(No Model.)

H. R. LUTHER.

FROG.

No. 483,964. Patented Oct. 4, 1892.

Fig. 1.

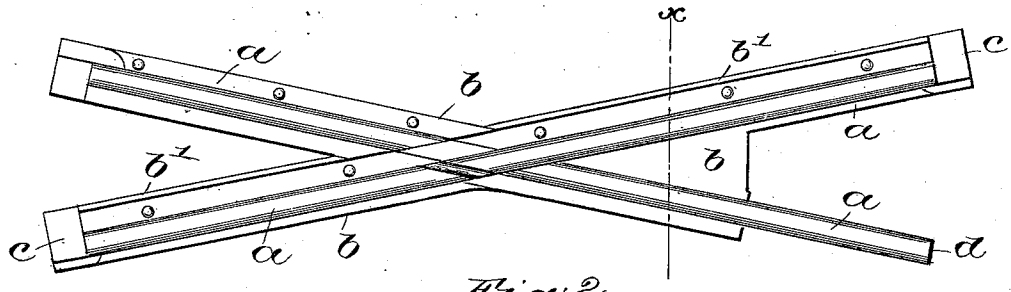


Fig. 2.

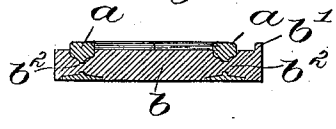
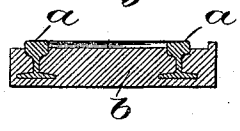


Fig. 3.



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UNITED STATES PATENT OFFICE.

HENRY R. LUTHER, OF CAMBRIDGE, MASSACHUSETTS, ASSIGNOR TO BARBOUR, STOCKWELL & CO., OF SAME PLACE.

FROG.

SPECIFICATION forming part of Letters Patent No. 483,964, dated October 4, 1892.

Application filed October 19, 1891. Serial No. 409,105. (No model.)

To all whom it may concern:

Be it known that I, HENRY R. LUTHER, of Cambridge, county of Middlesex, State of Massachusetts, have invented an Improvement in Frogs or Fittings for Railway-Tracks, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide an improved switch or frog, adapted more particularly for use in street-railway construction.

In accordance with this invention the treads of the frog are formed by properly arranged and fitted rails, which are rigidly bound together by a body portion cast or molded about them, any flanges, gutters, &c., being formed in the cast body portion.

One part of this invention therefore consists of a railway frog or switch having its tread formed of rails of ordinary construction bound rigidly together by a body portion cast about them and having formed upon it suitable guards, substantially as will be hereinafter described.

Other features of this invention will be hereinafter described, and pointed out in the claims.

Figure 1 of the drawings represents a frog embodying this invention. Fig. 2 is a cross-section of the same on the dotted line *x x*, and Fig. 3 a modified construction to be described.

Referring to the drawings I have represented my invention as embodied in the form of a frog; but I desire it to be understood that this invention is equally well adapted for switches or other similar fittings employed in railway construction.

In the drawings, *a a* represent the treads of the frog formed of independent portions, preferably in the form of rails, previously arranged and fitted, as required, they being held rigidly together and in position by a body portion *b*, cast or molded about them, as best represented in Fig. 2, the usual flange or guard *b'* being preferably formed in this body portion as represented.

In the construction, Figs. 1 and 2, the portions of the body *b* upon opposite sides of the rails are firmly united together by connecting portions b^2, extending through suitable openings in the rails; but in lieu of such construction the different portions of the body may be united together by carrying the body beneath the foot of the rail, as represented in Fig. 3. Besides binding the rail-treads rigidly together and obviating possible looseness the body portion *b*, molded about the rail-treads, presents ready means by which to unite the frog or fitting to any desired kind of rail. For instance, if it is desired to unite the frog to what is commonly known as a "tram-rail," the body portion *b* will be extended beyond the end of the rail-tread and formed to present a seat *c* of proper shape to receive and support the abutting end of the tram-rail. If, on the other hand, it is desired to fish-plate a girder-rail to the frog or fitting, the rail forming the tread is permitted to project beyond the body portion, as at *d*, thus permitting the abutting girder-rail to be connected by the usual fish-plates.

The rails embodied in the frog or fitting may be varied in size or shape to adapt the fitting for use in connection with any kind of rail, and the body portion may also be formed or shaped for a like purpose.

I claim—

1. The herein-described railway-frog, it having its tread formed of rails of ordinary construction bound rigidly together by a body portion cast about them and having formed upon it suitable guards *b'*, substantially as described.

2. The herein-described railway-frog, it having its treads formed of usual and independent rails bound rigidly together by a body portion cast about them and having seats formed in said body portion at the ends and below the tops of the rails to receive and support the end of an abutting rail, substantially as described.

3. The herein-described railway-frog, having its point and also the treads formed of usual independent rails bound rigidly together by a body cast about them and having

portions extended through openings in the webs of the rails, the body extending beyond the outer sides of the treads, the portions of the body upon opposite sides of the rails being united by the portions thereof extended through the said rails, substantially as described.

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

HENRY R. LUTHER.

Witnesses:
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