J. C. REED.

RAILWAY TIE.

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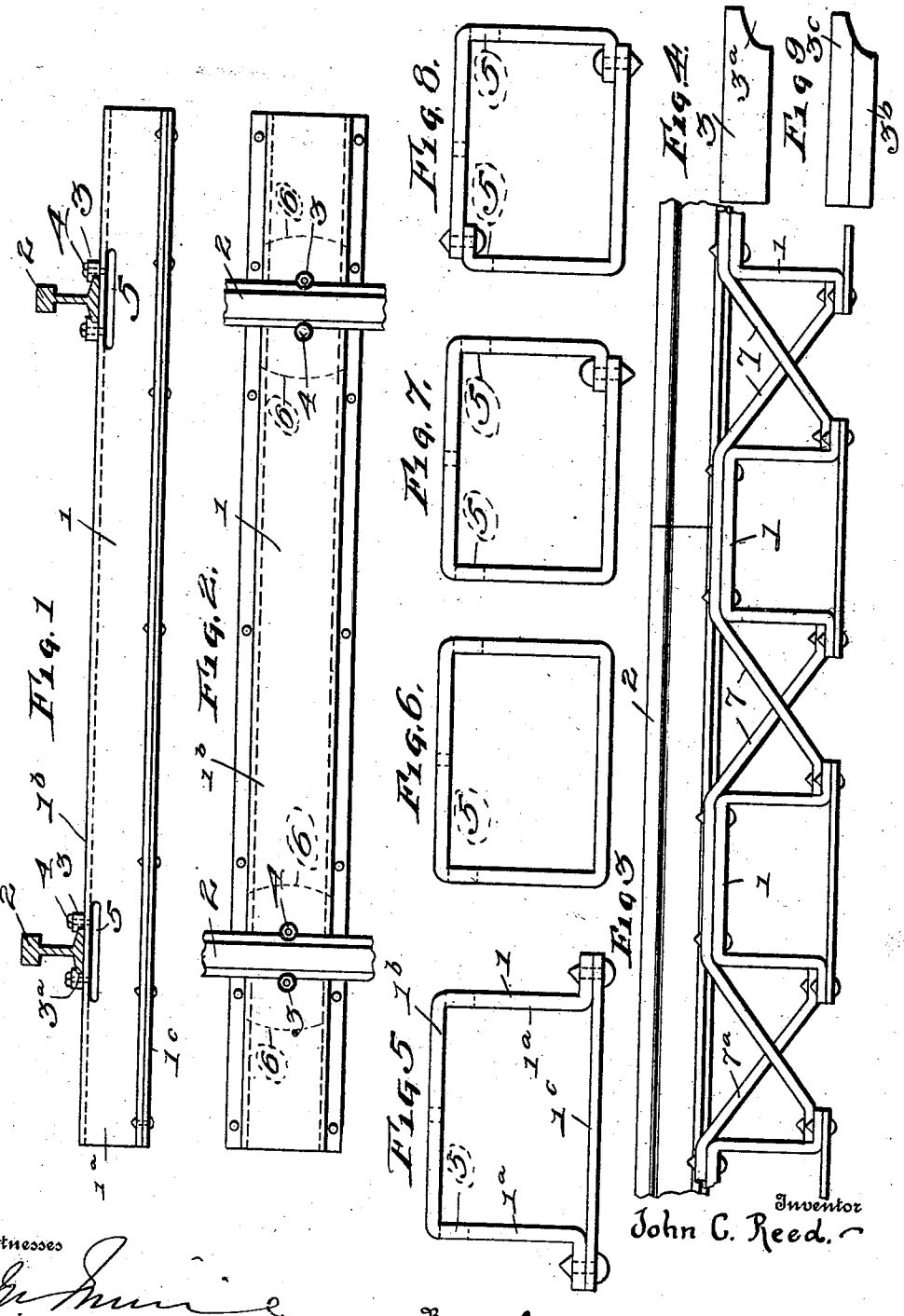
899,262.

Patented Sept. 22, 1908.



Witnesses

[signature]

W. N. Woodson

Inventor

John C. Reed.

By [signature] Attorneys

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN C. REED, OF AKRON, OHIO.

RAILWAY-TIE.

No. 899,262. Specification of Letters Patent. Patented Sept. 22, 1908.

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To all whom it may concern:

Be it known that I, JOHN C. REED, citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

The present invention relates to improvements in railway ties and has for its primary object to provide a device of this character embodying a novel construction whereby a slight yielding support is provided for the rails.

The invention further contemplates a railway tie which can be readily formed from sheet material and which will hold the rails securely in position and prevent the injurious effects incident to the passage of the rolling stock where the rail rests upon a solid or unyielding support.

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 side elevation of a metallic railway tie embodying the invention. Fig. 2 is a top plan view of the same. Fig. 3 is a side elevation of a portion of a track showing the manner of bracing the tie under a joint. Fig. 4 is an enlarged side elevation of one of the washer members for engaging the rails. Fig. 5 is an end view of the preferred construction of tie. Fig. 6 is a similar view showing a tie formed from a seamless tube of material. Figs. 7 and 8 are end views showing modifications. Fig. 9 is a detail view of a modified form of washer member for engaging the rails.

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 invention comprises essentially a tubular or hollow railway tie in which the sides are cut away under the rails so as to form a slightly yielding support for the latter members. Specifically describing the preferred embodiment of the invention, the numeral 1 designates the tie which is formed of sheet material and is approximately rectangular in cross section, the sides 1^a of the tie being integral with the top 1^b and having their lower edges extended outwardly and riveted or otherwise rigidly connected to the bottom 1^c. The rails 2 rest upon the top 1^b of the tie in the usual manner and are engaged upon opposite sides by washer members 3 carried by bolts 4 which are threaded into the tie.

Specifically describing the washer members 3 it will be observed that the same are notched at 3^a so as to engage the base flange of the rails and hold the latter members securely in position upon the ties. A slight modification is shown in Fig. 9 in which the washer member is shown as formed in the two sections 3^b and 3^c, the lower section 3^b having one side thereof cut away while the upper section 3^c extends over the said cut away portion of the lower section and is designed to overlap the rail. Longitudinal slots 5 are provided in the sides 1^a of the tie immediately under the rails 2 and these slots preferably extend beyond the rails in both directions and are disposed adjacent the top 1^b of the tie. It will thus be apparent that the portion of the top 1^b of the tie upon which the rail rests is deprived of support from the sides 1^a and has a spring action so as to provide a yielding base for the rail. In order to prevent any permanent sagging of this portion of the top which has thus been deprived of its support from the sides of the tie the same is preferably tempered after the formation of the tie, the tempered portion being bounded upon the drawing by the dotted lines 6. With this construction it will be obvious that while the rails are held securely in position, a yielding base is provided for the same and the injurious effect due to the hammering of the rolling stock thereby eliminated.

I do not wish to restrict myself to any specific manner of forming the tie 1 since for the purposes of the invention it is merely necessary that the same have a hollow or tubular formation. In Fig. 7 it is shown as formed by suitably bending a single piece of sheet material, the longitudinal edges thereof being overlapped and bolted or riveted. A further modification which might also be utilized is shown in Fig. 8 in which the tie is formed with two sections having the edges thereof overlapped and riveted or otherwise securely connected, one of the sides being integral with the top of the tie while the opposite side is integral with the bottom of the tie.

The invention further contemplates a novel construction for reinforcing and stiffening those ties under the meeting ends of the rails in order to prevent sagging of the rails at the joints. For this purpose as shown in Fig. 3 a plurality of brace members 7 are utilized, the said brace members extending across the top of the ties to which they are riveted or otherwise securely connected and having their extremities inclined downwardly and secured to the lower portions of the adjacent ties. In this connection it may also be noted that the end brace members 7^a are simply diagonal strips extending from the top of one tie to the bottom of the adjacent tie. This construction has the advantage of locking the ties under the rail ends against relative displacement and providing a firm support for the rail joints.

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

1. A metallic railway tie formed with a top and sides, the sides being cut away under the rails and the portions of the top under the rails being tempered.

2. A metallic railway tie formed with a top and sides, the sides being provided with longitudinal slots under the rails and located adjacent the top and the portions of the top under the rails and over the slots being tempered.

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

JOHN C. REED. [L. S.]

Witnesses:
F. M. COOKE,
IDA ZIMMERLY.