

J. B. DEMARY.
RAIL HOLDING DEVICE.
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1,065,595.

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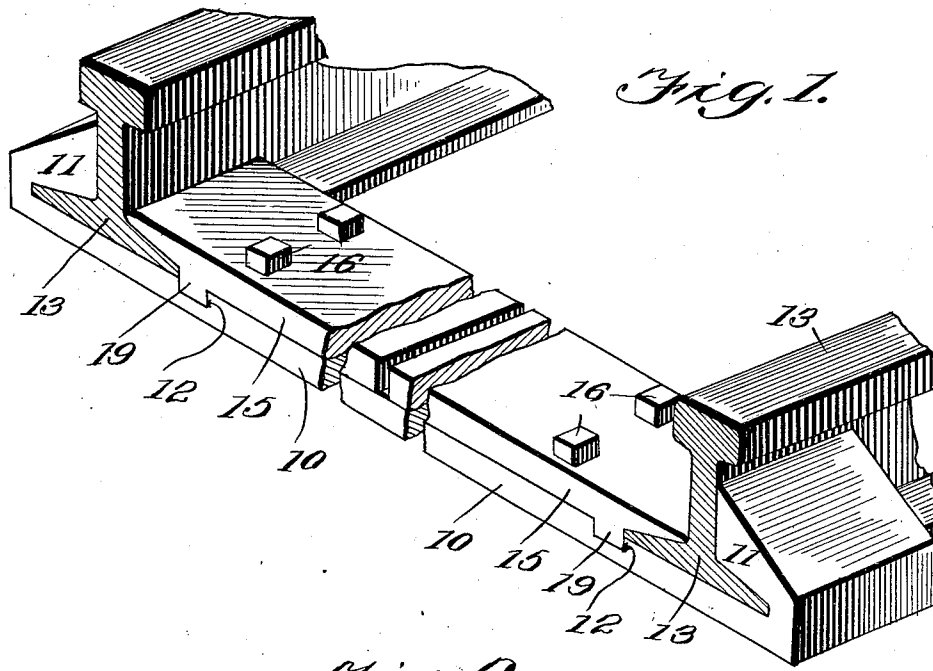


Fig. 1.

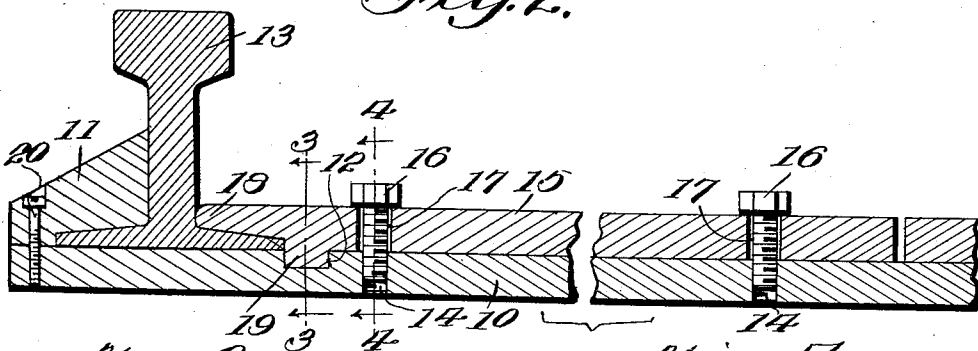


Fig. 2.

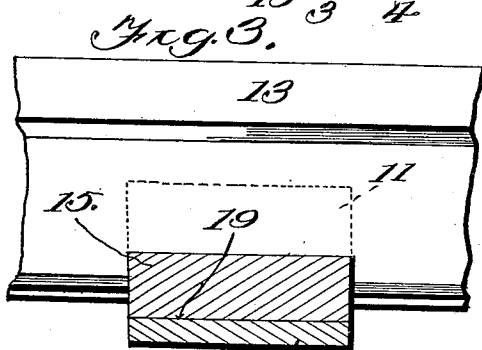


Fig. 3.

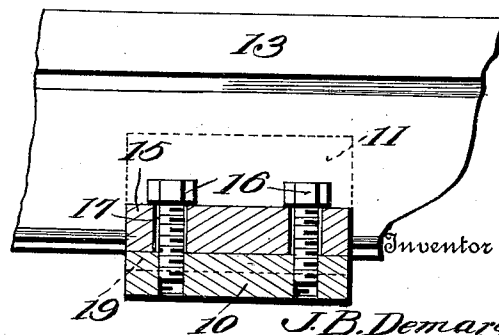


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

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RAIL-HOLDING DEVICE.

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Specification of Letters Patent

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To all whom it may concern:

Be it known that I, JOHN B. DEMARY, citizen of the United States, residing at Plattsburg, in the county of Clinton and State of New York, have invented certain new and useful Improvements in Rail-Holding Devices, of which the following is a specification.

My invention relates to new and useful improvements in ties for railways and more particularly to metallic ties, and the object of my invention is to provide a tie of the character described which will accurately and automatically gage the rails in proper spaced relation to each other.

A further object of my invention is to provide means for quickly and effectively securing the rails in place upon the tie. And a still further object of my invention is to improve the construction and increase the efficiency of railway ties of the above described character.

With these and other objects in view, my invention will be more fully described, illustrated in the accompanying drawings, and then specifically pointed out in the claim which is attached to and forms a part of this application.

In the drawing: Figure 1 is a perspective view partly broken away of a rail fastening device constructed in accordance with my invention; Fig. 2 is a longitudinal sectional view of a slightly modified form of tie; Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2 and looking in the direction of the arrow; Fig. 4 is a similar view taken on the line 4—4 of Fig. 2 and looking in the direction of the arrow.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

The preferred embodiment of my invention includes a plate 10, preferably formed of steel, and forming the body of the tie, the ends of the plate being formed with upwardly and inwardly directed extensions 11 spaced a slight distance above the body of the tie to receive the outer tie engaging flange of the rails and having their inner faces shaped to bear against the vertical webs of the rails.

The body member is provided adjacent each end with a transversely extending, square shouldered channel 12, these channels being so positioned that when the rails,

here designated as 13, are in place, their inner tie engaging flanges will lie flush with the outer side walls of the channels. The body member of the tie is further provided with a plurality of internally threaded bores 14 which are preferably symmetrically arranged as shown, but which may be formed at any desired points.

As a means for securing the rails upon the tie, I have provided locking plates 15 adapted to be clamped upon the tie by means of bolts 16 passed through bores 17 formed in the plates and threaded into the bores 14 of the tie. The locking plates are formed at their outer ends for engagement over the inner tie engaging flange of the rail, as shown at 18 and are provided with transversely extending, downwardly depending, squared ribs 19 adapted to seat in the channels 12 of the tie and so prevent all inward movement of the clamping plates upon the tie.

The bores 17 of the clamping plates are preferably formed somewhat greater in diameter than the diameter of the bolts in order to facilitate the positioning of the bolts when securing the clamping plates in place. The clamping plates, as shown, are preferably equal in width to the width of the tie and of such length that their inner ends are spaced apart but a slight distance. By this construction, the clamping plates reinforce and stiffen the tie practically throughout its entire length, while at the same time a slight resiliency in the central portion of the tie is allowed. All of the ties are alike in construction and both clamping plates employed are identical in construction and therefore interchangeable.

In laying a track, the ties are positioned in the usual manner, the rails are placed upon the ties and moved outwardly until their outer flanges engage beneath the extended terminals 11 of the ties, when, as will be readily seen, the rails will be in proper spaced relation with respect to each other. The clamping plates 15 are then positioned upon the ties with their ribs engaging in the channels of the ties and with their outer ends engaging against the inner faces of the vertical webs of the rails when the bolts are applied to firmly lock the clamping plates to the ties and therefore the rails to the ties.

The inwardly directed portions of the extensions 11 are preferably thickened as shown to bear against the vertical webs of

the rails to a considerable height and so take up all outward thrust upon the rails.

If desired one of the extensions or shoulders 11 may be made in a separate
5 piece and secured to the body 10 by a plurality of bolts 20 as shown in Fig. 2 of the drawings. With this form of construction, a broken tie may be removed without necessitating the taking up of a complete rail as
10 would be the case with the form shown in Fig. 1.

Having thus described the invention, what is claimed as new is:

A metallic tie including a body member
15 terminating in upwardly and inwardly directed shoulders shaped to engage over the outer flanges of the rails and to bear against the vertical webs thereof, said tie being provided with transversely extending channels
20 in its upper face, the side walls of said channels being vertical, said tie being further provided adjacent said channels with tapped

bores, and clamping plates adapted to be secured upon the tie and equal in thickness to the tie, the end faces of said clamping plates 25 at their outer ends being beveled to engage over the inner flanges of the rails and being provided with downwardly depending shoulders adapted to seat in the channels and bear against the inner rail flanges, the 30 side faces of said shoulders lying at right angles to the lower faces of the plates, said plates being provided with bores in alignment with the bores of the tie but greater in diameter, and a plurality of bolts passed 35 through the bores of the plates and threaded into the bores of the tie to secure the plates to the tie and the rails to the tie.

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

JOHN B. DEMARY. [L. S.]

Witnesses:

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