

## “The Costliest Railroad in America”

A New Railroad That Cost More Than Thirty Million Dollars

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**Figure 1 Clinchfield Depot in Johnson City, Tennessee: 1909**

This is the story of a great railroad. It is the **Carolina, Clinchfield & Ohio Railroad**, just completed from the great bituminous coal fields of southwestern Virginia and eastern Kentucky to the cotton mill district in South Carolina. **The promoter and builder of this magnificent road is George L. Carter.** To-day it stands as a monument to his genius—one of the greatest pieces of railroad construction east of the Rocky Mountains.

It is the only road which crosses the entire Alleghany Mountains at their widest part transversely, or at direct right angles with their parallel ranges. Rising from a few hundred feet above the level of the sea to 2,629 feet, at the highest point, where it crosses the Blue Ridge Mountains, exceptionally low grades have been maintained. From Dante, Va., the present northern finished point, to Bostic, N. C., its present southern terminus, the distance is 211 miles; and for the distance it contains **more tunnels than any other road** in the country. There are thirty-five tunnels, six important bridges, and many very large cuts and fills; but in the main, bridges and trestles have been done away with, and wherever possible, replaced by fills.

Take a map showing eastern Kentucky, southwest Virginia, eastern Tennessee, and western North Carolina; then locate Elk Horn City in Pike County, Kentucky, near the Virginia line, which is the nearest town of any size to Dante, Va.; next draw a straight line through to Marion, N. C., via Johnson City, Tenn., and you have the route of the C., C. & O. Railroad—directly across more mountain ranges than any other section in the Alleghany system.

**The purpose of the road is to furnish an outlet for the product of the Clinchfield coal mines,** principally to the southeast Atlantic seaboard, nearest the Panama Canal and southern coaling stations.

The original idea and purpose of George L. Carter, President of the road, when he purchased the unprofitable line of the old "Three C's" in 1901, which ran only from Johnson City, Tenn., to Hunt Dale, N. C., was to extend it into the great bituminous coal fields of southwest Virginia and eastern Kentucky; and to make it the best ballasted, safest, and largest coal-carrying road in the United States.

Looking backward into the history of the old "Three C's"—Chicago, Cincinnati & Charleston Railroad—we find that the promoters of this road were **Civil War Gen. John T. Wilder**, now living at Knoxville, and Frank Stratton, a Virginian. Their idea of constructing the road was to build a trunk line from Chicago to Charleston, and put it on foot in 1882. Within two years a line was constructed from Allison's Mills, Tenn., on the Watauga River to the North Carolina State line, a distance of about thirty miles. In 1890 it went into the hands of receivers, and was sold to Samuel Hunt, then president of the Cincinnati, Portsmouth & Ohio Railroad. That portion of the line from Allison's Mills to Johnson City was torn up, and the material used to extend it farther south, and to a station called Hunt Dale, named for the president. In 1901 George L. Carter purchased this short line, reorganized it, and changed the name to the South & Western Railway. With Mr. Carter the road was to be but the means to an end. He had early inspected and practically gone over every foot of the route, was familiar with the topography of the country, knew of and realized the value of the mineral deposits, had located every tract of timber, and figured out the possibility of big returns in its development.

He took his proposition to New York and interested capital. The services of M. J. Caples, an expert civil engineer and practical railroad builder, were secured, and the plans begun for building—which has been proven—one of the best and most costly railroads for the distance in the United States. Not costly in the meaning of extravagance, but costly from physical necessity, for the greatest experts of the country say that it has not cost a dollar too much. **The actual building began in 1903, and was finished in November, 1908.**

Instructions were given to the engineers that surveys be made which would give the road the lowest possible grade and yet the shortest route to the coast. To do this was the riddle which has just been solved in the finishing of the line from Dante to Bostic. In celebration of its completion, the Commercial Club of Johnson City, Tennessee, gave a large banquet to the officials which was attended by many prominent men of the country, including W. W. Finley, president of the Southern; F. P. Howe, Philadelphia, president of the East Tennessee & Western North Carolina Railroad; and presided over by **Congressman W. P. Brownlow** of the First Congressional District of Tennessee as toastmaster.

To handle big trains of large cars of coal meant to do away largely with trestles and bridges and to substitute fills wherever possible, and to build a low-grade road. As a result there are not more than a half dozen bridges, and the grade maintained is a compensated grade of less than six-tenths of one per cent a mile over the summit of the Blue Ridge. Bridges were built only where it was impossible to make fills.

From Dante, Va., to Bostic, N. C., a distance of 211 miles, there are thirty-five tunnels, the sum total of the lengths of each making more than seven miles of underground travel. The longest tunnel on the line is through Clinch Mountain, bearing the same name. It is 4,200 feet long, and cut through solid rock the entire length. It took more than two years to drive it and cost over two million dollars. The next longest tunnel is right on top of the Blue Ridge Mountains at Altapass, N. C., and is known as the Summit tunnel. This tunnel is more than a half mile long, and is 2,629

feet above sea level. From Spruce Pine, two miles west of Altapass, to Marion, N. C., there are twenty-odd tunnels.

After passing through the Summit tunnel, the line makes an eight-mile loop, returning to within four hundred yards of the south end of the tunnel, but three hundred feet lower down. In this eight-mile loop there are nine tunnels, and from within twenty miles of the Summit tunnel there are nineteen tunnels. A very important feature about the tunnels on this line is that every one is cut high enough to permit the tallest man to stand on top of a box car as the trains pass through. From the 211-mile post on the west side of the Blue Ridge to the 231-mile post on the eastern slope, the rise or fall vertical is 1,160 feet.

The cuts and fills are almost innumerable, while some of them are the largest and deepest to be found on any road east of the Mississippi River. The highest trestle is over Copper Creek in southwest Virginia, and is known as the Copper Creek viaduct. From the surface of the stream to the track or rails on top of the trestle the height is 185 feet, and its length is 1,160 feet. Another very high bridge is over Holston River, one of the headwaters of the Tennessee, the height of which reaches 100 feet. The largest and deepest fill on the line is known as the Knob Creek fill, being 85 feet deep and three-quarters of a mile long, requiring more than a half million yards of material to fill up to grade. The next largest fill is over Gate branch, which reaches a depth of 135 feet and 1,200 feet long. The Big Poor fill is another one of considerable cost. This fill is a mile long, and required more than 200,000 cubic yards of earth.

The largest and most important cut on the road—and said to be the largest on any road in the South—the **Soldiers' Home cut**, located right at the junction of the Home grounds in Johnson City and the Southern Railway. This cut is 85 feet deep, a mile long from grade ends, and required the removal of more than 500,000 cubic yards of dirt, most of which was used to make the Knob Creek fill, which is only two miles distant.

The most rugged and picturesque portion of the road is that part which runs from **Johnson City south across the Blue Ridge Mountains to Marion, N. C., and known as "The Land of the Sky."** Beginning at Unaka Springs, twenty miles south of Johnson City, the road enters and runs through the famous Nolachucky Canyon, said to be the grandest outside of the Grand Canyon itself. Like a serpent for nearly twenty miles, this road winds its way through chasms, gorges, ravines, between towering cliffs and mountains extending upward thousands of feet.

After leaving Altapass and the Summit tunnel for about four miles, the line passes in full view of Mount Mitchell, the altitude of which is 6,711 feet above sea level.

"Twelve miles from this point is Linville Falls Station, from which Linville Falls, N. C., a noted summer resort, is reached in covering a distance of six miles by stage. This is a charming resort, high above the clouds. From this point can be seen twenty-one peaks higher than Mount Washington, and forty-eight that overtop Mount Adams. The stage route from Linville Falls Station on the C., C. & O. Railway passes through some of the wildest scenery of the South; vast chasms, ghastly rents, massive towering rocks, seared and seamed, are on every hand. At this point a stream dashes over a steep, broken cliff some hundred feet high. There is most excellent trout fishing to be had at this point. (Charles T. Mandel in Appalachian Trade Journal.)

Where the famous loop is made on the eastern slope of the Blue Ridge, there are three complete views of the track on one mountain side as it winds its way back and forth to make the grade. This is said to be the most remarkable loop on any road in the United States. This feature was

considered practically impossible at one time; but the courage of the owners and the skill of the engineers accomplished the miraculous, and have proved nothing impossible in railroad building.

Standing at the mouth of Summit tunnel, one can see the train as it winds its way around the mountain sides, through many tunnels and cuts, crossing the valleys, puffing and blowing in the climb, for thirty-five minutes before it reaches you. Fourteen different views of the train are presented in this scene. Across the valley on the side of another great mountain can be seen the three Washburn tunnels in straight line, and to stand at either end, one can see through all three of them. It is indeed a spectacular sight, and with perhaps but few exceptions, unequaled on any road and anywhere.

The Blue Ridge section is one of the richest in iron, copper, mica, kaolin, manganese, limestone, and timber in the whole Appalachian region, if not in the whole country. Southeast of the Blue Ridge, and embracing part of it, lies the Piedmont section, stretching out into the great southeastern cotton mill district; and through the very heart of these penetrates the Carolina, Clinchfield & Ohio Railway. With such immense undeveloped wealth, together with that which is just yet in the embryonic and nursery stages, no one can gainsay the wisdom prompting the vast expenditures made in the development of this road and its co-related interests.

**The average cost per mile of the C. C. & O. Railway has been upward of \$125,000.** From Bostic, N. C., to Spartanburg, S. C., the building is well along toward completion, and by October next through trains will be running into Spartanburg.

To give one an idea of the economic considerations entering into the future management of the road, we will state that the road is now hauling in one train from the coal fields at Dante through to Bostic, with one engine, what it takes the Seaboard to haul out of Bostic in three loads. These large engines were made by the Baldwin Locomotive Works of Pennsylvania.



**Figure 2 Original Clinchfield Railway Logo**