

S. T. STRATTON.
RAILWAY TIE.
APPLICATION FILED NOV. 14, 1911.

1,053,752.

Patented Feb. 18, 1913.

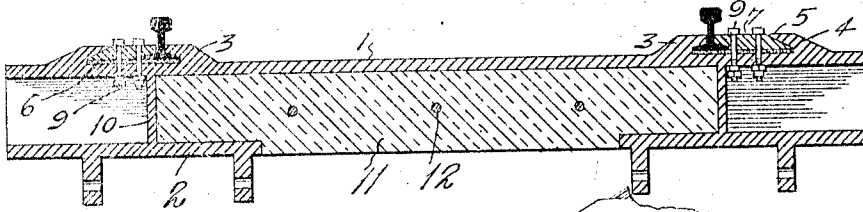


Fig. 1.

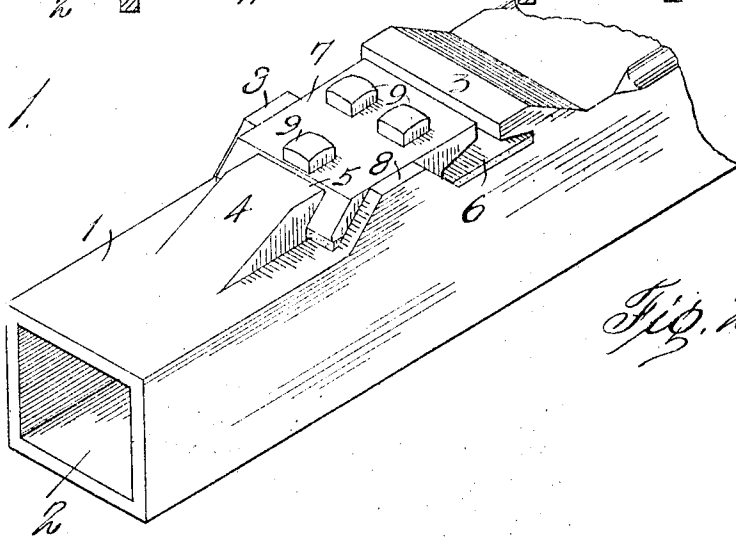


Fig. 2.

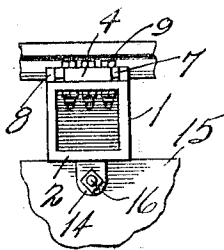


Fig. 4.

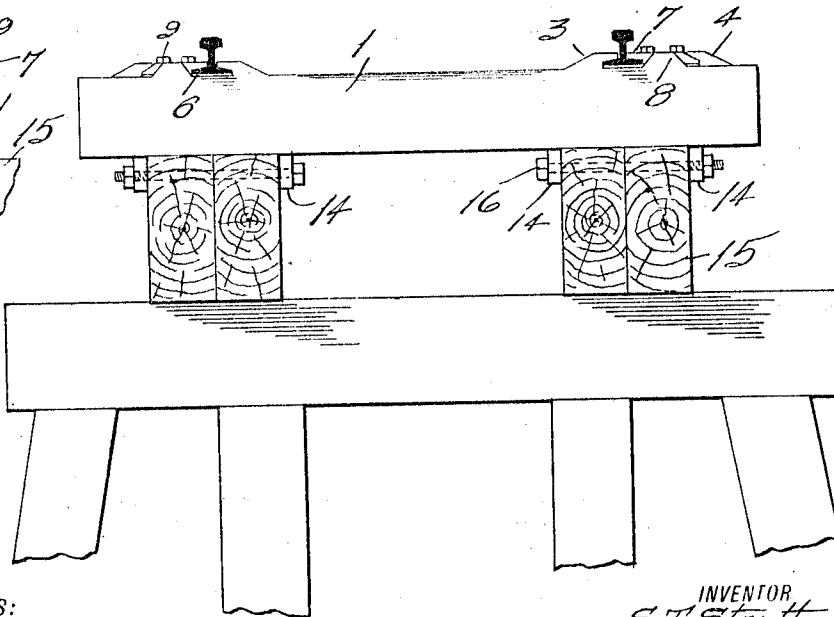


Fig. 3.

WITNESSES:

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STEBEN T. STRATTON, OF GRAND PRAIRIE, TEXAS.

RAILWAY-TIE.

1,053,752.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, STEBEN T. STRATTON, citizen of the United States, residing at Grand Prairie, in the county of Dallas 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 improvements in railway ties.

The object of the invention is to provide a metallic tie having a portion filled with a plastic material and hollow end portions together with a supporting and abutment wall at each end.

Among other features are; the provision of a fastening plate and lugs integral with the body of the tie for holding the plate against displacement; the provision of rail cushions; and the provision of means for fastening the tie on bridge stringers.

Finally the object of the invention is to provide a tie that will be strong, durable, efficient and comparatively simple and inexpensive to construct, also one in which the several parts will not be likely to get out of working order.

With the above and other objects in view the invention has relation to certain novel features of construction and operation, an example of which is described in the following specification and illustrated in the accompanying drawing, wherein:

Figure 1 is a longitudinal sectional view of the tie, Fig. 2 is a perspective view of one end of the tie, Fig. 3 is a cross-sectional view of the upper portion of a bridge showing the tie in position thereon, and Fig. 4 is an end elevation of the same.

In the drawings the numeral 1 designates the body of a metallic tie having a continuous top wall and solid side walls and partial bottom walls 2, whereby the tie is made hollow and open at each end.

Near each end and on the upper surface of the tie an integral jaw 3 is provided and extended transversely of the tie. These jaws are each shaped to receive the inner base portion of a rail, thus being oppositely directed. Between each jaw and the adjacent end of the tie a lug 4 is formed on the top of the tie. These lugs each have a width less than that of the tie and are arranged centrally of the tie. Each lug has its inner side cut inward at an angle so as to provide an overhanging lip 5 directed toward the adjacent jaw.

Between each jaw and lug a plate 6 of cushioning material is placed on the tie and the rail is disposed upon this plate with its inner side engaged in the jaw. For fastening the rails in place, fastening plates 7 are provided. Each plate has one end shaped to fit over the outer base portion of the rail; while its opposite end is beveled to snugly engage under the lip of the lug as shown in Figs. 1 and 2. Each plate has a width less than that of the tie and fits between lugs 8 which are flush with the sides of the tie. For fastening the plates each is provided with bolt holes which register with holes in the plates 6 and the top wall of the tie. Bolts 9 passed through the parts may be fastened as shown in Fig. 1 or reversed. It is to be understood that the plates 7 are first placed in position and the rails then slid into place transversely of the tie.

At each end of the tie a vertical supporting and abutment wall 10 is provided within the tie. These walls extend transversely of the tie and are located so that one will stand under the outer edge of the base of the rails. The bottom walls are extended inward beyond these walls 10 as shown in Fig. 1, whereby pockets are formed under the jaws 3. Between the walls 2 the bottom of the tie is open.

One of the important features of this invention is the core or filling of plastic material. As shown in Fig. 1 the tie between the walls 10 is filled with a plastic material 11 such as cement. This material being deposited in the pockets before referred to is locked in place. However as an additional fastening means rods 12 are passed transversely through the plastic material and secured in the side walls of the tie. The plastic material is finished off flush with the lower edges of the side walls between the bottom walls 2 and is also flush with the under surfaces of said walls 2.

It is obvious that the ends of the ties are open thus giving access to the bolts 9; while the entire central portion of the body of the tie is reinforced by the plastic material and this material is extended under the rails where the greatest load is carried.

As a means of fastening the tie to stringers of a bridge, ears 14 are provided on the under sides of the bottom walls 2. These ears are arranged in pairs so as to engage on opposite sides of the stringers 15 as shown in Fig. 4. Bolts 16 passed through the ears and

the stringers are employed to fasten the tie in place. When the tie is used on a road bed the ears are embedded therein. By arranging the cushion plate under plates 7 as well as the rails it is better held in position.

What I claim, is:

In a composite railroad tie, a metallic body having integral top and side walls, a filling of plastic material in the body except at the ends thereof, bottom plates integral with the side walls and extending inward from the ends of the body and having their inner end portions terminating under the plastic filling, vertical supporting walls, one rising from the central portion of each bottom plate and integral with the top and side

walls, the plastic material terminating at the vertical walls, rail fastening lugs integral with and on the upper surface of the top wall of the body arranged in pairs, the lugs of each pair being on opposite sides of the vertical wall therebelow, and retaining lugs integral with the top wall at sides of the body and associated with one of the lugs of pairs of lugs first named.

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

STEUBEN T. STRATTON.

Witnesses:

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JACK A. SCHLEY.