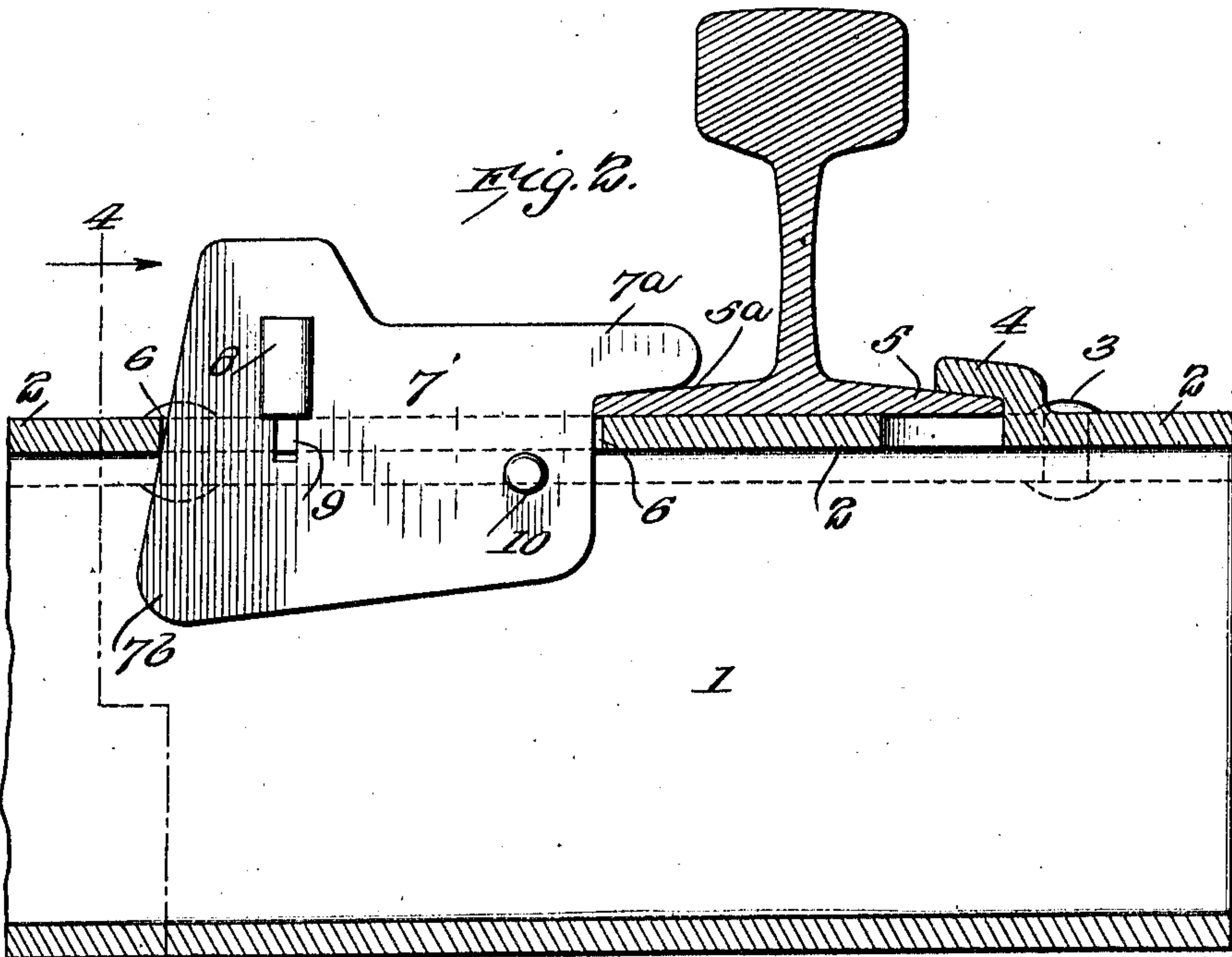
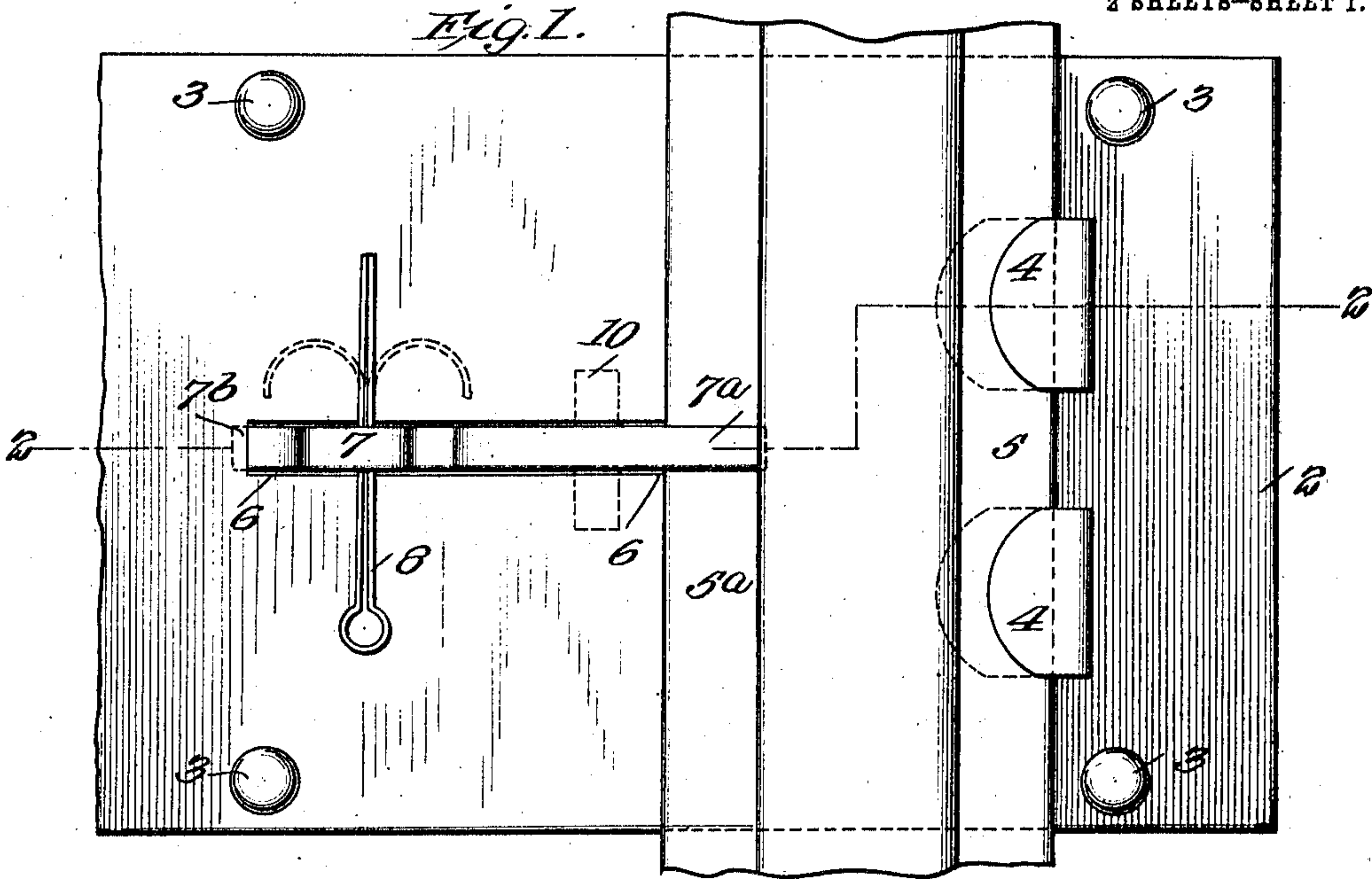


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RAIL FASTENING FOR METALLIC RAILWAY TIES.  
APPLICATION FILED JAN. 10, 1911.

993,149.

Patented May 23, 1911.

2 SHEETS—SHEET 1.



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Fig. 3.

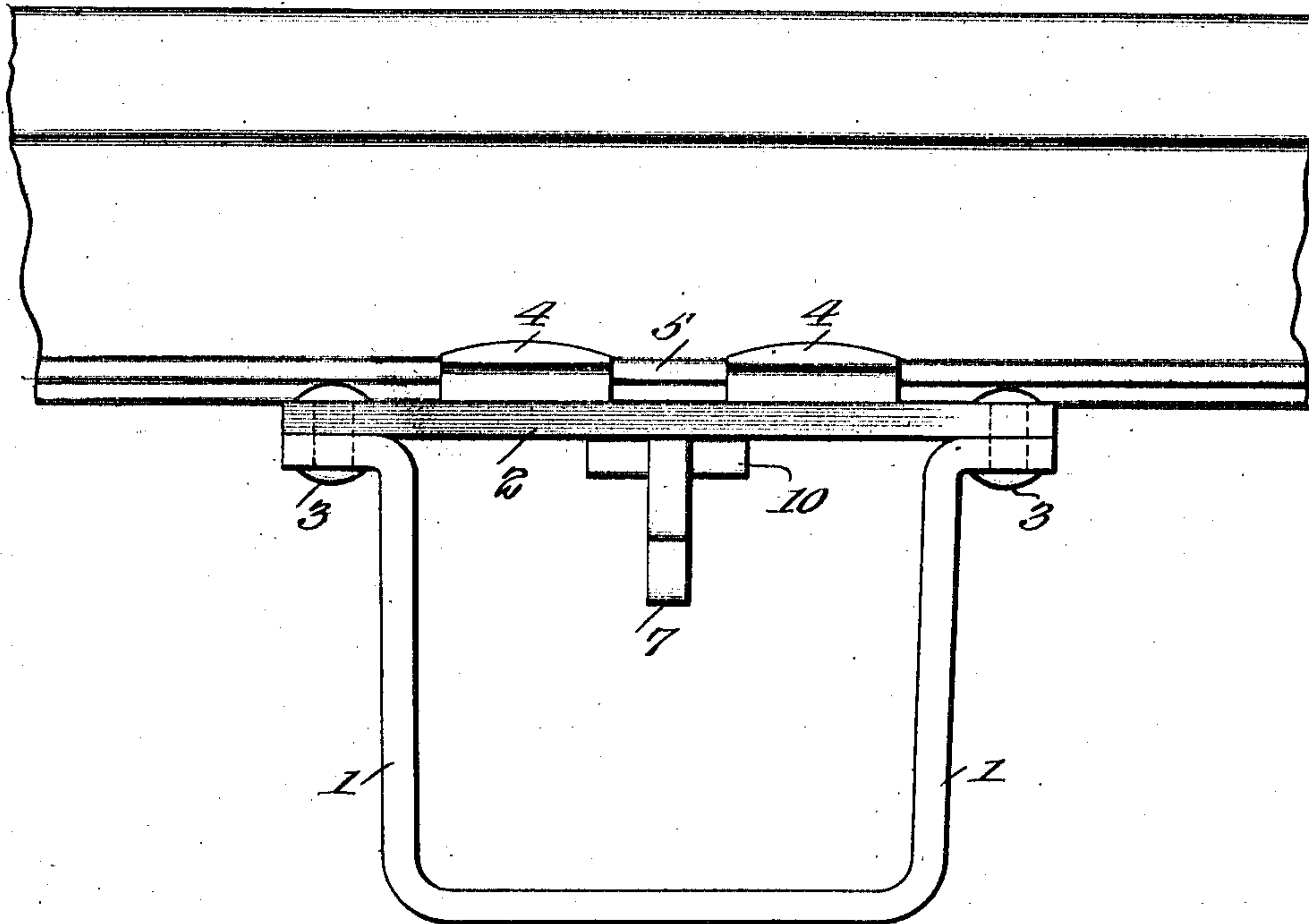
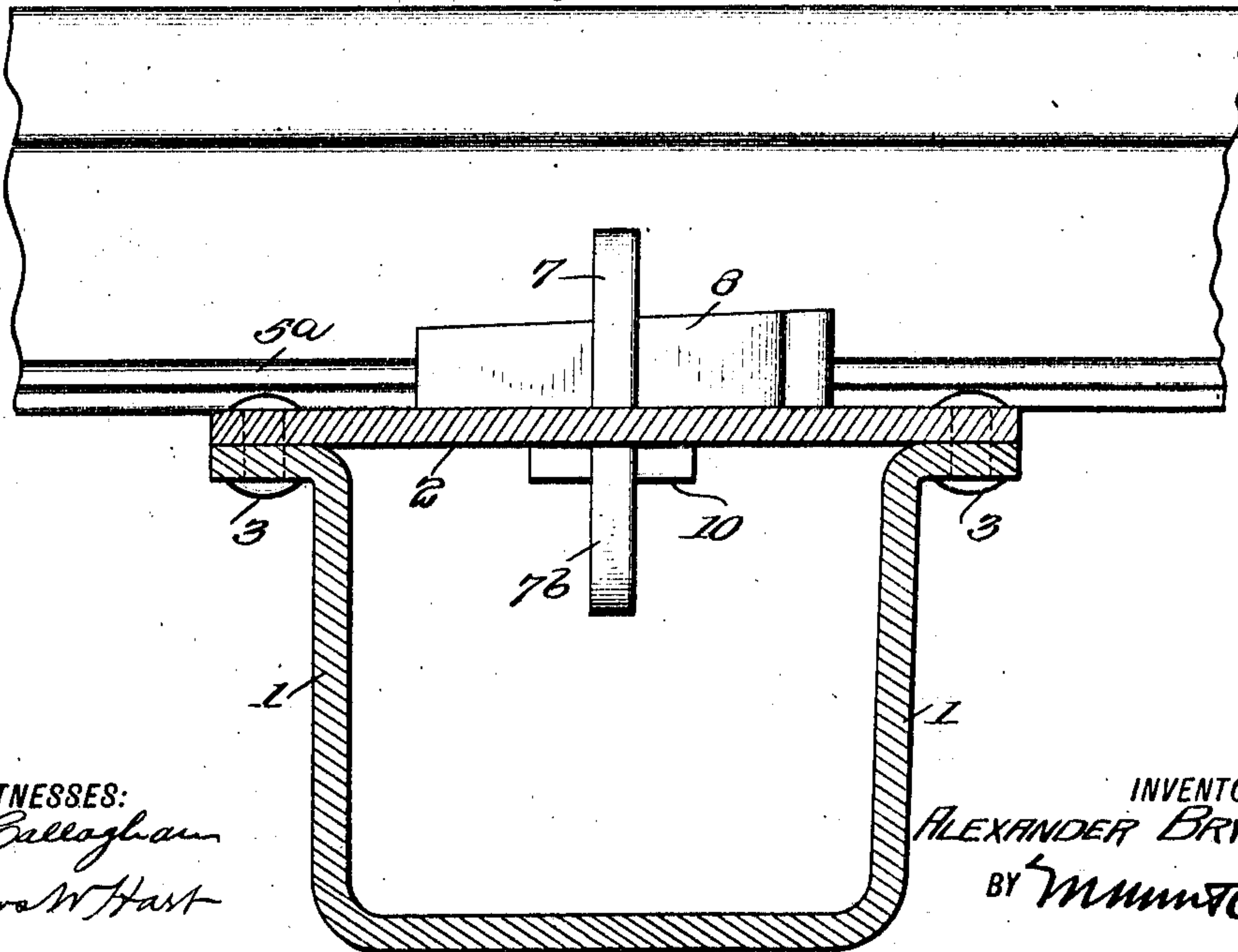


Fig. 4.



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# UNITED STATES PATENT OFFICE.

ALEXANDER BRYFOGLE, OF WEST EASTON, PENNSYLVANIA.

RAIL-FASTENING FOR METALLIC RAILWAY-TIES.

993,149.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed January 10, 1911. Serial No. 601,779.

*To all whom it may concern:*

Be it known that I, ALEXANDER BRYFOGLE, a citizen of the United States, and a resident of West Easton, in the county of Northampton and State of Pennsylvania, have invented an Improved Rail-Fastening for Metallic Railway-Ties, of which the following is a specification.

My invention is an improvement in that class of rail fastenings in which a rail-clamping plate is arranged in a slot in the top of a metal tie arranged adjacent to the rail base supported on the tie.

The details of construction, arrangement, and combination of parts are as hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a portion of a railway rail and a hollow metallic tie with my improved fastening applied. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is an end view of the tie and fastening applied thereto, together with a side view of a portion of a railway rail. Fig. 4 is a section on the line 4—4 of Fig. 2.

1 indicates the body and 2 the top plate of a metal tie which is provided with upwardly projecting lugs 4 for engaging one edge of a rail base 5. The rail rests flat on the top 2 and its base flange 5<sup>a</sup> extends a little beyond the edge of a slot 6 formed in the plate 2 at right angles to the rail. In this slot 6 is arranged the clamping plate. The said clamping plate has at one end a toe or projecting portion 7<sup>a</sup> which, in practice, overlaps the rail base at 5<sup>a</sup>, as shown in Figs. 1 and 2. The opposite edge or end 7<sup>b</sup> of the plate is inclined or sloped from the top downward, thus forming practically a wedging portion adapted to engage the tie plate 2 at the inner end of the slot 6 when the clamping plate is forced upward, which is effected by means of a wedge 8 that is inserted in a vertical slot 9 formed in the clamping plate. As shown in Figs. 1 and 4, the fastening 8 is preferably formed as a cotter-pin whose upper edge is inclined to form the wedge proper. The ends of the wedge may be turned out if desired, as shown by dotted lines in Fig. 1, to prevent it becoming accidentally detached from the rail-clamping plate 7.

A pin or bolt 10 is inserted through, and secured in, the inner end of the rail-clamping plate 7 at a point below the tie plate 2, whereby, when the wedge 8 is inserted and the clamping plate 7 forced upward, the pin is drawn upward against the under side of the plate 2 and the toe or lug 7<sup>a</sup> of the rail-clamping plate is drawn downward with corresponding force, so as to firmly engage and clamp the rail base 5<sup>a</sup>. Thus, by one operation, to wit, the insertion of the wedge 8 and forcing it into the slot 9, the rail is tightly clamped and the plate 7 is caused to engage and wedge against the outer end of the slot in which it is arranged, so that the opposite or inner edge of the plate 7 is pressed against the rail base and thus forces the rail laterally into firm engagement with the hooked lugs 4. In order to allow this action, the slot 6 in the tie plate 2 must be extended toward the end of the rail a short distance beneath the rail base, as shown in Fig. 2.

In assembling the parts, the tie 1 having been duly placed in position, the rail is laid thereon and its base flange 5 engaged with the hooked lugs 4; and then the clamping plate 7 is inserted from the end of the tie and passed upward through the slot 6 in the tie plate 2 and secured, as already described, by inserting the wedge 8.

It is apparent that the fastening may be readily detached by reversing this operation, that is to say, by withdrawing the wedge 8; when the plate 7 will drop down into the tie, thus leaving the rail proper free of obstruction on the inner side, so that it may be readily detached from the lugs 4 and removed from the tie.

In practice, I prefer that the rail-clamping plate 7 shall be arranged on the inside of one rail and on the outside of another adjacent one in order to facilitate replacing ties.

What I claim is:—

The combination, with a rail base and the top of a metallic tie, provided with a lug for engaging the outer flange of the base and on the inner side of the rail with a slot which extends beneath the inner base flange, of a fastening consisting of a flat plate whose outer edge is inclined from top to bottom, the in-

ner end being provided with a portion which projects over the adjacent rail base, and at a lower point with a transverse projection adapted to engage the under side of the tie  
5 plate, and a wedge inserted transversely through said plate, whereby, when the wedge is forced in, the plate clamps the rail base

and presses the same laterally against the outside lug, substantially as described.

ALEXANDER BRYFOGLE.

Witnesses:

JOHN BRUNNER,  
CHAS. B. BRUNNER.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,  
Washington, D. C."

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