

A. E. MARSHALL & F. J. CHAMROD.
RAILROAD TIE.

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1,009,539.

Patented Nov. 21, 1911.

Fig. 1.

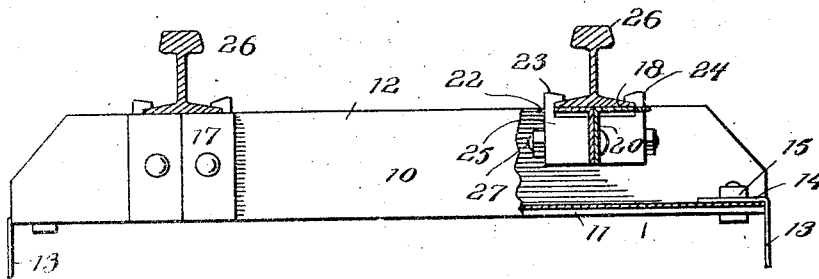


Fig. 2.

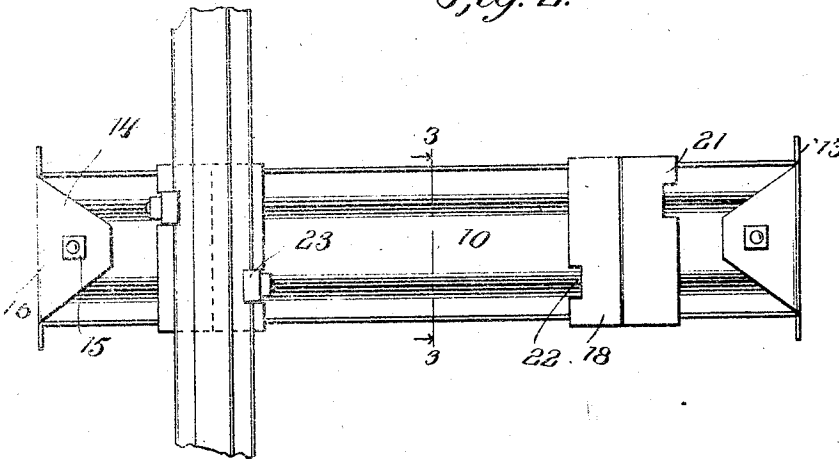


Fig. 4.

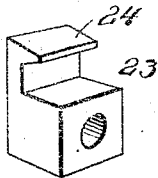
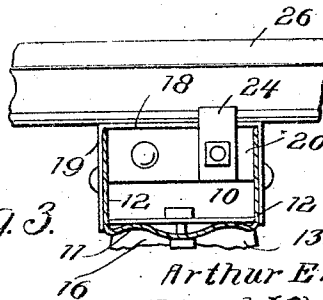


Fig. 3.



Witnesses

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ARTHUR E. MARSHALL AND FRANK J. CHAMROD, OF LIMA, OHIO.

RAILROAD-TIE.

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To all whom it may concern:

Be it known that we, ARTHUR E. MARSHALL and FRANK J. CHAMROD, citizens of the United States, residing at Lima, in the county of Allen and State of Ohio, have invented new and useful Improvements in Railroad-Ties, of which the following is a specification.

An object of the invention is to provide a device for rigidly supporting rails.

To accomplish the desired result, use is made of a channel, constituting a base and having the lower side thereof corrugated to act as a reinforcement, end plates connected to the channel and depending therefrom, the said end plates being adapted for insertion in the ground to retain the channel in position, rail plates secured to the channel and extending transversely thereof, the said rail plates being adapted to receive thereon the rails to be supported and means for engagement with the said rail plates and the rails to rigidly position the rails on the rail plates.

Reference is to be had to the accompanying drawings constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a side elevation, parts being broken away to disclose the underlying structure. Fig. 2 is a plan view, one of the rails being removed to disclose the construction of the rail plates. Fig. 3 is a vertical section taken on the line 3—3 in Fig. 2 looking in the direction of the arrow. Fig. 4 is a perspective view of one of the securing plates.

Referring more particularly to the views we provide a channel 10 having a corrugated bottom plate 11 and integral side plates 12. Secured to both ends of the channel 10 are end plates 13, consisting of angular portions 14 secured to the channel 10 by bolts 15 and depending portions 16 adapted for insertion in the ground to rigidly position the channel 10. Extending transversely over the top of the channel are a plurality of pairs of rail plates 17, each of the said pairs of rail plates consisting of tops 18 and sides 19, the said sides being riveted to the outer sides of the channel 10 as will be seen by referring to Figs. 1 and 3. Each of the plates is provided with an integral depending flange 20 and the flanges 20 on each pair of rail plates are provided with registering apertures and

adapted to abut for a purpose that will be hereinafter more fully described. The channel 10 is preferably provided with indented portions 21 in which the securing plates 17 are received so that the upper edges of the rail plates will lie flush with the upper edges of the channel 10.

Formed in each of the rail plates are indentations 22 adapted to receive therein securing plates 23, the said securing plates having hook portions 24 and depending portions 25, the hook portions being adapted to extend over the bases of the rails 26 and the depending portions being provided with apertures to receive therethrough bolts extended through the apertures in the flanges 20 of the rail plates 17, the said bolts being rigidly positioned by means of suitable nuts. As shown in Fig. 2 the securing plates 23 are positioned relatively to the pairs of rail plates 17 so that all of the securing plates will be disposed to engage one of the rail plates at one end thereof and the other securing plate will be disposed to engage the other rail plate of each pair at the other end thereof.

In the use of the described railroad tie, the tie is firmly set upon the ground with the depending portions of the end plates 13 inserted in the ground to rigidly position the channel 10. The rails 26 are then disposed to repose on the upper sides of the rail plates 17 and the securing plates are then screwed up to engage the rails, thus rigidly positioning the rails relatively to the channel 10.

Having thus fully described the invention, what we claim as new, is:—

1. A railroad tie comprising a channel having a corrugated bottom, pairs of connected rail plates extending transversely to the channel and secured thereto, end plates secured to the channel and depending therefrom at the ends thereof and securing plates disposed in indentations formed in the said rail plates, the upper ends of the said securing plates being connected to the pairs of rail plates and adapted to engage the said rails.

2. A railroad tie comprising a channel provided with a corrugated base, spaced pairs of rail plates extending transversely to the channel and connected thereto, the said rail plates having their upper sides flush with the upper edges of the said channel and provided with indentations and se-

5 cu. ing plates mounted to lie in the indentations in the said rail plates, the upper ends of the securing plates being adapted to engage the rails and the lower ends of the
 10 securing plates being bolted to the said rail plates.

3. A railroad tie comprising a channel, pairs of rail plates extending transversely to the channel and having their ends secured thereto, flanges integrally formed on each
 15 of the said rail plates and depending therefrom and between the sides of the channel and securing plates disposed in indentations in the said rail plates, said securing plates
 20 having their upper ends adapted for engagement with the rails and their lower ends bolted to the said flanges.

4. In a railroad tie the combination of a channel having the sides integral with the
 25 bottom, the bottom being corrugated, end plates secured to the said bottom and de-

pending therefrom, pairs of rail plates extending transversely to the said channel and having their ends secured thereto, the upper
 30 sides of the said rail plates being flush with the upper edges of the said channel, flanges integrally formed on each of the said rail plates and depending between the sides of the said channel and securing plates provided with hooked portions for engagement
 35 with the rails, the said securing plates being secured in indentations in the rail plates and having their lower ends bolted to the depending flanges of the rail plates.

In testimony whereof we affix our signatures in presence of two witnesses.

ARTHUR E. MARSHALL.
 FRANK J. CHAMROD.

Witnesses:

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 WESSIE V. GULLETTE.