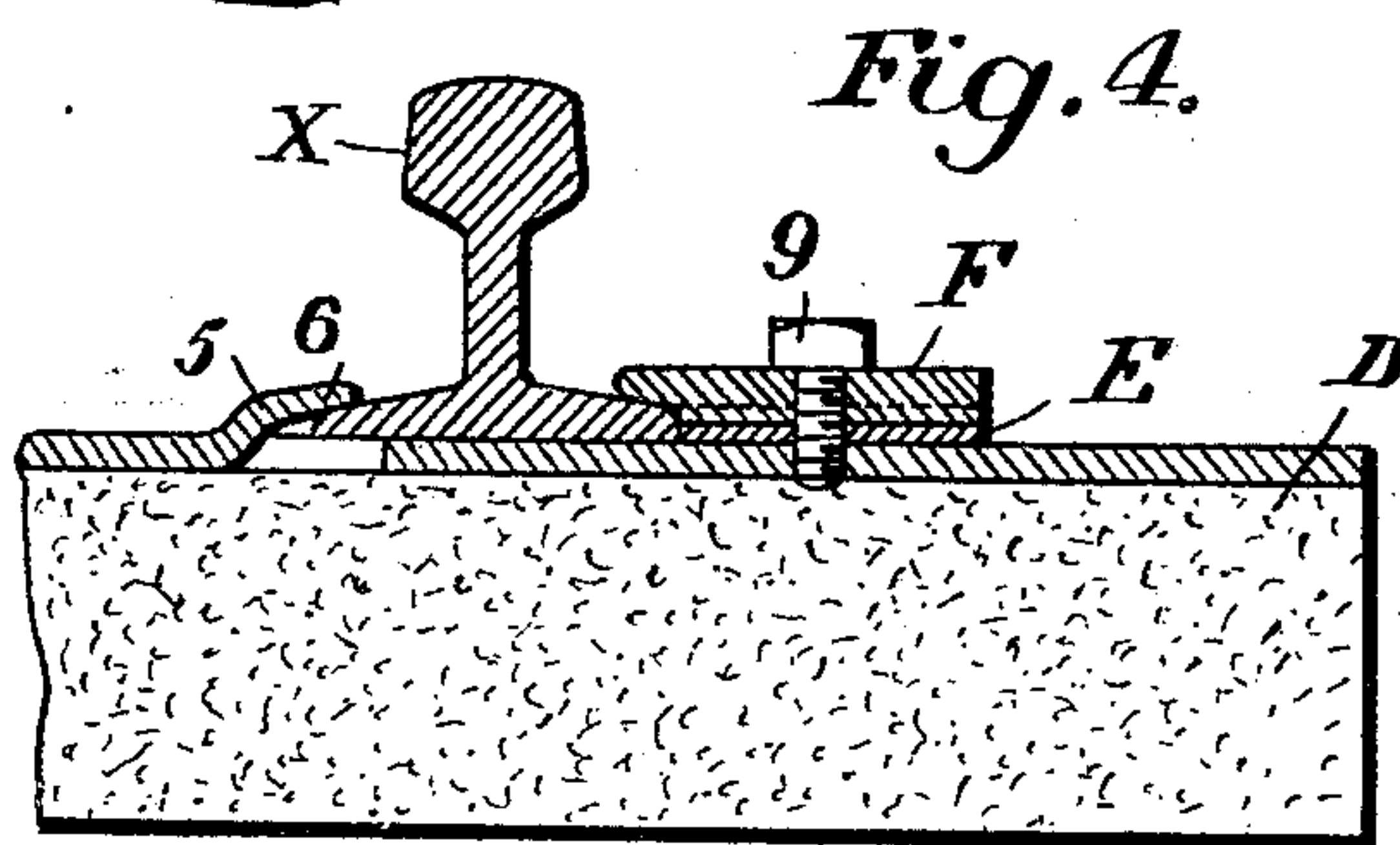
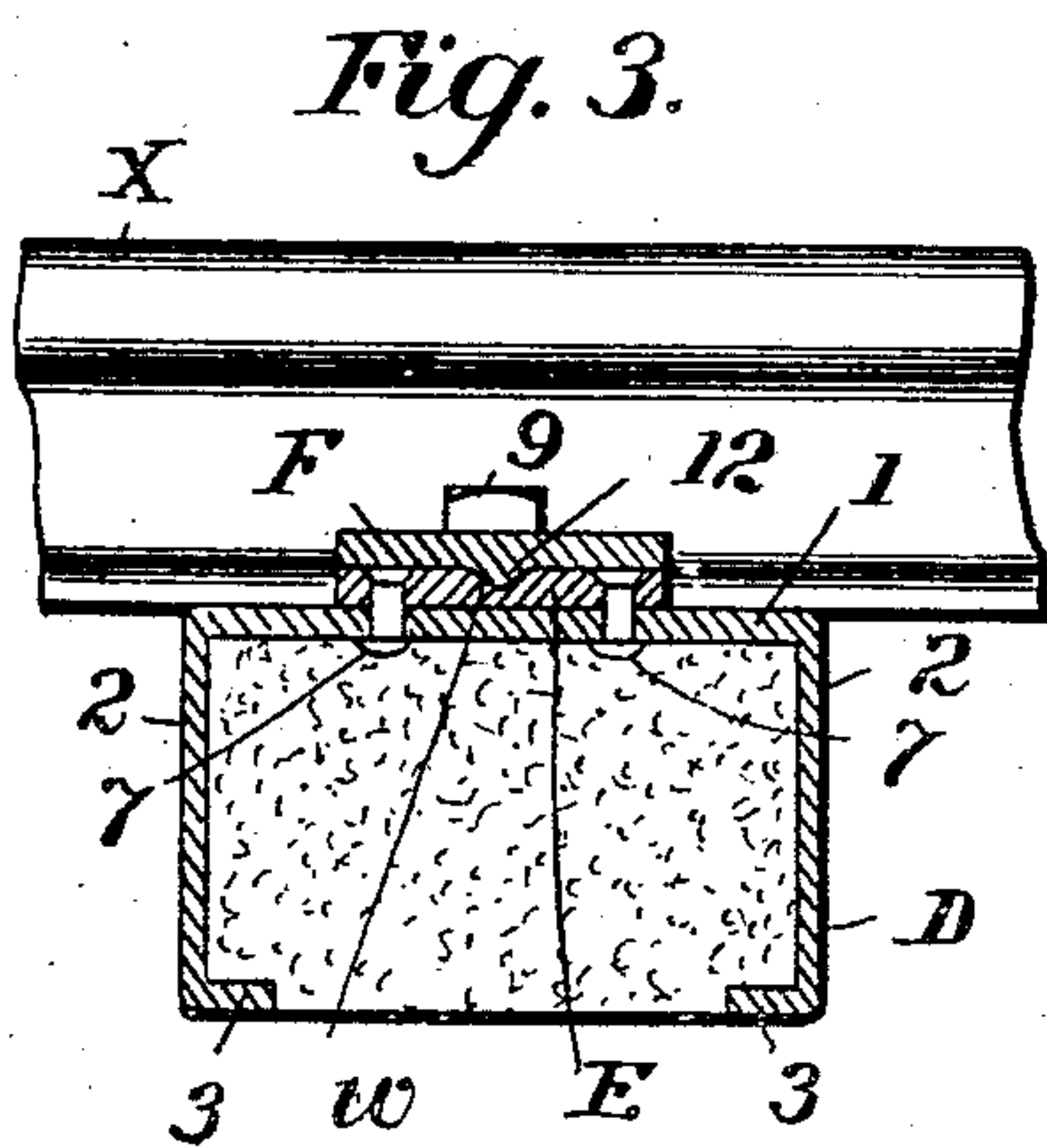
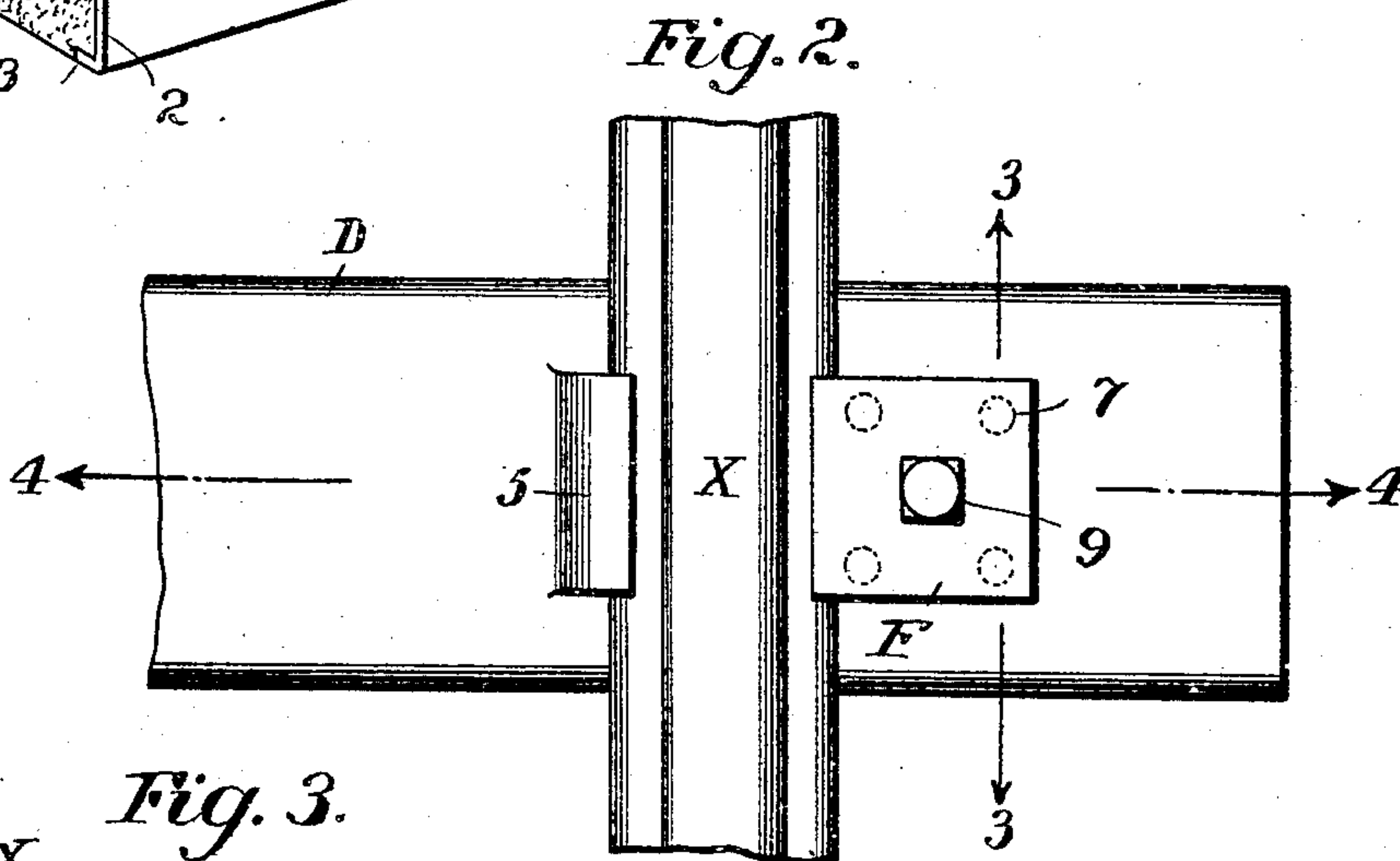
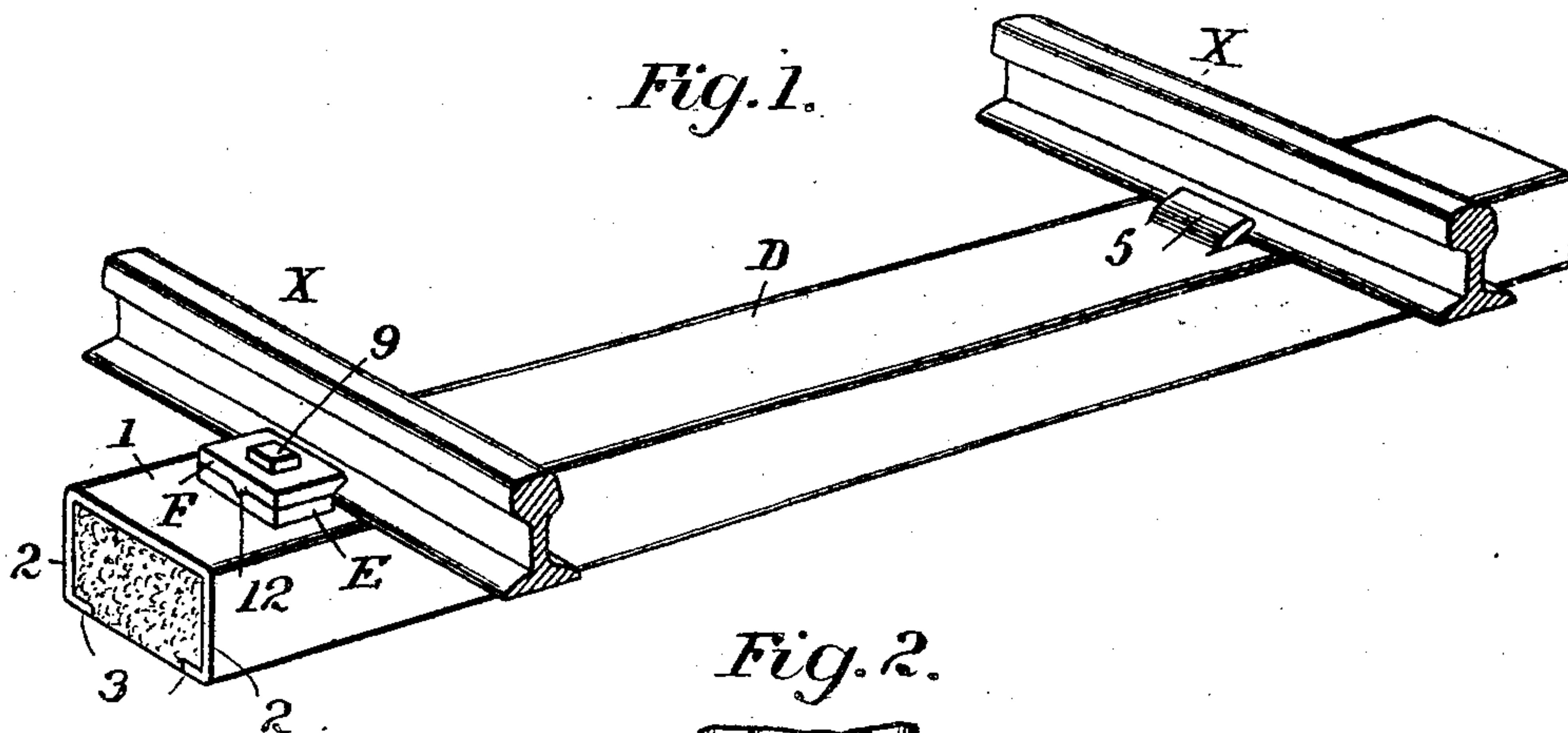


W. McCLOY.
RAILROAD TIE.
APPLICATION FILED MAY 14, 1907.

908,485.

Patented Jan. 5, 1909.



Witnesses
J. G. Stikel
J. J. McCarthy

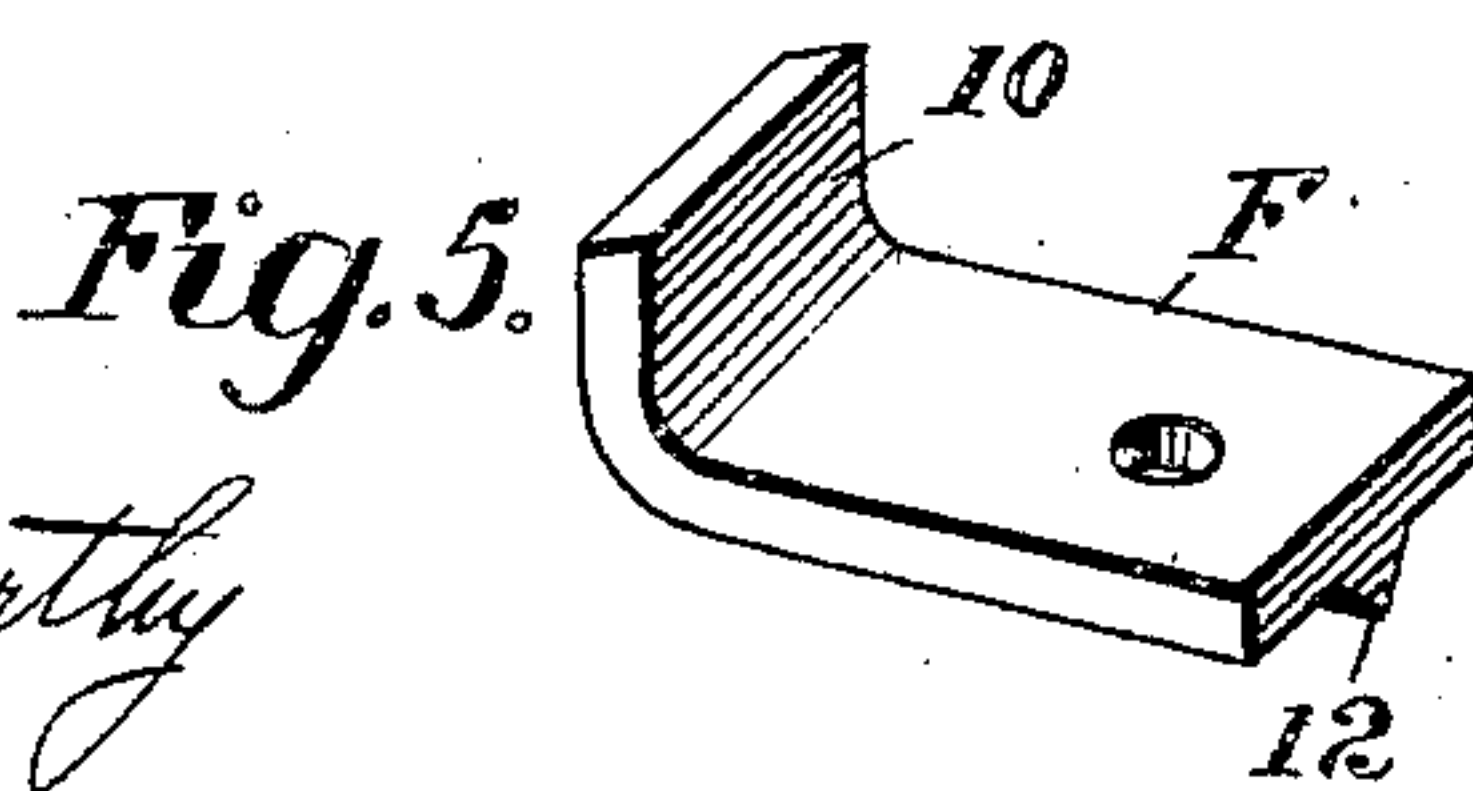


Fig. 6. Inventor
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UNITED STATES PATENT OFFICE.

WILLIAM McCLOY, OF CRESSONA, PENNSYLVANIA.

RAILROAD-TIE.

No. 908,485.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed May 14, 1907. Serial No. 373,535.

To all whom it may concern:

Be it known that I, WILLIAM McCLOY, a citizen of the United States, and resident of Cressona, county of Schuylkill, State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification.

My invention relates to cross ties for railways and consists in making the tie from a plate bent to form side and inturned flanges, strengthened by concrete, and provided with lips and clamps for securing the rails, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing parts of two rails and my improved cross tie and rail fastenings; Fig. 2 is an enlarged plan of part of one of the rails and adjacent parts of the tie; Fig. 3 is a section on the line 3—3 of Fig. 2; Fig. 4 is a section on the line 4—4 of Fig. 2; Fig. 5 is a perspective view showing the form of clamps and brace used at curves, and at intermediate points, and Fig. 6 illustrates a clamp without brace.

The tie consists essentially of a tie plate D which, as shown, may be formed by bending up a flat plate 1 to form two parallel side flanges 2, 2, and inturned lips or flanges 3, 3, whereby great rigidity is secured with a comparatively small amount of metal. The tie plate D is positioned so that the transverse portion 1 constitutes the top, and the said plate is filled with ballast, or preferably with concrete, whereby the rigidity of the structure may be greatly increased, and in fact a structure of sufficient rigidity secured with a comparatively light gage of metal.

In order to secure the rails X, X, to the tie plate, I provide inside flanges or bearings 5, each of which is formed by so slitting the top plate 1 and bending upward the part thus slit as to form a lip 6 adapted to receive below it the lower flange of the T-rail, and it will be seen that the overhanging portion of this lip is inclined so as to coincide with the inclined face of the rail flange and so that a tight bearing may be secured. The outer thrust of each rail is against a plate E, which is secured to the top plate 1 by rivets 7, 7, or in any suitable manner, and the rail is confined at this point to the top plate 1 by means of a clamp plate F which is bolted to

the plate E by means of a bolt 9 passing through both plates and through the top plate 1 of the tie.

In order to prevent any movement of the plate F transverse to the tie, I preferably make the said plate with a rib 12 adapted to the corresponding recess *w* in the plate E. This rib 12 may be formed upon the clamp plate F by rolling or by bending the latter, as shown in Fig. 6, and in order to properly support the rail against side thrusts at curves or other points where such side thrusts are likely to be excessive, I bend up the inner end of the clamp blades at such points to form lips 10, which overhang the flanges and bear against the web and head of the rails.

It will be seen that the structure above described can be made without the use of special mechanism, as the parts D, E and F can all be formed of flat plate iron bent up or stamped to proper shape, the only machinery required being that necessary to slit and punch the parts at proper points, and that therefore the structure is inexpensive to manufacture, while by strengthening the tie D by means of concrete I am enabled to reduce the thickness or gage of metal otherwise required, also giving extra weight to make solid tracks.

It will further be seen that with such a structure the rails may be readily applied and as readily removed without the exercise of skilled labor, as any ordinary laborer can set the rails in place and apply the clamp plates or remove the bolts and the clamp plates to attach the rails.

Without limiting myself to the precise construction and arrangements of parts shown and described, I claim as my invention:

1. In a cross tie for railway rails, a tie plate of metal having portions bent upward to form lips each overlapping one of the bottom flanges of one of the rails, bearing plates to bear against the edges of the other flanges and provided with recesses *w* at right angles to the rails, and clamp plates with ribs adapted to said recesses, lying on the bearing plates, and extending over the adjacent rail flanges, and bolts connecting the bearing plates and clamp plates to the tie plate.

2. The combination of the hollow tie D

consisting of a plate bent to form parallel sides and intumed flanges, and provided with a filler and having lips 6 and cross plates E bolted to the top of the tie and clamps F 5 for overlapping the flanges of the rails provided with ribs adapted to recesses in the plates E and bolted thereto.

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

WILLIAM McCLOY.

Witnesses:

C. T. BROWN,

E. M. BURGAN.