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C. W. REINOEHL & B. L. WEAVER.

RAILROAD FROG OR CROSSING.

APPLICATION FILED OCT. 2, 1907.

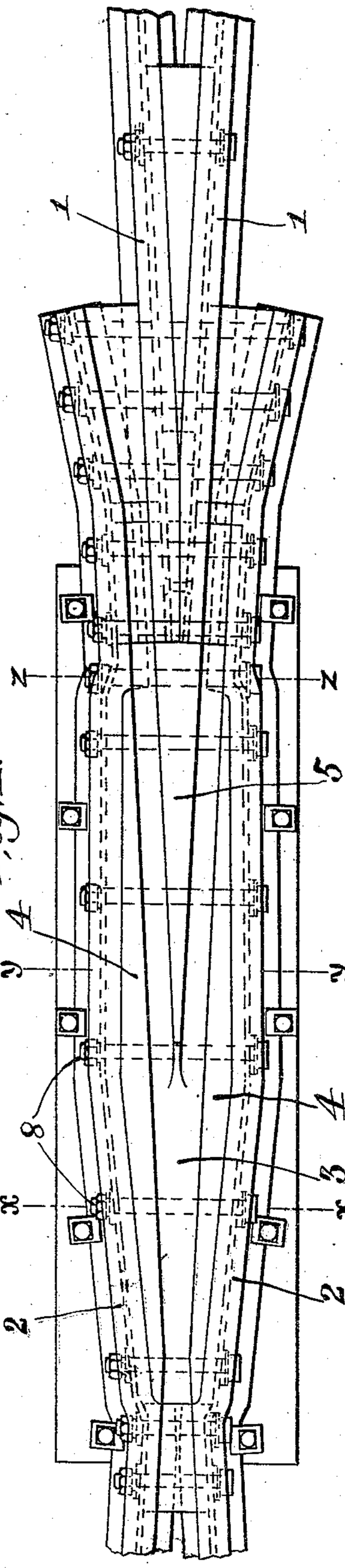

Fig. 1.

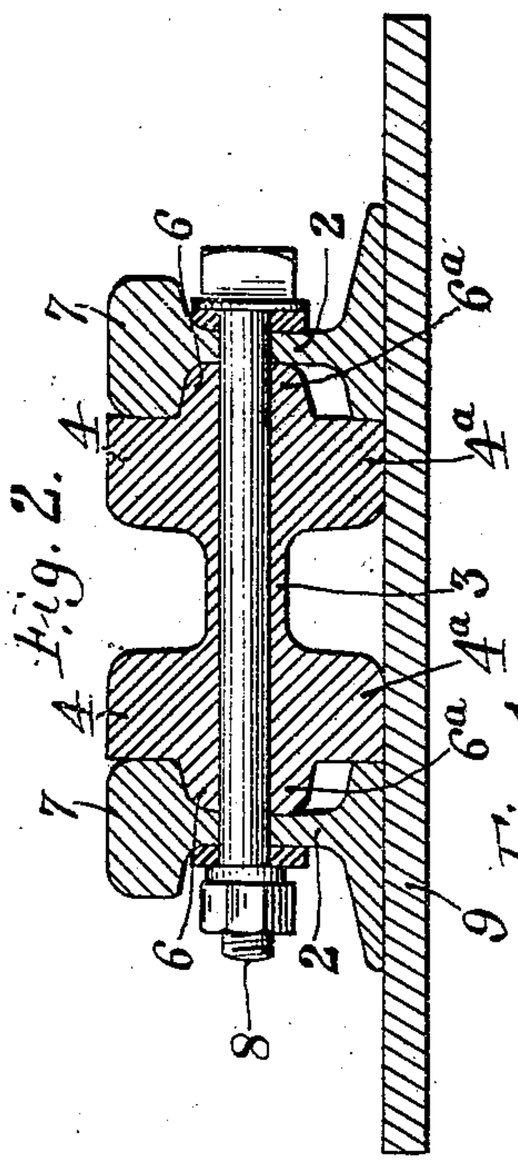

Fig. 2.

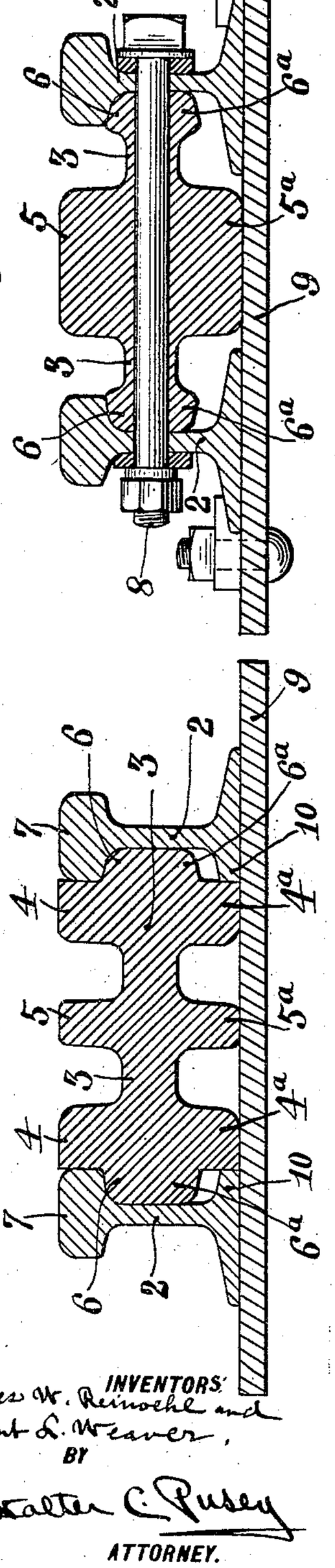

Fig. 4.

Fig. 3.

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RAILROAD FROG OR CROSSING.

No. 896,154. Specification of Letters Patent. Patented Aug. 18, 1908.

Application filed October 2, 1907. Serial No. 395,644.

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 provided with an insert piece embodying our invention. Figs. 2, 3, and 4 are transverse sectional views thereof, as on the lines *x*—*x*, *y*—*y*, and *z*—*z*, respectively.

This invention relates to railroad frogs and crossings, our object being to provide a hard and tough metal insert piece between the rails of a crossing, to receive the wear, such hard metal insert piece having provision whereby the upper and lower faces of the insert piece may be reversed and whereby, when either of said surfaces is uppermost the block and rails may be firmly secured together, and grooves will be presented for the reception of wheel flanges.

Having this object in view, the invention consists in the novel construction and combination of parts hereinafter fully described and particularly pointed out in the claims.

1 designates the point rails, 2 the stock rails of a railroad frog or crossing. These rails are arranged with relation to each other in the usual well known manner. Between the stock rails 2 is arranged a hard metal insert piece of the following construction. 3 is a horizontal body portion extending between and in engagement with the webs of the stock rails 2. The body portion is provided with lateral, upwardly projecting parts 4 and a central, upwardly projecting part 5, between which are formed flange receiving grooves. The lateral projecting parts 4 are adapted to take against the inner faces of the heads of the stock rails, and the central, projecting part 5 forms in effect a continuation of the point rails 1.

Directly beneath the parts 4 and 5, the body portion 3 is provided with similar oppositely disposed projecting parts 4^a, 4^a and 5^a, between which are formed flange-receiving grooves, so that when either the parts 4 and 5 or 4^a and 5^a are uppermost, grooves of the same nature will be presented for the reception of the flanges of the car wheels.

Extending horizontally through the body portion 3 and the webs of the stock rails 2, are removable bolts 8 for securing the stock rails and hard metal insert piece together. The inner foot flanges 9 of the stock rails 2 are cut away through the same vertical plane occupied by the inner faces of the heads 7, so that when the parts 4 are in engagement with the heads 7, the parts 4^a will be in engagement with the foot flanges 9, and the converse; thus providing a very rigid structure.

The ends of the body portion 3 are provided with top parts 6 which take against the bottoms of the heads 7 of the stock rails 2; and the ends of the body portion 3 are also provided with bottom parts 6^a, the distance between which and the bolts 8 is the same as the distance between the bolts 8 and the parts 6; so that when the bolts 8 are removed and the hard metal insert piece is inverted, the parts 4^a 5^a and 6^a will occupy the positions previously occupied by the parts 4, 5, and 6, and the parts 6^a will then engage the bottoms of the heads 7.

We preferably support the stock rails 2 and hard metal insert piece upon a base plate 10, and the distance between the tops of the parts 4 and 5 and the bottoms of the parts 4^a and 5^a is equal to the distance between the tops and bottoms of the rails, so that a firm foundation is secured.

By the foregoing construction it will be seen that should the parts 4 and 5 become worn, the hard metal insert piece may be inverted and the parts 4^a, and 5^a presented to the car wheels; and in either case, a firm and rigid crossing is secured.

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, the point rails, the hard metal insert piece comprising the central body portion extending horizontally between the webs of the stock rails, and provided with upper and lower oppositely disposed projecting parts between which are formed flange-receiving grooves, and means for securing the rails and hard metal insert piece together, substantially as set forth.

2. In a railroad crossing the combination of the stock rails, the point rails, the hard metal insert piece comprising the central body portion extending horizontally between the webs of the stock rails, and provided with upper and lower oppositely disposed projecting parts between which are

formed flange-receiving grooves, and bolts extending through said body portion and webs of the stock rails to secure the rails and hard metal insert piece together, substantially at set forth.

3. In a railroad crossing the combination of the stock rails, the point rails, the hard metal insert piece comprising the central body portion extending horizontally between the webs of the stock rails, and provided with upper and lower oppositely disposed projecting parts between which are formed flange-receiving grooves, and bolts extending through said body portion and webs of the stock rails to secure the rails and hard metal piece together, the distance between the bolts and the tops of the upper projecting parts being equal to the distance between the bolts and the lower projecting parts, substantially as set forth.

4. In a railroad crossing the combination of the stock rails, the point rails, the hard metal insert piece comprising the central body portion extending horizontally between the webs of the stock rails and provided with upper and lower oppositely disposed projecting parts between which are formed flange-receiving grooves, the lateral, upper projecting parts engaging the inner faces of the heads of the stock rails, and the inner foot flanges of the stock rails being cut away through substantially the same vertical plane occupied by the inner faces of the heads of the stock rails, substantially as set forth.

5. In a railroad crossing the combination of the stock rails, the point rails, the hard metal insert piece comprising the central body portion extending horizontally between the webs of the stock rail, and provided with upper and lower oppositely disposed projecting parts between which are formed flange-receiving grooves, and bolts extending through said body portion and webs of the stock rails to secure the rails and hard metal insert piece together, the top parts of the ends of said body portion engaging the bottoms of the heads of the stock rails and the distance between said bolts and the top parts of the ends of said body portion being equal to the distance between said bolts and the bottom parts of the ends of said body portion, substantially as set forth.

In testimony whereof, we have hereunto affixed our signatures.

CHARLES W. REINOEHL.
BENT L. WEAVER.

Witnesses:
WILLIAM M. HENDERSON,
WM. R. MILLER.