

No. 803,775.

PATENTED NOV. 7, 1905.

G. T. MURPHY.
RAILROAD TIE.
APPLICATION FILED JULY 3, 1905.

Fig. 1.

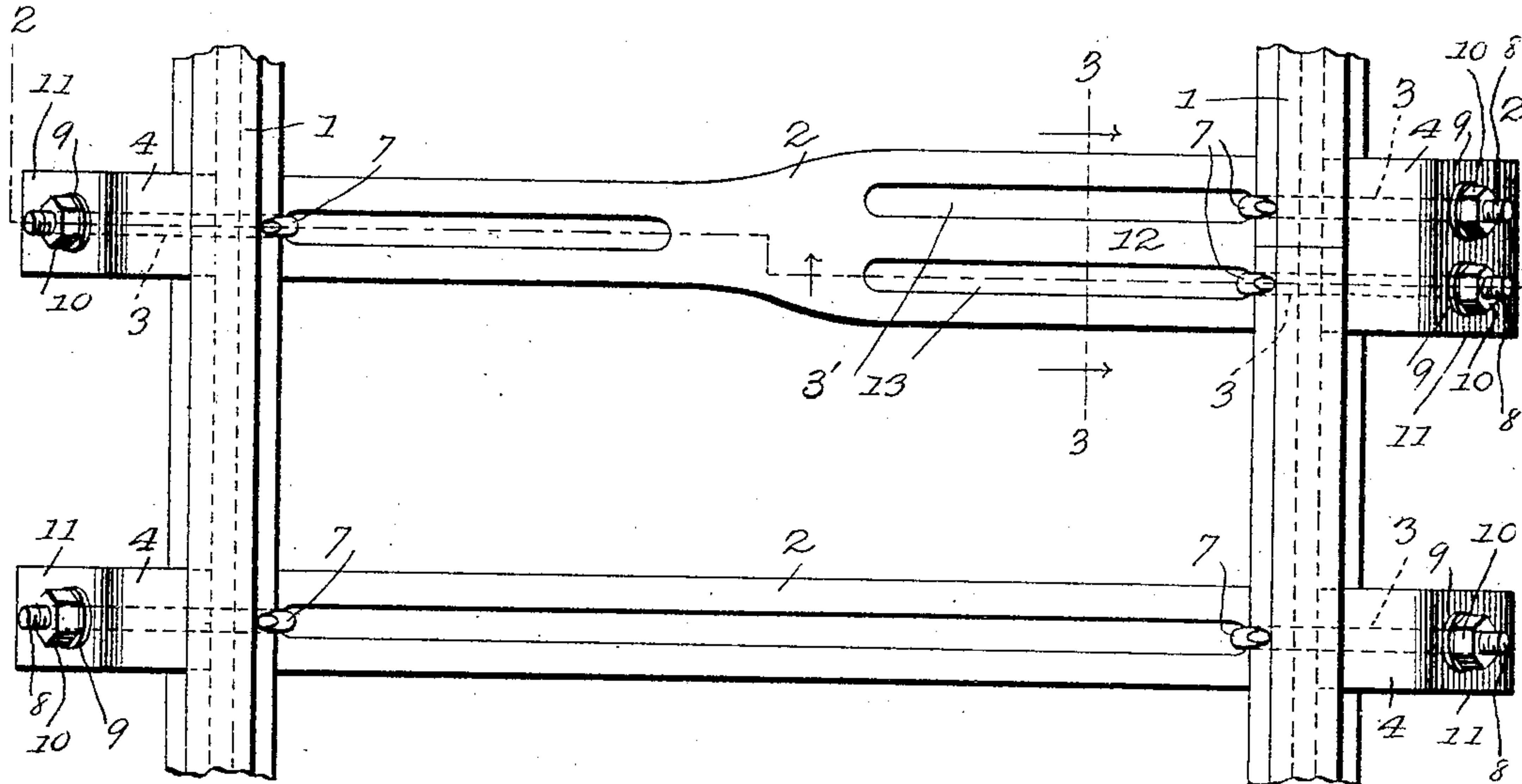


Fig. 2.

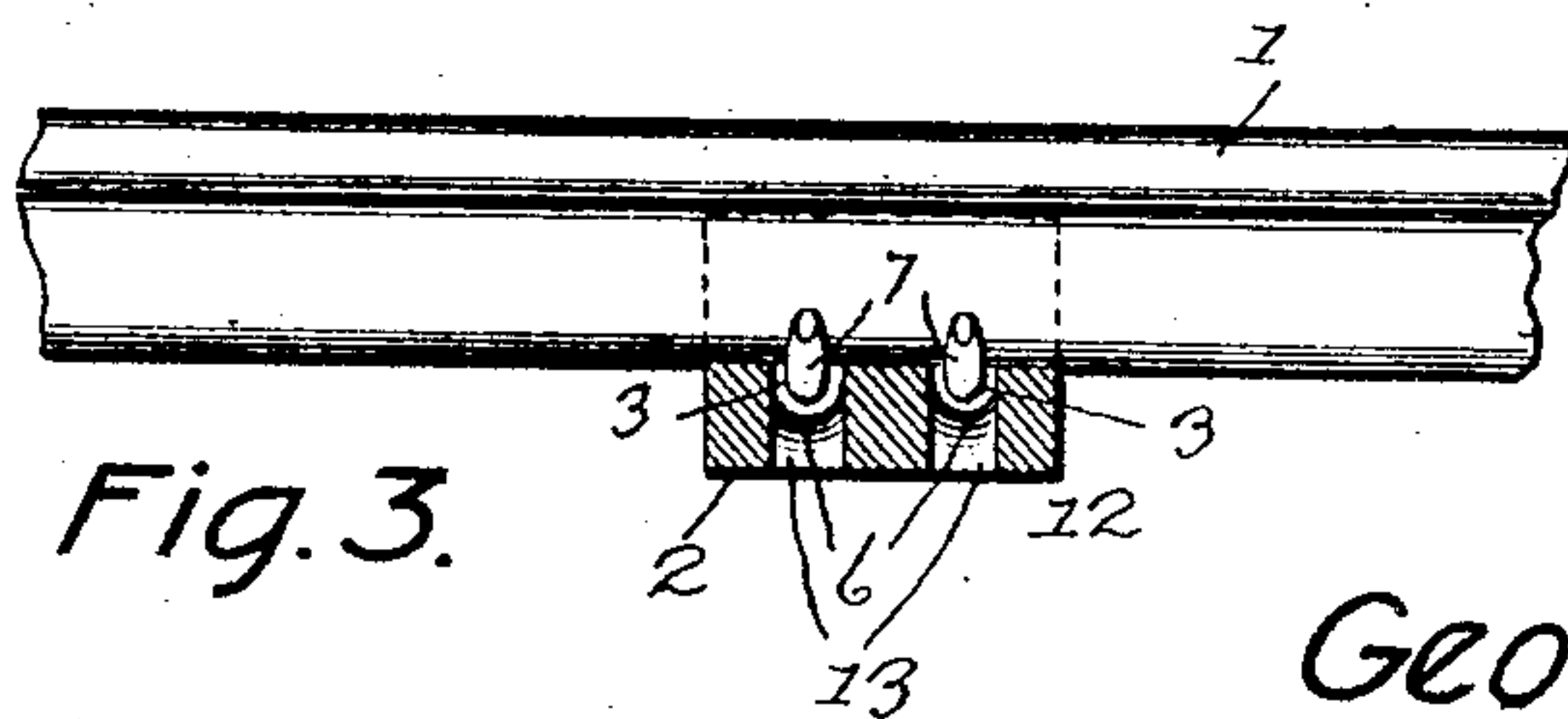
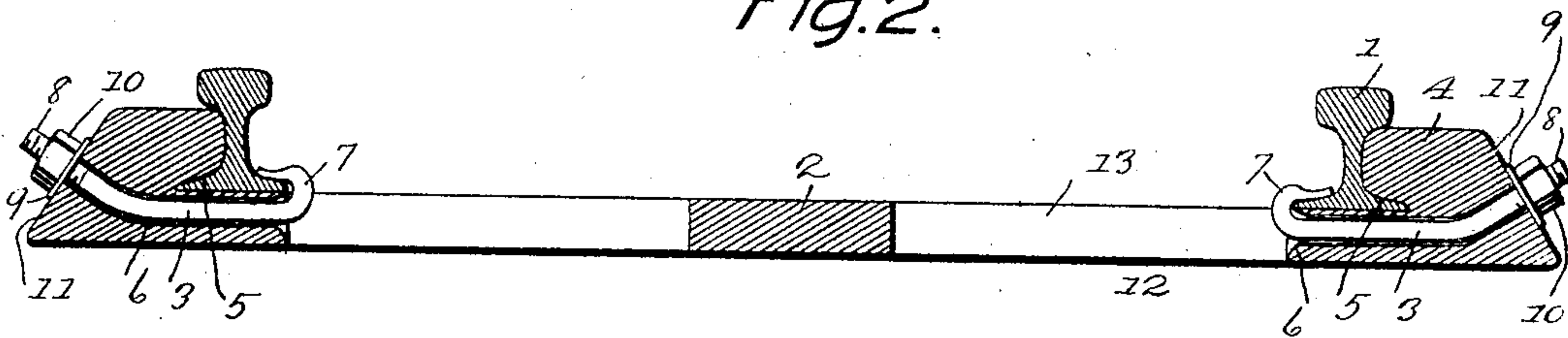


Fig. 3.

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RAILROAD-TIE.

No. 803,775.

Specification of Letters Patent.

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Application filed July 3, 1905. Serial No. 268,159.

To all whom it may concern:

Be it known that I, GEORGE T. MURPHY, a citizen of the United States, residing at Piedmont, in the county of Mineral and State of West Virginia, have invented certain new and useful Improvements in Railroad-Ties; and I do 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.

My invention relates to improvements in metallic railway cross-ties; and it consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

The object of the invention is to provide a simple, durable, and comparatively inexpensive tie of this character to which the track-rails may be quickly and securely fastened and which will effectively prevent spreading of the rails.

The above and other objects, which will appear as the nature of my invention is better understood, are accomplished by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a portion of a railway-track, showing the application of my improved cross-ties. Fig. 2 is a transverse sectional view taken on the line 2 2 in Fig. 1, and Fig. 3 is a detail transverse sectional view taken on the line 3 3 in Fig. 1.

Referring to the drawings by numeral, 1 denotes the track-rails, which are secured upon my improved metallic cross-ties 2 by fastening-bolts 3. The ties 2 are preferably cast with longitudinally-disposed openings 3' and enlargements 4, located at the ends of the tie. Said enlargements have their inner faces undercut, as shown at 5, to receive the outer base-flanges of the track-rails 1, which rest upon the top of the tie 2 and which are held thereon and in engagement with the enlargements 4 by the fastening-bolts 3. The latter pass through curved longitudinally-extending openings or apertures 6, located in the ends of the tie beneath said enlargements, and upon the inner ends of said bolts are formed hooked portions 7, which are adapted to engage the inner base-flanges of the rails 1, as clearly shown in Fig. 2 of the drawings. The outer threaded ends 8 of the bolts 3 are curved or bent at an angle to the body portions of the bolts, so that they extend upwardly and outwardly, as shown. A washer 9 and a fastening-nut 10 are placed upon the threaded

end of each bolt and bear against the inwardly and upwardly inclined outer face 11 of the enlargement 4.

I preferably provide but one of the fastening-bolts 3 at each end of the tie; but upon ties disposed beneath the abutting ends of two rails I preferably provide two of such bolts, as clearly shown at 12 in Figs. 1 and 2 of the drawings. When two of said bolts are used, one end of the tie is enlarged and formed with parallel slots 13, and each of the bolts has one of its hooked ends engaged with the inner base-flange of one rail.

The construction, operation, and advantages of the invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings. It will be seen that the rails will be effectively prevented from spreading by reason of their engagement with the enlargements 4 and that the rails will be securely retained upon the ties by the fastening-bolts 3. It will also be noted that the tie is of very simple and durable construction and that it may be manufactured at comparatively small cost.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

The herein-described metallic railway-tie having the undercut enlargements at its ends, on its upper side, to receive the outer base-flanges of the track-rails, the longitudinal slots in the intermediate portion of the tie, the bolt-openings through the undercut enlargements and having their inner ends horizontal and communicating with the said slots and their outer portions inclined upwardly and extending to the ends of the tie, said ends of the tie presenting inclined upwardly-converging faces, the bent bolts in the said openings having the hooks at their inner ends to engage the inner base-flanges of the rails, and the nuts on the outer, inclined portions of the said bolts and bearing on the inclined end faces of the tie.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE T. MURPHY.

Witnesses:

CHARLES L. DAVIS,
JOHN J. JENKINS.