I missed Lenny's wedding, that must have been a panic-but we couldn't all go. My thanks to Paul and Barry for their most welcome additions *(to this story)*. As you may have guessed, this incident made me pretty angry at the time, and thinking about it now it still rankles my ass. When the asshole *(who)* took this picture and another made it into a poster, this was a slap in the face to me, and to the Cog, I feel. I don't think that this is just another study in summit weather/rime ice. This is the summit people (State, AMC, Obs) thumbing their collective snotty noses at us. What do you guys think?"

Steven Comeau: "Michael! Michael!! They have nothing on us. You know that! Those panty wipes could never even come close to the likes of a Cogger. Don't let one bad apple or a crummy pic get you all wound up. Memories are memories."

Peter Steady: "I'm not sure who took that picture, but there were quite a few others and they were not just taken by Summit people. The point is that it still ends up as Cog History no matter how we feel about it."

Michael Kenly: "That may be the case, Pete; but some cocksucker who works for or at the Summit, had this picture copied; made into a poster; and agreed to sell it in their gift shop. Also, the Mount Washington fuckservatory not only had it made into posters, but postcards as well, and the picture figured prominently in their "Bulletin." Don't tell me those Summit fucks weren't totally complicit in this. They gloated over every rime ice crystal, and every minute that train was stuck there."

Paul Forbes: "Now THAT'S a genuine cog story in perfect detail. Thanks Mike!"

Frozen at the Summit (1988)
- Observatory photo / Rob Bermudes Jr. Collection

1989 - A Fictional Hijacking

While some brakemen during the Jitney Years would entertain passengers at the Waumbek water stop with fake stunt falls and faux robberies using their bandanas to disguise their faces while brandishing brooms as a Winchester 73. No real hold-ups ever occurred and no trains were ever hijacked. However a 1989 mystery described how one might occur: ***Murders in the White Mountains:*** A Review: "Steve Sherman makes the most of his New England setting in *The White Mountain Murders*. This regional thriller features a wild chase through New Hampshire's Franconia Notch, gunshots booming through the Flume and a hijacking of the Cog Railway train on Mt. Washington. Sherman has a feel for the interior landscapes of northern New England as well, hinging his plot on one of those tricky wills so notorious in the region. Sarah Cooper has told her children, money-hungry inventor Miles and footloose Amy, that he will get the house but can't sell it as long as Amy keeps the highboy she will inherit in the house. When Amy disappears, Sarah prevails on Miles to summon his old friend, Hugh Quint, of the Beacon Hill Quints and late of the Boston Police, now pursuing a career as a private investigator. As soon as he arrives, Sarah's lawyer is murdered and his file on her is rifled. The lineup of suspects further demonstrates Sherman's appreciation of local character. Aside from crackpot Miles, who needs to sell the house or the highboy to finance his development a sodium-sulphur battery to power cars of the future, there is Eric Fielding. Or Eric Cornplanter, as he is known by his Abenaki name. Is he, as the townspeople think, an Indian fanatic and the abductor of Amy, or a dignified and articulate defender of native American ways whom she has joined out of sympathy, as he would have Hugh believe? And what motivates Eric's laconic disciple, Asa? The only flaw besides the too-witty repartee concerns Quint's solution. Like many detectives he sets a trap; unlike most, he hasn't a clue, or enough clues, to the criminal's identity, nor do we. But the trap is clever enough to catch the killer, and few new readers for Sherman as well." - *Quincy (MA) Patriot-Ledger - Wed, Sep 13, 1989 pg. 25*

The White Mountain Murders excerpt
pages 126-132

"Where was the runt? He could be anywhere. In the gift shop. Behind the maintenance garage. Sidestepped into the woods.

Hugh *(Quint)* ran through the exit turnstile, bumping people out of the way, drawing hard stares and manly shouts of rebuke. The cluster of people frozen in disbelief at the far end of the *(Flume)* parking lot was out of sync with the rest of the commotion.

Ritter was pointing and shaking his gun at a man and woman in a white car. He looked over his shoulder, saw Hugh, then pulled the man by the shirt, yanking him out of the car. The woman screamed and pushed open her door to escape.

Hugh ran through the paralyzed crowd.

Ritter started the engine, peeled the back tires into smoke, shifted forward, and peeled the tires again. The door on the passenger side swung free. It hit another car and slammed shut as

Sec. 51 - Fictional Hijacking

Ritter squealed the stolen Mercury through the exit gate and skidded right-north-onto Route 3. He sped down the half-shoulder until it disappeared and pressed the car into the main traffic.

Hugh ran back to his Audi, fired up, and smoked his own tires out of the parking lot onto the crowded highway.

The highway funneled into Franconia Notch and traffic intensified where the Old Man of the Mountain, a forty- foot cliff profile on Cannon Mountain, coagulated with tourists. Hugh could see panic in the way Ritter swerved the Mercury back and forth, braking and bouncing the car, to get around the mass of cars. Hugh did the same. In the rear-view mirror he could see the usual follow-the-leader- a black car-adding further chaos to the congestion. Most of the tourists turned into the parking lot to gawk at the rocky profile, symbol of the state. This was where Ritter floored the Mercury and sped away through the last escape hatch of the notch.

Hugh honked and swerved in a tight hairpin cut around the left-turners and gunned the Audi through the steep, jagged cliffs on either side. Ritter was out of sight around a bend. When Hugh finally caught sight of him, the Mercury had kept on Route 3 to the east, not on the Interstate 93 hookup to Littleton. Smart again. The runt was staying in the mountains he knew. On the top side of the Whites, Ritter swerved and tilted the Mercury around the curves and raced at full reckless speed where the road flattened out for the nine miles to Twin Mountains junction. Hugh figured the runt would tum north again, but he kept right and was heading back into the thick of the mountains, to Crawford Notch. That was it! He was heading back to hometown Bartlett, where he could lose himself.

Then, at Fabyan, a pockmark village on the highway, Ritter took a left to the Cog Railroad. A dead end. What the hell? By the time Ritter sped up the long incline to the parking lot, Hugh had lost too much distance. Minutes later, Ritter was on the old-lime pol-bellied, coal-burning locomotive, the gun at the engineer's head, and going up the mountain.

The three-mile railroad had been built in 1869 as the first mountain-climbing cog railroad in the world, and it chugged up the steep incline to the top of Mt. Washington highest peak in the Northeast, highest in the Presidential Range of the Whites, a cloud-buster in these parts.

The black puffing steam engine crept up the mountain one cog turn at a time, clawing its undergears into the holding track, pushing two bright yellow and red passenger cars ahead of it. *(Ed. note: One car per train, not two)* Meanwhile, the would-be passengers remained behind, cowering at the side of the gift shop and staring bewildered and frightened at the gun-toting theft, like a stunt scene on a Western movie set turned real.

Hugh screeched his Audi to a stop, jumped out, and ran to the wire gate. The train could move only as fast as a man could climb, only easier. So he ran down the platform leaped off, and headed into the thinned-out trees that paralleled the tracks. At the base the incline was soft enough to make distance. Then the haughty mountain took permanent hold. He had to make it to the treeline before the locomotive. Otherwise, he would be a sitting duck.

Mt. Washington was a vortex of winds, a rocky bald summit that had once clocked the highest wind velocity ever recorded, over two hundred miles per hour-way over. Only now it was the fog that greeted Hugh. The mountain was smothered with fog.

He ran through the birches and maples, many of them losing their leaves and opening up the sightline. His breath heaved heavy and fast.

The train engine chugged along, then when it hit a sharp angle up, it slowed.

Ritter fired twice. Wasted shots.

Hugh passed the engine, ran sideways to a low boulder pass the train had to creep by, and jumped onto the outside iron steps of the lead passenger car in front of the tourist-cute engine.

Ritter leaned out the engine compartment and fired alongside the car. Wasted shots again. He couldn't leave the engineer to get Hugh. He couldn't wait for Hugh to get him.

Hugh kicked open the door and stomach-crawled down the aisle four feet, then rolled under the passenger seats. He waited. He crawled down the aisle again a few feet, then rolled under the seats.

The light faded, and fog enshrouded the chugging engine and cars, dampening the noise, shutting down the rest of the world.

Hugh eased up and looked.

The engineer shouted down the center of the other car: "There! Out there!"

Hugh saw the foggy silhouette of Ritter fading in a spastic rush to the netherworld, disappearing, vanished. God-damn smart, goddamn smart.

Hugh ran to the outside steps and stared into gray nothingness. The gurgling, ugly scream that emerged from the fog didn't make sense. A man didn't scream like that when he fell down.

Hugh jumped from the car, his sense of caution heightened by the nothingness that seemed all that was left of the world-and the disembodied, terrorized cry of what sounded like death.

Instinct baited his rush to the source of that terror. He saw only the waving, floating, gauzy grayness. The security of the bulky yellow and red train, he knew, was also being swallowed up behind. But he mustn't look back, mustn't turn his back to the scream.

He eased forward, but the dimensionless fog made his progress seem as if he were on a treadmill, getting nowhere.

Then, frighteningly close, he heard the fog-muted thud of boots on rock scampering away.

He squinted at the sound, and there, in the flash of a wave of fog, the stick figure of a fleeing human being appeared. The moment was brief, but it was enough to signal the approaching hor-

ror of being ambushed. Hugh froze at the anticipated pain to his gut, at the expectation of a realization that he was dying for some reason he couldn't comprehend.

Then he saw the other fog-crushed stick figure, the grotesque sprawl of a human being on the boulders, arms and legs askew, its head hanging upside down. It was a colorless phantom in the thick, wispy vapors, but the closer Hugh inched toward it, the more vivid became the shapes and colors.

Frank Ritter fixed an icy stare upward at gray eternity, his bushy eyebrows black and bold over his popping eyeballs. His neck was creased deep with a corded string tie, one of those tourist ties bought at gift shops, the kind with an emblem you push up to your throat.

This one read: "Welcome to the White Mountains."

Frank Ritter was finished, but who the hell had done it? And where had he come from?

The Cog Railroad had stopped, and the silence isolated Hugh all the more in the wet air. The only way out was down, and that was easy. He walked out of the cloud like a ghost of himself, then heard the engine start up again and the cog gears clank down the loud iron tracks, the black locomotive puffing out of the smeary heavens, a deus ex machina come to rescue Hugh Quint.

He ran to the locomotive, explained to the wide-eyed, worried engineers that, no, the body shouldn't be carried down until investigators had examined the scene as is, and rode down Mt. Washington to the station and a telephone.

The state police said they'd have officers out there in four minutes and to stay there. Yes, sir, they knew who Hugh Quint was; Chief Maddox had informed them, but stay there. They'd like to talk about it. Hugh stayed.

Whoever strangled Ritter had known what he was doing, known how to operate in the fog, known the territory. But who didn't around there? Maybe Miles, who had trouble with reality let alone real estate. Eric could slick through the fog like that. So could Calvin or Toop or, for that matter, Zeta. *Is fecit cui prodest* - he who profits by crime is guilty of it.

But who could be right at the critical spot when Ritter disappeared into the fog? That was impossible for anyone to know beforehand. Hugh had been followed, all right. Of course. It was the black Ford zigzagging in and out of the traffic behind him when he was behind Ritter. Or maybe the guy had been following Ritter in the first place. Hugh had blown it by not remembering the license number. It was reversed in the rear-view mirror and too far away. Then he should have looked at the guy's goddamn face. Well, hell, that was also too far away, and back. Besides, Ritter had commanded all of Hugh's attention, and that was always mistake number one, sidetracking a wider focus.

Whoever it was followed the two of them to the Cog Railroad, saw what was happening, got out, and climbed through the trees just like Hugh, only he climbed farther out, unseen, silent, waiting. Hugh had made just the right moves and forced Ritter into the open terrain, into the fog.

The killing had to be premeditated, and the right time worked into the killer's perfect opportunity. He had the strangling weapon ready, and it said what he wanted it to say, just like the other killings."

White Mountain Murders by Steve Sherman
Publisher : Walker & Co; First Edition (January 1, 1989)
ISBN-10 : 0802757359
ISBN-13 : 978-0802757357

2000 "Putting the Fun in..."

The Mt. Washington Funicular Railway

On May 16, 2000, New Hampshire Parks & Recreation Director Richard McLeod received a letter on Mount Washington Hotel & Resort letterhead that said simply "Enclosed is the engineering proposal "Mt. Washington Funicular" as we discussed. Please feel free to call me if you have any questions or need further information." The letter was signed - "Wayne W. Presby."

A binder sent with the letter outlined a $16-million dollar plan to build a second way to haul tourists to the top of Mount Washington alongside the existing three-mile Cog Railway track and within the 100-foot wide right of way the New Hampshire legislature chartered to Sylvester Marsh. Here an edited version of its contents.

Introduction

A double reversible funicular system shall be built parallel to the existing cog wheel railway. The purpose is the following: lower operating costs, lower maintenance cost, additional winter operation, withstand 80 mph operating cross wind speed (If the operating wind must be 120 mph, the design must be reviewed. Economies may be questionable.)

Company Profile: Doppelmayr Vertriebsgesellschaft mbH (Doppelmayr) of Wolfurt Austria is the worlds leading manufacturer of ropeways of various types. In 1996, Doppelmayr acquired the Swiss ropeway manufacturer Von Roll Tramways Ltd. whose name was changed to Doppelmayr Tramways Ltd. on May 1st, 1999. The name of the United States subsidiary was changed from Von Roll Tramways Inc. to American Tramways Inc. With the Doppelmayr group, Doppelmayr Tramways Ltd. is the center of technology for aerial tramways, funiculars and special ropeways for the world-wide market. All subsequent references to 'Dopplemayr' shall be construed as referring to the contracting office (American Tramways Inc.)

Sec. 52 - Mt. Washington Funicular

Doppelmayr is the world leading supplier of funiculars with more than 200 installations built in its 115 year existence... We have a vast reservoir of qualified funicular engineers who have gained experience on quite a number of funiculars built in recent years. For instance, in the past two years *(1998-1999)* not less than eight funiculars and major reconstructions have been designed, supplied and managed from our office in Thun, Switzerland. We can assure you, based on (those) and previous installations which have been successfully built by our company, we have the engineering and manufacturing expertise to build a comfortable, solid and durable Mt. Washington funicular to your full satisfaction and within the offered time and cost frame and according to the latest state-of-the-art technology.

Basic Project Parameters:
Operation

Capacity: 280 people per hour (pph)
(one way capacity)

Car Size: 60 (seated)

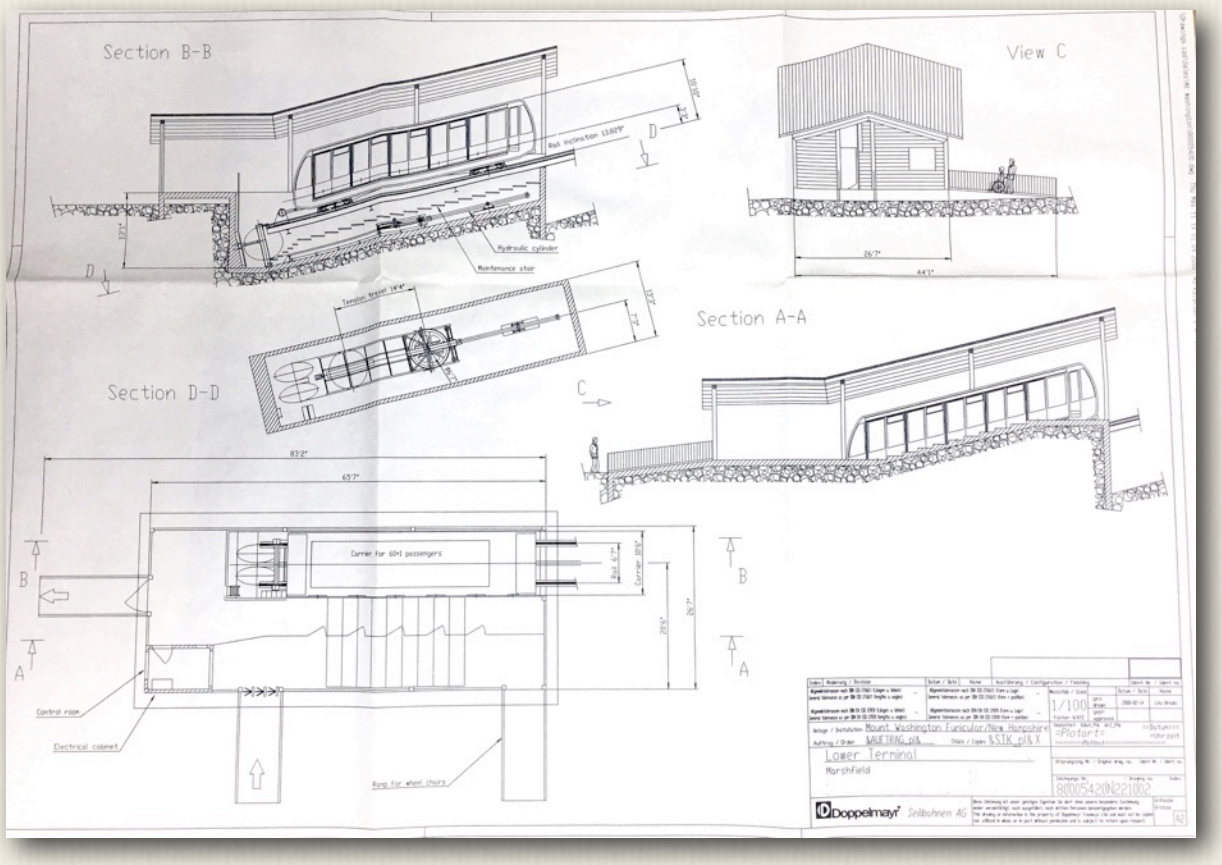
Operating Time: 365 days/year - 8 hours per day
(assumed)

Car with 5 compartments, each with 12 seats. The seats in the uphill compartment may be flipped up to provide space for wheelchairs

At the lower terminal the car will rest against a buffer, so to maintain car position independent of temperature and loading. This allows for practical maneuvering with wheel chairs.

The inclination of the rails are *(approximately)*:

Lower Terminal	13.8 degrees
Upper Terminal	11.2 degrees
Steepest Incline	18.9 degrees
Minimum Incline	8.40 degrees



Hence it is proposed to select the car inclination at 12.5 degrees. This results in nearly level platforms in the terminals.

Operator controls are located at the uphill and downhill ends of the cars
The cars shall be equipped with automatic doors at the right side looking uphill
A sewer line shall be aligned along - and attached to - the track substructure
The system shall be designed to connect a show blower at the uphill side of the car
The travel speed shall be approx. 1500 ft/min. and result in a travel time of 10 to 11 minutes
(high speed, short travel time is not desired)
Cars shall be heated - At -60° F the car inside temperature shall be ?? °F

Drives

A conventional funicular drive shall be located at the upper terminal. A Diesel engine hydrostatic emergency drive fully independent of the main gear box is included int eh main proposal.
Funicular speed with Diesel engine: 400 ft/min.

An emergency generator set to operate the system at 50% capacity in case of main power failure will be offered as an option, if required.

It will be necessary to install a power supply line along the track. The client's requirements, excluding the funicular drive at the upper terminal will be: 110 kVA

The available power supply at the lower terminal will be: 11 kV, 3 phase, 60 cycles

Environmental Conditions

Icing prevalent
Temperature range for design: -60° F to 72° F
Seismic: UBC Zone 2
Design operating wind speed: 80 mph
(assuming constant wind speed perpendicular to the track)
Track and terminal design to withstand a max. wind speed of: 160 mph
Maximum snow depth: 8 ft
Track exposure to avalanches: none

Funicular Line

The Mt. Washington Funicular shall be aligned to the right or left of the cog-wheel railway. Any foundation or obstruction shall not extend beyond 49.5' of the cog wheel centerline.

The entire track is elevated above ground (min. appox. 6 ft) to avoid heavy snow accumulation on the line.

There are a couple of hiking trails crossing underneath the elevated track.

There are no creeks, roads, power lines, other lift installations etc. to be crossed by the funicular line.

A remote start up of the drive from the lower terminal is required. This practically effected from the car stationed at the lower terminal.

In the morning before transporting passengers a service trip is required. Since the car stationed at the upper terminal will be moving down without a conductor, it will be necessary to monitor the funicular line to detect fallen trees. Hence a wire must be installed along the track in

the lower section which would trigger an emergency stop and a signal to the lower terminal indicating a problem on the line.

Access: There is a private road to the upper terminal. The cog wheel railway may also be used for construction.

Evacuation: It is assumed that snow cat access is available to any point on the track. The cog wheel railway will remain operable during the summer

Schedule: It is envisioned that some foundation work is executed in the year 2000. Start-up and commissioning of the funicular: Fall 2001.

Prices and Conditions

At this point a cost estimate of an accuracy of ±10% is submitted. An estimated of operating and maintenance cost is also included.

Base prices: Assumed exchange rate of 1.5 SFr./US$ (presently 1.62 SFr./US$)

Estimated price for design, supply and installation of Electro-Mechanical equipment
US$ 6,000,000
Estimated Price for Design and construction of civil works as described
US$ 9,600,000
Total Price (including estimate for Civil Works):
US$ 15,600,000
Optional Escape way along track - approx. 36" wide, 14,600' long in galvanized steel with hand rail US$ 1,200,000

Due to the present volatility of the exchange rate between the US dollar and the Swiss Franc, we must include a reserve clause for recalculation of the price depending ont eh exchange rate at the time the offer is accepted. Our price does not include any allowance for local taxes, fees, building or other permits which may be imposed by local authorities.

Description

To provide the Owner with an attractive, safe, and comfortable system designed with an economic life in excess of 30 years. The proposed system consists of the following:

Double-reversible funicular tramway with two carriers each for 60 passengers plus 1 operator

The track is composed of railway type rails with a 6.56 feet gauge supported at intervals of approximately 3 feet by special elastomeric mounts. A passing loop is included midway between the upper and lower terminal to allow the two cars to pass

Torque and motion of the friction-type drive is transmitted from the drive to the cars by means of the haul rope which is connected to the cars by anchoring drums.

The drive machinery is located in an enclosed room at the upper terminal

To maintain a safe friction factor at the drive bull wheel and to provide accurate docking at the lower terminal, a lower haul rope is required which is hydraulically tensioned at the lower terminal.

An evacuation drive is included in order to return the carriers to the terminals in the event of a power failure or failure of a component within the primary drive system.

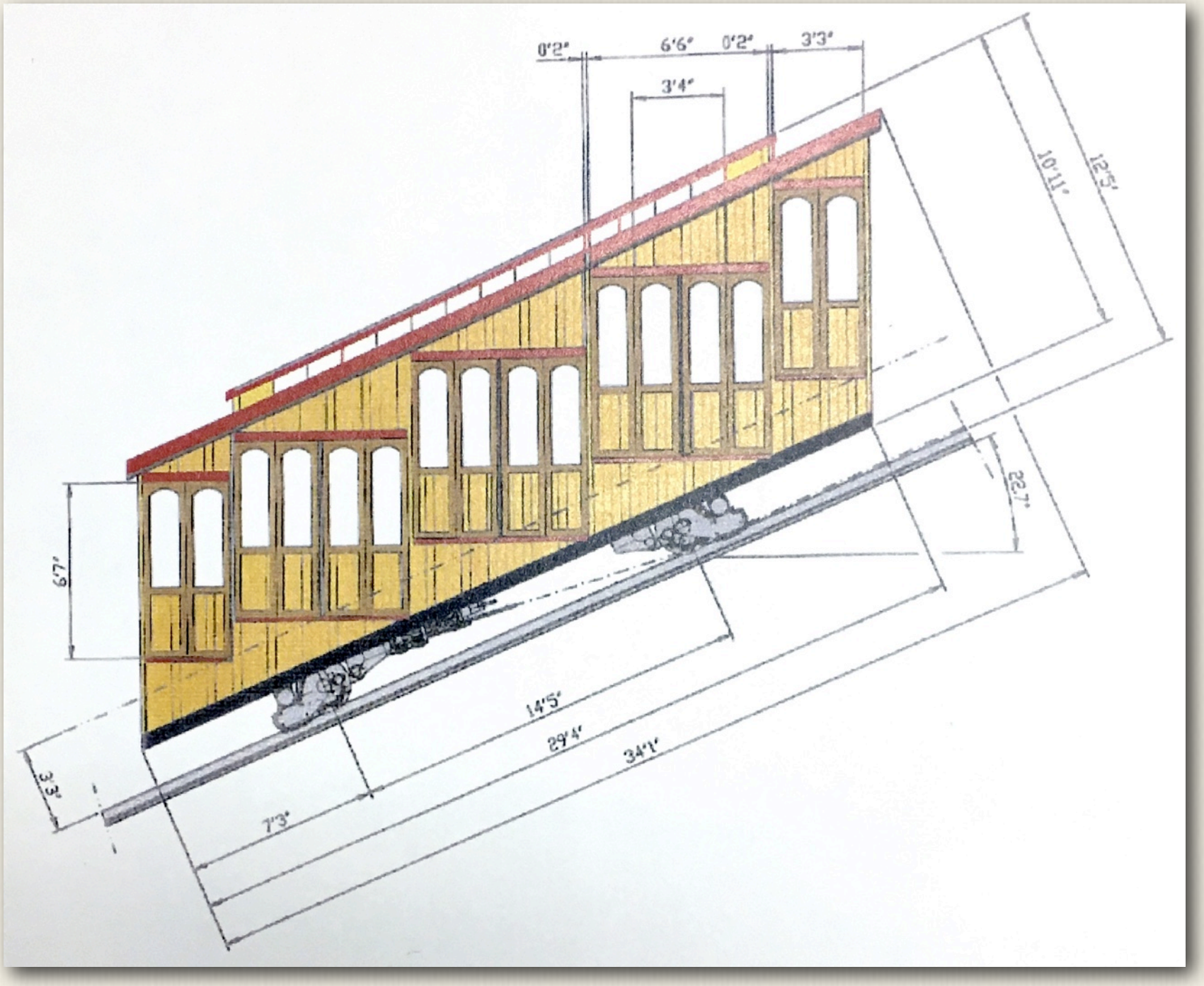
Sec. 52 - Mt. Washington Funicular

Along the track the haul rope is supported by sheaves which are insulated from the electrically grounded guideway structure.

A stairway may be incorporated along one side of the guideway structure to facilitate evacuation of the two passenger cars in the unlikely event that a failure prevents returning the cars to the terminals. The stairway also provides access for checking and maintaining the line sheaves. It may be feasible to delete the stairway if evacuation is guaranteed by other means (e.g. snow cat during the winter, cog wheel railway in summer). This subject needs further discussion.

Terminal Buildings

It is envisioned to provide a hall to enclose the boarding/de-boarding and car docking area to protect the passengers and the cars from adverse weather conditions. The boarding and de-boarding platforms are arranged on the right hand side of the cars looking uphill. The machine room at the upper terminal as well as the control rooms at both terminals shall be fully enclosed and heated.



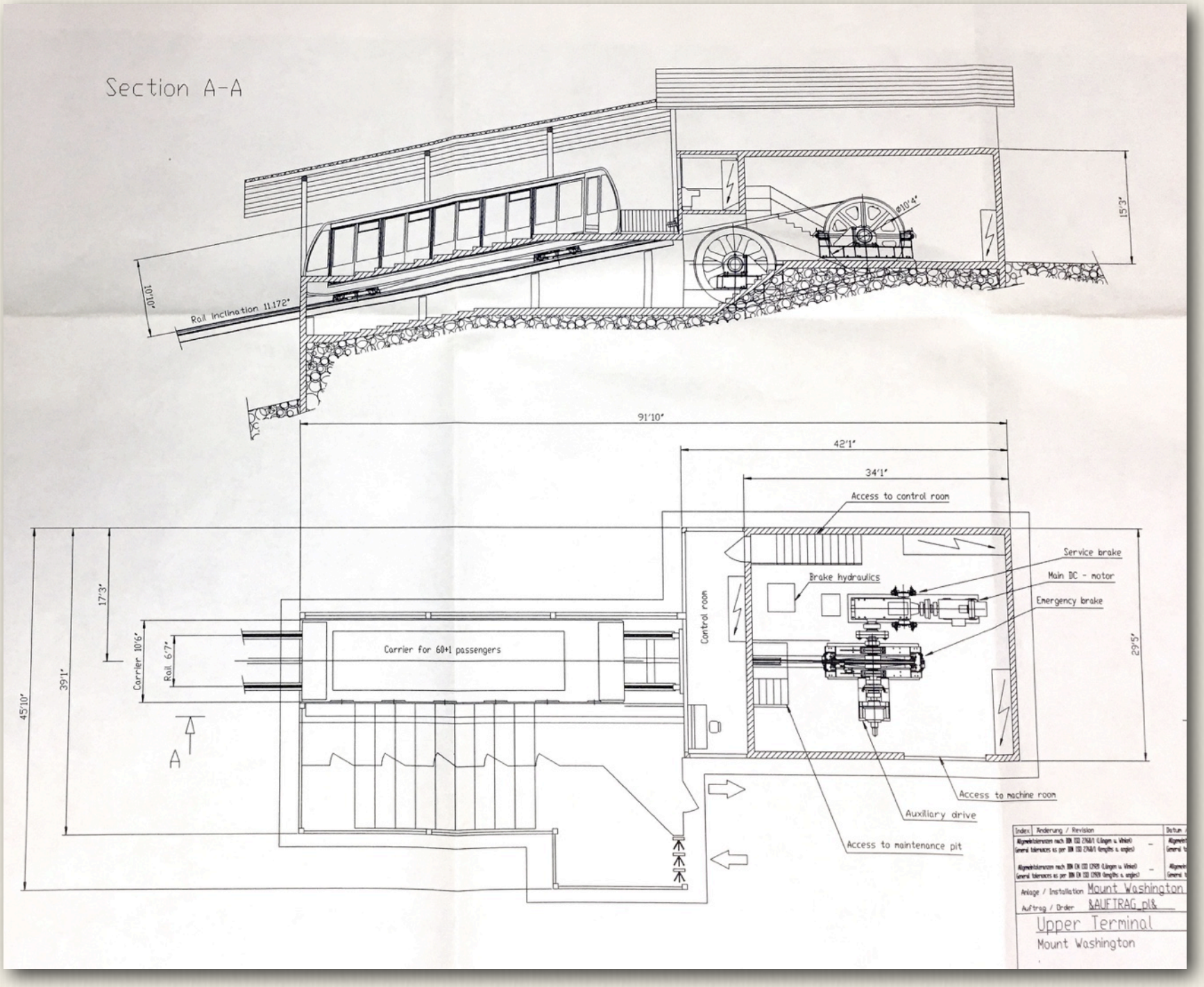
Vehicles

Two 60 plus 1 passenger car will be provided, consisting of the following:
Car body by Gangloff AG, Bern or CWA, Olten, Switzerland

Two bogies of 4 wheels each

2 emergency rail brakes

Passenger cars are configured to allow 60 passenger seating. In addition, a conductor's station is provided on both uphill and downhill end.



A car is divided into 5 compartments. In each compartment seating for 2 x 6 = 12 persons is provided. The separations between passenger compartments are open in their upper part, the separation to the drivers compartment is completely glazed. Each compartment is heated by Kerosene heater. The fuel input is at a centralized location of the car. The heater system is equipped with automatic fire-extinguisher. The tanks for Kerosene will be dimensioned for 2-3 days without refill. The electric power for fans and fuel pumps will be taken from onboard battery equipment.

Wheelchair access is provided at the uphill compartment of each car, requiring that the seats be folded to the raised position. When 2 wheelchairs are in the car the total capacity is reduced to approximately 52 persons.

Five automatically actuated car doors are provided on each carrier. Depending on the exterior design chosen, the doors can either be equipped with an electric or an electro-pneumatic automatic systems... We recommend pneumatic doors - this system has proven reliable functioning un-

der all weather conditions. Each door is equipped with obstacle sensors. The doors can be operated by attendant or, independently, by passengers in the terminals. An emergency opening system is provided with each door. The cars will be equipped with comfortably upholstered single seats out of a wide range of bus and train seats; color design to customer's choice. We provide 2 headlights on each front side with high-intensity lighting of the funicular track.

In addition to the hinged windows, a 24V-ventilator system provides fresh air-circulation in the passenger compartments and the attendants compartment. The carrier is equipped with bus type audio system providing two loud-speakers in the each compartment, radio-CD-cassette system as well as microphone in the drivers compartment. The audio-system also allows information from the control room.

The emergency rail brake units are designed to apply with loss of haul rope tension or at overspeed. These units are designed for maximum reliability and utilize spring applied brake calipers, which act on the trackway support rail.

Electric Controls

Electric controls for this system will incorporate state-of-the-art PLC (Programmable Logic Controllers) which are configured to provide maximum flexibility as well as fault enunciation. Normal operations allow operation from either the cars (one operator in each car) or from the control room. Various other modes of operation are allowed; for instance manual operation from either the cars or the control room in the event of various faults.

Control and voice signals to and from the cabins are transmitted via an inductive coupling through the haul rope. In addition, the haul rope is continuously supervised and if it comes into contact with a grounded component of the funicular structure (due to de-ropement or other failure) the control system will automatically stop the cars.

Parameters Affecting Cost

Track Structure: In view of snow accumulation, an elevated track 2 to 6 meters above ground is assumed at this time. Substantially lower in cost would be a conventional railroad track design. A factor against the low track is pedestrian or animal crossing of the track as the need for fending may become an issue.

Evacuation: It is assumed at this time that the entire line would be accessible by snow cats. The question concerning the elevated track is always the provision of an escape way along the track. Considering a maximum track elevation of no more than 20 ft. above ground, ladders may be acceptable, provided the passengers can be evacuated to the lower terminal. Since the cog wheel track is available and maintained, such evacuation may take place with the cog wheel railway in summer and with snow cats during winter conditions.

Temperature: The design for temperatures as low as -60° F has a substantial effect on cost. the total temperature difference of 132° F results in an extensive arrangement of fixed points and expansion joints.

Cars for All Seated Passengers: Due to the travel time, this requirement is reasonable. However, the car size is substantially bigger than for conventional funiculars - e.g. the empty car weight is now assumed to be 33,000 lbs., compared to the 18,000 lbs. originally estimated.

The high wind operation is a major cost factor. To achieve a fiscally reasonable design, we assumed a maximum crosswind of 80 mph, with a safety factor against overturning of 2.0. This al-

ready results in a record rail gage of 6.6 ft. Using higher wind speeds would affect cost to such a degree that economy would be questionable.

Summary

We recommend to discuss our first proposal upon our next trip to the USA (end of February 2000) and then continue our work as a result of your comments and input. As soon as the cog wheel railway is in operation, we will have to take a closer look on the track and preferably discuss the project with a local civil engineer.

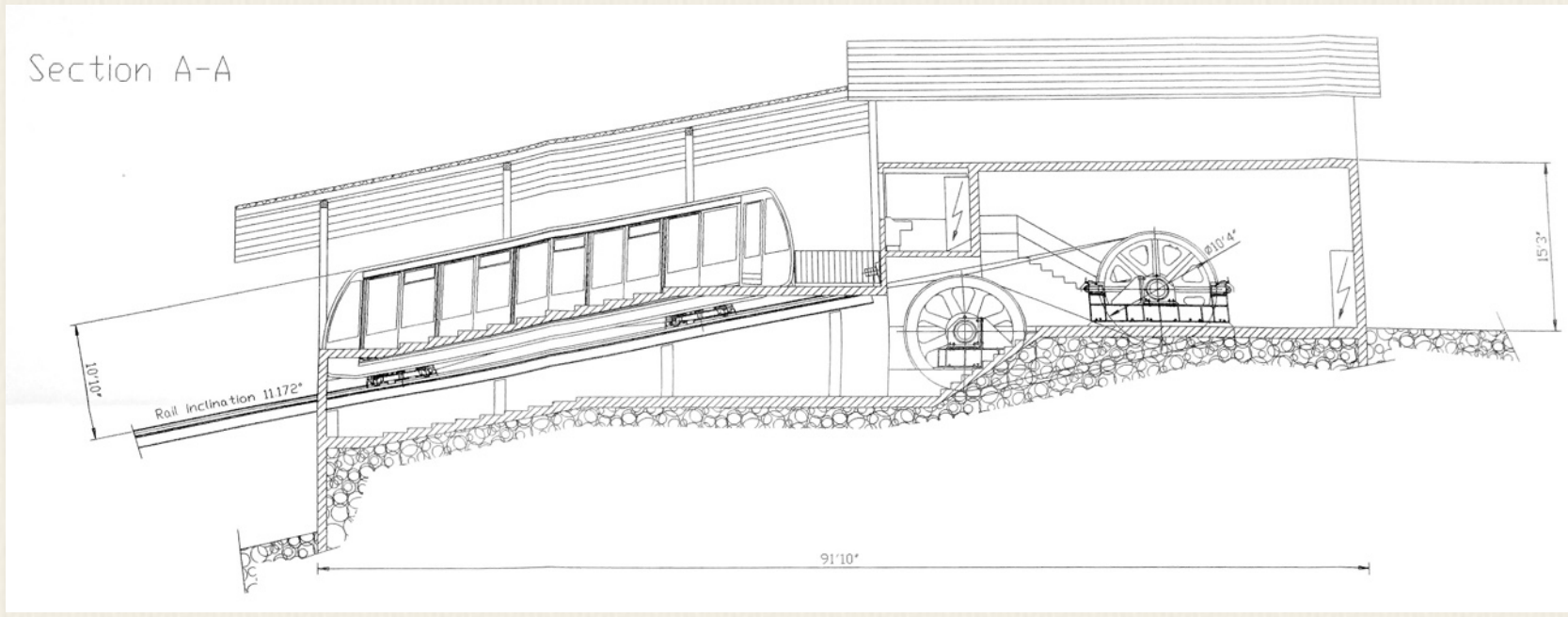
Annual Costs

Estimated Operating and Maintenance costs based on 4 trips per hour for 8 hours per day 365 days a year with each trip traveling 14,615 feet resulting in each car traveling 32,500 miles.

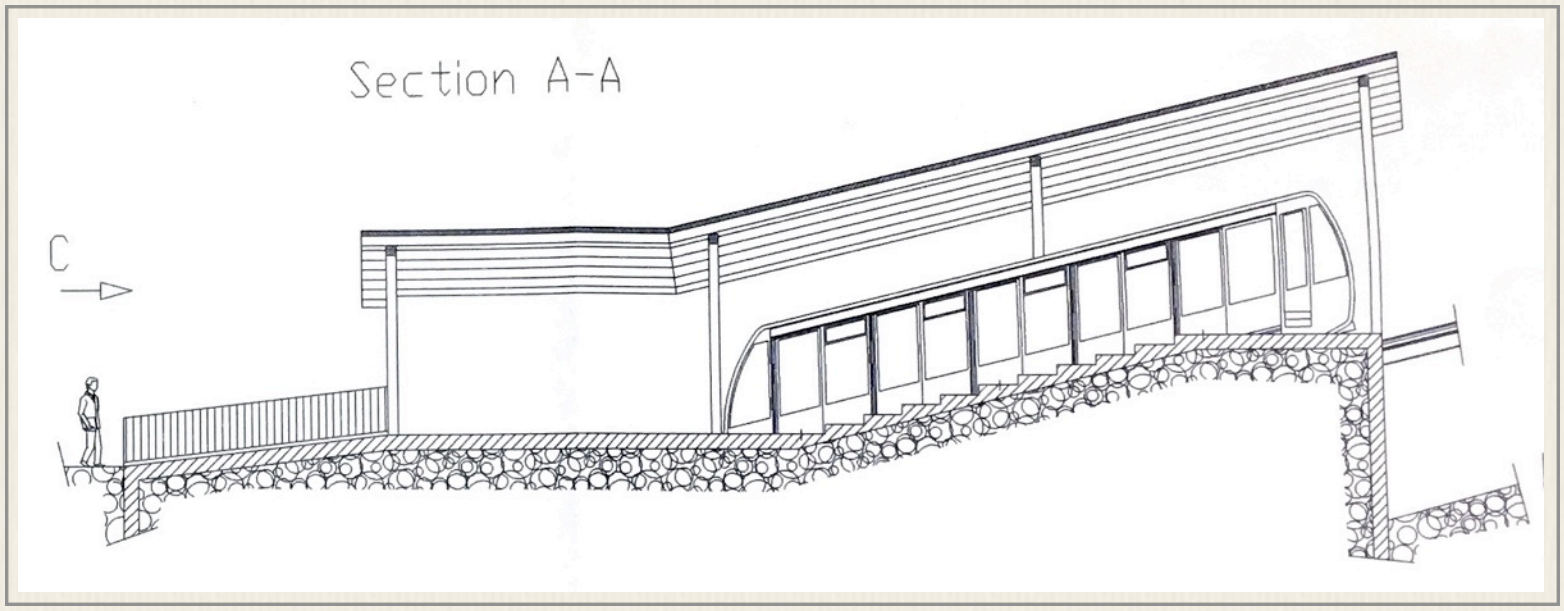
Inspections:	$25,000	
Line Sheave liner replacement	$62,000	
Exchange of haul & counter rope	$18,000	
Ropes replaced every 12 years		
Electromagnetic Rope Inspection	$ 1,500	
every 3 years		
Machining carriage wheel rims	$ 5,500	
every 3 years		
Exchange of Wheels	$ 5,500	
every 9 years		
Doppelmayr inspection	$ 7,000	
every 3 years		
Track Checking bolt tightness	$ 7,000	
every 6 years		
Car body repairs	$ 1,000	
Overhaul brakes, anchorage	$ 6,500	
every 8 years		
Drive equipment	$ 2,500	
Lubrication / Cleaning	$40,000	
Total Annual Maintenance		$180,000
Energy: 677,440 kWh	$ 54,000	
Heating & Lights	$ 15,000	
Staff: 5,840 man-hours @ $15	$ 88,000	
1 part-time mechanic/electrician	$ 30,000	
Part-time administration/ticketing	$ 30,000	
Advertising/PR	$ 25,000	
Liability insurance	$100,000	
1 inspector	$ 10,000	
Total Annual Operating		$350,000
Total Annual Costs	$530,000	

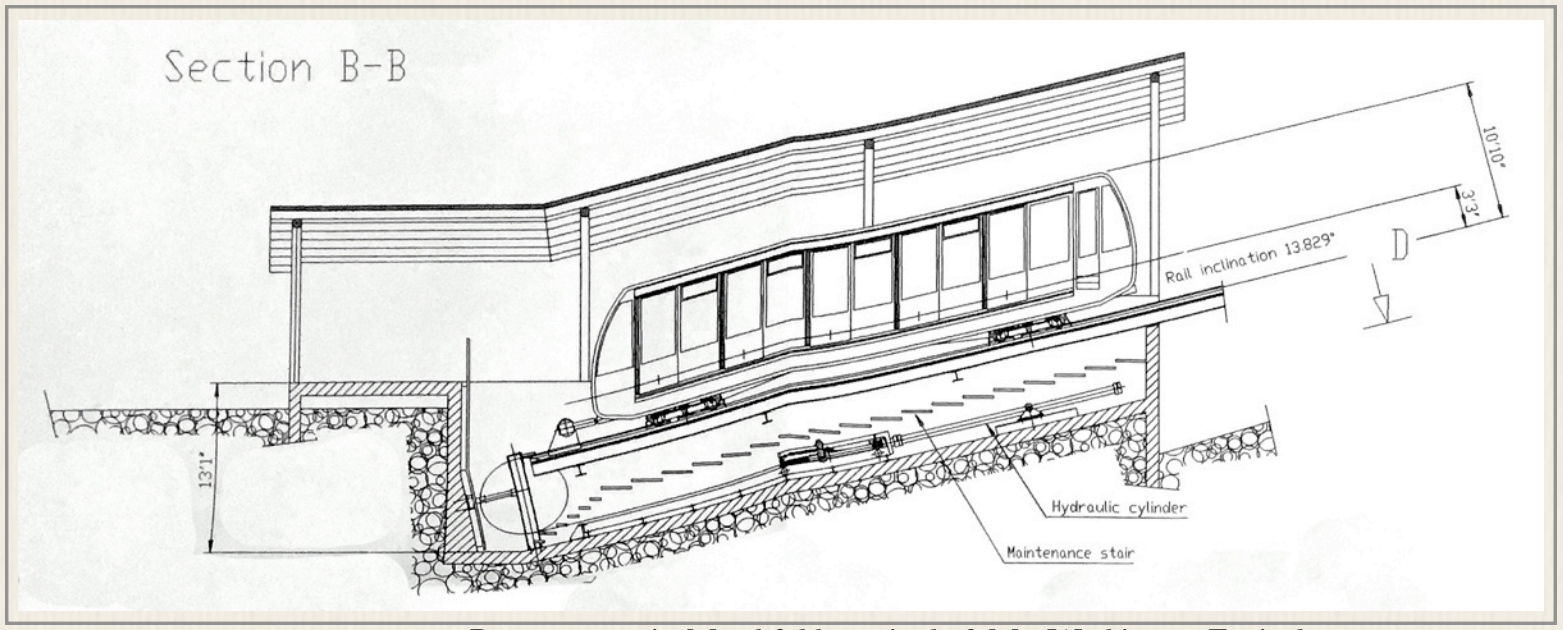
Sec. 52 - Mt. Washington Funicular

In Switzerland it is common to base the feasibility on a pay back period of 15 years, since a funicular system is designed for a life span of min. 30 years. The Mt. Washington Funicular proposal calculated the tickets sold each year at $44 per would yield $105,000.



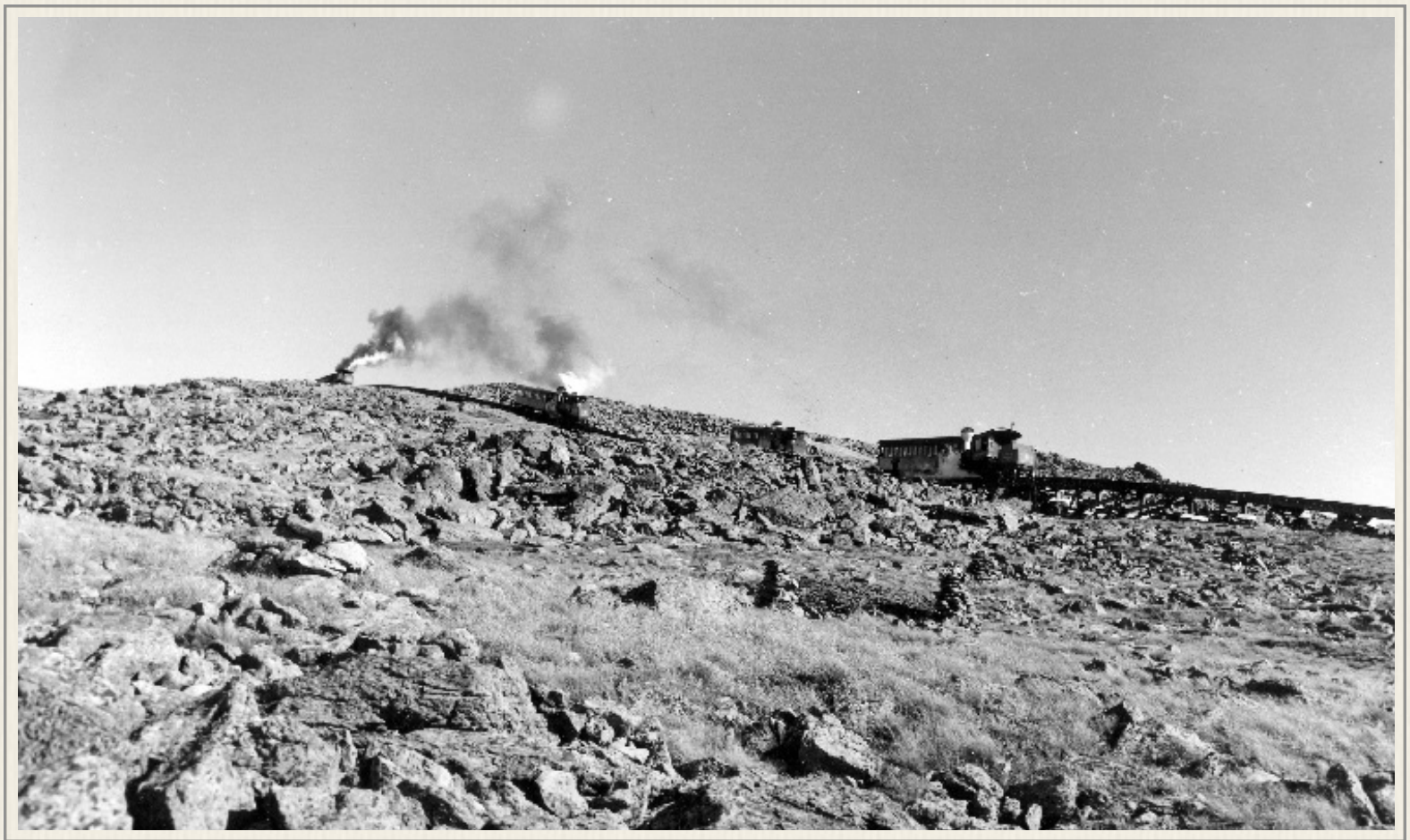
Up mountain Summit terminal of Mt. Washington Funicular cutaway (2000)
- Doppelmayr Design Proposal





Down mountain Marshfield terminal of Mt. Washington Funicular cutaways (2000)
- Doppelmayr Design Proposal

2016 Skyline Revisited



- Forest History Society (1954)

Cog Railway proposes 35-room hotel below summit of Mount Washington

By JOHN KOZIOL - Union Leader Correspondent

SARGENT'S PURCHASE --- In time for its 150th anniversary, the Cog Railway has announced plans to build a hotel and restaurant about a mile below the Mount Washington summit.

There will be a preliminary discussion of the plan at the Dec. 8 meeting of the Coös County Planning Board.

The new facility, according to Wayne Presby, the Cog's president, and Joel Bedor, one of the owners, would be built in an area known as Skyline, a former rail siding. The complex would be entirely within the 99-foot-wide tract of land the Cog owns from its base to the summit. The resort would operate from May to November, in keeping with the train's schedule.

As envisioned, the complex would straddle the tracks.

Presby said the hotel would include about 35 "well-appointed" rooms and a full-service restaurant that would cater to hikers and tourists alike.

The building would be engineered "to withstand the weather extremes of Mount Washington and would be designed to fit into the natural surroundings and reflect the architectural elements of the original summit hotels," Presby wrote.

Sec. 53 - Skyline Revisited

The footprint of the new hotel would be similar in scale to that of the Sherman Adams Building on the summit, which houses the Mount Washington Observatory and is part of the 60.3-acre Mount Washington State Park. Mount Washington is New England's highest peak at 6,288 feet.

The hotel and restaurant would create 20 new jobs, Presby said, and provide an economic boost to the North Country through the use of local contractors. The project also requires construction of a sewer line down the mountain and a septic system at the base. If all goes well, the hotel and restaurant would be completed in time for the Cog's sesquicentennial on July 3, 2019.

The new, privately funded facility is a successor to the former Summit House Hotel, which welcomed guests from 1852 until it was destroyed by fire in 1908. Acquired by the railway in 1873, the Summit House boasted 91 rooms. The hotel was rebuilt after it burned and in 1951 the Cog and the hotel became the property of Dartmouth College.

When the college offered to sell both to the state of New Hampshire, lawmakers instead purchased just the acreage at the summit and tore down the Summit House to replace it with the Sherman Adams Visitor Center, which doesn't accommodate overnight guests and offers only limited cafeteria-style dining.

The only places to stay overnight on Mount Washington are the Mount Washington Observatory, which rents space in the visitor center, and the Appalachian Mountain Club's Lake of the Clouds Hut.

Presby said both of those options are spartan in their amenities.

The Cog operator says Mount Washington and the railway have seen a boost in tourism since the collapse of the Old Man of the Mountain in Franconia in 2003.

About 5,000 people a day make the trek to the top — more than 300,000 each season— arriving via the Cog, the Mt. Washington Auto Road, and on foot. Presby is betting more of them would like to spend the night than can be accommodated now.

Formerly the owners of the Mount Washington Hotel and Resort in nearby Bretton Woods, Presby and Bedor hope the new venture gives visitors a taste of the luxury of the historic summit hotels.

Presby said the new hotel would not compete with the future 65-room Glen House at the base of the eastern side of Mount Washington to be operated by the Auto Road. Nor does he see a renovated and expanded Balsams Resort in Dixville Notch as a direct competitor.

- New Hampshire Union Leader - Thurs, December 1, 2016

Cog Railway owners propose 35-room hotel on Mount Washington

By DAVID BROOKS Monitor staff

The owners of the Mount Washington Cog Railway want to build a small hotel to deal with growing crowds of visitors drawn to the state's highest peak – but to build it in an unusual spot, two-thirds of the way up the mountain, alongside the railroad track.

"This one is certainly going to be interesting, because of where it's located," said Rep. Leon Rideout, a Lancaster Republican and member of the Coös County Planning Board, which will hear the proposal at a hearing Dec. 8.

Wayne Presby, who has owned the Cog Railway for 34 years, said the plan is to build 35 "high-end" rooms and a restaurant within the 99-foot-wide strip of land that the company owns straddling the railway line.

"We haven't really finalized what the design is going to be. There are options: One is to build it over the tracks, so the train goes through the middle," he said.

The Mount Washington Cog Railway runs three miles up the west side of Mount Washington, from a base station to the summit. Presby said the company wants to build the hotel about a mile below the summit, near where a hiking trail called the Jewell Trail crosses underneath the train's trestle.

This location, called the Skyline, once housed a siding where trains could pass each other. Presby said the faster uphill trip allowed by the biodiesel engines that replaced the old steam engines meant the siding was no longer necessary.

Under the proposal, Presby said the firm would build a sewer line running down the mountain to new leachfields at the base, near the Cog Railway station. He said this would be similar to a system used at Cannon Mountain to take waste from the mountaintop terminal for the aerial tramway.

The hotel would be open only during the Cog Railway's season, usually May to November.

Mount Washington has had a number of hotels at its peak over the years, the most recent of which was torn down in 1980.

The only overnight rooms on the mountain today is the Appalachian Mountain Club hut called Lakes of the Clouds, which offers accommodations for 90 hikers but is closed in the winter. The Mount Washington Observatory holds a small number of overnight guests in the winter.

"All of those are being done on state and federal land. This would be on private land, privately funded," Presby said of the Cog's proposal. He said it would cost "several million dollars" and he hopes to open it by July 1, 2019, the150th anniversary of the Cog Railway.

The Cog Railway was the world's first line to use mountain-climbing technology. It is the second-steepest such railway in the world, with an average grade of over 25 percent and a maximum grade of 37 percent.

Presby said the Cog Railway, which has closed for the season, carried more than 110,000 passengers to the summit this year, which is its "fifth record year in a row."

Putting up new buildings in the White Mountains can be controversial, as the Appalachian Mountain Club found when it proposed building a new hut for hikers in nearby Crawford Notch State Park, to help relieve congestion. That 50-person hut has drawn criticism from a number of places mostly due to environmental concerns.

"I'm sure there will be some people that will voice that concern," Presby said, "but we think there's a need for an additional facility." *- Concord Monitor - Thurs, December 1, 2016*

Owners of Mount Washington cog railway want to build a big hotel up there

By KATHY McCORMACK Associated Press

CONCORD, N.H. — The owners of a historic cog railway that climbs up New Hampshire's Mount Washington, the highest peak in the Northeast, want to build an upscale hotel a mile from

the summit, in keeping with hotels that once graced the mountain in the 1800s, and to accommodate an increasing number of summer tourists.

The 6,288-foot Mount Washington has been attracting more tourists in New Hampshire's North Country with the loss of the Old Man of the Mountain, a granite profile and state symbol that crumbled in 2003. It draws over 300,000 guests annually.

The railway owners are considering a 35-room hotel with a restaurant on their own land that would withstand the weather extremes of Mount Washington. It would be open from late April through November and hopefully be ready by July 3, 2019, to commemorate the 150th anniversary of the Mount Washington Cog Railway.

The railway runs 3 miles up the west side of the mountain, and became the first mountain-climbing cog railway in the world when it was built in 1869.

The owners want to build a 25,000-square-foot hotel at the site of a train siding called Skyline. They would like the train to pass through the building, sheltering patrons from inclement weather.

"It would be much more upscale than what people are offered up there currently, and would be more in keeping with what was available at the turn of the century," said Wayne Presby, president of the Mount Washington Railway Company.

During the tourism season, visitors to Mount Washington can stay at Appalachian Mountain Club hut, and at the Mount Washington Observatory, although space is limited at both. Accommodations are somewhat spartan, with bunk beds and cafeteria-style food.

In 1873, the railway built, owned and operated a 91-room hotel known as the Summit House on the summit. It burned down in 1908 and was replaced by a smaller structure several years later. The state bought the property in 1964 and replaced the hotel with a visitor center that was opened in 1980.

The Presby and Bedor families have owned and operated the railway for 34 years. They also owned, operated, and renovated the Mount Washington Hotel and Resort in nearby Bretton Woods. Their latest project, estimated to cost at least several million dollars, would be funded by them.

The families will discuss the proposal at a Dec. 8 meeting of a county planning board. The project will need numerous permits, including for sewer, water and other infrastructure.

Stop the Cog Railway from building a motel on Washington

Rachel L of N.H.

Yesterday 12/01/16 the Cog Railway announced a proposal to build a 35-room motel on Mt. Washington, New Hampshire. Just as soon as it was announced hikers of the beloved White Mountains started sharing the article on different forms of social media with less than favorable remarks.

Mt. Washington has been experiencing more and more foot, car, and railway traffic over the years, with a large environmental impact. The alpine zone is in constant threat. The heavy equipment and old Cog railway remnants are an eyesore. Much consideration needs to be put into this motel to preserve an already fragile mountain. I would be interested to see an environmental impact assessment.

Update 12/05/16 To learn more about the potential environmental impact please visit these links. Please, please, please read the below links that highlight what is at risk.

http://www.wildlife.state.nh.us/nongame/documents/appendixb-alpine.pdf
http://hydrodictyon.eeb.uconn.edu/people/capers/CapersTaylor2014.pdf
http://vtecostudies.org/wildlife/insects/butterflies/white-mountain-arctic/

With the constant expansion of luxuries on the summit we have also created two other problems. One being increased traffic on the mountain.

Second and in my eyes one of the most important issues is the increased perception that Mt. Washington is easily attainable, with no danger. The thought of pizza, a restaurant, and the ability to drive to the top has taken the danger aspect out of the climb. Every year we are hearing of more and more rescues and injuries, even deaths. Fish and Game are understaffed and underfunded enough as it is and the SARS team is responding to more and more calls, putting their lives in danger. With the increase of social media and electronic devices for a safety blanket the draw to the peaks are going to keep increasing.

Adding in a summer motel will just increase the traffic to Mt. Washington. We as a hiking community owe it to the mountains to preserve and protect them. Allowing the Cog to expand on Mt. Washington would be to fail the mountains that we love.

**The Planning Board meeting is taking place on Thursday 12/08/16 starting at 7 p.m.. Wayne Presby is on the agenda 3rd for new business. The meeting will be held at The North Country Resource Center Lancaster, N.H. Let your voice be heard here and hopefully we can stop this in its "tracks".

"Mountains are not stadiums where I satisfy my ambition to achieve, they are the cathedrals where I practice my religion." ~Anatoli Boukreev

Rachel L started this petition with a single signature, and now has 6,303 supporters

https://www.change.org/p/hiking-community-stop-the-cog-railway-from-building-a-motel-on-washington?recruiter=368353312&utm_source=share_petition&utm_medium=facebook&utm_campaign=autopublish&utm_term=mob-xs-share_petition-no_msg

DERAIL Cog Railway hotel proposal

Paul McCoy Conway, N.H.

35 room high-end hotel proposed on Mountain Washington. Let's derail this effort before it gains momentum. It'll irreparably damage a fragile mountain environment, impact the surrounding ecosystem, and impair aesthetics.

Details to follow, this has just been publicly announced. Spread the word. Coös County planning board meeting December 8th, if you can attend GO!

Paul McCoy started this petition with a single signature, and now has 496 supporters.

https://www.change.org/p/john-scarinza-chair-coos-county-planning-board-derail-cog-railway-hotel-proposal

Sec. 53 - Skyline Revisited

Mount Washington Cog Railway

December 2 at 9:13pm ·

Dear Facebook Friends!

The Mount Washington Cog Railway is considering plans to build a lodge and restaurant about a mile below the summit of Mount Washington on privately owned land to enhance the safety, comfort and experience of those coming to Mt. Washington.

This project is designed to help alleviate some of the congestion that is occurring at the Summit of Mount Washington. As part of the project, the Cog Railway intends to help the State Park upgrade its septic operations to help it cope with the current congestion. A new lodge will have the benefit of affording hikers who get caught in inclement weather another source of refuge. Unlike hikers, riders on the Cog Railway and the Auto Road spend relatively small amounts of time on the Mountain and they are not as likely to need rescue services. Users of the Cog Railway and the Auto Road are accessing areas that are well maintained for the use of the general public. In inclement weather Cog and Auto Road patrons have the option of retreating to their cars or the train and can quickly remove themselves from the mountain when the weather turns bad. Hikers do not have this option. Most of the rescues necessary on the mountain are for hikers, not the guests of the railway or the auto road.

The Skyline Lodge will be built with careful consideration of the environment. This would be consistent with the Cog's conversion to environmentally friendly bio-diesel locomotives. The Lodge would provide overnight accommodations to hikers who currently cannot access The Lake of The Clouds Hut due to high occupancy, as well as guests who are unable to hike to The Hut.

Many people are not familiar with the history of Mount Washington - Mount Washington has been the site of intense commercial and recreational use for almost two centuries. It is currently home to a vast communications network, a state park, a weather observatory and in the past has had several lodging establishments on it. It was also the site of a jet engine testing laboratory operated by the US Government. Currently it also has a large tank farm for the storage of 100,000 gallons of kerosene to provide heat and backup power to the numerous operations at the summit.

Notwithstanding this extensive commercial use, every year more and more hikers and visitors are making the journey to the summit. This increase in visitation has led to a lack of facilities to service the guests visiting the summit and the infrastructure to handle water and sewer problems. Over the past several years the Auto Road and the Cog Railway have contributed over $200,000 per year to the State and the Mount Washington Observatory to help maintain and enhance their facilities that benefits all visitors to the summit.

Tourism is the lifeblood of Northern New Hampshire. Tourism takes many forms and facilities need to be available to all who seek to enjoy the mountains not just those with the ability to hike to the summits. Facilities such as the one proposed by the Cog Railway will enhance the safety, the comfort and the experience of those coming to Mt. Washington. Therefore the Cog should be allowed to build the facility it is contemplating. The Appalachian Mountain Club (AMC) is operating similar facilities for hikers already, and from a historical perspective The Cog is simply recreating the ambiance and uniqueness of what existed on the mountain at the turn of the century.

https://www.change.org/p/the-mount-washington-cog-railway-support-the-cog-railway-in-building-a-lodge-to-accommodate-mt-washington-visitors-hikers

Wayne W. Presby
Posting to Mt. Washington Cog Railway - We Were There FB page
December 2 at 9:27pm

Everyone please go to the link provided below and register your support for our plan to build a new facility at skyline to help address the overcrowding of the summit facilities and provide a better experience to guests visiting the mountain.

We Have 500 Supporters!!
Mount Washington Cog Railway

Dec 6, 2016 — Thanks to all our past employees, friends, relatives and business associates for supporting our desire to try to help address the over crowding and infrastructure issues Mt. Washington is experiencing. I would also like to thank all of you for understanding the importance of tourism to the people who live and work in Northern New Hampshire and those who realize that meeting the needs and desires of our guests is crucial to keeping tourists coming to our area.

Summit Hotel May Face Zoning Issues
Hiker Petition Opposes Proposed Lodge, Restaurant
BY ROBERT BLECHL - Staff Writer

LANCASTER - Citing a history of hotels on the top of Mt. Washington and arguing the state does not have the infrastructure to accommodate an increasing number of people on the summit, the Cog Railway owners pitched to Coös planners their proposal for a new hotel.

For their plan to go through, however, Coös planners said the current zoning regulations designed to protect sensitive high-elevation areas might need to change.

During a preliminary consultation Thursday, they said the current regulations do not accommodate structures above 2,700 feet, though planning board member Fred King said a sub-section of the ordinance, when read one way, could allow an approval.

The board chairman also said any planning decision made needs to be done correctly to avert any legal challenges.

Wayne Presby and Joel Bedor, who first announced their conceptual plans last week, are proposing a 35-room mountainside Skyline Lodge and restaurant above treeline at 5,200 feet, about 1,000 feet below the state's iconic mountain summit within the 60- acre Mt. Washington State Park.

At least two planning board members - King and Tom Brady - were in favor of the plan, though a petition among hikers and outdoor enthusiasts, who want to keep the mountain as natural as possible, is circulating against it.

The opposition, however, might face a tough road because the land the hotel would go on is privately owned, and the financing, Presby told planners, will be privately raised and not include public dollars.

Presby argued the proposal is in the spirit of several former hotels on the summit, the first built in the early 1850s. A second hotel built in the early 1890s had 91 rooms, accepted guests until 1967, and was torn down in the 1970s to make way for the state-owned Sherman Adams Visitors Center.

Sec. 53 - Skyline Revisited

But today, that visitors center is no longer adequate on a mountain that sees 300,000 visitors a year, and 5,000 of them on a peak day, said Presby.

"Unfortunately, it's led to serious overcrowding with what the state has there now," he said.

The state, too, is investing $10 million in the buildings that house the communications equipment on the summit instead of investing the money to refurbish the Sher- man Adams building to accommodate more tourists, he said.

At the same time, the state's Mt. Washington Commission in 2010 submitted a new master plan stating the summit stands as New Hampshire's iconic attraction and should be promoted for tourism, said Presby.

That promotion, however, will lead to more visitors in an area where there is inadequate food choices and seating in the visitors center and an inadequate septic system, he said.

"We feel people visiting the summit expect a higher-quality experience than that," said Presby.

He also said the state park is running at a deficit and the Cog Railway and Auto Road subsidize its operations to the tune of some $200,000 annually.

"There doesn't seem to be a clear path by the state to manage overcrowding and infrastructure," said Presby.

Presby and Bedor own the 99-foot wide strip of land for the Cog Railway from the base to the summit.

A new hotel at the area known as Skyline will address overcrowding and infrastructure and tourist demand, said Presby.

"We would provide a more up-scale experience," he said. "At the same time, we would like to continue with the restoration of the railway and continue its heyday from the 19th century ... We look at it as restoring part of the history there ... [This] is something that was offered over a century ago on the mountain ... Out West and in Europe, these things are all over the place."

The proposed hotel would be serviced by the Cog Railway, which was built in 1869 and has been owned by Presby and Bedor for 34 years.

If they put in a hotel, they would also put in a sewer line so the summit visitors center could remove the effluent, said Presby.

Presby said he and Bedor would ask the board for leeway in setbacks to keep all of the development on private land.

King, citing those who are unable to hike to the summit because of age or ability, said, "It seems to me that if you were able to do this there would be a segment of the population that could enjoy the beauty up there."

Planning board member Mike Waddell, however, who once worked construction work on the mountain, pointed to the overcrowding more than 20 years ago.

"The whole discussion of the commission is how to deal with what they have now and not add to it," said Waddell. "It would help me a great deal to see something that's more advanced as to what your plans are."

To date, no conceptual drawings have been made, said Presby, who added he does not yet know what a design of the hotel would look like.

Tasked with reviewing the proposal under the county's zoning was Tara Bamford, of North Country Council, who said, "Currently, this wouldn't be allowed under existing zoning."

Under current rules, variances for setbacks in protection zones above 2,700 feet are for projects that include agriculture and forestry and not structures.

King, however, said, "The zoning statutes aren't cast in stone. If this is something people want, we can certainly change our regulations."

On the web site change.org is an online petition seeking 7,500 supporters to stop the Cog Railway from constructing the hotel. As of Thursday, after being established last week, it had more than 6,100 supporters, many from out of state.

The petition, also addressed to the Coös County Planning Board, states Mt. Washington, in a threatened and fragile alpine zone, is experiencing more foot, car and railway traffic, all with a large environmental impact, and a new hotel could threaten it all the more and diminish the overall wilderness experience.

A competing petition in support of the hotel has more than 500 supporters.

Planning board Chairman John Scarinza said planners will have to consult with the board's counsel and come to a consensus about what the protection zone would incur.

Because no application has been submitted and the project at this point remains a conceptual, no public input was taken at Thursday's planning board meeting, which drew more than 50 people to the North Country Resource Center in Lancaster.

- Caledonian Record - Saturday, Dec 10, 2016

Cog Tokens

Tokens

The Mount Washington Railway was specifically designed to haul tourists to the top of a mountain and every tourist attraction features "tchotkes" or souvenir items for sale. Sometimes coin-like tokens are made for the gift shop - enticing purchasers with their lower price. Col. Henry N. Teague's Mt. Washington Club at the Summit offered not only offered a coin, but a shield wrapped around a spent rifle cartridge for tourists to take home.

Other Cog medals would follow over the years. Sometimes young tourists would make their own - taking a penny and placing it on the rails - then watching as the tender, locomotive and passenger car wheels back down over the coin at the Base platform squashing a memento of their day at the Mountain for just one cent. "Official" promotional tokens made with money have apparently been part of the Cog experience since the beginning, and when a numismatist discovers one, they start looking for people who might be able to give them the backstory of their coin. It happened with...

A 1791 Spanish Piece of Eight

Mt. Washington historian Rob Bermudes: "I received the images *(below)* in an e-mail note from a gentleman in Mexico during my tenure as editor of *Historical New Hampshire* (he collected coins with "chops" on them, yes that's what this is called). He was looking for someone presumedly with knowledge of New Hampshire to assist him (and who better than the editor of the journal about New Hampshire history) in understanding who made the marks and why on the coin. We corresponded a bit and with his permission I shared the images with Q. David Bowers, a world-renowned numismatist and at the time a trustee of the New Hampshire Historical Society, who asked either the owner or me to write an article about it. I also shared it with a few of the Cog old timers who claimed to know nothing about it. While I am

aware that machinists have tools for making marks in metal, the alignment of the seven or eight (depending on whether there is a period after the "RY") characters on the coin seem too perfect for more than one tool to have been used. Rob McClay *(1977-1981)* was unaware of any single tool that could have made the chop."

During the Jitney Years there was at least one alphanumeric metal stamping tool kit in the Cog shop, so that those working there could mark and identify metal parts. They were a fairly common item in railroad repair and assembly areas. They would mark things like switch keys *(above)*, and even marked the cab grab handle *(right)* of the first Cog train display in Twin Mountain. But a dye to mark a coin with the carefully aligned "MT. W. RY" countermark on the 1791 coin was not in the modern Cog shop tool chest.

A Jitney Jr. web search on the background of the Spanish Dollar or Pieces of Eight yielded the following information from one coin dealer *(JGenn)* and two wiki pages *(pedia & wand)*.

JGenn: "In 1772, Spain decreed a lower silver content for their coinage and introduced a new design with the portrait of the reigning monarch... on the obverse and the crowned shield of León and Castile between the Pillars of Hercules on the reverse. Despite this change from the well-known *(earlier)* dollar design, the portrait eight reales were widely accepted as international

currency due to the consistency of silver content and uniform milling characteristics that made them difficult to counterfeit. These coins were so abundantly minted and used in commerce that they were legal tender in much of the world. They made up the majority of specie in the US, well after the US began minting its own currency, and were the preferred trade dollar with China." The mintmark on the 1791 Cog peso indicates it was made in Mexico. Spain's Mexico City mint is "the oldest.. in the Americas... established in 1535 in the capital of the Viceroyalty of New Spain... The common mintmark is 'M' with a small 'o' above."

https://coins.www.collectors-society.com/wcm/CoinCustomSetView.aspx?s=3785

WIKIpedia: "The Spanish dollar was widely used by many countries as the first international currency because of its uniformity in standard and milling characteristics. The Spanish dollar was the coin upon which the original United States dollar was based, and it remained legal tender in the United States until the Coinage Act of 1857. Because it was widely used in Europe, the Americas, and the Far East, it became the first world currency by the late 18th century. Aside from the U.S. dollar, several other currencies, such as the Canadian dollar, the Japanese yen, and the Chinese yuan, were initially based on the Spanish dollar and other 8-real coins. Diverse theories link the origin of the "$" symbol to the columns and stripes that appear on one side of the Spanish dollar.

The term peso was used in Spanish to refer to this denomination... Millions of Spanish dollars were minted over the course of several centuries. They were among the most widely circulating coins of the colonial period in the Americas, and were still in use in North America and in South-East Asia in the 19th century. The Coinage Act of 1792 created the United States Mint and initially defined the United States dollar at par with the Spanish dollar due to its international reputation: The Act pegged the newly created United States dollar to the value of the widely used Spanish silver dollar, saying it was to have "the value of a Spanish milled dollar as the same is now current." *https://en.wikipedia.org/wiki/Spanish_dollar*

WIKIwand: "Spanish coinage was legal tender in the United States until the Coinage Act of 1857 discontinued the practice. Spain's adoption of the peseta in 1869 and its joining the Latin Monetary Union meant the effective end of the last vestiges of the Spanish dollar in Spain itself.

https://www.wikiwand.com/en/Spanish_dollar

A Jitney Theory About the Spanish Cog Coin's Origins

The *Cog Clatter* publisher's first reaction to the Spanish 8 Reales coin with the "MT. W. RY" countermark was that it was something Master Mechanic John Horne *(1873-1911)* might do if the coin had been English. Its 1791 date was important to the Jitneys because that was the year that the Republic of Vermont became the 14th star in the United States' flag. Jitney was very proud of being "born on Vermont soil without a doctor present" and was quite vocal about it. When the crew of the No. 6 *Great Gulf* took a New Hampshire governor up the mountain on the chief executive's annual ride on the Cog, the Governor said to the Vermont-born engineer, "You must really like coming over to this side of the Connecticut River to work in New Hampshire." "Yes, sir," replied Jitney. "I can spend all my time looking at the great state of Vermont."

The 1791 date of the coin was nearly 80 years earlier than the completion of Sylvester Marsh's railroad so why use a Spanish, instead of an English coin for a Cog token. Well, the Spanish dollar was "officially" discontinued as legal U.S. tender in 1857. That meant they were only good in Spain and other countries. Then Spain replaced the 8 Reales coin with the peseta in 1869, and the old "pesos" were worthless. Due to its earlier popularity, Jitney Jr. suspects there were abundant supplies of "pieces of 8" the Mt. Washington Railway company could use as tokens to celebrate the opening of the world's first mountain-climbing railroad. While the additional marks around the MWRY initials on the coin look like celebratory fireworks to the *Clatter* publisher, they are a record of the coin's travels since it was created in Mexico City in 1791. The coin's owner says they called "chops" or "shroffs" - marks put on the coins (China: chops/India & Arabia: schroffs) by people to "warrant that the coin has pass(ed) by their hands... the metal was tested..." and the coin is not a counterfeit.

A 2000 US New Hampshire Quarter

Irene Mott and her husband live in a charming split level house in Thornton, Colorado just north of Denver. Irene "takes an interest in coins" and when she found a quarter in the fall of 2019 with the name COL. TEAGUE stamped across the face of the Old Man of the Mountain she was curious. Mott went online and discovered both the Teague geocache *(see Vol. 1 Annus Horribilis)* and the Jitney Years project. She contacted Jitney Jr. by email on Friday, October 18, 2019.

Irene Mott: "I received the coin in the photo in change recently & was curious about the letters stamped into it. My on-line search led me to you. Do you know its history or if it might be meaningful to someone?"

Jitney Jr: "This is most interesting. I have not seen NOR heard about this before. There were two Col. Teague's who owned/ran the Mount Washington Cog Railway from 1931 to 1967. Col. Henry N. Teague from Mt. Desert

Island, Maine and Col. Arthur S. Teague (no direct relation to Henry) from South Carolina. The "Old Colonel" Henry was sometimes called the "Old Man of the Mountain" because he did own the railway and the summit of Mt. Washington. The young Colonel Arthur was the most decorated soldier from New Hampshire during World War II. My dad worked for both men and they play prominent parts of my Jitney Years Research project. The use of a NH quarter minted in the year 2000 would seem to indicate to me that the person stamping the name into the coin would be more likely to be honoring Arthur who died in 1967, than Henry who died in 1951. But perhaps not."

Mott: "My family was not involved in 'your' cog railway, but I have ridden the one on Pike's Peak here in Colorado! We were told not to worry if the train should begin to slip back down the mountain as there are two very large springs at the bottom...Manitou Springs & Colorado Springs!"

Irene told Jitney Jr. that, like many people, she and her husband "put our change into a container as we receive it and when it gets full, I put it in paper coin rolls & we turn it into Starbucks! :-) By the time I discovered the coin & initially contacted you, it could have been in the container for a few weeks. We shop locally most of the time, so probably received it at a grocery, department store or restaurant in Thornton." She sent the quarter to New England so it could join the Jitney Years' project's memorabilia. "I hope you are able to track down the source," wrote Mott. "Please let me know if you do."

Who put the "Col. Teague" quarter into circulation (or whether there are more) remains unknown at this point. But somewhere, someone with the knowledge of, and perhaps a connection to the Teague years of the Mount Washington Railway between 1931 - 1967, has an alphanumeric metal stamp kit or a dye, a supply New Hampshire state quarters and a desire to put a little Cog Railway token in your pocket - just like the stamper who hammered the "MT. W. RY" onto a 1791 Piece of Eight.

A 1908 Knights of Pythias Medal

The Mount Washington Railway can also show up in medals cast as a symbol of the state of New Hampshire. Such was the case in the medal offered for sale on eBay in November 2020. Discovered by Cogger Dave Moody he posted the picture on the Mt. Washington Cog RY (NH) & Alumni Facebook page on Thanksgiving Day with notation: "Strange little gizmo for sale on Ebay." Cog co-owner Susan Gummerus Presby asked "Anyone have any ideas on what this is?" That spurred *Cog Clatter* publisher Jitney Jr to do a little web searching.: "After Dave posted this I took a close look at the shield/crest at the top of the medal. Finally figured out it was FCB and Wikipedia unlocked the key - the Knights of Pythias. Then it was off to newspapers.com to see what the Knights might have been up to in Boston in 1908 and there were articles and advertisements welcoming the group to town. I give thanks for the Thanksgiving Day eBay Mt. Washington mystery AND the interweb skillset I've developed while trying to track down every last one of the people whoever worked at the Mt. Washington Cog Railway from 1866 forward - now if there were only some Cog Party invite lists for workers from 1983 forward that I could find...."

The biennial convention of the Supreme Lodge of the Knights of Pythias of the United States was held in Boston, Massachusetts from August 3 to Tuesday, August 11, 1908. "Accommodation for over 40,000 people in 1000 different lodging houses" was arranged. There was a last minute controversy over the uniform ranked branch of the order.at Franklin field. The Harvard improvement association of Dorchester went to court to stop the encampment. The military branch of the Pythans were to be conducting daily drills on Franklin field - individual outfits competing for prize money. The "uniform rank" was described as "the only semi-military organization drilling in accordance with the regulations of the regular army." A recommendation to allow the uniform rank to drill with rifles in the future in order to "make the Pythian military of more practical value as a nucleus from which to draw partially trained men should the country need their service." The Massachusetts Supreme Court refused to issue the injunction sought by the Dorchester group, and the encampment went forward.

The eBay medal was likely struck for the New Hampshire Knights to wear during the 1908 convention and featured the Cog Railway appearing to emerge from the Pythian shield just before Jacob's Ladder and proceed to the summit of the Northeast's highest peak. The Knights of Pythias is a fraternal organization and secret society found in 1864. It would number nearly a million members in the early 1920s. By 1979, its numbers had shrunk to less than 200,000.

Sec. 54 - Cog Tokens

Mike Haney's Centennial Coin

To mark the 100th anniversary of the Mount Washington Railway reaching the summit, Railway President Ellen Teague had a limited number of souvenir coins struck and numbered. The Teague family would retain #0001. Number 0002 *(above)* was given to corporation board member and long-time gift shop manager Michael Haney. 1969 would be Mike's last year at the mountain. The coin would end up with a young Cogger from Louisiana. "This coin was given to me by Mike Haney one day following the celebration as I walked through the gift shop after dinner at the Marshfield," says Steve Christy. "He told me that the Teague family had #0001, and that as an officer of the Marshfield Corporation, he was given #0002. (Mike) told me that he thought that I might like to have it - Why? I have no earthly idea." Christy had arrived at the Cog in 1966 by bus. Mike Haney was the first Cogger he met. Mike had been sent down the Base Road in the Teague station wagon to bring him up from the Bretton Woods bus stop. Christy says, "A couple of years leading up to the sesquicentennial *(in 2019)* I showed these coins to Kathy and Joel Bedor. I don't know if that's where they got the idea for their coin *(next page)* or not."

The Rest of Christy's Collection

"The other two coins I bought from a friend and co-worker at the *(Mascoma)* bank, who was also a rail fan and hobbiest. The *(1994 NH Railroading Commemorative)* coins were sold, I believe, as a fundraiser for the "Old 494" in downtown White River Junction. They were struck in both bronze and silver. I noted *(in the Jitney Years - A Hero's Journey)* the connection of No. 494 to *Peppersass* in her wanderings about the country. Interestingly the Vermont coin of the same issue features 494 and I purchased two sets of those coins as well."

MOUNT WASHINGTON COG RAILWAY
739
PEPPERSASS
No 1
M.W.R.
1869-2019
SESQUICENTENNIAL

MOUNT WASHINGTON
1869
150th Anniversary!
2019
COG RAILWAY

Charlie's Cog History Quiz

In 1977, George Burdick was general manager of the Cog responsible to New Hampshire Public Utilities Commission. Ellen Teague's first choice for the position, son Charles, was working as railway superintendent with Burdick & as assistant treasurer to his mother. A late November end-of-year "Cog New's Letter" to the crew from Charlie outlined plans for 1978 - "maybe even a small museum will be started in the guest house."*(See Timeline entry Nov 29, 1978).* The museum was a "maybe" because Charlie had questions about the history of the railroad his mother wanted him to run. He developed a list of detailed questions, and reached out to the crew and others in the Cog circle with the February 1978 letter below. Glenn Kidder, who had written a Mount Washington Railway history focusing on the engines over the years that had been published for the Centennial in 1969, *Railway to the Moon,* responded. Kidder's hand-written response follows along with his answers to the questionaire. Kidder makes suggestions as to where answers may be found. Some of Charlie's questions remain open over forty years later. However, Charlie's Valentine's Day letter indicates his historical approach was the much the same as the path another Cog kid would take in the Jitney Years' Project. That research can fill-in some of the blanks, and Jitney Jr is now looking for any other responses to Charlie's 1978 queries.

February 14, 1978

Dear _____ , This spring I am planning to set up a museum at the Cog Railway. It will consist of a display of materials and history, starting with Marsh the inventor, and ending with the present crews of today. The museum will be broken down into four eras. The first era will be about Marsh and Aiken, the second will be about Col. Henry Teague and Dartmouth College, the third will be about Arthurs S. and Ellen Teague and the fourth will consist of the present railway history. In each era I would like to present some history about the railway men. Your cooperation will help make this possible.

Could you please send me your date of birth and birth place. What different jobs did you do before you worked at the railway? What brought you to the Cog Railway? What did you like about the railway? Please add anything you think is history, such as, events that happened during your period there.

Contained in this letter are questions that I have raised about some unknown history about the railway. If you have any knowledge of the following questions, could you please fill in the enclosed questionaire and send it back to me along with your life history. Thank you very much for your cooperation. Your contribution will help some knowledge from being lost forever.

Sincerely yours, *Charles Arthur Teague.*

March 8, 1978

Dear Charlie: Greetings once again! It was nice to hear from you and I hope this finds you, "the Mrs."*(Melissa Palmer Teague),* your mother and all the rest of the family well! Too, I hope you haven't been getting the unusually severe weather we've been getting all along

Sec. 55 - Charlie's History Quiz

I was pleased to learn of your proposed museum at the Base, Charlie, and also of your interest in the history of things having to do, in the past with the Railway. That is good & I think you'll find it quite a challenge. (I'm sure it pleases your mother & I'm sure your dad would have been pleased, too!)

I am returning your questionnaire, Charlie, but must apologize for not being able to provide you with more answers and data. Unfortunately, I never got too involved with the history of the buildings around the Base, etc. as most of my time over the past had been taken up with the locomotives, operations, etc. Today, it will be very difficult to find anyone who really knows the answers, especially since most of the information probably either wasn't recorded or was thrown out by the B&M RR when they sold out to "Col. Henry" in the early 30s. About the only one likely to now have such information might be Harold Adams, down in Rumney (?). If he doesn't have it, he probably would know who might (if anyone).

Some information, such as in the case of the bells, I tried to search out over the years but came up with nothing whatever, not too surprising as most folks sort of take such things for granted. Possibly Walter Mitchell might have, or might know of someone who would know some of the information you seek.

In connection with your proposed museum at the Base, Charlie, you'll want to consider the security aspects of it carefully since there are many today who have "taking ways" especially if they think they can "make a buck" by so doing. So, as they say, "a word to the wise should suffice!"

I mentioned to your mother a while back that I have one of the old Cog Railway headlights, discontinued probably in the late 1940s, which I have restored & which I propose to make available if she has any ideas, to her or someone such as your proposed museum or the weather observatory's museum at the Summit. Let me know if you or she wants it, etc. & I'll bring along up with me sometime this summer, if need be.

By now, I surmise you have much of your planning done for the season ahead, I hope the weather will cooperate better this year. Was glad to learn about the winter activities on the rolling stock in Lancaster. It should take some of the pressure off during the summer months. As I've mentioned to your mother on several occasions, Charlie, preventative maintenance, even regular maintenance, can pay off well over the years, as the few well-known railroads who run "in the black" could tell you. It results in fewer "head-aches", fewer breakdowns (which often occur at the most inopportune time!) and doesn't put the shop personnel, crews, etc. under such a strain. Too, it keeps more trains in operation more of the time. One thing that could help out a lot would be the replacement of the worn rails, etc. as it would result in less vibration, less wear & less stress & strain on the equipment & probably would pay for itself in this regard. Just a thought! If I can be of more help anytime, Charlie, let me know. I hope to see you again, as usual next summer.

Your friend, *Glen M. Kidder*

P.S. – Recognizing the efforts and work of the crews should help to restore morale on the Railway and increase their pride in their work. Your ideas in this regard are good!

Sec. 55 - Charlie's History Quiz

The Questionaire

February 14, 1978

(Charlie's questions with Glen Kidder's answers in *italics* / Jitney Years' Project information in ***bold italics***.)

Please answer any question that you know.

1) Where did the bell from the summit building come from? *Never have been able to find out. Am not sure it is a RR bell.*

2) Where did the bell from the ticket office come from? *Same as #1. If a RR bell, it probably was one from the B&M RR days.*

3) How many different types of stacks were made from 1866 – 1978? What was the time period for each? (when to when): *At least a half dozen – "Old Peppersass" had at least 4 variations within about 4 years. Then there were straight stack, "diamond" stack, variations thereof and the rest of type of stacks.*

4) I am looking for information about Paul Philbrook, time of employment to the date of his death. I am looking for contributions that he made to the railway. *Am not sure but would guess about 1963 to about 1970. Paul was a dedicated worker. Harold Adams, formerly of the Rwy probably could give you much info regarding him as they were good friends.* ***Paul Philbrook from Mexico, Maine worked for the Cog from 1953 to 1967. He died on August 17, 1971, in Alaska at the age of 35. See Roster entry & Vol. 1 - Annus Horribilis.***

5) When was the Skyline Switch built? *1942 (it was the last one installed)* ***Base switch installed first as proof-of-concept/pilot - Waumbek Switch debuted in 1941***

6) How long did Herrick Aiken work at railway? ***Herrick Aiken did not work at the railway, nor did he figure in the Cog's development although there remains a robust historical dispute caused by his son, Walter Aiken's efforts to further usurp Sylvester Marsh's role in the Cog.***

7) When did Walter Aiken start working at the Cog Railway? *Probably around 1868 (when the RRs & others began to get interested. He probably was there rather intermittently, - not steady.* ***Walter Aiken was contracted to build the second Cog engine in 1868. He became a director in 1869. John Lyon & Walter Aiken were named by company to "run and manage" the railroad in 1871.***

8) Marsh owned the railway from 1866 to what date? *Probably until about 1870 when the RRs had got a controlling interest.*

9) The devil shingle was used on the railway from ( ) to 1930. ***Likely 1869 - earliest reference to slideboard use found in Journal of the Franklin Institute Vol. LIX - Third Series - No. 1 - January, 1870 - pg. 49. Slideboards were used "unofficially" on remaining segments of single support timber cog racks into the 1960s / See Appendix - Section 8***

10) How many shingles were made? *Probably a half dozen or more over the years. (Several variations)*

11) Charles Bucker and Crawford Hassen were caretakers of the railway from when to when? Were there any other caretakers at the railway? *They probably had them but who & when = ???*

1871-1879	***"Uncle" John Camden***	***1930***	***John E. Williamson***
1890-1892	***Sam Gingras***	***1932***	***Mr. & Mrs. Charles Buckner***
1898-1915	***Eugene Marcotte***	***1934-1936***	***Talmadge McCormick***
1913	***George A. Gosbee***	***1937-1938***	***Everett & Irene Peck***
1913-14	***Ray Potter***	***1942-1960***	***James Webb***
1914-15	***George & sister Frances Tatham***	***1950-1951***	***Otis & sister Ethel Ireland***
1920-1926	***John B Coreau***	***1952***	***Murdock Campbell***

1953-1956 W. Scribner ***1961-1983 Gerald C. "Crawford" Hassen***

12) What engine broke one cog gear and slid down to half way house on July 14, 1949? *(Believe it was #6 – Great Gulf) I may have an account of it somewhere. Believe a chap named Lane was fireman on it & quit the job right then and there. Ed Clark knew him if I recall rightly.* ***See Timeline entry for that date for details - It was No. 6 Great Gulf - Engineer was Mike Boyce - Kidder then crossed out the following engine questions without answering except to correct the number vertical boiler engines built.***

13) The (#2) *George Stephenson* engine (vertical boiler) was in operation from when to when? ***1869 to 1878 - The railroad's second engine was built by Walter Aiken was run in 1868 and did not perform well. The Geo Stephenson was delivered to the Mountain in 1869 - the first to include a cab. The Geo Stephenson's last trip was to bring the broken down Cloud engine in August 1878. The Stephenson ran away on Cold Spring Hill, was stopped by broken ties under its frame, and was scrapped in place.***

14) The (#6) *Tip-Top* engine (vertical boiler) was in operation from what period of time? ***First four cylinder dual drive engine went into service in 1874 the same year the first horizontal boiler four cylinder engine No. 3 Hercules was delivered. No. 6 Tip Top reportedly was rebuilt with a horizontal boiler in 1878***

15) The (#5) *Cloud* engine (vertical boiler) was in operation from what period of time? ***Atlas engine (vertical boiler) in service 1870 along with Cloud engine (vertical boiler). Atlas rebuilt with horizontal boiler in 1875. Cloud rebuilt with horizontal boiler in 1876.***

16) There were ~~four~~ *five* vertical engine boilers besides old *Peppersass*. I have just listed three engines, what was the name of the ~~fourth~~ *fifth*? What was its number? How long did it run in service? ***The five vertical boiler engines: 1) Unnamed #2 (1868); 2) Geo Stephenson (1869-1878); 3) Atlas (1870-1876); 4) Cloud (1870-1876); 5) Tip Top (1874-1878) with vertical boilers in addition to No. 1 Hero aka Peppersass (1866-1878).***

(Please fill in the building dates that you know. Any history on the buildings or events about the buildings would be welcomed.) *Unfortunately, Charlie, I never got "involved" with these buildings & data. Suggest you check with Walter Mitchell. He might have some answers. Possibly Harold Adams or Crawford Hassen might, too.*

17) When was the log bathroom cabin built? ***1938 ?***

18) When was the guest house built? ***Originally built in 1925 as main building for Kro-Flite Kamps - contained store, dining area, and served a series of tourists cabins operated by the Barron's of the Crawford House. Became home to museum for a time. Razed to make room for new Marshfield Station in***

19) When was cabin #15 built? What date was it extended by Paul Dunn? ***Paul Dunn says in Feb 15th letter to Ken Randall that in 1970 he and Mrs. Dunn would be living in a remodeled cabin # 16 - "This year I am going to put an addition on cabin #16 for the same bride. We picked that location as it has the best view at the base."***

20) When was cabin #14 built?

21) When was cabin #13 built?

22) When was the photo house built?

23) When was cabin #1 built?

24) When was cabin #2 built?

Sec. 55 - Charlie's History Quiz

25) When was cabin #3 built?

26) When was cabin #4 built?

27) When was cabin #5 built?

28) When was cabin #6 built?

29) When was cabin #7 built?

30) When was cabin #8 built?

31) When was cabin #9 built?

32) When was cabin #10 built?

33) When was the cabin office built?

34) When was the generator house built which now contains the control switches for the base?

35) When was the house with the 3304 cat engine built?

36) When was the old generator house with the 22" Pelton wheel built? When was it destroyed?

37) When was the coal bunker built? ***1949 estimated***

38) The old gas station which is now a grease house was built?

39) When was the old hut with 7 bathrooms built? When did it burn? ***The Hut was originally built by Col. Henry N. Teague in 1935. An extension was added in 1941 that brought the bathroom total to seven in order to accommodate the growing of house guests, and later the family of Col. Arthur S. Teague. The Hut burned Halloween Night in 1966 - See Vol. 1 Operating Manual - Ch. 12***

40) When was the new hut built? ***1967***

41) When was the boarding house built? ***1896***

42) When was the old dog house, in back of the new hut, which was a baggage car built?

43) What engine did it come from? ***Have found no indication baggage cars were assigned to engines***

44) When were the red swings by the hut built?

45) When was the chlorinating house built? ***estimated 1967 - was alongside Jitney's cabin on pipes heading for shops***

46) When was the car barn built? ***Part of the new base station built in 1896 at the junction of the Fabyan spur line & Cog Railway after 1895 fire destroyed original base near Ammonoosuc crossing***

47) When was the engine shop built? *Probably about 1896 (after the buildings at Marshfield burned in 1895) -* ***Yes***

48) When was the red fire house built?

49) When was the horse barn and pressroom built? ***Press room was part of the new base station built in 1896 at the junction of the Fabyan spur line after 1895 fire destroyed original base near Ammonoosuc crossing. Horse barn built on site of original wood storage shed that extended towards the Boys Dorm (originally laundry building) and was connected to an ice house. Shed and ice house blown down during Hurricane of 1938. Pressroom was where the post-1908 Among the Clouds printing press stored after it was moved out of the laundry building.***

50) When was the electrical and pattern house built?

51) When was the old car shop storage house, which was moved and receive a new cement floor, built?

52) When was the boys dorm built? ***Boys dorm was originally a laundry building built as part of 1896 project***

53) When was the pump house built? ***1911 as part of the Mellen's Electric Trolley proposal***

54) When was the water pump installed? ***1911 with pump house***

55) When was the dump, in back of the shop, started? *Probably after the shops were built (about 1896)*

56) When was the girls dorm built? ***Began as carpentry shop north of tracks up from car barn - became Honeymoon Cottage - moved to south side of tracks to become Girls Dorm when the Kents moved into their second cabin two cabins up from Jitney's***

57) When was Arthur Minot's cabin, which was originally Niles Lacoss', which came from the boys camp, built?

58) When was Jitney's cabin built? ***First appears as a barn on 1914 Tax Valuation Map***

59) When was Harold Adams' cabin built? ***Seen on tax valuation map for 1934 - Paul Dunn says in Feb 15th letter to Ken Randall - "I am anxiously looking forward to my return after an absence of nearly 30 years. When there last, I built the little Cottage where Harold Adams lives for my bride." Dunn married Dorothy Brown on June 8, 1935 but the Cottage was on the tax map the year before.***

60) When was the Kent's ***(2nd)*** cabin built? ***Seen on tax valuation map for 1934***

61) When was Ken Randall's cabin built?

62) When was Griff Harris' cabin built?

63) When was the Livingston's cabin built? ***After the Peppersass House was moved and after providing housing for Young Pliney Granger, his wife Millie and young Pliney Granger III***

64) When was Arthur S. Teague's (chicken coop) cabin or Peppersass house built? ***Originally built at Marshfield location to house Peppersass after its return to Base in 1930s. Was moved to top of employee cabin row and occupied by Young Pliney Granger. Later moved to provide storage below the car ramp location. Finally razed in 2020 to make way for Wayne Presby's new shop building***

65) When was Charlie Kenison's cabin from the boys choir camp built?

66) When was the storage barn by girls dorm built?

67) When was the ticket office built? *My guess is in the early 30's when "Col. Henry" took over -* ***Ticket office was part of the Marshfield log station built by Col. Henry N. Teague in 1938-1939. It***

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was in a different configuration and was later moved to a position next to pedestrian crossing to bathrooms

68) When was the new cement bunker built?

69) When was the car ramp by shop built? ***Car ramp was part of the coal trestle built after trains stopped running on spur line in 1932. The rest of the coal trestle to the coaling station across the alley from the shop was blown down in the Hurricane of 1938***

70) When was the anchor chain mounted to the feeder line of the Boston & Maine? *Must check with you sometime on this one a I hadn't heard about it before!*

A 21st Century Master Plan?

The Mount Washington Commission (MWC) began a new effort to update the Master Plan "for the development of the summit (of Mt. Washington) and recommendations for the operation of the public property" in the State Park there. The 1970 plan was delivered to New Hampshire's governor and legislature on January 1, 1971, by MWC Chairman and former Governor Sherman Adams. It was to be updated every ten years. A draft was composed in January 2010, but was never submitted. Another effort begun in 2013 stalled. In late 2021, the Mount Washington Commission decided to try again to craft a plan the commission could agree on. These are some of the documents involved in that effort as observed by *Cog Clatter* publisher Jitney Jr and others. The Commission created a specific website for the planning process with background material & prior reports: https://www.nhstateparks.org/about-us/commissions-committees/mt-washington-master-plan-and-resources

Harvard Mediation Team Final Report
Fall 2021

"We conducted interviews, workshop sessions, and direct observation to identify obstacles preventing the Commission from master planning. We came to a number of conclusions, reflecting a series of common issues that the Commission, and many other bodies like it, face. First, we found that the master planning process will require a different meeting format than the Commission's regular meeting format, which is best at addressing operational and short- term issues. Master planning meetings will need to be forward-looking. They will depend on a commitment to collaboration and joint problem-solving, which will require strong trust and relationships. Second, we found that the Commission is getting stuck in a "zero-sum" mindset that impedes opportunities to collaborate. Understandably, partners look out for their own interests, rather than seeking ways that their interests might complement those of others on the Commission. There are opportunities to come to mutually beneficial agreements if the Commission can get beyond this zero-sum mindset. Third, our interviews suggested that master planning presents an opportunity for the Commission to resolve sources of friction that keep the Commission from realizing its full potential. Partners are generally willing and even eager to engage in substantive discussions about the future of the summit, and master planning presents just that opportunity. Based on our findings, we recommend three main strategies, grounded in dispute resolution and negotiation theory.

1) Make Master Planning distinct from regular meetings
2) Restructure Interactions to encourage value create
3) Hire a facilitator

Vision for the Summit of Mt Washington
February 13, 2022

Mount Washington Commission Chair Sen. Jeb Bradley assigned a homework assignment to the individual members "a one-page paper with a bullet-list of your vision for the summit in the foreseeable future." The homework, due February 13th, is designed to help define common goals to give scope and structure to the work ahead.

Sec. 56 - Vision Statements

Responses to Homework Assignment
Collated & Shared February 15, 2022

Commission Chair Sen Jeb Bradley:

1. Recognize Mount Washington Summit and Mount Washington State Park are iconic and emblematic of the Granite State.

2. Maintain public access to the summit which is one of only two summits of NH's 48 Four Thousand Foot Summits with non-hiker access. {Cannon is the other.) Many people cannot hike to the summit of Mount Washington so the Auto Road and Cog Railway are integral to allowing people from around the globe to have access to this wonderful place in a safe and wholesome manner.

   a. Complete water and sewer upgrades
   b. Plan for maintenance upgrades for other summit structures
   c. Utilize Capital Budget Process and ARPA funding
   d. Ensure financial viability of Mount Washington State Park

3. Resolve disputes between various summit entities (State Park, Cog Railway, Auto Road, Observatory, Communications, Hikers) so that all can operate together seamlessly and effectively. Creative thinking and respect for rights of all parties is essential. A recognition that when all summit entities work together all will benefit is also essential.

   a. Create an on-going dispute resolution mechanism
   b. Clarify and solidify pre-existing rights of all summit entities

4. Protect the Alpine Environment of the Summit and surrounding landscape.
   a. Determine carrying capacity of the summit infrastructure and number of visitors to ensure alpine environment is not over stressed
   b. Recognize the value and continue the critical scientific research of Observatory and the AMC

5. Ensure a good experience for hikers. Hikers generally appreciate the services offered at the Summit and understand that when only a short distance from the Summit they return to the rugged above tree-line experience of the Presidentials.

   a. Provide adequate safety/rescue measures
   b. Promote hiker safety education for all season hiking
   c. Ensure access of Summit services to hikers

Commission Vice-Chair H. Edmund Bergeron:

"I would like to see all of the aspects of the original master reviewed with regard to data gathered and each topic and recommendations and to determine any actions needed to update them or in the case of recommendations not completed, make further recommendations for actions to be taken. Additional items not envisioned in 1971 should also be considered.

Bullets regarding the recommended process are as follows;

- Determine which recommendations were completed?
- Determine which recommendations have yet to be done/completed/or partially completed?
- Update the capital improvement plan for the next 10 years.
- Review prior data on summit use.
- Review capacity proposed for the Sherman Adams Building.
- Review recommendations for summit operations.
- Review recommendations for fees.
- Review all leases.
- Review prior recommendations to protect flora and fauna.
- Engage an acceptable facilitator to guide the Commission through the process.
- Set a schedule and deliverable structure for the final report.
- Set a budget for related expenses, if needed.

The original master plan demonstrated a very detailed and thorough process. The Commission's updated Master Plan should demonstrate that we equal or exceed that effort."

Commission member Rep. Karen Umberger:

"Here are my suggestions for the Master Plan

Facilities

1. Remove and replace Yankee Building
2. Expand Sherman Adams Building

3. Continue plans for water and septic improvements
4. Add outside seating area, perhaps a picnic area

Operational

1. Determine how to keep access to the Sherman Adams building and Tip Top House at no charge
2. Work with partners to improve the mountain experience
3.Relook at food service
4. Is there a better way to operate concessions currently there are three
5. Look at the structure of the Commission is it serving the needs of Mt Washington
6. Protect the fragile environment

State of New Hampshire

Parks & Recreation Director Philip A. Bryce:

"A vision statement describes what a company desires to achieve in the long-run, generally in a time frame of five to ten years, or sometimes even longer. It depicts a vision of what the company will look like in the future and sets a defined direction for the planning and execution of corporate-level strategies.

A vision statement tells people what you want to accomplish over time and how your business can make things different through its purpose and activities. It provides the outside world with some insight about your goals and and how you want to be perceived.Vision statements are typically aspirational and inspirational in nature. They encourage your stakeholders, employees and customers to think in terms of what you're doing and where the company is headed.

Mount Washington State Park is a must see destination for visitors to the region where all the partners are all successful and support each other while park operations are providing financial support to the rest of the parks in the state park system."

Mt. Washington State Park Manager Patrick Hummel:

"***Summit Vision for the next 10 years***

• Mount Washington State Park as a fiscally sustainable operation, not only be able to continue covering operating expenses, but revenues will be available for larger, costlier maintenance and improvement projects, which are typically now and previously funded through Capitol Improvement funding.

• Adequate bathroom facilities and amenities for visitors.

• If attendance continues at present day levels, or grows, that added or new indoor space will be available to enhance the visitor experience.

• Updated and more modern informational displays within the Sherman Adams Building that provides visitors with better knowledge and understanding about the overall uniqueness of and history of Mount Washington.

• More recognition of and public understanding that the summit being a State property, facilities, and that the summit is cared for, managed by, and maintained by the NH State Park system.

• Local facilities that help support the daily State Park summit operations that are closer to the mountain than Moose Brook State Park.

• A continuation of the communal support that each organization gives to each other in times of need; the culture of helping one another out, especially amongst operational staff on the summit and on the mountain, is maintained and carried on as it exists today.

• There is a clearer path forward for the future of the Yankee Building and the important systems it supports."

Cooperating Partners

Chris Thayer - Appalachian Mountain Club:

"***Suggested Vision:***

• MW State Park is recognized as an iconic visitor experience in New England. Thousands of visitors experience the highest peak in the northeastern United States safely navigating its legendary weather, enjoying one-of-a-kind adventures by foot, rail, and car, inspiring outdoor memories, and mountain stewardship.

• MW State Park's accessibility by foot, rail, or car provides a welcoming and inclusive space in a high mountain environment for all. Regardless of sex, race, class, or orientation, the summit experience is enjoyed by all who seek natural outdoor spaces. Park visitors become part of a growing inclusive community who have a love and passion for enjoying and protecting the outdoors.

• MW State Park operations are guided by sustainability practices including care and attention to summit development, carrying capacities, and building system designs and maintenance. The unique and sensitive alpine environment surrounding the summit inspires park partners to achieve the goal of Net Zero emissions from existing sources no later than 2050.

Sec. 56 - Vision Statements

• MW State Park, by virtue of its location and history serves as a base of scientific research and monitoring for high alpine environments, weather, and dark sky conservation. Research scientists in partnership with public agencies, academic institutions, industry, and community scientists perform field studies that enhance our understanding of high mountain environments' significance to wildlife and humans. Walk-on naturalist programming informs and educates visitors about the unique and fragile alpine flora and fauna and the threats posed to this ecosystem by climate change.

Howie Wemyss - Auto Road:

"To get ten years down the road with the MWSP, first agree to: Do no harm

Allow no expansions, renovations, significant changes or master planning to summit operations until:

A thorough, scientific environmental analysis of current summit conditions is conducted to be used as a baseline to judge future master plans with the basic goal of no future deterioration of environmental conditions.

Only then consider building enhancements, replacements, expansions.

Involve the general public as well as Commission members in all master planning.

Cog Railway:

"Improve the visitor experience by working together to reduce congestion; facilitate the removal and cleanup of unsightly items; provide exhibits and experiences that highlight the uniqueness of the mountain; improve the Summit hiking trail network; and maximize revenue to the State.

1. ***Financial support:*** Summit Stakeholders agreement to financially support Summit betterment projects.

2. ***Entrance Fee***: Conduct study regarding charging a fee to enter the Sherman Adams Building - fee amount, how/where visitors are notified about the fee, educating visitor on purpose of fee/how it will be utilized and efficient/professional method(s) for charging the fee.

3. ***FMV of State Property:*** Conduct study to determine FMV of any State property being utilized by any party that is not allowed by deeded rights. Summit Stakeholders to be heard on all contracts to be made inside Summit Circle.

4. ***Telecommunications Facility:*** Enter into ground lease with third-party to construct and operate. Reduce number of towers and relocate Yankee Building off Summit as much as possible. New Yankee building to include classrooms for educational lectures/demonstrations.

5. ***Sherman Adams Building and General Summit Clean-Up***

a. Bury fuel tanks. Remove construction debris. Pave gravel locations to entrance and observation deck. Repair tiles on observation deck, cracked cement, roof leaks and a coat of fresh paint.

b. Fill every inch of available wall space with historical photographs/memorabilia from Summit Stakeholders.

c. Conduct study examining whether concession/gift shop space is being utilized to full potential with overall goal of improving quality and presentation.

d. Sherman Adams Building open year-round with longer hours (8AM - 7 PM).

6. ***Summit Trails:*** Improvement/maintenance of all trails on the Summit with new signage. Create additional hiking trail network with signage to keep visitors on the trail, entertained and dispersed.

7. ***Educate Uniqueness of Summit:*** Educate our visitors (scientific, botanical, geological).

a. Create display boxes of growing rare flora indigenous to the alpine climate. The rare flora is interesting to the visitor - this is opportunity to educate importance of protecting the Summit.

b. Guided educational tours along new Summit trail network and use of classrooms.

8. ***Mount Washington Summit Adventure Experience App*** *(See Pikes Peak App)*

a. Nature Gallery - Base to the Summit hosts a very diverse population of plants, animals, and insects.

b. Summit Challenge - Visit all __ locations on the Summit to collect badges .

c. "Summiteers" - Weather-related experience sponsored by MWOBS initiating visitors with wind tunnel simulation - great photo op (charge/donation for initiation to benefit MWOBS).

d. Educational and historical audio, video, and pictorial presentations included in the App.

e. My Summit Photos - Save and share on all social media platforms (create hashtags & filters). Our visitors themselves will promote NH and the Summit Adventure Experience for all of us.

f. Collaborative and aggressive promotion of Summit Adventure Experience App.

g. Donate Now Link - Mount Washington State Park

Robert Kirsch - Mt. Washington Observatory:

"**Sustaining the Summit Environment and Experience:** Summit infrastructure systems incorporate the quality and capacity needed, to the maximum extent possible: to restore, protect and preserve the Summit environment; to provide all summit visitors with the opportunity to observe and experience that environment; and, to maintain the quality of the summit environment in perpetuity in consideration of the number of people and vehicles that will visit the Summit. Coordinate capacities of buildings, of sewage, waste, energy, and water systems, and of transportation modes to accommodate the full number of visitors expected or permitted.

o Waste management system to be designed, sized, and operated to meet the long- term rather than short term goals and minimize environmental degradation.

o Summit structures incorporate protective and energy efficient features with designs reducing intrusion on summit experience and environment.

o Adopt a high standard to minimize additional structures and negative environmental consequences of existing and future Summit structures and actions, balancing historic depiction and ongoing needs.

o To the maximum extent possible, and consistent with the presentation of historic settings, Summit facilities and infrastructure would incorporate energy and resource efficient technologies, which would be upgraded, consistent with these principles, to accommodate technical advances.

Accessibility: Consistent with the above sustainability principles, Summit facilities and offerings would be accessible to all visitors, including the use of technology or designs to improve access to natural features and historic or scenic elements for all persons, including those with physical or intellectual disabilities.

Financial Sustainability: The summit would have in place a system of charges that equitably spreads the costs of maintaining and upgrading Summit infrastructure features among Summit visitors and those entities using the Summit because of its elevation, rather than purposes related to the natural environment or history of Mount Washington.

Inclusion: The public facilities would, after a public process of research and investigation, identify and considerately incorporate features sensitive to any significance of Mount Washington's Summit to indigenous people.

Remediation of Summit Environment: Damage to and deterioration of the environment on Mount Washington would be investigated and addressed where possible, including, without limitation, removing abandoned items (not offering historic value), actions to encourage the restoration of damaged vegetation and cleanup of contaminated groundwater and soils on and around the Summit.

Donna French Dunn - Mt. Washington Observatory Interim Exec. Dir:

- The summit is a model of sustainable tourism/land management.
- Building footprints remain the same or are reduced, improved view-scape. Balance of historic and modern facilities.
- Significant work toward a visitor center that is LEED certified or equivalent, emphasis on renewable energy sources.
- World-class Mount Washington Observatory weather research facilities, indoor/outdoor laboratory and testing space.
- Managed/conserved resources - reclaimed water, sewage management.
- Enhanced protection for the fragile alpine ecosystem at the summit - pathways, trails, signage.
- Cap the number of visitors during peak times through a reservation system
- Collaboration with other high-traffic parks/tourism sites to establish effective messages and information for visitor management.
- The RSA and all changes since the Commission was formed are reviewed. The Commission returns to the authority intended at its inception.
- The commission has a sub-group that helps coordinate the communications the entities on the summit to the public/visitors, establishing a joint communications package of some kind that gives consistent signage/info to visitors all around the region.
- Coordinated educational programs/visits for school and other groups. Showcase information on history of the summit, climate, environment and conservation work.
- The Commission has funds for administrative support separate from any one of the cooperating partners on the summit.
- The cooperating partners on the summit recognize their interdependence and respect their independence, working through the Commission for both new initiatives and disputes. Trust and respect are at the center of all interactions.

• The next Commission master plan for the summit of Mount Washington is complete and approved by the Governor and Executive Council."

Drew Scamman - Townsquare Media:

"The Future Mount Washington Summit

1. Up to date Communications and Maintenance Facility
2. The old Generator Building Foundation Cleaned up 3.Winter Access
4. A Bigger presents of the Museum
5. More Rest Room Facilities

Federal Government

Derek Ibarguen - White Mountain National Forest Supervisor:

"Vision - Summit Mountain Washington

• Quality Information and Access for the Diversity of Visitors
• Sustainable Summit Facilities remains no larger than current footprint
• Management promotes the desired experiences of see iconic views
• Information, Education, Access Features and Trail Maintenance promotes protection of the fragile alpine environment"

Summary of Comments for Mount Washington Management Plan

Vision/Mission Statements

Allen Brooks, counsel to the MWC analyzed the Vision comments.

The following is his Summary of Comments for Mt Washington Management Plan.

The Master Plan should ensure that:

Ubiquitous Theme: Uniqueness

• Mount Washington State Park continues to be a must-see destination for visitors to the region.
• The Summit will be managed such that all partners are successful.
• The alpine environment of the Summit and surrounding landscape is restored, protected, and preserved.
• Goals, objectives, and tactics are set forth in detail.
• Summit infrastructure systems incorporate the quality and capacity needed, to the maximum extent possible:
  o To provide all summit visitors with the opportunity to observe and experience the environment; and,
  o To maintain the quality of the summit environment in perpetuity in consideration of the number of people and vehicles that will visit the Summit.
• A high quality mountain experience that respects the Mountain's uniqueness is maintained.
• There is recognition that the Summit and State Park are iconic and emblematic of the Granite State.
• The Mountain's flora and fauna, its facilities, and its history are recognized.
• There is a coordinated approach to addressing the capacities of buildings, of sewage, waste, energy, and water systems, and of transportation modes to accommodate the full number of visitors expected or permitted.
• There is more recognition of and public understanding that the summit is comprised of State property and facilities and that the summit is cared for, managed by, and maintained by the N.H. State Park system.

Process: General:

The Commission should create a process whereby:

• The general public as well as Commission members are involved in all master planning.
• All partners contribute to success and ultimate outcomes.
• The cooperating partners on the summit recognize their interdependence but respect their independence.
• Members trust and respect each other.
• The communal support that each organization gives to each other in times of need continues (partners will support each other).
• The culture of helping one another out, especially amongst operational staff on the summit and on the mountain, is maintained and carried on as it exists today.
• Additional items not envisioned in 1971 are considered.
• The value and the critical scientific research of Observatory and the AMC are recognized and maintained.
• Creative thinking and respect for rights of all parties are encouraged.

- Members recognize that when all Summit entities work together, all will benefit.

Process: Specific:

As part of the process, the Commission should:

- Review the RSA and all changes since the Commission was formed.
- Establish a sub-group that helps coordinate the communications of the entities on the summit to the public/visitors
- Conduct a thorough, scientific environmental analysis of current summit conditions to be used as a baseline to judge future master plans and only then consider building enhancements, replacements, expansions.
- Set a schedule and deliverable structure for the final Master Plan.
- Set a budget for related expenses, if needed.
- Determine which prior recommendations were completed (determine which prior recommendations have yet to be done/completed/or partially completed) (Review all aspects of the original master plan with regard to data gathered and each topic and recommendations and determine any actions needed to update them or complete recommendations).
- Update the capital improvement plan for the next 10 years.
- Review prior data on summit use.
- Review capacity proposed for the Sherman Adams Building.
- Review recommendations for summit operations.
- Review recommendations for fees.
- Review all leases.
- Review prior recommendations to protect flora and fauna.
- Engage an acceptable facilitator to guide the Commission through the process.
- Create an on-going dispute resolution mechanism (resolve disputes between various summit entities [State Park, Cog Railway, Auto Road, Observatory, Communications, Hikers] so that all can operate together seamlessly and effectively).
- Determine carrying capacity of the summit infrastructure and number of visitors to ensure alpine environment is not over-stressed.
- Conduct a study examining whether concession/gift shop space is being utilized to full potential with overall goal of improving quality and presentation.
- Conduct study regarding charging a fee to enter the Sherman Adams Building that would include fee amount, how/where visitors are notified about the fee, educating visitor on purpose of fee/how it will be utilized, and efficient/professional method(s) for charging the fee.
- Conduct a study to determine full market value of any State property being utilized by any party that is not allowed by deeded rights.
- Ensure that summit stakeholders are heard on all contracts to be made inside the Summit circle.
- Collaborate with other high-traffic parks/tourism sites to establish effective messages and information for visitor management.
- Ensure that the Commission return to the authority intended at its inception.

Substantive Outcome

As a result of the planning process, the Master Plan should:

General:

Capital Improvements:

- Establish a clearer path forward for the future of the Yankee Building and the important systems it supports.
- Utilize Capital Budget Process and ARPA funding.
- Ensure that waste management systems are designed, sized, and operated to meet the long-term rather than short term goals and minimize environmental degradation.
- Ensure that Summit structures incorporate protective and energy efficient features with designs that reduce intrusion on summit experience and environment.
- Ensure that, to the maximum extent possible, and consistent with the presentation of historic settings, Summit facilities and infrastructure incorporate energy and resource efficient technologies, which would be upgraded, consistent with these principles, to accommodate technical advances.
- Provide for an up to date communications and maintenance facility
- Balance historic and modern facilities.
- Ensure that the Summit is accessible and inclusive (include quality information and access for the diversity of visitors) (ensure that public facilities would, after a public process of research and investigation, identify and considerately incorporate features sensitive to any significance of Mount Washington's Summit to indigenous people) (ensure that it increases visitor experience, outdoor accessibility and inclusion, operations sustainability, and natural resource values) (consistent with sustainability principles, Summit facilities and offerings would be accessible to all visitors, including the use of technology or designs to improve access to natural features and historic or scenic elements for all persons, including those with physical or intellectual disabilities).
- Create an additional hiking trail network with signage to keep visitors on the trail, entertained, and dispersed.

Operation and Maintenance:

- Ensure that the Mount Washington State Park is a fiscally sustainable operation, not only able to continue covering oper-

ating expenses, but such that revenues will be available for larger, costlier maintenance and improvement projects, which are typically now and previously funded through Capital Improvement funding (ensure financial viability of Mount Washington State Park).

- Ensure that the summit has in place a system of charges that equitably spreads the costs of maintaining and upgrading Summit infrastructure features among Summit visitors and those entities using the Summit because of its elevation, rather than purposes related to the natural environment or history of Mount Washington.
- Ensure that the summit is a model of sustainable tourism/land management.
- Ensure that the summit environment and experience are maintained.
- Account for the fact that park operations are providing financial support to the rest of the parks in the state park system.
- Clarify and solidify pre-existing rights of all summit entities.
- Plan for maintenance upgrades for other summit structures.
- Ensure a good experience for hikers (hikers generally appreciate the services offered at the Summit and understand that when only a short distance from the Summit they return to the rugged above tree-line experience of the Presidentials).
- Ensure that of all trails on the Summit are improved and maintained and have new signage.
- Ensure that management promotes the desired experiences including iconic views.
- Create a unique visitor experience.
- Manage the Summit to ensure sustainability and account for carrying capacity.
- Provide for scientific research and monitoring to enhance understanding.
- Create a bigger presence for the Museum.

Education/Outreach:

- Result in information, education, access features, and trail maintenance that promotes protection of the fragile alpine environment
- Educate visitors about the unique scientific, botanical, and geological aspects of the summit.
- Establish a joint communications package of some kind that gives consistent signage/info to visitors all around the region.

Environment:

- Ensure that Summit management "does no harm."
- Investigate and address damage to and deterioration of the environment.
- Adopt a high standard to minimize additional structures and negative environmental consequences of existing and future Summit structures and actions, balancing historic depiction and ongoing needs.
- Require management to conserve resources taking advantage of opportunities to do things like reclaim water or creatively manage sewage need.

Specific:

Capital Improvements:

- Allow no expansions, renovations, significant changes, or master planning to summit operations until planning is complete.
- Require that building footprints remain the same or are reduced in order to improve viewscape (summit facilities remain no larger than current footprint).
- Require that the number of towers be reduced and/or relocate aspects of the Yankee Building off the Summit as much as possible.
- Require burial of fuel tanks.
- Ensure adequate bathroom facilities and amenities for visitors (more rest room facilities).
- Ensure that, if attendance continues at present day levels, or grows, added or new indoor space will be available to enhance the visitor experience.
- Ensure that the New Yankee Building includes classrooms for educational lectures/demonstrations.
- Require paving of gravel locations to entrance and observation deck.
- Ensure that complete water and sewer upgrades are completed.
- Ensure that local facilities that help support the daily State Park Summit operations are closer to the mountain than Moose Brook State Park.
- Require removal of abandoned items (those not offering historic value), removal of construction debris, and cleanup of the old generator building foundation.
- Require repair of tiles on the observation deck, repair of cracked cement, repair of roof leaks, and a coat of fresh paint.
- Ensure cleanup of the Sherman Adams Building and the Summit generally.
- Require restoration of damaged vegetation.
- Require cleanup of contaminated groundwater and soils on and around the Summit.

Operation and Maintenance:

- Provide for winter access.

- Require the Sherman Adams Building to be open year-round with longer hours (8AM – 7 PM).
- Require a ground lease with a third party to construct and operate a Telecommunications Facility.
- Ensure the enhanced protection for the fragile alpine ecosystem at the summit through pathways, trails, and signage.
- Cap the number of visitors during peak times through a reservation system.
- Encourage a summit Stakeholders' agreement to financially support Summit betterment projects.
- Establish Commission funding for administrative support separate from any one of the cooperating partners on the summit.

Education/Outreach:

- Provide for the creation of display boxes of growing rare flora indigenous to the alpine climate to educate about the importance of protecting the Summit.
- Encourage guided educational tours along new Summit trail network and use of classrooms.
- Result in the creation of a Mount Washington Summit Adventure Experience App (See Pikes Peak App).
- Ensure that educational and historical audio, video, and pictorial presentations are included in the aforementioned App.
- Encourage creation of a Nature Gallery as the base to the Summit hosts a very diverse population of plants, animals, and insects.
- Create a Summit Challenge – (e.g. "Visit all ____ locations on the Summit to collect badges...").
- Create a program called "Summiteers" to be a weather-related experience sponsored by MWOBS initiating visitors with wind tunnel simulation that would include a photo op (charge/donation for initiation to benefit MWOBS).
- Create a system called My Summit Photos where people can save and share pictures on all social media platforms (create hashtags & filters) thereby allowing our visitors themselves to promote N.H. and the Summit adventure experience.
- Collaboratively create and aggressively promote the Summit Adventure Experience App.
- Create a Donate Now link for the Mount Washington State Park.
- Create updated and more modern informational displays within the Sherman Adams Building that provide visitors with better knowledge and understanding about the overall uniqueness of and history of Mount Washington.
- Create coordinated educational programs/visits for school and other groups that showcase information on history of the Summit, climate, environment, and conservation work.
- Create or maintain world-class Mount Washington Observatory weather research facilities, indoor/outdoor laboratory, and testing space.

Safety:

- Provide for adequate safety/rescue measures.
- Promote hiker safety education for all season hiking.
- Ensure access of Summit services to hikers.
- Maintain public access to the summit which is one of only two summits of N.H.'s 48 Four Thousand Foot Summits with non-hiker access (Cannon is the other) as many people cannot hike to the summit of Mount Washington so the Auto Road and Cog Railway are integral to allowing people from around the globe to have access to this wonderful place in a safe and wholesome manner.

Environment:

- Encourage net zero emissions.
- Require that the visitor center become LEED certified or equivalent with an emphasis on renewable energy sources.
- Preclude future deterioration of environmental conditions. Conclusion:
- Ensure that the next Commission master plan for the summit of Mount Washington is complete and approved by the Governor and Executive Council (The Commission's vision must lead to goals, objectives, and tactics for a 10-year master plan).

KAB-02.18.2022

Summary of Comments for Mount Washington Management Plan

Vision/Mission Statements

The following is result of March 4, 2022 MWC review of Brooks' Summary of Comments.

Notations:

✓ A "check mark" indicates the items where the MWC members agreed.

➢ An "arrow" indicates the items that require more discussion.

☐ A "box" indicates an Action Item.

Italicized text are notes taken at the MWC meeting on March 4, 2022.

Vision/Mission Statements

The Master Plan should ensure that:

Sec. 56 - Vision Summary Discussion

✓ 1. Mount Washington State Park continues to be a must-see destination for visitors to the region.

✓ 2. The Summit will be managed such that all partners are successful.

➢ 3. The alpine environment of the Summit and surrounding landscape is restored, protected, and preserved. *What does "restored" mean? Restoration projects can cause potential conflicts.*

✓ 4. Goals, objectives, and tactics are set forth in detail.

➢ 5. Summit infrastructure systems incorporate the quality and capacity needed, to the maximum extent possible: *Quality of infrastructure and sustainability. Tie infrastructure with the visitor experience and carrying capacity.*

o To provide all summit visitors with the opportunity to observe and experience the environment; and,

o To maintain the quality of the summit environment in perpetuity in consideration of the number of people and vehicles that will visit the Summit.

✓ 6. A high quality mountain experience that respects the Mountain's uniqueness is maintained.

✓ 7. There is recognition that the Summit and State Park are iconic and emblematic of the Granite State.

✓ 8. The Mountain's flora and fauna, its facilities, and its history are recognized.

✓ 9. There is a coordinated approach to addressing the capacities of buildings, of sewage, waste, energy, and water systems, and of transportation modes to accommodate the full number of visitors expected or permitted. *Carrying capacity*.

✓ 10. There is more recognition of and public understanding that the summit is comprised of State property and facilities and that the summit is cared for, managed by, and maintained by the N.H. State Park system. *Brand awareness. Public land experience. Public-Private partnerships. Mission- Education-Interpretation.*

Process: General:

The Commission should create a process whereby:

✓ 11. The general public as well as Commission members are involved in all master planning.

✓ 12. All partners contribute to success and ultimate outcomes.

✓ 13. The cooperating partners on the summit recognize their interdependence but respect their independence.

✓ 14. Members trust and respect each other.

✓ 15. The communal support that each organization gives to each other in times of need continues (partners will support each other).

✓ 16. The culture of helping one another out, especially amongst operational staff on the summit and on the mountain, is maintained and carried on as it exists today.

➢ 17. Additional items not envisioned in 1971 are considered. *A master plan is reflective of the time in which it was written.*

✓ 18. The value and the critical scientific research of Observatory and the AMC are recognized and maintained. *The Obs and AMC have summit-related research.*

✓ 19. Creative thinking and respect for rights of all parties are encouraged.

✓ 20. Members recognize that when all Summit entities work together, all will benefit. *This is a goal to strive for to build a culture of trust and balance.*

Specific:

As part of the process, the Commission should:

➢ 21. Review the RSA and all changes since the Commission was formed.

✓ 22. Establish a sub-group that helps coordinate the communications of the entities on the summit to the public/visitors

➢ 23. Conduct a thorough, scientific environmental analysis of current summit conditions to be used as a baseline to judge future master plans and only then consider building enhancements, replacements, expansions. *How detailed an analysis? Hire a consultant? Cost? Use capital budget funds?*

✓ 24. Set a schedule and deliverable structure for the final Master Plan.

➢ 25. Set a budget for related expenses, if needed. *Expenses related to the master plan effort, such as hiring a facilitator.*

➢ 26. Determine which prior recommendations were completed (determine which prior recommendations have yet to be done/completed/or partially completed) (Review all aspects of the original master plan with regard to data gathered and each topic and recommendations and determine any actions needed to update them or complete recommendations).

☐ *Howie, Wayne and Ed will draft a one-page document listing the completed, partially completed and yet to be completed recommendations of the 1970 Master Plan.*

✓ 27. Update the capital improvement plan for the next 10 years.

➢ 28. Review prior data on summit use. *Conduct a visitor survey this summer? Use of Survey Monkey or a kiosk? Plymouth State does a lot of tourism-related research. TripAdvisor? Google?*

☐ *Cog, Auto Road, State Park, MWObs, WMNF, AMC to draft a one-page document summarizing 5-years of visitation numbers from their user group/business.*

☐ *Sen Bradley will talk to UNH Survey Center Andy Smith.*

➢ 29. Review capacity proposed for the Sherman Adams Building.

☐ *Patrick will get the written documentation of approved SAB capacity from the Fire Marshal.*

➢ 30. Review recommendations for summit operations. *What does this mean?*

➢ 31. Review recommendations for fees.

➢ 32. Review all leases. *A communications sites appraisal was done years ago. What were the results? It's helpful to know where the income is coming from. The MWC has held and negotiated leases in the past. Appraisals must be independent.*

☐ *Phil to draft a paragraph describing his vision for MWC's involvement in reviewing leases.*

☐ *Torene to post leases and appraisal documents that are public on the website.*

➢ 33. Review prior recommendations to protect flora and fauna.

☐ *DNCR will provide a one-page summary of NHB data as part of Item #26.*

➢ 34. Engage an acceptable facilitator to guide the Commission through the process. *Ask the HNMCP to facilitate? The facilitator can help build consensus and coordinate master planning activities.*

☐ *Everyone will provide Torene with names of potential facilitators and/or a writer tasked with drafting the master plan report.*

➢ 35. Create an on-going dispute resolution mechanism (resolve disputes between various summit entities [State Park, Cog Railway, Auto Road, Observatory, Communications, Hikers] so that all can operate together seamlessly and effectively). *Should this be part of the master plan? Recognize partners and variables. Understand a process for resolution.*

➢ 36. Determine carrying capacity of the summit infrastructure and number of visitors to ensure alpine environment is not over-stressed.

☐ *All summit partners (Cog, Auto Road, State Park, MWObs, WMNF, AMC, TownSquare Media) will draft a one-page document that outlines the number of visitors to the summit that they believe can be sustained into the future.*

➢ 37. Conduct a study examining whether concession/gift shop space is being utilized to full potential with overall goal of improving quality and presentation. *Parks would like to expand its concession space, but is limited by lack of available space. Chris said there is a Cambridge company that specializes in this type of design needs.*

☐ *Patrick to draft a one-page document that describes his vision for state park concessions.*

➢ 38. Conduct study regarding charging a fee to enter the Sherman Adams Building that would include fee amount, how/where visitors are notified about the fee, educating visitor on purpose of fee/how it will be utilized, and efficient/professional method(s) for charging the fee. *A fee to enter the SAB does not currently have political support. The MWC could make its recommendations, including the planned use for fees and how it would defer capital expenditures. Assess public support through a user survey? Challenges include visitors who think park access is already covered in the fees paid to the Auto Road and Cog Railway; and hikers who question why they need to pay an entrance fee when they intend to purchase food and/or gifts. Educate all users on the need to support the facilities, e.g., trailhead fees?*

✓ 39. Conduct a study to determine full market value of any State property being utilized by any party that is not allowed by deeded rights. *Parks has been working on this park system wide.*

➢ 40. Ensure that summit stakeholders are heard on all contracts to be made inside the Summit circle. *See lease section, item #32.*

✓ 41. Collaborate with other high-traffic parks/tourism sites to establish effective messages and information for visitor management. *Including tourism partners such as White Mountain Attractions.*

➢ 42. Ensure that the Commission return to the authority intended at its inception. *What does this mean? MWC's authority is currently advisory. What is appropriate? AG input is needed.*

Substantive Outcome

As a result of the planning process, the Master Plan should:

Sec. 56 - Vision Summary Discussion

General:

Capital Improvements:

✓ 43. Establish a clearer path forward for the future of the Yankee Building and the important systems it supports. *Needs further study. Is there federal public safety funding, e.g., fire suppression?*

✓ 44. Utilize Capital Budget Process and ARPA funding. *And other funding sources.*

✓ 45. Ensure that waste management systems are designed, sized, and operated to meet the long-term rather than short term goals and minimize environmental degradation.

✓ 46. Ensure that Summit structures incorporate protective and energy efficient features with designs that reduce intrusion on summit experience and environment.

✓ 47. Ensure that, to the maximum extent possible, and consistent with the presentation of historic settings, Summit facilities and infrastructure incorporate energy and resource efficient technologies, which would be upgraded, consistent with these principles, to accommodate technical advances.

✓ 48. Provide for an up to date communications and maintenance facility

✓ 49. Balance historic and modern facilities.

✓ 50. Ensure that the Summit is accessible and inclusive (include quality information and access for the diversity of visitors) (ensure that public facilities would, after a public process of research and investigation, identify and considerately incorporate features sensitive to any significance of Mount Washington's Summit to indigenous people) (ensure that it increases visitor experience, outdoor accessibility and inclusion, operations sustainability, and natural resource values) (consistent with sustainability principles, Summit facilities and offerings would be accessible to all visitors, including the use of technology or designs to improve access to natural features and historic or scenic elements for all persons, including those with physical or intellectual disabilities).

➢ 51. Create an additional hiking trail network with signage to keep visitors on the trail, entertained, and dispersed. *Delete "additional." Maintain existing trails and provide better trail info. Do a trails assessment, including appropriate treadway. Improve a trail around the SAB?*

Operation and Maintenance:

✓ 52. Ensure that the Mount Washington State Park is a fiscally sustainable operation, not only able to continue covering operating expenses, but such that revenues will be available for larger, costlier maintenance and improvement projects, which are typically now and previously funded through Capital Improvement funding (ensure financial viability of Mount Washington State Park).

➢ 53. Ensure that the summit has in place a system of charges that equitably spreads the costs of maintaining and upgrading Summit infrastructure features among Summit visitors and those entities using the Summit because of its elevation, rather than purposes related to the natural environment or history of Mount Washington.

✓ 54. Ensure that the summit is a model of sustainable tourism/land management.

➢ 55. Ensure that the summit environment and experience are maintained. *Add the word "quality" experience.*

➢ 56. Account for the fact that park operations are providing financial support to the rest of the parks in the state park system. *It is a goal for Mt Washington state park to help provide financial support to the state park system.*

✓ 57. Clarify and solidify pre-existing rights of all summit entities.

✓ 58. Plan for maintenance upgrades for other summit structures.

✓ 59. Ensure a good experience for hikers (hikers generally appreciate the services offered at the Summit and understand that when only a short distance from the Summit they return to the rugged above tree-line experience of the Presidentials).

➢ 60. Ensure that of all trails on the Summit are improved and maintained and have new signage.

✓ 61. Ensure that management promotes the desired experiences including iconic views.

✓ 62. Create a unique visitor experience.

✓ 63. Manage the Summit to ensure sustainability and account for carrying capacity.

✓ 64. Provide for scientific research and monitoring to enhance understanding.

✓ 65. Create a bigger presence for the Museum. *Change "bigger" to "greater" and add "interpretive experience." Post historical interpretive panels on the walls of the SAB.*

(Mount Washington Commission moves on to their next agenda item for the day)

Summary of Comments for Mount Washington Management Plan

Vision/Mission Statements

The following is result of March 25, 2022 MWC continuing review of Brooks' Summary of Comments.

Notations:

✓ A "check mark" indicates the items where the MWC members agreed.

➢ An "arrow" indicates the items that require more discussion.

☐ A "box" indicates an Action Item.

Italicized text are notes taken at the MWC meeting on March 25, 2022.

The expected draft document of their work on items 66 to 115 changed formats. The checks, arrows, boxes and italicized notes format above was replaced by a draft master plan formatted with illustrations by New Hampshire Department of Justice attorney for the Commission Allen Brooks. *(see Vol. 3B Timeline - Apr 22nd, 2022 for details & press coverage.)* The work on that document was to be further refined into a second draft to be discussed at the Commission meeting of May 10, 2022. That draft will be inserted in this Section later to minimize readers' confusion. Here are documents produced for, or at the April 22nd meeting of the Mount Washington Commission.

Appalachian Mountain Club

Master Planning Data Request

Chris Thayer, Appalachian Mountain Club - Mt Washington Commission Member

4.20.22

AMC 5-year summary of overnight visitation in proximity to Mt Washington:

Year	Madison	Lakes	Mizpah	Tuckerman	Joe Dodge	Total
2017	4,868	8,531	5,282	3,898	15,198	28,597
2018	4,876	8,745	5,757	3,704	14,531	28,152
2019	4,990	8,951	5,573	3,175	14,303	28,244
2020	0	0	0	1,388	6,031	6,031
2021	3,110	5,538	3,345	1,950	6,564	15,212

- 1 bednight = 1 guest
- Operating season dates include:
  - o 3.5 months for Madison & Lakes Huts
  - o 4.5 months for Mizpah Hut
  - o 12 months for Tuckerman/Hermit Lake Shelters
  - o 12 months for Joe Dodge Lodge
- COVID-19 impacted overnight visitation in 2020 and 2021

Reliable day visitation (hikers passing through) is not available

Mt. Washington Cog Railway

TO: Mount Washington Commission

From: Wayne Presby, President - Mount Washington Railway Company

RE: 5-Year Visitation Numbers to the Summit *(Ed. note: Does not include passengers to Waumbek or Skyline Stations)*

DATE: March 25, 2022

YEAR	NUMBER OF VISITORS TO SUMMIT
2017	119,249
2018	117,936
2019	125,256
2020	57,043
2021	147,948

Sec. 56 - April Handouts

Mt. Washington State Park
Retail and Food Concessions

10 Year Vision for Summit (specific goals)

• Expand kitchen out to keep up with food demand. Give more work space in the kitchen for safety and food output. In addition potentially expand the food service to eliminate wasted space in Rotunda area in addition to giving more space for more product options and room to move freely around the food service.

• Build a walk in cooler outside Manager's office. Currently we have 3 stand up coolers in that area. A walk in would give us more cold storage space and would be a more efficient use of dead space in that area. Would also potentially be more energy efficient thus being more cost effective in the future.

• Expand Gift Shop to make it more of a rectangle shape. Would give more retail space for the sale of retail goods and also more walking space. In addition add bar and bar seating around gift shop perimeter to eliminate tables but maximize seating.

• Continue to sell a diverse product mix that changes year to year.

• Maximize storage space downstairs and upstairs. Plan out new ways to maximize storage space upstairs. Example: Building more shelving downstairs for glassware or finding a place upstairs for glassware.

• Keeping up with building maintenance and proper food safety certifications and licensing.

• Continue increasing sales and sales revenue to support the operation of the park and allow for investment beyond capital funding. For example: designing OUT own products and ordering locally. This minimizes overseas shipping cost and creates one of a kind souvenirs for the state park alone, along with supporting small businesses in the community.

• Having a higher social media presence for Mount Washington specifically. By having an increased social media presence, it would increase visitor-ship and increase potential new hires.

• Year-round retail sates, including winter mail order focus

10 Year Vision for Summit (broad)

- The Retail and Food Service Operation continue to cover the costs of its operation while providing additional revenues for the support of the greater Mount Washington State Park operations.

- Within the structure boundaries of the Sherman Adams Building, that interior reconfigurations and improvements can be made to better use available space while balancing the operational space needs of the retail and food service with the public areas used for both seating and walking lanes. Present day, there seems to not be enough of either and there are possible improvement opportunities on both sides.

- An increase in storage space for retail and food inventory, (and other operational support) both on the summit, and off the summit.

- Continue to sell a diverse product mix and unique items that changes year to year based on customer tastes and demands, that give our guests ways to both remember their visit and to promote Mount Washington State Park and New Hampshire. Continue finding opportunities to gain access to new vendors, including New Hampshire businesses, and product opportunities, through trade shows and other resources.

- Provide a safe, clean and inviting environment for guests worthy of the location. Keeping up with building maintenance and proper food safety certifications and licensing.

- Find ways to expand awareness and visibility of the State Park Gift Shop, which is currently tucked into the opposite side of the building that the public access. Find new ways to reach guests, both on the summit, and perhaps locally and/or through online sales.

- Have a full staff for Spring, Summer and Fall. By having competitive wages within the scope or our State CBA, and perhaps offering other kinds of employee incentives, we will increase our potential hires and will hopefully be fully staffed for our entire season. Increase our staffing numbers to fit the ever changing demands of the job while achieving financial performance goals.

- PH/PB 4/22/2022

1970 Master Plan

COMPLETED	PARTIALLY COMPLETE	YET TO BE COMPLETED	NOTES
			1970 MP does not seem to have included the public.
			When did the Cog and Road cease to be PUC permitted?
Summit Building			Sherman Adams Building. MP states capacity is 400 people. What is current capacity?
	Tip Top House restored		Flat roof not used for observation deck (I.A.2.)
Stage Office			Complete rebuild finished late fall 2021 (I.A.3.)
Obs moved into new quarters			(I.A.3.) Old Obs razed.
		Summit environs not preserved. Historic foundations and wall not identified, and no signage as suggested	(I.A.4.)
Electric Power			(I.A.5.)
Water System			(I.A.6.)
		Summit not "aggressively" promoted	(I.C.)
		Mountain Flora not identified and protected	(I.D.)
		Entrance to the Summit Building Fee	Operation of Summit – Page 29
		WMTW Building (Yankee Building replacement)	(I.A.3.)

Document handed out at Mt. Washington Commission meeting of April 22, 2017.
- Jitney Jr. photo

Mount Washington Management Plan - DRAFT

April 26, 2022

MWC Chair Sen. Jeb Bradley passed out two versions of a draft master plan that Mr. Brooks wrote and that was based on discussions from earlier meetings. Mr. Allen Brooks - Dept. of Justice explained that the intention of the drafts is to show commission members what a final plan could look like. Mr. Brooks said that one copy has brackets around copy points where either he added language or where commission members need to develop consensus. Mr. Brooks further explained that in the instances where he added information, he did so to balance the needs of all partners.

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I. Statutory Requirements

Pursuant to RSA 227-B:6: The commission shall:

I. Prepare a master plan for the summit including but not limited to:

(a) Capital improvements to be made by the state over a 10-year period;
(b) The proposed operation of the summit by the commission including fees to be charged for the facilities operated by the commission, the method of collection of such fees, employment of personnel, franchises to be granted to concessionaires, and any other items deemed necessary to the proper operation of the summit by said commission;
(c) Promotion of the use of the summit by the public as a recreational, historic or scientific attraction;
(d) Protection of the summit as to its unique flora and other natural resources;
(e) The negotiation of public rights-of-way to the summit over private lands which benefit from the improvement of facilities on the summit;
(f) Cooperative arrangements between private interests and the commission relative to the collection of fees, joint personnel, and any like subject.

II. Submit the said master plan to the governor on or before January 1, 2010, and on January 1 every 10 years thereafter, for approval and for enabling legislation in the New Hampshire legislature. ...

IV. The governor and council are to authorize the expenditure of funds for final design and contract plans out of funds appropriated for that purpose when requested by the commission. The governor and council are to authorize the construction of the capital improvements to the Mount Washington summit authorized by the general court in a manner consistent with the 10-year master plan prepared by the commission.

II. Purpose

The summit of Mount Washington and Mount Washington State Park are iconic and emblematic of the Granite State. Visitors to the summit should have the opportunity to observe and experience its unique environment. The purpose of this Master Plan is to ensure that Mount Washington State Park continues to be a must-see destination for visitors to the region while also ensuring that all Summit partners1 are successful. This will be achieved by: maintaining a high quality mountain experience that respects Mt. Washington's uniqueness; recognizing the mountain's flora and fauna, its facilities, and its history, and; using a coordinated approach to address the capacities of buildings, of sewage, waste, energy, water systems, and transportation modes that must accommodate the full number of visitors expected or permitted.

The "Summit" referenced in RSA 227-B is comprised of State property and facilities. The Summit is cared for, managed by, and maintained by the N.H. State Park system.

The N.H. State Park system strives to provide a quality public land experience that includes education and interpretation. Its management is enhanced by public-private partnerships. Among other things, the Mount Washington Commission ("Commission") advises and assists the N.H. State Park System in its management. In doing so, the Commission must try to balance conflicting goals. For instance, the Commission values restoration, protection, and preservation of the alpine environment of the Summit and surrounding landscape. However, the Commission simultaneously recognizes the importance of access, recreation, and fiscal responsibility which necessarily includes providing summit infrastructure systems that incorporate high-quality services to accommodate capacity needs. In short, the Commission hopes to maintain the quality of the mountain environment in perpetuity while still accommodating the significant number of people and vehicles that will visit the Summit.

III. Process

The Commission has attempted to set forth goals, objectives, and tactics in detail in this Master Plan. To create the Master Plan, the Commission used a process:

- Wherein Commission members trusted and respected each other.

- Wherein all Summit partners contributed to success and ultimate outcomes.

• Wherein the Summit partners recognized their interdependence but also respected their independence.

• Wherein the Summit partners ensured that the communal support that each organization gives to each other in times of need continued.

• Wherein Commission members recognized that when all Summit Partners work together, all will benefit.

• That maintained and carried on the culture of helping one another out, especially among operational staff on the Summit and on the mountain generally.

• That recognized the value and the critical summit-related, scientific research of the Mt. Washington Observatory and the Appalachian Mountain Club ("AMC").

• That recognized the public service and security importance of the Summits' various communications systems.

• {That recognized the historic and special mountain experience provided by the Mt. Washington Cog Railway.}

• {That recognized the equally historic and sometimes interactive visitor experience offered by the Mt. Washington Auto Road.}

• That recognized the hard work and dedication of the N.H. State Park System.

• That allowed the general public as well as Commission members to be involved.

• That encouraged creative thinking and respected the rights of all parties.

• That took advantage of prior work.

IV. Capital Improvements

A. Improvements on the Summit Generally

The Commission hopes to achieve a balance between historic and modern facilities at the Summit. The Commission also hopes to ensure that the Summit is accessible and inclusive. This means providing quality information and access for a diversity of visitors including those with physical and intellectual disabilities. Capital improvements should provide for outdoor accessibility and inclusion for those with disabilities. They should also provide for the enhancement of experiences using technology and designs to improve access to natural features and historic or scenic elements for all persons.

{To help further inclusiveness}, N.H. State Parks should conduct a public process of research and investigation to determine the significance of the Summit to indigenous people and, thereafter, identify and considerately incorporate features sensitive to such significance.

Capital improvements should be evaluated and chosen consistent with sustainability principles in order to achieve sustainable operations. In addition, Capital improvements should be funded that enhance visitor experiences. These should include:

• Posting historical interpretive panels on the walls of the Sherman Adams Building.

• Creating updated and more modern informational displays within the Sherman Adams Building that provide visitors with better knowledge and understanding of the overall uniqueness of and history of Mount Washington. [This could include a looping video display.]

[N.H. State Parks should explore modifying the hiking trail network and including new signage to keep visitors on the trail, entertained, and dispersed. Prior to modification, N.H. State Parks, in coordination with Summit Partners, 3 should perform a trails assessment. The trail around the Sherman Adams Building should then be improved consistent with N.H. State Park and Commission recommendations.]

Measures should also be taken to create or maintain world-class Mount Washington Observatory weather research facilities, indoor/outdoor laboratory, and testing space.

B. **YankeeBuilding**

The Yankee Building supports many systems of State and national importance. However, the building is currently in a State of disrepair. {In recent times, the Yankee Building has suffered from leaking roofs, poor insulation, disjointed work areas, and a general condition that is far below acceptable levels for public buildings.} The Commission shall conduct further studies to determine how to properly provide an up-to-date communications and maintenance facility. As part of this process, the Commission shall explore funding opportunities to determine whether there is federal public safety funding for items like, for instance, fire suppression. The Commission shall also assist N.H. State Parks in utilizing the Capital Budget Process, the American Rescue Plan Act ("ARPA") funding, and other funding sources. {N.H. State Parks, with input from the Commission, shall determine a course of action for the Yankee Building by ___. This Master Plan may be amended based on that determination.} [N.H. State Parks should consider elements other than just communication when siting, building, or maintaining summit towers and the Yankee Building].

C. Water and Waste

Capital improvements should make sure that waste management systems are designed, sized, and operated to meet the long-term rather than short-term goals while minimizing environmental degradation. N.H. State Parks should evaluate restroom facility needs, using data and accounting from Summit Partners, and construct future facilities based on that evaluation. N.H. State Parks will ensure completion of the currently planned water and sewer upgrades {which consist of installing two 20,000 gallon water tanks behind the Sherman Adams Building to enable year-round usage on a single system, and replacing the aging sewage treatment plant. The project cost is $3,376,308, funded through ARPA, the federal Land and Water Conservation Fund, and state Capital Budget funds.}

D. Energy Efficiency

N.H. State Parks should incorporate protective and energy efficient features into Summit structures with designs that reduce intrusion into Summit experiences and the environment. To the maximum extent possible, and consistent with the presentation of historic settings, Summit facilities and infrastructure should incorporate energy and resource efficient technologies, which would be upgraded, consistent with these principles, to accommodate technical advances. Changes should encourage net zero emissions. {N.H. State Parks, with the help of the Commission,} should explore changes to the visitors' center that are compatible with energy certifications or the equivalent with an emphasis on renewable energy sources.

E. Access

Mount Washington is one of only two of New Hampshire's forty-eight "four-thousand- footers" with non-hiker access (Cannon is the other), making the Cog Railway and Auto Road integral components of a special experience for people from around the globe. Given the presence of non-hikers, N.H. State Parks should strive to create walking surfaces that are smoother and more accessible with an eye towards permeability, considering limiting factors such as climate, and should ensure any work is performed within the context of overall master planning objectives. [N.H. State Parks, in cooperation with Summit Partners, should also consider ways to disburse visitors throughout the Summit through trails or other means.]

V. Operation and Maintenance

A. Operation and Maintenance of the Summit Generally

Generally, the Summit should be managed to promote desirable experiences including the enjoyment of iconic views and should help foster a unique visitor experience. Operations should ensure a good experience for hikers understanding that hikers appreciate the services offered at the Summit because they know that they will soon return to the rugged above-tree-line experience of the Presidentials. {Include statement of Cog and Road as well to balance}.

{Strong consideration must be given to management techniques and objectives based on the number of current and expected visitors. To do so, N.H. State Parks should first evaluate existing use. The Mt. Washington Cog Railway indicates that ___ users visit the park each year. The Auto Road estimates ___. The Appalachian Mountain Club estimates ___ hikers per year. The UNH Survey Center indicates __.} {[N.H. State Parks should use this information, and other available resources, to attempt to estimate the current use and "carrying capacity" of the Summit.]} [Some structures also have discrete limitations; for instance, the Sherman Adams Building currently can only lawfully hold 498 people on the main floor and 298 people on the ground floor.] {Experiences should be tailored to meet identified needs and limitations.} For instance, N.H. State Parks should evaluate the feasibility and implications of capping the number of visitors during peak times through a reservation system. It should also consider longer hours for the Sherman Adams Building during the operating season or a possible extension of the operating season.

B. Finance

The Summit should be a model of sustainable tourism and land management. N.H. State Parks should strive to ensure that the Mount Washington State Park is a fiscally sustainable operation, not only able to continue covering operating expenses, but able to generate revenues that will be available for larger, costlier maintenance and improvement projects, which are typically now and previously funded only through Capital Improvement funding. [However, planning must account for the fact that the few State parks that generate revenue, like the Mt. Washington Summit, are providing financial support to the rest of the parks in the State Park system. It is a goal of the Mt. Washington State Park to continue to help provide this financial support to the State Park system. {At least every biennium, N.H. State Parks should describe how it has balanced these competing interests to the Commission. This Master Plan can then be further amended if needed based on that information.}] As part of its efforts, N.H. State Parks should explore the potential of having a third party construct and operate a Telecommunications Facility.

For its part, the Commission, including Summit Partners, should work to ensure the financial viability of the Summit while also ensuring that a quality Summit environment and experience are maintained. The Commission as a whole should explore a summit Stakeholders' agreement to financially support Summit betterment projects.

Concessions at the N.H. State Park should be addressed by ___{Patrick's statement}. {To ensure smooth operations,} N.H. State Parks should explore and consider opportunities closer to the base of the mountain to support Summit operations.

C. Maintenance

N.H. State Parks should proactively plan for maintenance upgrades for Summit structures. As soon as possible, N.H. State Parks should repair tiles on the observation deck, repair cracked cement, repair roof leaks, and provide a coat of fresh paint for the

Sherman Adams Building. N.H. State Parks should complete cleanup of the Sherman Adams Building and Summit generally. Abandoned items around the summit (those not offering historic value), construction debris, and other debris should be removed. {[Final disposition of the existing unused foundation of the former generator building, whether reuse or removal, should be accomplished expeditiously after approval from the N.H. Dept. of Historic Resources.]}

D. Education/Outreach

Management activities should result in information, education, access features, and trail maintenance that promotes protection of the fragile alpine environment. They should also educate visitors about the unique scientific, botanical, and geological aspects of the summit. Educational programs and visits from school and other groups should be coordinated to showcase information on the history of the Summit, climate, environment, and conservation work. In the future, N.H. State Parks and the Commission should look to increase synergy among Summit Partners to do things like, for instance, establishing a joint communications package that gives consistent signage and information to visitors all around the region.

The Commission and Summit Partners should assist the N.H. State Park System in promoting scientific research and monitoring to enhance understanding. Efforts should be made to create a greater presence for the Museum so that it can provide an "interpretive experience" for interested Summit visitors.

Summit Partners should provide for the creation of display boxes of rare flora indigenous to the alpine climate to educate about the importance of protecting the Summit. Similarly, Summit Partners should encourage creation of a Nature Gallery as the terrain from the base to the Summit hosts a very diverse population of plants, animals, and insects.

N.H. State Parks, with the assistance of the Commission, should review the Pike's Peak plan to begin integrating technology-based experiences. Ideas include guided tours, educational interpretive plans, and a summit-related "App." to be collaboratively and aggressively promoted. The App. could include such features as:

- Educational and historical audio, video, and pictorial presentations.
- A Summit Challenge – (e.g. "Visit all [X] locations on the Summit to collect badges...").
- A "Summiteers" program to be a weather-related experience sponsored by MWOBS initiating visitors with wind tunnel simulation that would include a photo op (charge/donation for initiation to benefit MWOBS).
- A system called My Summit Photos where people can save and share pictures on all social media platforms and create hashtags and filters thereby allowing our visitors themselves to promote N.H. and the Summit adventure experience. Commission members including Summit Partners will help advertise and promote any such App. along with the existing "Online Donation to Mt. Washington State Park" option and will integrate the donation link into Summit Partner websites. [N.H. State Parks should also consider collaborating with other high-traffic parks/tourism sites {and organizations} such as White Mountain Attractions to establish effective messages and information for visitor management.]

E. Environment

Summit management, either by N.H. State Parks or cooperatively with Summit Partners, should aspire to minimize harm by ensuring that human presence is consistent with the environmental goals and protections established in this Master Plan.

As an initial step, measures should be taken to assess damage to and deterioration of the environment. Such an assessment will establish a baseline and, thereby, provide an important benchmark for Master Plan implementation. The assessment should include an analysis of contaminated groundwater and soils around the summit to guide remediation efforts. [It will also include a review of prior recommendations related to protecting flora and fauna and information from the N.H. Natural Heritage Bureau (NHB) database.] To the extent possible, N.H. State Parks and Summit partners should address identified damage and deterioration of the environment, including stressed or damaged vegetation, identified in the assessment. N.H. State Parks should also continue to enhance the protection of the fragile alpine ecosystem at the Summit through pathways, trails, and signage.

With respect to structures, the Commission, through this Master Plan, hereby adopts a high standard for planning and performance aimed at avoiding unnecessary additional structures. The negative environmental consequences of existing and future Summit structures should be minimized while balancing ongoing needs and considering other objectives such as the creation of important historic depictions. This standard does not prohibit new structures; however, it embodies a commitment to minimize environmental damage when performing necessary construction, repairs, or maintenance. N.H. State Parks should look for opportunities to make new structures even less impacting than previous structures such that construction could actually promote positive environmental changes. Management practices to conserve resources, for example, taking advantage of opportunities to reclaim water or creatively manage sewage need, are also encouraged.

N.H. State Parks should account for aesthetic impacts. For instance, it should endeavor to reduce the visual impact of fuel tanks. Measures may include reducing the quantity of tanks but could also simply include reducing impacts by wrapping tanks in material that helps them blend into the landscape.

F. Safety

N.H. State Parks should continue assisting and coordinating with rescue professionals to generally maintain a safe and enjoyable park experience. Where needed, N.H. State Parks should ensure that it has an updated emergency response plan and that it, and Summit Partners, acknowledge their respective roles within response efforts led by N.H. Fish and Game or U.S. Forest Service. [Reference how we are using our resources in respect to other efforts]. [Describe all responsibilities]. [Cutler river drainage does a plan, Thayer will send it to me].

N.H. State Parks should continue to promote hiker safety education for all season hiking. {To the extent possible, N.H. State Parks should take care to [ensure access of Summit services to hikers]} and assess how to ensure that current winter access remains as safe as possible.

G. Real Property Management

[N.H. State Parks should report on how State property at the Summit is being utilized, {leased, or licensed} along with any analysis it may have on the full market value of such {leases or licenses.} {The Commission may then request an independent analysis of full market value if it deems appropriate.} With respect to future leases, {Phil's statement on how leases should be reviewed}. N.H. State Parks should ensure that Summit Partners are engaged and heard with respect to leases or contracts on the Summit. Summit Partners, including N.H. State Parks, should also work to clarify and solidify existing property rights at the Summit.

VI. Implementation

The deliverables within this Master Plan have been targeted for completion within the timeframes specified in the attached Table 1.

VII. Conclusion

This Master Plan fulfills the Commissions responsibilities under RSA 227-B:6. The Commissioner may update or amend this Master Plan as it sees fit.

Net Zero Goals Commentary

Chris Thayer - Appalachian Mountain Club

"If you can please share the following with commission members I'd appreciate it especially as I'll be absent for our 5/20 meeting due to a work commitment in NY.

At last month's work session of the MW Commission on master planning, we had some good discussion around the definition and merits of including net zero goals as part of any plan for summit operations and experiences. While I remain committed (stubborn?) to including net zero as an aspirational, forward-thinking goal for a summit master plan, I wanted to share a few resources with the entire commission as we continue to refine master plan drafts and discuss both inherent challenges and opportunities. I view MW State Park as one of the iconic fixtures of NH but also of the state park system existing in a finite landscape at more than 6000 feet. If we can't push ourselves to mitigate human impacts in and on this environment through new and evolving technology and related investments, then we all fall short of truly stewarding the natural resources and outdoor experiences for future generations. Enough of my soapbox, and on to some resources to share that provide some hopeful context of my thinking.

What does net zero mean? Net zero means rapid deployment of clean energy technologies to reduce operational emissions as low as they can realistically go while balancing out the remaining emissions that cannot or have not yet been eliminated through carbon removal technologies. AMC is due to release our own organization-wide net zero goals and plan this summer for operations.

How are federal and state agencies and the broader outdoor recreation industry recognizing the need to combat climate threats amidst changing visitor expectations? I was struck reading a recent post from Outdoor Recreation Roundtable involving the first-ever Outdoor Recreation Summit on Electric Vehicles and New Technology. The summary here and the white paper to come on leading the greening of outdoor recreation experiences struck me as transformational. The same post also called out the $800M investment to be made by the USDA across 40 states in climate- smart infrastructure making the connection on how the "nation's recreation destinations can thrive while mitigating their impacts on a changing climate and ensuring sustainable access for generations to come." That's a future I'm excited to be a part of.

Thanks for hearing me out as we continue working together openly and honestly on a summit master plan. See you at our next scheduled commission meeting.

Chris Thayer - AMC Director of External Affairs & Contracts

Sec. 56 - Draft Plan for Comment

Mount Washington Management Plan - DRAFT for Comment

July 5, 2022

MWC Chair Sen. Jeb Bradley passed out two versions of a draft master plan that Mr. Brooks wrote and that was based on discussions from earlier meetings. Mr. Allen Brooks - Dept. of Justice explained that the intention of the drafts is to show commission members what a final plan could look like. Mr. Brooks said that one copy has brackets around copy points where either he added language or where commission members need to develop consensus. Mr. Brooks further explained that in the instances where he added information, he did so to balance the needs of all partners.

II. Purpose

The summit of Mount Washington is iconic and emblematic of the Granite State. Visitors to the summit should have the opportunity to observe and experience its unique environment. The purpose of this Master Plan is to provide for this experience while enabling the success of all Summit Partners1 by ensuring that the summit of Mount Washington, featuring the Mount Washington State Park, continues to be a must-see destination for visitors to the region while also ensuring that resource values are protected. This will be achieved by: maintaining a high quality mountain experience that respects Mount Washington's uniqueness; recognizing the mountain's flora and fauna, its facilities, and its history; and, using a coordinated approach to address the capacities of the summit environment, buildings, sewage, waste, energy, and water systems, and transportation modes that must accommodate the full number of people expected or permitted to visit the summit each year.

The "Summit" referenced in RSA ch. 227-B is comprised of State property and facilities. Overall management of the Summit and facilities to support visitors was entrusted to the N.H. Division of Parks and Recreation ("N.H. State Parks") when the Summit became a State park in 1964. The existence of the Summit Partners is inextricably linked to the physical and geographic attributes of Mount Washington but the degree to which they succeed is dependent, at least in part, on State park operations. N.H. State Parks strives to provide a quality public recreational experience that includes education and interpretation. Its management is enhanced by public-private partnerships. *(1 "Summit Partners" shall refer to Commission members who own, lease, or otherwise contractually occupy an area on the physical Mount Washington summit. However, the Commission recognizes that it benefits from the efforts of all of its members including the voluntary support and assistance of the U.S. Forest Service. The Commission also recognizes that many parties have legal interests in the summit area. 2 RSA 227-B:2, II states: "'Summit' shall mean the Mount Washington summit property owned by the State." A map of the Summit is attached as Attachment 1.)*

Among other things, the Mount Washington Commission ("Commission") advises and assists N.H. State Parks in its management of the Summit. In doing so, the Commission must try to balance conflicting goals. The Commission values restoration, protection, and preservation of the alpine environment of the Summit and surrounding landscape. The Commission similarly recognizes the importance of access, recreation, and fiscal responsibility which necessarily includes providing Summit infrastructure systems that incorporate high-quality services to serve capacity needs. The Commission strives to maintain the quality of the mountain environment in perpetuity while accommodating the significant number of people and vehicles that visit the Summit.

III. Process

The Commission has attempted to set forth goals, objectives, and tactics in detail in this Master Plan. To create the Master Plan, the Commission used a process:

- Wherein Commission members trusted and respected each other.
- Wherein all Summit partners contributed to success and ultimate outcomes.
- Wherein the Summit partners recognized their interdependence but also respected their independence.
- Wherein the Summit partners ensured that the communal support that each organization gives to each other in times of need continued.
- Wherein Commission members recognized that when all Summit Partners work together, all will benefit.
- Wherein the Commission recognized the "all hands on deck" approach to managing important issues, especially as it relates to responding to emergencies and safety.
- That maintained and carried on the culture of helping one another, especially among operational staff on the Summit and on the mountain generally, which arises, in part, from the need to withstand extreme and often dangerous conditions.
- That recognized the important contributions and services provided by the U.S. Forest Service.
- That recognized the evocative reputation and the critical summit-related research of the Mt. Washington Observatory and the Appalachian Mountain Club ("AMC").
- That recognized the public service and security importance of the various Summit communications systems.
- That recognized the essential roles of the historic and special experiences provided to Summit visitors by the Mt. Washington Cog Railway and the Mt. Washington Auto Road.
- That recognized the hard work and dedication of N.H. State Parks.

- That involved both the general public as well as Commission members.
- That encouraged creative thinking and respected the rights of all parties.
- That took advantage of prior work.
- That utilized third-party expertise where appropriate.

IV. Operation and Maintenance

A. Environment, Summit Assessment, and Aesthetics

Summit management by N.H. State Parks in cooperation with Summit Partners should aspire to minimize harm by ensuring that human presence is consistent with the environmental goals and protections established in this Master Plan.

As an initial step, a Summit assessment should be completed. The assessment should examine damage to and deterioration of the environment including, but not limited to, an analysis of contaminated groundwater and soils around the summit, the impact of climate change, and other environmental considerations. "Contamination" in this context is to be interpreted broadly. Prior recommendations related to protecting flora and fauna and information from the N.H. Natural Heritage Bureau (NHB) database will help inform the assessment. Assistance from the N.H. Dept. of Environmental Services and the N.H. Fish and Game Dept. should be requested to help determine a scope of work. The assessment should also include a building survey and an infrastructure survey; however, such surveys shall not impinge on the confidentiality or privacy interests of State Park tenants. This assessment will form a baseline for planning. Given its importance and estimated cost, the Commission will help seek a capital appropriation for this assessment. *(The Commission also encourages completion of a visitor survey, using expertise from entities like UNH. Depending on the scope of this survey, it may be able to be completed as part of the larger Summit assessment.)*

To the extent possible, N.H. State Parks and Summit partners should address damage and deterioration of the environment, including stressed or damaged vegetation and impacts of invasive species, identified in the assessment. This could include remediation of impacts or mitigation – meaning avoidance, minimization, or offsets achieved by restoration. Adverse impacts should also be avoided using lessons learned. Summit Partners should continue to enhance the protection of the fragile alpine ecosystem at the Summit through pathways, trails, and signage. Implementation will be informed by the environmental assessment discussed above.

With respect to structures, the Commission, through this Master Plan, hereby adopts a high standard for planning and performance aimed at avoiding unnecessary additional structures. The negative environmental consequences of existing and future Summit structures should be minimized while balancing ongoing needs and considering other objectives such as the creation of important historic depictions. This standard does not prohibit new structures; however, it embodies a commitment to minimize environmental damage when performing necessary construction, repairs, or maintenance. Opportunities should be sought to make new structures even less impacting than previous structures such that construction could actually promote positive environmental changes. Management practices to conserve resources, for example, taking advantage of opportunities to reclaim water or creatively manage sewage need, are also encouraged.

N.H. State Parks should account for aesthetic impacts. For instance, it should endeavor to reduce the visual impact of fuel tanks. Measures may include reducing the quantity of tanks but could also simply include reducing impacts by wrapping tanks in material that helps them blend into the landscape.

B. Operation of the Summit Generally

The Summit should be managed to promote desirable experiences including the enjoyment of iconic views and unique visitor experiences. Operations should ensure a good experience for hikers understanding that hikers appreciate the services offered at the Summit because they know that they will soon return to the rugged above-tree-line experience of the Presidentials.

The Mt. Washington Cog Railway and the Mt. Washington Auto Road each bring well over 100,000 visitors to the Summit each year. The number of hikers each year is currently unknown but likely rivals that of other transportation modes. Consideration must be given to management techniques and objectives for the Summit that take into account the number of current and expected visitors. However, N.H. State Parks must recognize that ownership of the Summit is subject to several deeded reservations related to access including the following:

The rights of the passengers, guests, and employees of the Mount Washington Road Company and the Mount Washington Railway Company, and of the students and faculty of educational institutions, and of hikers, skiers and other members of the general public, to pass and repass, in common with others, over and across the premises [] which are not occupied by buildings or other structures for the purpose of scientific research and for the purpose of obtaining a view from and observing the summit of Mount Washington.

Book 481, pg. 212, Coös County Registry of Deeds. Nevertheless, N.H. State Parks can limit the capacity of structures like the Sherman Adams building. The Sherman Adams Building currently can only lawfully hold 495 people on the main floor and 298 people on the ground floor. If this number is likely to be exceeded, actions will need to be taken to limit visitors to the building at one time, additional amenities (i.e. restrooms, water) will need to be provided at the Summit to support the visitors, or hours ex-

tended to allow access to the Sherman Adams building earlier and later in the day. N.H. State Parks asserts that the operating season is dictated, for the most part, by the weather.

With this information in mind, experiences should be tailored to meet identified needs and limitations. In general, N.H. State Parks should evaluate limiting the number of visitors, using reservation systems, or changing operating hours with respect to structures while recognizing the requirements of relevant deeds and the Commission's charge in RSA 227-B:6, I(c) relative to the "[p]romotion of the use of the summit by the public as a recreational, historic or scientific attraction." Recognizing that there will always be a physical limit to the number of people on the Summit at any given time, the Auto Road and the Cog Railway should investigate ways to limit their visitors in order to contribute to the long range success of the Mount Washington experience. Similarly, the AMC, N.H. State Parks, and the U.S. Forest Service should investigate ways to limit the number of hikers or associated impacts. The Commission may update this recommendation as it deems necessary.

C. General Maintenance

Maintenance upgrades for Summit structures should be proactively planned consistent with the terms expressed in this Master Plan. There are a number of pending repairs needing attention including: tiles on the observation deck, cracked cement, roof leaks, and paint on the Sherman Adams Building. Cleanup of the Summit and a neat appearance should be an ongoing priority. Abandoned items around the summit (those not offering historic value), including construction debris, and other debris should be removed. The foundation of the former generator should be evaluated for re-use in the context of a long-term plan for Summit structures (e.g., new building for Observatory, additional visitor service, maintenance support, of another viewing platform) and removed if there is no use.

D. Finance

The Summit should be a model of sustainable tourism and land management. All parties should acknowledge the need for a fiscally sustainable State Park and should explore options to cover operating expenses and generate revenues that will be able to contribute to maintenance and improvement projects that are typically now and previously funded only through Capital Improvement funding.

Currently, Mount Washington State Park is the only park that does not support the operations of the park system statewide. All revenue to the Park is deposited in the Mount Washington Fund to be used on the Summit. None of the revenue is used to support parks administration or support less iconic locations that cannot generate enough revenue to support themselves. Capital funds used on the Summit are also not available to support improvements in other locations that do financially support the entire park system. However, like Hampton Beach, the Park is an important revenue generator for private sector businesses. Summit Partners should consider how to support the Mount Washington State Park and understand that their interaction with the Park, and with each other is not a zero-sum game. All partners benefit from the success of the others. The Commission, including Summit Partners, should work to ensure the financial viability of the Summit while also ensuring that a quality Summit environment and experience are maintained. The Commission as a whole should explore a summit Stakeholders' agreement or other means to financially support Summit betterment projects.

The Commission should work with N.H. State Parks to determine whether a fee should be charged to enter or use Park facilities. As part of that, a third party should evaluate Park operations unless Commission members can provide such an evaluation free of charge.

Retail and food concessions are the primary source of revenue to support the entire operation of the State Park. The gift shop generates the highest per square-foot return in the parks system. However, space is insufficient to operate efficiently and there is little opportunity for future expansion. In particular there is a lack of storage space on the summit. Kitchen space, refrigeration and ventilation are inadequate. Therefore, existing space in the building should be evaluated to optimize return while preserving visitor experience. Year-round online sales should continue to be explored.

To ensure smooth operations, N.H. State Parks should explore and consider opportunities closer to the base of the mountain to support Summit operations.

E. Education/Outreach

Management activities should result in information, education, access features, and trail maintenance that promotes protection of the fragile alpine environment and an environmental ethic. They should educate visitors about the unique scientific, botanical, meteorological, and geological aspects of the Summit. Educational programs and visits from school and other groups should be coordinated to showcase information on the history of the Summit, climate, environment, and conservation work. Synergy among Summit Partners should be increased to do things like, for instance, establish a joint communications package that gives consistent signage and information to Summit visitors, many of which hail from all around the region and the world.

The Commission, Summit Partners, and N.H. State Parks should promote the scientific research and monitoring on the Summit conducted by the Mt. Washington Observatory and the Appalachian Mountain Club to enhance public understanding. Efforts should be made to create a greater presence for the Museum so that it can provide an "interpretive experience" for interested Summit visitors. Measures should also be taken to create or maintain world-class Mt. Washington Observatory weather research facilities, indoor/outdoor laboratory, and testing space.

Summit Partners should provide for the creation of display boxes of rare flora indigenous to the alpine climate to educate about the importance of protecting the Summit. Similarly, Summit Partners should encourage creation of a Nature Gallery as the terrain from the base to the Summit hosts a very diverse population of plants, animals, and insects.

N.H. State Parks, with the assistance of the Commission, should review the Pike's Peak plan for ideas on how to begin integrating technology-based experiences. Ideas include guided tours, educational interpretive plans, and a summit-related "App." to be collaboratively and aggressively promoted. The "App." could include such features as educational and historical audio and visual presentations, a "Summit Challenge," a "Summiteers" program, or programs that encourage people to post and share pictures on social media. Commission members including Summit Partners will help advertise and promote any such "App." along with the existing "Online Donation to Mt. Washington State Park" option and will integrate the donation link into Summit Partner websites. N.H. State Parks should also consider collaborating with other high-traffic parks/tourism sites and organizations such as White Mountain Attractions to establish effective messages and information for visitor management.

F. Safety

State Parks should continue assisting and coordinating with rescue professionals to generally maintain a safe and enjoyable experience within the Park. Where needed, N.H. State Parks should ensure that it has an updated emergency response plan and that it, and Summit Partners, acknowledge their respective roles within response efforts led by the N.H. Fish and Game Department and U.S. Forest Service outside of the Park. Please note that job descriptions for State Park employees on the Summit do not include a requirement to perform emergency responses off site; however, staff often have that training and have assisted hikers on a limited basis. Park staff members also take responsibility for the safety of visitors within the Park boundary, including buildings, to the same degree they would in any State Park. Generally, search and rescue efforts outside of the Park are led by the N.H. Fish and Game Department except that from December 1st to May 31st, the U.S. Forest Service has search and rescue responsibility over the Cutler River Drainage Basin. See Attachment 2. As a "rule of thumb," State Park staff and other entities should call the N.H. Fish and Game Department "for those situations that are beyond their capability."4 All Summit Partners should emphasize cooperation and coordination among the relevant entities. *(This advice courtesy of N.H. Fish and Game Lieutenant Mark W. Ober, Jr., District One Chief.)*

State Parks should continue to promote hiker safety education by its Summits Partners for all season hiking. With respect to safety, education is key.

G. Real Property Management

State Parks should report on how State property at the Summit is being utilized, along with any analysis it may have on the full market value of relevant leases or licenses. The Commission may then request an independent analysis of full market value if it deems appropriate.

Leases and agreements are between the lessee and the State of New Hampshire rather than the "Commission." The State has not consulted with the Commission regarding leases in recent years. Consultation is awkward because of the specific rights and interests that many of the Commission members have in the Park through agreement and deed. However, with the new focus on master planning and the strengthening of both relationships and the function of the Commission, the Commission should be presented with leases and agreements including terms, compensation, rights granted, and rights received. This will allow the Commission members to provide comments and advice relative to achieving the Master Plan and the impact on their own operations, visitor experience, and the Park as a whole. Commission members should recuse themselves as appropriate and when agreements are in negotiation, the Commission may need to go into non-public session to discuss (as is the case with the State Park System Advisory Council review of agreements). Generally, N.H. State Parks should ensure that Summit Partners are engaged and heard with respect to leases or contracts on the Summit.

Summit Partners, including N.H. State Parks, should also work to clarify and solidify existing property rights at the Summit.

V. Capital Improvements

A. General Goals

The Commission hopes to achieve a balance between historic and modern facilities at the Summit. Capital improvements, to the greatest extent practicable, will provide for accessibility, inclusiveness, visitor experiences, trail experiences, and energy efficiency as described below.

B. Accessibility and Inclusiveness

The Commission will, to the extent practicable, ensure that the Summit is accessible and inclusive. This means providing quality information and access for a diversity of visitors including those with varying physical and intellectual abilities. Therefore, capital improvements should provide for outdoor accessibility and inclusion for those of all ability levels. The visitor experience should be enhanced for all persons using technology and designs to improve access to natural features and historic or scenic elements. The Commission will also explore opportunities to lower financial barriers of access to the Summit in an effort to achieve additional demographic equity.

The Commission notes that Mount Washington is one of only two of New Hampshire's forty-eight "four-thousand-footers" with non-hiker access (Cannon is the other), making the Cog Railway and Auto Road integral components of a special experience

for hundreds of thousands of visitors annually from around the globe. Therefore, it would be beneficial to create walking surfaces that are safe and accessible to all people with an eye towards permeability, considering limiting factors such as climate, and ensure any work is performed within the context of overall master planning objectives. To help further inclusiveness, a public process of research and investigation should be undertaken to determine the significance of the Summit to indigenous people and, thereafter, identify and considerately incorporate features sensitive to such significance.

C. Enhanced Visitor Experience within Structures

Capital improvements should be funded that enhance visitor experiences in public structures. These should include:

- Posting historical interpretive panels on the walls of the Sherman Adams Building; and,
- Creating updated and more modern informational displays within the Sherman Adams Building that provide visitors with better knowledge and understanding of the overall uniqueness of and history of Mount Washington. This could include a looping video display or enhancements to the museum.

D. Trails

Ways to disperse visitors throughout the Summit should be considered in order to enhance visitor experience by limiting overcrowding in certain locations. Modification of the hiking trail network and the inclusion of new signage to keep visitors on the trail, entertained, and dispersed should be explored. Prior to modification, a trails assessment should be performed. The trail around the Sherman Adams Building should then be improved consistent with N.H. State Park and Commission recommendations. Eventually, the possibility of creating a loop trail should be evaluated.

E. YankeeBuilding

The Yankee Building supports many systems of State and national importance. However, the building is currently in a state of disrepair and was not designed for its current function as a communications facility. At the request of the Commission, an assessment of the building was completed in 2019 addressing fire protection, communications equipment, and alternatives for building use with recommendations. An opinion of costs for reconstruction and a proposed Summit site plan were provided. The Commission should continue to pursue actions to determine how to properly provide an up-to-date communications and maintenance facility including consideration of what other uses might be incorporated in such a facility. As part of this process, the Commission should explore funding opportunities to determine whether there is federal public safety funding for items like, for instance, fire suppression. The Commission shall also assist N.H. State Parks in utilizing the Capital Budget Process, the American Rescue Plan Act ("ARPA") funding, and other funding sources such as the private sector. Elements other than just communication, such as aesthetic and environmental impacts, will be considered when siting, building, or maintaining summit towers and the Yankee Building. As part of its efforts, N.H. State Parks should consider the potential of having a third party construct and operate a telecommunications facility.

F. Water and Waste

Capital improvements should make sure that waste management systems are designed, sized, and operated to meet the long-term rather than short-term needs while minimizing environmental degradation. This can be furthered by the use of conservation, utilization and reclamation technology.

A project is underway to replace the sewage treatment tank and modernize the water systems. It consists of upgrading the seasonal Summit water system to a year-round
system. Two new 20,000-gallon water tanks will be installed adjacent to the Sherman Adams Building to replace the deteriorating steel tanks currently located 300 yards down slope from the Sherman Adams Building. The existing sewage treatment plant will be replaced with a larger plant that will provide capacity for anticipated growth in the number of annual visitors over the next decade. Funding for the project has been secured through a combination of capital funds, ARPA, and Land and Water Conservation Fund monies totaling $3,575,417. The contract for construction has been approved by Governor and Council and is underway.

Restroom facility needs should also be evaluated, using data and accounting from Summit Partners. Future facilities should be constructed based on that evaluation.

G. Energy Efficiency and Sustainability

Capital improvements should be evaluated and chosen consistent with sustainability principles in order to achieve sustainable operations while serving the needs of the visitor. Protective and energy efficient features should be incorporated into Summit structures with designs that reduce intrusion into visitors' Summit experiences and the environment. To the maximum extent possible, and consistent with the preservation of historic settings, Summit, equipment, facilities and infrastructure should incorporate energy and resource efficient technologies, which would be upgraded, consistent with these principles, to incorporate technical advances. Changes should encourage the lowest possible emissions. Changes that are compatible with energy certifications or the equivalent and that incorporate renewable energy sources should be encouraged. These may be structural, such as the use of modern building materials or techniques, or non-structural such as switching to LED lights and induction cooking. The Cog Railway will lead efforts to determine if electrical infrastructure and use related to its activities could contribute to cost efficiencies.

VI. Implementation

The deliverables within this Master Plan shall be implemented as soon as possible and, if applicable, will continue to be implemented throughout the planning period unless modified by the Commission. The Commission shall support a request for funding for the Summit assessment described in Part IV.A. of this Master Plan. It shall review that assessment and modify the Master Plan based upon the recommendations in the assessment.

VII. Conclusion

This Master Plan fulfills the Commissions responsibilities under RSA 227-B:6. The Commission may update or amend this Master Plan as the Commission sees fit.

Mount Washington Management Plan

August 22, 2022 Public Information Session

Summary

The Mount Washington Commission (MWC) held a Public Information Session on its draft Master Plan for the Summit at the North Conway Community Center. PRESENT were Sen Jeb Bradley/MWC Chair, Dir Phil Bryce/Div Parks and Rec, Greg Gustina/WMNF, Jack Middleton/MWObs, Wayne Presby/Cog Railway, Drew Scamman/TownSquare Media, Chris Thayer/AMC, Rep Karen Umberger/House, and Howie Wemyss/Auto Road. Also in attendance were Rep Steve Woodcock, Councilor Joe Kenney, DNCR Commissioner Stewart, Mark Lucas/DOJ for the MWC, Rob Kirsch/MWObs, and Patrick Hummel/Mt Washington State Park. Approx. 75 public attendees were present.

Chair Bradley called the meeting to order at 7 p.m. He welcomed the public and said that written comments on the draft Master Plan are due by August 31st. The MWC members introduced themselves.

Mark Lucas provided a brief overview of the draft Master Plan which is a "living" document near finalization and can be amended. He reviewed the MWC statutory requirement to submit a master plan to the Governor every 10 years for approval by legislature. The Master Plan encompasses the summit circle owned by the State and provides the basis for capital projects and funding. Accordingly, the MWC is recommending that a summit assessment be completed as a baseline for planning.

The public was informed that the Cog Railway project known as Lizzie's Station is not within the jurisdiction of the MWC. Comments on Lizzie's Station, which is a proposal located within the Railway's Right-of-Way, should be directed to the Coös County Planning Commission and the White Mountain National Forest.

Chair Bradley recognized Director Bryce, who is retiring from the Division of Parks and Recreation next week. Dir Bryce said that the Master Plan outlines the process used to guide the MWC in its work. The challenges and partner relationships are complex. As a self-funded operation, state parks must achieve financial stability but, by statute, revenue generated by Mount Washington State Park does not contribute back to the park system. The Master Plan balances conflicting goals, such as capital improvement needs, the mix of historical and modern facilities, environmental impacts and natural resource preservation, the tourism economy and providing access for those visitors who would not otherwise have access to the summit. Mr Hummel confirmed that visitors came from 30 different countries in July, as recorded in the visitor log.

Chair Bradley called upon the public to provide comment on the draft Master Plan:

Michael Callis, Conway recommends the use of switchbacks rather than stairs to improve accessibility.

Joe Egan, Brownfield, ME said he has spent 52 years in the Mt Washington area, is an AMC member, and helps maintain two hiking trails on Mt Washington. He recognizes the value of the Auto Road and Cog Railway but said there should be no further development. Existing facilities may be improved, but facility expansion would be detrimental.

Abby Evankow, Gorham said environmental and climate assessments, including the flora and fauna, are needed. The Commission should hire a facilitator to incorporate the environmental assessment. The preservation of the summit should take higher priority.

Rick Davis, No. Conway has lived in the Mt Washington valley for over 70 years. Continued growth and development will bring more people to the summit and cause more traffic. The Mt Washington system is already over stressed. He asked about the 18 railcars proposed by the Cog Railway. Chair Bradley reiterated that the Cog project is outside the jurisdiction of the MWC, and comments should be directed to the Coös County Planning Commission and the WMNF. Mr Davis said the Cog project will impact the summit, that hurricane forces will impact the railcars, and that there is an endangered bird species at the summit.

Nick Aiello, Conway said he has operated as a mountain guide for 10 years and understands groups profiting from the mountain. He thinks we should reduce the physical presence on the summit: when structures are at its end-of-life they should be removed, and the summit should be restored to its natural environment.

Donna Veilleux, Madison said that the Master Plan calls for an environmental assessment for the summit funded by legislature. She thinks that the Coös County and WMNF should ask for an assessment of the Cog project. Chair Bradley clarified that the MWC recommendations are not binding on legislature, but that the commission's unanimous support for the assessment makes a strong case.

Commissioner Stewart said that the purpose of tonight's public session is to solicit comments on the summit Master Plan. The Cog's proposal is separate from this effort. The Master Plan will provide legislature with MWC's united support for the assessment and funding request.

Lucy Wyman, Lancaster said that the MWC has some influence beyond their jurisdiction of the state park. She asked if the MWC had any interest in the Cog project. She thinks the project will bring more people to the mountain.

Charlene Brown has served on the Conway Planning Board and is 7th generation on the land. She asked who speaks for the mountain, the impacts of weather, the birds, and other species? She said that we should work towards having people who speak for the mountain.

Commissioner Stewart said that the Governor and Council approved an MOU between DNCR and the Cog that would clarify the Cog's Right-of-Way easement at the summit by limiting its future use if Lizzie's Station were approved.

Chocorua Lake Conservancy representative said that people need to learn to wait for what they want. If it is too crowded, one should come back later. There are a limited number of people that can be on the mountain and a full environmental assessment needs to be completed.

Teresa M. Egan, Brownfield, ME thanked the MWC for the Master Plan and its deliverables that includes summit aesthetics. She said that Lizzie's Station railcars will have an aesthetic impact and are dangerous. She added that those who stay overnight may not be prepared for the elements that may occur.

Ellen ?, Conway said that she did not know about the MWC, and thought that their meetings should be more widely announced. Chair Bradley responded that the meetings are noticed in the Senate calendars.

Elizabeth Seabury, No. Conway said that climate change is an issue, and the energy efficiency measures deserve more attention in the Master Plan. She observed that the MWC members are mostly male.

Jonathan ? said that the Master Plan should include alternatives for visitors that are off summit. Chair Bradley said that the Master Plan is essential to support the funding request for the environmental assessment. The Master Plan can be amended based upon the findings of the assessment.

Mr Jack Middleton, who is stepping down from the MWC, was recognized for his long-standing work on the MWC since its inception in 1969. Thank you, Mr Middleton!

Written comments are due by Aug. 31st. The MWC will act on the Master Plan at a meeting in the fall. The meeting adjourned at 8:10 p.m. Submitted by T. Tango-Lowy, MWC clerk.

Mount Washington Management Plan

August 23, 2022 Public Information Session

Summary

The Mount Washington Commission (MWC) held a Public Information Session on its draft Master Plan for the Summit at the Legislative Office Building in Concord. PRESENT were Sen Jeb Bradley/MWC Chair, Dir Phil Bryce/Div Parks and Rec, Greg Gustina/WMNF, Jack Middleton/MWObs, Wayne Presby/Cog Railway, Drew Scamman/TownSquare Media, Chris Thayer/AMC, Rep Karen Umberger/House, and Howie Wemyss/Auto Road. Also in attendance were DNCR Commissioner Stewart, Mark Lucas/DOJ for the MWC, Donna Dunn/MWObs, and Patrick Hummel/Mt Washington State Park. Rob Kirsch/MWObs arrived later. Approx. 25 public attendees were present.

Chair Bradley called the meeting to order at 9:30 a.m. He welcomed the public and announced that the public session to solicit comments on the draft Master Plan for the summit would start at 10 a.m. The MWC members introduced themselves.

Mr Middleton MOVED to accept the minutes of June 10, 2022; SECONDED by Mr Presby. The minutes were APPROVED, as written.

Ms Dunn asked the MWC to approve the use of $2,500 from the MWObs restricted funds for summit museum exhibit improvements. Mr Presby MOVED to approve the request; SECONDED by Mr Middleton. The motion was APPROVED, unanimously.

Commissioner Stewart said that she spoke to the UNH Survey Center about conducting a visitor survey. UNH could send a survey to its existing participant list or developed a survey specific for the MWC. Following a brief discussion, Commr Stewart was

asked to obtain cost proposals from UNH that outlines the two options and includes sample questions. The MWC will discuss the proposals at its next meeting.

Mr Wemyss asked how the State and Cog Railway developed an MOU that was approved by the Governor and Council without having first discussed it with the MWC. He said that the State is an abutter to the Cog's Lizzie's Station project, yet the MWC had no say or input into the MOU. Commr Stewart said that the Cog proposed its summit track extension project to the MWC and did not get the MWC's support. The Cog worked on a new proposal and presented it to the MWC in March and obtained feedback. The State worked with the Cog that would provide the State with additional protections at the summit. The resulting MOU would, if Lizzie's Station is constructed, restrict the Cog from expanding its footprint at the summit.

Mr Wemyss thought the MWC should have been able to comment on the MOU as one of its duties. Mr Presby commented that the MWC did not review the NDA (Non-Disturbance Agreement) between the State and the Auto Road that has a 15-year term. Dir Bryce said that the Master Plan addresses the MWC's review of agreements and recognizes the complexity of the summit relationships and their interests. The Cog's original proposal to expand its track would have had a negative impact on the visitors and the partners.

The meeting was recessed at 9:50 a.m. until the 10 a.m. start of the public information session.

At 10 a.m., Governor Sununu gave his remarks. He thanked the MWC for bringing forward new ideas for investments in support of the state's travel and tourism, and future opportunities at the summit. He thanked the public for their interest and participation in the process. Governor Sununu recognized Jack Middleton for his continuous 50+ years of leadership and service to the MWC and the Mt Washington Valley region. He read An Accommodation honoring Mr Middleton.

Mr Lucas provided a brief overview of the draft Master Plan, which is close to final, following public comment. The MWC's jurisdiction relates to the summit and not Lizzie's Station. Those who wish to provide comment on Lizzie's Station should direct their comments to the DNCR, the Cog Railway, the Coös County Planning Commission and their elected officials. In accordance with statute, the MWC is targeting Jan. 1, 2023, to submit the Master Plan to the Governor and legislature.

Allen Brooks is collecting photos and icons for inclusion in the final Master Plan. Mr Lucas reminded everyone that the Master Plan is a living document that may be amended. He highlighted each section of the Plan and the deliverables table. The goal is to submit the final Master Plan and request a capital appropriation from legislature to fund the summit assessment. The results of the assessment may result in modifications made to the Plan.

Chair Bradley called upon the public to provide comment on the draft Master Plan:

Roy Schweiker, Concord said that the Master Plan references only two 4,000 footers with non-hiker access. He suggested that Wildcat be added to the list. He said that we should stop encouraging more visitors with too many people already on the summit. Perhaps there should be a parking fee at the hiker lots. A summit loop trail will help to disperse people. He thinks the Auto Road and Cog will increase their fees if there are limits placed on the number of visitors. A reservation system could be used, but hikers should be given a week-long "window" of dates to allow for scheduling adjustments due to inclement weather. The National Parks Service's reservation system has problems with "no shows" and a reservation system needs to be fair.

Wilfrid Mott-Smith, Loudon asked if a legislative change needs to be made to give the MWC a stronger role than just consultation, including the jurisdiction over the Cog's Lizzie's Station project. Chair Bradley read RSA 227-B:1 that established the MWC "to manage the summit of Mount Washington property owned by the state of New Hampshire." He said that the Coös County Planning Commission would have jurisdiction over the Cog project.

Bruce Berk, Pittsfield (?) asked about the cost of the environmental assessment. Chair Bradley reviewed the scope of the assessment found in the draft Master Plan, pg. 5. He and Rep. Umberger will advocate for the funding in legislature, and the unanimous support of the MWC for this work is essential. For comparison, the assessment of the Yankee Building was $200K, resulting in a report for building replacement at a cost of $15M. Chair Bradley hoped that the public would also testify before legislature in support of the summit assessment appropriation.

Zack Porter, Exec Director of Standing Trees, Montpelier, VT said his organization was established two years ago for the protection of public lands. He suggested that these meetings be held on Zoom to allow greater public participation. The WMNF 2005 Forest Plan identified the flora in the alpine range to be most interesting and unique. He thinks the Cog project will have a negative impact on the alpine flora. The management goals of the Master Plan are not co-equal. The summit flora and natural resources should be honored and given legal protections. Lizzie's Station will increase visitation and overnight lodging is a new use on the mountain. He questioned why the Master Plan needs to be finalized before the environmental assessment is done. A Master Plan hasn't been submitted in over 50 years and it may be harder to amend the Plan. The Master Plan should include alternatives for options that meet the MWC's statutory obligations. The summit is an amazing place and a lot is at stake. He appreciates the efforts of the MWC and providing public access to the summit.

Written comments on the draft Master Plan are due by Aug. 31, 2022. The MWC will act on the Master Plan at its meeting on October 7, 2022, at 10 a.m. at Cannon Mountain Peabody Lodge.

Chair Bradley thanked Jack Middleton for his work with the MWC and the State and presented him with a Senate Resolution. Chair Bradley recognized Director Bryce for his positive impact to the state park system and presented him with a Senate Resolution.

Rep Umberger MOTIONED to adjourn; Mr Wemyss SECONDED. The meeting adjourned at 11:00 a.m.

Submitted by T. Tango-Lowy, MWC clerk.

From: Rob Kirsch

Sent: Monday, October 3, 2022 11:49 PM

To: Jeb Bradley; K Allen Brooks

Cc: Ed Bergeron; Jack Middleton; Howie Wemyss; Chris Thayer; Derek Ibaguen; Drew Bush

Subject: Draft MWC Plan Comments

Jeb and Allen,

As promised, I attach a set of comments on our draft plan. The comments are supported by the AMC, Auto Road, Forest Service and Observatory. Earl Duval supports them and will recommend them on October 4 to Wayne Presby. Our comments sought to make the document slightly simpler and more straightforward, continuing the remarkable work Allen did in weaving together concepts drafted by so many authors. In response to and anticipation of concerns of the public, we have suggested changing some "should" language to "shall." Generally, the associated requirement is to "consider," and we do not believe those changes should be controversial.

In some instances we recommended identifying the MWSP where its participation may have been inferred. We suggest featuring the Park more directly is in keeping with our collective desire to promote the entire Mount Washington Summit community and to especially bring more awareness to the presence of the Park at the Summit. We have proposed emphasizing further the Summit Assessment and expressly making it and the information it collects a part of future decision making. That was implicit in the draft, and we hope this shift will help generate more public support for the Plan. We have proposed moving a few paragraphs containing details of summit maintenance and operation into footnotes. While they are relevant to the Plan, they seemed to distract from the strength and overall forward looking nature of the underlying document. We hope all of these suggestions will be acceptable to the rest of the Commission. We have worked to build on Allen's work and to improve and polish a document that will serve us for at least 10 years. I regret I cannot be present on the 7th to review the draft in person, but others copied here will be present and can help with that review. Thank you again for your work and leadership in pulling together this document, which will help preserve and protect Mount Washington for years to come.

Best,

Rob

(Ed. note: Former president Mt Washington Obs. retired partner Wimmerhale LLP, Environmental & Human Rights Advocate)

From: Tango-Lowy, Torene <torene.k.tango-lowy@dncr.nh.gov>

Date: Wednesday, October 5, 2022 at 3:21 PM

Subject: RE: MWC 10/07 meeting CANCELLED

Hello MWC members – Please see the following message from Chair Bradley. Attached are the cancellation notice, email and proposed changes to the draft Master Plan for the Summit. --Torene

"Good Afternoon Everyone:

Regretfully, I am CANCELLING this Friday's Mount Washington Commission Meeting.

Correspondence was sent to me, which I received this morning, with proposed changes to the draft Master Plan. I saw the changes for the first time today and several members of the Commission had not seen them either. It is not appropriate to ask members who have not had time to digest the proposed changes, to vote on them without time to review them, which is why I am cancelling Friday's meeting.

As a reminder to all members, the Mount Washington Commission is subject to the Right-to-Know Law. As such, proposed changes need to be shared with everyone on the Commission and should go through my assistant Ava and/or Torene at DNCR. Torene will distribute the proposed changes within this email.

Sec. 56 - Adoption? No, Further Revision

I am tentatively rescheduling for Friday, October 28 at 10:00 am. Location to be determined. I need to hear immediately if anyone is unable to attend on the 28th. Please let Torene know of your availability.

I apologize for having to change the schedule but, given the circumstances, it is, unfortunately, unavoidable.

Thank you for your forbearance, Jeb"

(MWC Chair & State Sen. Jeb Bradley)

From: Tango-Lowy, Torene

Date: Thursday, October 20, 2022 at 12:40 PM

Subject: RE: MWC 10/28 meeting **Draft Master Plan 10/20/22 **

Dear Commission members:

Commission member Kirsch has suggested changes to the final text of the Mt. Washington Master Plan. Allen Brooks has finished reviewing this draft. Attached is a version of the plan with changes suggested by Commission member Kirsch in green.

Mr Brooks believes that almost all of the suggested changes could be considered stylistic. However, he believes that a small number could be considered substantive. He has highlighted these in yellow. He indicates that these substantive changes are not necessarily of great importance, he simply believes that the Commission should be aware of them. Mr Brooks has also reconciled the Table to match the suggested changes although changes in the Table are not shown in strikethrough/underline. If the changes by Commission member Kirsch are not accepted, or accepted in part, Mr Brooks will re-reconcile the table.

Please do not comment on this draft prior to the meeting. We'll see you on Fri, Oct 28 at 10 a.m. at the Pope Memorial Library in North Conway.

(Ed. note: To focus the readers attention to "substantive" changes only - the sections with yellow highlights appear below in italics)

Suggested Substantive Changes:

IV. Operation and Maintenance

A. Environment, Summit Assessment, and Aesthetics - As an initial step, an assessment of the Summit ("Assessment") should be completed forthwith by a qualified third-party. This Assessment will form a baseline and resource for planning. *All future development proposed for the Summit will be subject to this Plan, and proponents of future Summit projects shall address the information and recommendations in the Assessment, including any updates, in order to demonstrate compliance with this Plan.*

D. Finance - The Commission will undertake to make the Summit should be a model of sustainable tourism and land management. *The Commission will explore whether and how to use Summit-based transmission and communication revenue to support the Park. The Commission will explore opportunities consistent with this Plan, to improve the space available for generating revenue in the Sherman Adams Building."*

F. Safety - State Parks should continue assisting and coordinating with rescue professionals to generally maintain a safe and enjoyable experience within the Park. Park staff members *assist with assuring* ~~also take responsibility for~~ the safety of visitors within the Park boundary, including buildings, to the same degree they would in any State Park.

V. Capital Improvements

F. Water and Waste - *Consistent with this Plan's objectives, all Commission members will support capital investments, and N.H. State Parks and the Summit Partners shall take steps needed, to ensure that Summit facilities are sufficient to preserve the Summit environment and provide for the needs of the visiting public*.

G. Energy Efficiency and Sustainability - To the maximum extent possible, and consistent with the preservation of historic settings, Summit equipment, facilities, and infrastructure should incorporate energy and resource efficient technologies, and should ~~which would~~ be upgraded, consistent with these principles, to incorporate technical advances. Changes should encourage the lowest possible *net* emissions.

Deliverables Grid changes

"All future development proposed for the Summit will be subject to this Plan, and proponents of future Summit projects shall address the information and recommendations in the Assessment, including any updates, in order to demonstrate compliance with this plan" ***Entity Responsible:*** N.H. State Parks; Summit Partners; Commission; NHDES; NHF&G and NHB

"Explore whether and how to use Summit-based transmission and communication revenue to support the Park"

"Explore opportunities, consistent with this Master Plan, to improve the space available for generating revenue in the Sherman Adams Building."
Entity Responsible: Commission

"Encourage and participate in a public process of research and investigation to determine the significance of the Summit to indigenous people and, thereafter, identify and considerately incorporate features sensitive to such significance, consistent with the goals of this Master Plan." ***Entity Responsible:*** Commission *& Native American Commission*

"Support capital investments, and take other steps, needed to ensure that Summit facilities are sufficient to preserve the Summit environment and provide for the needs of the visiting public." ***Entity Responsible:*** N.H. State Parks; Summit Partners; Commission

"Encourage the lowest possible *net* emissions." ***Entity Responsible:*** N.H. State Parks; Summit Partners; Commission

Mount Washington Management Plan - FINAL Discussion

October 28, 2022

Pope Memorial Library

North Conway, N.H.

Chair Bradley called the meeting to order at 10:05 a.m. with a quorum present at the Pope Memorial Library in North Conway. Present were Sen Jeb Bradley/MWC Chair, Ed Bergeron/Public, Phil Bryce/Public, Chris Ellms/Public, Derek Ibarguen/WMNF, Rob Kirsch/MWObs, Wayne Presby/Cog Railway, Drew Scamman/TownSquare Media, Commr Sarah Stewart/DNCR, Chris Thayer/AMC, Rep Karen Umberger/House, and Howie Wemyss/Auto Road. Public attendees, summit partner staff members and MWC counsel Allen Brooks/AG Office were also present.

APPROVE MINUTES of 8/22 & 23 – Mr Ibarguen requested a correction to the 8/22 minutes to reflect that comment about Lizzies Station should go to the Cog Railway and the Coös County Planning Commission rather than to the WMNF who has no jurisdiction for the project. Mr Kirsch **MOTIONED** to approve the minutes as amended; Mr Presby **SECONDED**. The motion **CARRIES**, unanimously.

MASTER PLAN – Sen Bradley provided background information on the Master Plan effort, including the public hearings held on 8/22 & 23; stylistic changes made to the plan by Mr Kirsch and other MWC members; and Mr Brook's incorporation of the stylistic changes (green text) and substantive changes (yellow highlights), as shown in the draft Plan dated 10/20/22.

• Discussion, finalization and changes to the Master Plan were made, see below. Mr Brooks did not have any other additions. He agreed with the changes to make document more stylistic and to clarify the public's concerns.

o Pg.5, that all future development will be subject to the Plan and shall address the recommendations of an assessment. Some public attendees asked that the plan be put on hold until after the assessment was complete.

o Finance – Mr Kirsch read the two changes highlighted in yellow on pg. 8. Mr Bryce said that revenue from the communications leases is deposited to the Mt Washington Fund and is used to support Mt Washington State Park. Administrative staff costs are being offset by other DNCR funds. Rep Umberger wants the MWC to have a better understanding of the use of the Mt Washington Fund.

o Safety – Park staff members "assist with assuring the safety of visitors within the Park," pg. 9.

o Water and waste – stronger statement that summit facilities are adequate to protect environment.

• Implementation – pg. 13. There was a long discussion about changes to this section, including:

o Whether MWC's review of the assessment "shall require" the modification of the Master Plan

o The concern that elements of the assessment may conflict with other goals of the Master Plan

o Mr Wemyss said that we need to understand that we are talking about a sensitive environment and may have to modify how we do business. Growth has to be modified to protect the mountain.

o Mr Brooks said that this is a policy matter not just word choice.

o The balance of competing goals: the alpine environment and access for the visiting public. The difficulty in controlling hiker access yet having some control of Auto Road and Cog Railway visitor access.

o Chair Bradley suggested changing the text to "...shall review and modify as appropriate the Master Plan..." Mr Brooks clarified the revision to "The Commission shall incorporate recommendations of the Assessment to the extent that they are consistent with the other elements of the Master Plan."

o Discussion continued. Mr Kirsch said that the Commission must exercise judgement in making decisions for the mountain and must preserve its ability to act as Commissioners. The assessment will be done by a third party that may have a narrower scope. Mr Wemyss said that he was not afraid to impose the current will on future Commissioners.

o A public attendee asked if the Commission was putting the "cart before the horse." If the environment is not the main issue, then what is? The mountain is irreplaceable. Mr Jamie Sayen of No. Strafford said that without the assessment, it is hard to finalize a plan. You cannot change natural laws and limits and, therefore, the environment will take a hit. He said that the master plan, if adopted today, will have zero credibility to the scientific community. Mr Bryce said that the plan is needed to request funding from legislature for the assessment work.

Sec. 56 - Adoption

o Chair Bradley offered a revision to the text: **"The Commission shall review the assessment and shall modify the master plan based upon the recommendations in the assessment and the other recommendations of the master plan."** Mr Bergeron **MOVED** to adopt the amended language; Mr Wemyss **SECONDED**. Discussion continued.

o A public attendee said that the Cog's Lizzie's Station might be built by then. Mr Brooks reminded the public that the Lizzie's Station proposal is outside of the Commission's jurisdiction.

o Ms Lucy Wyman of Lancaster asked that the Master Plan include a recommendation that someone be assigned to speak for the entire mountain and not just for the state park. Chair Bradley said that RSA 227-B, that established the MWC states that its jurisdiction is only on the state park. Legislative action would be required to change 227-B, or to establish a new movement. Mr Ibarguen is a fan of cross-jurisdictional discussion and said that we have been doing that for years: we are the voice for the mountain. Ms Wyman countered that this group needs to advocate for someone who will speak for the entire mountain.

o Mr Brooks said that a mechanism for change has been provided, but that the Commission cannot discuss additional bounds within the confines of its current statutory charge. Mr Sayen said that instead of adopting the plan, the Commission should be adopting new legislation to expand the commission's duties. The assessment will find what we already know: that the alpine environment will be gone. There is no balance in that. Chair Bradley re-iterated the duties of the Commission to submit a Master Plan every 10 years.

o The Commission to a roll call vote of the amendment to the language offered by Chair Bradley. Voting **YES** were Mr Bergeron, Chair Bradley, Mr Bryce, Mr Ellms, Mr Ibarguen, Mr Kirsch, Mr Presby, Mr Scamman, Commr Stewart, Mr Thayer, Rep Umberger, and Mr Wemyss. The motion **CARRIES**, unanimously.

• Mr Bryce commented on the fire suppression effort in the Yankee Building. Mr Kirsch **MOTIONED** to restore the fire suppression reference in the text on pg. 11; Mr Wemyss **SECONDED**. The motion **CARRIES**, unanimously.

• Mr Kirsch **MOTIONED** to adopt the stylistic changes indicated in green text in the draft Master Plan dated 10/20/2022. Mr Bryce was concerned about the 2nd paragraph in the Real Property Management section, pg. 10, as it pertains to the potential conflicts between the parties regarding their rights, deeded and financial interests, and operations. Mr Brooks clarified that the Master Plan cannot override other statutory obligations. Mr Kirsch **AMENDED** his previous motion to rescind the edits on page 10; Rep Umberger **SECONDED**. Mr Bryce asks to remove the word "some" in the text. Rep Umberger thought the text was appropriate with public, legislature, park staff and tenants assigned. Mr Kirsch **RESTORED** his original motion; Rep Umberger **SECONDED**. The motion **CARRIES**, unanimously.

• Mr Wemyss **MOTIONED** to approve the yellow highlighted changes, including the changes in Table 1; Mr Kirsch **SECONDED.** The motion **CARRIES**, unanimously.

• Rep Umberger **MOTIONED** to adopt the Master Plan with the approved amendments and changes; Mr Bergeron **SECONDED**. Rep Umberger said that the MWC worked hard on the plan and there is more work to do. The Governor and Executive Council may also have comments on the plan. Mr Ibarguen said the stewardship values are genuine and that the Commission may change course based on the assessments, but that completing the Master Plan was needed.

o A public attendee asked what happens if a private owner does not want to go along with everyone else? Chair Bradley answered that the Harvard Mediation process encouraged dialogue between the Commission members. There was consensus that an assessment was needed, and that public access to the publicly owned State Park is also important. Disagreements can end up in court, but the public could be the biggest loser. Collaborative interest not overriding the rights of an individual.

o It was remarked that during the public comment period 1.7% of public comments submitted agreed with plan and 98% disagreed with it.

• Mr Kirsch called for the vote on Rep Umberger's **MOTION** to adopt plan as amended that was **SECONDED** by Mr Bergeron. The Commission unanimously voted in favor of the motion and the motion **CARRIES**.

o Mr Robert White *(a Walter Aiken relative)* of Intervale thought that it was too bad that the MWC has to confine itself to its statutory authority. Hampton Beach State Park is the main financial generator for the park system and parks must fund themselves. When the Hampton Beach capital improvement project went to Governor and Council for approval, it had to show an economic return that it would generate revenue to fund environmental projects and improvements.

o The Master plan is living document and provides opportunities for partnership. It is always good that people are willing to take part in the public process and speak up.

STATE OF NEW HAMPSHIRE
DEPARTMENT of NATURAL and CULTURAL RESOURCES
OFFICE OF THE COMMISSIONER
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TDD ACCESS: Relay NH 1-800-735-2964

January 17, 2023

His Excellency, Governor Christopher T. Sununu
State House
Concord, New Hampshire 03301

RE: Mount Washington Master Plan, October 2022

Dear Governor Sununu,

Pursuant to RSA 227-B:6, the Mount Washington Commission is pleased to present you with the Mount Washington Master Plan, dated October 2022. This plan was developed over the course of one year, with ten Commission meetings, stakeholder outreach, and public involvement. All Commission meetings are open to the public in accordance with RSA 91-A.

Before we finalized this Master Plan, we held two public involvement sessions – one in Concord and one in North Conway. We solicited written public comment and received 236 responses. After assessing all public input and incorporating some edits and changes, on October 28, 2022, the Mount Washington Commission voted to unanimously pass this Master Plan.

The summit of Mount Washington is iconic and emblematic of the Granite State. All visitors to the summit should have the opportunity to observe and experience its unique environment. The purpose of this Master Plan is to enhance the opportunities for this experience while enabling the success of all Summit Partners by ensuring that the summit of Mount Washington, featuring the Mount Washington State Park, continues to be a must-see destination for visitors to the region while also ensuring that the summit's natural resources are protected. This will be achieved by: maintaining a high quality mountain experience that respects Mount Washington's uniqueness; actively stewarding the summit's flora and fauna, its facilities, and its history; and, consciously aligning the capacities of the summit environment, the resources supporting buildings, sewage, waste, energy, and water systems, and the number of people expected or permitted to visit the summit each year.

We humbly request your review and support of this plan. Any work contracted to occur on the state-owned summit will be submitted to you and the Executive Council for their vote.

Thank you for your consideration. Please feel free to contact me or Senator Bradley should you have any questions.

Sincerely,

Jeb Bradley, Senator
Chair, Mount Washington Commission

Sarah L. Stewart, Commissioner
Dept. Natural and Cultural Resources

Attachment

c: Edward Bergeron, Vice-Chair, Mount Washington Commission
Brian J. Wilson, Director, DNCR - Division of Parks and Recreation

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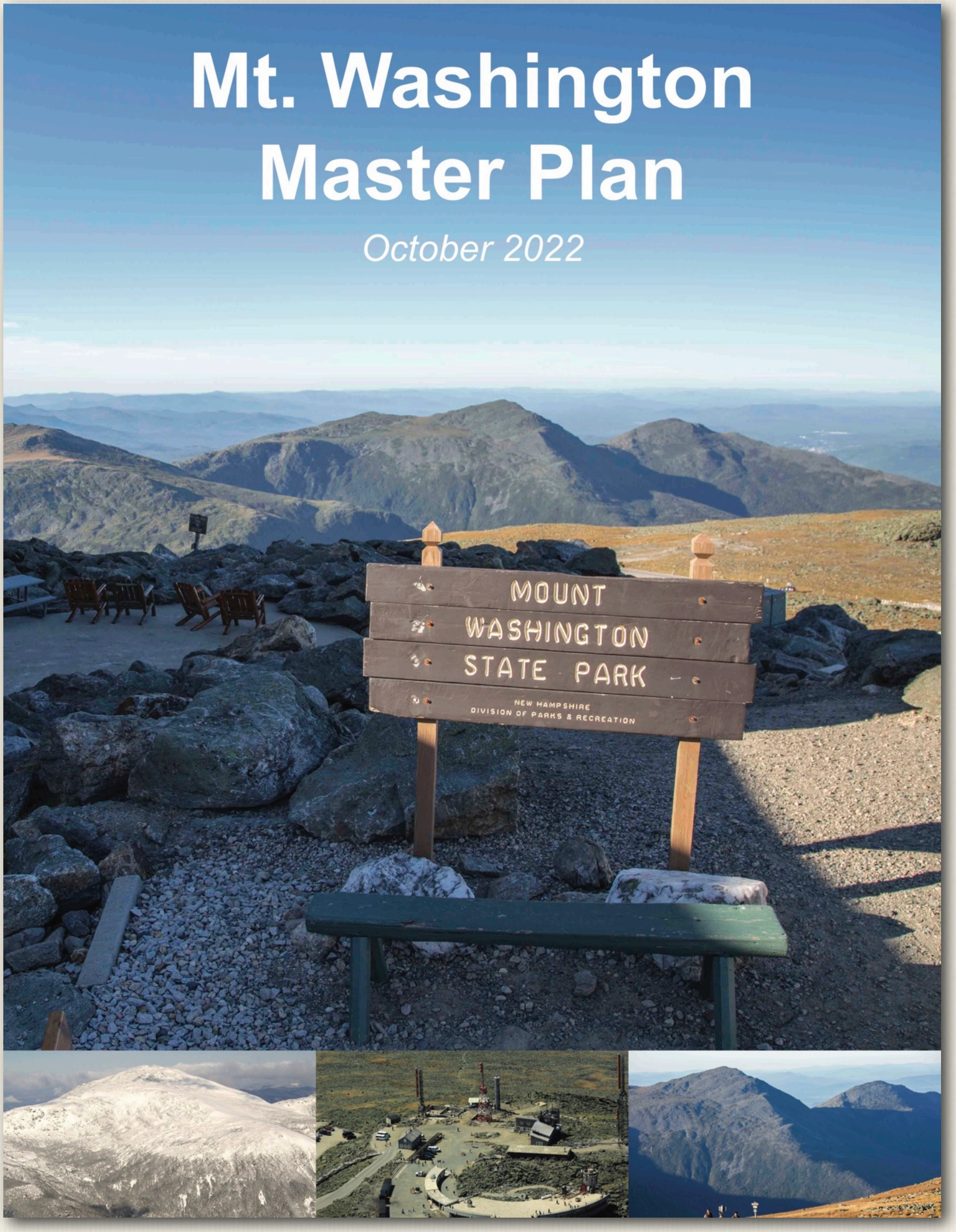
Mt. Washington
Master Plan
October 2022
MOUNT
WASHINGTON
STATE PARK
NEW HAMPSHIRE
DIVISION OF PARKS & RECREATION

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PREPARED BY:

- N.H. Senator Jeb Bradley
- N.H. Representative Karen Umberger
- Ed Bergeron, Governor Appointee
- Christopher Ellms, Governor Appointee
- Philip A. Bryce, Governor Appointee
- Sarah L. Stewart, Commissioner, N.H. Dept. of Natural and Cultural Resources
- Wayne Presby, Mount Washington Cog Railway
- Howard Wemyss, Mt. Washington Auto Road
- Rob Kirsch, Mount Washington Observatory
- Chris Thayer, Appalachian Mountain Club
- Derek Ibarguen, Forest Supervisor, White Mountain National Forest
- Drew Scamman, Townsquare Media
- Torene Tango-Lowy, Clerk
- K. Allen Brooks, Senior Assistant Attorney General, Counsel

I. Statutory Requirements

Pursuant to RSA 227-B:6:

The commission shall:

I. Prepare a master plan for the summit including but not limited to:

(a) Capital improvements to be made by the state over a 10-year period;

(b) The proposed operation of the summit by the commission including fees to be charged for the facilities operated by the commission, the method of collection of such fees, employment of personnel, franchises to be granted to concessionaires, and any other items deemed necessary to the proper operation of the summit by said commission;

(c) Promotion of the use of the summit by the public as a recreational, historic or scientific attraction;

(d) Protection of the summit as to its unique flora and other natural resources;

(e) The negotiation of public rights-of-way to the summit over private lands which benefit from the improvement of facilities on the summit;

(f) Cooperative arrangements between private interests and the commission relative to the collection of fees, joint personnel, and any like subject.

II Submit the said master plan to the governor on or before January 1, 2010, and on January 1 every 10 years thereafter, for approval and for enabling legislation in the New Hampshire legislature.

III Monitor all fees being paid to the state for the use or lease of state-owned facilities on the summit, such fees to be used by the commission in its duties and for its expenses.

IV The governor and council are to authorize the expenditure of funds for final design and contract plans out of funds appropriated for that purpose when requested by the commission. The governor and council are to authorize the construction of the capital improvements to the Mount Washington summit authorized by the general court in a manner consistent with the 10-year master plan prepared by the commission.

V Cooperate and consult with the division of parks and recreation of the department of natural and cultural resources concerning the daily operation of the summit as carried on by the division of parks and recreation.

VI Consult and advise with the commissioner of the department of natural and cultural resources[.]

1

II. Purpose

The summit of Mount Washington is iconic and emblematic of the Granite State. All visitors to the summit should have the opportunity to observe and experience its unique environment. The purpose of this Master Plan is to enhance the opportunities for this experience while enabling the success of all Summit Partners[1] by ensuring that the summit of Mount Washington, featuring the Mount Washington State Park, continues to be a must-see destination for visitors to the region while also ensuring that the summit's natural resources are protected. This will be achieved by: maintaining a high quality mountain experience that respects Mount Washington's uniqueness; actively stewarding the summit's flora and fauna, its facilities, and its history; and, consciously aligning the capacities of the summit environment, the resources supporting buildings, sewage, waste, energy, and water systems, and the number of people expected or permitted to visit the summit each year.

The "Summit" referenced in RSA ch. 227-B is comprised of State property and facilities.[2] Overall management of the Summit and facilities to support visitors became the responsibility of the N.H. Division of Parks and Recreation ("N.H. State Parks") when the Summit became a State park in 1964. The existence of the Summit Partners is inextricably linked to the physical and geographic attributes of Mount Washington and the degree to which they succeed depends, at least in part, on the State Park fulfilling that responsibility. N.H. State Parks strives to provide a quality public recreational experience that includes education and interpretation. Its management is enhanced by such public-private partnerships.

Among other things, the Mount Washington Commission ("Commission") advises and assists N.H. State Parks in managing the Summit. In doing so, the Commission must try to balance conflicting goals. The Commission seeks to restore, protect, and preserve the alpine environment of the Summit. The Commission similarly recognizes the importance of access, recreation, and fiscal responsibility. Meeting these objectives necessarily includes providing Summit infrastructure systems that incorporate high-quality services to match capacity and environmental needs. The Commission strives to maintain the quality of the mountain environment in perpetuity and to accommodate the significant number of people and vehicles that visit the Summit.

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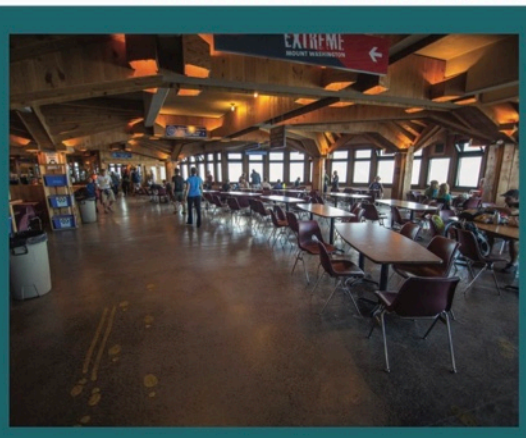
[1] "Summit Partners" shall refer to Commission members who own, lease, or otherwise contractually occupy an area on the physical Mount Washington summit. However, the Commission recognizes that it benefits from the efforts of all of its members including the voluntary support and assistance of the U.S. Forest Service. The Commission also recognizes that many parties have legal interests in the summit area.
[2] RSA 227-B:2, II states: "'Summit' shall mean the Mount Washington summit property owned by the State." A map of the Summit is attached as Attachment 1.

III. Process

The Commission has attempted to set forth goals, objectives, and tactics in detail in this Master Plan. To create the Master Plan, the Commission used a process:

- Wherein Commission members trusted and respected each other;
- Wherein all Summit partners contributed to success and ultimate outcomes;
- Wherein the Summit partners recognized their *interdependence* but also respected their *independence*;
- Wherein the Summit partners ensured that the communal support that each organization gives to each other in times of need continued;
- Wherein Commission members recognized that when all Summit Partners work together, all will benefit;
- Wherein the Commission recognized the "all hands on deck" approach to managing important issues, especially as it relates to responding to emergencies and safety;
- That applauded and carried on the culture of helping one another, especially among operational staff on the Summit and on the mountain generally, which arises, in part, from recurring extreme and often dangerous conditions;
- That recognized the critical contributions and services provided by the U.S. Forest Service and Appalachian Mountain Club ("AMC") in educating, protecting and reducing the environmental footprint of those who hike to the summit;
- That recognized the evocative reputation and the critical summit-related research of the Mount Washington Observatory;
- That recognized the public service and security importance of the various Summit communications systems;
- That recognized the essential roles of the historic and special experiences provided to Summit visitors by the Mount Washington Cog Railway and the Mt. Washington Auto Road;
- That recognized the hard work and dedication of N.H. State Parks;
- That meaningfully involved the general public;
- That encouraged creative thinking and respected the rights of all parties;
- That built upon prior work; and,
- That utilized third-party expertise where appropriate.



IV. Operation and Maintenance

A. Environment, Summit Assessment, and Aesthetics

Summit management by N.H. State Parks in cooperation with Summit Partners should aspire to preserve and where practicable improve the Summit environment by ensuring that resources invested at the Summit are sufficient so that the human presence there is consistent with the environmental goals and protections established in this Master Plan.

As an initial step, an assessment of the Summit ("Assessment") should be completed forthwith by a qualified third-party. The Assessment should examine damage to and deterioration of the environment including, but not limited to an analysis of contaminated groundwater and soils around the Summit, damage to and options for restoring alpine flora, and steps to be considered under the goals of this plan in light of the anticipated consequences of climate change, and other environmental considerations. "Contamination" in this context is to be interpreted broadly. Prior recommendations related to protecting flora and fauna and information from the N.H. Natural Heritage Bureau (NHB) database will help inform the Assessment. Assistance from the N.H. Dept. of Environmental Services and the N.H. Fish and Game Dept. should be requested to help determine a scope of work. The Assessment should include a building survey and an infrastructure survey; however, such surveys shall not impinge on the confidentiality or privacy interests of State Park tenants. This Assessment will form a baseline and resource for planning. All future development proposed for the Summit will be subject to this Plan, and proponents of future Summit projects shall address the information and recommendations in the Assessment, including any updates, in order to demonstrate compliance with this Plan. Given its importance and estimated cost, the Commission will help seek a capital appropriation for this Assessment.[3]

To the maximum extent possible, N.H. State Parks and Summit Partners should address damage to and deterioration of the Summit environment, including stressed or damaged vegetation and impacts of invasive species, identified in the Assessment. This could include remediation of impacts or mitigation – meaning avoidance, minimization, or offsets achieved by restoration. Adverse impacts should also be avoided using lessons learned. The State Park and Summit Partners should continue to enhance the protection of the fragile alpine ecosystem at the Summit through pathways, trails, and signage. Implementation will be informed by the Assessment discussed above.

With respect to structures, the Commission, through this Master Plan, hereby adopts a high standard for planning and performance aimed at avoiding unnecessary additional structures. The negative environmental consequences of existing and future structures should be minimized while balancing ongoing needs, considering other objectives such as the creation of important historic depictions, and meeting the objectives of this Plan. This standard does not prohibit new structures; however, it embodies a commitment to minimize and mitigate environmental damage when performing necessary construction, repairs, or maintenance. Opportunities should be sought to make new structures even less impacting than previous structures such that construction could actually promote positive environmental changes. Management practices and improvements to conserve resources, for example, taking advantage of opportunities to reclaim water or creatively manage sewage need, are also encouraged.

[3] The Commission also encourages completion of a visitor survey, using expertise from entities like UNH. Depending on the scope of this survey, it may be able to be completed as part of the larger Assessment.

N.H. State Parks should account for aesthetic impacts. For instance, it should endeavor to reduce the visual impact of fuel tanks. Measures may include reducing the number of tanks and options such as wrapping or coating the tanks in material that helps them blend into the landscape.

B. Operation of the Summit Generally

The Summit should be managed to promote desirable experiences including the enjoyment of iconic views and unique visitor experiences. Operations should ensure a good experience for hikers understanding that hikers appreciate the services offered at the Summit because they know that they will soon return to the rugged above-tree-line experience of the Presidentials.

The Mount Washington Cog Railway and the Mt. Washington Auto Road each bring well over 100,000 visitors to the Summit each year. The number of hikers each year is currently unknown but likely approaches that of other transportation modes. Management techniques, investments and objectives for the Summit must take into account the number of current and expected visitors. N.H. State Park's management of the Summit is subject to deeded reservations related to access, which must be honored in future decisions. In particular, future decisions must accommodate:

> *[t]he rights of the passengers, guests, and employees of the Mount Washington Road Company and the Mount Washington Railway Company, and of the students and faculty of educational institutions, and of hikers, skiers and other members of the general public, to pass and repass, in common with others, over and across the premises [] which are not occupied by buildings or other structures for the purpose of scientific research and for the purpose of obtaining a view from and observing the summit of Mount Washington.*

Book 481, pg. 212, Coos County Registry of Deeds. N.H. State Parks can limit the capacity of structures like the Sherman Adams Building. As currently configured, the Sherman Adams Building can accommodate 495 people on the main floor and 298 people on the ground floor. In the event that building access is restricted due to those limitations, additional amenities (i.e. restrooms, water) will need to be provided at the Summit to support the visitors, or hours extended to allow access to the Sherman Adams Building earlier and later in the day. N.H. State Parks asserts that the operating season is dictated, for the most part, by the weather.

With this information in mind, experiences should be tailored to meet identified needs and limitations. In general, N.H. State Parks should evaluate controlling the number of visitors present at a specific time, using reservation systems, or changing operating hours with respect to structures. Those decisions should recognize the purposes stated above, the requirements of relevant deeds and the Commission's charge in RSA 227-B:6, I(c) relative to the "[p]romotion of the use of the summit by the public as a recreational, historic or scientific attraction." Recognizing that there will always be a physical limit to the number of people on the Summit at any given time, the Summit Partners and the U.S. Forest Service should investigate ways to limit the number of Summit visitors in order to contribute to the long-range success of the Mount Washington experience and to help ensure that the level of investment in Summit resources balances with the number of visitors. The Commission may update this recommendation as it deems necessary.

C. General Maintenance

Maintenance upgrades for Summit structures should be proactively planned consistent with this Master Plan. There are a number of pending repairs needing attention including: tiles on the observation deck, cracked cement, roof leaks, and paint on the Sherman Adams Building. Cleanup of the Summit and a neat appearance should be an ongoing priority. Abandoned items around the summit (those not offering historic value), including construction debris, and other debris should be removed. The foundation of the former generator should be evaluated for re-use in the context of a long-term plan for Summit structures (e.g., new building for Observatory, additional visitor service, maintenance support, or another viewing platform) and removed if there is no use

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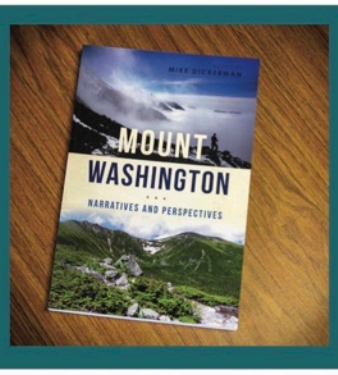
D. Finance

The Commission will undertake to make the Summit a model of sustainable tourism and land management. All parties acknowledge the need for a fiscally sustainable State Park that operates consistent with the purposes stated in this Plan, and shall explore options to generate revenue that will contribute to operating expenses, maintenance, and improvement projects that up to now have been funded mainly through Capital Improvement funding.

Currently, Mount Washington State Park is the only park in the N.H. State Park system that does not financially support the operations of the park system statewide. All Park revenue is deposited in the Mount Washington Fund to be used on the Summit. No Park revenue is used to support parks administration or to support less iconic locations that cannot generate enough revenue to support themselves. Capital funds used on the Summit are also not available to support improvements in other locations that do financially support the entire park system. However, like Hampton Beach, the Park is an important revenue generator for private sector businesses. Summit Partners shall consider how to support the Mount Washington State Park and each other in meeting the purposes and goals of this Plan. All partners benefit from the success of the others. The Commission shall work to ensure the financial viability and the adequacy of funding to meet the purposes and goals of this Plan. The Commission will explore a summit Stakeholders' agreement or other means to financially support Summit betterment projects devised under this Plan.

The Commission will work with N.H. State Parks to determine whether and how a fee should be charged to enter or use Park facilities. As part of that, a third party should evaluate Park operations unless Commission members can provide such an evaluation free of charge.



Retail and food concessions are the primary source of revenue to support the entire operation of the State Park. The Commission will explore whether and how to use Summit-based transmission and communication revenue to support the Park. The gift shop generates the highest per square-foot return in the parks system. However, space currently is insufficient to operate efficiently and there is little opportunity for future expansion. In particular there is a lack of storage space on the summit.

The Commission will explore opportunities, consistent with this Plan, to improve the space available for generating revenue in the Sherman Adams Building. Kitchen space, refrigeration and ventilation are inadequate. Existing space in the building should be evaluated to optimize return, preserve visitor experience, and advance the interests of the Summit Partners. Year-round online sales should continue to be explored.

To ensure efficient operations, N.H. State Parks should explore and consider obtaining facilities close to the base of the mountain to support its Summit operations.

E. Education/Outreach

Management activities should result in information, education, access features, and trail maintenance that promotes protection of the fragile alpine environment and an environmental ethic. They should educate visitors about the unique scientific, botanical, meteorological, and geological aspects of the Summit. Educational programs and visits from school and other groups should be coordinated to showcase information on the history of the Summit, climate, environment, and conservation and scientific work performed by the Summit Partners. Synergy among Summit Partners should be increased to do things like, for instance, establish a joint communications package that gives consistent signage and information to Summit visitors.

The Commission, including the Summit Partners, and N.H. State Parks, should promote the scientific research and monitoring on the Summit conducted by the Mount Washington Observatory and the AMC to enhance public understanding. Efforts should be made to create a greater presence and resources for the Observatory Summit Museum so that it can provide an “interpretive experience” for interested visitors. Measures should also be taken to create or maintain world-class Mount Washington Observatory weather research facilities, including indoor/outdoor laboratory, and testing space.

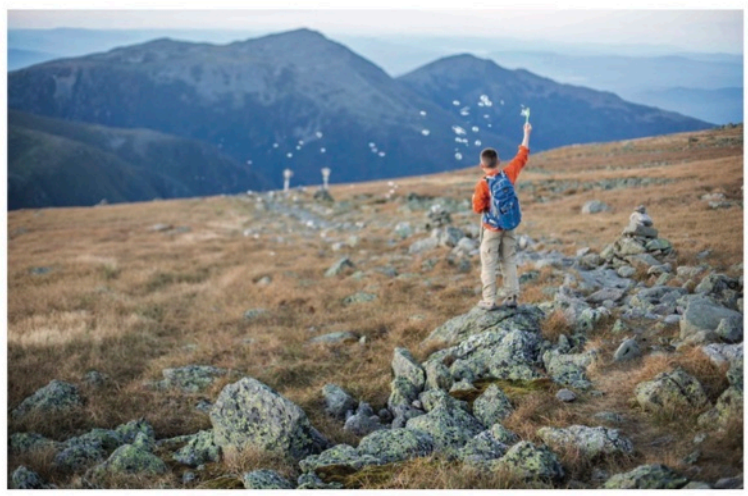
Summit Partners should provide for the creation of displays of rare flora indigenous to the alpine climate to educate about the importance of protecting the Summit. Similarly, Summit Partners should encourage creation of a Nature Gallery as the terrain from the base to the Summit hosts a very diverse population of plants, animals, and insects.

N.H. State Parks, with the assistance of the Commission, should review the Pike’s Peak plan for ideas on how to begin integrating technology-based experiences into the Summit experience, consistent with this Plan. Ideas include guided tours, educational interpretive plans, and a summit-related “App.” to be collaboratively and aggressively promoted. The “App.” could include such features as educational and historical audio and visual presentations, a “Summit Challenge,” a “Summiteers” program, and programs that encourage people to post and share pictures on social media. Commission members including Summit Partners will help advertise and promote any such “App.” along with the existing “Online Donation to Mt. Washington State Park” option and will integrate the donation link into Summit Partner websites. N.H. State Parks will consider collaborating with other high-traffic parks/tourism sites and organizations such as White Mountain Attractions to establish effective messages and information for visitor management.

F. Safety

State Parks should continue assisting and coordinating with rescue professionals to maintain a safe and enjoyable experience within the Park. Where needed, N.H. State Parks should ensure that it has an updated emergency response plan and that it, and Summit Partners, acknowledge their respective roles within response efforts led by the N.H. Fish and Game Department and U.S. Forest Service outside of the Park. The Commission understands that job descriptions for State Park employees on the Summit do not include a requirement to perform emergency responses off site; however, staff often have that training and have assisted hikers on a limited basis. Park staff members assist with assuring the safety of visitors within the Park boundary, including buildings, to the same degree they would in any State Park. Generally, search and rescue efforts outside of the Park are led by the N.H. Fish and Game Department except that from December 1st to May 31st, the U.S. Forest Service has search and rescue responsibility over the Cutler River Drainage Basin. See Attachment 2. As a "rule of thumb," State Park staff and other entities should call the N.H. Fish and Game Department "for those situations that are beyond their capability."[4] All Summit Partners should emphasize cooperation and coordination among the relevant entities in connection with search and rescue activities.

State Parks should continue to promote hiker safety education by its Summits Partners for all season hiking. With respect to safety, education is key.



4 This advice courtesy of N.H. Fish and Game Lieutenant Mark W. Ober, Jr., District One Chief.

G. Real Property Management

N.H. State Parks will report on how State property at the Summit is being utilized, along with all analysis and information it may have on the value of relevant leases or licenses. The Commission may then request an independent analysis of how property on the Summit should be valued if it deems appropriate.

Leases and agreements are between the lessee and the State of New Hampshire, rather than the "Commission." The State has not consulted with the Commission regarding leases in recent years. Consultation is awkward because of the specific rights and interests that some Commission members have in the Park through agreement and deed. However, with the new focus on master planning and the strengthening of both relationships and the function of the Commission, the Commission will be presented with draft leases and agreements including terms, compensation, rights granted, and rights received. This will allow the Commission members to provide comments and advice relative to achieving the Master Plan and to inform the Commission of any anticipated impact on their own operations, visitor experience, and the Park as a whole. Commission members should recuse themselves from portions of relevant discussions, as appropriate, and when agreements are in negotiation, the Commission should go into non-public session, when appropriate, to discuss those negotiations. Generally, N.H. State Parks should ensure that Summit Partners are engaged and heard with respect to leases or contracts on the Summit.

Summit Partners, including N.H. State Parks, should also work to clarify and solidify existing property rights at the Summit.

V. Capital Improvements

A. General Goals

The Commission hopes to achieve a balance between historic and modern facilities at the Summit. Capital improvements, to the greatest extent practicable, will provide for accessibility, inclusiveness, visitor experiences, trail experiences, and energy efficiency as called for elsewhere in this Plan.

B. Accessibility and Inclusiveness

The Commission will, to the extent practicable, ensure that the Summit is accessible and inclusive for all persons. This means providing quality information and access for a diversity of visitors without regard to their physical and intellectual abilities. Capital improvements should provide for such accessibility both indoors and outdoors. The visitor experience should be enhanced for all persons using technology and designs to improve access to natural features and historic or scenic elements. The Commission will also explore opportunities to lower financial barriers of access to the Summit in an effort to achieve additional demographic equity.

The Commission notes that Mount Washington is one of only two of New Hampshire's forty-eight "four-thousand-footers" with non-hiker access (Cannon is the other), making the Cog Railway and Auto Road integral components of a special experience for hundreds of thousands of visitors annually from around the globe. Therefore, it would be beneficial to create walking surfaces that are safe and accessible to all people with an eye towards permeability, considering limiting factors such as climate, and ensure any work is performed within the context of overall master Plan objectives. The Commission should encourage and participate in a public process of research and investigation to determine the significance of the Summit to indigenous people and, thereafter, identify and considerately incorporate features sensitive to such significance, consistent with the goals of this Plan.

C. Enhanced Visitor Experience within Structures

Capital improvements should be funded that enhance visitor experiences in public structures. These should include:

- Posting historical interpretive panels on the walls of the Sherman Adams Building; and,
- Creating updated and more modern informational displays within the Sherman Adams Building that provide visitors with better knowledge and understanding of the overall uniqueness and history of Mount Washington. This could include a looping video display or enhancements to the museum.

D. Trails

Ways to disperse visitors throughout the Summit should be considered in order to enhance visitor experience by limiting overcrowding in certain locations. Modification of the hiking trail network and the inclusion of new signage to keep visitors on the trail, entertained, and dispersed should be explored. Prior to modification, a trails assessment should be performed. The trail around the Sherman Adams Building should then be improved consistent with N.H. State Park and Commission recommendations, and consistent with this Plan. The possibility of creating a loop trail should be evaluated.

E. Yankee Building

The Yankee Building supports many systems of State and national importance. However, the building is currently in a state of disrepair and was not designed for its current function as a communications facility. At the request of the Commission, an assessment of the building was completed in 2019 addressing fire protection, communications equipment, and alternatives for building use with recommendations. An opinion of costs for reconstruction and a proposed Summit site plan were provided. The Commission should continue to pursue actions to determine how to properly provide an up-to-date communications and maintenance facility including consideration of what other uses might be incorporated in such a facility consistent with this Plan. As part of this process, the Commission should explore funding opportunities to determine the availability of federal and private funding for items like, for instance, fire suppression. The Commission shall assist N.H. State Parks in utilizing the Capital Budget Process, the American Rescue Plan Act (“ARPA”), and other funding sources including the private sector. As called for in this Plan, elements other than communication, such as aesthetic and environmental impacts, will be considered when siting, building, or maintaining summit towers and the Yankee Building. As part of its efforts, N.H. State Parks should consider the potential of having a third party construct and operate a telecommunications facility.

F. Water and Waste

Capital improvements should make sure that waste management systems are designed, sized, and operated to meet the long-term rather than short-term needs while minimizing environmental degradation. This can be furthered by the use of conservation, utilization, and reclamation technology. Consistent with this Plan's objectives, all Commission members will support capital investments, and N.H. State Parks and the Summit Partners shall take steps needed, to ensure that Summit facilities are sufficient to preserve the Summit environment and provide for the needs of the visiting public.

A project is underway to replace the sewage treatment tank and modernize the water systems. It consists of upgrading the seasonal Summit water system to a year-round system. Two new 20,000-gallon water tanks will be installed adjacent to the Sherman Adams Building to replace the deteriorating steel tanks currently located 300 yards down slope from the Sherman Adams Building. The existing sewage treatment plant will be replaced with a larger plant that will provide capacity for anticipated growth in the number of annual visitors over the next decade. Funding for the project has been secured through a combination of capital funds, ARPA, and Land and Water Conservation Fund monies totaling $3,575,417. The contract for construction has been approved by Governor and Council and is underway.

Restroom facility needs should also be evaluated, using data and accounting from Summit Partners. Future facilities should be constructed based on that evaluation to ensure that the objectives of this Plan are met.

G. Energy Efficiency and Sustainability

Capital improvements should be evaluated and chosen consistent with sustainability principles in order to achieve sustainable operations while serving the needs of the visitor. Protective and energy efficient features should be incorporated into Summit structures to reduce intrusion into visitors' Summit experiences and the environment. To the maximum extent possible, and consistent with the preservation of historic settings, Summit equipment, facilities, and infrastructure should incorporate energy and resource efficient technologies, and should be upgraded, consistent with these principles, to incorporate technical advances. Changes should encourage the lowest possible net emissions. Changes that are compatible with energy certifications or the equivalent and that incorporate renewable energy sources should be encouraged, consistent with these objectives. These may be structural, such as the use of modern building materials or techniques, or non-structural such as switching to LED lights and induction cooking. The Cog Railway will lead efforts to determine if electrical infrastructure and use related to its activities could contribute to cost efficiencies.

VI. Implementation

The deliverables within this Master Plan shall be implemented as soon as possible and, if applicable, will continue to be implemented throughout the planning period unless modified by the Commission. The Commission shall support a request for funding for the Summit Assessment described in Part IV.A. of this Master Plan. It shall review that Assessment and shall modify the Master Plan based upon the recommendations in the Assessment and the other recommendations of the Master Plan.

VII. Conclusion

This Master Plan fulfills the Commissions responsibilities under RSA 227-B:6. The Commission may update or amend this Master Plan as the Commission sees fit.

Table 1

Deliverable	Entity Responsible
Aspire to preserve and where practicable improve the summit environment by ensuring that resources invested at the summit are sufficient so that the human presence there is consistent with the environmental goals and protections established in this Master Plan.	• N.H. State Parks • Summit Partners • Commission
As an initial step, complete an assessment of the Summit ("Assessment") which should be completed forthwith by a qualified third-party. The Assessment should examine damage to and deterioration of the environment including, but not limited to an analysis of contaminated groundwater and soils around the Summit, damage to and options for restoring alpine flora, and steps to be considered under the goals of this plan in light of the anticipated consequences of climate change, and other environmental considerations. "Contamination" in this context is to be interpreted broadly. Prior recommendations related to protecting flora and fauna and information from the N.H. Natural Heritage Bureau (NHB) database will help inform the Assessment. Assistance from the N.H. Dept. of Environmental Services and the N.H. Fish and Game Dept. should be requested to help determine a scope of work. The Assessment should include a building survey and an infrastructure survey; however, such surveys shall not impinge on the confidentiality or privacy interests of State Park tenants. This Assessment will form a baseline and resource for planning. All future development proposed for the Summit will be subject to this Plan, and proponents of future Summit projects shall address the information and recommendations in the Assessment, including any updates, in order to demonstrate compliance with this Plan. Given its importance and estimated cost, the Commission will help seek a capital appropriation for this Assessment.	• N.H. State parks • Summit Partners • Commission • NHDES • NHF&G • NHB
A visitor survey should be conducted, using expertise from entities like UNH.	• N.H. State Parks • Summit Partners • Commission
To the maximum extent possible, address damage and deterioration of the environment, including stressed or damaged vegetation and impacts of invasive species, identified in the Assessment. This could include remediation of impacts or mitigation - meaning avoidance, minimization or offsets achieved by restoration. Adverse impacts should also be avoided using lessons learned.	• N.H. State Parks • Summit Partners • Commission • NHDES • NHB
Continue to enhance the protection of the fragile alpine ecosystem at the Summit through pathways, trails, and signage. Implementation will be informed by the environmental assessment.	• N.H. State Parks • Summit Partners • Commission
Avoid unnecessary additional structures and minimize the negative environmental consequences of existing and future Summit structures while balancing ongoing needs and considering other objectives such as the creation of important historic depictions and meeting the objectives of this Plan. Look for opportunities to make any possible new structure even less impacting than previous structures such that construction could actually promote positive environmental changes.	• N.H. State Parks • Summit Partners • Commission

Encourage management practices to conserve resources, for example, taking advantage of opportunities to do things like reclaim water or creatively manage sewage need.	• N.H. State Parks • NHDES • Summit Partners
Account for aesthetic impacts.	• N.H. State Parks • Summit Partners
Endeavor to reduce the visual impact of fuel tanks. Measures may include reducing the number of tanks and options such as wrapping tanks in material that helps them blend into the landscape should be considered.	• N.H. State Parks • Summit Partners

Operation and Maintenance – Operation of the Summit Generally

Deliverable	Entity Responsible
Manage Summit to promote desirable experiences including the enjoyment of iconic views and help foster a unique visitor experience. Operate to ensure a good experience for hikers and other visitors..	• N.H. State Parks • Summit Partners • Commission
Tailor experiences to meet needs, limitations, and carrying capacity.	• N.H. State Parks • Summit Partners
Evaluate limiting number of visitors, using reservation systems, or changing operating hours with respect to structures while recognizing the requirements of relevant deeds and the Commission's charge in RSA 227-B:6, I(c) relative to the "[p]romotion of the use of the summit by the public as a recreational, historic or scientific attraction."	• N.H. State Parks
Investigate ways to limit the number of visitors in order to contribute to the long-range success of the Mount Washington experience and to help ensure the level of investment in Summit resources balances with the number of visitors.	• Summit Partners • N.H. State Parks • Commission

Operation and Maintenance – General Maintenance

Deliverable	Entity Responsible
Proactively plan maintenance upgrades for summit structures consistent with the Master Plan.	• N.H. State Parks • Summit Partners • Legislature
Track pending repairs: observation deck tiles, cracked cement, roof leaks, and paint.	• N.H. State Parks • Summit Partners
Prioritize cleanup of the Summit generally.	• N.H. State Parks • Summit Partners
Remove abandoned items around the summit (those not offering historic value), construction debris, and other debris.	• N.H. State Parks • Summit Partners
Evaluate foundation of former generator for re-use or removal.	• N.H. State Parks • Summit Partners

Operation and Maintenance - Finance

Deliverable	Entity Responsible
Acknowledge need for fiscally sustainable State Park that operates consistent with the purposes stated in this Master Plan and explore options to generate revenue to cover operating expenses and maintenance and improvement projects that up to now have been funded mainly through capital improvement funding.	• N.H. State Parks • Summit Partners • Commission
Summit Partners shall consider how to support the State Park financially.	• N.H. State Parks • Summit Partners • Commission
Determine whether and how to charge a fee for State Park building use. A third party could possibly be used to assist in this evaluation.	• N.H. State Parks • Summit Partners • Commission
Work to ensure the financial viability of the Summit and the adequacy of funding to meet the purposes and goals of this Master Plan.	• Summit Partners • N.H. State Parks • Commission
Explore additional Summit Stakeholders' agreement to financially support Summit betterment projects.	• N.H. State Parks • Summit Partners • Commission
Explore whether and how to use Summit-based transmission and communication revenue to support the Park	• Commission
Explore opportunities, consistent with this Master Plan, to improve the space available for generating revenue in the Sherman Adams Building.	• Commission
Evaluate existing space to optimize return, preserve visitor experience, and advance the interests of the Summit Partners.	• N.H. State Parks • Summit Partners
Explore year-round online sales.	• N.H. State Parks
Explore and consider obtaining facilities close to the base of the mountain to support Summit operations.	• N.H. State Parks • Cog Railway • Auto Road

Operation and Maintenance - Education/Outreach

Deliverable	Entity Responsible
Continue and expand information, education, access features, and trail maintenance that promote protection of the fragile alpine environment and environmental ethic.	• N.H. State Parks • Summit Partners
Continue and expand visitor education about the unique historic, scientific, botanical, meteorological, and geological aspects of the Summit. Coordinate educational programs and visits from school and other groups to showcase information on history of the Summit, climate, environment, conservation, and scientific work.	• N.H. State Parks • Summit Partners
Increase synergy among Summit Partners to do things like, for instance, establish a joint communications package that gives consistent signage and information to visitors	• N.H. State Parks • Summit Partners
Promote the scientific research and monitoring on the Summit conducted by the Mount Washington Observatory and the Appalachian Mountain Club to enhance public understanding.	• N.H. State Parks • Summit Partners
Provide for the creation of display boxes or other educational tool to display rare flora indigenous to the alpine climate to educate about the importance of protecting the Summit. Encourage creation of a Nature Gallery or similar display tool as the terrain from the base to the Summit hosts a very diverse population of plants, animals, and insects.	• N.H. State Parks • Summit Partners • Commission
Review the Pike's Peak plan for ideas on how to begin integrating technology-based experiences into the Summit experience, consistent with this Master Plan.	• N.H. State Parks • Summit Partners
Collaboratively and aggressively promote resulting ideas like guided tours and a Summit-related "App." with audio and visual presentations, a "Summit Challenge," a "Summiteers" program, and programs that encourage people to post on social media.	• N.H. State Parks • Summit Partners
Help advertise and promote "Online Donation to Mt. Washington State Park" option and integrate the donation link into Summit Partner websites.	• N.H. State Parks • Summit Partners
Consider collaborating with other high-traffic parks/tourism sites and organizations such as White Mountain Attractions to establish effective messages and information for visitor management.	• N.H. State Parks • Summit Partners
Create or maintain world-class Mt. Washington Observatory weather research facilities, indoor/outdoor laboratory, and testing space.	• N.H. State Parks • Summit Partners • Commission

Operation and Maintenance - Safety

Deliverable	Entity Responsible
Continue assisting and coordinating with rescue professionals to maintain a safe and enjoyable park experience within the State Park.	• N.H. State Parks • Summit Partners • Commission
Where needed, ensure that an updated emergency response plan for N.H State Parks exists.	• N.H. State Parks
Emphasize cooperation and coordination among the relevant entities in connection with search and rescue activities.	• N.H. State Parks • Summit Partners • Commission
Continue to promote hiker safety education for all season hiking. N.H. State Parks will determine, in coordination with rescue agencies, its role in off-Park rescues.	• N.H. State Parks • Summit Partners • Commission

Operation and Maintenance - Real Property Management

Deliverable	Entity Responsible
N.H. State Parks will report on how State property at the Summit is being used along with any analysis it may have on the value of relevant leases or licenses	• N.H. State Parks
Present leases and agreements to Commission and ensure that Summit Partners are engaged and heard with respect to leases and contracts on the Summit.	• N.H. State Parks • Summit Partners • Commission
Summit Partners, including N.H. State Parks should also work to clarify and solidify existing property rights at the Summit.	• N.H. State Parks • Summit Partners

Capital Improvements – Accessibility and Inclusiveness

Deliverable	Entity Responsible
To the greatest extent practicable, provide for accessibility, inclusiveness, visitor experiences, trail experiences, and energy efficiency as called for elsewhere in this Master Plan.	• N.H. State Parks • Summit Partners
Provide quality information and access for people of all abilities, both indoors and outdoors.	• N.H. State Parks • Summit Partners • Commission
Enhance visitor experience for all persons using designs to improve access to natural features and historic or scenic elements.	• N.H. State Parks • Summit Partners • Commission.
Explore opportunities to lower financial barriers of access to the Summit in an effort to achieve additional demographic equity.	• Commission
Create walking surfaces that are more accessible to all people with an eye towards permeability, considering limiting factors such as climate, and ensure any work is performed within the context of overall master planning objectives.	• N.H. State Parks • Summit Partners
Encourage and participate in a public process of research and investigation to determine the significance of the Summit to indigenous people and, thereafter, identify and considerately incorporate features sensitive to such significance, consistent with the goals of this Master Plan.	• Commission. • Native American Commission

Capital Improvements – Enhanced Visitor Experience Within Structures

Deliverable	Entity Responsible
Post historical interpretive panels on the walls of the Sherman Adams Building.	• N.H. State Parks • Summit Partners
Create updated and more modern informational displays within the Sherman Adams Building that provide visitors with better knowledge and understanding of the overall uniqueness of and history of Mount Washington. This could include a looping video display or enhancements to the Observatory Museum.	• State Parks • Summit Partners

Capital Improvements - Trails

Deliverable	Entity Responsible
Explore ways to disperse visitors throughout the Summit through trails or other means to enhance visitor experience and prevent overcrowding. Explore modifying the hiking trail network and including new signage to keep visitors on the trail, entertained, and dispersed.	• N.H. State Parks • Summit Partners
Complete a trails assessment prior to making new trail changes	• N.H. State Parks • Summit Partners
Improve trail around Sherman Adams Building consistent with N.H. State Park and Commission recommendations and this Master Plan.	• N.H. State Parks • Summit Partners
Evaluate possibility of Summit loop trail.	• N.H. State Parks • Summit Partners

Capital Improvements – Yankee Building

Deliverable	Entity Responsible
Continue pursuing actions to determine how to properly provide an up-to-date communications and maintenance facility including consideration of what other uses might be incorporated in such a facility consistent with this Master Plan.	• N.H. State Parks • Summit Partners • Commission
Explore funding opportunities to determine whether there is federal public and private funding available for the Yankee Building. Assist N.H. State Parks in utilizing the Capital Budget Process, the American Rescue Plan Act ("ARPA"), and other funding sources including the private sector	• N.H. State Parks • Summit Partners • Commission
Consider elements other than just communication when siting, building, or maintaining Summit towers such as aesthetic and environmental impacts.	• N.H. State Parks • Summit Partners • Commission
Consider the potential of having a third party construct and operate a telecommunications facility.	• N.H. State Parks

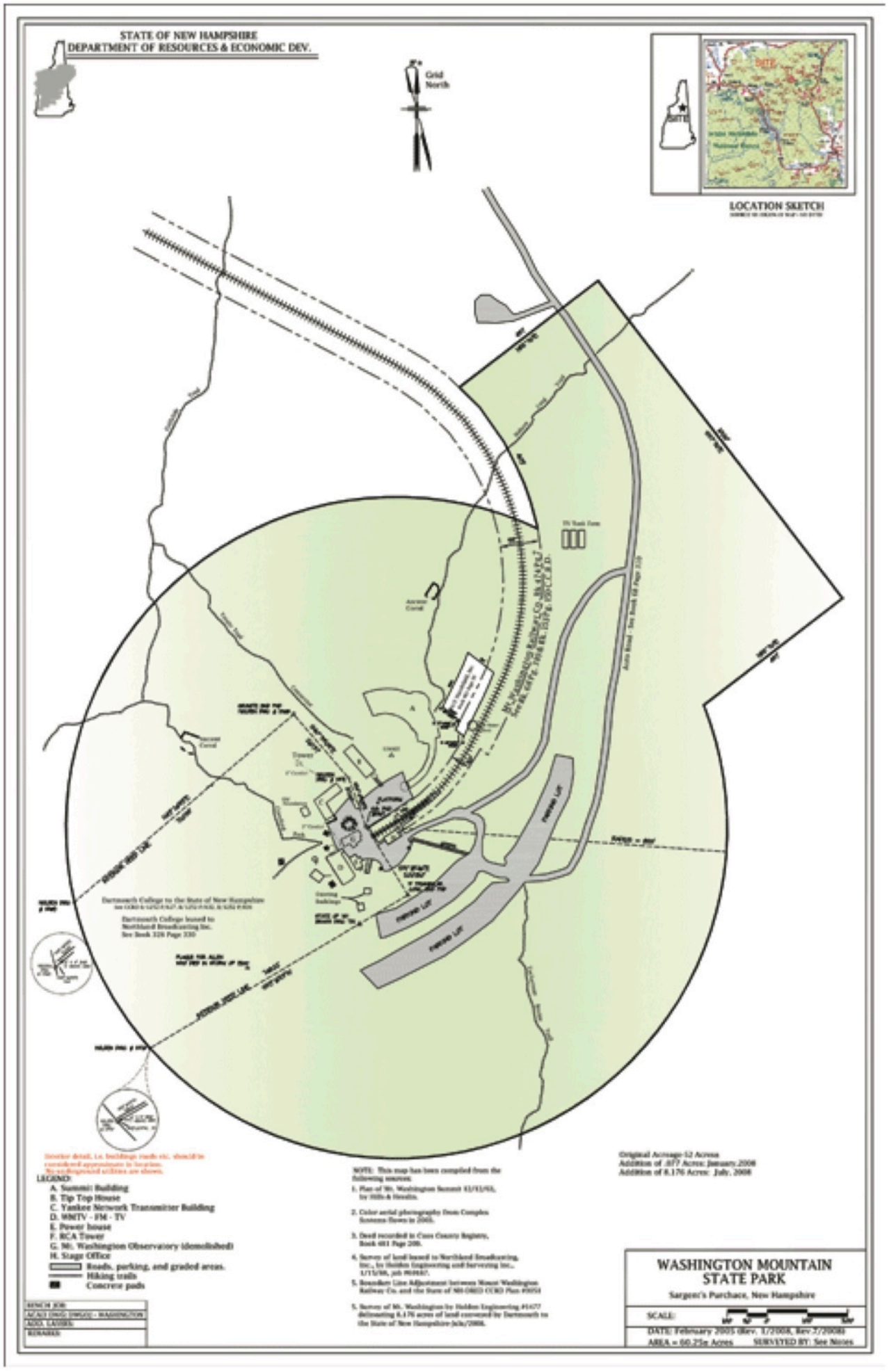
Capital Improvements – Water and Waste

Deliverable	Entity Responsible
Ensure that waste management systems are designed, sized, and operated to meet the long-term rather than short-term goals while minimizing environmental degradation. This can be furthered by the use of conservation, utilization, and reclamation technology.	• N.H. State Parks • Summit Partners
Support capital investments, and take other steps, needed to ensure that Summit facilities are sufficient to preserve the Summit environment and provide for the needs of the visiting public.	• N.H. State Parks • Summit Partners • Commission
Evaluate restroom facility needs, using data and accounting from Summit Partners, and construct future facilities based on that evaluation to ensure that the objectives of this Master Plan are met.	• N.H. State Parks • Summit Partners • Commission

Capital Improvements - Energy Efficiency and Sustainability

Deliverable	Entity Responsible
Evaluate and choose capital improvements consistent with sustainability principles in order to achieve sustainable operations while serving the needs of the visitor.	• N.H. State Parks • Summit Partners • Commission
Incorporate protective and energy efficient features into Summit structures to reduce intrusion into Summit experiences and the environment. To the maximum extent possible, and consistent with the presentation of historic settings, incorporate energy and resource efficient technologies, and should be upgraded, consistent with these principles, to accommodate technical advances.	• N.H. State Parks • Summit Partners • Commission
Encourage the lowest possible net emissions.	• N.H. State Parks • Summit Partners • Commission
Encourage both structural and non-structural changes that are compatible with energy certifications or the equivalent with an emphasis on renewable energy sources consistent with these objectives.	• N.H. State Parks • Summit Partners
The Cog Railway will lead efforts to determine if electrical infrastructure and use related to its activities could contribute to cost efficiencies.	• Cog Railway

Attachment 1



Attachment 2

N.H. Fish and Game Search and Rescue/Dive Policy

USDA Forest Service Policy

Memorandum of Understanding Between State of New Hampshire, Fish and Game Department and the U.S. Department of Agriculture Forest Service, White Mountain National Forest U.S. Forest Service on Search and Rescues

NH Fish and Game Search and Rescue/Dive Policy

All search and rescue and/or recovery operations required by RSA 206:26 XII shall be conducted in accordance with the following S.O.P. Guidelines.

PURPOSE: To provide reasonable standard operating procedure guidelines by which all search and rescue, drowning or recovery missions required by RSA 206:26 XII shall be conducted by.

1. Guidelines for statewide search and rescue (SAR) plan

    a. Upon being advised of a reported lost person, rescue, drowning or downed aircraft when your assistance has been requested, the Conservation Officer in charge of the area, or the nearest available Conservation Officer, will immediately gather all information available such as the who, what, when, where, and how of the situation, being as precise as possible. The officer will then do the following:

2. Call the district supervisor

    a. Call the area District Lieutenant or Sergeant; if they are not available, the nearest Senior Conservation Officer. After due appraisal of all facts, a determination will be made by the Lieutenant, Sergeant or Senior Conservation Officer as to what further action should be taken.
    b. Notice of a search, rescue or drowning will be passed onto the Chief of Law Enforcement and/or the Assistant Chief of Law Enforcement or their designee.

3. Responsibility

    a. Pending the arrival or orders of the Lieutenant, Sergeant, or Superior Conservation Officer, the first Conservation Officer on the scene will assume incident command and take whatever action he feels is necessary, including names and addresses of witnesses and all other people involved. He should call for whatever assistance he feels is required. Any Conservation Officer called upon to assist shall respond at once.
    b. Upon arrival of the Lieutenant, Sergeant or Superior Conservation Officer, the operation will then become their responsibility. All search and rescue and drowning details of any magnitude will have a Lieutenant or Sergeant in charge. Should the Lieutenant or Sergeant in charge of a detail become ill or require relief, the Chief of Law Enforcement and/or the Assistant Chief of Law Enforcement will assign a Supervisory Officer to take charge.

4. Duties

    a. It will be the duty of the Lieutenant, Sergeant, or Conservation Officer in charge of a search and rescue or drowning detail to do the following:
        i. Call whatever Fish and Game assistance is necessary. This will not be limited to the Law Enforcement Division, but may be personnel or equipment from any of

the Divisions within the Department. Request from other Divisions shall be made through the proper Division Chief.

ii. Call any other state, county or local agencies for manpower or equipment.

iii. Take whatever action is necessary to call personnel and equipment needed on a local level, keeping in mind that no more volunteers will be used than is necessary. In situations where volunteers are used to carry out special or hazardous assignments, care will be used to make certain of their capabilities.

iv. When volunteers are utilized, it shall be the responsibility of the officer in charge to secure the names and addresses of all such persons on F&G Form 131-a (4/83) and submit the original copy with search and rescue Form 131. Instructions on F&G Form 131-a, shall be followed when any volunteer is injured. An incident report detailing the injuries shall accompany the F&G Form 131-a.

v. On National Forest land, call the Ranger in charge of the area and follow the rules of the Letter of Understanding between the White Mountain Forest and the Fish and Game Department. Such Memorandum of Understanding (Appendix I) and National Wilderness Acts memo (Appendix II) shall be an integral part of this Manual.

vi. Keep Fish and Game or State Police Dispatch, the Chief of Law Enforcement, the Assistant Chief of Law Enforcement or their designee advised of events at all times.

vii. When a search and rescue or drowning warrants, as determined by the Chief or Assistant Chief of Law Enforcement, a command post or coordination post may be established, calling such persons as are necessary to handle radio communications, news media, etc. In some cases the Chief of Law Enforcement and/or the Assistant Chief of Law Enforcement may make such assignments.

viii. The Incident Command System Structure may be utilized in all Search and Rescue, Drowning and Recovery missions.

ix. Each Lieutenant, Sergeant and Conservation Officer II shall keep a regularly updated Search and Rescue Response manual. The SAR Response manual shall include information such as SAR mission protocol procedures, resource lists with contact information and SAR data information.

5. Incident command system

a. Incident Commander (Search Chief) - Responsible for:
   i. Overall management of the search and rescue incident.
   ii. Organizes strategies to be implemented during the incident.
   iii. Provides direction to personnel under his supervision.
   iv. Secures necessary resources needed to complete the mission.
   v. Establishes and maintains an excellent working relationship with the media.

b. Public Affairs - Responsible for:
   i. Disseminating information to the media with Incident Command approval.
   ii. Documentation of the incident.
   iii. Liaison with assisting agencies.

c. Dispatcher - Responsible for:
   i. Communications to/from Incident Command to field personnel.

ii. Documentation of all communications.

d. Specialist Advisors
   i. Individuals or organizations that provide specialized knowledge and/or training in a specific area.
e. Search and Rescue Team Leaders - Responsible for:
   i. Qualifications of team members.
   ii. Maintains a master roster of team members.
   iii. Directs tactical assignments in a safe manner.
   iv. Reports progress and condition of resources to Incident Command.
f. Search and Rescue Team Members
   i. Performs tactical assignments in a safe and effective manner.

6. Law enforcement agencies to be notified

   a. In all cases of search and rescue and drownings, the State Police, the Sheriff's Department and local police may be notified at the outset and kept informed of events. They will be requested for assistance whenever necessary.
   b. The State Police will handle all out-of-state next-of-kin notifications in cases involving accidents or death.
   c. The State Medical Examiner's Office and appropriate County Attorney shall be notified of all cases involving death.
   d. The State Police or local police will be advised at once of anything of a suspicious nature that may point to foul play, law violations, or suicide for further investigation. A close working relationship between State Police, the Sheriff's Departments and local police will be kept in mind at all times.

7. Response to aircraft accidents

   a. Fish and Game Law Enforcement personnel are not required to respond to the scene of aircraft accidents EXCEPT for the purpose of removing deceased and/or injured persons ONLY, that occur in the woodlands/waters of the State and then only upon request of the N.H. Aeronautics Commission through State Police Communication Headquarters in Concord. Deceased persons shall not be removed from the wreckage without authorization of the medical referee in whose district the accident occurred. It is the responsibility of the aircraft owner and/or FAA to secure the crash scene and to have aircraft removed, according to the State Aeronautics Director.
   b. The Fish and Game Department will maintain liaison with the coordinating agency (NHAC) during any mission so that any request for additional assistance can be made (mountain climbers, helicopters, etc.).
   c. Suspected Criminal Activities - If at any time it is suspected that a crime has been committed, an immediate notification will be forwarded to the Division of State Police and/or local police.
   d. The New Hampshire State Police, in coordination with local law enforcement agencies, will be responsible for the control of those persons not directly involved in the mission at the scene of the rescue or recovery area. This includes the blocking off of an area to all but such search vehicles as required for the execution of the surface

mission. The State Police will also provide security at the site of any temporary morgue or any other area if requested or required.

8. Utilization of National Guard aircraft

   a. When any search and rescue mission involves the use of National Guard helicopters, the Lieutenant or Sergeant in charge of the mission shall be required to assign a Conservation Officer to the National Guard Communications Van if it accompanies the helicopter.
   b. The Lieutenant or Sergeant may remain with the Communications Van himself if he so desires, but it is required that an officer be with the van at all times.
   c. The communications van is equipped with a Fish and Game radio. The van is also able to communicate directly with the helicopter. Radio messages are kept at a minimum.
   d. A Conservation Officer will be provided to be on board, accompanying the helicopter during all search and rescue or associated missions.

9. Chain of command

   a. All requests for the National Guard or any helicopters and aircraft will be made through the Chief of Law Enforcement, Assistant Chief of Law Enforcement, Captain or in the absence of all, by a Lieutenant.
   b. The final decision to bring a large scale search to an end will by made by the Chief of Law Enforcement and/or the Assistant Chief of Law Enforcement in the absence of the Chief of Law Enforcement.

10. Reports

   a. The Lieutenant, Sergeant or designated Conservation Officer in charge of any search and rescue or drowning operation shall promptly make such reports and summaries as are required by Headquarters on the appropriate forms.
   b. Such reports shall be submitted to Headquarters within ten (10) working days following completion of the mission. An extension of the ten (10) working day submission requirements may be extended by permission of the Chief of Law Enforcement or their designee.

11. Search and rescue plan

   a. All Lieutenants, Sergeants, and Conservation Officers will be required to return to duty for search and rescue and drowning details when on days off or weekends off when their service is required and they are available by phone, radio or other means of communication.

USDA Forest Service Policy:
The USDA Forest Service has the lawful responsibility and authority as the Lead Agency to coordinate all search and rescue missions within the Cutler River Drainage each year from December 1 through May 31 pursuant to FSM 1599; WMNF Supplement No. 4, December 1982. This area encompasses the eastern facing flanks of Mt Washington, including the East Cone, the Alpine Garden, Tuckerman Ravine, Raymond's Cataract, Huntington Ravine, and the terrain down to the Pinkham Notch Visitor Center.

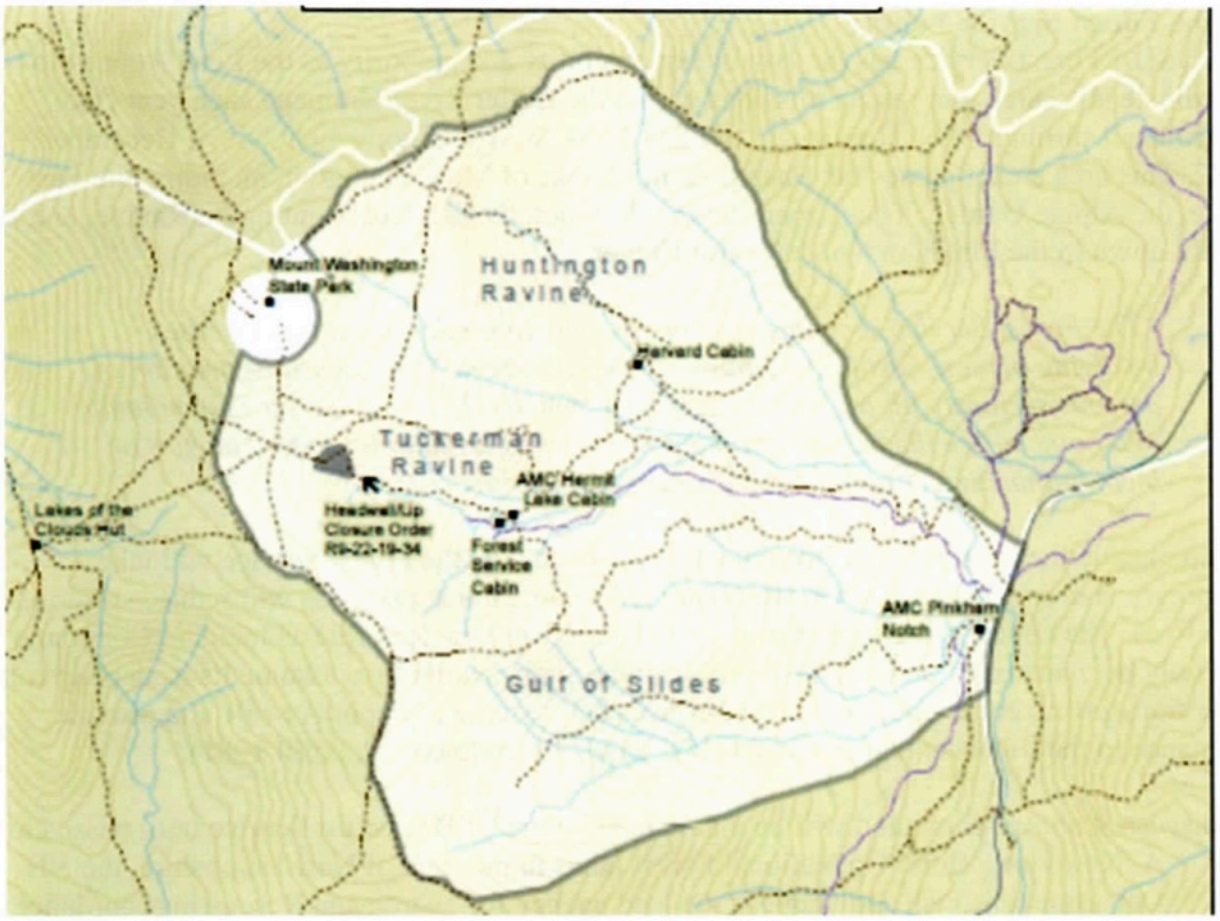
> *"The Forest Service recognizes its public duty to render assistance in cases involving persons lost in the National Forest System. Also, the transportation of persons seriously ill, injured, or deceased from the National Forest System lands to a point where the person or body may be transferred to interested parties or local authorities." (FSM 1599; Amendment 72, April 1981)*

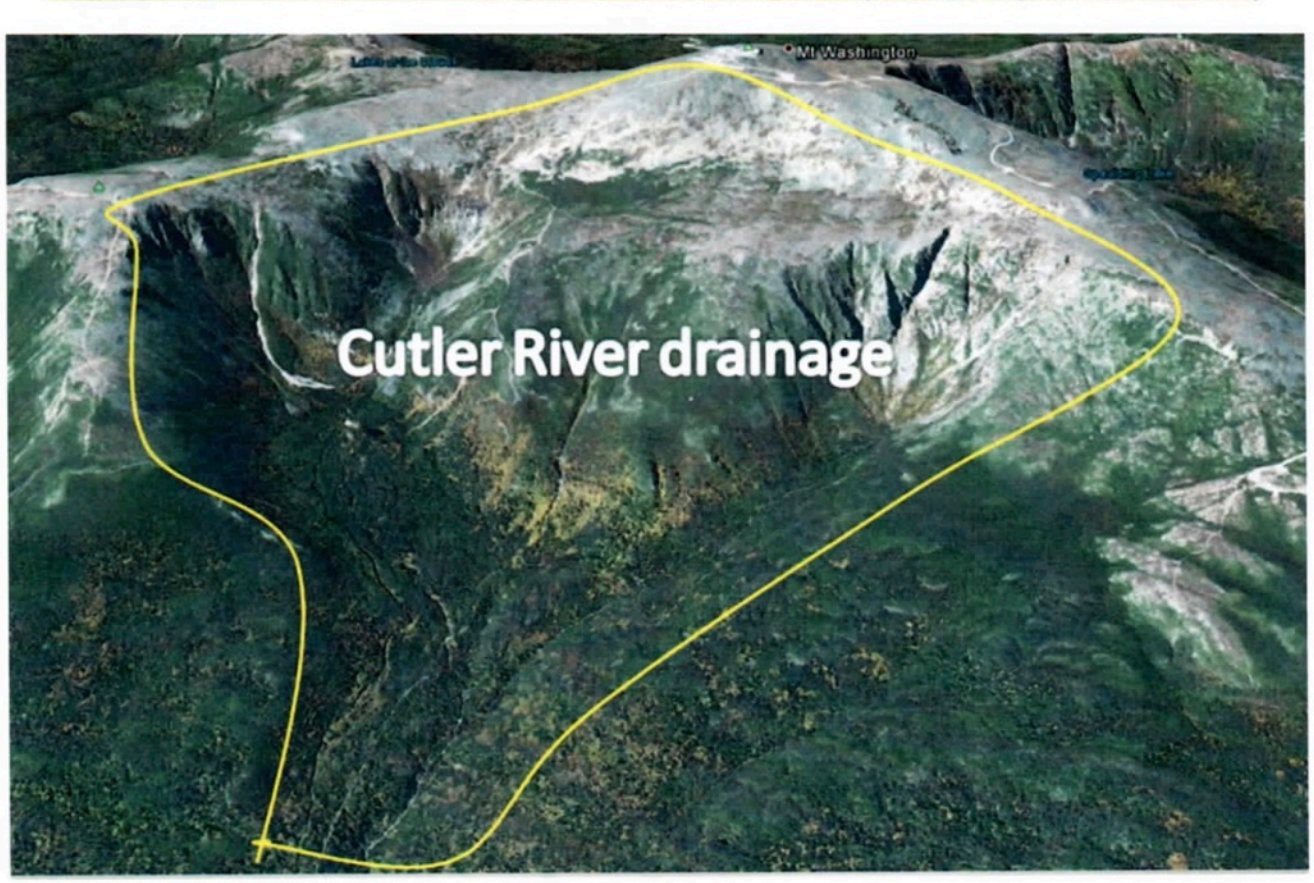
When outside the jurisdiction of the Cutler River Drainage, the Forest Service will take a temporary lead role in any SAR in which immediate and quick response will reduce suffering or save lives. The concept of closest forces must be used and the lead role as Incident Command will only be maintained until the responsible authority is available to assume its leadership role. After transferring command, the Forest Service shall assume a supportive role and provide assistance to the fullest extent possible (FSM 1599; Amendment 72, April 1981).

As discussed above, command will be maintained by the USDA Forest Service until passed to:

A. New Hampshire: On National Forest lands in the state of New Hampshire, the NH Department of Fish and Game is the lead agency for Search and Rescue in accordance with its official state responsibility for all SAR operations.
B. Maine: On National Forest Lands in the state of Maine, the ME Department of Inland Fisheries and Wildlife is the lead agency for SAR operations.

A SAR incident is an emergency and will be recognized as such by the Snow Rangers and other employees of the USDA Forest Service. When a call involves a threat to human life, the incident will take priority over other Snow Ranger activity except other more serious life threatening situations. The District will respond appropriately while balancing other needs of a diverse workforce. As requested, the District will provide equipment, supplies, human resources, and facilities to meet the objectives. Time is of the essence in any rescue mission, but especially during the winter months when hypothermia can rapidly reduce an individual's ability to survive. Timely notification and a quick response by appropriate resources can mean the difference between life and death.


Mount Washington State Park
Huntington Ravine
Harvard Cabin
Tuckerman Ravine
AMC Hermit Lake Cabin
Headwall/Up Closure Order R9-22-19-34
Lakes of the Clouds Hut
Forest Service Cabin
AMC Pinkham Notch
Gulf of Slides


Mt Washington
Cutler River drainage

Appendix I

MEMORANDUM OR UNDERSTANDING

Between
STATE OF NEW HAMPSHIRE
FISH AND GAME DEPARTMENT
and
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
WHITE MOUNTAIN NATIONAL FOREST

This memorandum of understanding concerning search and rescue operations on the White Mountain National Forest is made and entered into between the White Mountain National Forest, hereinafter referred to as the Forest Service, and the Fish and Game Department, hereinafter referred to as the State, agencies with mutual concern for the welfare of the public.

WITNESETH THAT;
WHEREAS, The Forest Service has certain responsibilities for the safety, health, and protection of visitors relative to the National Forest System and to provide assistance in search and rescue; and

WHEREAS, The State has the authority and responsibility for providing search and rescue services for the public; and

WHEREAS, The White Mountain National Forest is partially located in the State of New Hampshire for which the State has the authority and responsibility for search and rescue; and

THEREFORE, The parties hereby mutually agree that is is desirable to cooperate in better utilizing the resources of both agencies while providing for more adequate search and rescue services.

The State agrees to continue providing search and rescue services on lands within or part of any unit of the National Forest within its area of jurisdiction and the normal scope of its duties and capabilities without reimbursement by the Forest Service.

The Forest Service agrees to act as lead for the State in all winter search and rescue operations in the Cutler River Drainage between January 1 to May 31 at no cost to the State.

The Forest Service and the State agree, within availability of funds and established regulations and policies:

1. To notify and keep informed the appropriate Ranger District Office as soon as practical when a search and rescue operation is initiated. The telephone numbers are:

Ammonoosuc Ranger District	(603) 869-2626
Androscoggin Ranger District	(603) 466-2713
Evans Notch Ranger District	(603) 824-2134
Pemigewasset Ranger District	(603) 536-1310
Saco Ranger District	(603) 447-5448

2. To provide support, cooperation and assistance to the State in maintaining a continuing search and rescue program.

3. To furnish at no cost, upon request of the State, available Forest Service personnel and equipment to assist in search and rescue operations.

4. To limit use of motorized equipment except for certain situations. The State is authorized to use motorized equipment outside of designated Wildernesses. The State agrees to limit the use of motorized equipment within Wildernesses to life threatening situations and removal of deceased persons. Further the State agrees to consult with the responsible District Ranger prior to the use of motorized equipment in Wilderness. When prior consultation is not possible, notification will occur as soon as practical. This is in recognition of the Intent of Congress and the Wilderness Act of 1964 and the subsequent establishment of the Wildernesses on the White Mountain National Forest. Those areas in New Hampshire are: Pemigewasset Wilderness, Sandwich Range Wilderness, Presidential Range/Dry River Wilderness and Great Gulf Wilderness.

5. To meet once a year to review this agreement and previous year's operation and plan joint future activities.

RICK D. CABLES
Supervisor
White Mountain National Forest

Date: June 30, 1992

DONALD A. NORMANDEAU
Executive Director
Fish and Game Department

Date: June 30, 1992

Appendix 11

United States Department 638 Agriculture 03247 | Forest Service | White Mountain National Forest | 719 Main Street P.O. Box Laconia, NH

Reply to: 1590
Date: September 5, 1984

Major Mason Butterfield
Law Enforcement Division,
New Hampshire Fish & Game Department
34 Bridge Street
Concord, NH 03301

Dear Mason:

The National Wilderness Act prohibits the use of motorized equipment in designated Wilderness Areas except for a few exceptions spelled out in the Act. Motorized Equipment and mechanical transport may be allowed when an emergency condition exists which involves the health and safety of human beings. This may also include the removal of deceased persons from the Wilderness. Forest Service policy requires the approval of the Forest Supervisor before such use is initiated.

As New Hampshire Fish & Game Department has the primary responsibility for search and rescue in the State, I authorize you to use motorized equipment when an emergency involving human health and safety occurs. I ask that your Department notify the District office who administers the Wilderness Area before the search or rescue mission begins. If contact cannot be made prior to entering the Wilderness, please notify the District office as soon as they can be reached.

The District offices are:

Wilderness	Office phone
Great Gulf	466-2713
Presidential Dry River	447-5448
Sandwich Range	447-5448
Pemigewasset	536-1310
Laconia	528-8721

/s/ Michael Hathaway

MICHAEL B. HATHAWAY
Forest Supervisor

Partners

THE MOUNT WASHINGTON COG RAILWAY

FOREST SERVICE U S DEPARTMENT OF AGRICULTURE

NEW HAMPSHIRE STATE PARKS

BE OUTDOORS APPALACHIAN MTN CLUB

MWOBS MOUNT WASHINGTON OBSERVATORY

MT. WASHINGTON AUTO ROAD

townsquare

STATE OF NEW HAMPSHIRE
OFFICE OF THE GOVERNOR

CHRISTOPHER T. SUNUNU
Governor

January 26, 2023

Dear Chairman Bradley and Commissioner Stewart,

I want to thank you both and the entire Mount Washington Commission for your great work over the last year to produce a comprehensive Mount Washington Master Plan.

I have received and reviewed the plan over the last week. It presents a number of great opportunities to pursue going forward. The summit of Mount Washington, as you well know, draws people from all over the world to our wonderful state, and I am glad to see such thought devoted to ensuring that it is accessible for recreation, utilized for essential services, and preserved for future generations.

The Commission's work in developing this Master Plan has been an example of the New Hampshire way of governing. It is crucial that we continue to bring all the stakeholders to the table to collaborate and find solutions. Thank you for that work.

Please consider this letter my approval of the Mount Washington Master Plan. I look forward to seeing the work of the Commission in the years to come.

Sincerely,

Christopher T. Sununu
Governor

107 North Main Street, State House - Rm 208, Concord, New Hampshire 03301
Telephone (603) 271-2121 • FAX (603) 271-7640
Website: http://www.governor.nh.gov/ • Email: governorsununu@nh.gov
TDD Access: Relay NH 1-800-735-2964

Illustrations/Photographs

Because of its novelty as the very first mountain-climbing railroad, and its location in the heart of a 19th and 20th Century tourist destination region at the same as the art of photography moved from glass plates to roll film - from trained professional to everyday tourist means there are thousands of photographs of the Mount Washington Railway out on the internet as well as various collections - public, private and personal. But most do not have a date, and so those attempting to nail down a date are forced to become forensic photo interpreters. The dates can be approximated by looking at the rolling stock, the buildings and things in the image that are NOT people. For instance, the woman above is standing on the transfer platform at the new Base Station built after 1895. She is holding what appears to be a small box camera. The Blair Camera Company of Boston and Chicago marketed a 3.5" x 3.5" box camera called the Hawk-Eye Junior between 1890 and 1899. So the guesstimated date for this image is between 1896 and 1900. A historian specializing in clothing design might be able to further narrow the date down by looking at the fashions being worn by the passengers. Here is what Jitney Jr. looked for in photos to put them in rough chronological order.

AT THE BASE OF THE MOUNTAIN

Sec. 57 - Illustrations/Photographs

Photographs of the Mount Washington Railway contained within this crowd-sourced memoir come from many places - private collections, public archives, and internet postings. The list below includes source, collection, link, and photographer (when known) so that any potential publisher or researcher in the future might seek further information from those whose images grace this manuscript.

22nd Infantry Regiment Society http://www.22ndinfantry.org
John Tomawski Collection
Acadia National Park Collection https://www.nps.gov/acad/index.htm
Harold Adams Family Collection
Alpha Delta Phi.org
Among The Clouds
Ancestry.com
Tourist photos
Yearbook photos
Geddes Anderson Collection
Beverly (MA) Historical Society https://www.historicbeverly.net
Walker Transportation Collection
Boston Globe
Boston & Maine Railroad Historical Association http://www.bmrrhs.org
*B&M Employee*s Magazine
B&M Mainline Magazine
Boston Public Library http://www.bpl.org/research/print/jones/index.htm
Leslie Jones Collection https://www.digitalcommonwealth.org/collections/commonwealth:2j62s484w
Michael Boyce Family Collection
Robert Bradley Family Collection
Donald Bray
Bruce Family Collection
Dennis Buss Collection
California Museum of Photography – UC Riverside http://artsblock.ucr.edu/Page/california-museum-of-photography
Gifford M. Mast
Coös County Democrat
Dartmouth College https://www.dartmouth.edu/~library/digital/collections/index.html
Kat Davis
Detroit Public Library https://digitalcollections.detroitpubliclibrary.org
Michael Dickerman http://www.bondcliffbooks.com
Littleton Courier
Richard Smith
Digital Commonwealth https://www.digitalcommonwealth.org
Maureen Driscoll Collection
Peter Eddy
Fillion Family Collection
Find A Grave.com
Forest History Society https://foresthistory.org
Bluford W. Muir
Joe Geronimo Collection
Getty Images - The LIFE Images Collection
Samuel Goldstein – Keystone Features – Sept 1943
Dimitri Kessel - 1957
Roy Stevens - July 1946
Granger Family Collection
Lincoln Handford Collection
Historic New England https://www.historicnewengland.org
Ron & Alice Howell Collection

Sec. 57 - Illustrations/Photographs

Authors of two books detailing the history of hotelier John Anderson who owned and managed properties in the White Mountains and Ormond, Florida

Hutchinson Collection

Internet Archive.org

Owen Jansson Collection

Kent Family Collection

Commercial Slides – Gift Shop

Elvira Murdoch

Lahey Family Collection

Fred Langevin Collection www.nekg-vt.com

Jeffrey R. Leich Collection

Simon Towle

Lewis Family Collection

David Ballou

J. L. Bradley

Taffy Brown

Mary Clare Carroll

Commercial Slides – Gift Shop

J. A. Mannix

Elvira Murdoch

Wayland Peck

Earl Whitney

David Woodbury

Library of Congress https://www.loc.gov/collections

Detroit Photographic Co.

H. G. Peabody, Boston

Littleton, N.H. Historical Society

Robert J. Varney

Harold Young

Lynch Family Collection

Manchester Historic Association https://www.manchesterhistoric.org

Baldwin Coolidge

Manchester/NH Union Leader

Lorna Colquhoun

John Koziol

Mount Washington Cog Railway https://www.thecog.com

Mt. Washington Cog Railway: We Were There/We Worked There https://www.facebook.com/groups/got.steam42

Walter Aiken Collection

Clemons Family Collection

John Colarusso Collection

Steven Comeau Collection

Bev Nash Esson Collection

Paul Forbes Collection

Allen Haggett Collection

David Kurz Collection

Brian McMinn Collection

Phil Miller Collection

Charles Morrill Collection

Tom Norcott Collection

Joseph Orlando Jr. Collection

Arthur Poltrack Collection

Carolyn Poltrack Ashley Collection

Peter Poltrack Collection
Kelly Rines Eggleston Collection
Anne Teague Koop Collection
Elvira Murdock
Fanny Teague Blaggie Collection
Mussy Schold Collection
Strickland Family Collection
John Thompson Collection

John Thompson is the Facebook pseudonym of Dave Moody, who's worked at the Cog Railway since 1972 and is currently track foreman. Should you receive an email that originates from a Gmail account from Sylvester Marsh know that Mr. Moody, who's "not one for social media," likely crafted it.

H.G. White Co.

Mt. Washington Cog RY https://www.facebook.com/groups/982345131885017

H. L. Bradley
Conrad Ekstrom Jr. Collection
Gary Gardner Collection
E. B. Robertson Collection
Bruce Rockwood Collection
R. B. Sanborn Collection

Museum of American Heritage http://www.moah.org

Museum of the White Mountains https://www.plymouth.edu/museum-of-the-white-mountains

E. B. Holden
Guy Shorey

New Boston, New Hampshire Historical Society http://www.newbostonhistoricalsociety.com

New Hampshire Historical Society https://www.nhhistory.org

Baldwin Coolidge
Janey Morey Collection
Dr. William Taylor of Philadelphia

New Hampshire Profiles Magazine

R. H. Shurbert Collection

New Hampshire Public Utilities Commission

Winslow Melvin
George Hester – NH State Police Criminal & Photographic Laboratory

New Hampshire Then & Now https://www.facebook.com/NewHampshireThenAndNow

Robert J. Girouard Collection
Raymond Evans
Benjamin Kilburn
Ralph (Deak) Morse

Newspapers.com

New York Public Library https://digitalcollections.nypl.org

Robert N. Dennis Collection
S. F. Adams (1844-)
G. H. Aldrich & Co.
Joseph L. Bates (1806/7-1886)
Charles Bierstadt (1819-1903)
Bierstadt Brothers
B. Bradley
C. L. Dakin (1848-)
E. B. Holden
St. Joachim
Benjamin Kilburn
Kilburn Brothers

Sec. 57 - Illustrations/Photographs

J.W. & J.S. Moulton
Nathan W. Pease (1836-1918)
Franklin G. Weller (1833-1877)
Franklin White (1813-1870)
U.S. Stereoscopic Co.

Nye Family Collection

The Old Motor.com

Fifties and Sixties Kodachrome Images

Ken & Bonnie Randall Collection

John Murdock (Mudrock?)

Rochester, VT Historical Society

Marcus Blair Collection
Paul Saunders Collection

Story of Mount Washington

John P. Soule

Tatham Family Collection

Douglas Taylor Collection

Elvira Murdock
Teague Stereoview Captures

George Thompson Family Collection

TRAINS Magazine

L. B. Herrin

Twin Mountain Historical Society

United States Department of Agriculture

Web Search

Fifth Army Mobile Radio.com
G. H. Aldrich & Co.
Annamarie Bailey
Berkshire AMC Paddlers
Catskill Archive.com
J. Claypool Associates
CogAzzi – Tom Doyle
Doug Cole
Mike Condren – condrenrails.com
Coös County Democrat – Jeff Woodburn
Cow Hampshire.com
Cowan's Online Auction Gallery
Ephemera Society.org
Field Museum.org
Jonathan Hall Collection
Keystone-Mast Collection
LEGOS Ideas.com
Ethan Lemieux FB page
Richard Leonard – railarchive.net
LinkedIn
Massachusetts Housing Investment Corp.
Mount Washington Observatory
New England Rail.org
Raymond Johnson
Joseph Raymond
Carl Weber Jr.
OhCroo.com

RG US Rail.com
Warren Reed Collection
Don Ross Collection
Swift Boats.net
UNH Magazine
George Henry Vorndran, Jr. Collection
Waterford, VT History blog
White Pass & Yukon Railroad
Worthpoint.com
Yale University Library

Weigel Family Collection

Raymond Welch Family Collection

Whitcomb Family Collection

White Mountain Echo and Tourists' Register

White Mountain History.org

Robert W. Bermudes Jr. Collection
Douglas Philbrick Collection
Guy Shorey

White Mountains Remembered https://www.facebook.com/WhiteMountainsNhHistoricalResearchProject

Wilkinson Family Collection

Beverly Williams Decato Collection

Kimberly Williams Collection

Wilmot Family Collection

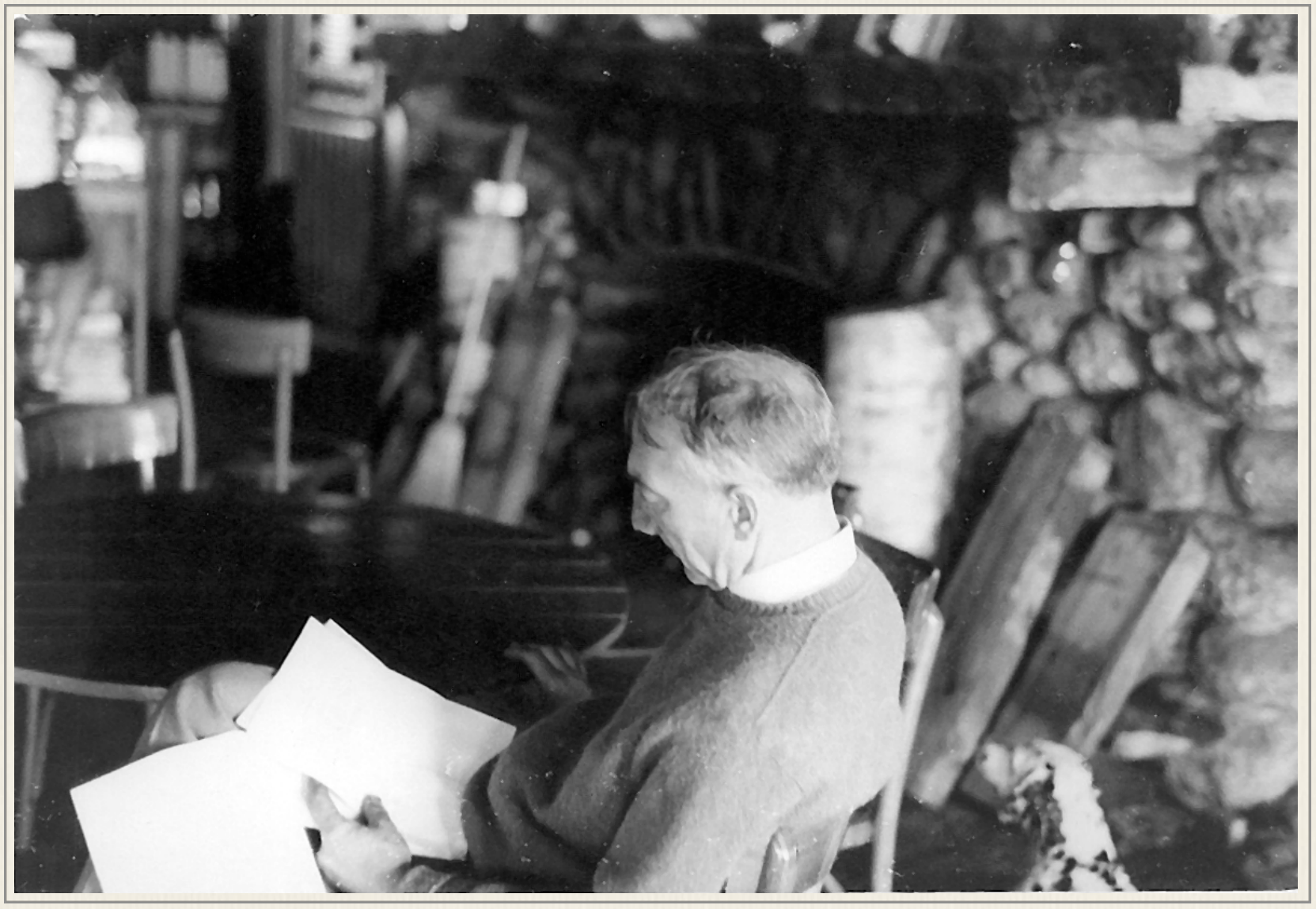
"But wait, Will there will be More...?"

Sunset Edition: You are reading one of the final versions of *The Jitney Years* manuscript. The "Sunset Special" was the last train up the mountain. This is an online update to the March 2023 document sent out at the mid-point of a year-long effort to collect additional Cog employee names, information and stories. As the first quarter of 2024 begins, *The Jitney Years* project continues to prepare for the last train up the mountain before committing to a final print-out of the manuscript. This is a continuing "last call" for any information that should be included.

If you or your relatives worked on the Cog Railway, please contact Jitney Jr. so he might include your family's mountain tales in this manuscript.

And if you would like to receive notification when newer versions of the manuscript are posted, please contact Jitney Jr. at the following email address:

jitneyjr@gmail.com

OR via USPS at:

Tim Lewis
P.O. Box 267
Danville, VT 05828