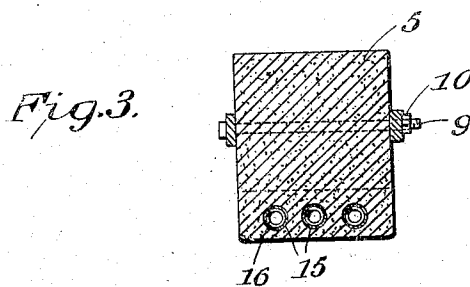
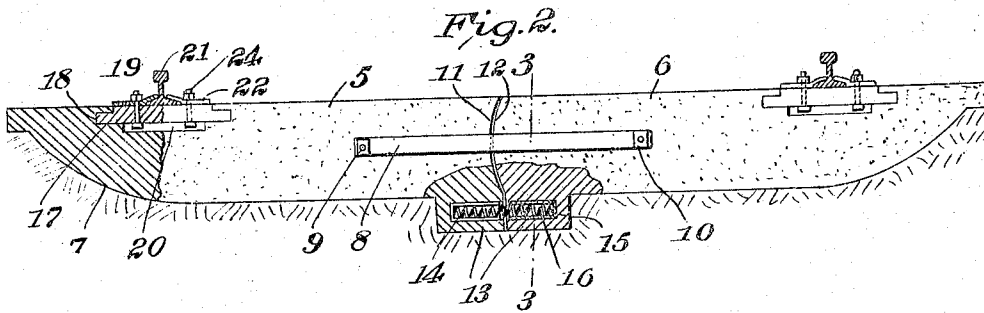
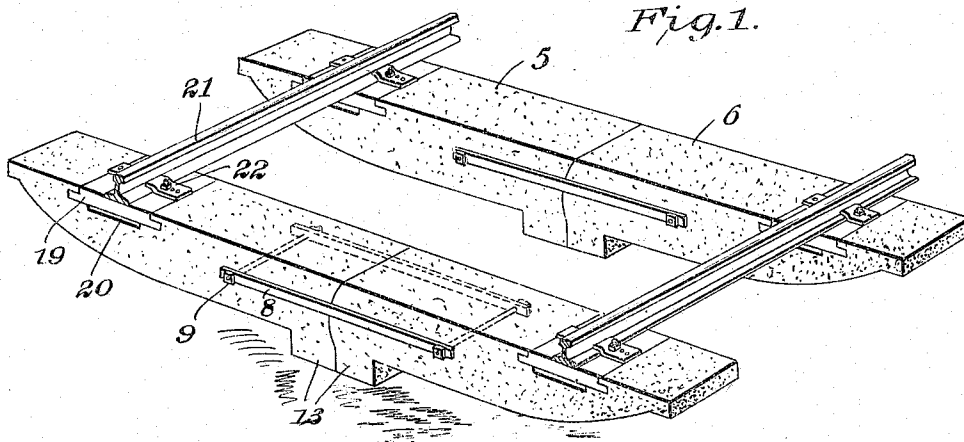


M. L. TOWNSEND.
RAILWAY CROSS TIE.
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933,276.



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MONTREVILLE L. TOWNSEND, OF POTOSI, MISSOURI.

RAILWAY CROSS-TIE.

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To all whom it may concern:

Be it known that I, MONTREVILLE L. TOWNSEND, citizen of the United States, residing at Potosi, in the county of Washington and State of Missouri, have invented certain new and useful Improvements in Railway Cross-Ties, of which the following is a specification.

This invention relates to railway cross-ties, and has for its object to provide a strong, durable and thoroughly efficient device of this character, the construction and relative disposition of the several parts of which is such as positively to prevent the jar or impact of a train or car traveling over the tie from cracking, breaking or otherwise injuring the same.

A further object of the invention is to provide a cross tie formed of a plurality of sections the outer ends of which are deflected upwardly to permit a slight tipping or rocking movement thereof, there being a coiled spring interposed between the abutting ends of the same to prevent injury thereto.

A further object is to form the cross tie with depending anchoring members or lugs and further to provide the abutting faces of said tie sections with a tongue and groove connection so as to prevent binding or wedging action between the parts.

A still further object of the invention is generally to improve this class of devices, so as to increase their utility, durability and general efficiency.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which;

Figure 1 is a perspective view of a railway cross tie constructed in accordance with my invention. Fig. 2 is a side elevation partly in section of the same, and Fig. 3 is a transverse sectional view taken on the line 3-3 of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

The improved cross tie forming the subject matter of the present invention comprises mating sections 5 and 6, preferably formed of cement or other plastic material, as shown, and having their lower faces inclined upwardly at 7 in the direction of the

upper portion of the tie, in order to permit a slight rocking or tilting movement of said sections incident to the passage of cars and other railway rolling stock over the tie.

The tie sections are secured together by means of longitudinally disposed bars 8 the opposite ends of which are connected by transverse bolts 9 which also pierce the adjacent tie sections for engagement with nuts or similar fastening devices 10. The tie bars 8 not only form a connection between the sections 5 and 6 but also serve to assist in reinforcing and strengthening the latter.

The inner end of the tie section 5 is formed with a curved socket 11 which receives a correspondingly shaped tongue 12 formed on the mating section 6, the lower faces of the tie sections at their point of juncture being provided with depending members or lugs 13 adapted to be embedded in the road bed thereby to prevent longitudinal movement of the cross tie.

The abutting faces of the tie sections 5 and 6 at the anchoring members are formed with a plurality of sockets 14 in which are seated metallic tubes or casings 15, adapted to receive coiled springs 16, the latter being interposed between the lugs 13 of the mating sections thereby to form a yieldable connection between the same and thus assist in absorbing any jar or impact of the tie sections incident to the passing of rolling stock.

The upper face of each tie section is formed with a transverse recess 17 undercut as indicated at 18, and adapted to receive a correspondingly shaped tie plate 19, there being a recess formed in the cross tie and in communication with the recess 17 so as to allow the tie plate 19 to be pressed downwardly within the recess 20 when subject to the weight of a car.

The rails 21 are retained in position on the tie plates 19 by means of angularly disposed plates or brackets 22 having a series of openings formed therein for the reception of bolts or similar fastening devices 24, which latter pierce the tie plates 19 and hold the rail rigidly combined therewith.

It will here be noted that by providing the attaching brackets 22 with a series of openings the rails 21 may be adjusted laterally on the tie plates 19 so as to properly center the rails on the cross ties, should the rails have any tendency to spread. Thus it will be seen that the springs 16 may serve to yieldably support the tie sections in assembled

position, while the plates 19 and recess 20 permit a slight yielding movement of the rails independent of the mating tie sections. It will also be noted that the curvature of the walls of the socket 11 and tongue 12 is such as to prevent binding or wedging of said sections when the outer ends thereof are tilted slightly by the weight of a train of cars traveling over the cross ties.

While it is preferred to construct the cross ties from concrete it is obvious that the same may be formed of metal or other suitable material without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new is;

1. A railway cross tie including relatively movable mating sections having inter-engaging ends and provided on their upper faces with means for engagement with a railway rail, and yieldable means interposed between the abutting ends of the tie sections.

2. A railway cross tie including relatively movable mating sections having their inner ends provided with a tongue and groove connection and their upper faces provided with means for engagement with a railway rail, and a spring interposed between the abutting ends of said tie sections.

3. A railway cross tie including relatively movable mating sections having their inner ends provided with a tongue and groove connection and their upper faces provided with means for engagement with a railway rail, anchoring lugs depending from the tie sections at the abutting ends thereof and adapted to be embedded in the ground, and a spring interposed between the lugs.

4. A railway cross tie including mating sections one of which is provided with a grooved socket and the other with a correspondingly shaped tongue adapted to enter said socket, bars secured to the opposite sides of the tie sections and forming a connection between the same, lugs depending from the sections at the abutting ends thereof, yieldable means interposed between the lugs, and means carried by the tie sections for engagement with a railway rail.

5. A railway cross tie including mating sections having their outer ends deflected upwardly and their inner ends provided with interengaging parts, lugs depending from the tie sections at the meeting ends thereof,

and provided with registering sockets, springs interposed between the tie sections and seated in the sockets, and means carried by the tie sections for engagement with a railway rail.

6. A railway cross tie including mating sections having their inner ends connected to permit independent rocking movement of said sections and their upper faces provided with means for engagement with a railway rail, and yieldable means interposed between the abutting ends of the mating tie sections for normally and yieldably supporting the same in horizontal alignment.

7. A railway cross tie including mating sections having their outer ends deflected upwardly and their inner ends formed with depending anchoring lugs having registering sockets formed therein, tubes seated in said sockets, tie bars secured to the opposite sides of the tie sections, and having their terminals connected by transverse bolts, coiled springs interposed between the abutting ends of the tie sections and seated in the tubes, and means carried by the tie sections for engagement with a railway rail.

8. A railway cross tie including mating sections having independent rocking movement, and each having its upper face provided with a transverse seating recess, a tie plate seated in the recess of each tie section and adapted to support a rail, and means for clamping the rail in engagement with the tie plates, there being a recess formed in each tie section below the adjacent tie plates.

9. A railway cross tie including mating sections having their upper faces provided with seating recesses the side walls of which are undercut, there being auxiliary recesses formed in each tie section and communicating with the adjacent seating recess, resilient tie plates fitting within the seating recesses and adapted to support a railway rail, means for clamping the railway rails in engagement with the tie plates, and yieldable means interposed between the adjacent ends of the tie sections.

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

MONTY L. TOWNSEND. [L. S.]

Witnesses:

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JOHN M. SLOAN.