

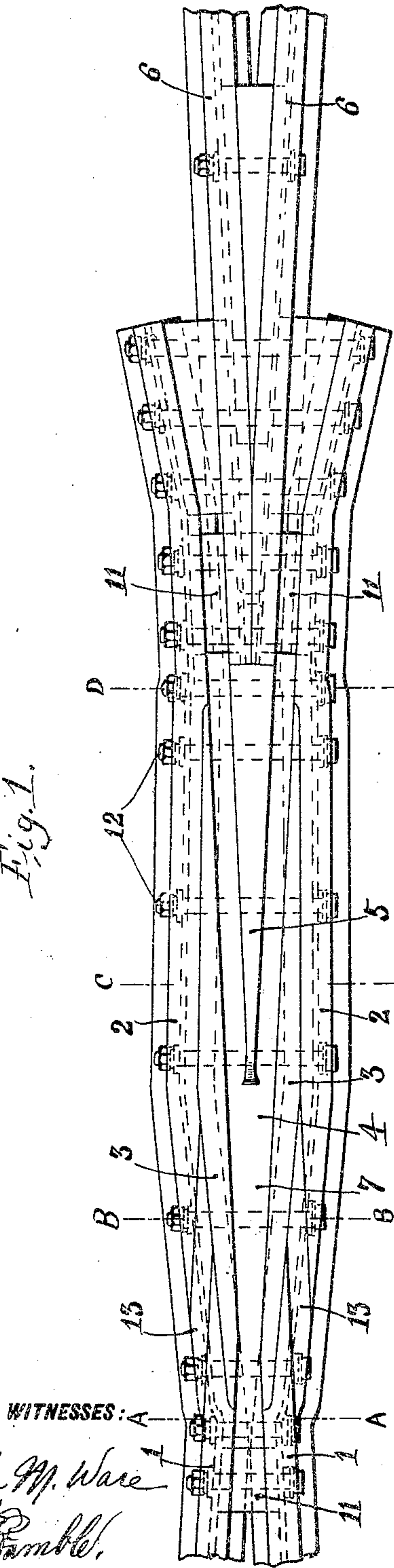
No. 887,847.

PATENTED MAY 19, 1908.

C. W. REINOEHL & B. L. WEAVER.
RAILROAD FROG OR CROSSING.

APPLICATION FILED AUG. 6, 1907.

Fig. 1.



WITNESSES:

Edla M. Ware
J. B. Gamble.

Fig. 2.

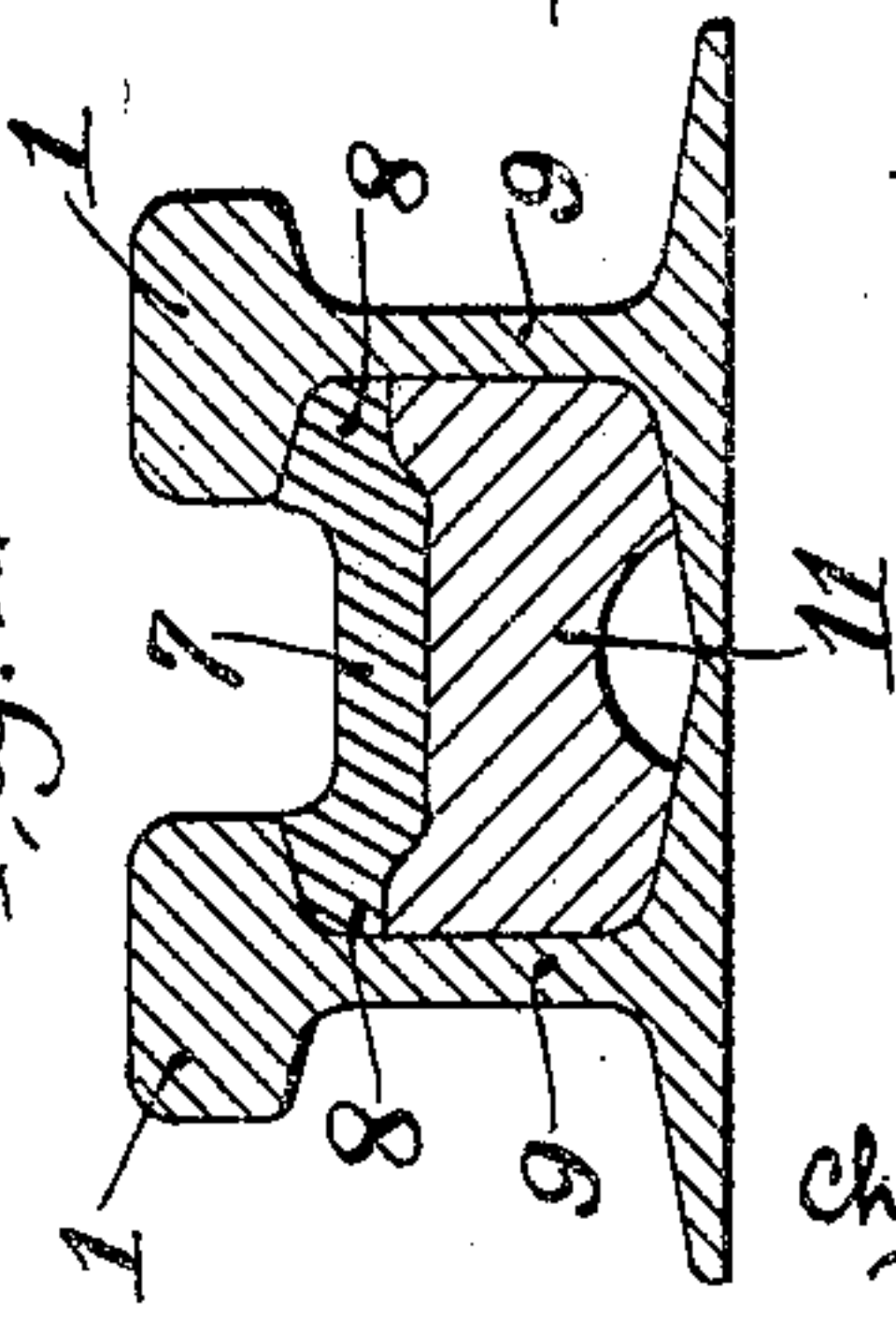


Fig. 3.

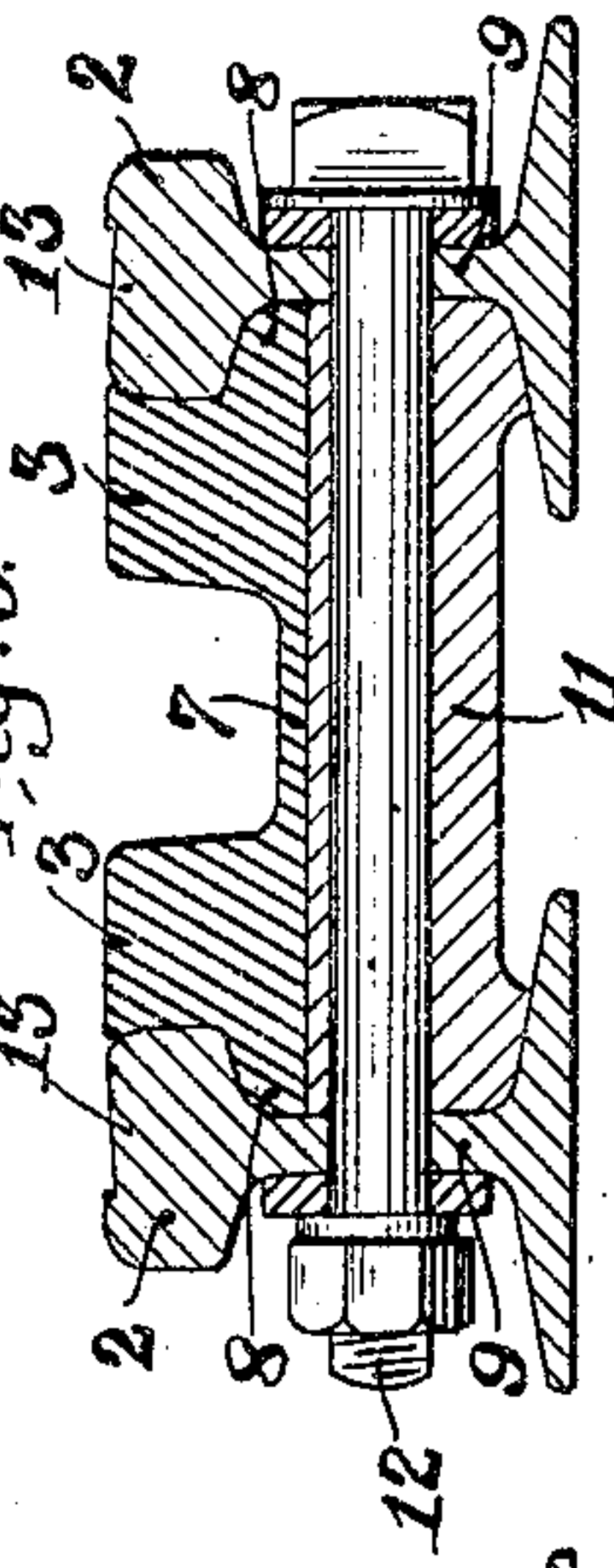


Fig. 4.

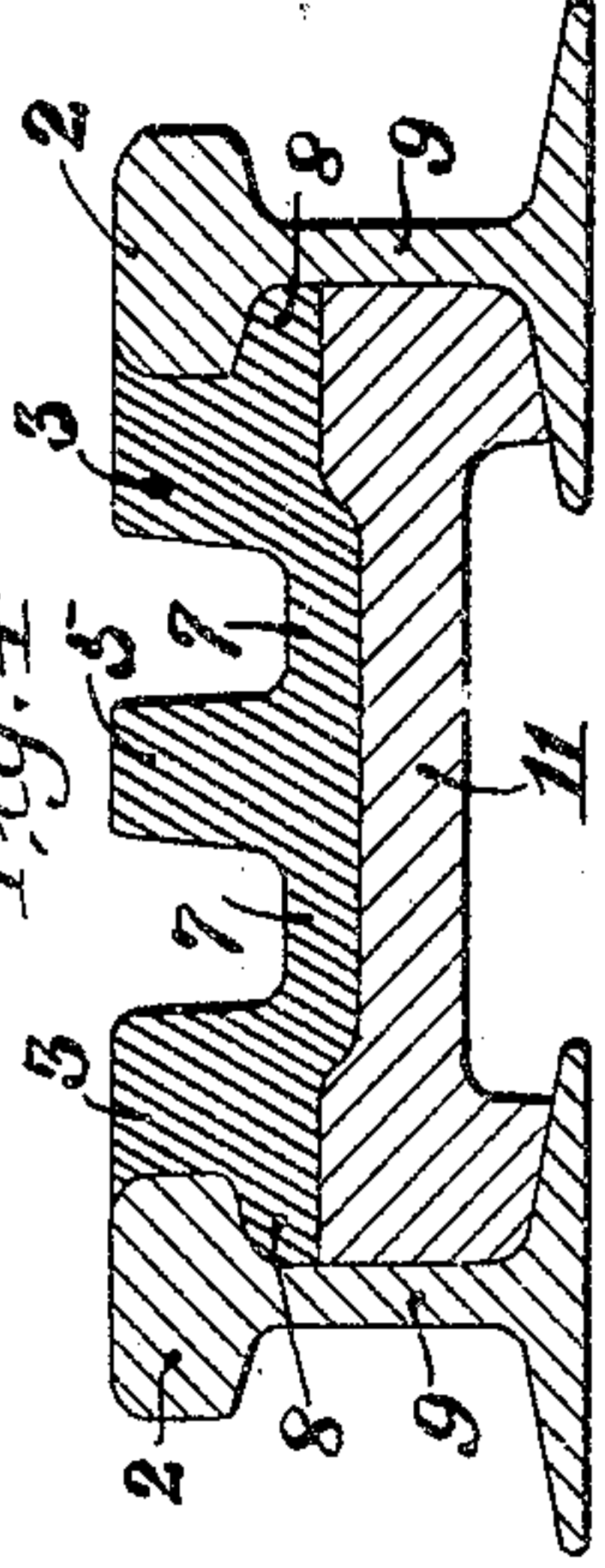


Fig. 5.

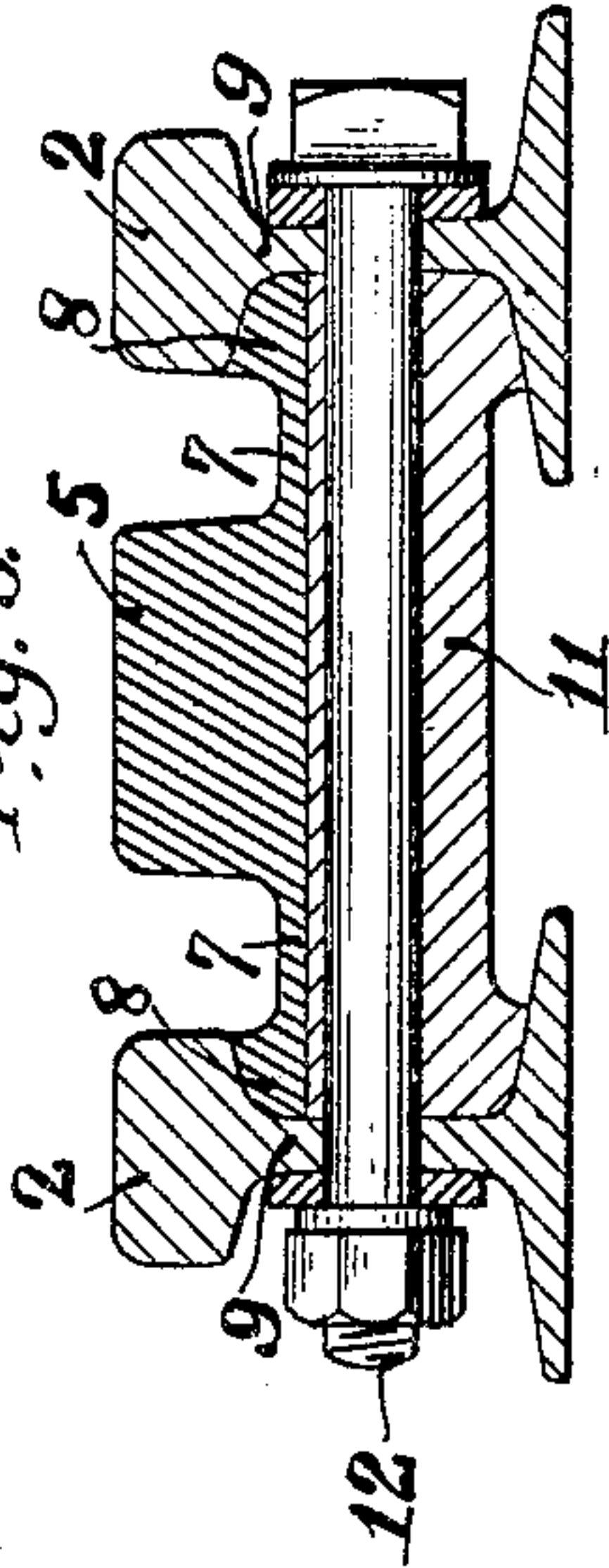
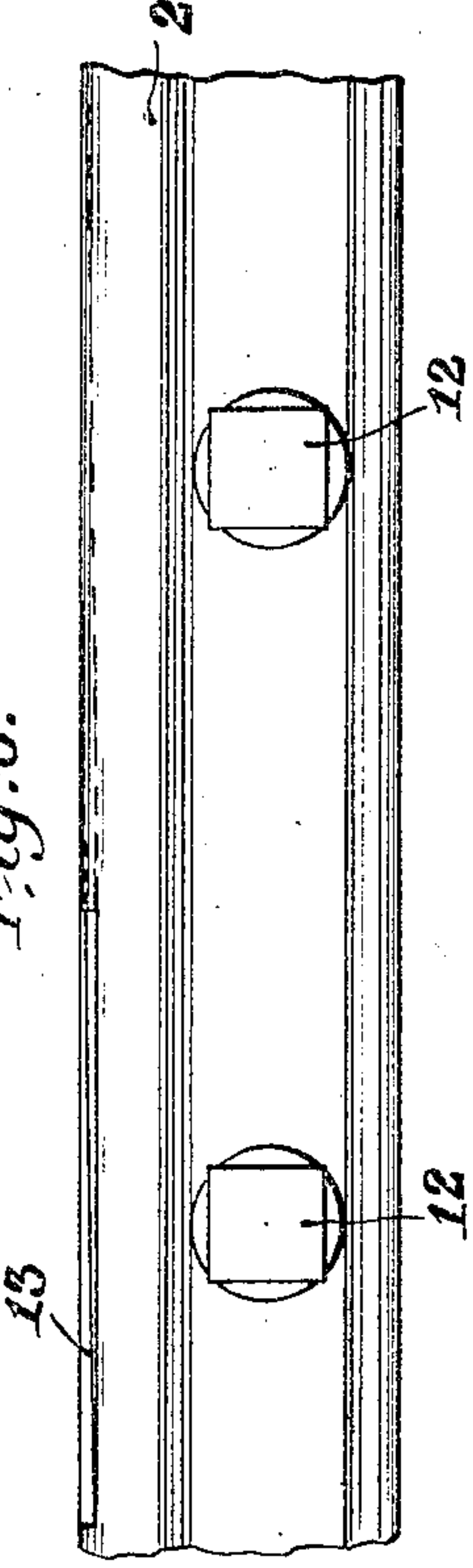


Fig. 6.



INVENTORS
Charles W. Reinoehl, and
Bert L. Weaver.

Walter C. Pusey
ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES W. REINOEHL AND BENT L. WEAVER, OF STEELTON, PENNSYLVANIA.

RAILROAD FROG OR CROSSING.

No. 887,847.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed August 6, 1907. Serial No. 387,300.

To all whom it may concern:

Be it known that we, CHARLES W. REINOEHL and BENT L. WEAVER, citizens of the United States, and residents of Steelton, Dauphin county, State of Pennsylvania, have invented certain new and useful Improvements in Railroad Frogs or Crossings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a plan view of a railroad frog in which my invention is embodied. Figs. 2, 3, 4, and 5 are respectively sections on the lines A—A, B—B, C—C, and D—D. Fig. 6 is a side elevation showing the cut out portion of the wing rail to constitute a pick-up for false flanges of guttered wheels.

This invention relates to improvements in railroad and railway frogs, crossings, &c.

The object of our invention is to provide, at such crossings or intersections, a hard and tough metal bearing surface which shall comprise a minimum amount of such metal and which hard metal block is retained in place solely by being fitted to the rails; whereby said hard metal block, being free from bolt holes or the like, is comparatively free from danger of fracture, and is also very readily renewable without the necessity of renewing any other parts of the frog or crossing structure.

In the drawings, in which we have shown our invention as embodied in a stiff railroad frog; 1, 1 are the stock rails bent outwardly from some distance in advance of the frog point to the rear thereof, constituting the usual wing rails, 2. Arranged between the wing rails, 2, is a hard and tough metal block, 4, which comprises the floor, 7, the lateral wing portions, 3, and the central point-forming portion, 4, the rear end of which abuts against the convergent ends of the point rails, 6, and forms in effect a continuation thereof. The top surfaces of the wing portions, 3, and point-forming portion 5 are substantially flush with the top surfaces of the rail sections, and between the point-forming portion, 5, and the wing portions, 3, are formed the usual flange grooves. The sides of the block, 4, or wing portions, 3, thereof, rest against and are clamped between the inner faces of the heads of the wing rails, 2, and the sides of the block, 4, are provided with extensions, 8, which extend laterally from the wing portions, 3, beneath the heads of the wing rails, 2, to and into engagement with the webs, 9,

of the wing rails. The block, 4, rests upon a sub-base, 11, made of a casting of semi-steel; that is, of a metal much softer and cheaper than that of the block, 4. The sub-base, 11, extends between the wing rails, 2, and rests upon the foot flanges of said rails, so that the portions, 8, of the block, 4, and the sub-base, 11, will fill the space between the bottoms of the inner sides of the heads of the wing rails and the foot flanges thereof, in a manner to firmly hold the block, 4, in place. Extending through the sub-base, 11, and webs, 9, of the wing rails, 2, are bolts, 12, which are provided with suitable heads and nuts for drawings the wing rails, 2, toward each other and firmly clamping the sub-base, 11, and superposed block, 4, between the wing rails, 2. Thus it will be seen that the block, 4, is firmly held in place. To renew the block, 4, all that is necessary to do is to loosen the bolts, 12, separate the stock rails a sufficient distance to release the portions, 8, from the heads of the wing rails, 2; whereupon the block, 4, may be lifted out and a new block inserted.

It will be observed in the form of construction shown in the drawings, not only do we derive the advantage of securing a readily renewable hard metal face, but, in the embodiment of the invention in a frog, it will be observed that we maintain the full thickness of the wing portions, 2, of the stock rails, 1, throughout their length; that is, no portion of the head or foot flanges has been removed; and owing to the shape of the bend in the stock rail to form the wings, 2, at no point does the tread of a wheel passing over the intersection come into contact with and wear solely upon the stock rails.

To afford a ready pick-up for false flanges of guttered wheels, we would, in a railroad frog, preferably plane out of the stock rails, 1, inclined grooves, 13, arranged parallel to and adjacent the stock rails, 1, and leading from below the upper surfaces of the heads of the stock rails to the tops of the wing portions, 3, of the block 4, (see Figs. 1 and 6).

We remark that although we have shown our invention as embodied in a railroad frog, it may be equally applicable to other forms of crossings or intersections.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:—

1. In a railroad crossing, the combination of the stock rails having outwardly extending wing portions, the point rails, the hard metal

block inserted between the wing portions of the stock rails, and provided with flange-receiving grooves, the sides of the block engaging the inner faces of the heads of the wing portions of the stock rails and extending laterally beneath said heads, a separate sub-base supporting said block, and means for securing said rails, said block, and said sub-base together, substantially as set forth.

2. In a railroad crossing, the combination of the stock rails having outwardly extending wing portions, the point rails, the hard metal block inserted between the wing portions of the stock rails, and provided with flange-receiving grooves, the sides of the block engaging the inner faces of the heads of the wing portions of the stock rails and extending laterally beneath said heads, a separate sub-base supporting said block, and bolts for securing said rails said block, and said sub-base together, substantially as set forth.

3. In a railroad crossing, the combination of the stock rails having outward extending wing portions, the point rails, the hard metal block inserted between the wing portions of the stock rails, and provided with flange-receiving grooves, said block extending beneath the heads of the wing portions of the stock-rails, a sub-base supporting said block, and means for securing said block, said sub-base, and said rails together, substantially as set forth.

4. In a railroad crossing, the combination of the stock rails having outwardly extending wing portions, the point rails, the hard-metal block inserted between the wing portions of

the stock rails, and provided with flange-receiving grooves, said block extending beneath the heads of the wing portions of the stock-rails, a sub-base supporting said block, and bolts extending through the sub-base and wing portions of the stock rails, to secure the parts together, substantially as set forth.

5. In a railroad crossing, the combination of the stock rails having outwardly extending wing portions, the point rails, and means for securing them together, the wing portions of said stock rails being provided with inclined surfaces parallel to the stock rails and leading from below the upper surfaces of the heads of the stock rails to the tops of the heads of the wing portion of the stock rails, substantially as set forth.

6. In a railroad crossing, the combination of the stock rails having outwardly extending wing portions, the point rails, the hard metal block inserted between the wing portions of the stock rails, and provided with flange-receiving grooves, means for securing said block and rails together, the wing portions of said stock rails being provided with inclined surfaces parallel to the stock rails and leading from below the upper surfaces of the heads of the stock rails to the top of the hard metal block, substantially as set forth.

In testimony whereof, we have hereunto affixed our signatures.

CHARLES W. REINOEHL.
BENT L. WEAVER.

Witnesses:

B. A. HANKIN,
WM. R. MILLER.