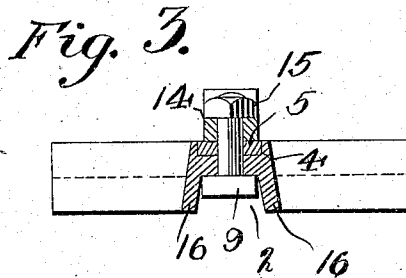
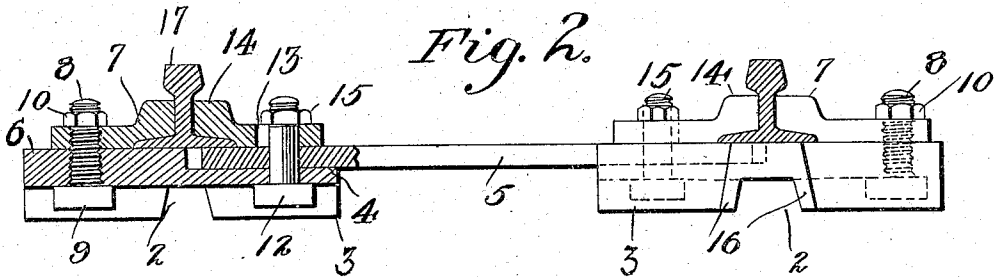
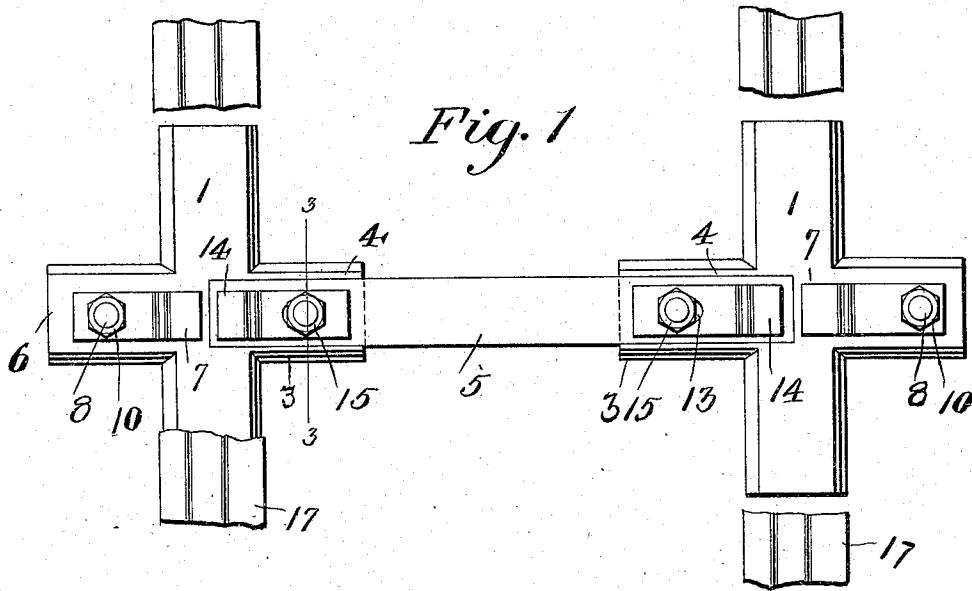


W. E. ROBERTS.
RAILWAY TIE.
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937,182.

Patented Oct. 19, 1909.



Witnesses
M. E. Connor.
W. E. Roberts.

By

Inventor
William E. Roberts.

Emil Schreyer.
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM E. ROBERTS, OF SAN ANTONIO, TEXAS.

RAILWAY-TIE.

937,182.

Specification of Letters Patent.

Patented Oct. 19, 1909.

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To all whom it may concern:

Be it known that I, WILLIAM E. ROBERTS, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention relates to railway ties, and has for its object to produce a simple, practical tie of this type, which will be inexpensive in manufacture and which can be made with a comparatively small quantity of material.

The invention aims primarily to provide a tie which will be compact, and which will eliminate the use of as many parts as possible, while yet preserving all the essentials and requisites demanded by a device of this type.

Further and other objects will appear hereinafter and be set forth.

In the drawings, Figure 1, is a top plan view of a tie constructed in accordance with this invention, Fig. 2, is an end elevation showing one of the rail supporting members in section, and Fig. 3, is a section on line 3-3 of Fig. 1.

The invention contemplates the use of two rail supporting members each of cruciform designated in the drawings 1. As both of the members are identical a description of one will suffice for both. Each arm of each member is formed on its under face so that it is in cross section a substantially U-shape or channel-bar formed as depicted in Figs. 2 and 3 at 2. This channel, so to speak, has its sides diverging, the purpose of which is to bite firmly into the road-bed and thereby obtain a firm footing for the rail engaging member. The members 1 are preferably cast of metal, or may be otherwise formed and since as is obvious there are four arms provided for each member 1, any tendency toward shifting movement in any direction will be effectually arrested. Each of the arms 3 of the members 1 is formed on its upper face with a cut-out portion 4 which terminates at a point substantially central of the width of the members as depicted in Fig. 2. A connecting member or bar 5 of strip-form is of such thickness and size as to

completely fill the cut-out portion 4 and to lie flush with the top face 6 of members 1 as shown in Fig. 2.

A rail engaging clamp 7 is mounted on the face 6 and is cut-out so as to receive the base and web of the rail and is formed with an opening through which extends a bolt 8. The head 9 of bolt 8 is of a size to be received in the channel 2. A nut 10 engages on the free end of bolt 8 and seats on the top face of clamp 7, whereby the latter is readily retained in position. A second bolt 12 is secured in like manner to the opposite arm of member 1 and extends through an opening provided therefor in the connecting member of bar 5, the bolt further extending through an elongated slot 13 formed in the rail engaging clamp 14, being secured in position by means of a nut 15. By referring to Fig. 2, it will be observed that the base of the rail 17 overlaps the free end of connecting member or bar 5, and seating thereon tends to assist in retaining bar 5 in position. By the provision of the slots 13 it will be obvious that when the clamp 14 is placed in position it may be urged to engage the rail 17 as desired prior to tightening of its securing nut 15. It will furthermore be obvious that bolt 12 performs a dual function, in that it serves to simultaneously secure bar 5 in position and to provide the necessary securement for the rail clamp 14.

Inasmuch as the heads of the bolts extend way up into the channels 2 they are not exposed and moreover, since they engage the walls formed by channels 2 they are effectually held against any turning movement.

In practice the device can as above stated, be made at comparatively slight cost, it is simple and possesses an economy of material in its manufacture. By firmly embedding the cruciform members into the road-bed due to the channels 2 providing edges 16 which bite into the road-bed due to the divergent relation of the edges, the rail carrying members can be secured effectually against any tendency to move.

What is claimed is:

A rail tie comprising spaced cruciform members having their arms grooved longitudinally upon their under sides, a tie-rod

having either end fitting in a groove extending to a central point in the upper face of said member, a stationary clamp mounted on the outer arm of each member, a later-
5 ally adjustable clamp mounted on said tie-rod adapted to hold the rail, tie rod and tie together, and bolts for said clamps having heads conforming to the grooves in the under

faces of said members and prevented from rotation thereby.

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

WILLIAM E. ROBERTS.

Witnesses:

PETER SMITH,
JOHN H. BOLTON.