

(No Model.)

J. REESE.

METALLIC RAILWAY TIE.

No. 384,785.

Patented June 19, 1888.

FIGURE 1.

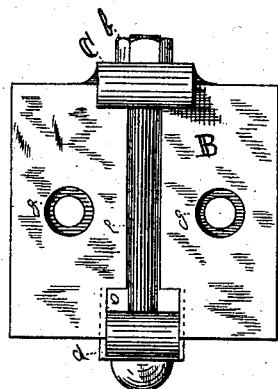
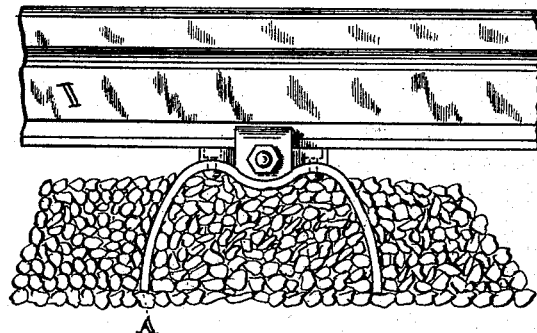


FIGURE 2.

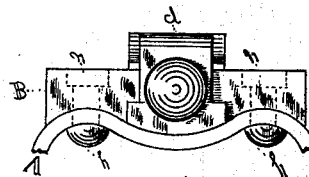
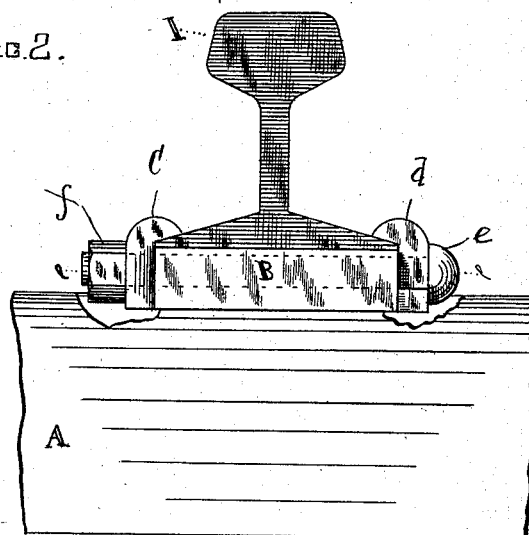


FIGURE 3.

FIGURE 4.



WITNESSES.

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METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 384,785, dated June 19, 1888.

Application filed January 22, 1887. Serial No. 225,217 (No model.)

To all whom it may concern:

Be it known that I, JACOB REESE, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Metallic Railroad-Ties, of which the following is a specification.

My invention relates to metallic railroad-ties, to which rails are fastened in railroad practice.

The objects of my invention are, first, to provide a strong iron or steel railroad-tie of light weight; second, to prevent spreading of the rails; third, to provide a tie easily put in place and readily adjusted to the rail; fourth, to secure a tight fastening of the rail to the tie. I obtain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an enlarged end view of my tie with section of rail in place. Fig. 2 is a plan view of the rail-shoe for attachment to the body of the tie. Fig. 3 is an end view of Fig. 4. Fig. 4 is a sectional view of a tie with a rail in place.

Similar letters refer to similar parts throughout the several views.

A is the rolled body of the ties; B, the shoes; C, the fixed jaw; *d*, the adjustable gripping-jaw; *e*, the tightening-bolt; *f*, the nut; *g g*, the rivet-holes for fastening the shoe B to the rail; *h h*, the rivets for fastening the shoe to the rail I. *o* is an opening in the shoe B for the adjustable gripping-jaw to slide in.

In the construction of my improved railroad-ties I roll a plate of iron or steel twenty-four inches wide, about No. 7 in thickness, cut it to proper lengths, then bend it to shape, then punch four holes in it for fastening the shoes.

The shoes B are made of cast-iron or steel. The fixed gripping-jaw C may be formed integral with the shoe B, and may extend all the way across the shoe, or at any less distance. The adjustable gripping-jaw *d* is made of iron or steel and may be made of any size desired.

When the opening *o* is properly prepared, the adjustable gripping-jaw *d* is put in place, the bolt *e* is put in, and the nut *f* is screwed up, as shown in Fig. 2. The shoes B are then riveted to each end of the plate A. The rivets should have countersunk heads, as shown in Fig. 3 at *n*.

In the construction of a railroad with my improved metallic ties the road-bed is leveled in the usual manner. I then cover it with about six inches of broken stone. The ties are then put in place and the rails fastened to them. Broken stone is then filled in between the ties until up to the top, and broken stone is rammed in under part of the tie until the road-bed is formed, as shown in Fig. 1.

On the opposite side from the permanent fixed jaw the shoe is provided with an opening, *o*, as shown in Figs. 2 and 3. This opening is larger on the under than on the upper surface of the shoe. This is so shaped in order to form shoulders for holding the adjustable jaw *d*. When the opening *o* is properly constructed, the adjustable gripping-jaw *d* is put in place, the rail is placed on the chair, the bolt *e* is put in, and the nut *f* is screwed up. The screwing up of the nut will draw the bolt outward and press the adjustable gripping-jaw *d* against the flange of the rail, and thus hold it tight between the jaws *d* and C.

In riveting the shoes B to the plates A, I prefer to place the solid gripping-jaw C on the outside of the track, so that the pressure of the wheels of the train shall press the rail against the solid jaw and will not tend to unloose the nut and bolt *e* and *f*; but I do not limit myself to the use of the solid jaws on the outside, as they may be used to advantage on the inside.

The bolts *e* may be screwed up from the inside or from the outside; but I prefer to use them as shown in Fig. 4, in which case both the solid gripping-jaw and the nut will be on the outside of the rail.

When the plates A are rolled of steel, the shoes B are made of cast-iron or steel and riveted to the plates, as described, with the solid gripping-jaws on the outside, and the whole constructed as set forth, the flanges of the rails will be held tight between the gripping-jaws C and *d*, and the rails thus held in a proper permanent position without any extra strain on the bolts or nuts.

The object of corrugating the top of the plate A is to get room for the bolt *e* and nut *f* without increasing the weight of the shoe B.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a metallic rail-

road-tie having a corrugated top and downwardly-extending sides, of a shoe conforming in shape to the upper portion of said tie and firmly secured thereto, and having a stationary
5 jaw at its outer portion, and an adjustable jaw located at the inner portion of the shoe, and held against vertical movement, and a bolt-and-nut connection between the jaws, as set forth.

2. The combination, with the shoe having

an opening at its inner portion and a stationary jaw at its outer portion, of a movable jaw having shoulders *d* and working in said opening, and a bolt-and-nut connection between the jaws, as set forth.

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Witnesses:

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