Sept. 17, 1929. A. L. CRANE 1,728,593

TIE AND RAIL FASTENER

Filed March 30, 1929

Fig. 1.

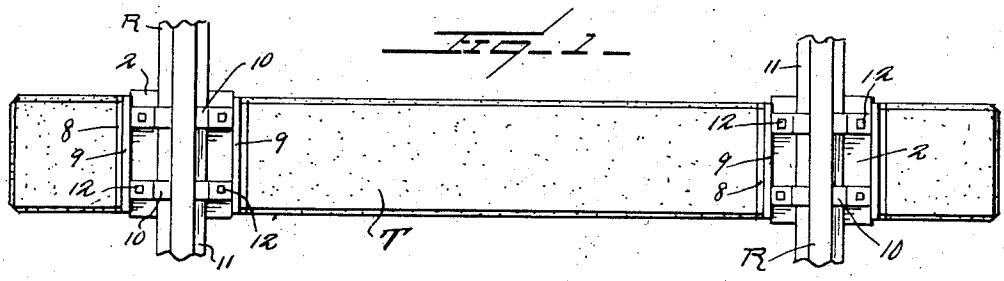


Fig. 2.

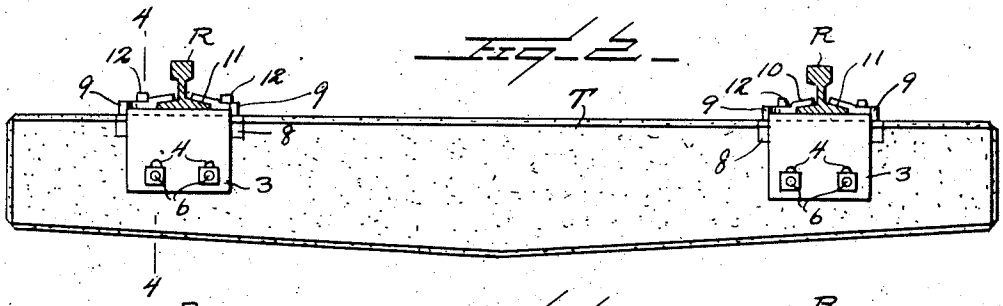


Fig. 3.

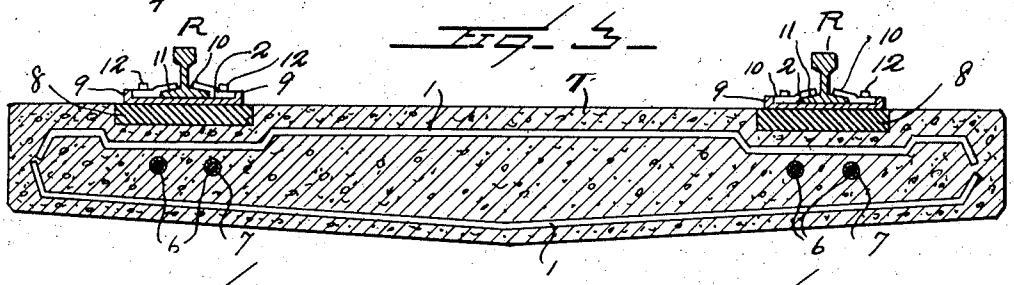


Fig. 4.

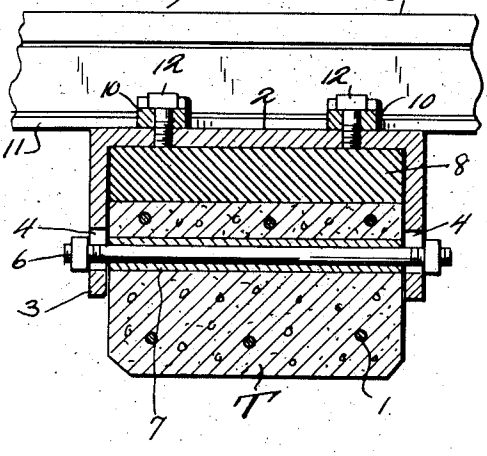
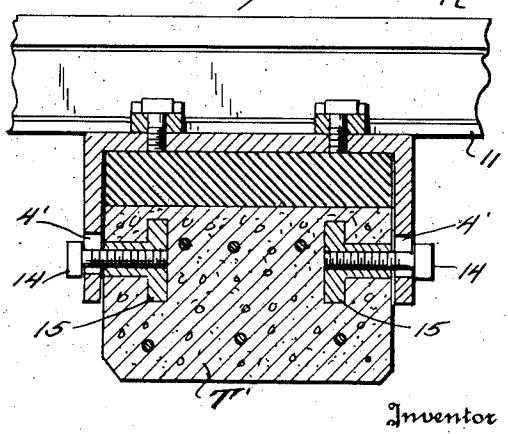


Fig. 5.



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Patented Sept. 17, 1929 1,728,593

UNITED STATES PATENT OFFICE

ADAM L. CRANE, OF CHARLOTTE, NORTH CAROLINA, ASSIGNOR OF ONE-EIGHTH TO ANDREW TOMLIN, ONE-EIGHTH TO PAUL E. BROWN, AND ONE-EIGHTH TO FRANK KOABLER, ALL OF CHARLOTTE, NORTH CAROLINA

TIE AND RAIL FASTENER

Application filed March 30, 1929. Serial No. 351,376.

This invention relates to a tie and rail fastener and an object of the invention is to provide a novel and improved structure whereby a rail may be effectively secured to a cement tie or the like and wherein the rail fastener is of a type to be employed in connection with rails of different sizes.

Another object of the invention is to provide a structure of this kind wherein the rail fastener comprises a base plate adapted to be mounted upon the tie and wherein a yielding or cushioning medium is interposed between said plate and tie to provide the requisite elasticity as the rolling stock passes over the tie.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved tie and rail fastener whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:—

Figure 1 is a view in top plan illustrating a tie and rail fastener constructed in accordance with an embodiment of my invention;

Figure 2 is a view in side elevation of the structure as illustrated in Figure 1;

Figure 3 is a longitudinal sectional view taken through the structure as illustrated in Figure 1;

Figure 4 is a sectional view taken substantially on the line 4—4 of Figure 2;

Figure 5 is a view similar to Figure 4 illustrating a further embodiment of my invention.

As disclosed in the accompanying drawing, T denotes a tie herein disclosed of a cementitious type having embedded therein the reinforcement members 1.

Resting upon the tie T adjacent to each end thereof is a metallic plate 2. This plate 2 is disposed transversely across the upper surface of the tie T and has its extremities provided with the depending plates 3 closely adjacent to the side walls of the tie T. Each of the depending plates 3 is provided with the parallel slots 4 spaced apart in a direction lengthwise of the tie and extending through each of said slots 4 is an extended end portion of an elongated bolt 6. Each of the bolts 6 is disposed transversely through the tie T and is surrounded by a tubular member 7, preferably of metal, said member 7 being properly positioned within the tie when molded.

Interposed between the plate 2 and the upper surface of the tie T is a yielding or cushcushioning medium 8, preferably of rubber compound, whereby the rail R held to the plate 2 has desired elasticity or up and down movement as the rolling stock passes over the tie.

The side marginal portions of the plate 2 are defined by upstanding flanges 9 which serve as abutments for the outer ends of the clips 10 which coact with the base flanges 11 of the rail R for holding said rail to the plate 2. The clips 10, as herein disclosed, are held to the plate 2 in any preferred manner, as indicated at 12. Rails of different sizes may be effectively secured to a plate 2 by using holding clips of requisite sizes.

In the embodiment of my invention as illustrated in Figure 5 each of the slots 4′ has disposed therethrough a headed shank 14 which enters the adjacent side portion of the tie T′ and is threaded through a plate 15 embedded and suitably positioned within the tie.

From the foregoing description it is thought to be obvious that a tie and rail fastener constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. In combination with a tie, a plate mounted on the upper surface thereof and provided with depending plates overlying the side faces of the tie, said depending plates having slots, a holding medium engaged with the tie and extending through each of the slots, a cushioning means mounted upon the plate and upon which a rail is adapted to be seated; the slots in the depending plates permitting requisite up and down movement, and rail engaging means carried by the first named plate.

2. In combination with a tie, a plate mounted on the upper surface thereof and provided with depending plates overlying the side faces of the tie, each of said depending plates having parallel slots spaced apart in a direction lengthwise of the tie, a holding medium engaged with the tie and extending through each of the slots, a cushioning means mounted upon the plate and upon which a rail is adapted to be seated, the slots in the depending plates permitting requisite up and down movement, and rail engaging means carried by the first named plate.

In testimony whereof I hereunto affix my signature.

ADAM L. CRANE.