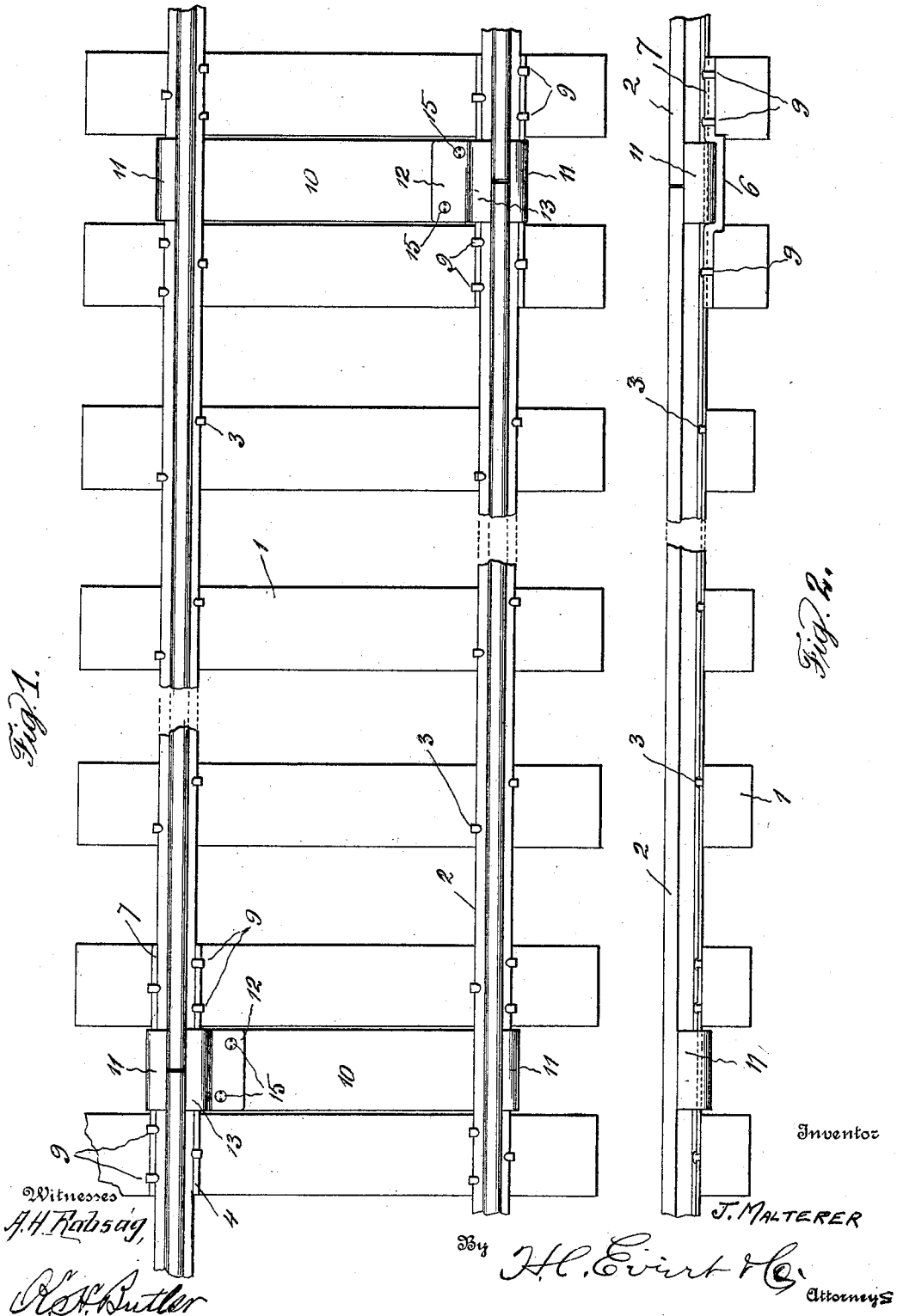


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RAIL JOINT.  
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934,926.

Patented Sept. 21, 1909.  
2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

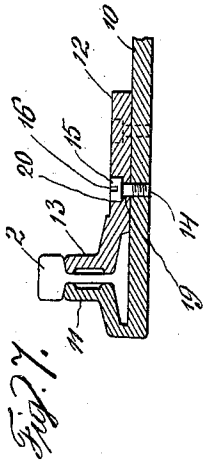


Fig. 7.

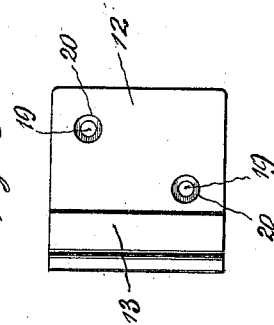


Fig. 8.

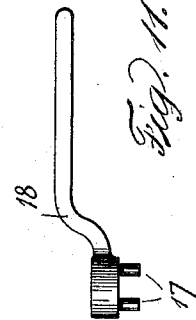


Fig. 11.



Fig. 9.

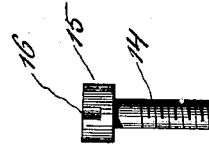


Fig. 10.

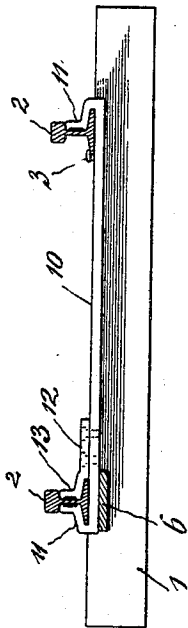


Fig. 13.

Fig. 14.

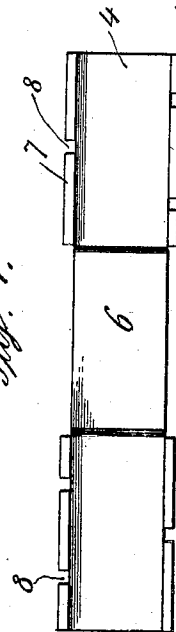


Fig. 15.

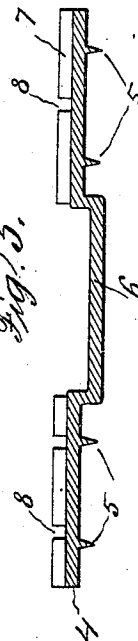


Fig. 16.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN MALTERER, OF DENNISON, OHIO.

## RAIL-JOINT.

934,926.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed July 2, 1909. Serial No. 505,636.

*To all whom it may concern:*

Be it known that I, JOHN MALTERER, a citizen of the United States of America, residing at Dennison, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawing.

The invention relates to rail joint braces, and the invention has for its objects to provide simple and effective means for connecting the confronting ends of two rails without the use of nuts and bolts; and to furnish strong and durable means for preventing the rails comprising the track from spreading.

Other objects of the invention are to prevent lateral and vertical displacement of rails and to provide a rail joint and brace that can be installed without the use of skilled labor.

These and such other objects as may hereinafter appear are attained by a structure that will be presently described in detail and then claimed.

Referring to the drawings forming a part of this specification, wherein there is illustrated a preferred embodiment of my invention, it is to be understood that the structural elements thereof can be varied or changed without departing from the spirit of the invention.

Figure 1 is a plan of a portion of a track constructed in accordance with my invention, Fig. 2 is a side elevation of the same, Fig. 3 is a cross sectional view of the track, Fig. 4 is a plan of a tie plate, Fig. 5 is a longitudinal sectional view of the same, Fig. 6 is an end view of the tie plate, Fig. 7 is a longitudinal sectional view of a portion of the rail joint, Fig. 8 is a plan of a detached rail plate, Fig. 9 is a plan of a screw bolt used in connection with the rail plate, Fig. 10 is an elevation of the same, and Fig. 11 is a side elevation of a spanner wrench used in connection with the screw bolts.

In the accompanying drawings, 1 denotes ties or sleepers supporting rails 2, said rails being spiked to the ties or sleepers, as at 3.

4 denotes tie plates arranged at the confronting ends of the rails 2, said plates being designed to rest upon two ties or sleepers and are provided with depending transverse ribs or corrugations 5, for engaging

in the wooden ties or sleepers 1. The tie plates are provided with central depending spacing portions 6 adapted to maintain the ties apart, and in proper position relative to the confronting ends of the rails. To prevent lateral displacement of rails resting upon the plates 4, said plates at the ends thereof are provided with longitudinal vertical flanges 7 having openings 8 for spikes 9 employed for securing the tie plates in position.

10 denotes a connecting bar for the rails 2 comprising the track, said bar having the ends thereof bent upwardly to provide fish plates 11 for engaging and bracing the outer sides of the rails 2. The bar 10 at each joint rests upon a depending spacing portion 6 of the tie plate 4, and to clamp said connecting bar to the rails, a rail plate 12 is employed. This plate is provided with an integral fish plate 13 to engage the inner side of the rails 2, resting upon the tie plate 4, and to secure the rail plate to the connecting bar 10 screw bolts 14 are employed. These screw bolts are provided with heads 15 having oppositely disposed recesses 16 for the depending pins 17 of a spanner wrench 18, said spanner wrench being used to screw the bolts into the connecting bar 10. In order that the heads of the screw bolts 14 will not be exposed, the openings 19 of the rail plate 12 are provided with countersunk seats 20 for said heads.

As shown in Figs. 1 and 2 of the drawings, the connecting bars 10 are reversed relative to each other, this being essential as the joints of the rails comprising a track are not located opposite one another on account of weakening the track structure.

Having now described my invention what I claim as new, is:—

1. In a rail joint, the combination with ties, a track supported by said ties and comprising rails, of tie plates secured to said ties at the confronting ends of the rails, said tie plates having longitudinal vertical flanges adapted to prevent displacement of said rails, said tie plates having central depending spacing portions for the ties located at the confronting ends of said rails, connecting bars, said bars having the ends thereof bent upwardly to provide fish plates for bracing the outer sides of the rails comprising said track, one end of said bar resting upon the depending central spacing portion of the tie plate, and a rail plate

secured to said connecting bar adjacent to said tie plate and having a fish plate for bracing the inner sides of the rails located upon said tie plate.

5 2. In a rail joint, the combination with ties, a track supported by said ties and comprising rails, tie plates supported by said ties at the confronting ends of said rails, said tie plates having central depending  
10 spacing portions for the ties adjacent to the confronting ends of said rails, a connecting bar having one end thereof resting

upon the central depending spacing portion of said tie plate with both ends of said bar bent to brace the outer sides of said rails, 15 and a rail plate secured to said connecting bar at said tie plate for bracing the inner sides of the rails resting upon said tie plate.

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

JOHN MALTERER.

Witnesses:

HAZEL DUTTON,  
JENNIE SHAFFER.