

Carolina Conductor



Volume 7 Number 2

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 Bldg.
721 East Poinsett Street
Greer, SC 29651-6404
Third Friday of the Month at 7:00 pm

**Hub City Railroad Museum and
SOU Rwy Caboose #X3115:**
Spartanburg Amtrak Station
298 Magnolia Street
Spartanburg, SC 29301-2330
Wednesday 10-2 and Saturday 10-2

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Articles can be submitted anytime.

Early Steam Locomotives

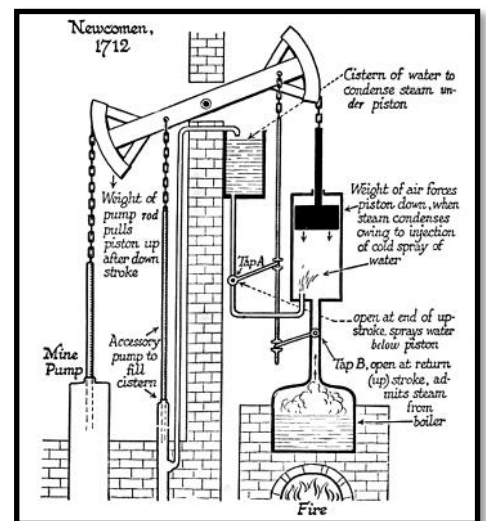
For centuries, man had attempted to harness the mechanical power of heat and water. As early as 200 BC, in his *Pneumatica*, Hero of Alexandria described a device called an Aeolipile, considered to be the first recorded steam engine. A ball containing water was mounted over a cauldron and, as it heated, two protruding bent tubes shot out jets of steam, causing the ball to spin. Many such devices were conceived in the following centuries as scientists studied the principles of hydraulics, pneumatics, and the properties of gasses, but these devices did not perform real work. It was not until the 18th century in Britain that the steam engine began to change not only the face of industry, but humanity's relationship to work and society.

In 1712, Thomas Newcomen and his assistant John Cally unveiled the first commercially viable steam engine. The Newcomen atmospheric engine used steam to power a pump. Though it was not very efficient, hundreds of these engines were used for pumping water from British coal mines and flooded areas.

In the late 18th Century, James Watt, the man who would eventually be called the father of the steam engine, greatly improved the effi-

ciency of the stationary engine when he patented a "double acting" engine that used high pressure steam on both sides of the piston to double the output. His patents also included such ancillary devices as pressure gauges, throttle valves, and steam regulators. In partnership with manufacturer Matthew Boulton, Watt's improvements and inventions powered the industrial revolution.

Following Watt's improvements, many inventors attempted to adapt the steam engine to modes of transport on both land and water. To achieve motive steam power would, for the first time in history,



The 1712 Newcomen steam engine.

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President's Message

I hope you made it to the Easley train show. Vendors had a wide variety of offerings, there were many modular railroads and the NRHS / CRHA had lots of books, model



buildings, locomotives and rail cars and more for sale. It is a great place to make new friends and talk trains.

The caboose renovation continues. All the old window frames are removed, with special thanks to



Bruce for muscling through that strenuous task. Please stop by and take a look at the work in progress. Someone is there most Wednesdays and Saturdays to give you a mini tour.

As I said last month, there are many other activities you can be involved in. Your NRHS / CHRA has two storage areas, loaded with historical artifacts and documents. The predecessor to FedEx was the

played. If interested, talk with Marv.

We also have another storage area loaded with the Jim Shepard collection, and Piedmont and Northern documents. These have been somewhat organized, but still need extensive review to catalog and organize into a collection that can be used for research. Speak to one of your board members if you have an interest in helping with this work.

The January program was on the Walt Disney trains, at both Disney Land and World. Dave Leaphart gave a great presentation from his years of research into this fascinating topic. Don't miss this month's presentation, by Bruce Gathman



Railway Express Agency. They handled priority freight using rail cars. When it reached its destination, REA trucks would deliver to the final customer. We have a partially restored REA truck, that needs finishing. It runs, but needs much more work before it can be dis-



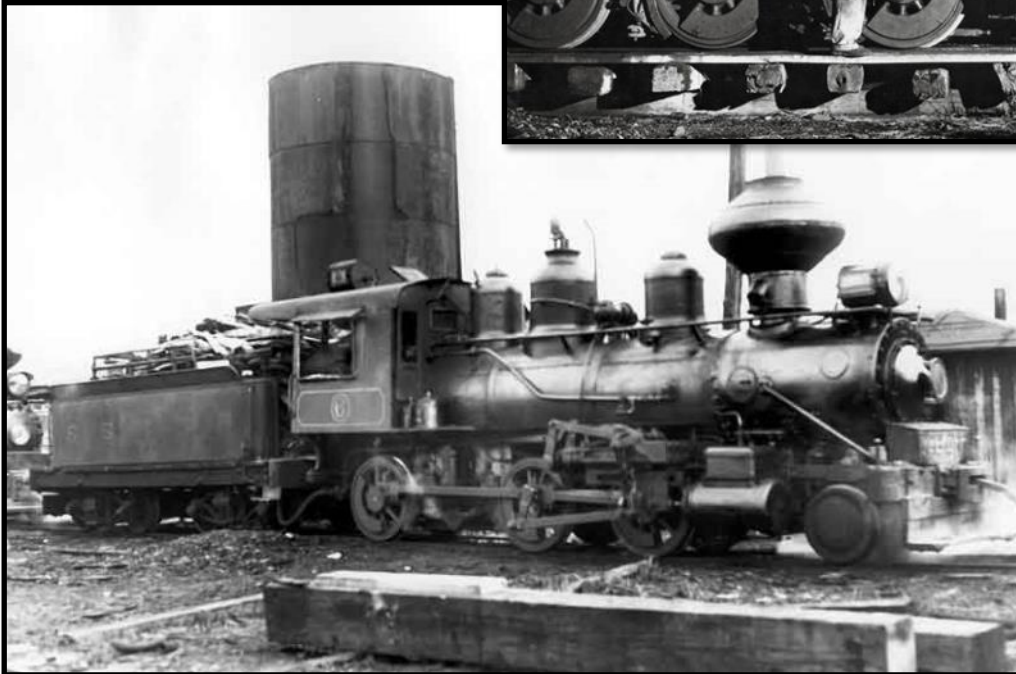
Can you identify the logo above and the railroad it represents?

covering many of the fallen flag railroads and their histories.

See you at the meeting on the 21st. Steve Baker, President

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.

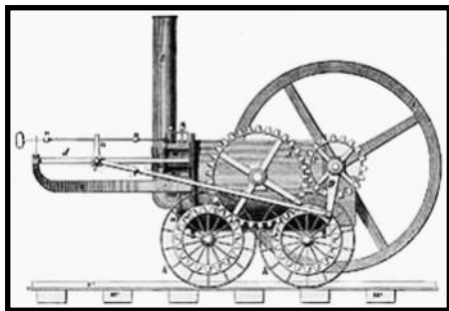


A collection of Argent Lumber Company locomotive photos in the Hardeeville, SC area. See the story about the company on page 7.

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allow man to travel on land at a speed faster than that of the domesticated horse.

In 1802, Richard Trevithick pa-



The 1802 Trevithick locomotive.

tented a "high pressure engine" and created the first steam-powered locomotive engine on rails. Trevithick wrote on February 21, 1804, after the trial of his High-Pressure Tram-Engine, that he "carried ten tons of Iron, five wagons, and 70 Men...above 9 miles...in 4 hours and 5 Mints." Though a ponderous-sounding journey, it was the first step toward an invention that would utterly change man's relationship to time and space.

George Stephenson and his son, Robert, built the first practical steam locomotive. Stephenson built his "travelling engine" in 1814, which was used to haul coal at the Killingworth mine. In 1829, the Stephen-

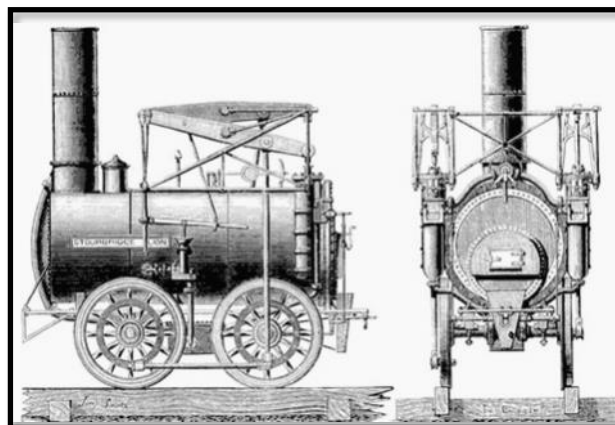
sons built the famous locomotive *Rocket*, which used a multi-tube boiler, a practice that continued in successive generations of steam engines. The *Rocket* won the competition at the Rainhill Trials held to settle the question of whether it was best to move wagons along rails by fixed steam engines using a pulley system or by using locomotive steam engines. The *Rocket* won the £500 prize with its average speed of 13 miles per hour (without pulling a load, the *Rocket* attained speeds up to 29 miles per hour), beating out Braithwaite and Erickson's *Novelty* and Timothy Hackworth's *Sans Pareil*. The Stephensons incorporated elements into their engines that were used in succeeding generations

of steam engines.

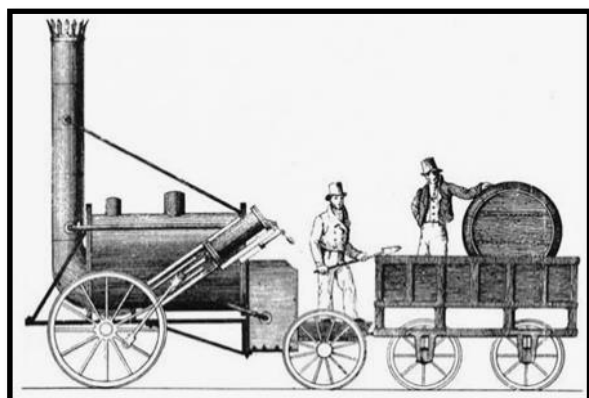
Though the first locomotive to operate on an American railroad was the *Stourbridge Lion*, built in 1828 and imported from England by Horatio Allen of New York, the British locomotives did not come to dominate American railways because they were too heavy for the relatively light and often uneven American tracks. In fact, the *Lion* was soon relegated to functioning as a stationary steam engine.

American inventors and engineers had been on a parallel course with the British and, as early as 1812, John Stevens had petitioned Congress to support a national railroad. He had also built the first American steam locomotive in 1825.

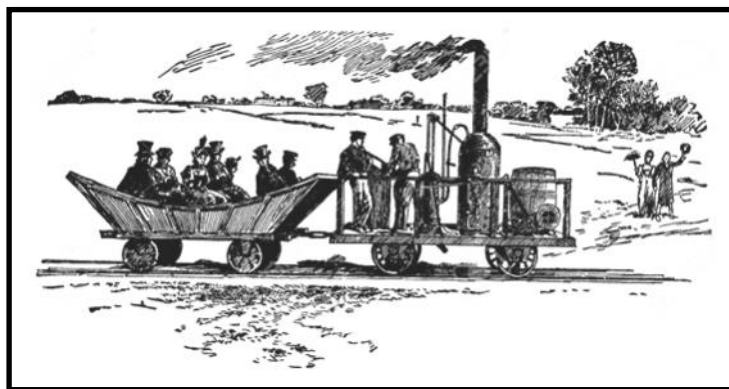
A multi-tube boiler engine, it ran on a circular demonstration track on his property in Hoboken, New Jersey. Though he was not successful in getting financial support for a national railroad or his locomotive, Stevens later founded one of America's first railroads, the Camden



The 1828 Stourbridge "Lion".



The 1829 Stephenson "Rocket".



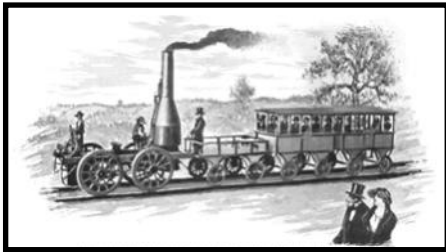
The 1830 "Tom Thumb" pulling a passenger car.

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& Amboy Railroad.

Peter Cooper's *Tom Thumb*, built in 1830, was the first American locomotive to pull a passenger car on a railroad. Though small it was powerful enough to convince the directors of the Baltimore and Ohio railroad of the practical application of the steam locomotive.



Best Friend of Charleston

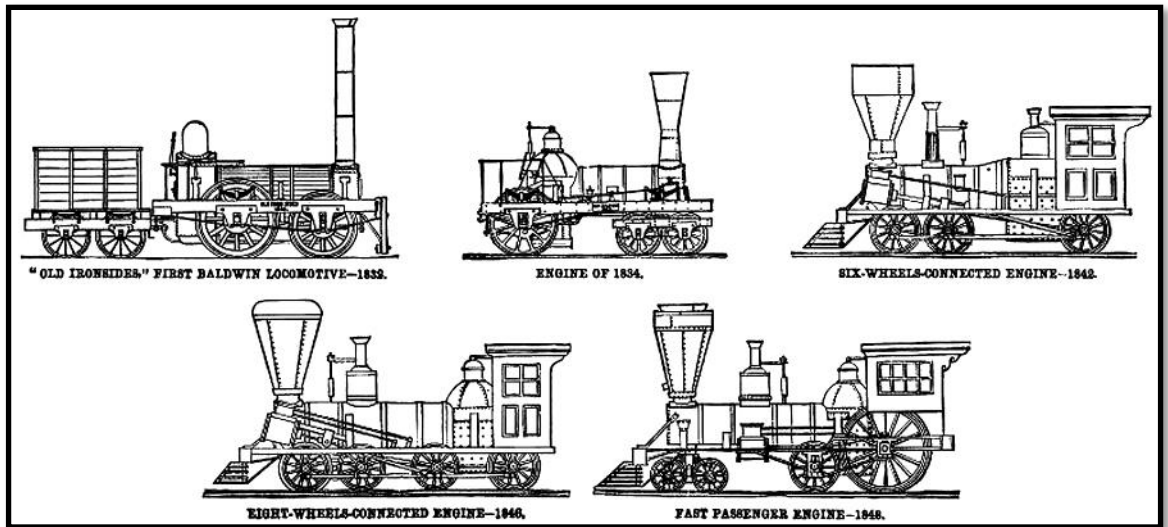
The distinction of being the first to pull a train of cars over an American railroad in regular service goes to the *Best Friend of Charleston* in 1831. Designed by E. L. Miller and built in New York, the *Best Friend* operated for nearly six months until its boiler exploded when a worker, who was irritated by the sound of the hissing steam, lashed down a safety valve.

The year 1831 also saw Matthias Baldwin establish the Baldwin Locomotive Works. His second steam engine, the *E.L. Miller*, established the prototype from which later engines developed. By the end of the 19th Century, Matthias Baldwin's company became the largest single-plant locomotive builder in the



↑ Matthias Baldwin

↓ Early Baldwin Locomotive Designs



"OLD IRONSIDES" FIRST BALDWIN LOCOMOTIVE-1832.

ENGINE OF 1834.

SIX-WHEELS-CONNECTED ENGINE-1842.

EIGHT-WHEELS-CONNECTED ENGINE-1846.

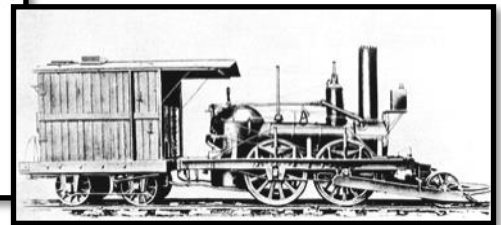
FAST PASSENGER ENGINE-1846.

world and dominated the market for over one hundred years, manufacturing approximately 59,000 locomotives.

The first locomotives were built with fixed wheels, which worked well on straight tracks but not so well in America's mountainous terrain. An American civil engineer, John Jervis, designed the locomotive the *Experiment* in 1832, which had a swiveling four-wheeled guide

truck, also known as a "bogie," that could follow the track and enable locomotives to travel on railways with tighter curves.

The pilot, or "cow catcher," was unique to American locomotives. The rail lines were not fenced and the railroad companies were responsible for any damage done by a collision with an animal, which



The John Bull Locomotive

could derail a locomotive. The *John Bull*, in about 1833, was one of the first locomotives in America to be fitted with such a device to clear obstacles off the track. Soon, pilots became standard appliances for American locomotives.

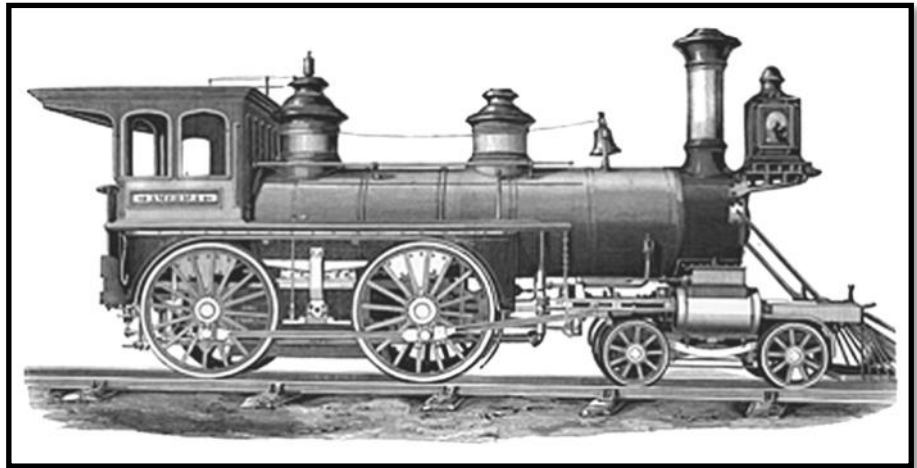
Locomotives could be configured in a number of ways, categorized by the wheel arrangement of the leading truck, driving wheels,

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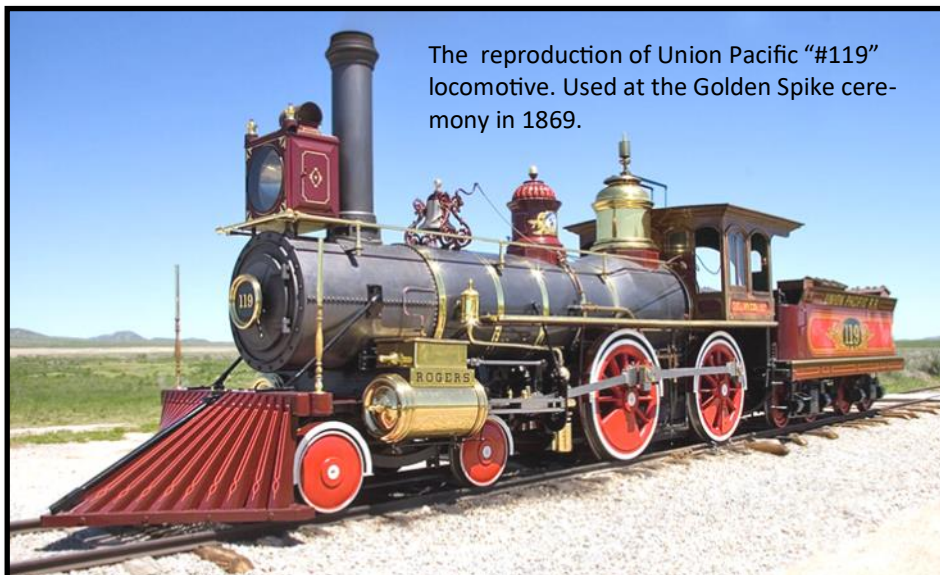
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and the trailing truck. The 4-4-0 configuration (that is, four wheels on the leading truck and four driving wheels, with no trailing truck), was most commonly used in the U.S and came to be known as the American Standard. The locomotives that met at Promontory Summit, the Central Pacific's Jupiter and the Union Pacific's Engine No. 119, were both 4-4-0 locomotives.

American manufacturers produced locomotives equal in capacity to British engines, but at lower cost.



The 4-4-0 for many years was the "Standard" locomotive design.



The reproduction of Union Pacific "#119" locomotive. Used at the Golden Spike ceremony in 1869.

It is not an exaggeration to say that steam power and locomotives had the same transformative effect in the 19th Century that the computer had in the 20th. Robert Thurston, in his 1878 book on the history of the steam engine, said that it would be "superfluous to attempt to enumerate the benefits which it has conferred upon humans, for such an enumeration would include an addition to every comfort and the creation of almost every luxury that we now enjoy."

Though American engines were elaborately decorated with expensive brass work and labor costs were higher than in Britain, American manufacturers reduced costs by using less expensive cast iron rather than wrought iron for many components. America's railroads began by using locomotives imported from Britain, but by the end of the 19th Century, America was a major producer of locomotives and had exported more than 2,900 engines.



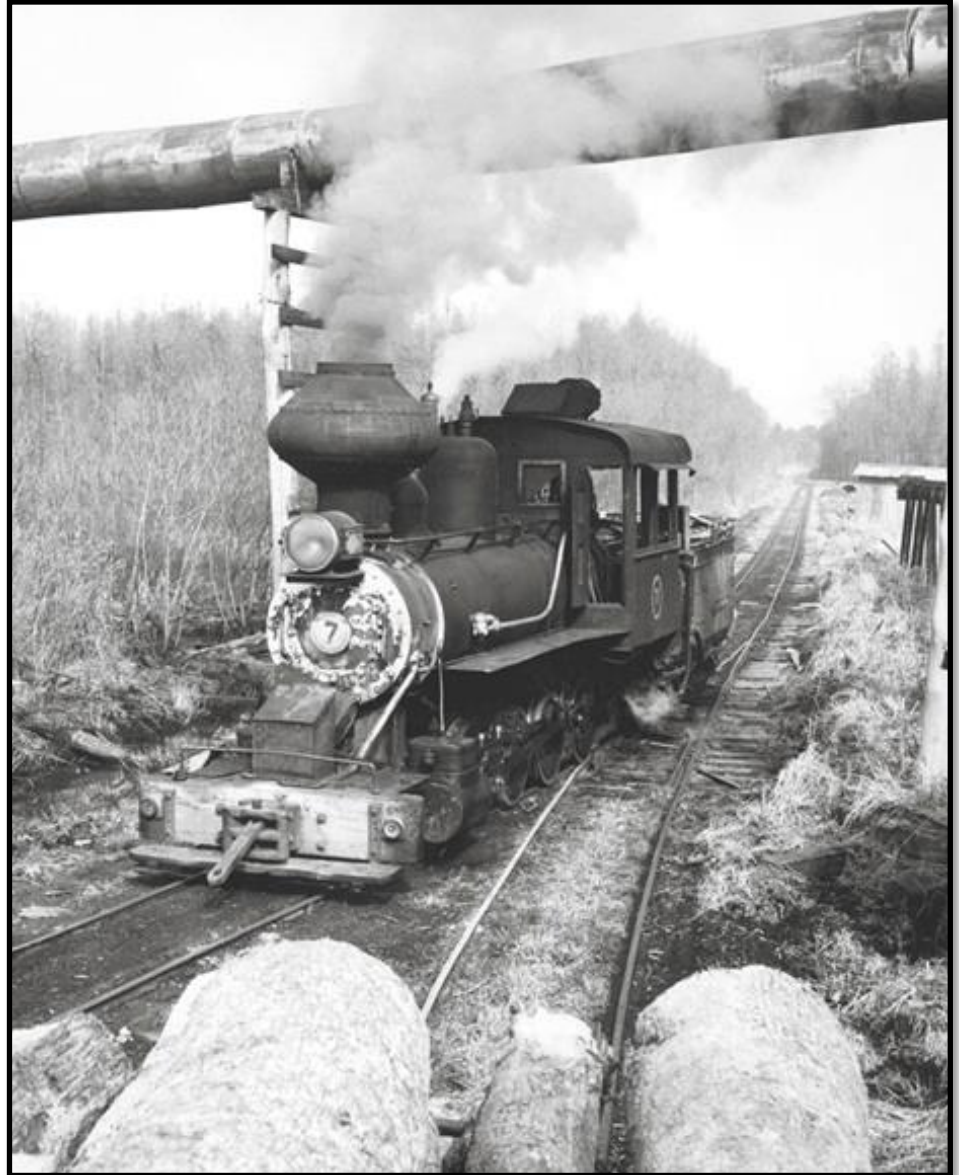
The reproduction of Central Pacific "Jupiter" locomotive. Used at the Golden Spike ceremony.

The Argent Lumber Company

The Argent Lumber Company started in February of 1916, when Horace W. Phillips Jr., J. Ross McNeal, and William B. McNeal formed a company in order to log an 8,000-acre tract of original growth short-leaf pine, 25 miles north of Savannah, Georgia. The name "Argent" came from the friend of the company's lawyer who had a racehorse named "Argent". The name was short and at the top of the alphabet.

The Argent Lumber Company was a cypress lumber operation with a mill at Hardeeville, SC. This mill was put in operation in September of 1916 with a three-foot gauge logging line built north 7 miles towards Tillman, SC. By 1938 this mainline had turned west near Tillman towards the swamps bordering the Savannah River. Another mainline in 1938 turned east a few miles north of Hardeeville where it crossed the ACL above grade over extensive trestle giving this flat land swamp logger a mountain grade division that had to be double headed. This line had a branch towards Jasper, SC and another branch south of Switzerland, SC where the line crossed the Seaboard at grade to extensive logging areas east of the Seaboard.

The year was a turning point for Argent as the timber was running out on its north and east mainlines. They were already at work on a new mainline that would cross the Savannah River with a center draw bridge to reach extensive cypress swamps on the west side of the river in Georgia. These new lands would give the Argent Lumber Co. Life



Wood burning narrow gauge (36") Consolidation type (2-8-0) locomotive #7 was built by H. K. Porter in Pittsburgh, PA, in 1911 and bought by the Dennis-Simmons Lumber Co., in Williamston, NC, and later sold to the Argent Lumber Company in Hardeeville, SC. #7 weighs 58,000 lbs, 51,000 lbs on its 33" drivers. With 12" x 16" cylinders, it operated at a boiler pressure of 160 psi delivering 11,150 lbs tractive effort.

until abandonment 20 years later in 1959.

The Argent Lumber Company owned seven wood burning engines, of which the Baldwin moguls (2-6-0s)

were used as log car haulers. The Argent Lumber Company in the later years was the only interstate narrow gauge logging railroad in the

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Argent locomotives were wood burners.

nation. In May 1956, the owner sold out to the Union Bay Camp Paper Corporation of Savannah, Georgia. The company had produced 638 million board feet of lumber in 40 years of operation.

In October 1959, the Union Bag Camp Paper Corporation retained William B. McNeal of the Argent Lumber Company to dispose of the Argent property. The Corp of Savannah, Georgia. The January 1960 sale had received about 1000 inquires but only eight bidders were present at the sale of the eight Argent locomotives.



Argent #7 as it is today on display in Hardeeville, SC.



The Cabbage stack was common on Argent locomotives.



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