

No. 798,036.

PATENTED AUG. 22, 1905.

W. W. GREEN.
RAILWAY TIE.

APPLICATION FILED MAR. 18, 1905.

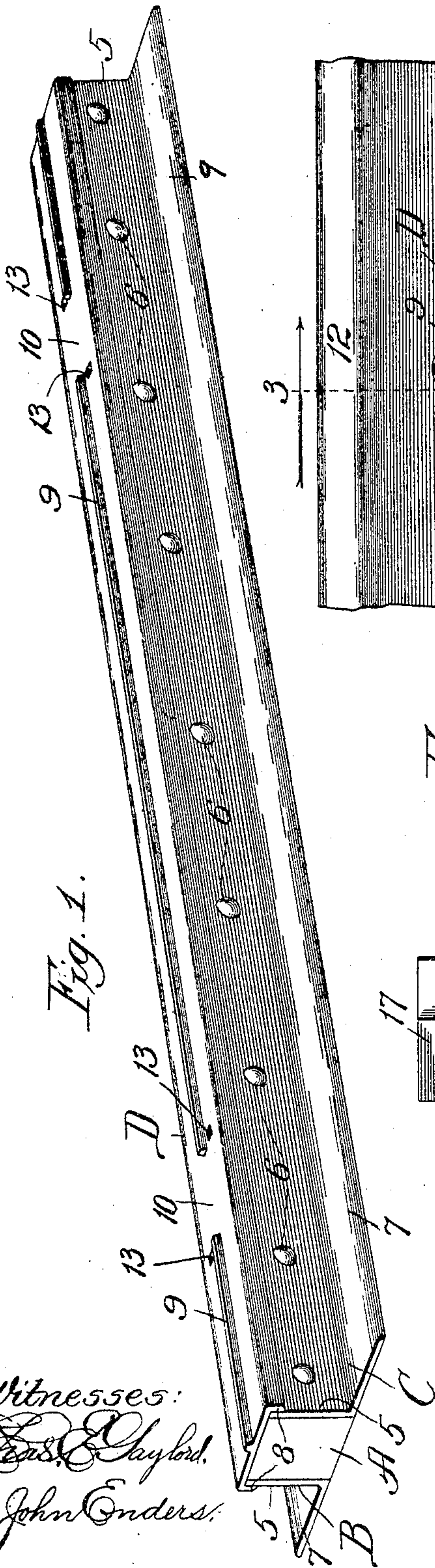


Fig. 1.

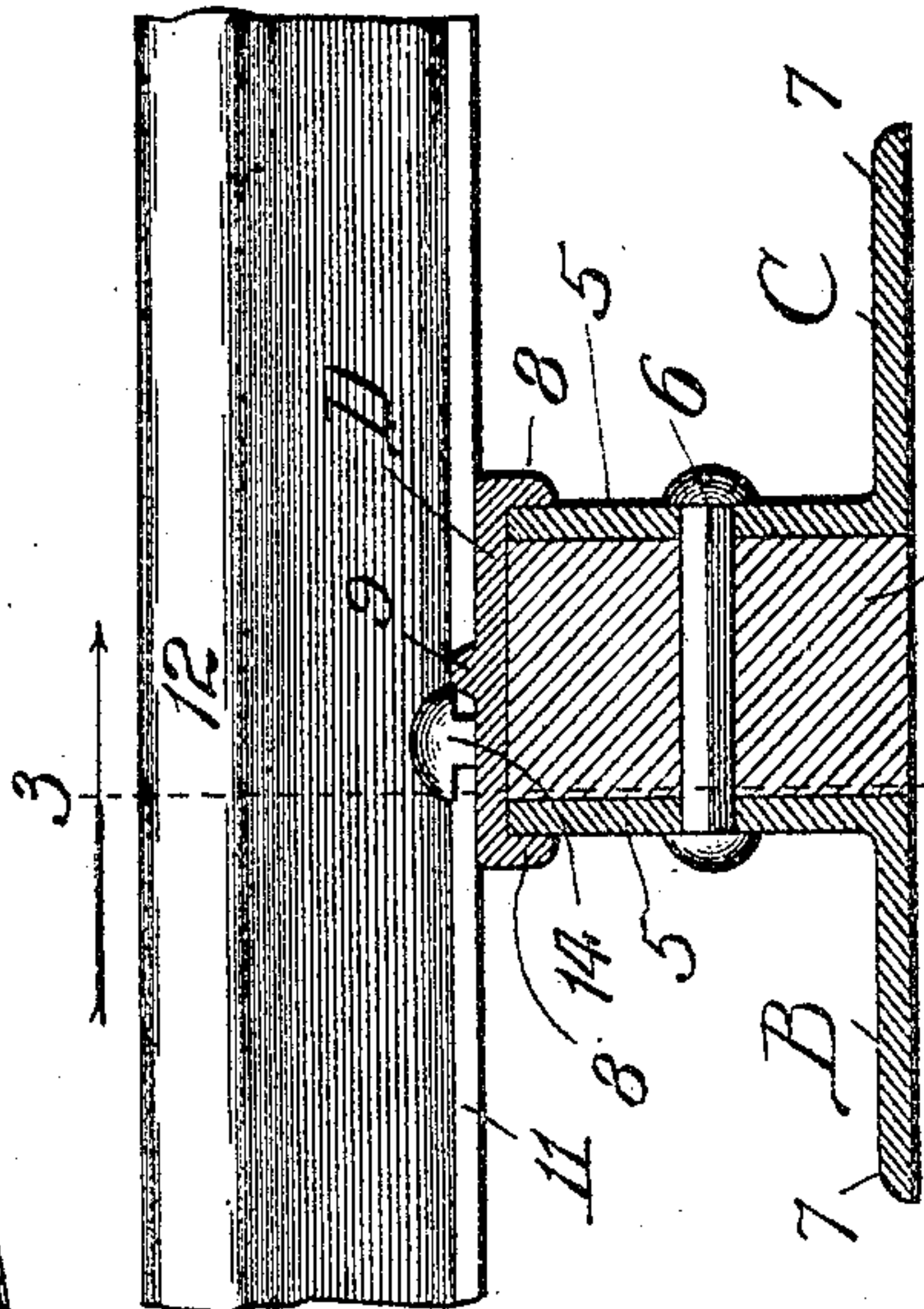


Fig. 2.

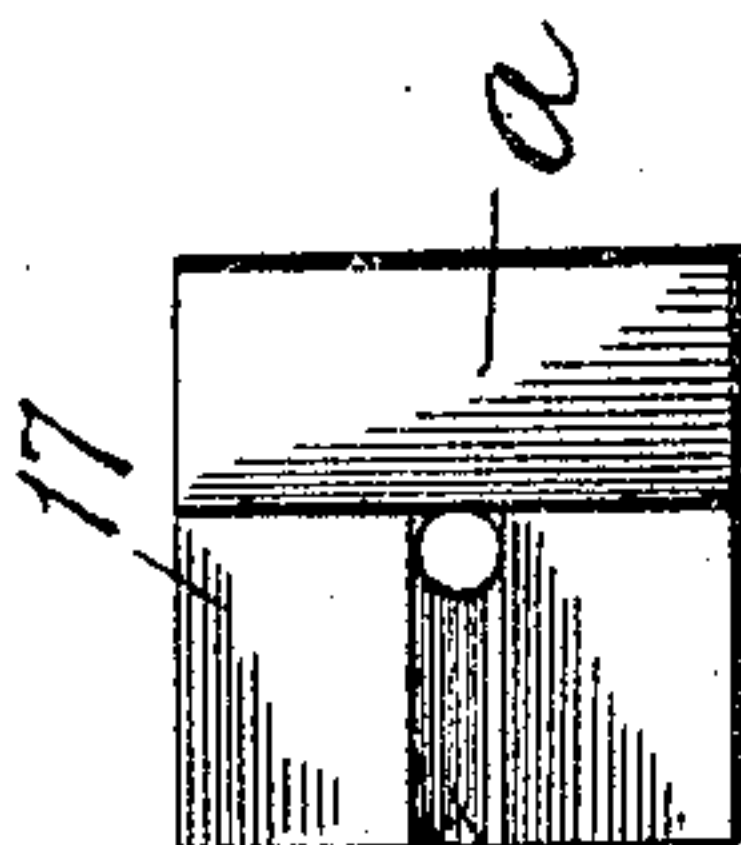


Fig. 5.

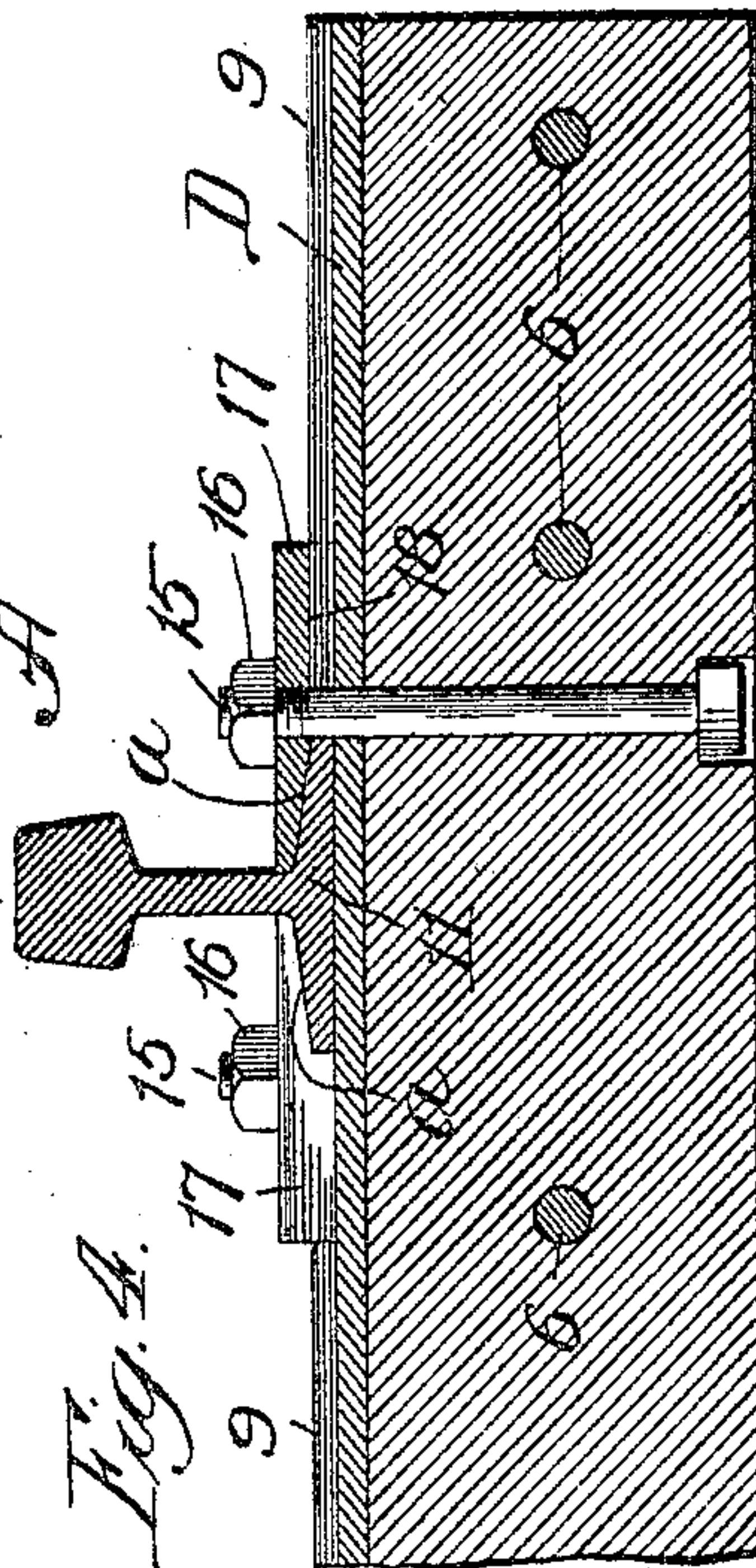


Fig. 4.

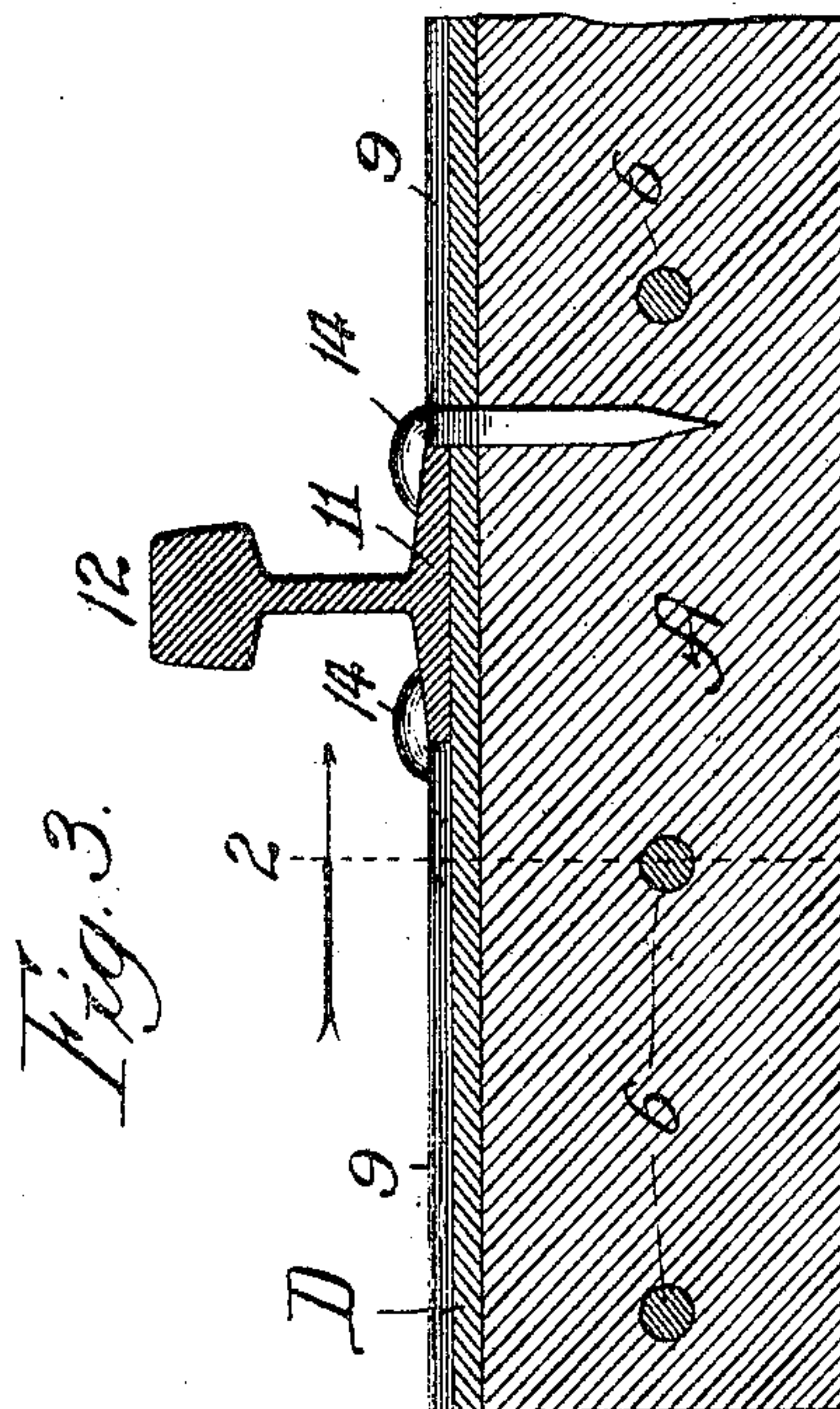


Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM W. GREEN, OF NILES, MICHIGAN.

RAILWAY-TIE.

No. 798,036.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed March 18, 1905. Serial No. 250,799.

To all whom it may concern:

Be it known that I, WILLIAM W. GREEN, a citizen of the United States, residing at Niles, in the county of Berrien and State of Michigan, have invented new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention relates to improvements in a railway-tie, and has for its object to provide an article of this character in which safety, strength, and durability are combined.

The growing scarcity of wood as a suitable material for ties makes it necessary that a practical substitute be provided or some means employed for protecting and greatly lengthening the life of a tie in which wood or its equivalent shall form a component part.

With this object in view the invention presented in this application is of a compound character, a wood body being sheathed in a protecting-covering of metal to prevent too rapid a destruction by the elements.

In the drawings, Figure 1 is a view in perspective of a device embodying the improved features. Fig. 2 is a transverse section on line 2, Fig. 3, looking in the direction indicated by the arrow, a track-rail being shown in elevation. Fig. 3 is a longitudinal section on line 3, Fig. 2, the rail being in cross-section. Fig. 4 is a similar view showing an improved means for fastening the rail and tie together, and Fig. 5 is a bottom plan of a clamping-plate.

The tie comprises in its structure a body A, the companion angle-irons B and C, and the cap-plate D. The body of the tie will ordinarily be composed of a beam of wood approximately square in cross-section. The vertical flanges 5 of the angle-irons cover the respective sides of the body A and are rigidly secured thereto by a number of bolts 6, disposed at intervals. The horizontal flanges 7 of the angle-irons extend at right angles and form a wide substantial base, which may be solidly embedded in the earth by the usual method of tamping followed in the operation of setting the ordinary wood tie. It will be readily seen that this flanged base provides a good holding-ground for the tie and forms a wide bearing-surface for the track, lessening the liability of being seriously affected by atmospheric disturbances and making it easier to maintain a uniform level or grade.

A close-fitting cap-plate D forms the top covering and is provided along its respective sides with turned-down edges 8, overlapping

the top edges of the companion angle-irons. This cap-plate is provided longitudinally with a rib 9, having a gap or break 10 at two different points corresponding to the position of the track-rails. The width of these gaps will be equal to the flanged foot 11 of the rail 12 and aid in preventing the spreading of the rails. The tie cap-plate is provided with a number of apertures 13 for the insertion of the means employed in fastening the track-rails to the ties or sleepers, the same means locking the cap-plate in place.

When the sheathed body of the tie is of wood, the ordinary spike 14 may be used in fastening the rails to the ties. A more substantial fastening device is shown in Fig. 4. This consists of a bolt 15, inserted from the under side, the headed end being counter-sunk in the bottom of the tie and the threaded end projecting through the top thereof and in position to receive the nut 16. A clamping-plate 17, cut away on its inner under side, as at *a*, so as to have a bearing both on the foot of the rail and on the cap-plate, Fig. 4, is placed on the bolt or bolts 15 and rigidly held in place by the nut 16. This plate, Fig. 5, is provided on the under side with a groove 18 for the reception of the rib 9 in allowing the plate to come down to a close bearing on both the rail and cap D.

It is obvious that the body or filling of the sheathed part of the tie may be made of any material other than wood that is suitable for the purpose, such as paper-stock, cement, or other substance that can be molded or pressed into the desired form.

The protecting covering or envelop will usually be of sheet-steel rolled in the desired form. Only the two sides and top of the tie are covered, as shown, the under side being sufficiently protected when embedded in the earth.

Having thus described my invention, what I claim is—

1. A railway-tie, comprising in its structure a body forming the tie proper, the companion angle-irons rigidly secured thereto and having the free flanges extending at right angles therefrom, and a cap-plate, as set forth.

2. A railway-tie, comprising in its structure a body forming the tie proper, the companion angle-irons having the vertical flanges rigidly secured to the opposite sides of said body, the horizontal flanges extending laterally therefrom, a covering cap-plate, and means for securing the same against displace-

ment when the track-rails are laid, as set forth.

3. In a railway-tie structure, a cap-plate provided longitudinally with a rib having gaps therein corresponding to the position of the track-rails for preventing the same from spreading, as set forth.

4. In a railway-tie, a cap-plate provided longitudinally with a rib having gaps therein corresponding to the position of the track-rails, a clamping-plate provided on the under

side with a groove for the reception of said rib so that said clamping-plate will have a close bearing and means for rigidly securing the parts together, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM W. GREEN.

Witnesses:

J. B. DONALSON,
L. B. COUPLAND.