M. CONDON.

Railroad-Frog.

No. 219,690. Patented Sept. 16, 1879.

Fig. 1.

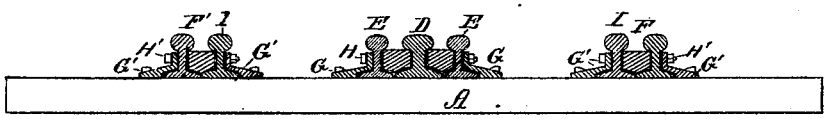


Fig. 2.

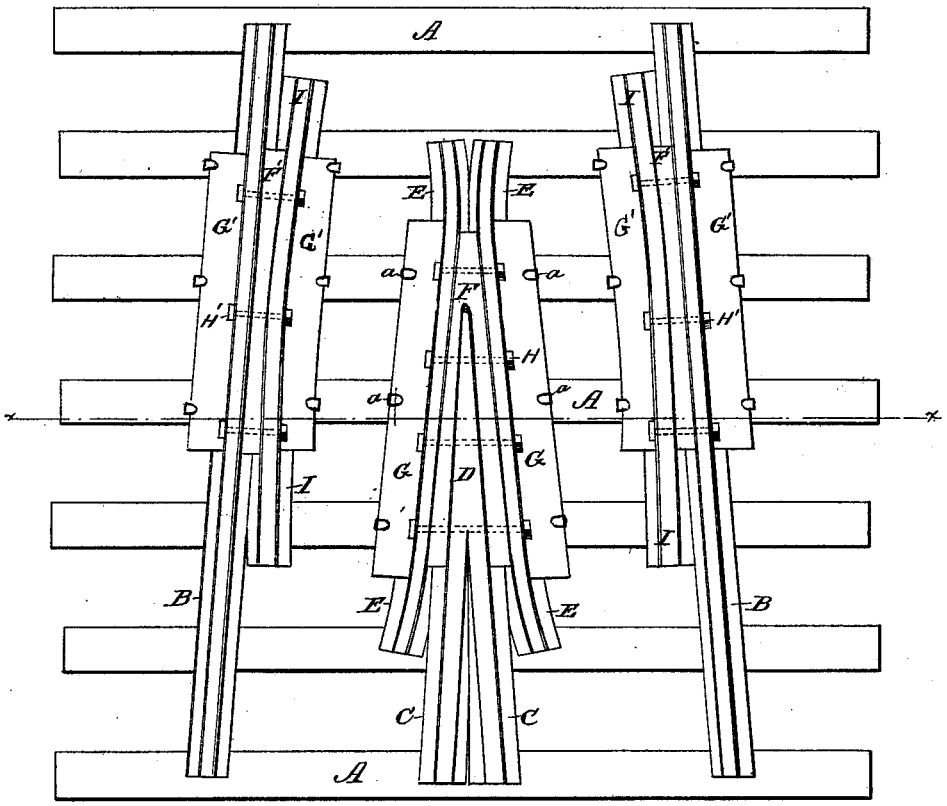
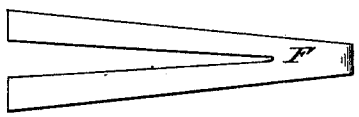


Fig. 3.



WITNESSES:

W. W. Hollingsworth

Solon C. Kemon

INVENTOR:

M. Condon

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

MICHAEL CONDON, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN RAILROAD-FROGS.

Specification forming part of Letters Patent No. **219,690**, dated September 16, 1879; application filed August 7, 1879.

To all whom it may concern:

Be it known that I, MICHAEL CONDON, of Newark, in the county of Essex and State of New Jersey, have invented a new and Improved Railroad Frog and Guard; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section through the line *x x* of Fig. 2. Fig. 2 is a plan view, and Fig. 3 is a detail of the filling-piece F.

My invention relates to certain improvements in frogs and guard-rails for railroads, designed to secure greater strength, cheapness, and increased facilities for repairing.

The improvement consists in combining the point and the wing-rails of the frog by means of a filling-piece embracing the point and separating the said point from the wing-rails; together with angle-plates on the outside of the wing-rails, which are spiked to the ties, and tie-bolts, which extend through the angle-plates, wing-rails, filling-piece, and point, to bind the same together.

The improvement also consists in a corresponding arrangement of devices for the guard-rails on each side of the frog, as hereinafter fully described.

In the drawings, A represents the railroad-ties, and B B the converging outside rails of a double track. For continuing the inside rails, C C, of the double track at the crossing-point a frog is ordinarily required, the improvement of which frog constitutes one feature of my invention.

In constructing the frog the rails C C terminate in a point, D, which is flanked on each side by the wing-rails E E, having their ends flared outwardly. Straddling the point D, and separating the same from the wing-rails E, is fixed the detachable filling-piece F, while upon the outer sides of the wing-rails there abuts the vertical flanges of the angular fastening-plates G G. Through the vertical flanges on these plates, the wing-rails, the filling-piece, and the point D, there extends the tie rods or bolts H, which, when tightly screwed up, securely bind together the several parts, and yet permit any one of said parts to be removed when worn, and replaced by a new one without disturbing the rest. For holding the frog, as thus constructed, securely down upon the cross-ties, spikes *a* are used, and, to enable them to take a firmer hold on the angle-plates, said plates are slotted at the points where the spikes are to be driven.

Upon each side of the frog is arranged a guard-rail, I, which is similarly fitted to the outside main rail by a filling-piece, F′, the tie-bolts H′, and the angle-plates G′.

Now, in defining more clearly the scope of my invention, I would state that I do not claim broadly the independent filling-piece and tie-bolts in connection with the separable parts of a frog for separating and securing these parts; neither do I claim broadly these means for separating and securing the main rail and guard-rail, as these parts have been heretofore arranged in this way. I do not know, however, that these parts have been used in connection with the angle-pieces on the sides, which supply the additional advantages of affording a better bearing for the tie-bolt and a better basic support for the frog and guard-rail, so as to stiffen, strengthen, and brace the parts when secured as described.

Having thus described my invention, what I claim as new is—

1. The combination, with the point, of the filling-piece embracing the point, the wing-rails, and the angle-plates, and bolts extending through all, as set forth.

2. The combination of the outside rail, the filling-block, guard-rail, and the angle-plates, and bolts through all, as set forth.

3. The combination of the frog, constructed as hereinbefore set forth and claimed, with the guard-rails, each secured to the ties by their angle-plates, filling-block, rail, and through-bolt, as set forth.

MICHAEL CONDON.

Witnesses:

HENRY HILLS,

BENJAMIN C. POTTS.