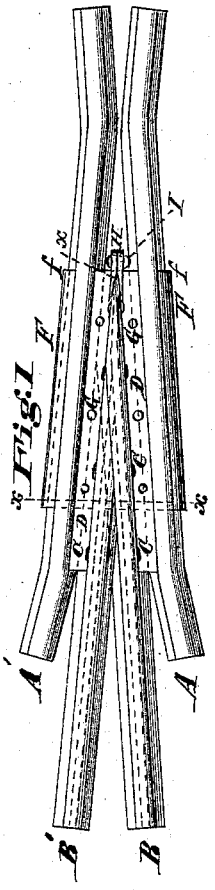
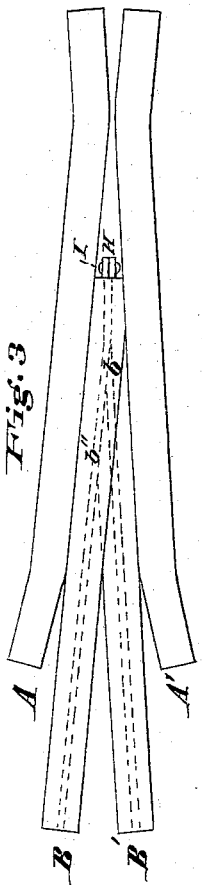
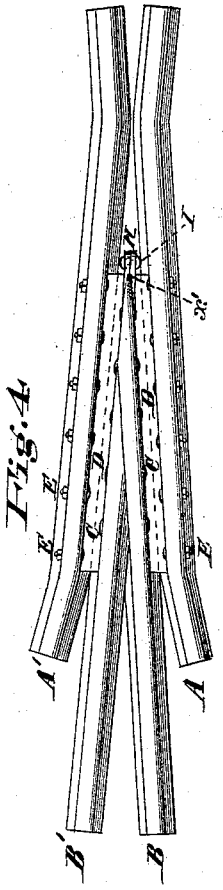
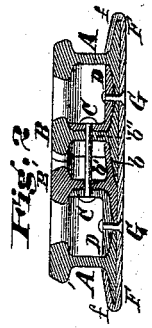
F. C. WEIR.
Railroad Frog.

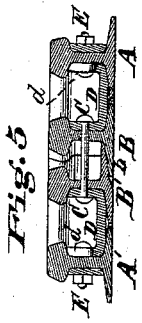
No. 215,548. Patented May 20, 1879.











Attest

Edgar J. Gross

John E. Jones

Inventor

F. C. Weir

By F. Millward

Atty

UNITED STATES PATENT OFFICE.

FREDRIC C. WEIR, OF CIN[illegible], OHIO.

IMPROVEMENT IN RAILROAD-FROGS.

Specification forming part of Letters Patent No. **215,548**, dated May 20, 1879; application filed February 4, 1879.

To all whom it may concern:

Be it known that I, FREDRIC C. WEIR, of Cincinnati, Hamilton county, State of Ohio, have invented an Improvement in Railroad-Frogs, of which the following is a specification.

My invention relates to the class of frogs made by the bending of the overlapping ends of the rails themselves and the junction of the same with the central rails constituting the point by rivets or bolts through separating-pieces; and my invention consists, first, in such a formation and connection of the two rails which make up the angular point as that one of the rails extends unbroken and uncut directly across the path of the other, and in itself makes a solid end to the point, with a full-width flange, which is overlapped by the flange of the other rail, and thus a flange of double thickness is afforded at a point where strength is particularly needed, and the cutting away of the flanges (as is the usual custom) avoided entirely; second, in an improved manner of connecting the two rails of the point together, and to angle or channel iron pieces, to which the outer rails are connected.

In the accompanying drawings, Figure 1 is a plan of a frog embodying my improvements. Fig. 2 is a cross-section of the same on line *x x*. Fig. 3 is a plan of the under side of the frog, showing the continuation of the main point-rail with a full width of flange throughout. Fig. 4 is a plan of the frog, embracing a modification in the manner of connecting the rails, Fig. 5 being a cross-section of this figure.

A A′ are the outer or wing rails of the frog, and B B′ are the two rails which compose the acute angle or point. In place of cutting away both the flanges of the rails B B′, so as to make a joint between the two rails midway between the lines of the angle of the frog, as is common now, and I may say universally practiced, I continue the flange *b* of rail B, of full width, intact clear along the junction of the two rails to the point where it strikes the flange of the outer rail, as shown in Fig. 3, which is almost immediately under the point *x′* of the frog, and I swage up the flange *b′* of rail B′ on one side, as shown in Figs. 2 and 3, so that it lies over the flange of rail B, this flange of rail B′ being cut away angularly on the edge to properly meet the line of the web *b″* of the rail B.

I connect the point-rails B B′ together by rivets C, which, while they secure these rails together, also secure pieces of angle or channel iron D to said point-rails, the channel or angle iron making the separating medium between the points-rails B B′ and wing-rails A A′, and giving a means for attaching said wing-rails.

With channel-iron I attach the wing-rails in the manner shown in Fig. 5, the outer flanges of the iron being notched at *d* for the passage, before the outer rails are attached, of the long rivets C, the bolts E, which connect the outer rails, being placed between the notches *d*.

With angle-iron I use a bottom plate, F, as shown in Figs. 1 and 2, which has turned edges *f*, and, when slid on and driven into place endwise on the frog, is secured by rivets G. Whether it be angle-iron or channel-iron, I extend it beyond the point *x′*, so as to make ears H, which I join by a bolt or rivet, I, which serves to materially strengthen the point.

I claim—

1. A frog having one of its point-rails extending with a full-width flange along the junction of the two rails, and the flange of the other point-rail overlying the flange of the first-mentioned one, substantially as and for the purpose specified.

2. In combination with the point-rails B B′, fitted to each other as described, the angle or channel pieces D, extending and bolted or riveted together beyond the point of the frog, and connecting-rivets C, which extend entirely through the two point-rails and the angle or channel pieces, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

FREDRIC C. WEIR.

Witnesses:

JOHN E. JONES,

EDGAR J. GROSS.