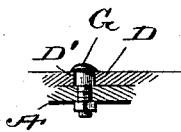
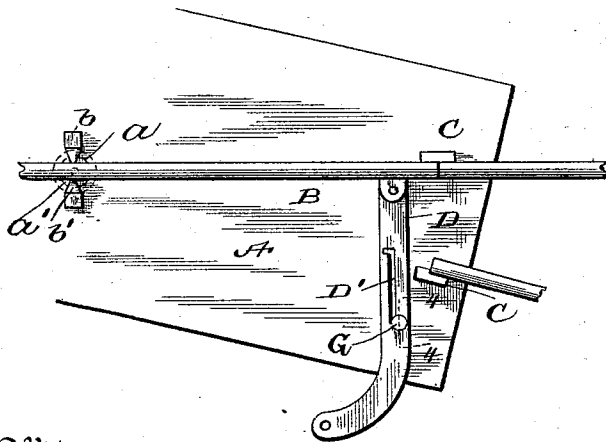
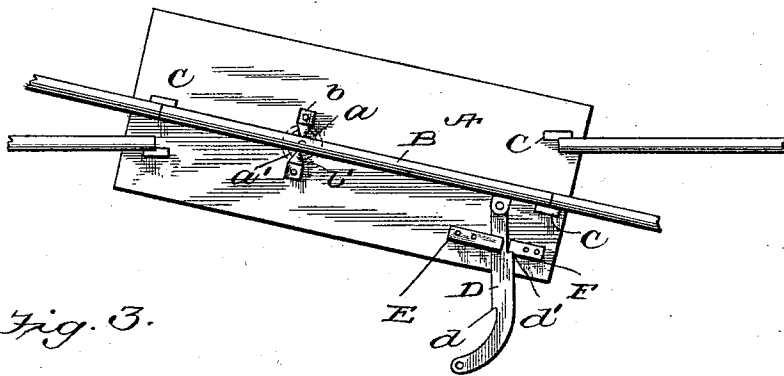
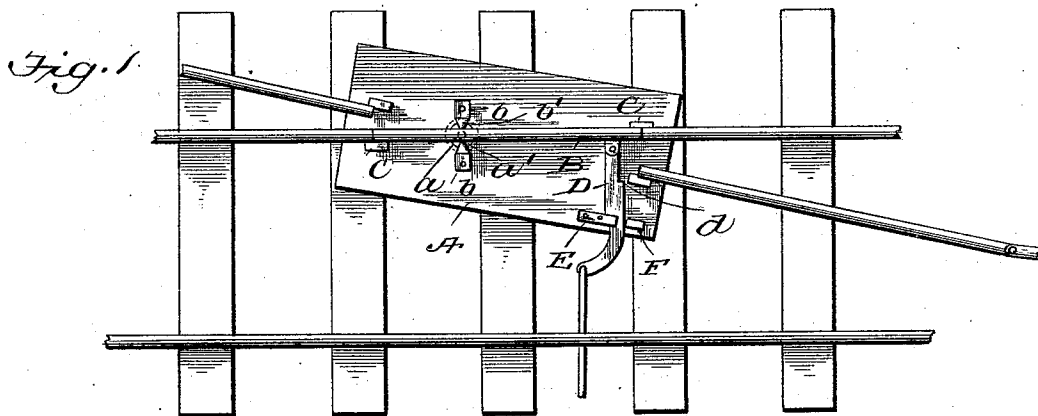


(No Model.)

F. HARDY.
RAILWAY FROG AND SWITCH.

No. 531,030.

Patented Dec. 18, 1894.



Witnesses

John James
Charles Brock

Inventor

Frederick Hardy.
By

By *R. S. & A. P. Gacey*

Attorney

UNITED STATES PATENT OFFICE.

FREDERICK HARDY, OF BIRMINGHAM, ALABAMA.

RAILWAY FROG AND SWITCH.

SPECIFICATION forming part of Letters Patent No. 531,030, dated December 18, 1894.

Application filed April 12, 1894. Serial No. 507,293. (No model.) Patented in Canada May 7, 1894, No. 45,970.

To all whom it may concern:

Be it known that I, FREDERICK HARDY, a citizen of the United States, residing at Birmingham, in the county of Jefferson, State of Alabama, have invented certain new and useful Improvements in Railway Frogs and Switches, (patented in Canada, No. 45,970, dated May 7, 1894;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention is an improved device for operating and locking the movable rail of either frogs or switches and it is applicable to either stub or split rail switches.

My invention relates also to certain improvements shown, described and claimed in an application filed of even date herewith.

The object of this invention is to provide novel means for operating and locking the movable rail and to dispense with the use of springs, providing a positive locking mechanism.

With this object in view my invention consists broadly of a base plate having a movable rail pivoted thereon and an operating rod having shoulders thereon adapted to engage projections upon the bed plate.

My invention consists also in certain details of construction and combination of parts all of which will be more fully hereinafter described and claimed.

In the drawings, forming a part of my invention—Figure 1 is a top plan view of my device in one position. Fig. 2 is a similar view in the reverse position. Fig. 3 shows a slight modification and Fig. 4 is a section on the line 4—4 of Fig. 3.

In practice I employ a flat bed plate A which has a circular aperture *a* intended to receive a circular disk *a'* to which the base of the rail B is bolted said rail being held in position by means of the brace pieces *b b* having knife edges *b'* said pieces being rigidly secured to the bed plate A.

At each corner of the bed plate is arranged a shoulder or rail brace C which serves as a rail brace for the fixed rail and a stop for the movable rail. An operating rod D is pivoted at one end to the rail B, the outer end of said rod being bent or curved at *d* and connected

with any suitable switch rod or lever. Stop blocks E and F are secured to the bed plate near one edge, the operating rod D working between them as shown and in order to lock the rod and consequently the rail I construct the rod with shoulders *d'* and *d* upon opposite sides and adapted to engage the stops F and E, respectively, when the rail is shifted back and forth. It is preferred to make the stop E overlap the rod D but this is not absolutely essential. Furthermore the stops E and F can be dispensed with entirely and when this is done I construct the rod D with a longitudinal slot D' and produce locking recesses at its opposite ends. Passing through said slot into the bed plate A is a pin, stud or projection G which engages the recesses at the ends of the slot and hold the bar locked.

Now in operation, the parts are assembled as shown and when it is desired to shift the rail the rod D is moved to one side or the other. The first pressure, however, that is exerted upon the rod D serves to throw the shoulder out of engagement with its stop. The continued pressure then shifts the rail and the final pressure throws the opposite shoulder into engagement with the stop so that the rod D is thus locked after its adjustment. When it is desired to shift the rail again these operations are simply reversed.

The advantage of the slotted rail is that it puts the engagement of the shoulder in direct line with the rod and line of force and very little oscillation is necessary to effect the locking and unlocking though it will of course be understood that the lock is always sufficient to hold the rail securely against accidental movement.

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

1. The combination with a bed plate of a movable rail pivoted thereon, the fixed stops or braces near each corner of the bed plate, the operating rod having shoulders and the projection upon the bed plate adapted to engage the shoulders upon the operating rod, substantially as shown and described.

2. The combination with a bed plate having locking projections thereon of a movable rail pivoted upon the said plate and a curved or angular operating rod having shoulders

thereon adapted to engage the locking projection, substantially as shown and described.

3. The combination with a bed plate having a circular opening of a circular disk located therein the movable rail secured thereto, the bearing blocks having knife edges, the braces or stops at each corner of the bed plate, the locking projections, the operating rod passing between the same, said rod hav-

ing shoulders to engage the locking projections, substantially as shown and described. 10

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

FREDERICK HARDY.

Witnesses:

E. P. QUIGLEY,
M. D. ORCUTT.