

G. R. REEVES.
 METALLIC RAILROAD TIE.
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1,231,427.

Patented June 26, 1917.

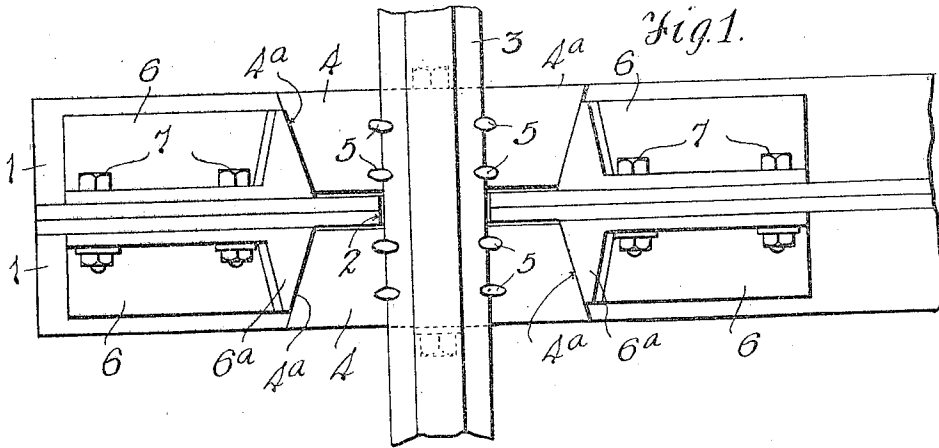


Fig. 2.

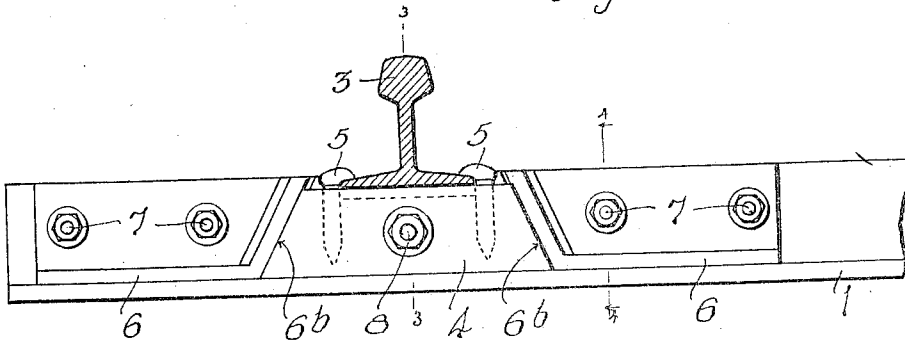


Fig. 4.

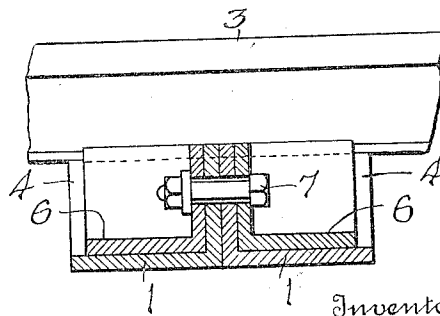
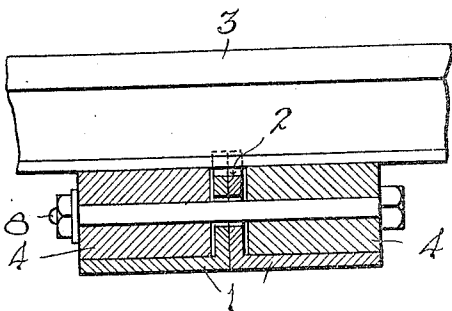


Fig. 3.



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METALLIC RAILROAD-TIE.

1,231,427.

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To all whom it may concern:

Be it known that I, GEORGE R. REEVES, a citizen of the United States, residing at Magnolia Springs, in the county of Baldwin, State of Alabama, have invented a new and useful Metallic Railroad-Tie; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to a metallic railroad tie, and has for its object to provide a device of this character which embodies novel features of construction, whereby the rails are effectively cushioned, thereby preventing the objectionable hammering of metal on metal as a train passes along the track.

Further objects of the invention are to provide a metallic railway tie which is comparatively simple and inexpensive in its construction, which serves both to prevent spreading of the track rails and also to cushion the same, which admits of the cushioning elements being readily renewed without displacing the track or interfering with passing trains, and which is formed of few parts which can be quickly assembled into the complete article.

With these and other objects in view, the invention consists in certain novel combinations and arrangements of parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a top plan view of one end of a metallic railway tie constructed in accordance with the invention.

Fig. 2 is a side elevation of the same.

Fig. 3 is a transverse sectional view through the tie, on the line 3—3 of Fig. 2.

Fig. 4 is a similar view on the line 4—4 of Fig. 2.

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

The metallic body of the tie has a substantially inverted T-shaped formation, being formed with a longitudinally extending upright rib, and base flanges which extend longitudinally of the rib and project hori-

zontally in opposite directions from the lower edge thereof. In carrying out the invention this tie body is preferably formed of two similar and interchangeable lengths of angle iron 1, the upright flanges of the angle iron members fitting closely against each other and providing the longitudinally extending intermediate rib of the inverted T-shaped tie body.

The upper edge of the upright rib is notched at 2, to receive the track rails 3, said notches 2 being positioned apart according to the gage of the track and operating in practice to prevent spreading of the track rails. While the rails 3 engage the sides of the notches 2, the bases thereof rest upon cushioning blocks and do not directly engage the lower edges of said notches. A pair of opposed cushioning blocks 4 are arranged under each of the track rails 3, said cushioning blocks being arranged upon opposite sides of the vertical rib of the tie body and resting upon the base flanges of the tie body. Any suitable rail fastening means, such as the spikes 5 may be employed for securing the rails to the cushioning blocks.

The ends of the cushioning blocks are beveled both inwardly and upwardly, as indicated at 4^a, and engage the heads 6^a of angle positioning blocks 6. These angle blocks 6 are fitted within the corners of the angle iron strips 1 of the tie body, being secured thereto by suitable fastening members such as the bolts 7. These bolts 7 may also serve to hold the strips 1 together. The faces of the heads 6^a of the positioning blocks 6 are beveled outwardly and downwardly, as indicated at 6^b, in a manner corresponding to the beveling of the ends 4^a of the cushioning blocks 4. The clamping bolt 8 extends through the cushioning blocks 4 and the intermediate rib of the tie body, so that by tightening the bolt the two cushioning blocks are forced toward each other and toward the rib of the tie body. The inwardly and upwardly beveled ends 4^a of the cushioning blocks 4 then engage the beveled faces 6^b of the positioning blocks 6 and cooperate therewith to wedge the cushioning blocks firmly against the base flanges of the tie body and tightly between the positioning blocks.

The cushioning blocks are thus held securely in position, so that any vertical or lateral displacement thereof is impossible, although it will be obvious that these blocks can be readily removed and replaced at any

time at small expense and without the necessity of tearing up the track or interfering with passing trains. After the ties have been once installed, the cost of maintenance will be much less than that of the ordinary wooden ties, and the rails will be properly supported and held against spreading at all times. The cross section of the tie body is such as to give it the necessary strength, while the horizontal flanges at the base thereof will obtain a firm bearing upon the road bed, so as to support the tie in the necessary manner. It may also be mentioned that all of the material which will ever be necessary to make repairs, after the ties have once been installed, can be readily carried upon a section hand car, so that the cost of up-keep will be slight.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A metallic railroad tie including a body formed with a longitudinally extending upright rib, rail supporting and cushioning blocks arranged upon opposite sides of the rib, means for securing the blocks to the rib, and wedge means cooperating with the ends of the blocks to hold them against displacement.

2. A metallic railroad tie including a body formed with a longitudinally extending upright rib having rail-receiving notches in the upper edge thereof, rail supporting and cushioning blocks arranged on opposite sides of the rib at the notched portions thereof, means for securing the cushioning blocks to the rib, and wedge means cooperating with the ends of the blocks to hold them against displacement.

3. A metallic railroad tie including a body formed with a longitudinally extending upright rib, rail supporting and cushioning blocks arranged upon opposite sides of the rib and having the ends thereof beveled inwardly and upwardly, positioning blocks applied to the tie body and having the ends thereof beveled in a manner corresponding to the ends of the cushioning blocks, and means for drawing the cushioning blocks toward the upright rib of the tie body, the beveled ends of the blocks then engaging the beveled ends of the positioning blocks to wedge the cushioning blocks securely in position.

4. A metallic railroad tie including a tie body formed with a longitudinally extending upright rib and having a substantially inverted T-shaped cross section, cushioning blocks arranged upon opposite sides of the upright rib and having the ends thereof beveled inwardly and upwardly, angle shaped positioning blocks fitted in the corners of the tie body and formed with heads

which are beveled in a manner corresponding to the ends of the cushioning blocks, and means for securing the cushioning blocks to the rib of the tie body, the beveled ends of the cushioning blocks then engaging the ends of the angle shaped positioning blocks and cooperating therewith to wedge the cushioning blocks securely in position.

5. A metallic railroad tie including a body formed with a longitudinally extending upright rib and having a substantially inverted T-shaped cross section, rail supporting and cushioning blocks arranged upon opposite sides of the intermediate rib, positioning blocks fitted in the corners of the tie body for engagement with the ends of the cushioning blocks, and means for forcing the cushioning blocks toward the upright rib of the tie body, the cushioning blocks and positioning blocks being correspondingly beveled for cooperation with each other to wedge the cushioning blocks securely in position.

6. A metallic railroad tie including a body formed with a longitudinally extending upright rib having a notch in the upper edge thereof, a cushioning block arranged upon each side of the upright rib at the notched portion thereof, positioning blocks applied to the tie body at opposite ends of the cushioning blocks, and means for drawing the cushioning blocks toward the upright rib, the ends of the cushioning blocks and positioning blocks being correspondingly beveled for cooperation with each other to wedge the cushioning blocks securely in position.

7. A metallic railroad tie including a tie body formed of two strips of angle iron and having an inverted T-shaped cross section, the upright flanges of the angle irons providing an upright rib which is provided with rail-receiving notches, rail supporting and cushioning blocks arranged upon opposite sides of the upright rib at the notched portions thereof, positioning blocks fitted in the corners of the tie body for engagement with the ends of the cushioning blocks, and means for drawing the cushioning blocks toward the upright rib, the ends of the cushioning blocks and the positioning blocks being correspondingly beveled for cooperation with each other to wedge the cushioning blocks tightly in position.

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

GEORGE R. REEVES.

Witnesses:

A. J. WEEKES,
CARL SCHINDLER.