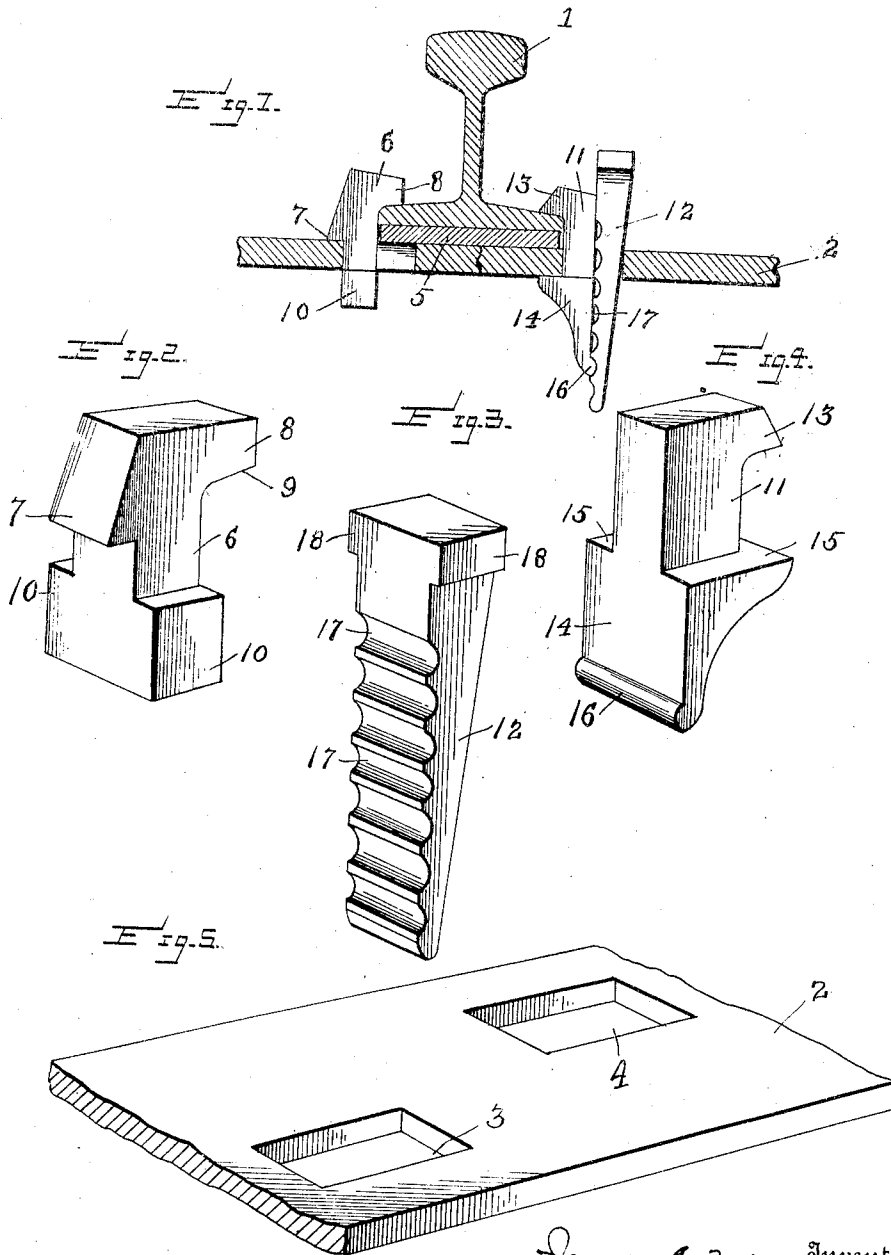


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RAIL FASTENER.

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964,675.

Patented July 19, 1910.



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JAMES ARTHUR McMILLEN AND ADDISON C. McMILLEN, OF MERCER, PENNSYLVANIA.

RAIL-FASTENER.

964,675.

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To all whom it may concern:

Be it known that we, JAMES A. McMILLEN and ADDISON C. McMILLEN, citizens of the United States, residing at Mercer, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Fasteners, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in rail fasteners for securing ordinary T-shaped track rails to metal cross ties.

The object of the invention is to provide a device of this character which will be simple and inexpensive in construction, will enable the rail to be quickly and effectively secured to the tie, and may be repeatedly adjusted and reversed to compensate for wear.

With the above and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, hereinafter fully described and claimed, and illustrated in the accompanying drawing in which:—

Figure 1 is a sectional view through a track rail and of a portion of a metallic tie showing the improved rail fastener in position; Figs. 2, 3 and 4, are perspective views of several portions of the device, and Fig. 5 is a perspective view of a portion of the metal cross tie.

Referring more particularly to the drawing 1 denotes a track rail and 2 the portion of a metallic cross tie, said portion being here shown in the form of a flat, metal plate formed with two vertical openings 3, 4, of rectangular shape and disposed out of longitudinal alinement. If desired, the base flanges of the track rail may rest upon a cushioning block of wood or other suitable material.

6 denotes a rail gripping member which may be inserted in either of the openings 3, 4, but which is initially used in the outer opening 3. This member 6 has a rectangular body portion formed at its top on its outer side with a laterally projecting lug 7 which forms a shoulder to engage the upper face of the tie 2. On the inner side of the upper end of the member or fastener 6 is a laterally projecting lug 8 to extend over and engage the outer base flange of the track rail 1, the enlargement or lug 8 having an inclined bottom face 9 to effectively grip the rail and hold it down upon the tie and block 5. The

fastener or member 6 is adapted to be inserted in the opening 3 by passing its upper end upwardly through said opening, and on its bottom or lower end are formed outwardly projecting side lugs 10 which engage the bottom face of the tie plate 2 and make the lower end of the member 6 T-shaped.

11 denotes a rail-engaging and fastening member which is arranged in the other opening 4 and locked in position by a locking wedge or key 12. The fastener or member 11 has a rectangular body formed at its top and on its inner side with a laterally projecting lug 13 which is similar to the lug 8 and engages the inner base flange of the rail 1. The lower end of the body of the fastener 11 is formed with an enlargement 14 which provides on its inner face and its two side faces shoulders 15 to engage the bottom face of the tie plate 2. The outer face of the enlargement 14 is flush with the outer face of the body of the fastener or member 11, and extending transversely across the bottom of said face of the enlargement is a rib 16 adapted to be engaged by similar grooves 17 formed transversely on one face of the wedge 12. The opposite face of this wedge is smooth for engagement with the inner end wall of the opening 4, and on the enlarged upper end of the wedge are formed laterally projecting side lugs 18 to provide a head for engagement by a claw lever or other retracting tool.

When the invention is used for securing a new track rail to the tie the fastener 6 is placed in position in the outer opening 3, the rail is then placed in position on the cushioning block 5, and the other fastener 11 is then inserted in the inner opening 4 and engaged with the rail. The wedge 12 is then driven into the inner portion of the opening 4 between its inner end wall and the fastener 11 so that its grooves 17 engage the rib 16 on the lower portion of the enlarged lower end of said member. When the rail works loose it may be tightened by driving the wedge downwardly.

Having thus described the invention what is claimed is:

In a rail fastener, the combination with a tie formed with openings and a rail, of a rail gripping member arranged in one of said openings and having at its top a laterally projecting lug forming a shoulder to

engage the top of the tie, and also with a laterally projecting lug for engagement with one of the base flanges of the rail, the lower end of said member being formed with lugs
5 to provide shoulders for engagement with the bottom face of the tie, a second rail gripping member arranged in the other opening and formed at its top with a lug to engage the adjacent base flange of the rail,
10 the lower end of the second member being enlarged to provide shoulders to engage the bottom face of the tie, said enlargement being formed at its lower end with a trans-

verse rib, and a locking wedge driven into the last mentioned opening of the tie and 15 having at its upper end a head and upon one of its side faces transverse grooves to engage said rib.

In testimony whereof we hereunto affix our signatures in the presence of two wit- 20 nesses.

JAMES ARTHUR McMILLEN.
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Witnesses:

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