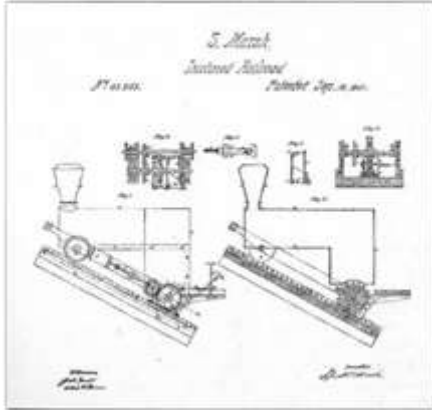


## Great engineering feats of The Mount Washington Cog Railway, “Railway to the Moon”

The first mountain-climbing cog railway was conceptualized by businessman and inventor from NH, Sylvester Marsh in 1858. The concept of the mountain-climbing cog railway was such a radical invention, when Marsh approached the NH Legislature for a charter to build the Cog, he was mocked that a provision to build a “Railway to the Moon” should be included.



The Cog Railway was built by hand in the rural region of the White Mountains. Marsh’s design (pictured at left) for a cog-wheel based locomotive was built to go 2.8 miles up Mount Washington, the highest peak in the Northeastern United States. It is famous for being the home of the world’s worst weather with an average summit wind of 37 mph and the highest recorded wind speed ever taken at 231mph. At least 135 lives have been claimed by Mount Washington over the years. Its weather is compared to that of Labrador of North Eastern Canada, and mountains four times its size.

Oxen and wagons hauled 230 tons of track from Littleton, NH, the nearest rail town, to the Base Station Road, a distance of 30 miles. The wooden ties and trestles were cut from the forest land the railway lies on and hauled up the mountain. To this day, there are no other railroads that have an average climbing ascent of 25 degrees with a peak of 37.4 degrees.

Now that the train could ascend the mountain safely, the problem of getting back down was addressed. Because of the intense grade, in 1864 Sylvester Marsh designed and patented possibly his most important invention, the “atmospheric brake” or airbrakes, by the compression of air in the cylinders of the descending locomotive, which is still used today on many cog railways.

Today, the Cog still utilizes the steam trains of the Marsh era to pay tribute to its historical roots, but also has a new fleet of eco-friendly biodiesel locomotives, which run in part off the recycled oil from the Cog kitchen. Conceptualized and built entirely on-site by chief engineer Al LaPrade, manager Charles Kenison and the railway crew. The Cog is currently in the process of building its fifth biodiesel locomotive in the shop on premises, slated to be finished late Summer, 2013.



The Mount Washington Cog Railway has stayed in private ownership and in operation consistently for over 144 years. It has adapted to and overcome adverse opinion, the Great Depression, the Hurricane of '38, and the changing times to be one of New Hampshire’s most successful historical attractions. The Boston Transcript called the Mount Washington Cog Railway at its inauguration in 1868, “One of the greatest wonders of all time.” It can certainly be argued that this is still true today.