

T. L. EVERETT.
RAILROAD TIE.
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959,490.

Patented May 31, 1910.

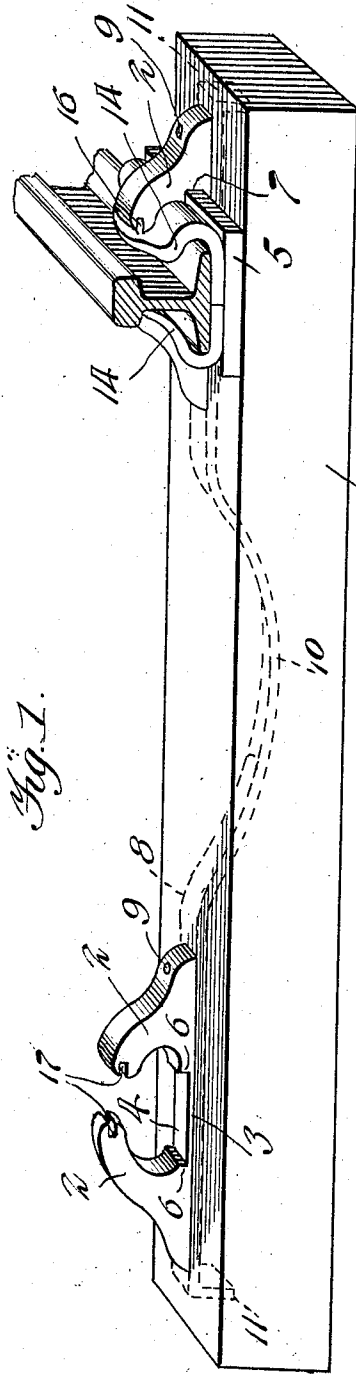


Fig. 1.

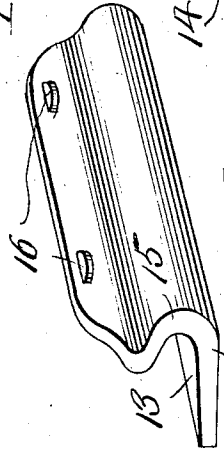


Fig. 2.

Fig. 3.

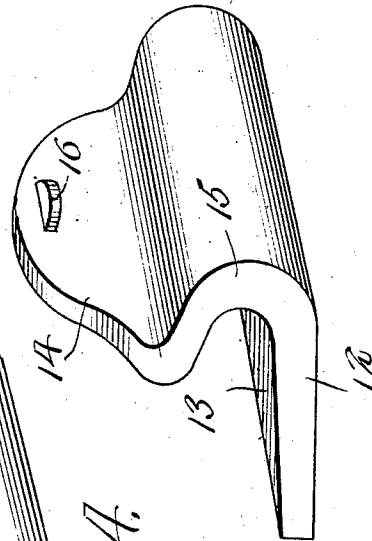
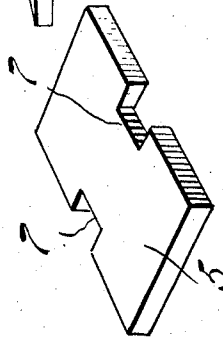


Fig. 4.



Witnesses

Hugh H. Ott.
P. M. Smith.

Inventor

Thomas L. Everett

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

THOMAS LEE EVERETT, OF FAIRFIELD, IOWA.

RAILROAD-TIE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS LEE EVERETT, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention relates to railroad ties, the object of the invention being to provide a substitute for the ordinary wooden railroad tie now in common use.

The tie hereinafter described, comprises a concrete body combined with rail-holding means embedded in and forming a part of the tie, doing away with the necessity of using the ordinary fish plates and bolts and economizing materially in the cost of maintenance of the road by avoiding the necessity of tightening the bolts and fasteners from time to time.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of a railroad tie embodying the present invention, showing a section of a railroad rail applied thereto. Fig. 2 is a detail perspective view of one of the cushions. Fig. 3 is a similar view of one of the rail clamps. Fig. 4 is a detail perspective view of a double rail clamp adapted to bridge adjacent ties.

The body of the tie indicated at 1 is composed of concrete and may be made of any desired length, width and depth, the length being sufficient to support the rails.

In connection with each tie, I employ a pair of yokes, each yoke embodying a pair of upwardly curving and inwardly facing braces 2 having enlarged lower ends which are connected by a base 3 formed integrally with the braces as shown in Fig. 1 at the left hand end. The said base 3 is recessed in its upper face as shown at 4 to provide for the reception of a cushion block 5 preferably of wood. In forming the recess 4, shoulders 6 are left at opposite sides of said recess, which shoulders are received in oppositely located notches 7 formed in the cushion 5, as shown in Fig. 2. In this way the cushion is securely locked in place in the yoke and between the braces 2. The yokes at opposite ends of the tie are connected by a tie bar 8 indicated by dotted lines in Fig.

1, the yokes being secured to the tie bar by bolts or rivets 9 or in any convenient manner. The central portion of the tie bar between the yokes is depressed in the form of an inverted arch as shown at 10, the said depressed portion together with the entire tie bar being embedded in the tie during the formation of the latter. The opposite extremities of the tie bar beyond the yokes are extended downward and are also embedded in the tie.

In connection with each yoke, I employ a pair of rail clamps each embodying a tapering base 12 having an inclined upper surface 13; the clamp also comprises a vertical or upstanding flange 14 adapted to bear against the side of the rail, and a curved or U-shaped bend 15 which embraces the bottom flange of the rail, as shown in Fig. 1. The upstanding part 14 is provided on its outer side with an interlocking lug 16 while the upper extremities of the braces 2 are provided with slots 17 to receive the lugs 16 of the rail clamps. In this way, an interlocked engagement is effected between the rail clamps and the braces, as shown in Fig. 1.

Instead of employing a separate pair of clamps for each tie, the clamps may be elongated horizontally as shown in Fig. 4 or in other words said clamps may be made of sufficient length to bridge a pair of ties in which case each clamp may be provided with a pair of lugs 16 to be received in the notches 17 above described.

From the foregoing description, it will be observed that both the cushions 5 and the rail clamps are interlocked with the braces forming part of the yokes. Therefore, there are no bolts to work loose. Furthermore, by reason of the particular shape of the rail clamps combined with the wooden cushions 5, when a train passes over the joint, the rail clamps bear with greater firmness and pressure against the rail and avoid any possibility of the rail slipping adjacent to the joint. The joint also provides for the necessary expansion and contraction of the rails due to changes in the weather as it may work lengthwise between the rail clamps when relieved of the weight of the train. The rails are associated with the clamps and tie by sliding the clamps endwise into engagement with said rails and tie.

The joint hereinabove described is especially valuable on curved sections of a railway track as it not only provides for the

necessary contraction and expansion but also prevents the tendency of the outer rail to spread on a curve. It is also within the scope of this invention to use the clamp upon a continuous bed of concrete instead of separate ties as hereinabove described.

I claim:—

1. A railroad tie comprising a tie body of concrete, yokes each comprising a pair of rail braces and an integral base connecting said braces and formed with a cushion receiving recess between the braces, and a tie bar connecting the yokes and having its central portion depressed between the yokes and its opposite extremities projected downward beyond the yokes, the said tie bar being embedded in the tie body.

2. A railroad tie comprising a tie body of concrete, yokes each embodying a pair of rail braces and an integral base connecting said braces and formed with a cushion receiving recess between the braces, a tie bar connecting the yokes and embedded in the tie body, cushion blocks having notches to receive portions of the yokes, and rail clamps having

braces which extend under the rail and rest upon the cushion blocks and upstanding portions which extend between the rail and braces and interlock with the braces.

3. A railroad tie comprising a tie body of concrete, yokes each embodying a pair of rail braces and an integral base connecting said braces and formed with a cushion receiving recess between the braces, tie bars connecting the yokes and embedded in the tie body, cushions fitting in said recesses and having notches to receive portions of the yoke, and rail clamps having braces which extend under the rail and rest on the cushion blocks, upstanding portions which extend between the rail and braces, and lugs on said upstanding portions which fit into notches in the braces.

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

THOMAS LEE EVERETT.

Witnesses:

H. G. KING,
F. H. HIGBY.