

# United States Patent Office.

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HUGH LEE, OF BELOIT, WISCONSIN.

*Letters Patent No. 102,283, dated April 26, 1870.*

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## IMPROVEMENT IN THE MANUFACTURE OF RAILROAD RAILS.

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The Schedule referred to in these Letters Patent and making part of the same

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*To all whom it may concern:*

Be it known that I, HUGH LEE, of Beloit, Rock county, in the State of Wisconsin, have invented certain new and useful Improvements in the Manufacture of Railroad Rails; and I do hereby declare that the following description is sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and used my said invention or improvements without further invention or experiment.

The nature of my invention and improvements consists in the manufacture of iron or steel rails, or a combination of iron and steel rails for railroads, which consists in twisting the bar while in a heated state and proper shape, and prior to being passed through the forming-rollers or dies for imparting the finished shape to the rail.

The object of twisting the bar or rail is to cause the fibers of the metal to run round the rail in a spiral or circular form, and thereby prevent lamination or

abrasion of the surface of the rail. Such number of twists to be given to the bar or rail as will best accomplish the object above specified.

I am aware that axles and bars for various uses have been formed, or similar bars or rods twisted together before being passed through the shaping-rolls, but the object and purpose to be attained was increased strength; and I therefore claim only—

As an improvement in the construction of railroad rails, twisting together the parts forming the pile prior to passing it through the grooves, by which the proper form is imparted to it, in order that the grain of the metal shall run in a spiral direction, and thus prevent lamination and abrasion, also giving a harder surface to the rail, substantially as set forth, as and for the purpose described and set forth.

HUGH LEE.

Witnesses:

J. BRITTAN,  
FRANK H. SMITH.