

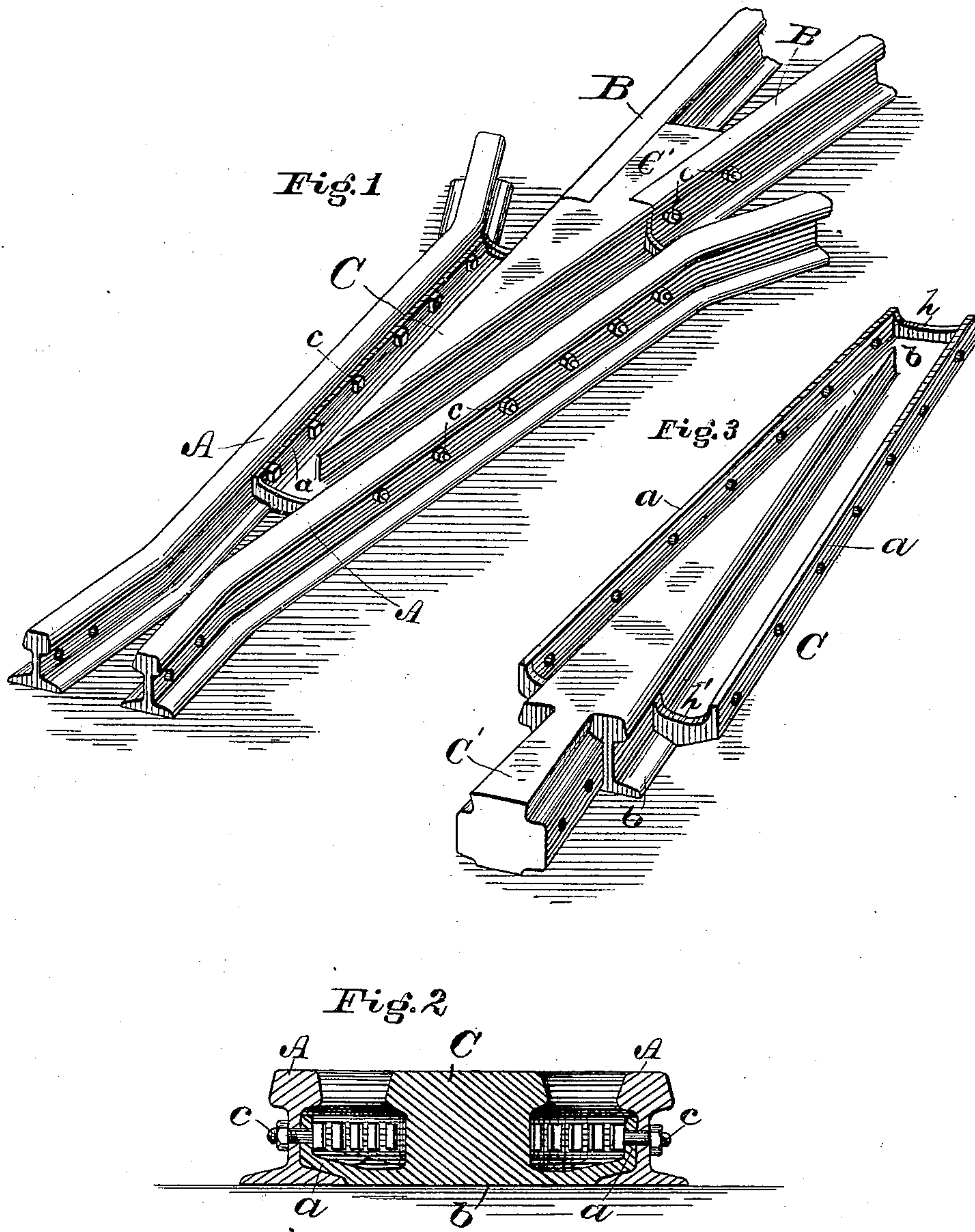
(No Model.)

W. J. MORDEN.

FROG.

No. 267,564.

Patented Nov. 14, 1882.



Attest
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UNITED STATES PATENT OFFICE.

WILLIAM J. MORDEN, OF CHICAGO, ILLINOIS.

FROG.

SPECIFICATION forming part of Letters Patent No. 267,564, dated November 14, 1882.

Application filed August 4, 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 an Improvement in Frogs, of which the following is a specification, to wit:

My invention relates to improvements in that class of railway-frogs made by connecting the outer or wing rails with a solid point formed or cast in a single piece.

In making frogs of this class heretofore it has been the custom to use filling-pieces between the outer or wing rails and the point for the purpose of separating the same and keeping them at the proper distance apart, and to secure the whole together by means of bolts passing entirely through the several parts.

My invention consists in constructing the point with wings or flanges, formed as herein-after described, on each side thereof and shaped to conform to the lower part or shank of the outer or wing rails, to which they are secured by bolts or otherwise.

The object of my invention is by this construction to provide a simpler, less expensive, and more durable frog than heretofore by dispensing with the filling-pieces and the necessary labor and fitting thereon, and removing the shearing strain, to which the bolts, when extended entirely through the frog, are subjected by the car-wheels in passing from one rail to the other.

In the accompanying drawings, Figure 1 is a perspective view of my improved frog. Fig. 2 is transverse sectional view of the same. Fig. 3 is a perspective view of the point or center piece, with the wing or flange pieces formed thereon shown in detail.

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

A A are the outer or wing rails, which are bent in the ordinary manner to the desired angle. B B are center or point rails, and C the center piece or point. This center piece or point C may be made of any suitable material, and may be either cast, forged, rolled, or swaged into the desired shape and thickness.

The wings *a a* may be made separate, if desired, and secured to the base of the point C by bolts, rivets, or otherwise; but I prefer to make C, with its flanges *a a*, of one piece of cast-steel cast in a single piece, with the sides and top thereof conforming in shape, as near

as possible, to the ordinary rail with a plain flat base, *b*; but I do not wish to be limited to this particular construction. When the frog is completed the point C, with wings *a a*, rests upon the lower inner flange of the wing-rails A A, and when in use has an additional bearing on the cross-ties, sills, or other foundation. On each side of the center piece, C, at the base *b*, are formed wings or flanges *a a*, shaped to conform to the top of the flange and shank of the wing-rails A A, and secured to the same by bolts *c*, passing through said wings *a* and the shank of the rails, or in any other suitable manner. The sides of the wings *a a*, at the point end, are connected together by pieces or braces *h* and cast or made in one piece with *a a*, serving to strengthen said wings and hold the frogs firm. At the other end of the wings *a a* are pieces *h'*, similar to *h*, except that they connect each flange or wing *a a* with the main body of the point C. *h'* is also made in one piece with *a*. These pieces *h* and *h'* form a trough, the top edge being almost on a level with the top of the frog proper.

The inner rails, B B, are secured to the shank C' of the center piece, C, each side of which conforms to the shape of the rail, by bolts *e e*, which extend through both rails and said shank C'. Fish-plates may be placed on the sides of B B through which the bolts *e e* pass.

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

1. In a railway-frog, a center piece or point, C, provided with wings or flanges *a a* and connecting-pieces *h* and *h'*, all in one piece, substantially as described and shown.

2. In a railway-frog, a center piece or point, C, provided with wings *a a*, having connecting-pieces *h h'*, all cast or made in one piece, in combination with and secured to the wing-rails, substantially as shown and described.

3. In a railway-frog, the combination, with the wing-rails A A and point-rails B B, of the center piece or point, C, having shank C', and trough-shaped wings or flanges *a a*, substantially as shown and described.

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

WILLIAM J. MORDEN.

Witnesses:

FRANK JOHNSON,
CHAS. KRESSMANN.