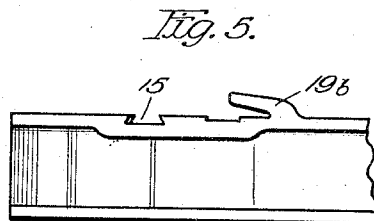
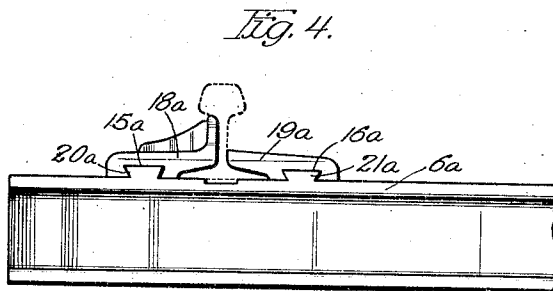
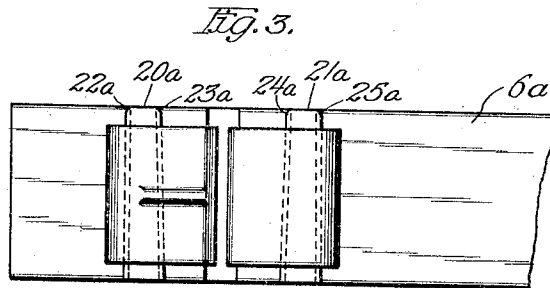
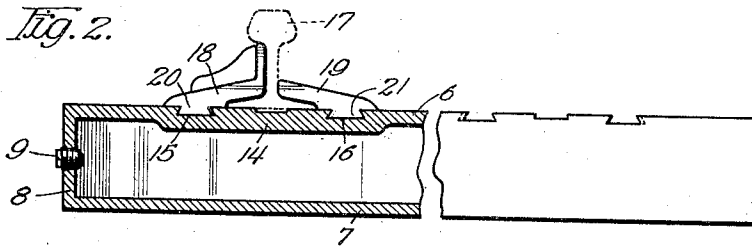
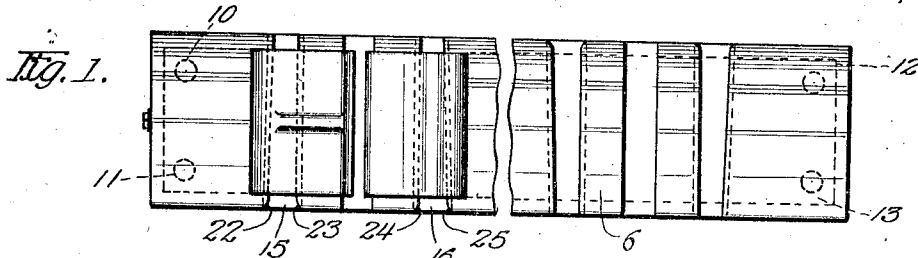


J. C. THEBAULT.  
RAILROAD TIE.  
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1,330,752.

Patented Feb. 10, 1920.



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# UNITED STATES PATENT OFFICE.

JOSEPH C. THEBAULT, OF CHICAGO, ILLINOIS.

## RAILROAD-TIE.

1,330,752.

Specification of Letters Patent.

Patented Feb. 10, 1920.

Application filed April 2, 1919. Serial No. 286,936.

*To all whom it may concern:*

Be it known that I, JOSEPH C. THEBAULT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Railroad-Ties, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to railroad ties and has to do more particularly with the provision of railroad ties and rail fastening devices therefor. One of the features of my invention is the provision of a railroad tie and rail fastening device therefor so constructed that the parts interlock to hold the rail upon the tie after which a portion of one of the parts is hammered so as to be bent against the other portion to lock the parts against separation. To this end, I provide a tie which is preferably grooved to receive the slide of a rail clamp. One of these parts is made of malleable metal so that it may be hammered and bent against the other part to prevent separation. One of the objects of my invention is to provide an improved and simplified device of the above character having a minimum number of parts in which the tie and clamping elements themselves co-act to effect a locking of the parts. In the accompanying drawing I have illustrated my invention showing several forms thereof in which—

Figure 1 is a plan view of one form of my invention;

Fig. 2 is a longitudinal section through Fig. 1;

Fig. 3 is a plan view of a modified form of my invention in which the tie partakes of an I beam shape;

Fig. 4 is a side view of the device shown in Fig. 3; and

Fig. 5 is a modified form of my invention in which one of the rail clamps is preferably integral with the tie.

Referring now to the form of my invention as shown in Figs. 1 and 2, it comprises a tie of the usual rectangular shape and preferably made of malleable metal so that it may be hammered to lock a rail clamp in a manner as will be hereinafter more particularly pointed out. This tie consists preferably of a cored casting having a top wall 6 and bottom wall 7 together with ends 8 and side walls. The core for this casting

may be supported in any desirable manner either at the ends or at the base. If end supports are used, then the resulting core holes 9 are plugged in a suitable manner. If bottom core supports are used, these may be placed at the corners 10, 11, 12 and 13 and may be left open or plugged as desired. It probably is preferable to plug the core holes to keep out moisture, dirt, etc. The upper wall section of the tie is enlarged at the ends 14 so as to receive taper grooves 15 and 16, the taper of both at one end being in the same direction as indicated in Fig. 1. The other end of the tie is also grooved but the wider ends of the grooves are on the opposite side, this arrangement permitting the use of one type of rail clamp pairs, that is the same pair of clamps may be used at both ends.

Now in order to fasten the rail 17, (indicated by dotted lines) to the tie, I provide clamps 18, 19, provided with suitable slides 20 and 21 respectively, adapted to be driven into the grooves 15, 16. These grooves 15, 16, it will be noted, have only their outer or far edges tapered so that as the clamps 18 and 19 are driven into the grooves they will wedge against the rail so as to securely hold it against the tie. It will be noted that the outer clamp 18 is preferably higher than the inner clamp 19 so as to support the rail against strain caused by the flanges of the wheels. Of course the shapes of these clamps may be varied if desired.

After the clamps 18 and 19 have been driven home the corners 22, 23, 24 and 25 on the grooves 15 and 16 are hammered downwardly against the corresponding faces on the clamp 18 and 19 thus bending these portions to lock the parts against separation. Should the parts loosen from the constant jarring of passing trains it is only necessary to tap the ends of the clamps with a hammer so as to drive them home and then again bend the grooved edges to lock the clamps in place.

In Figs. 3 and 4 I have shown a modified form of my invention in which I use a tie having the shape of an I beam, the upper face 6<sup>a</sup> of which is provided with slides 20<sup>a</sup> and 21<sup>a</sup> which coöperate with grooves 15<sup>a</sup> and 16<sup>a</sup> in the rail clamps 18<sup>a</sup> and 19<sup>a</sup>. That is, in this modified form of my construction, I reverse the slide and groove construction shown in Figs. 1 and 2. In this case the corners 22<sup>a</sup>, 23<sup>a</sup>, 24<sup>a</sup> and 25<sup>a</sup> of the slides

20<sup>a</sup> and 21<sup>a</sup> are hammered so as to lock the rail clamps upon the tie and prevent a separation of the parts.

In Fig. 5 I have shown another modified form of my invention in which instead of using two removable rail clamps I provide one rail clamp 19<sup>b</sup> preferably integral with the tie and the single groove 15 adapted to receive the slide of a clamp such as 18 shown in Figs. 1 and 2.

For the purpose of illustrating my invention I have shown several forms of which it may partake but I understand that changes and modifications will readily occur to those skilled in the art and therefore I do not desire to be limited to the exact structure shown and described but aim to cover all that which comes within the spirit and scope of the appended claims.

What I claim as new and desire to secure by Letters Patent is:—

1. A device of the character described comprising a tie and rail clamp, and cooperating integral portions of the tie and clamp for locking the parts against separation, the tie portion being of malleable iron and adapted to be deformed to lock said portions together.

2. A device of the character described comprising a tie, a rail fastener, said tie and fastener having a cooperating groove and slide construction whereby the fastener may be secured to the tie to hold the rail, the tie part being of malleable metal so that it may be bent to lock the parts against separation.

3. A device of the character described comprising a tie having a groove, a rail fastener having a slide to drive into the groove to hold the rail on the tie, one edge of said groove being of malleable metal so that it may be bent against the slide to lock the parts against separation.

4. A device of the character described comprising a tie having a grooved top face, a

rail fastener having a slide to drive into the groove to hold the rail on the tie, the tie being of malleable metal so that an edge of the groove may be bent against the fastener to lock the parts against separation.

5. A device of the character described comprising a tie having a transversely grooved top face, a rail fastener having a slide to drive into the groove to hold the rail on the tie, the tie being of malleable metal so that an edge of the groove may be bent against the fastener to lock the parts against separation.

6. A device of the character described comprising a tie having a transverse groove in its upper face, a rail clamp having a slide for the groove, said groove having an angular far edge so that the clamp will wedge against the rail to hold the rail upon the tie, said far edge being malleable so that it may be bent down to lock the clamp in the groove.

7. A device of the character described comprising a tie having a transverse groove in its upper face, a rail clamp having a slide for the groove, said groove having an angular far edge so that the clamp will wedge against the rail to hold the rail upon the tie and means for locking the clamp to the tie to prevent separation of the parts, said means comprising a portion of the tie adapted to be bent around said clamp.

8. A device of the character described comprising a tie, a rail clamp, said tie and clamp including a cooperating groove and slide having a cooperating outer edge angular relative to the axis of the rail as it is positioned transverse of the tie, whereby the clamp will wedge against the rail to hold the rail upon the tie, said outer edge being malleable so that it may be bent down to lock the slide in the groove.

In witness whereof, I hereunto subscribe my name.

JOSEPH C. THEBAULT.