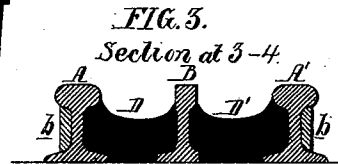
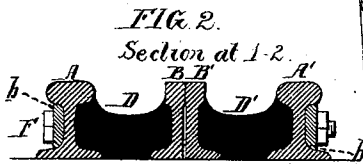
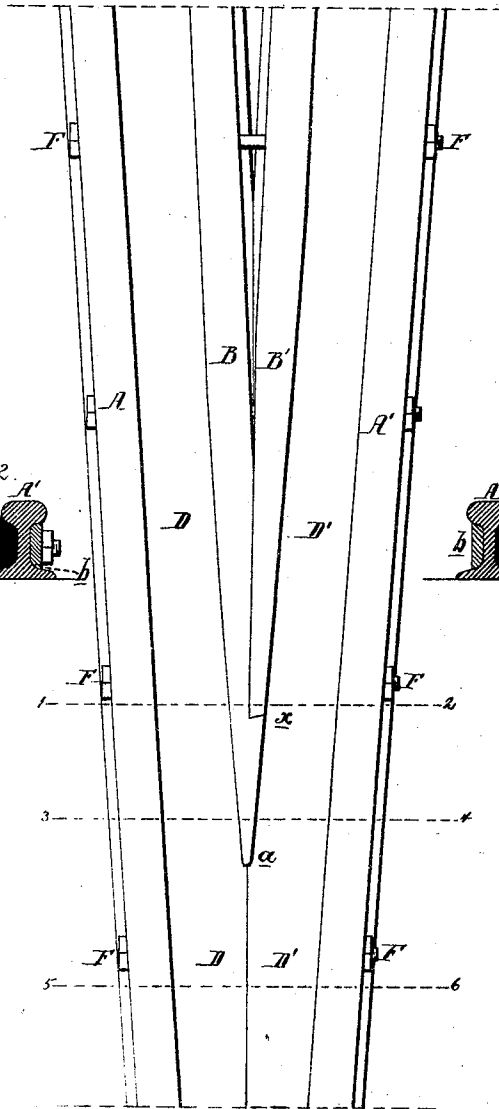


W. B. ATKINSON.
Railroad Frogs.

No. 138,835.

Patented May 13, 1873.

FIG. 1.



Witnesses { Thomas McSwain
Harry Smith

Wm. B. Atkinson
By his Atty.
Horsman & Son.

UNITED STATES PATENT OFFICE.

WILLIAM B. ATKINSON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN RAILROAD FROGS.

Specification forming part of Letters Patent No. **138,835**, dated May 13, 1873; application filed January 8, 1873.

To all whom it may concern:

Be it known that I, WILLIAM B. ATKINSON, of Philadelphia, Pennsylvania, have invented an Improved Railroad Frog, of which the following is a specification:

The object of my invention is to permanently and solidly secure the several parts of a combination frog together, so as to form a perfect unit of the whole capable of being secured at once to the cross-ties without the aid of the usual foundation-plate; and I accomplish this object in the manner best observed in the plan view, Fig. 1, and transverse section, Fig. 2, of the accompanying drawing, by combining with the rails A A' and B B' of the frog, two cast-iron filling-pieces, D D', which occupy the whole of the space between the said rails throughout the entire length of the frog, except that which is required for the flanges of the wheels, the said rails and filling-pieces being permanently secured together by transverse bolts F. The solid point *a* of the frog is formed, as in ordinary combination frogs, by reducing and tapering the rail B, which is notched at *x* at some little distance from the point, for the reception of the reduced end of the adjoining rail B', and the exterior rails A A', which do not require to be reduced, are nearly parallel with their corresponding central rails. The filling-pieces adjoin each other up to the point of the frog, where they diverge, the piece D into the space between the rails A and B, and the piece D' into the space between the rails B' and A'.

It will be observed, on reference to the trans-

verse sections, Figs. 2, 3, and 4, that the filling-pieces extend entirely across the spaces between the rails; that they are snugly fitted to the flanges and webs of the said rails; and that they are only recessed or hollowed out at the top sufficiently to afford space for the passage of the flanges of the car-wheels. It will also be observed that the under sides of the said filling-pieces are flush with the bottoms of the rails, thus forming a continuous base for the frog, in which all the parts are permanently bolted together in their relative positions, thus enabling the same to be secured solidly to the cross-ties without the aid of the usual foundation-plate.

The fastening-bolts F may be used with or without the fish-plates *b*, and serve, with the filling-pieces, to solidly and permanently secure the rails together, forming a perfect unit of the whole frog, capable of resisting the greatest strains to which it is subjected.

I claim—

A compound frog, consisting of rails A A' B B', in combination with filling-pieces D D' extending the entire length of the frog and flush with the bottoms of the rails, all being permanently bolted together in their relative positions, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. B. ATKINSON.

Witnesses:

WM. A. STEEL,
HUBERT HOWSON.