

No. 662,841.

Patented Nov. 27, 1900.

J. S. WARLEY.
METALLIC RAILROAD TIE.

(Application filed May 28, 1900.)

(No Model.)

FIG. 1.

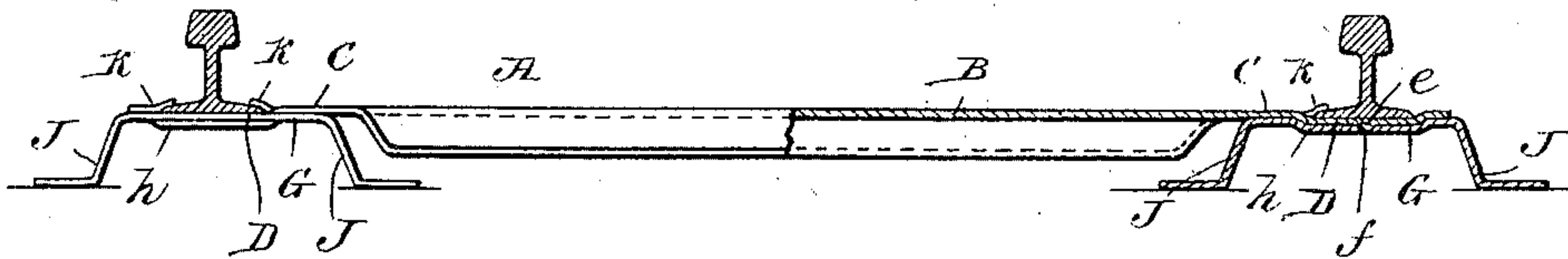


FIG. 2.



FIG. 3.

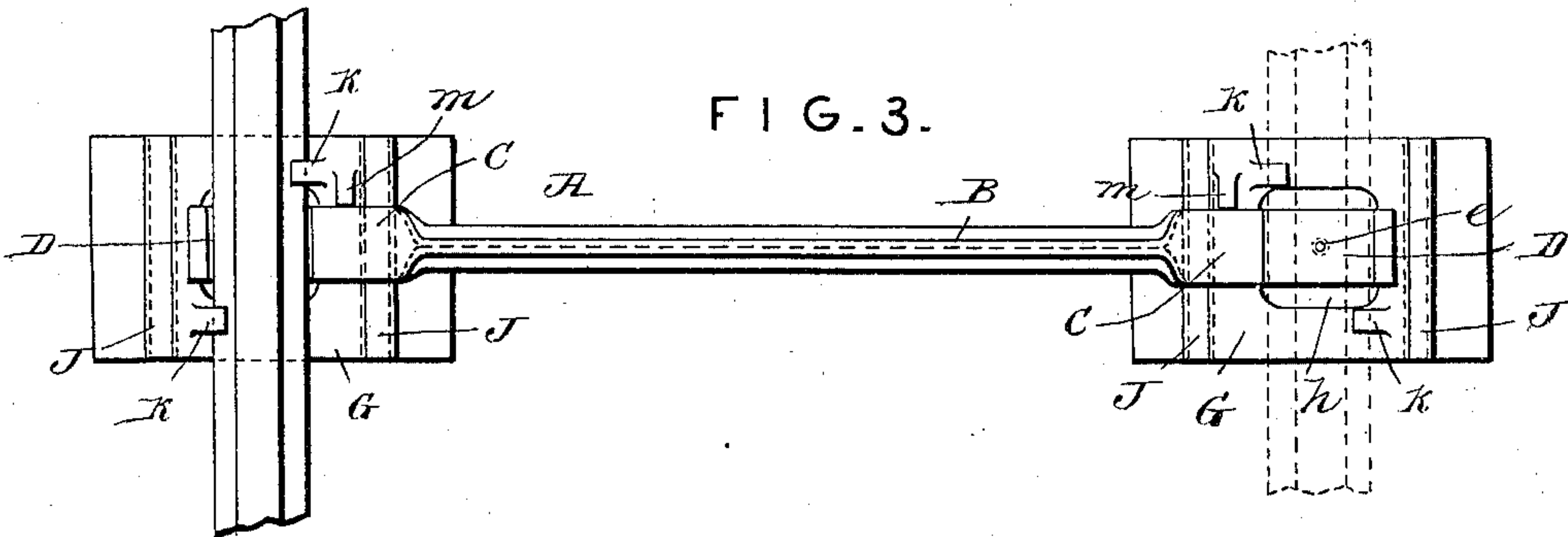


FIG. 4.

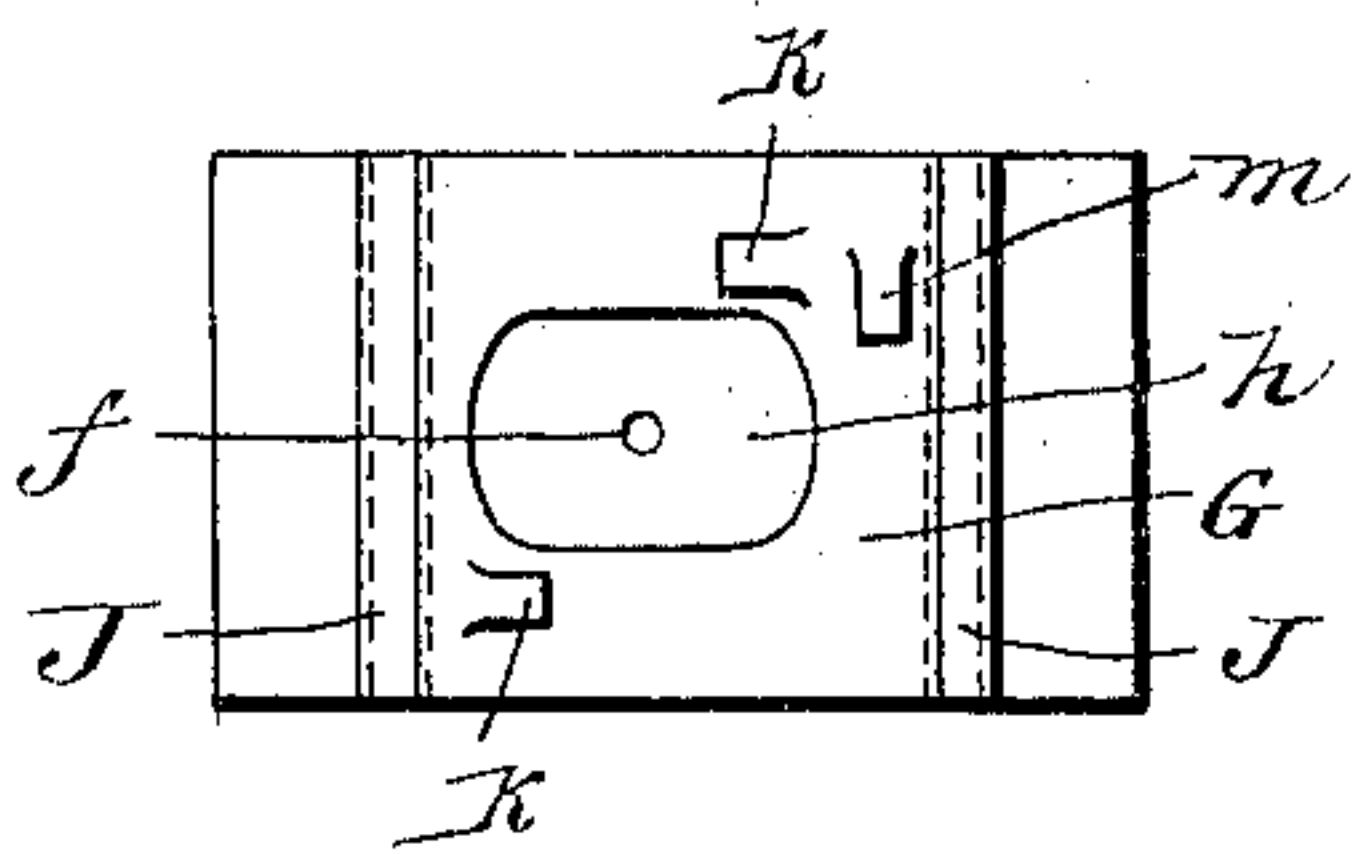


FIG. 6.

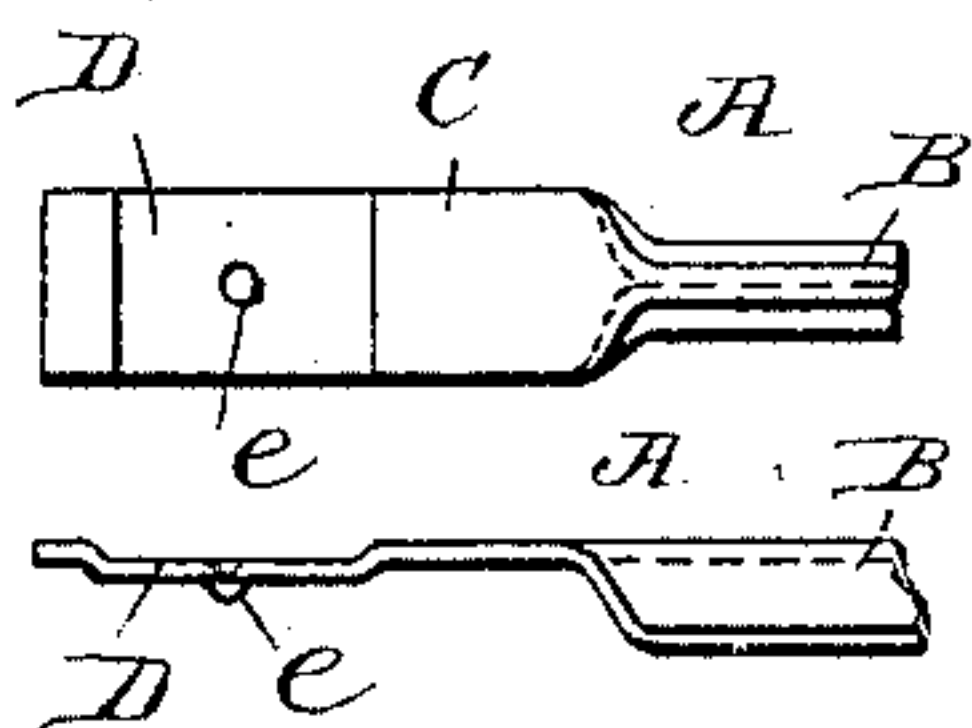


FIG. 7.

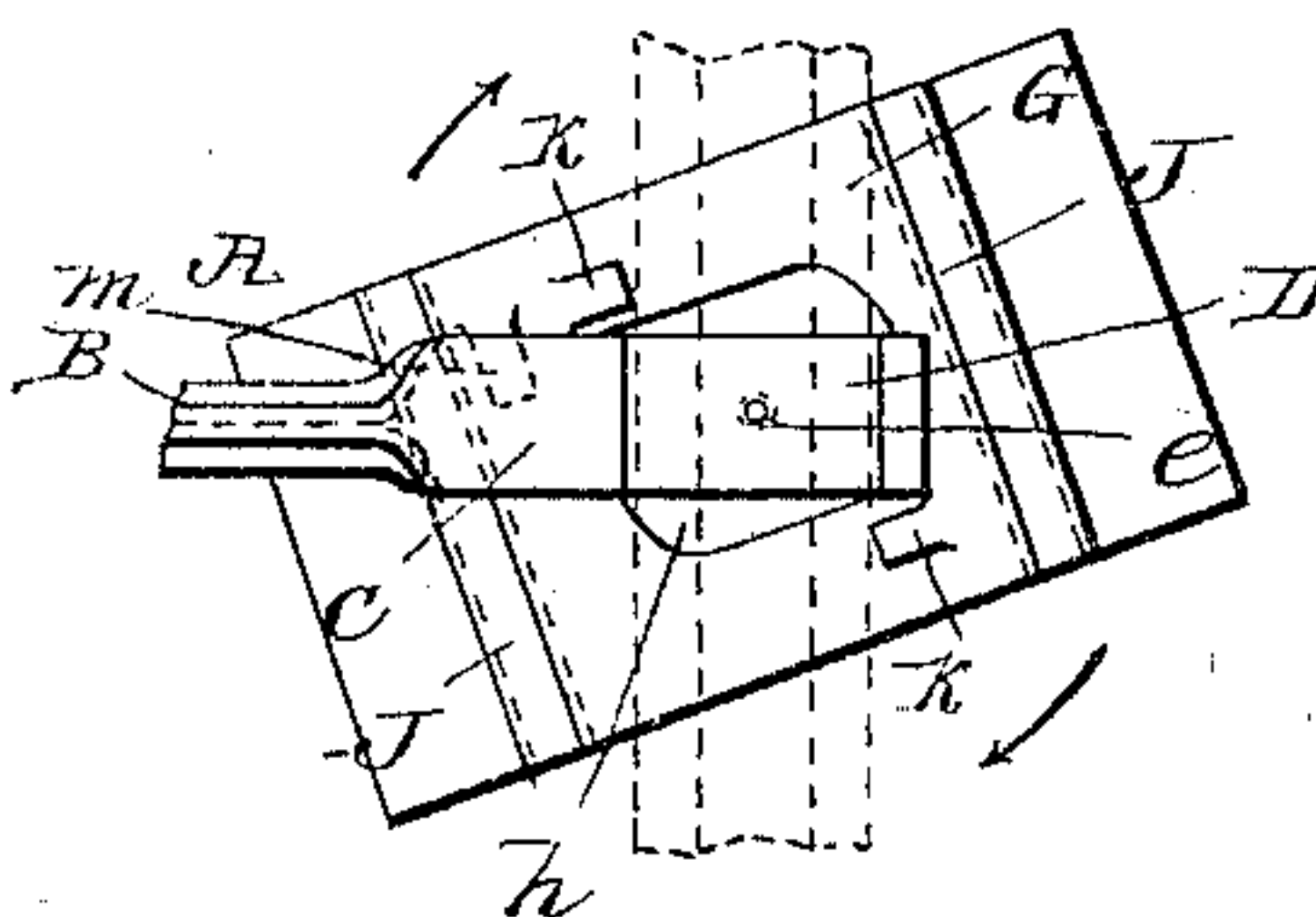
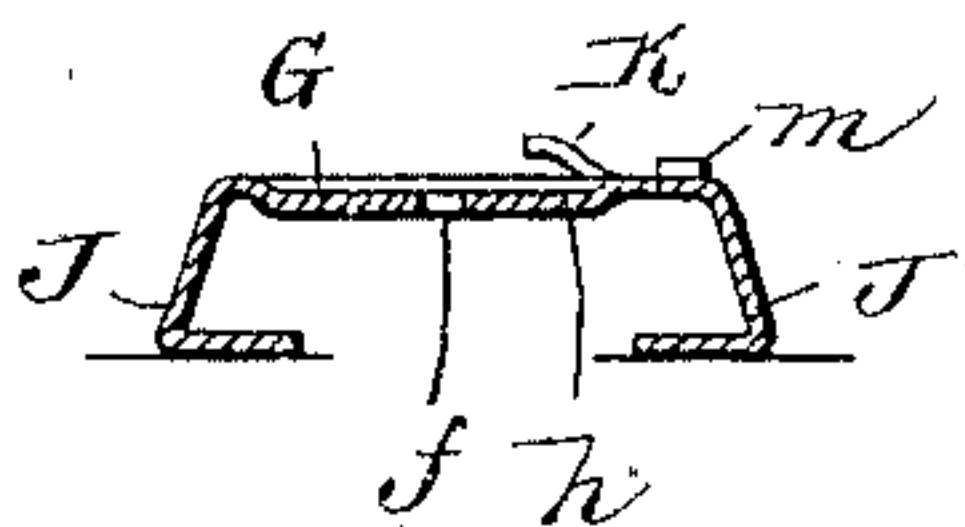


FIG. 5.



ATTEST-

Harry L. Amer.
George M. Anderson

INVENTOR-

Jacob S. Warley.

By E. W. Anderson

TYPE SETTER.

UNITED STATES PATENT OFFICE.

JACOB S. WARLEY, OF POTTSTOWN, PENNSYLVANIA:

METALLIC RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 662,841, dated November 27, 1900.

Application filed May 28, 1900. Serial No. 18,310. (No model.)

To all whom it may concern:

Be it known that I, JACOB S. WARLEY, a citizen of the United States, residing at Pottstown, in the county of Montgomery and State of Pennsylvania, have invented new and useful Improvements in Metallic Railroad-Ties, of which the following is a specification.

In the accompanying drawings, Figure 1 is a side view of the tie, partly in section, showing the construction. Fig. 2 is a section of the middle portion. Fig. 3 is a plan view. Fig. 4 is a plan view of the sill-plate detached. Fig. 5 is a section of the sill-plate detached. Fig. 6 is a plan and side view of the end portion of the tie. Fig. 7 is a view of the end of the tie and a sill-plate in process of attachment thereto.

The invention has relation to metallic sills or ties for railroads; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In the annexed drawings the letter A designates the transverse tie, consisting of heavy sheet or plate metal, or it may be cast in form. This metallic tie consists of the middle portion B, which is flanged in A form and terminates at each end in flat extensions C, formed with depressed seats D to receive the rail-base. Said middle portion B of the tie-plate lies below the planes of the flat end portions thereof in position to have its inclined sides ballasted in the road-bed. The under side of the extension C is usually formed with a pivotal depression or projection *e* to engage a center bearing *f* of the sill-plate G. The sill-plate is formed with a plain surface having a depression *h* in its middle portion of proper size to receive the bottoms of the seats D of the tie extensions and wide enough to allow of some turning of said seats therein. When the seat D is in place in the depression, the bearing of the seat and the plain surface of the sill-plate are flush, so that the rail-base will have a firm bearing thereon. The sill-plate is provided with the lateral flanges J, which extend downward and somewhat outward obliquely, as indicated in the drawings, being designed to engage ballast in a firm manner and to be packed so that the sill-plate, and consequently the tie, will be se-

curely anchored and braced in position. This effect is aided by the A form of the flanged middle portion of the tie. The sill-plate is provided with the raised hook-lugs *k*, diametrically opposite each other and projecting, as shown, from the plain surface of the sill-plate, being directed toward each other on opposite sides of the rail-seat in order to engage the rail when the sill-plate is turned thereunder on the pivot of the tie extension. When the rail-base is engaged by the lugs *k*, the parts are securely connected together, the rail-base holding the tie extension in the depression of the sill-plate. An automatic lock is provided, usually in the form of a third lug *m*, which when the sill-plate is turned to proper position escapes from under the tie extension and engages the edge of the latter, preventing any turning of the sill-plate in the reverse direction. This lug can be forced down when it is desired to unlock the connection in order to disengage the parts.

This tie is designed to serve an excellent purpose, as it is light and strong and is locked automatically in and by the ballasting. It is easily constructed, as the lugs of the sill portion may be struck up, and made in this manner it will consist of but three portions—the transverse tie portion and the two sill-plates.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a railroad-tie, the combination of the sheet-metal sill-plates, having depressions in their upper surfaces, of the sheet-metal tie-plates having flat end portions, provided with depressed rail-seats engaging such sill-plate depressions to provide an uninterrupted bearing-surface for the rails, said sill-plates having diagonally-located stop-lugs, and a locking-lug, for the rails, together with means for providing a pivotal connection of sill and tie plates, substantially as specified.

2. In a railroad-tie, the combination of the sheet-metal sill-plates having depressions in their upper surfaces, and a central bearing in said depression, of the sheet-metal tie-plates having flat end portions provided with depressed rail-seats engaging said sill depressions, and having a pivotal projection engag-

ing said central bearing, said tie-plates having also A-form middle portions lying below the planes of said end portions thereof, in position to have their inclined sides ballasted
5 in the road-bed, and said sill-plates having diagonally-located stop-lugs, and spring locking-lug, for the rails, substantially as specified.

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

JACOB S. WARLEY.

Witnesses:

GEO. W. LEAMAN,
B. F. HIPPLE.