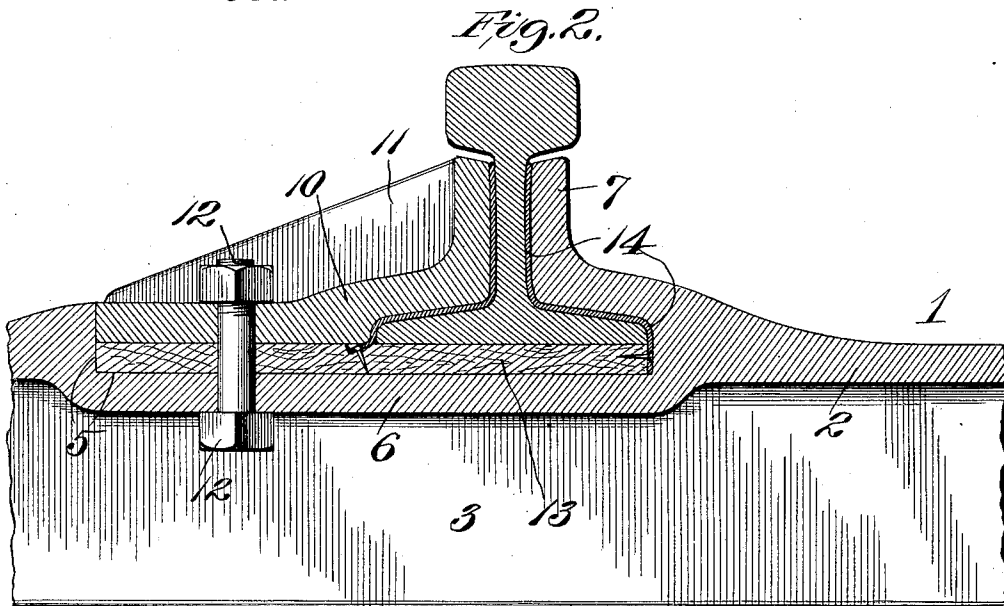
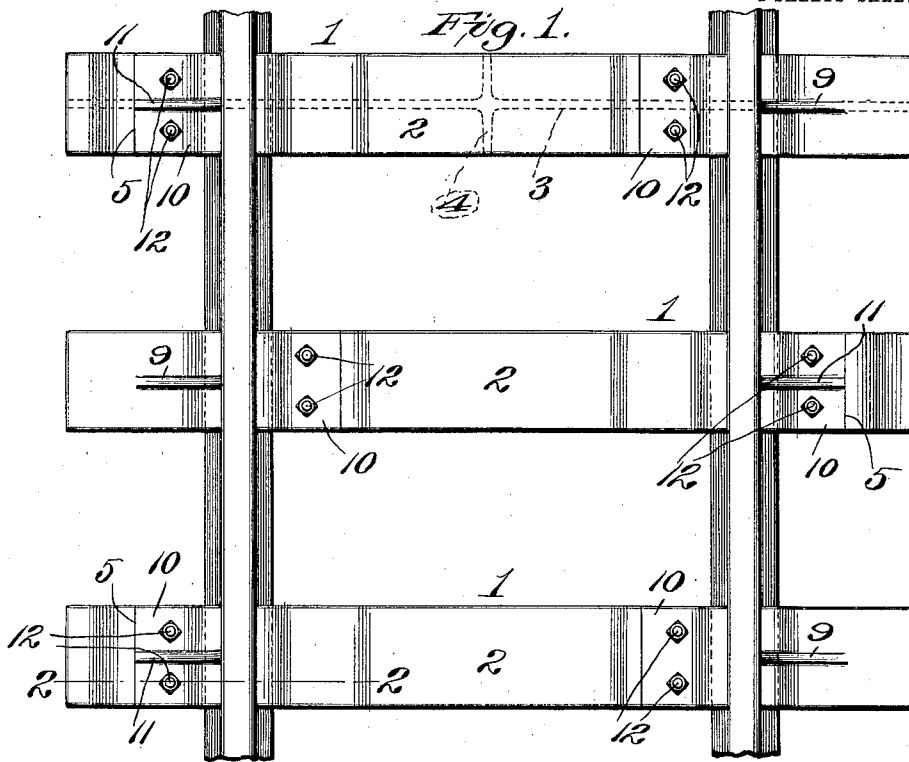


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METALLIC RAILWAY TIE.
APPLICATION FILED DEC. 9, 1911.

1,047,057.

Patented Dec. 10, 1912.

2 SHEETS-SHEET 1.



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UNITED STATES PATENT OFFICE.

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METALLIC RAILWAY-TIE.

1,047,057.

Specification of Letters Patent.

Patented Dec. 10, 1912.

Application filed December 9, 1911. Serial No. 664,836.

To all whom it may concern:

Be it known that I, JOHN HOVEY, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Metallic Railway-Ties, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in metallic railway ties, and the object of my invention is to construct a tie in such manner that ballast may be tamped in and around the tie to prevent both lateral and longitudinal movements of the tie relative to the rails, and to construct a tie having a novel means, for securing the rails, embodying cushioning devices between the tie and the rail securing means in order to prevent vertical vibrations of the rails relative to the ties.

With the above purposes in view my invention consists in certain novel features of construction and arrangement of parts as will be hereinafter more fully described, pointed out in the claim and illustrated by the accompanying drawings, in which—

Figure 1 is a plan view illustrating a pair of rails and a number of ties constructed according to my invention; Fig. 2 is an enlarged, detail, sectional elevation taken on the line 2—2 of Fig. 1; Fig. 3 is a fragmental plan of a tie of my improved construction with a section of rail secured thereon; Fig. 4 is an end elevation of one of my improved ties having a section of rail secured thereon; Fig. 5 is a fragmental elevation of one of my improved ties with a pair of rails secured thereon; and Fig. 6 is a plan of one of the detachable rail clamps.

Referring by numerals to the accompanying drawings: 1 designates the body portion of the tie which is substantially T-shape in cross section and comprises a head 2 and the web 3. At the central portion of the tie there are the transverse webs 4. Formed in the upper face of the tie, adjacent each of its ends, there is a depression 5 having lengths greater than the width of the bases of the rails.

The portion 6 of the head of the tie is dropped to a plane beneath the upper surface of the head of the tie.

7 designates a rail clamp member formed integral with the head of the tie and extends over one of the depressions 5 thence in a vertical direction to engage the web of the rail.

8 designates a rail clamp member identical in construction with the rail clamp member 7 just described and extends in the same direction and is provided with a reinforcing web 9.

10 designates detachable rail clamping members arranged to be secured in the depressions 5 in opposition to the clamping members 7 and 8 and only one of said clamping members 10 is provided with a strengthening web 11 arranged in opposition to the web 9. These clamping members 10 are secured to the heads of the ties by means of the bolts 12.

13 designates fibrous blocks which are placed in the depressions 5 and upon which the rails are placed. The depressions 5 and the fibrous blocks 13 receive and support the detachable clamping members 10.

14 designates cushioning material preferably flexible which is secured to the blocks 13 and is placed between all of the clamping members and the rails in order to prevent the hammering and clattering between the rails and the clamping members, due to lateral movements of the rails relative to the ties.

It is to be observed in Fig. 1 that each tie has at one of its ends a fixed clamping member to engage the outside face of the web of the rail and opposing the fixed clamp there is a detachable clamping member to engage the inside face of the web of the rail. At the other end of the same tie the fixed clamping member engages the inside face of the web of the rail and opposing this fixed clamping member on the other side of the same rail is the detachable clamping member. In the next tie the order of parts, as described of the first mentioned tie, is reversed and the third tie has the order of parts as described in the first mentioned tie. This arrangement is accomplished by simply reversing the ties, end for end. In this manner the rails are secured by the clamping members integral with the ties, which oppose each other to form rigid braces against lateral movements of the rails.

By reason of the web 3 the ballast may be tamped in such a manner as to prevent

movements of the ties lengthwise of the road-bed, and by reason of the webs 4 the ballast may be tamped in such manner as to prevent lateral movements of the ties relative the road-bed.

5 The fibrous blocks 13 permit of slight movements of the rails vertically relative to the ties, hence the tendency of the rails to vibrate vertically when a train is passing thereover is eliminated.

10 I claim:

15 In a metallic railway tie, a head having depressions in its upper face adjacent each end of the tie, integral rail clamping members carried by the tie each extended in the same direction over said depressions in order to overlap the base of the rails and each provided with an integral vertical portion to engage the sides of a rail web, a cushion 20 block arranged in each depression between the head and the rail, removable rail clamp-

ing members arranged to extend in the same direction and shaped identically like the integral rail clamping members, said depressions and said blocks arranged to receive 25 and support said removable clamping members, means extended through the removable clamping members, through said blocks and through said tie head for securing said blocks and said removable rail clamping 30 members in position, and flexible cushioning material secured to said cushion blocks and arranged between said clamping members and the rail, substantially as shown and for the purposes stated.

35 In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

JOHN HOVEY.

Witnesses:

E. L. WALLACE,
N. G. BUTLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."