

No. 874,322.

PATENTED DEC. 17, 1907.

E. L. GEER.
METALLIC TIE AND RAIL FASTENER.
APPLICATION FILED JUNE 11, 1907.

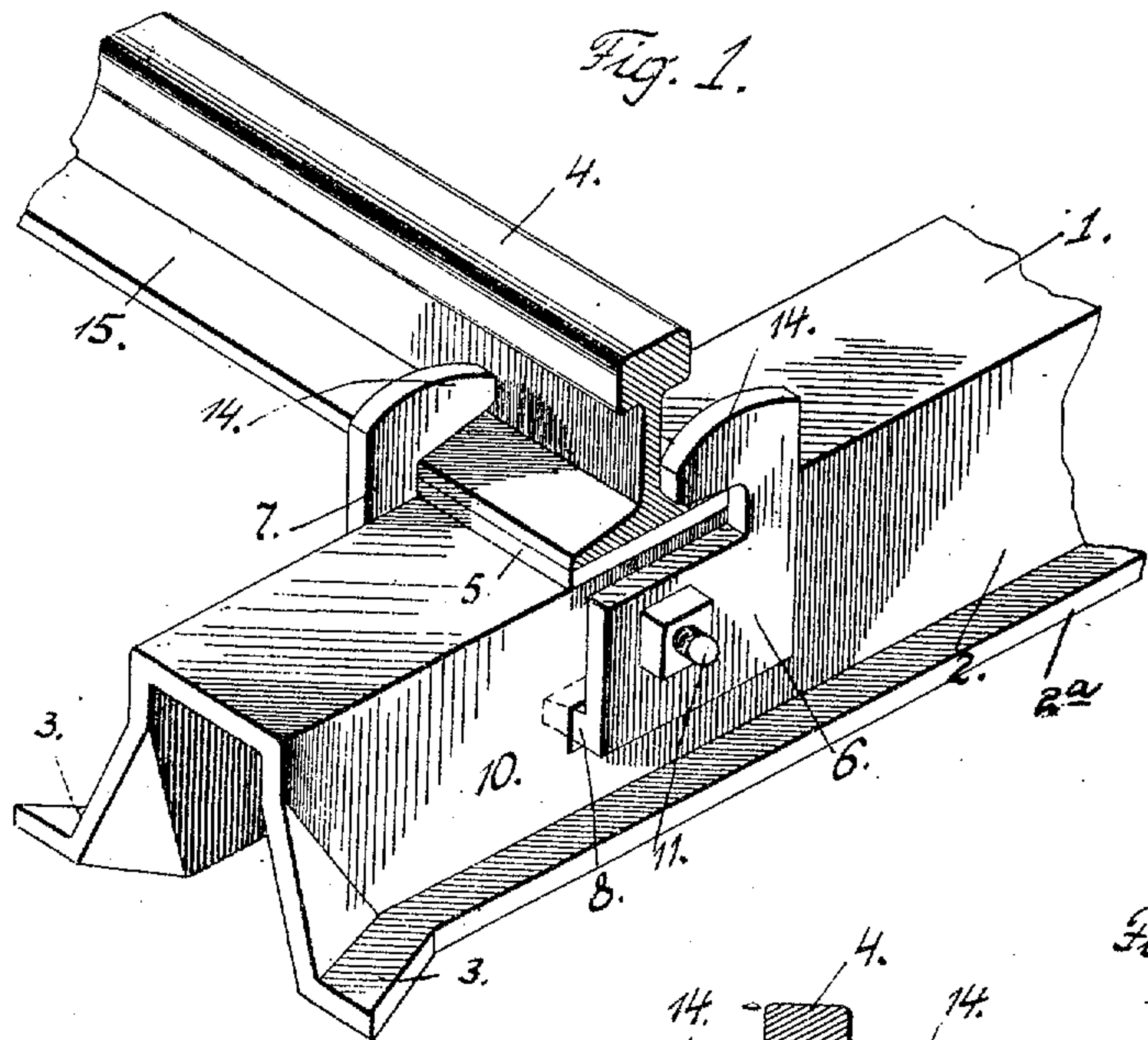


Fig. 2.

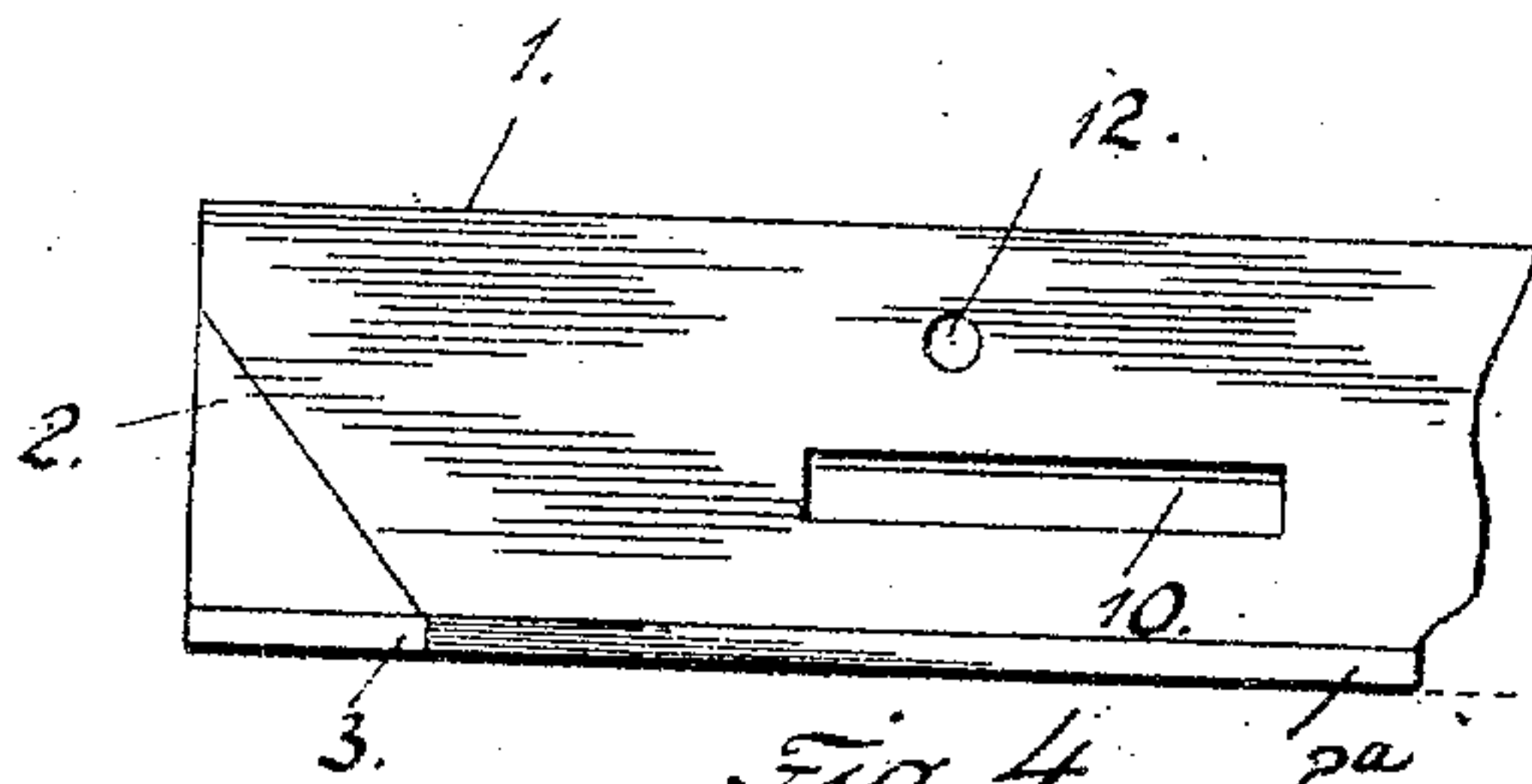


Fig. 3.

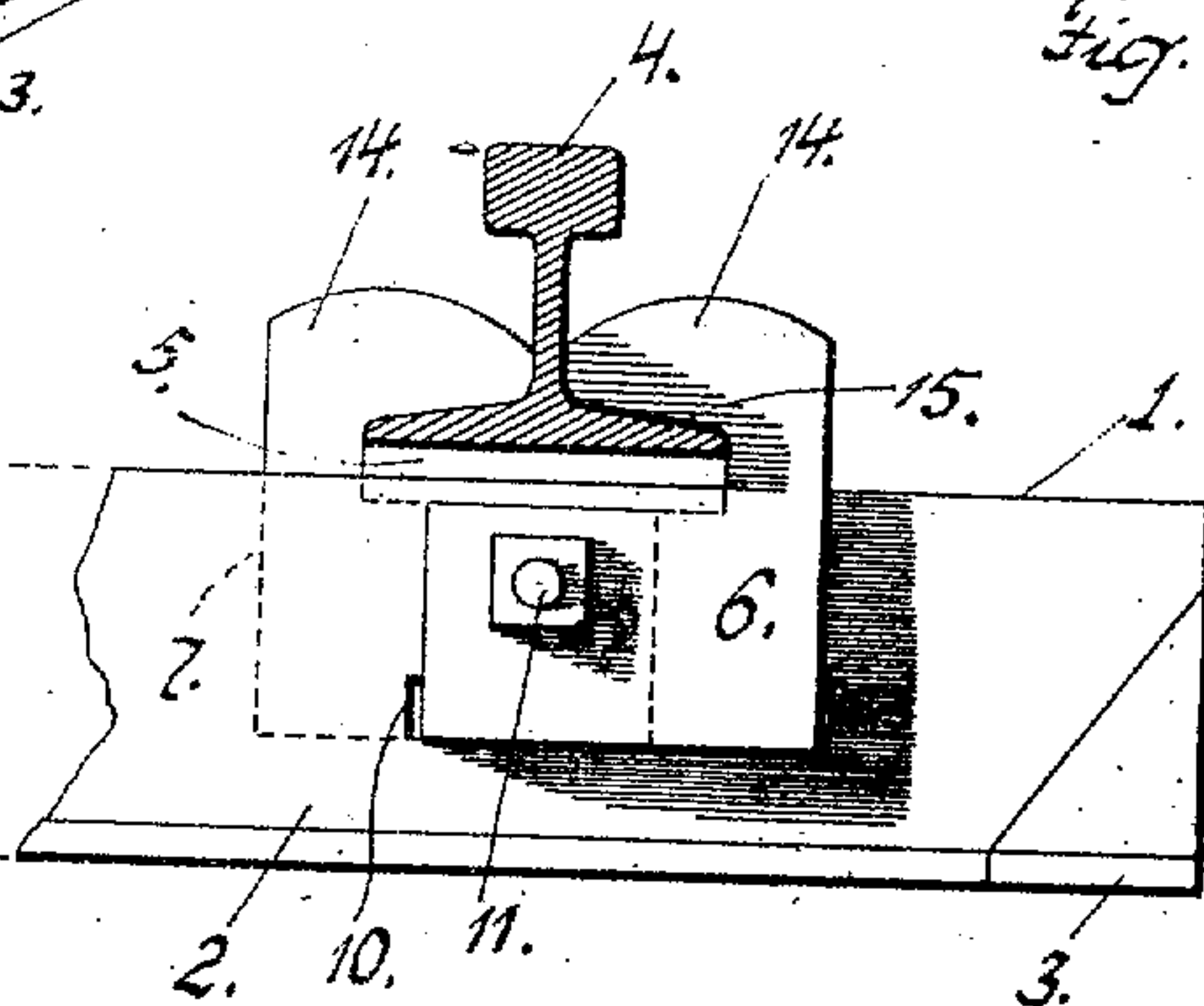


Fig. 4.

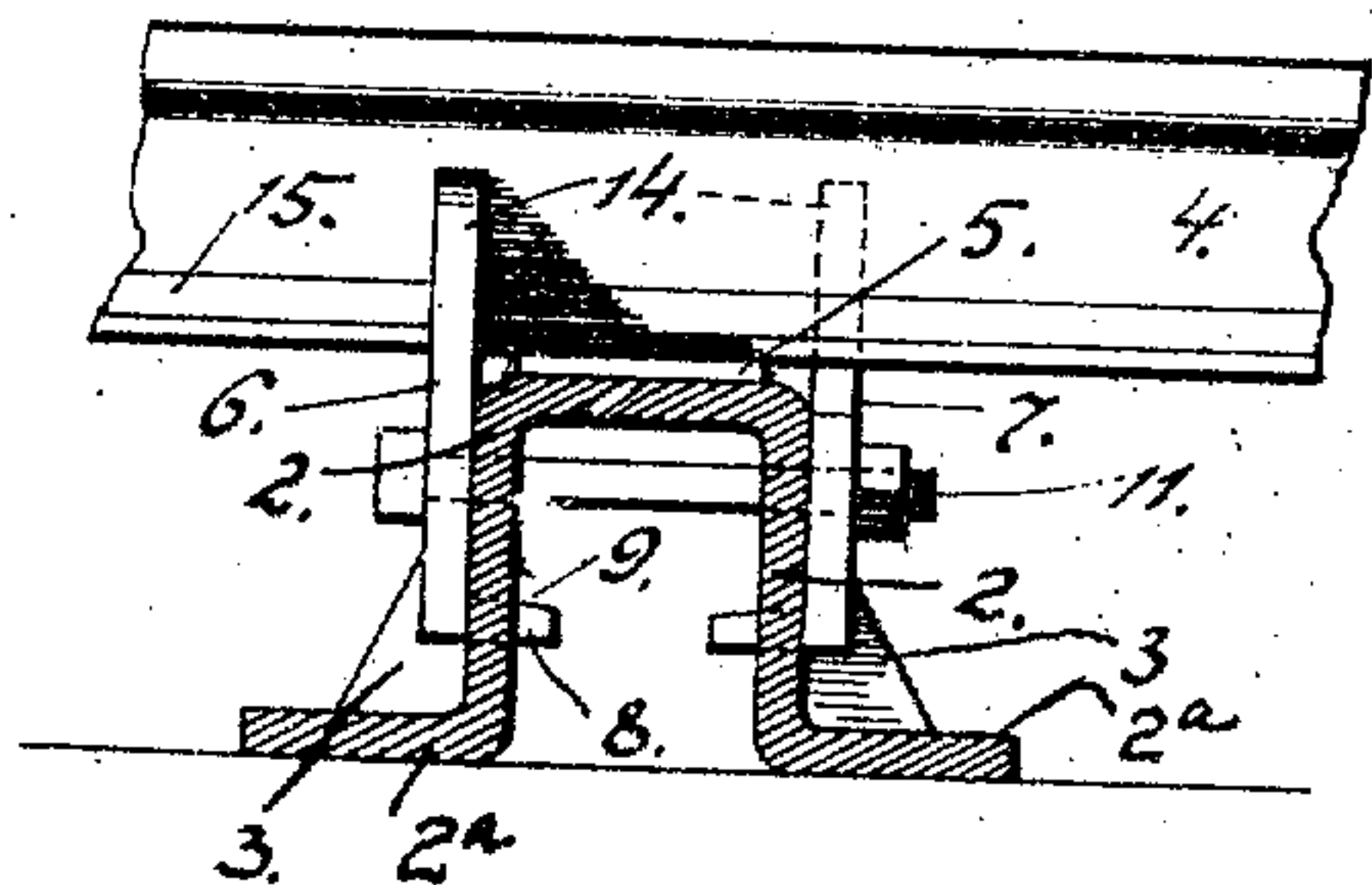
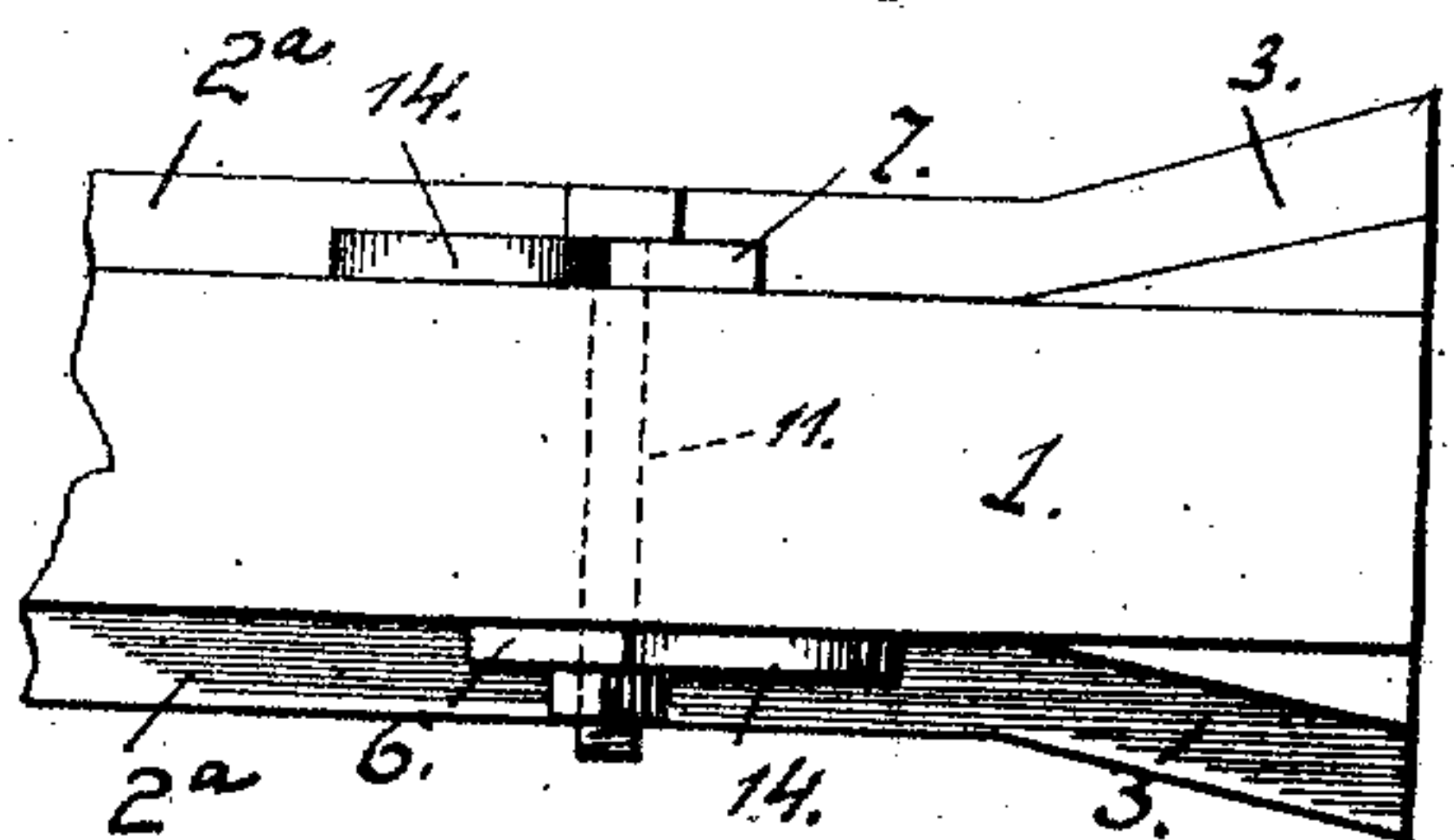


Fig. 5.



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UNITED STATES PATENT OFFICE.

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METALLIC TIE AND RAIL-FASTENER.

No. 874,322.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed June 11, 1907. Serial No. 378,380.

To all whom it may concern:

Be it known that I, ERASTUS L. GEER, citizen of the United States of America, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in the metallic ties and rail fasteners, and the invention has for its object to provide a strong and durable tie in connection with which positive and reliable means are employed for retaining rails upon the ties.

My invention aims to provide a metallic tie of the channel beam construction, the beam being used in an inverted position to provide a rigid rail base and support, at the same time insuring a positive anchorage of the tie in the ballast of a road bed.

The rail fasteners used in connection with the tie are easily and quickly placed in position to clamp a rail to the tie, said fasteners preventing lateral and vertical displacement of a rail with relation to the tie.

The detail construction entering into my invention will be presently described and then specifically pointed out in the appended claims.

Referring to the drawing forming part of this specification, like numerals of reference designate corresponding parts throughout the several views, in which,

Figure 1 is a perspective view of one end of the tie equipped with a fastener. Fig. 2 is an elevation of one end of the tie, the fastener thereof being removed. Fig. 3 is a similar view of the tie, illustrating the fastener in position. Fig. 4 is a cross sectional view of the tie, and Fig. 5 is a plan of the same.

To put my invention into practice, I construct the tie of an inverted channel-shaped beam 1, either rolled or pressed to the shape illustrated. The ends of the ties have their sides 2 flanged, as at 2^a and flared, as at 3, to form a base or anchorage for the tie in the ballast of a road-bed.

Upon the top of the tie rests a rail 4, and to provide an elastic seat for said rail and prevent the wear and tear of the tie by the vibratory stresses and strains thereon, I use a piece of wood or fiber 5 between the base of a rail and the tie.

To retain the rail 4 upon the tie, I use fasteners 6 and 7, the lower edges of said fasteners being bent to provide flanges 8, having beveled upper surfaces 9. The flanges 8 are adapted to extend into the tie through elongated openings or slots 10 formed in the sides 2 of the tie. The fasteners are retained in engagement with the tie by a bolt 11 passing through said fasteners and openings 12 formed in the sides of the tie, said openings being located directly above the openings or slots 10. Each fastener has a hook-shaped clamp 14 for engaging the base flanges 15 of a rail 4 and retaining the said rail to the wood or fiber seat 5 upon the tie.

The fasteners are oppositely arranged, the fastener 6 engaging the rail upon one side, while the fastener 7 engages the rail upon the opposite side. In positioning the fasteners in this manner and connecting them by a bolt, the bolt is relieved of all strain, except that of holding the fasteners together, as the flanges 8 firmly prevent vertical displacement of said fasteners. In beveling the upper surface of the flanges 8, the fasteners are forced downwardly as they are connected to the sides 2 of the tie. This movement of the fasteners causes the hook-shaped clamps to firmly grip and bear upon the base flanges 15 of the rail 4.

It will be apparent from the foregoing description that I have devised a novel tie and rail fastener capable of withstanding the rough usage to which it is subjected, and insuring a substantial support for a track.

It is obvious that such changes in the structural details of my invention, as are permissible by the appended claims, can be resorted to without departing from the spirit and scope of the invention.

Having fully described my invention, what I claim and desire to secure by Letters Patent is:

1. In a metallic tie and rail fastener, the combination with the rail, of a tie consisting of a channel beam having its sides flanged, and flared at its ends, fasteners having inwardly extending flanges adapted to extend into the sides of said tie, hook-shaped clamps carried by said fasteners and adapted to engage the base flanges of said rails, a bolt passing through said fasteners and the sides of said tie, and a nut for holding said bolt in position.

2. The combination of a rail, of an inverted channel-shaped beam for supporting said

rail, the sides of said beam having openings formed therein, fasteners arranged at the sides of said beam, beveled flanges carried by said fasteners and extending through the openings of said beam, hook-shaped clamps carried by said fasteners and adapted to engage the base flanges of said rail, and means passing through said fasteners and beam for

holding said fasteners in position at the sides of said beam.

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

ERASTUS L. GEER.

Witnesses:

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