

H. O. WERT.
TIE AND BRACE FOR RAILWAY RAILS.
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941,917.

Patented Nov. 23, 1909.

Fig. 1.

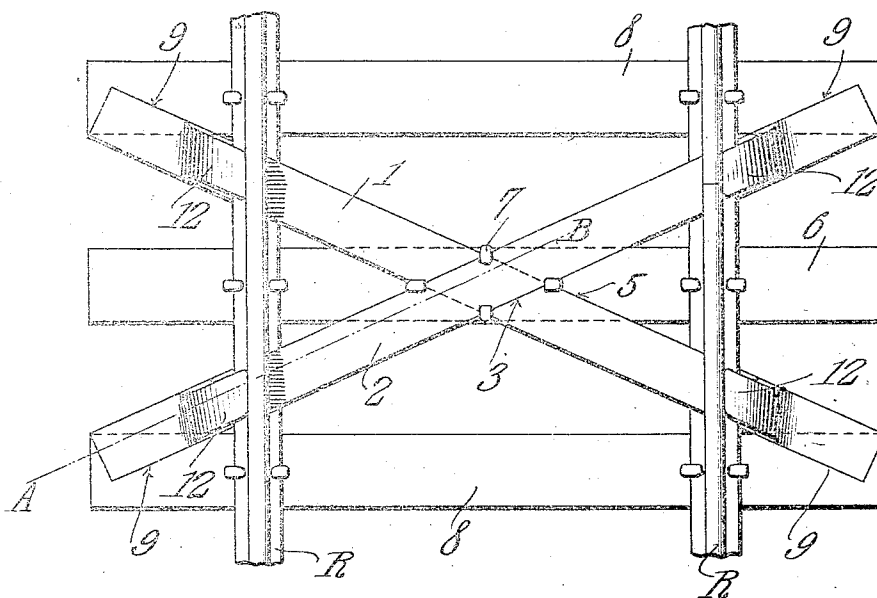
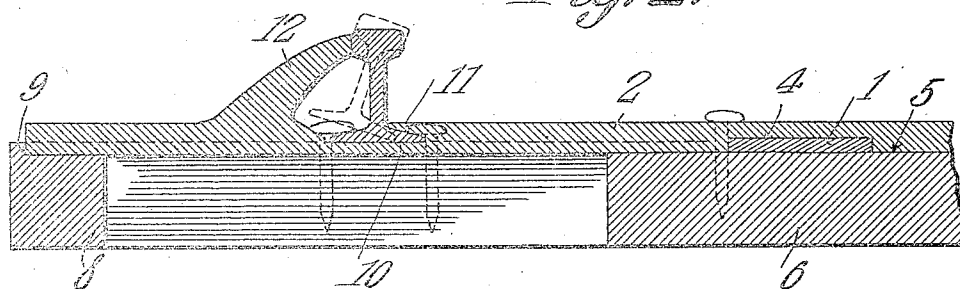


Fig. 2.



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Witnesses

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UNITED STATES PATENT OFFICE.

HARRY O. WERT, OF BLOOMSBURG, PENNSYLVANIA.

TIE AND BRACE FOR RAILWAY-RAILS.

941,217.

Specification of Letters Patent.

Patented Nov. 23, 1909.

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To all whom it may concern:

Be it known that I, HARRY O. WERT, a citizen of the United States, residing at Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented a new and useful Tie and Brace for Railway-Rails, of which the following is a specification.

This invention relates to a combined tie and brace for use in connection with the rails of railway tracks, the object being to provide simple means whereby the rails may be prevented from tilting, said invention being designed for use in addition to the ordinary railway tie.

A further object is to provide a brace of this character which can be readily applied to rails, said brace operating to practically prevent the rails from spreading apart.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a view of a portion of a track, showing the improved brace and tie applied to the rails thereof. Fig. 2 is an enlarged section on line A—B of Fig. 1.

Referring to the figures by characters of reference 1 and 2 designate the two members of the device constituting the present invention, each of said members being in the form of an elongated metallic strip of sufficient length to extend diagonally under both rails of the track, the member 1 being provided in its upper face with a transverse groove 3 which extends obliquely there-across, the width of said groove being equal to the width of the member 2 and said member 2 being provided in its lower face with a similar groove 4. The depth of each groove is equal to one half the thickness of the members 1 and 2 respectively, and it will be therefore apparent that the grooved portion of the member 1 may receive the grooved portion of the member 2, and both of the members thus be securely held together to form a substantially X-shaped tie. The crossed or intersecting portions of the members 1 and 2 are designed to rest within a recess 5 formed in the middle portion of a tie 6, which is of the usual form, and these members may be retained within the recess by means of spikes 7 such as usually pro-

vided for the purpose of fastening rails to wooden ties. As shown in Fig. 1 these spikes are designed to be placed within the angles formed by the intersecting members so as to hold said members firmly in position.

The terminal portions of the members 1 and 2 are designed to rest upon ties 8 similar to the ties 6, but are provided with end recesses 9 in lieu of the central recess 5. The members 1 and 2 are seated within these recesses and are supported at their ends by the ties 8. These portions of the members 1 and 2 that are located directly below the rails R R are provided with transverse grooves 10 extending obliquely there-across, the grooves of the corresponding ends of the two members 1 and 2 being disposed in alinement and the inner walls of all the grooves being undercut as indicated at 11, so as to snugly fit upon the inner base flanges of the rails R. Extending upwardly and inwardly from the members 1 and 2 and adjacent the outer walls of the grooves 10 are braces 12 so shaped and proportioned as to bear against the outer faces of the heads of the rails when said rails are in upright positions upon the ties. The outer walls of the grooves are so shaped as to permit the rails to be inserted into the recesses 10 as indicated by dotted lines in Fig. 2. In other words in order to insert a rail into a groove it is merely necessary to tilt it and shift the inner flange of the rail under the undercut wall 11 of the groove, after which the rail can be shifted into an upright position with its base bearing on the bottom of the groove and its head in contact with the upper end of the brace 12. After a rail has been secured within the alining grooves of a tie such as herein described it is secured in place by means of spikes driven into the ties 6 and 8 in the ordinary manner.

Obviously when a brace and tie such as herein described is employed the rails are prevented from tilting outwardly and although the device is capable of being used at any point along a track it is particularly desirable at curves where the rails are subjected to more than the ordinary lateral pressure.

Importance is attached to the fact that the two members of the device are crossed and interengaged because it thus becomes possible to secure both of them to one tie and movement of the braces with relation to each other and to the rails is thus prevented

in a simple and efficient manner without the necessity of changing the ties to an objectionable extent.

Obviously various changes may be made in the construction and arrangement of the parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. A combined tie and brace for track rails, consisting of crossed interlocking members having transversely grooved end portions, corresponding faces of said members being in the same plane, the grooves of the corresponding ends being arranged in alinement, and a rail brace upstanding from each end portion of each member and adjacent the groove therein for contact with the outer face of the head of the rail seated within the groove, the opposite wall of each groove being undercut for the reception of the inner base flange of a rail.

2. The combination with a recessed tie and rails secured upon the tie, of crossed members interlocking at an intermediate point and seated and secured within the recess in the tie, said members having transverse grooves in their end portions in which the rails are detachably seated, the inner walls of the grooves being undercut for engagement with the inner base flanges of the rails, and braces upstanding from the end portions of the members and contacting with the outer faces of the heads of the rails seated within the grooves.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HARRY O. WERT.

Witnesses:

CHAS. E. SMITH,
C. L. POHL.