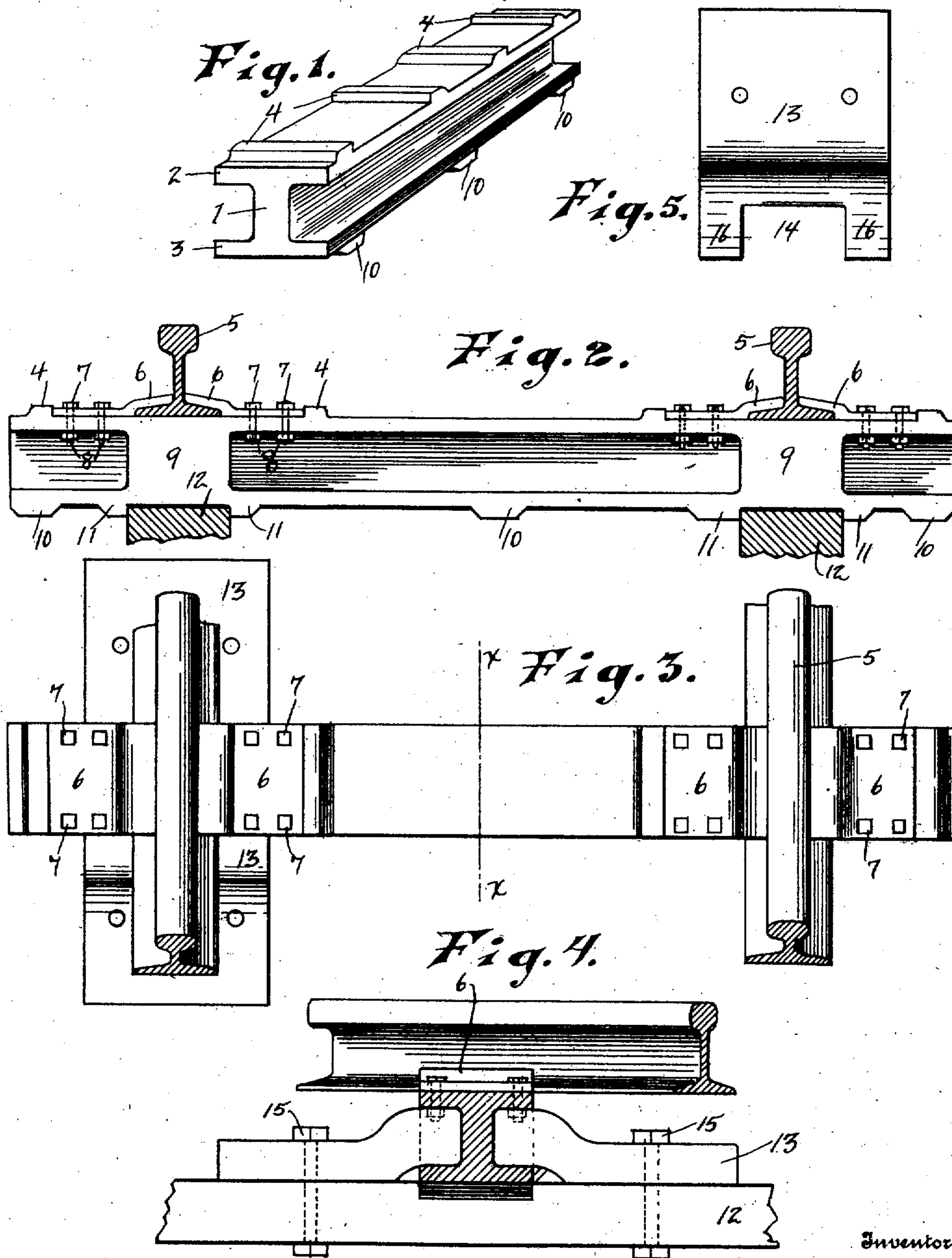


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METALLIC TIE FOR RAILWAY RAILS.  
APPLICATION FILED APR. 11, 1910.

987,101.

Patented Mar. 21, 1911.



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# UNITED STATES PATENT OFFICE.

WILLIAM W. ANDREW, OF LIVINGSTON, WISCONSIN.

METALLIC TIE FOR RAILWAY-RAILS.

987,101.

Specification of Letters Patent.

Patented Mar. 21, 1911.

Application filed April 11, 1910. Serial No. 554,784.

*To all whom it may concern:*

Be it known that I, WILLIAM W. ANDREW, a citizen of the United States, residing at Livingston, county of Grant, and State of Wisconsin, have invented new and useful Improvements in Metallic Ties for Railway-Rails, of which the following is a specification.

My invention relates to improvements in metallic railway ties, and it pertains among other things,—1st, to the construction of the body of the tie, 2nd, to the rail retaining members, and 3rd, to the device for securing the tie to a trestle of an elevated railway when it is so used, and the same is explained by reference to the accompanying drawings in which,

Figure 1 is a perspective view of the tie. Fig. 2 is a side view thereof in connection with railway rails and the device for securing the rails in place thereon. Fig. 3 is a top view of the device illustrated in Fig. 2, showing in addition thereto, one pair of plates for securing the tie to a supporting trestle. Fig. 4 is a side view, drawn on line  $x-x$  of Fig. 3, looking toward the left, and Fig. 5 is a top view of one of the tie retaining plates removed from the tie.

Like parts are identified by the same reference numerals throughout the several views.

The tie proper in cross section is substantially the shape of an ordinary so-called I-bar, comprising the central member 1, the upper flange 2, and lower flange 3. The upper flange 2 is provided with two pairs of rail retaining shoulders 4, 4, each pair being formed near its respective ends. The railway rails 5, 5 are supported centrally between the shoulders 4, when they are respectively secured in place by a pair of clamping plates 6, 6, and plate retaining bolts 7, 7. The bolts 7 extend down through the respective ends of the clamping plates 6 and the upper flange 2 of the tie, when such parts are rigidly secured in place by the nuts 8, 8. Under certain conditions, the ties are preferably provided with supporting members 9, 9, which are located directly be-

neath the railway rails and are formed integrally with the upper and lower flanges 2 and 3 of the tie and serve to strengthen and reinforce the same, whereby the liability of the flanges being broken at such point when formed of cast metal is avoided.

To prevent the ties from sliding longitudinally on the ground or other support, their lower surfaces are preferably provided with a plurality of downwardly projecting beads 10, which are adapted to penetrate the surface of the ground upon which the ties are located. When, however, the ties are supported upon a trestle, they are preferably provided with two pairs of downwardly projecting shoulders 11, 11, which are adapted to engage upon the respective sides of the trestle members 12, shown in Figs. 2 and 4. As an additional means for securing the ties in place upon a trestle, I preferably provide the same with two pairs of clamping plates 13, 13, which plates are provided with recesses 14 for the reception of the supporting members 9 of the tie. When the ties are in place, the clamping plates 13 are secured to the trestle member 12 by a plurality of bolts 15, while the recessed end of said plate is adapted to rest upon the lower flange 3 of the tie, when the side members 16 of said clamping plate are caused to bear against the respective sides of the strengthening member 9 of the tie, whereby the tie is securely retained in place upon the trestle member, as shown in Figs. 3 and 4.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A metallic railway tie comprising an integrally formed vertical central member, transversely arranged upper and lower horizontal flanges, two pairs of reinforcing vertical members interposed between said upper and lower horizontal flanges upon the respective sides of said vertical member, and two pairs of upwardly projecting shoulders, in combination with a railway rail, two pairs of rail retaining clamping members, a plurality of bolts for retaining said clamping

members in place on said rails and tie, two  
tie retaining clamping members adapted to  
engage at their two opposing ends upon the  
upper side of the lower horizontal flange of  
5 said tie, and means for connecting their op-  
posite ends to a transversely arranged tie  
supporting trestle member.

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

WILLIAM W. ANDREW.

Witnesses:

F. B. RUNDELL,

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

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