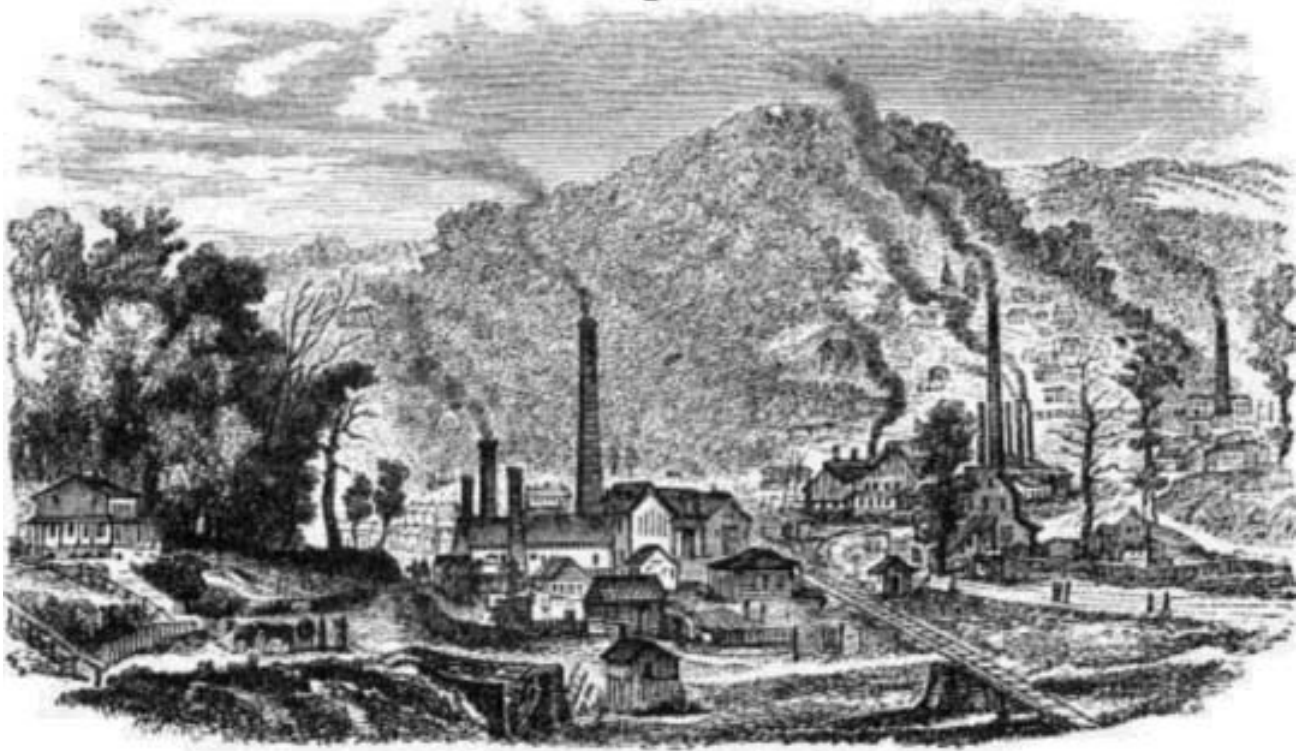


## The Mount Savage Iron Works

Western Maryland's Industrial (Little) Giant

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This is the first in a series of articles on the production of railroad iron and industrial machinery at Mt. Savage, Maryland from the earliest casting of iron wheels, through the rolling of the first iron rails, to locomotive rebuilding and production. From an 1840's producer of pig iron to an 1890's manufacturer of locomotives, Mt. Savage reflected in a microcosm of industrial America. This installment covers the evolution of iron manufacturing and the transportation systems that supported it.

**The Transportation Problem.** In the 1840's, the United States looked to British imports for its high-tech transportation needs. American firms quickly adopted British locomotive designs to the unique requirements of the railroads in the States. But, mass production of rail was another problem. The Baltimore & Ohio Railroad was built from Baltimore to Cumberland, Maryland using imported rail because the material could not be obtained locally. A little-known operation in the backwoods of Allegany County, Maryland was to change that and break the monopoly the British had on rail production. The integrated manufacturing center at Mount Savage, with its associated transportation infrastructure, represented the very cutting edge of the Industrial Revolution in America and rivaled the best in the world.

Mt. Savage is located in Allegany County, Maryland, some ten miles from Cumberland. Standing in down-

town Mt. Savage today, it is hard to appreciate that 150 years ago, this was the mid-Nineteenth Century equivalent of Silicon Valley. The key recognizable feature there today is the brickyard, the third component of a once-thriving, vertically integrated manufacturing center. Mt. Savage, for all its remoteness, was the site of collocated deposits of coal, iron ore, and fireclay. The juxtaposition of all of these elements ensured an early success for the entrepreneurs who could bring the pieces together with adequate financing, and a ready work force.

Of primary importance to any manufacturing of the time was a ready source of raw materials. The second issue of importance was an adequate transportation infrastructure. The late recognition of this problem forced the demise of the earlier Georges Creek Coal & Iron Company. Learning from this, the Mt. Savage company built their rail line to connect with the Baltimore & Ohio (B&O) Railroad.

The earliest shortline railroads in Allegany County were constructed by the coal and iron mining companies. They were necessary because the companies required a way to move products to market from the extraction or production site. Transportation involved the B&O railhead or the Chesapeake and Ohio (C&O) canal terminus at Cumberland. The earliest railroads were the Mt. Savage Rail Road, built by the Mt. Savage Coal & Iron Co. in 1845, the Eckhart, built in 1846 by the Maryland

Mining Company, and the Georges Creek, built in 1853 by the Georges Creek Coal & Iron Co. All were eventually absorbed into the Cumberland & Pennsylvania Railroad, thence into the Western Maryland Railway, the Chessie System, and finally CSXT.

On July 4, 1828 both the Baltimore & Ohio (B&O) Railroad and the Chesapeake & Ohio (C&O) Canal began building westward from the eastern seaboard to the Ohio River. The geography dictated an intermediate goal of Cumberland, Maryland, a choke point but at least narrow passage through the Allegheny Mountains. The B&O reached Cumberland in 1842; the C&O Canal in 1850. Although not foreseen to be the major cargo, coal from the rich fields around Eckhart, Mt. Savage, and the Georges Creek quickly became the dominant out going freight. The regional shortlines addressed the problem of getting the coal from the point of extraction to the canal or railroad.

The Mt. Savage Rail Road was the first of these shortlines. It was used as a connection between the manufacturing facilities at Mt. Savage, and the recently completed B&O railhead at Cumberland. The primary out going traffic was finished iron goods such as rail and firebrick with coal being of minimal importance. Much of the initial rolling stock and motive power for the Mt. Savage Railroad was provided by the B&O. Ross Winans of Baltimore supplied at least five engines and some rolling stock to the Mt. Savage Railroad. The Winans Camel engines were well suited to the long grades and slow operating speeds of the early mountain shortlines. Five hundred tons of rail were produced for the Mt. Savage Rail Road to Cumberland, that followed the path of Jennings Run to Will,s Creek, and then through the Narrows. The valuation map of the Mt. Savage Railroad shows the furnaces at Mt. Savage, the B&O railhead at Cumberland, and the fact that there is basically nothing in between.

In 1845, the railroad inaugurated passenger service from Mount Savage with connections to the B&O in Cumberland. Three trains per day were operated from Cumberland by the B&O. At that time, the trip from Baltimore to Cumberland took 8-1/2 hours. William Cullen Bryant wrote in the *Saturday Evening Post* of his trip from Cumberland into the coal fields, providing a fascinating glimpse into the rigors of early rail travel:

“At Cumberland, you leave the B&O railroad, and enter a single passenger car at the end of a long row of empty coal wagons, which are slowly dragged up a rocky pass beside a shallow stream into the coal regions of the Alleghenies.”

**The Blast Furnaces of Western Maryland.** The Georges Creek Coal & Iron Company, a predecessor to the Mt. Savage Iron Works, was chartered on March 29, 1836. Between 1837 and 1839, the company built an iron furnace at Lonaconing, Maryland, several miles south of Mt. Savage in the Georges Creek Valley between Frostburg and Westernport. The furnace, fueled by coke, went into blast in 1839. There was plenty of iron ore, limestone, water, and coal locally, but the major problem the company faced was transporting finished products to market. Production reached 75 tons per week, and local iron needs were quickly satisfied. Some products were shipped out by wagon, including such items as dowels for the C&O Canal walls. The adjacent casting house made farming implements, mine car wheels and track, and household utensils.

The lack of reliable, all-weather transportation to market proved to be the Achilles, heel of the Lonaconing venture. In 1842, sales of pig iron to foundries in Cumberland were begun, with delivery by wagon. That fall, pig iron was offered to the B&O railroad at a price of \$29 per ton but delivery was still a problem. After experimenting with a horse powered tram road connecting with the Eckhart Railroad, the company realized that their own rail line, built down the Georges Creek Valley for 9.2 miles toward the Potomac River at Westernport, was the only solution to their problem. The B&O reached Piedmont in July 1851 and the Georges Creek Coal & Iron company built their line from Piedmont to Lonaconing in 1852. But by then the Mt. Savage Iron Works and its dedicated railroad dominated the market and the Lonaconing Furnace was blown out for the last time in 1855. The Georges Creek line never hauled iron; it was acquired in 1863 by the Cumberland & Pennsylvania Railroad and is operated today by CSX's Cumberland Coal Business Unit as the Georges Creek Secondary, with on-demand coal service.

Three furnaces were built at Mt. Savage, but only two went into service. These two resembled the one at Lonaconing. They were fifty feet high, fifteen feet wide at the bosh, and built against the side of a hill to provide for easy access to the top of the furnace for charging. The third furnace was not built against a hill, and would have had to be loaded by derrick. The furnaces were lined with firebrick produced locally.

In the late 1840's, the blast furnaces at Mount Savage blazed around the clock, consuming large amounts of coked coal, iron ore, scrap iron, and limestone. According to the few surviving records, in June of 1856, 356.5 tons of iron were produced. This required 747 tons of iron (a 39% yield), 1.77 tons of coke per ton of iron

**The Rolling Mill and the First American Railroad Iron.** In 1842, the American Railroad Journal had said in an editorial that there was no firm in the United States capable of manufacturing heavy-edged rail. Many facilities had tried and failed to produce an acceptable product. The market was apparent and the Mt. Savage rolling mill was built in 1843 by the Maryland & New York Iron & Coal Company. The rolling mill site had 3 trains of rollers, 17 puddling furnaces, 6 reheating furnaces, and 3 special facilities for sheet iron production. The furnaces were of the Siemens type, using coal gas -- produced on-site -- as fuel. The first successful output of the Mt. Savage mill was in 1844, and marked the end of the U. S. dependence on imported products. The rail was used for the home road and sold to the B&O, which up to then had been dependent on imported British rail. One thousand tons of rail, at \$59 per ton, also went to a railroad at Fall River, Massachusetts. Besides rail, cannon balls were produced in quantity.

In the 1850's, the facilities employed 900. Jobs at Mt. Savage attracted both skilled and unskilled immigrants from Ireland, England, and Wales. In foundries and machine shops wages were relatively stable from the early 1880,s to the 1910's. A machinist or boilermaker would make about \$2.50 per 10-hour day, 6 days a week, 300 days per year. There was no vacation, no sick leave, no holidays except for Christmas day. The puddler's job was

a particularly hot and dangerous one. He stirred the molten iron with a long rod, to bring the slag and impurities to the surface, where they could be skimmed off. Still, it was probably a better job than in the nearby mines. Nevertheless, industrial safety was a concept that developed slowly and the iron shops of the 19th Century were dangerous places to work. As part of the social contract men injured at work usually had guaranteed lifetime employment -- if they survived. This practice continued with the railroads through the early parts of the twentieth century: railroad crossing guards at the time were mostly one-armed or one-legged men, the victims of accidents with link-and-pin couplers or manual brakes.

From 1840-1870, Maryland was seventh in the nation in iron production, rising to fifth, but iron manufacture in Maryland declined sharply after that. The Maryland ore was never that good and the discovery of rich veins in the Great Lakes Region, coupled with the emergence of the huge integrated iron conglomerates in the Pittsburgh Region and southeastern Pennsylvania, put small, local operations like that at Mt. Savage out of business. The Mt. Savage rolling mill closed in 1868 and was dismantled by 1875. No trace of the mills remains, but ruins of two of the furnaces are still visible in the town of Mt. Savage and the Lonaconing furnace has been preserved as a historic landmark.

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Learn more about the Mt. Savage Iron Works at the website of the Mt. Savage Historical Society:

<http://www.mountsavagehistoricalsociety.org>