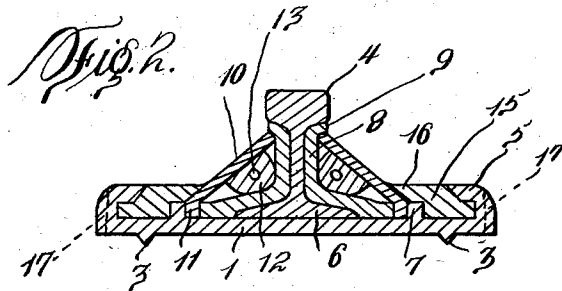
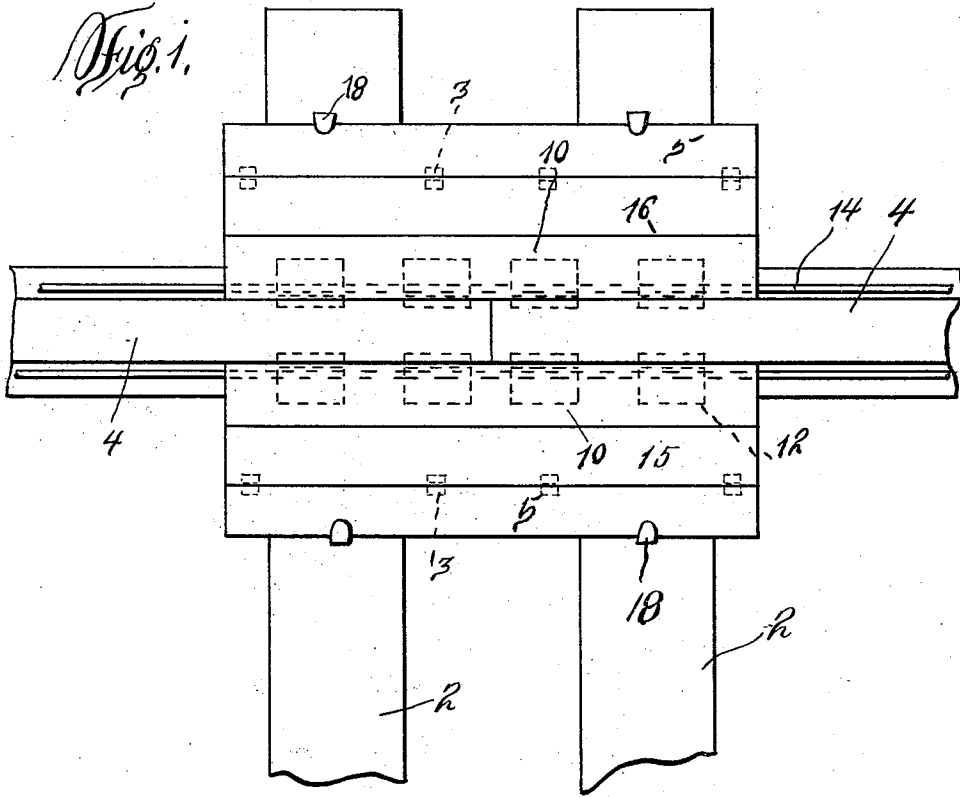


E. F. MILLER.
RAIL JOINT.

APPLICATION FILED MAY 22, 1911.

1,008,179.

Patented Nov. 7, 1911.



WITNESSES

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EDWARD F. MILLER, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ANTHONY H. McCLAFFERTY, OF PITTSBURGH, PENNSYLVANIA.

RAIL-JOINT.

1,008,179.

Specification of Letters Patent.

Patented Nov. 7, 1911.

Application filed May 22, 1911. Serial No. 628,640.

To all whom it may concern:

Be it known that I, EDWARD F. MILLER, a citizen of the United States of America, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to rail joints and the objects of the invention are, first, to provide means as will be hereinafter set forth for positively holding the confronting ends of two rails without the use of bolts and nuts; second, to provide a rail joint that can be easily installed without the use of skilled labor; third, to furnish a tie plate for rails that will provide practically a continuous tread for the rolling stock adapted to travel over the rails; fourth, to provide a rail joint that will allow for the expansion and contraction of the rails without the same becoming laterally or vertically displaced, and fifth, to accomplish the above results by a joint that is strong, durable, inexpensive to manufacture, and highly efficient for bracing the confronting ends of two rails. These and such other objects as may hereinafter appear are attained by the novel construction, combination, and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing, wherein:

Figure 1 is a plan of the rail joint, and Fig. 2 is a cross sectional view of the same.

In the drawings the reference numeral 1 denotes a tie plate of a sufficient length to span or bridge two ties 2, said plate having longitudinal depending V-shaped ribs 3 adapted to engage in the upper surfaces of the tie 2 and prevent creeping or lateral displacement of the tie plate. The plate 1 supports the confronting ends of rails 4, and said plate has the longitudinal edges thereof provided with vertical overhanging flanges 5, and intermediate said flanges and the base flanges 6 of the rails 4 are vertical longitudinal ribs 7, said ribs and the flanges 5 extending from one end of the tie plate to the opposite end thereof. Bracing the sides of the rails 4 and extending over the base flanges 6 thereof are splice bars 8 cor-

responding in length to the tie plate 1, said bars having the upper edges thereof bent outwardly, as at 9, to engage under the heads of the rails 4, while the lower edges of the splice bars 8 rest upon the tie plate 1 in proximity to the vertical ribs 7. Bracing the upper and lower longitudinal edges of the splice bars 8 are angularly disposed braces 10 having the lower edges thereof bent downwardly, as at 11, to engage between the lower edges of the bars 8 and the ribs 7. Arranged between the braces 10 and the bars 8 are blocks of insulation 12, said blocks having longitudinally alining openings 13 to provide clearance for the signal wires or electric conductors 14 of a railway. Slidably mounted between the ribs 7 and the vertical overhanging flanges 5 are locking bars 15, said bars having the lower outer edges thereof extended under the overhanging flanges 5, while the upper inner edges thereof extend over the ribs 7 and engage the outer sides of the braces 10, as at 16, thus preventing the braces 10 from becoming accidentally displaced.

With the exception of the blocks of insulation 15, the rail joint in its entirety is constructed of strong and durable metal, and in order that the same can be secured to the ties 2, the flanges 5 have the outer sides thereof provided with vertical slots 17 to accommodate spikes 18.

What I claim, is:

In a rail joint, the combination with confronting ends of two rails, of a tie plate adapted to span two ties and support said rails, longitudinal depending V-shaped ribs carried by said tie plate for engaging said ties, vertical overhanging flanges carried by the longitudinal edges of said tie plate, vertical longitudinal ribs carried by said tie plate intermediate said flanges and the rails mounted upon said plate, splice bars bracing the sides of said rails and having the upper edges thereof bent outwardly to brace the heads of said rails and the lower edges of said splice bars engaging said tie plate in proximity to said vertical longitudinal ribs, angularly disposed braces engaging under the upper edges of said splice bars and extending between the lower edges of said bars and said vertical longitudinal ribs, blocks of insulation interposed between said braces and said splice bars and adapt-

ed to support electric conductors, and locking bars slidably mounted between the said vertical overhanging flanges and said vertical longitudinal ribs, said locking bars extending under said flanges and over said ribs to engage the outer lower edges of said braces, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

EDWARD F. MILLER.

Witnesses:

MAX H. SROLOVITZ,
K. H. BUTLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
