

Carolina Conductor



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Monthly Newsletter of the Carolina Railroad Heritage Association, Inc.

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Preserving the Past Active in the Present Planning for the Future

Web Site: hubcityrrmuseum.org

Facebook: Carolina Railroad Heritage Association & Hub City RR Museum

Meeting Site:

Woodmen of the World Building
721 East Poinsett Street
Greer, SC 29651-6404
Third Friday of the Month at 7:00 p.m.

Hub City Railroad Museum and SOU Rwy Caboose #X3115:

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Spartanburg, SC 29301-2330
Wednesday 10-2 & Saturday 10-2

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Pikes Peak Cog Railway

The Broadmoor Pikes Peak Cog Railway (also known as the Pikes Peak Cog Railway) is an Abt rack system cog railway with 4 ft 8 1/2 in standard gauge track in Colorado, United States, climbing the well-known mountain Pikes Peak. The base station is in Manitou Springs, Colorado, near Colorado Springs. The railway is the highest in North America by a considerable margin. It was built and operated for the tourist trade following its use by people who lived above the town below.

The railway was started by Zalmon G. Simmons, inventor, and founder of the Simmons Beautyrest Mattress Company. The com-



pany was founded in 1889 and limited service to the Halfway House Hotel was started in 1890. On June 30, 1891, the first train reached the summit.

A number of steam locomotives were built for the line by the Baldwin Locomotive Works, all rack-only locomotives with steeply inclined boilers to keep them level on the average 16% grades. Operating steam locomotives on such a line was back-breaking work and expensive, so when more modern forms of traction became available, the railway was eager to modernize.

A gasoline powered railcar #7 was constructed in 1938. It was designed to be a cheaper alternative to the steam



Steam powered train climb a steep grade.

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Museum Happenings



Pat working on antenna installation. →

← Sometimes it is a frosty start in the mornings.



1. 4x4 Stringer with plywood spacer to go over rivets. →

2. Tongue & Groove Plywood

3. Foam Insulation

4. OSB Subfloor



Caboose interior with studs waiting for installation. ↑
Duane putting in the last of several hundred screws in the floor sandwich of plywood, insulation, and OSB. →



Wanted—Articles for the Carolina Conductor

Submit an article of 200 words or more with some photos and captions and see them in print. Every one of us has some unique railroad experience that would make interesting reading for our membership. Your editor always needs more contributions of local railway history and news.

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locomotives enabling economic service during quieter times of the year. Proving a huge success, the railway soon bought more internal combustion engined trains. This car is still on property having been re-engined with a more modern Cummins diesel.



Lever drive used on steam locos.

The next were five 'streamlined' diesel locomotives from General Electric, which were equipped with matching passenger cars, acquired from 1939 onward. These slowly supplanted the steam locomotives, though some steam operations persisted until the 1960s as backup power and to operate the snow-clearing train (where their



Early internal combustion cars at Colorado RR Museum.

greater weight meant they were less likely to derail). Several of the steam locomotives are now on static display, in Manitou and elsewhere, and the Railway still

has an operational steam locomotive #4 and an original coach. The steam locomotive was put out of service for many years before being retrieved from a museum and brought back to service in 1980.

In 1964 the railway needed more equipment, but General Electric was not interested in the business. The railway went abroad, to Switzerland, home of most of the world's cog railways. In 1964, the Swiss Locomotive and Machine Works in Winterthur provided two bright red railcars (railcars contain a seating compartment as well as engineer stand, eliminating the need for a separate pushing locomotive), very similar to equipment used on many Swiss railways. Unit #14 was delivered in 1964 with a pair of air-cooled, 8-cylinder diesel engines that proved to be less than satisfactory on the railroad above tree line. Unit #14 was returned to Switzerland and redesigned to have facilities for water cooling. Unit 14's



Self-powered Swiss built railcars at the summit.

twin, Unit 15, was also rebuilt to house a pair of water-cooled Cummins 724's. Two more (Units #16 and #17) were built in 1968 to increase the railroads capacity. All four of these units eventually received new Cummins 855 diesels. As of 2017 all four original Swiss trains are still in operation at the Manitou and Pikes Peak Cog Railway.

As tourism increased in the 1970s the railway needed more capacity. In 1976 M&PPRy took delivery of two larger two-car articulated railcars from the Swiss Locomotive and Machine Works of Winterthur, designated Train #18, and Train #19. Passing sidings were

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built in several places at about the same time, allowing trains to pass at various points on the mountainside. Trains could previously pass only at the Mountain View siding, permitting only three trains a day up the mountain. Eight trains per day became possible with

added if there is sufficient demand.

The railway was usually closed from mid-December through mid-March unless the snowplows were able to clear the line, but in 2006 the railway began year-round service. The winter service varies according to demand:



the new equipment and sidings (two additional larger railcars were delivered from SLM; Unit #24 in 1984 and the last, Unit #25, in 1989).

Rolling stock on the M&PP Rwy consists of four 214-passenger articulated Swiss-built railcars, four 78-passenger Swiss-built railcars, four GE built locomotives (one being rebuilt in 2017 to modern specifications), one snowplow (#22 - built upon the frame of a GE locomotive), one 23-passenger diesel railcar (#7), one steam locomotive (#4 - built by Baldwin), a Winter-Weiss "streamliner" coach, and an original Wasson wooden coach (#104). Only the Swiss-built railcars carry regular passengers. The steam locomotive and passenger coaches are used on rare special occasions but can no longer make it to the summit due to the demolition of most water towers on the line.

As of 2017 the railway owns enough equipment (railcars and snowplows) to run six to eight trains per day from mid-May through mid-September. During "off-peak" months (mid-September through mid-December and mid-March through mid-May), from one to five trains are run per day, with additional trains

in January, for example, trains run once a day on weekends and holidays. These Winter operations were suspended on October 29, 2017, for maintenance to the railway. In March 2018 it was announced that the railway would remain closed indefinitely while feasibility studies are completed.

On June 13, 2018, the Manitou Springs City Council approved a pair of tax incentives to fund repairs of the railway. On November 29, 2018, it was announced that the tax incentives had been approved, and that reconstruction would begin in Spring 2019 for a projected 2021 reopening; the project will see all track replaced, the Manitou Springs depot remodeled, and Cars #14, #16, and #17 retired (Car #15 will be retained for maintenance-of-way duties) in favor of three trainsets manufactured by Stadler Rail; the Stadler order consists

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of three locomotives and nine passenger cars, marking a return to locomotive-hauled trains; Cars #18-#19 and #24-#25 will be refurbished and remain in service.



↑ New summit visitor center under construction.

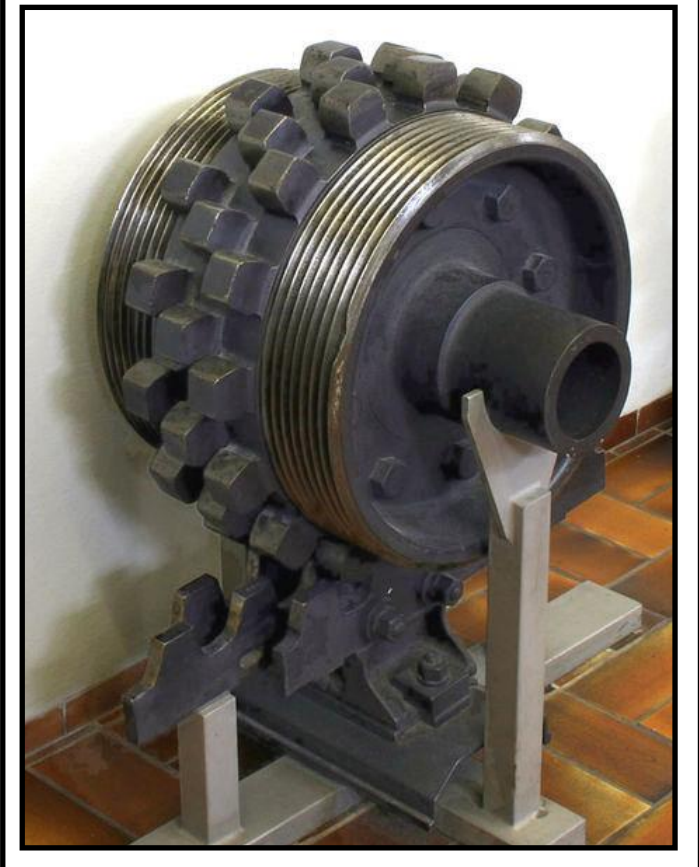
↓ New Swiss cars being unloaded at Manitou Springs.



The Abt system was devised by Carl Roman Abt, a Swiss locomotive engineer. Abt worked for Riggenbach at his works in Olten and later at his IGB rack locomotive company. In 1885, he founded his own civil engineering company.

During the early 1880s, Abt worked to devise an improved rack system that overcame the limitations of the Riggenbach system. In particular, the Riggenbach rack was expensive to manufacture and maintain and the switches were complex. In 1882, Abt designed a new rack using solid bars with vertical teeth machined into them. Two or three of these bars are mounted centrally between the rails, with the teeth offset.

The use of multiple bars with offset teeth ensures that the pinions on the locomotive driving wheels are constantly engaged with the rack. The Abt system is cheaper to build than the Riggenbach because it requires a lower weight of rack over a given length. However, the Riggenbach system exhibits greater wear resistance than the Abt.



Spartanburg Depot Restoration

The following was taken from the study done prior to restoration of the building that our Hub City Railroad Museum is located in.

The Railroad in Spartanburg

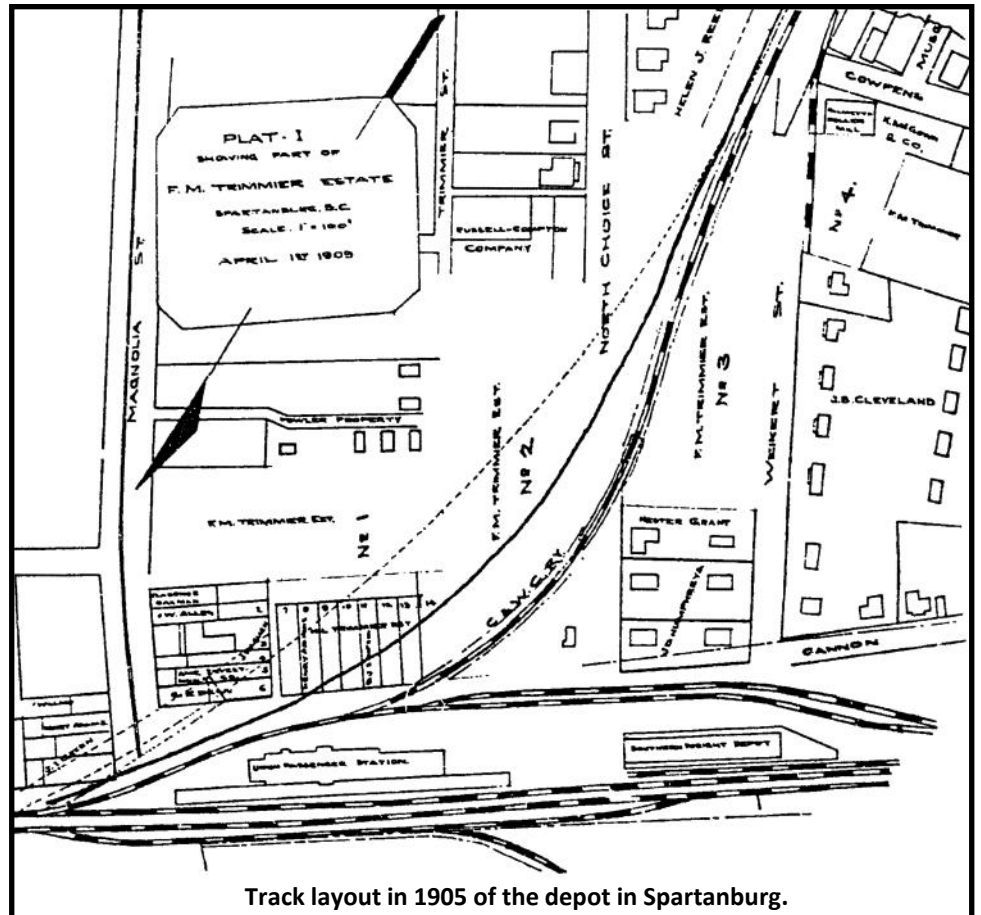
Chronological history of the Spartanburg depot.

- 1849 Charter secured for Spartanburg-Union Railroad
- 1854 First Property Purchased from James Sorrow & Spartanburg-Union Railroad
- 1859 First Train pulls in Spartanburg on November 25 at 1:00 PM. A barbecue is held with speakers, dignitaries, and a band from Unionville.
- 1859 November 26 – A railroad convention is held to consolidate the Cincinnati, Cumberland Gap & Charleston Railroad, the Greenville (Tenn.) & French Broad Railroad, & the Spartanburg-Union Railroad
- 1866 A discussion to continue the railroad to Asheville and a railroad from Spartanburg to Charlotte as one link from New York to New Orleans
- 1868 July – link Spartanburg-Union Railroad to the Block House
- 1871 September-October – Citizens securing a railroad through Laurens from Spartanburg to Augusta
- 1873 March 31 – First train from Charlotte pulls into Spartanburg
- 1874 September 7 – Meeting and Barbecue celebrating ground breaking at the junction of the Spartanburg-Union and Air Line railroad
- 1876 Spartanburg & Asheville railroad begun.
- 1885 Port Royal and South Carolina Railroad from Spartanburg to Augusta began operating
- 1904 Opening of the Magnolia Street Depot
- 1925 Spartanburg is one of the strategic junction points in the Southeast. A new slogan “The

Hub City of the Southeast” echoes the 1888 slogan “Hub City of the Piedmont”
 1973 Main Terminal razed

The first rail service was provided by the Spartanburg & Union Railway in 1859 out of Columbia. The Atlanta & Charlotte Air Line mainline, built in 1873, offered service east and west. A railroad northwest over Saluda Grade to Asheville and Knoxville, the Spartanburg & Asheville Railroad was completed to Hendersonville in 1879. These lines later became Southern Railway mainlines.

Spartanburg thus straddled two southern Railway mainlines and was perhaps unique in that trains bound for all four compass points mutually converged at the same time at the Southern Railway station. Here a scramble exchange of passengers between trains, which sat parallel to one another on four tracks, was some-



Track layout in 1905 of the depot in Spartanburg.

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what unsettling to the unseasoned traveler who had to be on the proper car at departure time.

From a State of S.C. publication, printed about 1884, publisher unknown, we read "For many years our people hauled their produce to Charleston, Augusta and Columbia, and the merchants bought their goods in those cities. As soon as the S.C. Road was finished

gap between that point and Asheville remains to be finished. It runs through the county about twenty-six miles. The next road undertaken was the Greenwood, Laurens, and Spartanburg early in 1885. It runs twenty-seven miles in this county. When this is completed, we will have about one hundred and fourteen miles of railway in the county. With two more roads now charted and in contemplation, this county will take the lead in the State in railroad facilities."

The Magnolia Street railroad station was constructed in 1904-1905 and is in an eclectic style. There are elements of the commercial Italian Renaissance style (1890-1935) (i.e. the massive rusticated granite base and hooded arched doors and windows), the Prairie style (1900-1920) (i.e. roof overhangs and an emphasizing horizontal massing), and the Craftsman style (1905-1930) (i.e. beams and brackets added under gables mainly for decoration the early examples.)

The station was remodeled and enlarged in 1916.



to Columbia, our people began to agitate the building of a railroad. The first survey made was for Charleston, Cumberland, and Cincinnati Railway, and two lines were run across this country. Nothing was done, however, and the talk of a railroad died out until about the year 1850, when the Spartanburg and Union Road was brought to notice. After much talk and legislation, work was commenced, and the road was completed in 1859. This road runs about thirteen miles through the county. The next road undertaken as the Air Line from Charlotte to Atlanta. This was completed in 1873 and runs across our county a distance of about forty-eight miles. The Spartanburg and Asheville Road was begun in 1876 and was completed only to Hendersonville; the

Camp Wadsworth, a World War I training camp, was located in Spartanburg at this time. More than likely this is the reason for the remodeling. Umbrella sheds, an underpass and underground waiting room (no longer used by the 1960's) were installed. The sheds on the outlying platforms were apparently replaced with reinforced concrete ones later. The two outlying platforms were necessitated, in later years at least, by the fact that the northbound and southbound Piedmont Limited and eastbound and westbound Carolina Specials all four met here in the afternoon. Sometime after 1968 the outlying platforms (no longer needed with the Piedmont Limited and Carolina Special discontinued) were removed. The main

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part of the station was also torn down and the separate baggage building converted into the present station.

The large observation tower was removed prior to 1945, as it does not appear on the Sanborn Map of 1945.



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