Jan. 2, 1923.

1,440,696.

R. A. E. REIGARD ET AL.

RAILWAY RAIL BRACE.

FILED APR. 18, 1922.

Fig. 1.

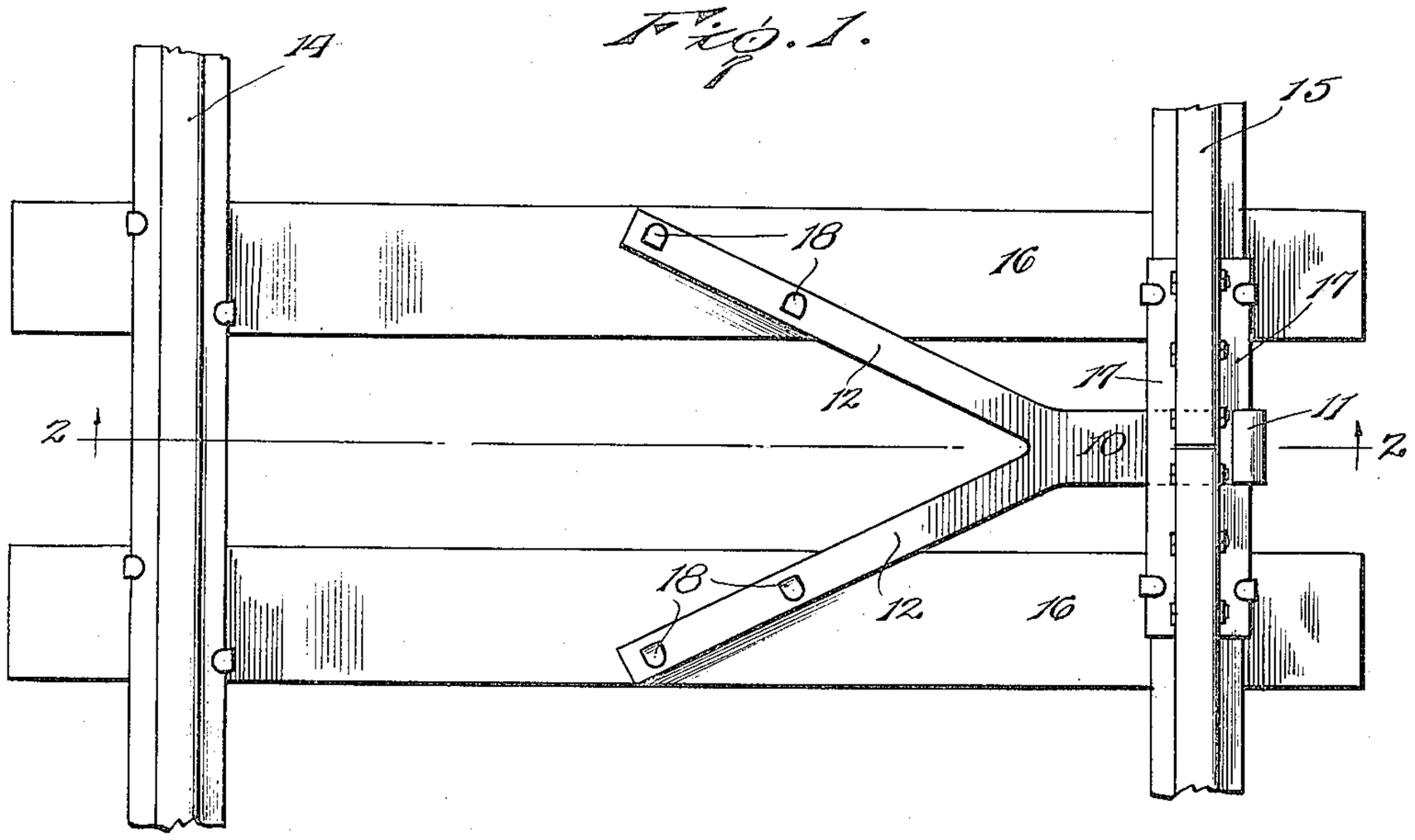


Fig. 2.

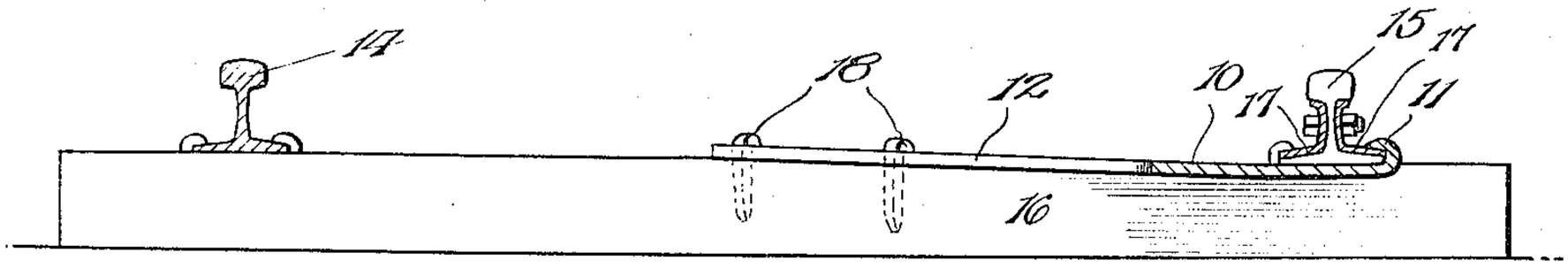
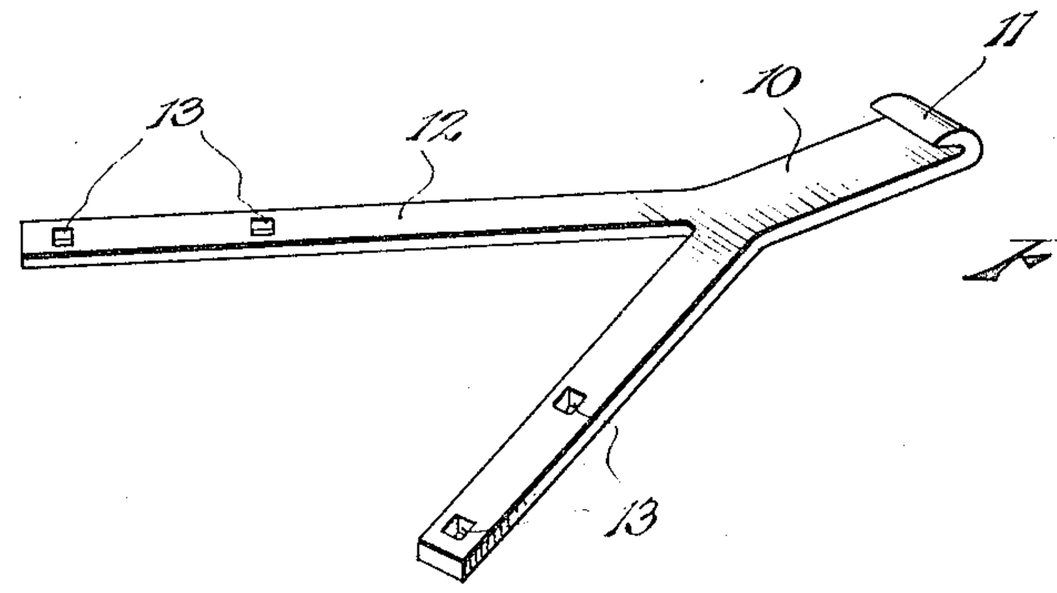


Fig. 3.



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UNITED STATES PATENT OFFICE.

ROBERT A. E. REIGARD AND SALVATORE RANIERI, OF BRACKENRIDGE, PENNSYLVANIA.

RAILWAY-RAIL BRACE.

Application filed April 18, 1922. Serial No. 554,646.

To all whom it may concern:

Be it known that we, ROBERT A. E. REIGARD and SALVATORE RANIERI, citizens of the United States, residing at Brackenridge, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Rail Braces, of which the following is a specification.

This invention relates to an improved railway rail brace and seeks, as one of its principal objects, to provide a device which will render the use of unsatisfactory tie rods unnecessary and which will serve to rigidly brace the rails of a track against lateral spreading at the rail joints.

The invention has as a further object to provide a device which may be engaged with a track rail at the joints therein and spiked to the middle portions of the track ties where the ties are less subject to decay so that the effectiveness of the device to anchor the rails will thus be correspondingly prolonged.

And the invention has as a still further object to provide a device which will be of simple and rugged construction and which may be readily applied.

Other and incidental objects will appear hereinafter.

In the drawing:

Figure 1 is a fragmentary plan view showing our improved device in connection with a conventional railway track.

Figure 2 is a sectional view on the line 2—2 of Figure 1, looking in the direction of the arrows, and

Figure 3 is a perspective view showing the device in detail.

In carrying the invention into effect, we employ a flat metal bar 10 upturned at one end to form a rail engaging hook 11 while at its opposite end the bar is forked to provide diverging straps or arms 12. Formed in each of said arms is a pair of squared openings 13. In Figures 1 and 2 of the drawing, we have shown the device in connection with a conventional railway track having rails 14 and 15 respectively. A typical rail joint is illustrated in connection with the rail 15, the meeting ends of the rail being rested upon ties 16 and connected by fish plates 17. As shown, the bar 10 is arranged to extend beneath the meeting ends of the rails when the hook 11 is engaged over the base flange of the outermost of the first plates 17, the arms 12 of the device being disposed to extend inwardly along the ties overlying the ties. Spikes 18 are then driven through the openings 13 of the arms 12 of the device into the ties for rigidly connecting the device with the ties so that, as will be seen, the brace will be anchored to the ties for securely holding the rail ends against outward spreading movement. In this connection, attention is directed to the fact that the device is of a length to extend to the middle portions of the ties, thus locating the spikes substantially midway between the ends of the ties. Accordingly, since, as is well known, the ties of a track suffer the greatest decay at the ends of the ties and the least decay at the middle portions of the ties, the spikes are so disposed that the ends of the ties will be in a condition necessitating replacement of the ties before disintegration of the middle portions of the ties will have progressed sufficiently to release the spikes. The efficiency of the anchorage for the brace may thus be depended upon throughout the period of use of the ties so that the device will at all times operate to rigidly brace the rails. Furthermore, it is to be noted that the bar 10 as well as the arms 12 are resilient and when the device is applied, the brace is flexed longitudinally so that the bar is tensioned against the base flanges of the rails. Rattling, such as might be occasioned by vibration, will accordingly be overcome. We, therefore, provide a particularly simple and efficient device for the purpose set forth and a brace adapted for a wide range of use since the brace may readily be applied to rails of different sizes without the necessity for structural change in the brace. Furthermore, when desired, the device may not only be employed at the rail joints of a track but may also be used between the ends of the rails for bracing the rails.

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

The combination with a railway rail, and spaced ties supporting the rail, of a one-piece resilient sheet metal brace including a bar extending beneath the base flange of the rail from the inner edge thereof and up-

turned at its outer end to provide a hook engaging upwardly over said flange at its outer edge, the bar being forked at its inner end to define spaced arms of a length to extend longitudinally of the ties over the middle portions thereof, and means securing said arms to the middle portions of the ties flexing the arms for tensioning said bar upwardly against the base flange of the rail.

In testimony whereof we affix our signatures.

ROBERT A. E. REIGARD. [L. S.]
SALVATORE RANIERI. [L. S.]