

(No Model.)

W. J. MORDEN.

RAILWAY FROG.

No. 267,567.

Patented Nov. 14, 1882.

Fig. 1

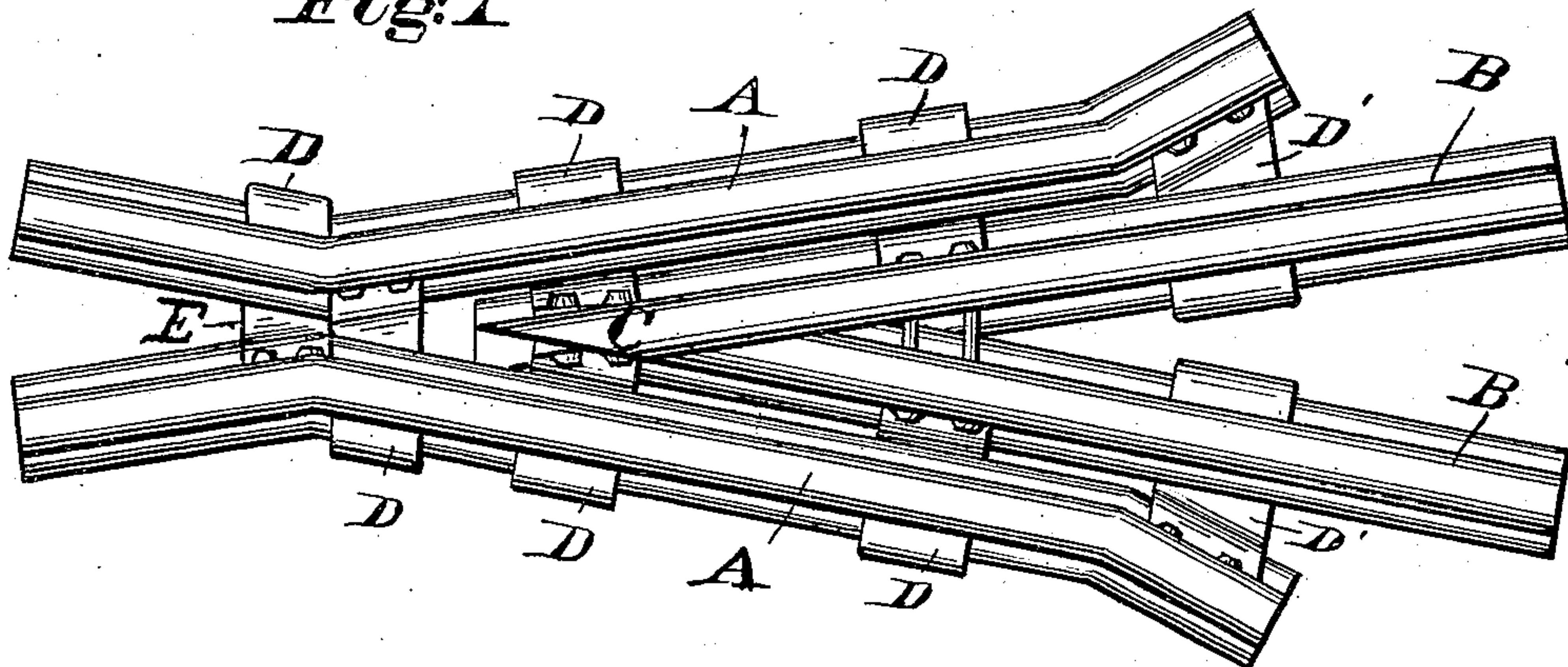


Fig. 3

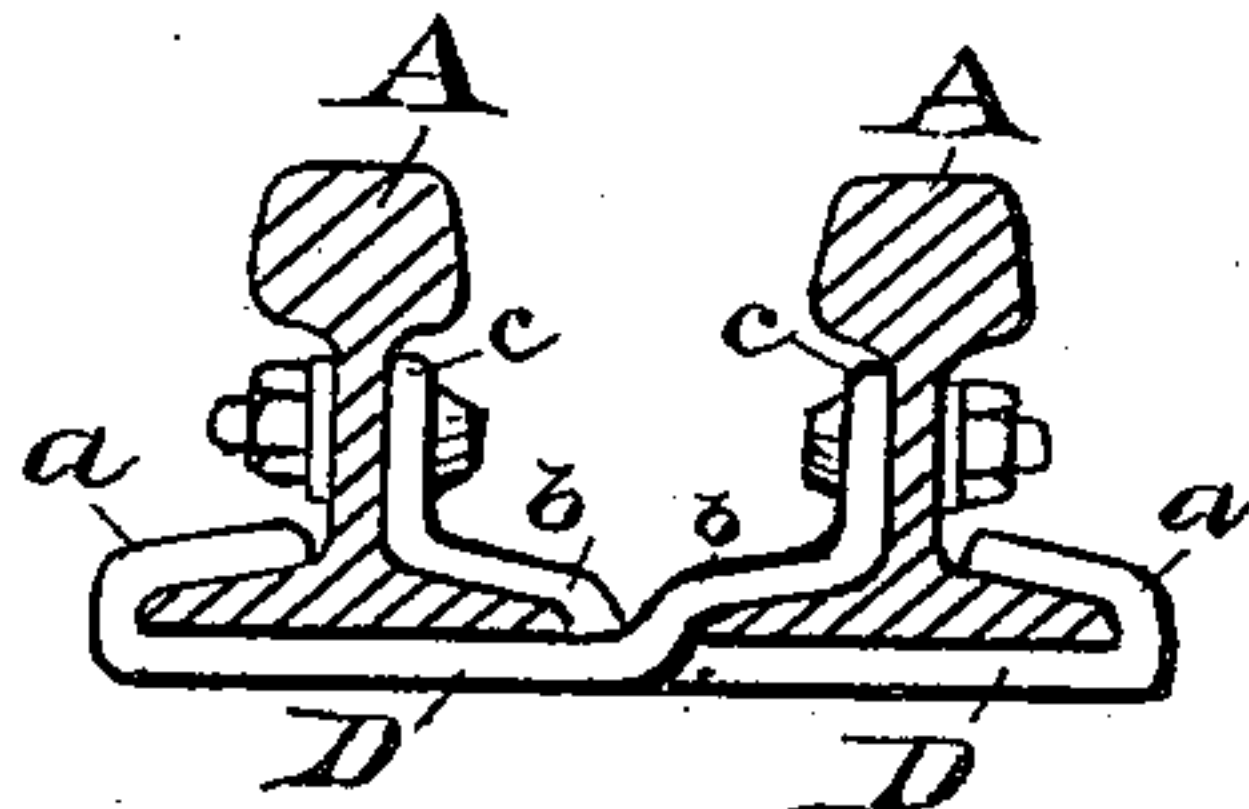


Fig. 2

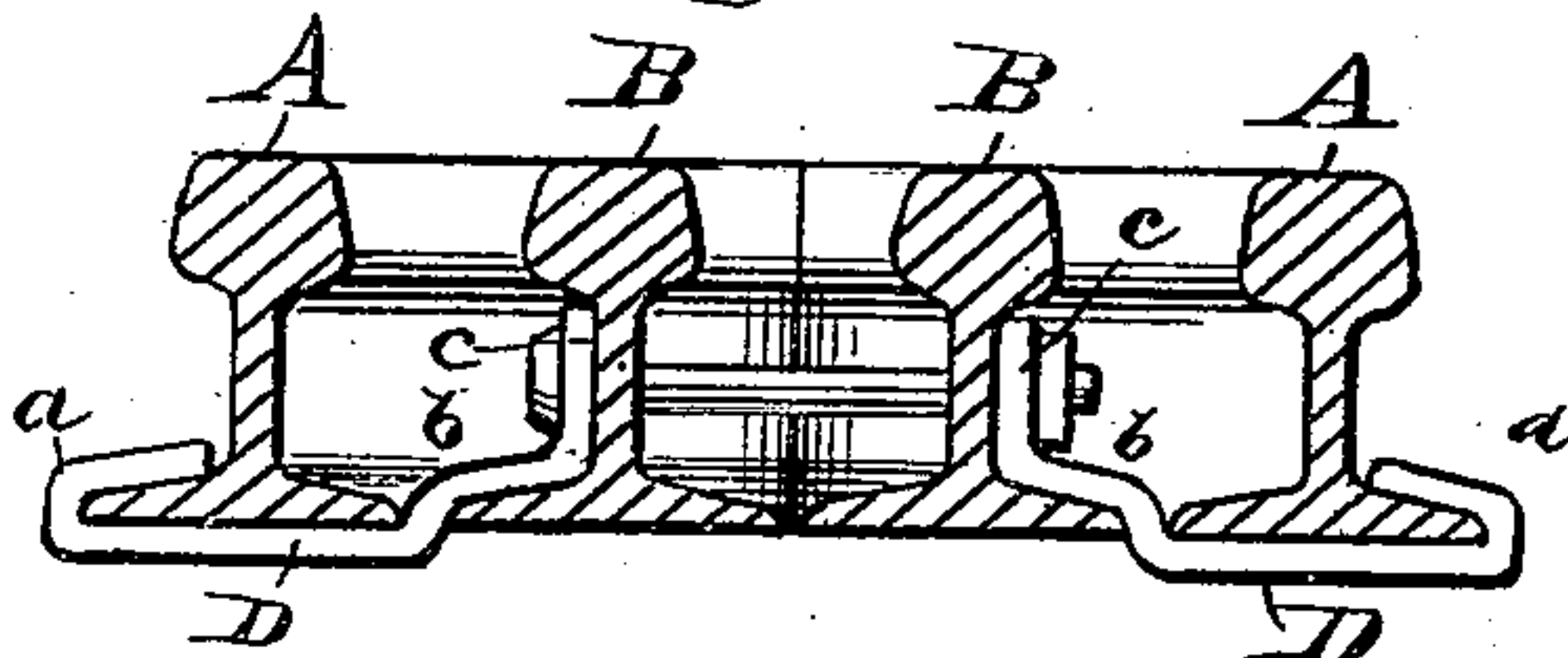


Fig. 5

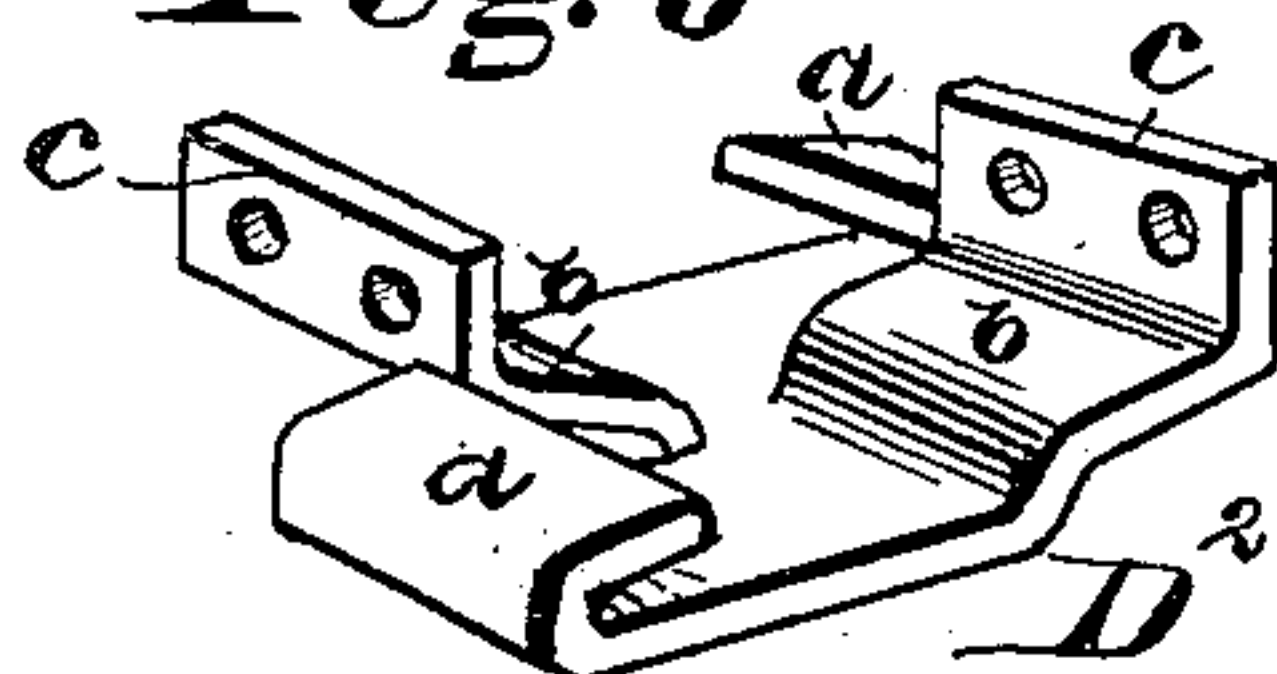
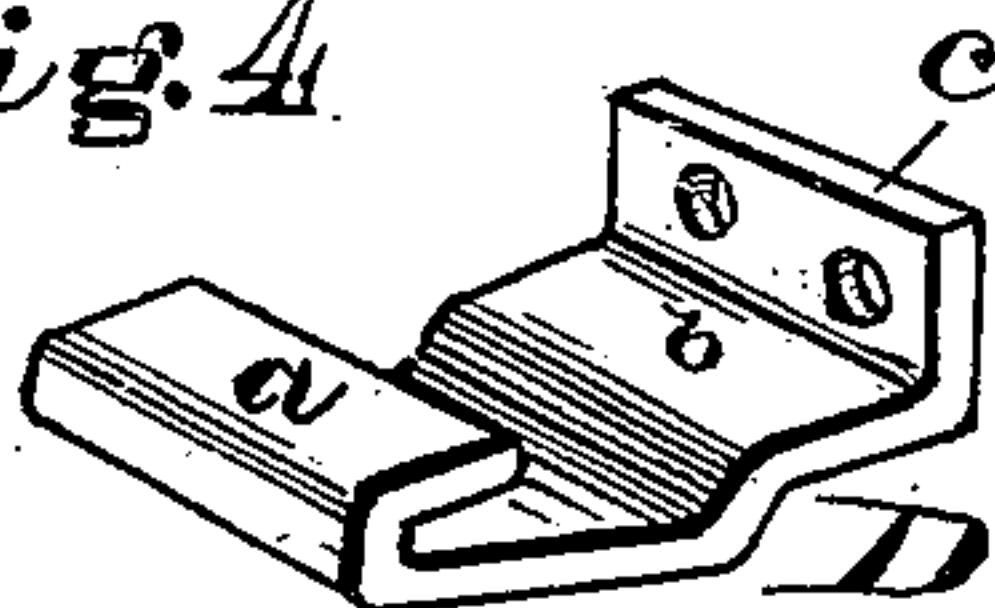


Fig. 4



Attest

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WILLIAM J. MORDEN, OF CHICAGO, ILLINOIS.

RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 267,567, dated November 14, 1882.

Application filed May 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. MORDEN, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway-Frogs, of which the following is a specification.

My invention relates to that class of railroad-frogs formed by bending the rails themselves to the proper shape and connecting the same to the central rails constituting the point.

The object of my invention is to provide a simple and economical and at the same time a substantial and durable means for connecting the point and wing rails.

To this end my invention consists in the construction and arrangement of parts as hereinafter fully described with reference to the accompanying drawings, in which—

Figure 1 is a plan view of my improved frog; Figs. 2 and 3, cross-sectional views of same; and Figs. 4 and 5, detailed views of the connecting-plates, hereinafter more fully described.

Similar letters of reference refer to similar parts throughout the several views.

In the said drawings, A A represent the outer or wing rails, which are bent in the ordinary manner, corresponding to the angle of the frog.

B B are center or point rails, which are also shaped in the ordinary manner, by cutting or otherwise, to form the point C. In connecting the point-rails with the wing-rails I use a number of plates, D, any number of which may be used of any desired width. These plates are formed, as shown in detail, Fig. 4, with a hook, *a*, which hooks over the flange of one rail, and, passing under said rail, is curved up and shaped at *b*, to correspond with the shape of the top of the flange of the other rail, on which it rests. They are further provided with a flange, *c*, which comes against the shank of the rail, and is secured thereto by bolts, rivets, or in any other suitable manner. In forming a frog with these plates the part *a* of a plate is hooked over the flange of each of the wing-rails A A opposite the point C, with the part *b* brought over and resting on the top of the flanges of the point-rails B B, with the flanges *c* against the shank thereof. These plates are

thus firmly secured to the point C. In the same manner plates are secured along the frog, as many being used as desired. The plates D' at the rear portion of the frog are reversed, the hook *a* being hooked over the flange of the center rails, B, and the flange *c* bolted or riveted to the wing-rails. At the "knuckle" E, I connect the wing-rails A A together in a similar manner, the plates being alternated, as shown in Fig. 3, with one plate hooked over the flange of one rail and bolted or riveted to the other, and vice versa. If desired, instead of two or more plates D, secured alternately, as described, a plate, D², may be used, (see Fig. 5,) constructed in a single piece, with the hooks *a a* and flanges *c c* alternated, the same being substantially the same thing as the two plates D last described, and joined at their adjacent edges.

In making a frog in the manner above described a great saving is effected in material and labor, fewer bolts and less fitting being required, and at the same time a frog of great strength and durability secured. It will be evident that the same construction may be used to advantage for railway-crossings.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A frog composed substantially of the center rails, B B, joined to form the point C, and united to the outer or wing rails, A A, by means of the plates D, which are provided each with a hook, *a*, curved portion *b*, and flange *c*, each of which hooks over the flange of one rail, and, passing under said rail, curves up and rests on the top of the flange of the other, and is secured thereto by bolts or equivalents passing through the flange *c* and the shank of the rail, substantially as shown and described, and for the purpose set forth.

2. In combination with the center rails, B B, joined to form the point C, a plate, D, riveted or bolted to each side thereof, said rivets passing directly through the point C and through the flanges *c* of each plate, the plates extending in opposite directions, passing under and being hooked over the flange of the wing-rails A A, substantially as described and shown.

3. The combination, with the wing-rails A

A, of a frog, two or more plates, D, each provided with a hook, *a*, curved part *b*, and flange *c*, placed beyond the point C of the frog, and alternately hooked over the flange of one rail
5 and secured to the shank of the other, substantially as shown and described.

4. A compound clamp for spacing and securing together two adjacent rails, consisting of two interior vertical flanges, *c*, and two ex-

terior hooks, *a*, the hooks and flanges being 10 joined by a base-plate in uniform plane, as set forth.

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

WILLIAM J. MORDEN.

Witnesses:

C. S. HARRISON,

FRANK JOHNSON.