



Engines of War

The Role of Railroads in the Civil War by James H. Hillestad

In the words of British General Sir Rupert Smith, the American Civil War was the “first industrial war” and the “first railway war.”

In 1840, there were 2,818 miles of railroad line in America. At the onset of the Civil War in 1861, this number had grown to more than 30,000 miles -- of which two-thirds were in the North.

The South’s trackage was divided between 113 different railroad companies, which frustrated any attempt at a unified system. Adding further to the problem was that the South’s railroads were owned by civilians, and the Confederate government opposed taking over civilian industries.

Fierce competition between railroad owners meant the owners did not want to see their equipment ever fall into the hands of their rivals. The lines of competing companies rarely met, even if they ran through the same town. In 1861, no fewer than six different railroads served the city of Richmond, Virginia. Yet none of these lines connected with another.

The railroads also lacked a standard gauge, so that trains of competing companies ran on



tracks anywhere from four to six feet wide. Anything that needed to be transferred from one railroad to another had to be hauled across town, and loaded onto new freight cars. For an army to suffer such delays could mean the differ-

ence between victory and defeat.

So the Confederate rail “system” was really a collection of railroads and was not, in fact, a system at all. Southern railroads were typically short feeder lines, connecting agricultural areas to water ports, and, as a rule, were not city-to-city or inter-regional transportation corridors.

As historian James McPherson put it, “The Confederate government was never able to coax the fragmented, run-down, multi-gauged network of southern



A menacing ordnance rifle shielded by 500-pound cotton bales.

TOP
First United States Military Railroad train going over Bull Run Bridge, Spring of 1863. Library of Congress

STANDARD GAUGE

At the beginning of the Civil War in the United States, there were more than 20 different railroad track gauges (the distance between the rails). Of the track laid, 53 percent was "standard gauge" (4 feet, 8.5 inches), while 22 percent was five feet in width and was primarily found in the South.

Southern companies preferred the broader gauge, as it allowed for wider rolling stock that could more efficiently accommodate cotton bales, the most commonly transported good in the South at the time.

Today, the U.S. has one standard track gauge as a result of the North's victory over the South... which raises the question, why the odd number of 4 feet, 8.5 inches?

This "standard" has been attributed to George Stephenson of British locomotive fame. (Keep in mind that the English developed railroads ahead of the Americans.)

The story goes that Stephenson, while inspecting some portions of the Roman wall through which chariots used to be driven, discovered deep ruts worn into the stone. He found them to be a consistent 4 feet, 8.5 inches apart. From this arose the belief that wagon makers adopted the width to wagon wheels -- taking advantage of the pre-existing ruts and making travel more comfortable while reducing wheel breakage.



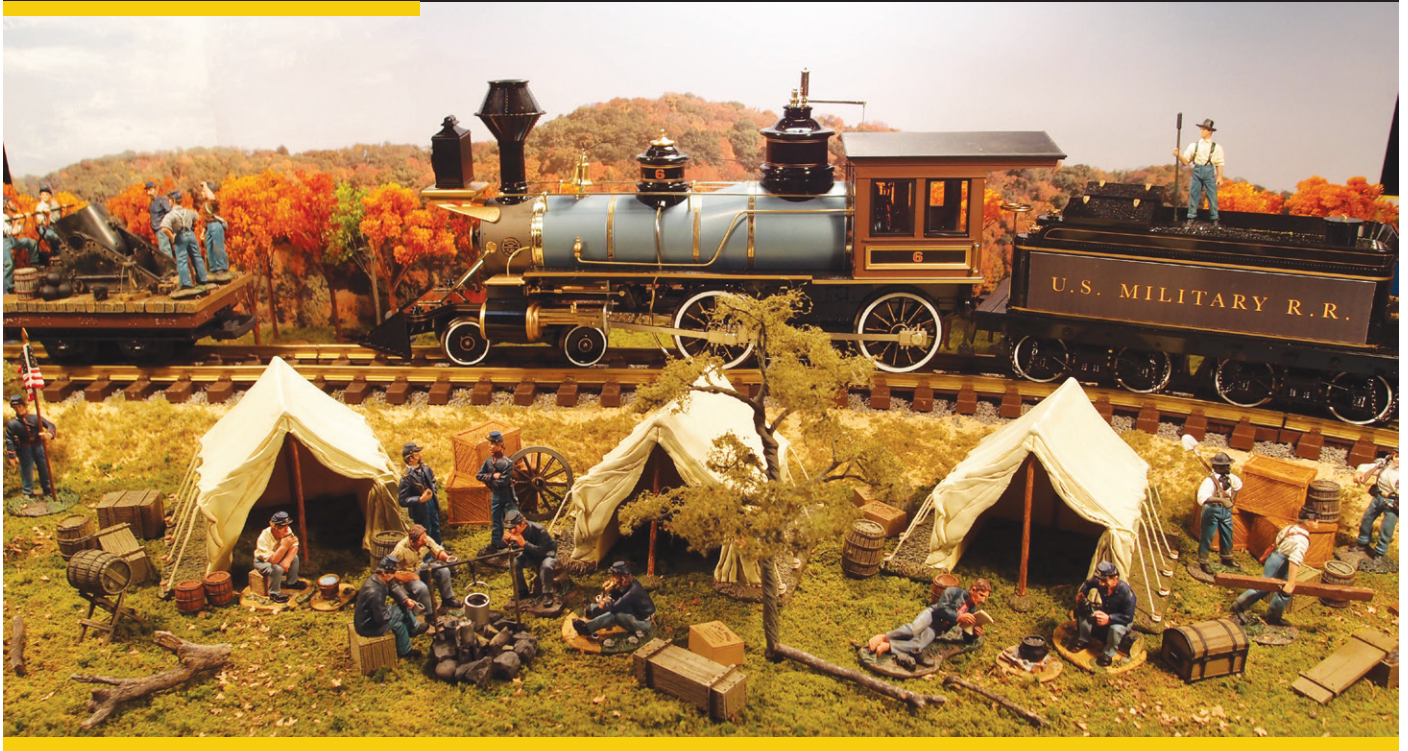
Union infantry, taking shelter behind sand bags, provide protection for the field gun.

This evolved into the gauge that tramways used and then in turn, railroad trackage.

The significance for the opposing forces in the Civil War was that the North benefited from the widespread use of standard gauge, while the South was impeded by the multiplicity of gauges, frustrating efficient connections.



A flat car mounting a 3-inch ordnance rifle comes under attack from Colonel John Mosby and his Partisan Rangers in the Fall of 1864. Mosby rendered it impossible for the Federals to rebuild the Manassas Gap railroad, which was supplying General Sheridan's troops in the Shenandoah Valley.



railroads into the same degree of efficiency exhibited by northern roads.”

Lincoln had been a railroad lawyer and understood the crucial importance of railroads in moving men and material to and from the front. When railroad executives balked at cooperating with the

railroads. Assisting McCallum was Herman Haupt, an engineer trained at West Point, who was made a brigadier-general. Haupt harnessed and coordinated the North’s railroad power -- in contrast to Jefferson Davis, who vacillated over the relationship between railroads and the war effort.

ABOVE
Union encampment outside Petersburg, where a 4-4-0 locomotive has positioned a heavy mortar.

Confederate counterpart never became more than a small advisory bureau within the Confederate War department.

The Importance of Railroads in War

Railroads transported troops, supplies, and served as reconnaissance vehicles providing traveling platforms for launching tethered observation balloons. They also served as headquarters command centers and were extensively employed as medical evacuation or ambulance trains.

LEFT
The “Dictator,” a 13-inch mortar, being loaded for fire.



war effort, he pushed through Congress a bill that authorized him to assume control of any line, if the war warranted it.

Lincoln appointed Daniel C. McCallum as military director of

The government of the United States centralized control of the Northern railroads in 1862, under the U.S. Military Railroads (USMRR), an agency within the War Department. In contrast, the

SHERMAN'S NECKTIES

On their march through Georgia, Sherman’s troops took time to destroy Southern railroad lines, by making “Sherman’s Neckties” of the rails. Task forces pulled the spikes from the railbeds and removed the light iron rails. The hand-hewn wooden ties were gathered into piles, and the iron rails were laid across them. The ties were then set on fire -- and the burning wood heated the center sections of the soft metal causing the rails to droop out of shape.





The men in camp enjoy a lull in the action.

It is logical that the “first railway war” would bring about the introduction of rail-borne combat vehicles. To protect against skirmishers, infantry were deployed on the cars.

Though lacking military designations, railroad artillery can be divided into light and heavy categories. Generally, they were single pieces of ordnance mounted on a flat car, which was pushed by a locomotive. The light “batteries” or armed trains were fitted with 12-pdr fieldpieces and howitzers. The heavy “batteries” consisted of 32-pdr naval guns and mortars such as “The Dictator,” which fired a 220-pound explosive bomb nearly a mile.

Examples of light and heavy “batteries” are shown in the accompanying diorama images. ■

My thanks to H.Lee Riley, Vice President of Product Development with Bachmann Trains for his guidance with this article.

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Union artillery officers plot the trajectory of the mortar.



Supplies are stockpiled at the rail site.

THE GREAT LOCOMOTIVE CHASE

For a dramatic tale of Civil War railroading, the Walt Disney film, “The Great Locomotive Chase” (1956) is worth watching. It stars Fess Parker as the intrepid Union raider, James Andrews, who hijacked a Confederate train in April 1862.

The celebrated raid was prompted by General Ormsby Mitchell, the Union commander in middle Tennessee. The Confederates defending Chattanooga were being supplied by the Western & Atlantic Railroad operating out of Atlanta.

Andrews’ mission was to capture a train outside of Atlanta and sabotage the line as he headed back north, thus interdicting supplies destined for Chattanooga. Andrews was joined by a group of 21 soldiers.

Dressed as civilians, they boarded a northbound train in Marietta, Georgia, 20 miles north of Atlanta. At Big Shanty Station, seven miles up the line, the train made a stop for breakfast. This gave the raiders the opportunity to detach the passenger cars and commandeer the engine, “The General,” and head north.

The conductor of the train, William Fuller, furious about the hijacking, pursued “The General” on foot, then on a gaudy dancers’ handcar, and finally on another locomotive. The chase went on for a hundred miles at speeds of 60 miles and hour -- until “The General” ran out of fuel and the raiders dispersed into the countryside.

Because of Fuller’s efforts in keeping so closely behind, Andrews’ men never managed to create any serious damage to the railroad. Andrews, along with seven of his raiders, were hanged.

All the Union military participants received the Congressional Medal of Honor, the first soldiers ever to receive this newly-instituted award.

