

July 23rd

Ops Described - Summit Hotel Predicted: “As we have before stated, the Mount Washington Summit Railway was completed on the 3d inst., and cars were run to the top on the 5th. Its length is three miles and the ascent in some places is so steep that a person could scarcely walk upon a plank if laid upon the rails. The car moves steadily and securely, at about the speed of a person walking. Mr. Hitchcock, proprietor of the Tip Top House, has enlarged and improved his hotel so that he can, in an emergency, lodge 110 persons. Last year the number of lodgers averaged about 60 per night, waiting to see a sunrise on the mountain. The proprietorship of this land or pile of rocks at the top of the mountain, is in dispute and has been in court about ten years. Whenever it is settled it is expected that a large hotel will be built.”

- *White Mountain Republic (Littleton, NH) - Fri, Jul 23, 1869*

July 28th

Our First Trip to the Mountain: “Our party was a very agreeable one, the weather was delightfully favorable and all the incidents and associations were such as to give a rose-colored view to everything that transpired during the (four day) trip. Taking the cars upon the Montreal railroad at 10½ o’clock, a.m., we were in due time landed at Plymouth, where the weary traveler finds rest and comfort at the Pemigewasset House, one of the best hotels in New England. Rested and refreshed by a good dinner, we resumed our journey up the beautiful valley of the Pemigewasset to Wells River, and thence up the “wild Ammonoosuc” to the thriving village of Littleton. There the railroad ends for the present. Taking stagecoaches, we were driven over the hilly road to Bethlehem, five miles, where we found the Sinclair House so inviting that we concluded to spend the night therein, instead of going to the foot of the Mountains in the evening. This enabled us to approach them by day and thus get a good view of the attractive scenery upon the route. The next morning “bright and early,” with our own hired team, four good horses and an open wagon, our jolly party of nine started for the foot of Mount Washington. The weather was delightful, and the drive of eighteen miles was as pleasant as every favoring circumstance could make it. Arriving at the foot of the Mountain at 10 o’clock, we found the engine fired up and the train ready, and soon about fifty passengers were on board and moving steadily up the steep side of Mount Washington by steam! We do not know who first conceived the idea of a railroad up the steep declivity of this Mountain, but the credit of making the idea a practical thing, undoubtedly, belongs to Mr. Sylvester Marsh, a native of Campton, but for many years a successful businessman of Boston - now residing in his native State again. (After receiving his charter, Marsh) set to work to secure the attention and aid of railroad men to his scheme, and after seven years’ persistent effort this was accomplished. He first built a little engine weighing nineteen pounds, and a track twenty feet long, which he fixed up in his office in Boston; and with this he would carry 100 lbs. of pig iron up a grade of one foot in three. By these experiments he convinced railroad men that his scheme was a practical one. Among those who first lent him countenance and aid were Mr. Lyon, President of the Montreal Railroad; Mr. Stearns, President of the Northern; Mr. Keyes, President of the Passumpsic; Mr. Nath’l White of this city, and Mr. Holmes Hinkley, the well-known engine builder. By the aid of these gentlemen, and by perseverance and pluck, he overcame all the natural obstructions that stood so formidably in his way. He first, three years ago, built a section of 100 feet to clearly demonstrate the practicability of the scheme; and it was so satisfactory that a company was at once formed and the work was pushed forward as rapidly as the natural obstacles would permit. It takes about an hour and a quarter to accomplish the trip up, including three stops to take in wood and water. Upon the point of safety, there seems to be no room for doubt. The track is strong and firm as wood and iron can well make it; the wheels are literally fastened upon the track by iron clamps; and the engine and car are furnished with five or six independent brakes, either of which is deemed amply sufficient. The seats in the car are so hung as to adjust themselves to the grade, and the passenger



*New track with Tip-Top, the Summit & first Summit House (~1869)
- Gift of Glen Kidder to Teague Family Collection*

rides backward, so that he can have a full view of the magnificent scenery which is spread out before him as he rises in his heavenward journey. And judging from our own feelings and observation, we should say that the traveler is and feels as safe on this road as upon any ordinary Railroad. Over fifty passengers went up with us, and a merrier crowd we have seldom been in. Mr. Marsh says it has been tested thoroughly and nothing, but carelessness can cause an accident. Over 700,000 feet of timber and 234 tons of iron used in building the road were carried over it with a small cheap engine built for the experiment, and not a single accident or any occurrence to cause a fright occurred; and during its building thousands of persons rode on the freight-car, with the feeling of entire safety. The whole cost of this railroad, including engine, cars, buildings, etc., is about \$125,000 (~\$2.5-million today). The fare up and back is \$3. Whether it is likely to prove a “paying” stock, we have no means to judge; but visitors to the mountains have reason to bless its projectors for affording them so comfortable and pleasing a method of reaching the summit. And large numbers appear to be availing themselves of it; for we learn that the day after our trip, more arrived than could be carried up at once, and the day following seventy-five went up. We understand this whole thing, track, engine and cars, is the invention of Mr. Marsh, for which he has three separate patents. Mr. Marsh personally superintended the building of the first mile of the track in 1867, but since then Mr. J. J. Sanborn of Lake Village, has had the charge of the work, and now runs the trains. He is a competent and careful man, and no one need fear an accident from his fault.”

“Before taking a seat in the car we had taken a look at the engine which was to push us up that steep declivity. It was a small affair, weighing about a third as much as an ordinary passenger locomotive, and appeared unequal to the task before it. It is an odd-looking thing and standing upon a level track it appears to be of the kangaroo species, the rear being much higher than the front end. We cannot describe it, nor its method of action; but suffice it to say that it was invented for this particular job and proves to be just the thing. All being ready, the word was given, the steam let on, and we began to move slowly, steadily, smoothly up the mountain-side. There was no feeling of *going up*; the seats being hung like a swing, the occupants “retained their perpendicular,” regardless of the grade, and we seemed to be going ahead on a level plain. As we proceeded onward and upward, our little engine steadily and bravely pushing us ahead, making three brief stops for refreshments in the form of wood and water, we soon became conscious of a change of temperature. At the start, the ordinary clothing was comfortable, the mercury standing but a little below 70; before getting halfway up, overcoats were in demand, and as we approached the summit the wind blew a gale – a cold, hard wind that reminded one of “Greenland’s icy mountains” from which it seemed to have come, and made the teeth chatter.

“After a ride of an hour and a quarter we reached the end of our journey, upon the extreme tip-top of Mount Washington, stopping a few rods from the cars to the hotel! The wind blew a gale, men’s hats had to be tied or held on, women’s garments fluttered and snapped like the loosened topsail of a ship, one could with difficulty stand, and the passage over the uneven ledges was only effected after herculean effort and many ludicrous mishaps which created great hilarity. But it was accomplished at last, and we entered the house and crowded around two roaring wood-fires! The thermometer outside stood at 43, some 25 degrees lower than at the other end of the Railroad. The hotel is a one-story building, embracing a reception room about 20 by 25, a dining room about twice as large, the necessary kitchen rooms, and a score of little 7 by 9 sleeping rooms overhead. We found some fifty or sixty people there. After getting warm, those who thought it would pay went out to “look around” and to gather curiosities. The atmosphere was clear, and a fine view rewarded them. In due time the “joyful sound” of the dinner bell greeted our listening ears, and over a hundred hungry travelers sat down to a very bountiful and well gotten up dinner, to which ample justice was done. Soon after it was announced that the cars were ready for our return, and we all prepared again for that “perilous passage” over the rocks. The wind had increased in violence, and it seemed as if the very rocks would be blown away. But after innumerable accidents and hair-breadth escapes, all reached the safe haven of the car, through the open sides of which there was imminent danger of being blown. After some detention, waiting for the laggards, all were rejoiced to feel that the train was moving. The ride down was generally but a repetition of the ride up. We faced the engine now, which was ahead of the car and backed down. How it worked we cannot describe; but it did work; steam was on and it “went through the motions,” and the train moved as steadily, as smoothly as before. As in going up we did not seem to be going up, so now there was no consciousness of going down; a person with his eyes shut would think he was moving upon a perfect level. Not having to stop for wood and water, the passage is made in less time than the trip up, and in an hour from the start we were landed safely at the foot of the Mountain. The ease, speed and comfort with which the ascent of the Mountain is made on this Railroad, compared with the old method, will bring down blessings upon Mr. Marsh from all who now go up a second time.

Formerly it was a long and very tedious day's work – too much so for feeble people. We breakfasted eighteen miles from the foot and took tea at the same place, having spent two full hours upon the Mountain, and felt but slight weariness at night. The ride up and down in the cars, rests instead of tiring, and the tiresome part of the trip now is in getting to, not in ascending, the Mountain. We advise you, as many as can afford the requisite time and money, to follow in our footsteps; you will never feel it time and money lost." A Littleton, New Hampshire paper would reprint the article two days later: "Local and State news are dry as the weather this week. As a substitute, we publish an interesting account (*above*) of a trip to Mt. Washington, by Mr. Butterfield, of the *Concord (NH) Patriot*, who last week made his first visit to this "Switzerland of America."

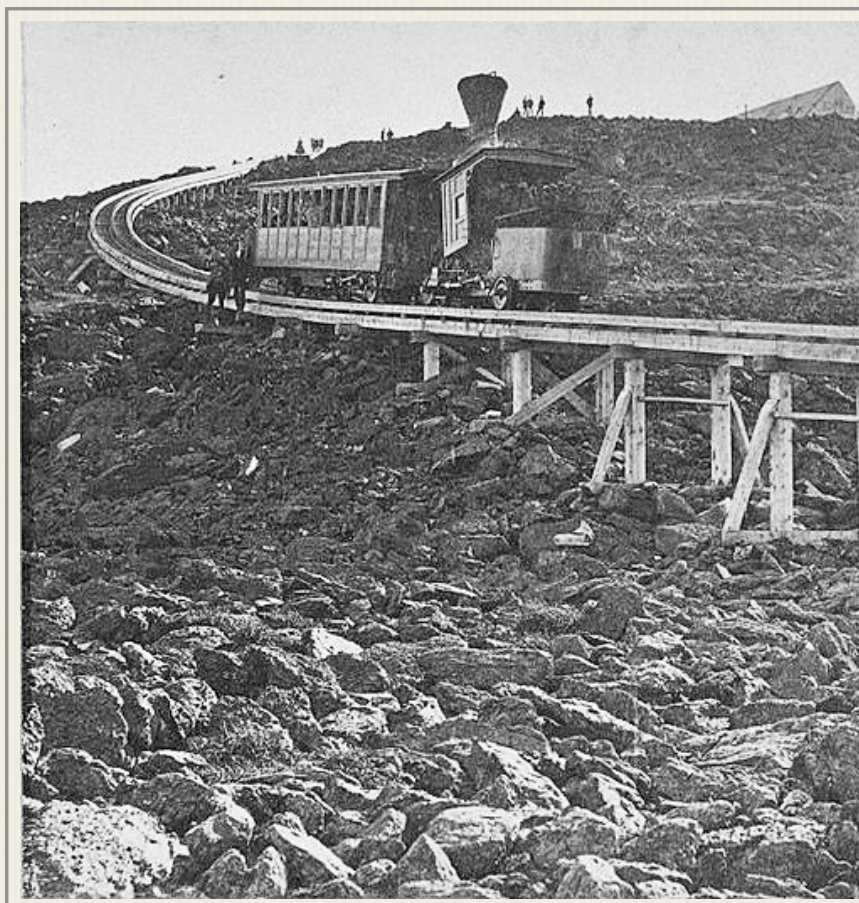
- *Concord New Hampshire Patriot & State Gazette* - Wed, Jul 28, 1869 pg 2 & *White Mountain Republic (Littleton, NH)* - Fri, Jul 30, 1869

July 29th

Breakdown: *Geo Stephenson* breaks an axle on descent at Jacob's Ladder. The *St. Johnsbury Caledonian* reports "true to the promise of the proprietors, the train was stopped upon the very spot where the accident occurred, and nobody was hurt. The safety of that road is more completely established than ever before."

- *Railway to the Moon by Glenn Kidder / St. Johnsbury Caledonian* - Fri, Aug 13, 1869 pg 1

Passenger's Description - "We left the cloud region... at about six o'clock to descend... We left in gay spirits, enthusiastic in our pride of this mountain region, well satisfied with the views obtained from the elevated position, since nowhere in New England, and perhaps tin the world, can so much of the grand, the sublime, the awe-inspiring and the beautiful be seen in a single hour as from the summit of Mt. Washington, and indeed from many points in the vicinity. We had proceeded as far as "Jacob's Ladder" very pleasantly when an unusual noise was observed under the engine. The writer (*J.H.H*) noticed it first - being on the engine - then the chief engineer, who directed the engineer to stop the train, repeating the order, the first not being heard nearly half a minute having elapsed after the noise was first heard before the attempt was made to stop the train, so slight was the noise and so little the effect produced by the accident, which proved to be the breaking of the axle connected with the driving wheel. It is scarcely necessary to say that no one was injured by the accident - to the corporation, not the passengers - which often occurs on other railroads, sometimes disastrous. The train was stopped in an instant, though the accident occurred on the "Ladder," the worst place on the road, where the rails are on an elevated trestle work with a descent of *one foot in three*. The feasibility of steaming up the mountain had been already proved by many trips, but this accident or *incident*, demonstrated the complete control of the engineer over the train, the practical working the machinery and the safety of this mode of travel. Indeed, it is difficult to conceive of any method of travel, even that by a well-trained horse, or by *wheelbarrow* or *velocipede* not excepted - attended by less danger. There are *eight* different means of controlling and stopping the train, each singly, being sufficient to stop it under any ordinary circumstances. Besides the control of the engineer who controlled it as this time, a brakeman, every watching the relative distance of the car and the engine has an equal control, both over the whole train or his car alone. The "friction brake" consists of an iron band encircling the whole wheel, the tightening of which must stop it instantly, to say nothing of the several cog wheels - perfectly controlled - the "exhaustion reverse," etc., etc. Indeed it would seem that Mr. Sylvester Marsh, the originator of the road and a man of marked perseverance and practical ability, and Mr. John L. Davis, the Chief Engineer, who has may several very important improvements - "the right man in the right place" - had exhausted their powers in the effort to devise many means of rendering mountain travel *perfectly* safe, not only in the devices to stop the train, one of which alone might serve the purpose if always in order, but the peculiar construction of the track, wheels, etc. Expe-





rience has proved that stronger axles are needed and that the strain should be equally distributed to both (*axles*), as previously suggested by Mr. Davis. (*Ed. question: the four cylinder design?*) Indeed, the broken one was temporarily used while a larger one was being made, that to be succeeded by one made of steel, while a new engine (*Atlas?*) is expected in a few days, three in all, the last an improvement over the second. The conductor, Mr. Sanborn, is entitled to credit for the promptness and generosity to the passengers, refunding fares, besides bringing all down who wanted by the other car. - J. H. H.”

- Boston

Journal - Mon, Aug 2, 1869 pg. 4

July 30th

Built Despite Snow & Bears: A letter to the *Boston Journal* outlines difficulties faced during the construction of the final five hundred feet of the Sky Railway. “In the latter part of May the snow was two feet deep in the vicinity of the depot. Mr. Sanborn took up a gang of men to the summit of the mountain in June, and the remaining rail was were laid in about three weeks. The workmen labored under many disadvantages on account of the winds and the cold weather, even in July. July 1 ice formed to the thickness of three inches at the Tip-Top, and July 3 and 4 were also quite cold. Operations were begun in the spring of last year as early as May 11. A snow squall occurred as late as June 13. There are three or four watering stations along the road, the water being brought from neighboring springs, and also two buildings erected for the shelter of the workmen - one at what is termed Waumbek Junction, and the other opposite the Gulf of Mexico (*Great Gulf*). One of these buildings was broken into last winter by the bears, who, together with wild-cats made sad havoc with a lot of provisions Mr. Sanborn had left there.”

How Much Wood...?: “The Tiptop House, Mount Washington, requires as much wood to burn, during the short season it is open to visitors, as eight horses can haul in a month of constant work. It is cut upon the side of the mountain near the carriage road and has to be hauled six miles. The summit is a cool place and constant fires are required to keep the rooms comfortable.”

- *Ludlow (VT) Black River Gazette - Fri, Jul 30, 1869 pg. 2*

Another Railroad Project: “By a recent act of the New Hampshire Legislature permission has been given for the construction of a branch of the White Mountain Railroad, which now has its termination in Littleton. An extension of this road is already in course of construction, and one section will probably be finished to Whitefield before next winter. The proposed branch will leave the main line at Wing road, about six miles from Littleton, and follow the valley of the Ammonoosuc river to the Fabyan place (nearly down the Notch), and then to the terminus of the Mount Washington Railway, if deemed advisable.”

- *Buffalo (N.Y.) Commercial Advertiser - Fri, Jul 30, 1869 pg. 4*

August 3rd

White Mountain Travel: “The travel in this direction is not yet very brisk, compared with the corresponding period last year, which we presume is owing to the unusual coolness of the season. Last summer, at this season and earlier, we had the hottest weather of the year, and there was almost a rush for the mountains the first week in July. But thus far, the attendance at the Crawford, Profile, Thayer’s and Sinclair, has been somewhat slim, but will doubtless be compensated for during the remainder of the season. The Mount Washington rail-

road works well so far, and gives good satisfaction. It is slow but sure, and an athletic man can beat the train up or down the mountain - yet the man would be tired and the machine would not. People are not obliged to come if they do not wish to, the hotels may lose money, railroad and stage lines may lack travel, but the White Hills are here in all their glory, and will remain forever one of the grandest objects of interest upon the continent. The August dog-days, now upon us, will increase the travel, and the season, though comparatively short, may yet be a brilliant one.”

- *Manchester (NH) Weekly Union* - Tue, Aug 3, 1869 pg. 3 & *White Mountain Republic (Littleton, NH)* - Fri, Aug 6, 1869

August 7th

Stranded by Snow: “The cars on the White Mountain railway were delayed by snow on the 7th of August, and a hundred and fifty people were compelled to pass the night on Mount Washington.”

- *New Bedford (MA) Evening Standard* - Fri, Aug 20, 1869 pg. 1

It is Finished: “The railroad up Mt. Washington is finished and passengers are being transported at reasonable rates. It has a rise of 1700 feet in one mile, and the total rise is 3000 feet in 2¾ miles. It cost \$100,000, and was projected by Mr. S. Marsh of Littleton. The construction of the road was done by Mr. James Sanborn of Lake Village. The engine was planned and manufactured by Walter Aiken, Esq. of Franklin.”

- *New England Farmer (Boston)* - Sat, Aug 7, 1869 pg. 3

August 11th

Wagon Accident: “Mr. H. L. (*Harrison L.*) Davis was driving a wagon load of machinery to the depot of the Mount Washington Railway on August 11th, the wagon went over an embankment and the load fell on top of him. He was injured so severely that his recovery is doubtful.”

- *Bellows Falls (VT) Vermont Chronicle* - Sat, Aug 28, 1869 g. 5

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.” (*Ed note: Davis would survive, would sue the toll road over the accident in 1871, and later became to operator of the Marshfield House hotel at the Base.*)

- *Concord New Hampshire Patriot & State Gazette* - Wed, Aug 18, 1869 pg. 1

August 13th

Axle Broke: “While descending Mt. Washington, recently, the engine axle became broken. The train was stopped in an instant, though the accident occurred on the “ladder,” the worst place in the road, where the rails are on the elevated trestle work with a descent of one foot in three. The occurrence is one which has often caused the most disastrous accidents on railroads. The feasibility of steaming up the mountain had been already proved by many trips, but this incident demonstrated the complete control of the engineer over the train. There are eight different means of controlling and stopping the train, each singly being sufficient to stop it under any circumstances. Besides the control of the engineer, who held it at this time, a brakeman, every watching the relative distance of the car and the engine, has an equal control, both over the whole train or his car alone. The “friction brake” consists of an iron band encircling the whole wheel, the tightening of which must stop it instantly.”

- *White Mountain Republic (Littleton, NH)* - Fri, Aug 13, 1869

August 21st

The “Sky Railway” in Running Order: A visitor to the White Mountains describes Mount Washington Railway, which ascends the mountain in a tolerably straight course, following the general line of the old Fabyan bridle path. The rolling stock is in a much better condition than it was last year. There are two locomotives now in use, and a third is expected from the establishment of Mr. Walter Aiken, at Franklin, this week or next. These are more powerful than those in use last year. A new car has also been constructed. Every competent person who has examined the road and the running machinery, pronounce both as safe as they could possibly be made. The landing place at the top of the mountain is directly in the rear of the telegraph office, and but a few rods from the door of the Tip-Top House.

- *Scientific American* - Vol 21 No 8 - Aug 31, 1869 pg. 4

August 21st

Brief Locals: “*Harper’s Weekly* has an illustrated article on the Mount Washington Railway. Supt. Sanborn, of (*Lake Village*), comes in for favorable mention.” (see next entry) - *Laconia (NH) Lake Village Times* – Sat, Aug 21, 1869 pg. 3

Into Cloudland by Cars: “We started (six of us, including our driver), after an early breakfast at Littleton, hoping to reach the foot of Mount Washington in time for an afternoon train to the summit. Our twenty-mile ride – with the grand mountains before us, changing in form with every turn of the winding road, swelling and subsiding like gigantic sea-waves, as the varying cloud-shadows moved across them – had intensified all our previous desires, and the ladies vowed with great vehemence that to the top they would go though they should do it upon their hands and knees. And so it seemed they must, for when we reached the toll-gate at the commencement of the turnpike, near the old Fabyan stand, the good-natured gate-keeper (*John Varney, perhaps?*), with many sympathizing regrets, said the cars had gone up. A glance at our disappointed faces induced a doubtful “perhaps they may go up again this afternoon.” This, with a tin cup of strawberries which he had just gathered, gave us some encouragement. On we went by the beautiful Ammonoosuc, calculating our chances, and watching the thread on the mountain, scarcely believing it possible anything more than Queen Mab’s fairy coach could descend upon it, but each moment hoping to see the smoke, which would show us the train was descending, and might therefore be ready to take us up. Arriving at the depot (we speak prophetically) a busy scene met our eyes: piles of lumber, newly erected sheds, workmen going and coming and plying the hammer and the saw, but, alas! No cars. We went into the log-cabin, where the ladies were amused to find telegraph-office, store room, parlor, and sleeping room in a curious state of admixture, where we were informed that the Superintendent of the road, Mr. J. J. Sanborn, would soon be down with the train from the summit. We found here Mr. Marsh, the projector of the road, and from him gained some idea of what an undertaking it had been. When, twelve years ago, he applied for a charter from the New Hampshire Legislature, a worthy member proposed to amend Mr. Marsh’s petition by substituting “the moon” for “the top of Mount Washington.” Where is that member, and those who laughed with him? Mr. Marsh obtained his charter, purchased 17,000 acres of land from the base to the summit, broke ground, and built a mile of the road before railroad men could be convinced of its practicability. Then a company was formed, and under Mr. J. J. Sanborn, the present Superintendent, the work slowly but surely progressed. Driven away from their work early in the fall, and not able to recommence until another summer was almost at hand, there were very few weeks of each year in which any work could be done. Last October the laborers were interrupted by a sudden snowstorm without having time to gather up their tools. Under the snow they laid all winter, and not until June could the men go up to lay the remaining five hundred feet of track. In less than a month it was completed; and by the opening of another season there will be a comfortable depot and small hotel at the foot. We took our lunch, sheltered from the sun,



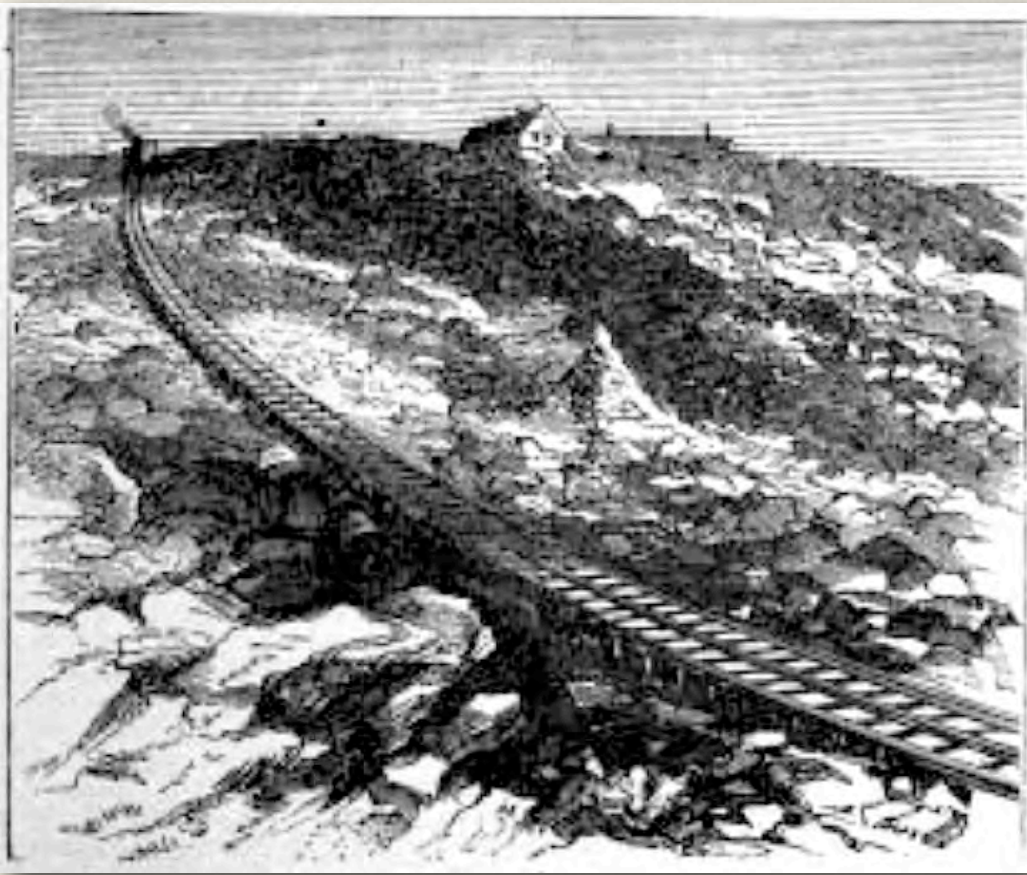
and partially protected from the numerous black flies, in one of the rough buildings put up for the workmen. We availed ourselves of the opportunity to study a little the construction of the cars and track, and carried off some Kilburn Brothers’ admirable stereoscopic pictures, which, transferred by the artist to these pages, give the result of our investigations better than we can do in words. A third track, laid between the other two, is fitted with cogs. A third wheel, both in the engine and the cars, is furnished in the like manner. The teeth of the cog fitting into those of the other propel both car and engine steadily up the steepest grades. It thus differs from the Mount Holyoke Railway, where a stationary engine pulls you up by a long rope, and from the Mount Cenia Railway, where two little wheels, gripping the

third rail propel you by means of friction only.

Looking up the track and realizing that it is really as steep in some places as an ordinary flight of stairs, we almost doubted our courage, and we listened eagerly to Mr. Marsh's kind and detailed explanations of the means which are used to secure the safety of the trains. More than once the ladies shook their heads and turned away from the track, made almost dizzy with looking at from below. Hark! a whistle! We run to see a black dot smoking a very minute cigar. It comes nearer, and, as we see men and women there, we hold our breath, and when they safely reach us, strangers though they are, we fell like congratulating them that they have safely passed through such an awful experience. We are somewhat rebuffed by seeing them



step calmly out upon the platform as if from an ordinary carriage. We are not willing to be outdone, so we think of the atmospheric brakes, of the friction-brakes, of the ratchet wheel, and the cogs, and look very brave. Mr. Sanborn, in spite of some difficulties in the way, most kindly made up a special train. The old and smaller engine, and a common platform-car, with a rough tier of seats upon it, were soon ready. The seats were arranged to be level on an ascent of one foot in five, and when the car is on level ground the seats present that angle. While we were arranging ourselves upon them our predecessors on the road stood by giving us the benefit of their recent experience – counseling sundry tying on of hats, coat-buttoning, and extra wrappings. But the sun is so hot! Never mind; wait and see how long it will be so. We start. There are no words – only looks, one at another, and underhand grasping of the seat; and up, up we go, as if pushed from the earth into the air. No place to step to upon. On a trestle-work, sometimes more than twenty feet high, we seem entirely severed from the earth. The stoutest of the party looks a little pale; but we feel the firm grip of cog upon cog; we remember that the wheel is so clamped upon the pin-rigged middle rail that that neither the engine nor the car can be lifted or thrown off; that the pawl dropped into the ratchet wheel would hold us in the steepest place; that the shutting of a valve in the atmospheric brakes effectually stops the wheels from moving; we look at our Superintendent, who stands composedly watching the engine; his calmness inspires us with courage, and we dare to look off, and then – we forget all fears. We are ascending so precipitately that unless we look directly behind us up the track, we seem to go up from the middle of a great valley. Hills and valleys, streams and lakes and distant villages, spread out before us with a wonder of beauty that beguiles us of all fear. Suddenly we become conscious that there are no more black flies. The sun seems not quite so hot. Our wrappings are not quite so oppressive. The trees are not so large. We are still creeping up, up. There are no level places. When we stop to water the engine, it is on a steep grade, and we wonder whether we shall not go whizzing down. But no! We start again, and still up we go. The horizon extends. The trees appear smaller. The flowers are such as bloomed with us two months ago. Admiration gives place to awe. There is no room in our hearts for fear. We care not if wind is chilly – we drink in the wonder. Another stop for water. There is some consultation between Superintendent and workman. Water is short. Why? Frozen up. Frozen up in July? Sure enough soon we come to a laborer with red, cold hands, who reports frozen ground only a foot below the surface. Think of it, you who were sweltering in the city. But look off: Yonder are distant lakes, lifted up by the sunlight. The mountains about shrink into small hills, and still we are not at the top. It begins to feel damp. We come to a cloud. What is it like? Like rain? No. Like fog? No. We are saturated, permeated with moisture. It seems almost to drive through us. But now it lifts and how gloriously the sun lights up the valleys! There are no trees about us, only dwarfed attempts at trees. Now only moss-covered rocks, no bare rocks. Just beside us winds the carriage road. Now we pass poor Lizzie Bourne's crude but most appropriate monument. Now are at the top. Cloud-wrapped, we see nothing more than rocks just about us. Stepping of the car we are almost thrown down by the



wind, tightly drawing our wraps about us, shutting the driving water out of our eyes, we scramble to the Tip-Top House, and by the blazing fire we have time to consider what we have done. In an hour and a half we have climbed by steam a ladder nearly three miles long. We have ascended in that time over 3,000 feet. We are more than 6,000 feet above the level of the sea. We have passed from the atmosphere of July to that of January. The stunted vegetation just below is not that of New England. It is the vegetation of Labrador. Shall we dare to go down again, to drop, in some long grades, at the rate of one foot in three? The Superintendent tells us that a car set free would make the descent in less than three minutes. We shudder at the bare thought. He tells us that he can load that car with stone, adjust the brakes, and leave it without a man to operate them, and it will

make the descent in safety. We are reassured. There are the atmospheric brakes – if one gives way there are three more to hold; there is an ordinary friction brake with which the engineer tells us he can stop the train in four inches; there is the ratchet-wheel that stops it instantly; and there is the steam in the engine, never used in descent, but always ready as additional protection; and, finally, the mechanism is so adjusted that it seems as though not even carelessness in the engineer could well be fatal. It is only the novelty of the situation which inspires fear. That novelty is already gone. And after a good breakfast we descend the mountain-side, exchanging the piercing winds and yet more penetrating clouds for sunlight, throwing off our wintry wrappings, coming from the region of barren rocks to that of stunted vegetation, and from that of stunted vegetation to that of noble forest trees, with less tremor than we often have experienced on the top of an old-fashioned stage among the precipitous hills of Maine.”

- *Harper's Weekly* – Aug 21, 1869 pg. 533 & 534

August 26th

MWR Receipts: “The Mt. Washington Railway is a success, and the enterprising men who projected and carried it through, are reaping the well-merited reward of their labors. The daily receipts from passengers in pleasant weather since the opening of the road, have averaged from \$300 to \$600 (~\$6,034 to \$12,069 today). One day last week, 100 persons from the Crawford House alone, passed over the road.”

- *The Amherst (NH) Farmers' Cabinet* - Thu, Aug 26, 1869 pg. 2

August 27th

President Ulysses S. **Grant** and his family **ride** the *George Stephenson* and newly built car **to the summit**. An S. F. Adams, of New Bedford, Massachusetts, stereoview (*right*) shows President Grant and his party at the summit of Mt. Washington, N.H., on August 27, 1869. Grant's wife, son, and daughter are all identifiable, as well as others such as New Hampshire senator George G. Fogg. Tom Boyce says ancestor Patrick Boyce met Grant. A 1955 *New York Times* article comparing President Dwight Eisenhower's White Mountains visit to Grant's notes that while Eisenhower will travel that summer with a large group of Secret Service, press, communications officers and White House staff along a route conceived, planned and investigated weeks in advance, President Grant came with one aide, a



private secretary and two servants and he arrived on a half-day's notice that left New Hampshire officialdom scrambling. <http://www.cog-railway.com/03timeline.htm>

President Grant in the White Mountains: “The President and party arrived in Littleton by special train, at 3 o'clock, on Thursday (8/26) of last week. A large number of people congregated at the depot to meet him, among them being many from towns twenty miles distant. He at once entered a barouche driven by H. P. Thayer, and was taken to Thayer's Hotel, where he was introduced to the people from the balcony. He made no remarks, but bowed his acknowledgments, and immediately returned to the depot...” “...and the party started in coaches for the Crawford House. Upon the arrival of the party at Bethlehem there was a lively demonstration in honor of the distinguished visitor. The display was exceedingly fine. A half hour's halt was made at the (Sinclair House), during which time a lunch was partaken of. Upon leaving Bethlehem the President and Mrs. Grant preceded the rest of the party as far as the Mountain House in Carrol – eight miles further on – the President handling the reins over a handsome pair of horses owned by Hon. John G. Sinclair. They arrived at that point some little time in advance of the stage coaches. When these came up Mrs. Grant resumed her seat in one of the coaches, while the president was driven the remainder of the way to the Crawford House by Mr. Lyon, arriving, here a few minutes after eight o'clock, the others coming through half to three quarters of an hour later. (S)hortly after nine o'clock the party sat down to an elegant supper. Friday (8/27) morning the President and party made the ascent of Mount Washington, by the Steam railway, having previously visited the Notch and other objects of interest. The journey up the mountain was delightful, although cold weather was encountered some time before the Tip Top was reached. The atmosphere was very clear and scarcely a cloud dimmed the sky. The view of the surrounding peaks and of the most distant scenery was unobstructed. The novel mode of traveling was also enjoyed by everyone, but by no one more than by President Grant, who exhibited a lively interest in all that related to the road or the mountains.

At the first watering station, a short distance below Waumbek Junction, the party were photographed (*right*) by Kilburn Brothers, the President and family forming the prominent features of the group (*on the platform at left of image*). As the car neared the summit a salute was fired with a cannon brought up the day before for the purpose. The trip from the depot to the summit occupied one hour and twenty minutes. The party proceeded at once to the Tip-Top House, where



*President Grant (3rd from left) with his wife & party at Waumbek (1869)
- Kilburn Brothers image / Littleton Historical Society Collection*

a fire restored warmth and comfort to those who had found a temperature at 44 degrees the reverse of these conditions, and a dinner provided by John R. Hitchcock, Esq., landlord of the Summit House and of the Alpine House, Gorham, was the next feature of the program. The party left the summit at 2 p.m. A strong north-west wind prevailed on the mountain, making pedestrianism about the rocks an exceedingly difficult matter, but this did not deter the President or Mrs. Grant from enjoying the magnificent views to be had, and all the best points of observation were visited by them. The atmosphere was clearer than it had been for a long time, and probably no better day for a visit could have been picked out with a whole season to select from. The President was much pleased with the excursion, and everything pertaining to this great triumph of mechanical and engineering skill over difficulties of mountain climbing appeared to interest him much.” “In driving back to the Crawford House from the foot of the mountain, the whiffletree bolt of the President's carriage broke, and when the rest of the party overtook him, he had brought his horses to a standstill and was busily engaged in repairing the damage.” “Making a brief stop at Bethlehem, the party reached the Profile House, Franconia Notch, early in the evening. After supper a reception was held, and on Saturday morning they left for Bellows Falls and Saratoga, via Littleton. The visit of President Grant is the fifth visit of any President to New Hampshire; - Monroe, Jackson, Polk, and Pierce having visited the state during their term of office, and the first visit of any President to (Coös) county.” - *White Mountain Republic (Littleton, NH) - Fri, Sep 3, 1869 / Lancaster (NH) Coös Republican - Aug 31, 1869 pg 2*



The Grant Ascent: “The ascent of Mount Washington over the railway formed the most interesting feature of the entire excursion. In this work President Grant has manifested much interest, and when he accepted the invitation to visit New Hampshire he remarked to a gentleman that he was glad to do so in order that he might see the road. As he arrived at the base of the mountain some time in advance of the rest of the party, he had ample time to examine quite minutely both the running-gear and the track. Mr. Sylvester Marsh, the projector of the road and its President, Mr. J. J. Sanborn the Superintendent, and Mr. Walter Aiken, who is one of its Directors as well as the constructor of two of the engines and some of the other rolling stock, were present, and explained the peculiar principle and operation of the railway to the General. In the trip up the mountain Mr. Aiken officiated at the important post of brakeman. In addition to Messrs. Marsh and Aiken, four other directors of the road were also with the President’s party, viz: Governor Stearns, Mr. Lyon, Mr. White and Mr. Keyes. After the party were all on board the car the signal was given, and the train began to creep up the mountain. It started off at a rate of speed somewhat greater than is usually attained, and this was kept up through the whole trip, the time occupied in reaching the summit being one hour and twenty minutes, including several stops for fuel and water, one of which was prolonged by picture taking operations (*at Waumbek*). Upon starting from the bottom, the car at once enters upon a very heavy grade – one foot in three – the heaviest, in fact, of any on the whole line, save at a particular point just above Jacob’s Ladder. The President as well as all the rest of the company regarded this novel style of locomotion apparently with the fullest interest, and he afterward pronounced the road a wonderful work. The car with its precious freight soon emerged from the forest covering the lower part of the mountain into the region of the stunted trees and shrubs, and the view toward Jefferson and beyond – up the valley of Israel’s river – is gradually opened in all its loveliness. The atmosphere is found to be remarkably clear and the day seems in every way most admirably fitted for the visit to the summit, although a little cool weather is promised, and we may as well add here that the predictions in regard to this matter are at length verified. As we rise higher and higher the view becomes more and more sublime. By a singular effect the distant mountain peaks appear to ascend to a greater altitude as we crawl upward. The vast forests at the foot of Mt. Washington have the semblance of green fields and here and there, miles away, glisten little streams, like broken threads of silver. Even the large trees in the valley beside us appear like mere shrubs, but the huge shoulder of Mt. Clay rises on the other side like a giant wall. To the south, and near at hand, are the grand peaks which support Washington on the east – Franklin, Monroe, Pleasant and Clinton. Surrounding objects when viewed from the car, such as the water tanks beside the road, the station buildings – of which there are one or two on the line – and the trestle work supporting the rails over “Jacob’s Ladder,” have the appearance of being tipped up out of their proper, perpendicular position, this phenomenon arising, of course, from the inclination of the car itself. Soon we approach the masses of broken rock and leave arboraceous vegetation behind us altogether or rather not exactly behind us, for the seats are so arranged that we are looking back down the mountain. As we come in sight of the Tip Top and (*1st*) Summit Houses, a salute is belched forth from a little cannon stationed on the rocks just below, but the noise is not much greater than the report of a pop-gun when first heard, from the fact that the gun is so far above us. The slamming of the car door – were the vehicle only provided with one – would make a far greater noise than the cannon firing. We peer down the depths of the Gulf of Mexico (*later Great Gulf*), and then turn with sad feelings toward the rude monument marking the spot where Lizzie Bourne perished, which stands so near the rack that the passengers can reach out and almost touch the topmost rock. Frozen ground and also ice are found before the top is reached, and the mercury indicates a temperature of 44 degrees at the summit, a strong northwest wind making the chilliness still

more penetrating. The fire which is always found burning in the office and sitting-room of the Tip Top House, is found a genuine comfort.”

- Concord (NH) Independent Democrat - Thu, Sep 2, 1869 pg. 2



Benjamin W. Kilburn with stereocamera
- N.H. Then and Now FB

Summer 1869

Photographic Wanderings on Mount Washington: “Our vacation this year was spent in company with our friend, Mr. B. W. Kilburn, of Littleton, N.H., in exploring the beauties and wonders of that magnificent (Granite State) range. Mr. Kilburn (*left*) has been familiar with the White Mountains since childhood. For twenty-five years or more he has trailed for trout in their lakes and torrents, chased the wild game through forests and over the snows, and, latterly, has occupied much time in making negatives of the endless variety of scenery there, for the stereoscope. He was therefore, a good guide as well as a congenial companion. Littleton is about twenty-five miles away from Mount Washington. Yet on a clear day, from a hill back of Mr. Kilburn’s residence, the Tip Top House on the summit of Mount Washington, and the Railroad cut, may be plainly seen with the naked eye, together with innumerable peaks intervening. We started before four o’clock in the morning. All the garments available were needed to protect us from the cold. The stars were shining brilliantly, and no sound broke the silence but that of the noisy, every-busy Ammonoosuck [sic], as it sped along to give power to the innumerable mills on its banks. As we drove along, morn began to gather up from the valleys the misty

mantles in which night had clothed them during the chilly hours of darkness... Soon, feeling the influence of the coming day, the misty veils gently rose to meet the sun, whose bright rays now flashed upon the mountain tops, lighting up their peaks with vivid gold, while the valley around us still lay shrouded in the dimness of early dawn. Morning in its pure glory was soon upon us, and for hours we drove... reaching the base of Mount Washington at about half-past ten, in good time to make the ascent via the railway. And now, as this railway is the subject of our picture, while, in obedience to the telegraph, we wait the arrival of some dilatory passengers from the hotels below. The photograph (*right*) was made a few rods up the road from the depot at the base of the mountain. There are thousands of more beautiful views in the country surrounding, but none more interesting. The line of the road is cut right through the forest (the remains of which lie on each side waiting to serve as fuel for the locomotive. A ride in this railway is one of the things which every American should experience before he dies. and now, the dilatory passengers having arrived, let us make the ascent. Before you get to the summit, the mountain for a mile around looks just like it. We reached the highest point by climbing to the top of a pile of rocks. The week before we were there, a foot of snow lay upon the rocks, and two inches of ice hung upon the telegraph wires. We found Mr. S. F. Adams, of New Bedford, Massachusetts, on the summit, making photographs of the visitors. The descent was as interesting. as the ascent. Just below the summit, the engine stopped for water. With Mr. Kilburn, we got off to take a peep down the Great Gulf. Imagine yourself looking down, perpendicularly, nearly half a mile; merely peeping over, while your companion braces himself and holds on to you, and you will have an idea of the Great Gulf. Arriving at the base safely again, a long drive to the Crawford House was the next thing in order. Mr. Kil-



1869

burn has made the most prominent points (of the White Mountains) familiar to many, by aid of his camera, and has a most charming series of views. Long may he live to photograph his native hills, and delight us with the doings of his camera. He is an enthusiast. He loves his business, and his work is excellent.” - by E. L. Wilson

- *The Illustrated Photographer* - Dec 24, 1869 pg. 575-6 & Jan 14, 1870 pg. 605-607

September 9th

Sanborn's Labors Described: “The means of ascending Mt. Washington was invented by Mr. Sylvester Marsh of Littleton, and the road has been constructed under charge of Mr. J. J. Sanborn, a man of great experience and skill in the business. The depot at the foot of the mountain is six miles from Fabyan place, or seven miles from the White Mountain House, the approach to it being over an excellent turnpike for the this region, leading from the former point, where it is proposed to build another hotel soon. The turnpike runs along the banks of the Ammonoosuc river, and directly by the main (*Upper*) falls, which are a great attraction for all visitors. The railroad was completed last year except about 500 feet (*to the summit*). Mr. Sanborn could not recommence work as soon this season as last on account of severe weather. In the latter part of May the snow was two feet deep in the vicinity of the depot. Mr. Sanborn took a gang of men to the summit of the mountain in June, and the remaining rails were laid in about three weeks. The workmen labored under disadvantage on account of the winds and cold weather even in July. July 1st ice formed to the thickness of three inches at the Tip-Top House, and July 3d and 4th were cold. Last fall the work was carried on up to Oct. 16, when 18 inches of snow fell, driving the workmen off. Work commenced last year (*1868*) May 11. Some of Mr. Hitchcock's people drove up the mountain from the Glen House side on the 10th of June to put the Tip-Top and Summit houses in order, and a large snowdrift 30 ft. wide had to be leveled before the road could be made passable. – The first visitors this year are recorded under date of June 11. A snow squall occurred June 13. The railroad ascends the mountain in a tolerably straight line, following the general course of the old Fabyan bridle path. The depot is 2685 ft. above the level of the sea, or 1117 ft. above the White Mountain House. This leaves a grade of 3600 ft. to be overcome, as the height of the mountain is 6285 ft. above the level of the sea. The length of the road is two miles and thirteen sixteenths. The heaviest grade is 13 inches to the yard, and the lightest one inch to the foot. A part of the course is over “Jacob's Ladder,” the zig-zag portion of the old bridle path lying just above the point where the trees are left behind. The railroad takes a generally straight line, however, curving lightly, only, to maintain a direct course. The rolling stock is in much better condition than it was last year. Two locomotives are now in use, and a third expected from the establishment of Mr. Walter Aiken, at Franklin. These are more powerful than those used last year. A new car has also been constructed. The upward trip now takes about one hour and a fourth, the downward journey occupies about the same time. The locomotive pushes the car before it up the decline, both running up on three rails. The center one being a cog rail. The engine and car are kept upon the track by friction roller under the sides of the cog rail, and the appliances for stopping the descent are ample. By means of atmospheric brakes either the car or engine could be sent down alone at any given rate of slowness, and there are also hand-brakes operating with equal directness upon the central wheel, together with other means for governing the machinery of locomotion. Every competent person who has examined the road and the running machinery pronounce both as safe as they could possibly be made. The landing place at the top of the mountain is directly in rear of the telegraph office, and but a few rods from the door of the Tip-Top House. Near the top the track passes within a few feet of the rude monument which marks the spot where poor Lizzie Bourne of Kennebunk, Me., met her sad death in 1855. There are three or four watering stations along the road, the water coming from neighboring springs, and also two buildings erected for the shelter of the workmen – at what is termed “Waumbek Junction,” and the other opposite the “Gulf of Mexico.” One of these buildings was broken into last winter by bears, who, together with wildcats, made sad havoc with some provisions Mr. Sanborn had left there.

- *The Amherst (NH) Farmers' Cabinet* - Thu, Sep 9, 1869 pg. 1

September 25th

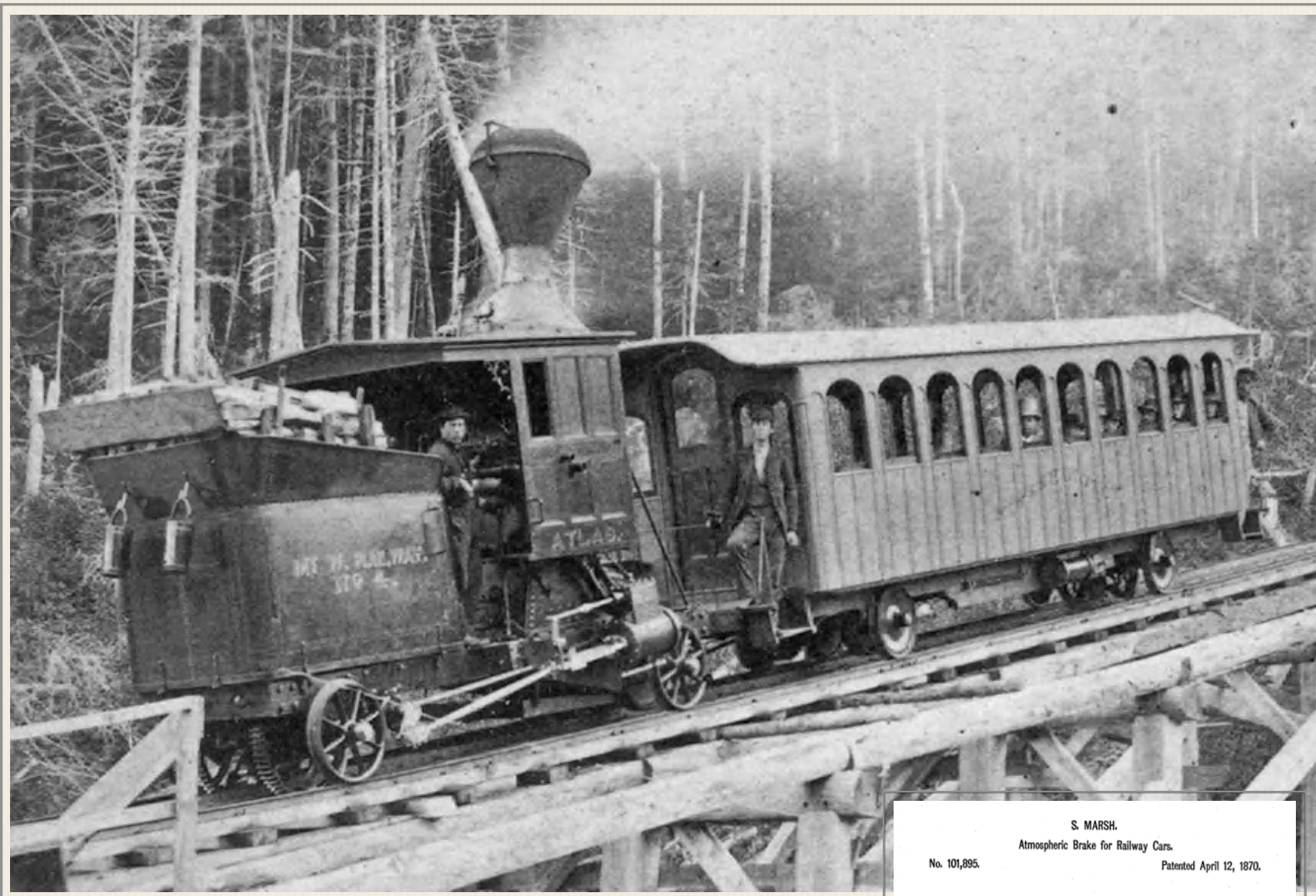
Railway Route Filed: “The undersigned having been duly appointed and authorized for that purpose, for and on behalf of the Mount Washington Railway Company, a corporation duly established in the State of New Hampshire, have located the route for the road and laid out the road of said Company as follows – Commencing at a stake and stones set in the ground about fifty four feet northwesterly from the northwesterly corner of the stable lately erected by said Company, near the base of Mount Washington and on the westerly side thereof, and running thence from point to point in succession for the distances in feet and on the lines and courses hereinafter specified and which are intended to describe a central guiding line of said location and road; and said

location and road extends on the right and left sides of said guiding line to the widths in feet therefrom, for the effective distances mentioned, and include the quantities in square feet of land within said widths and distances, hereinafter specified. The owners of the lands included within the above described limits of said location and road are not known to the undersigned or to said Company and cannot be stated in whole or any part. And return of said location and road as aforesaid is hereby made to the office of the Secretary of State of said State of New Hampshire as required by law. - John E. Lyon, Walter Aiken & Nathaniel White. Recd & filed Sept. 25, 1869” - *New Hampshire State Archives*

October 22nd

Not Injured: “The Mount Washington railroad suffered no damage during the late storm. A woodshed at the depot, blown down, was all the damage done.”

- *White Mountain Republic (Littleton, NH) - Fri, Oct 22, 1869 & NH Patriot & State Gazette - Wed, Oct 27, 1869 pg 2*



1870

Locomotive #3 - Atlas is **built** with upright boiler (*above*) Passenger coach is seen with Marsh air brake system (*right*) installed

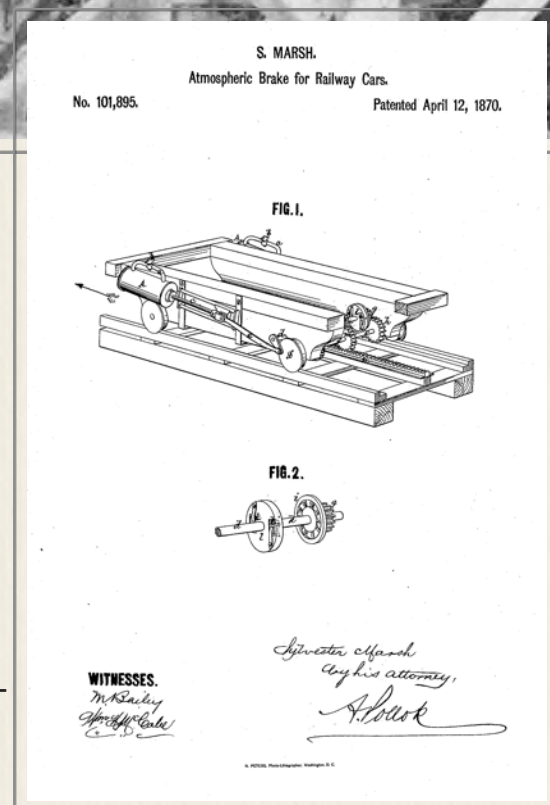
January 2nd

Build One for Us?: “Sylvester Marsh, the projector of the Mount Washington Railway, has received a letter from the Swiss Government inviting him to go to Switzerland and superintend the construction of the road to the top of Rigi.”

- *Laconia (NH) Lake Village Times - Sun, Jan 2, 1870 pg 2*

April 12th

Patent No. 101,895: Improvement to apparatus for descending gradients Patent No. 44,965 of Nov 8, 1864. “In the practical operation of this apparatus I (*Sylvester Marsh*) have found that although in the upward



1870

travel of the car the valves or faucets are left open, yet it takes some power to move the piston and small gears used in the apparatus. For these, under my former arrangement, must move with the wheels, as it would be dangerous to uncouple them, because they are needed for instant use in case any accident should happen during the ascent. My object in the present invention is to so combine the coupling devices with the piston or pistons, that the latter shall remain at rest during the ascent of the car, and yet be ready for instantaneous operation should any accident occur which might otherwise cause the car to descend. To this end I combine with the car-axle and wheels, and the piston or pistons and their couplings, a ratchet and pawl, clutch, or equivalent device, operating to permit the free rotation of the wheels during the ascent without communicating motion to the piston, and in case of the reverse movement or descent of the car, to at once throw the pistons in communication with the wheels, for the purpose of retarding or of completely arresting their movement, as may be desired.”

May 11th

MWR Stockholders Meet: “The annual Meeting of the Stockholders of this Corporation will be held at Eagle Hotel, in Concord, N.H., on Wednesday, the 11th day of May, instant, at 4 o’clock P.M. to choose a board of Directors and to transact such other business as may legally come before the meeting. By order of the Directors, Charles Lane, Clerk. dated: Laconia, N.H., May 2, 1870”

- *New Hampshire Historical Society Collection*

May 21st

Directors Chosen / T-Rail Experiment: “At the annual meeting of the Mount Washington Railroad Company, at Concord, on Wednesday last, the following directors were chosen: Sylvester Marsh, John E. Lyon, Nathaniel White, Josiah Minot, Onslow Stearns, Henry Keyes and Walter Aiken. Mr. Marsh was elected President, Mr. Lyon Treasurer, and Charles Lane of Laconia, Clerk. It was voted to lay a small portion of the road with the T-iron rail, as an experiment.”

- *Vermont Chronicle (Bellows Falls, VT) - Sat, May 21, 1870 pg 4*



June

New Hampshire Railroad Commissioners Report: Contains no mention of Mt. Washington Railway. **Railway operates** with regularly scheduled runs. Locomotive fleet is now 3. Second rebuilt engine, *Geo Stephenson* seen at left.

<http://www.cog-railway.com/03timeline.htm>

July 29th

Good Season So Far: “The Mount Washington Railway is proving a great success this season. This wonderful structure has been patronized by a great proportion of the Mount Wash-

ington climbers, and not an accident or a detention has occurred so far, which, when it is remembered that at many points the grade is 1,900 feet to the mile, is wonderful. The largest party taken up at one time was 84, today, who found a perfect day throughout, not a cloud to obstruct the view from morning till night.”

- *New York Tribune - Fri, Jul 29, 1870 pg 3*

August 1st

New Car Smell?: “On Monday (8/1) the Mount Washington Steam Railroad Company inaugurated a new car called the *Mount Washington* (seen with new locomotive *Atlas* previous page), which left the depot on the west side of the mountain about 11 o’clock and arrived at the Tip-Top House at half-past twelve, taking a special party. Superintendent John W. Dodge conducted the car, and Walter Aiken, inventor of the three engines used on the railway, took charge of the locomotive.”

- *Rutland (VT) Weekly - Thu, Aug 4, 1870 pg 1*