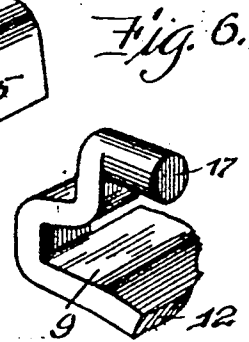
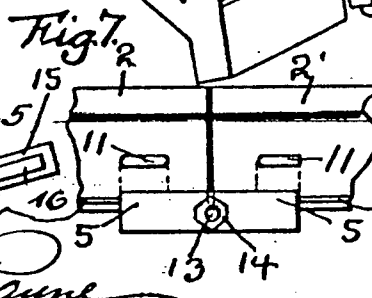
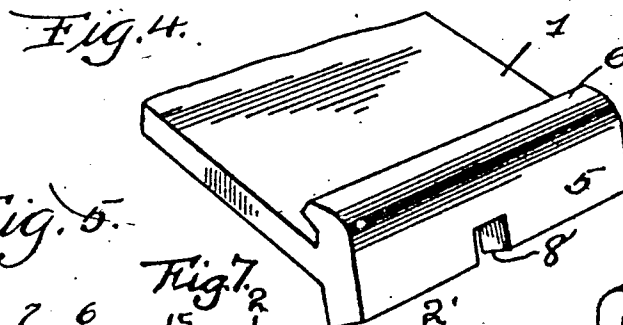
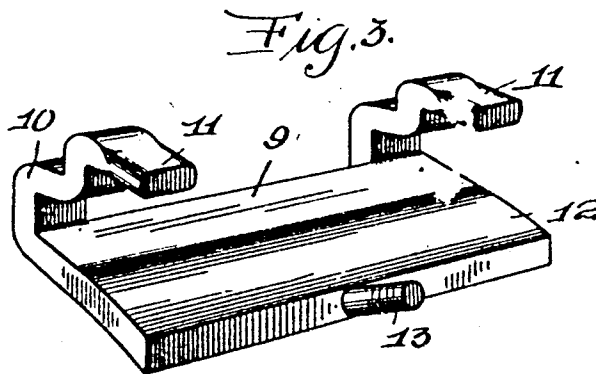
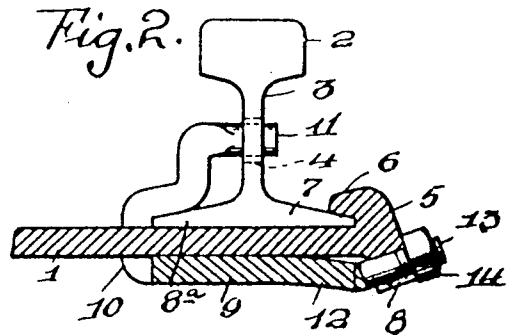
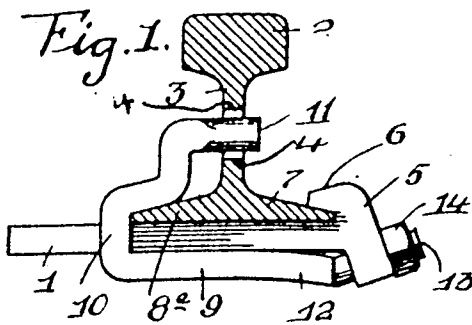


J. O. BROOKS, F. E. PARSONS & G. J. ALTSTETTER.
METALLIC TIE AND RAIL FASTENER.
APPLICATION FILED JAN. 6, 1911.

991,944.

Patented May 9, 1911.



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991,944. METALLIC TIE AND RAIL-FASTENER. JOHN O. BROOKS, FRANK E. PARSONS, and GEORGE J. ALTSTETTER, Clarksburg, W. Va. Filed Jan. 6, 1911. Serial No. 601,169.

To all whom it may concern:

Be it known that we, JOHN O. BROOKS, FRANK E. PARSONS, and GEORGE J. ALTSTETTER, citizens of the United States of America, residing at Clarksburg, in the county of Harrison and State of West Virginia, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to metallic ties and rail fasteners, and to certain improvements disclosed in our companion application Serial No. 601,168, filed Jan. 6, 1911, wherein we have illustrated a fastener designed for retaining rails upon the ends of a metallic tie. Besides having the same objects in view as disclosed in our companion application, the present invention aims to provide a rail fastener that can be used for connecting the abutting ends of two rails upon a tie, whereby one rail cannot become laterally or vertically displaced relative to the adjoining rail.

Other objects of our invention are to obviate the necessity of using splice bars, bolts and nuts as a rail fastener, and to provide a fastener that will allow for the expansion and contraction of rails secured to a tie.

Furthermore, the invention aims to accomplish the above results without using splice bars, ordinary bolts and nuts, or similar detachable fastening means, and to this end, we provide a rail joint that can be advantageously used in connection with industrial railways.

We attain the above objects by a mechanical construction that will be hereinafter specifically described and then claimed, and reference will now be had to the drawing, wherein:—

Figure 1 is a side elevation of the rail joint with the rail shown in section. Fig. 2

is a longitudinal sectional view of the same. Fig. 3 is a perspective view of the rail fastener. Fig. 4 is a perspective view of one end of the tie. Fig. 5 is a side elevation of a portion of a modified form of fastener. Fig. 6 is a perspective view of a portion of another modified form of fastener and Fig. 7 is a view illustrating the abutting ends of two rails showing the adaptation therewith of a fastener in accordance with this invention.

Like numerals of reference designate corresponding parts throughout the several views.

1 denotes a metallic plate tie oblong in plan and constituting the tie, and it is upon this plate that the abutting ends of two rails 2 are adapted to be supported, said rails having the webs 3 thereof provided with oblong or circular openings 4.

5 denotes an angularly disposed flange carried by the end of the plate 1, said flange having an inwardly projecting lip 6 adapted to extend over the outer base flange 7 of the rail 2. The flange extends below the plate 1 and is provided with a notch 8, the object of which will presently appear.

9 denotes a plate of a greater width than the tie 1, said plate having the inner edge thereof at the ends provided with two upwardly extending angular members 10, said members extending upwardly at the sides of the plate tie 1, over the inner base flange 8^a of the rails 2 and 2', and with the ends 11 thereof extending in the oblong or circular openings 4 of the rails 2 and 2'. The opposite edge of the plate is curved downwardly, as at 12, and intermediate the ends thereof is provided with an angularly disposed stud bolt 13 adapted to extend upwardly in the notch or slot 8 and receive a nut 14 employed for locking the fastener plate 9 in engagement with the rail 2, and the flange 5 of the plate tie 1.

In Fig. 5 of the drawings there is illustrated a slight modification wherein the curved edge of the fastener plate 9 is provided with a tongue 15 adapted to extend into the notch or opening 8 and receive a tapering key 16.

Another modification is shown in Fig. 6 of the drawings wherein the members 10 of the fastener plate 9 are provided with cylindrical ends 17 (only one shown) adapted to enter circular openings in the webs 3 of the rails 2.

The principle involved in this invention is practically the same as that involved in the invention disclosed by our companion application, the difference between the two residing in the fact that one is designed for holding a single rail upon the end of a tie and the other for retaining two rails upon the end of a tie.

It is apparent that with the ends 11 of the member 10 extending into the webs 3 of the rails 2 that the rails cannot become longitudinally displaced, and that through the medium of the lips 6 and the members 10 the rails cannot become laterally displaced, thereby obviating many accidents that are incurred by the spreading of rails.

It will be noted that sufficient space exists between the angular members 10 and the rails to permit of electric conductors or bonds being used at the juncture of the rails and as in the device disclosed in our companion application, the flanges of the plate tie prevent the rails from spreading even though the fastener plates become loose.

We would have it understood that the invention is susceptible to such changes in the size, shape, proportion, and manner of assemblage as fall within the scope of the appended claims.

What we claim, is:

1. In a metallic tie and rail joint, the combination with a plate tie adapted to support the abutting ends of two rails, and a flange carried by the end of said plate tie and adapted to engage the outer base flanges of said rails, of a fastener plate located below said plate tie, angular members carried by the inner edge of said fastener plate and adapted to extend upwardly around said plate tie and over the inner base flanges of the rails and engage in the webs thereof, and means adapted to lock the outer edge of said fastener plate in engagement with the flange of said plate tie.
2. In a metallic tie and rail joint, the combination with a plate tie adapted to support the abutting ends of two rails, and a flange carried by the end of said plate tie and adapted to engage the outer base flanges of said rails, of a fastener plate located below said plate tie, angular members carried by the inner edge of said fastener plate and adapted to extend upwardly around said plate tie and over the inner base flanges of the rails and engage in the webs thereof, and means adapted to lock the outer edge of said fastener plate in engagement with the flange of said plate tie, said means including a stud bolt carried by the outer edge of said fastener plate and adapted to extend upwardly into the flange of said plate tie, and a nut screwed upon said bolt.
3. In a metallic tie and rail joint, the combination with a plate tie adapted to support the abutting ends of two rails, and a flange carried by the end of said plate tie and adapted to engage the outer base flanges of said rails, of a fastener plate extending under said plate tie, said fastener plate having the outer edge thereof curved downwardly, angular members carried by the inner edge of said fastener plate at the ends

thereof and adapted to extend upwardly around said plate tie and over the inner base flanges of the rails and into openings provided therefor in the webs of the rails, and means in connection with the outer curved edge of said fastener plate adapted to lock said plate in engagement with the flange of said plate tie, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

JOHN O. BROOKS.

FRANK E. PARSONS.

GEORGE J. ALTSTETTER.

Witnesses:

JAMES N. HESS,

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