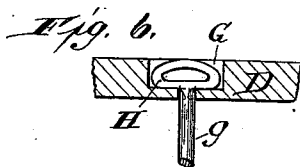
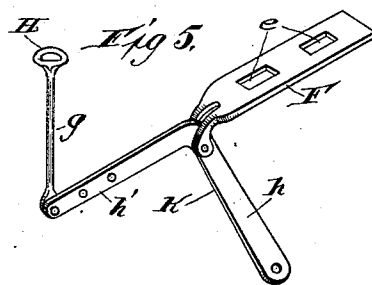
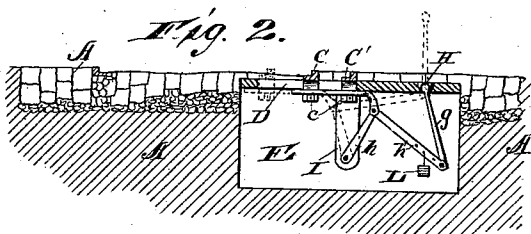
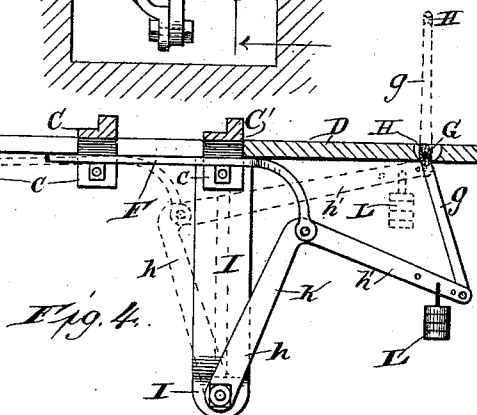
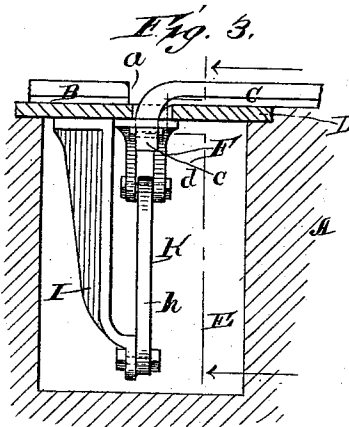
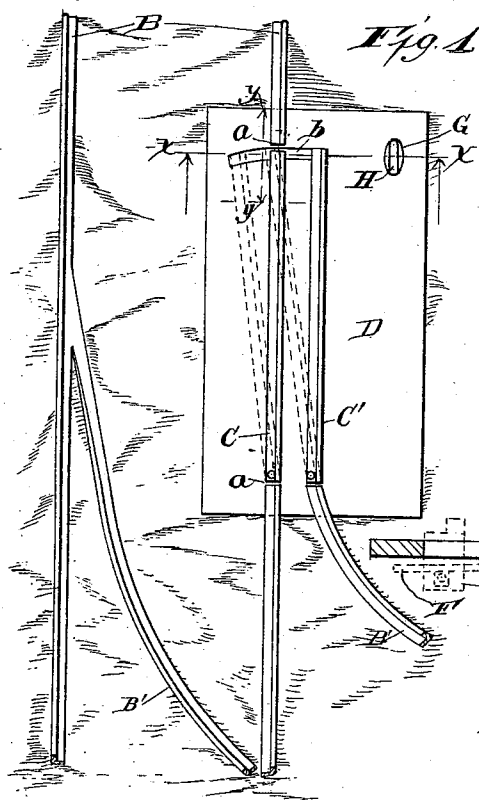


(No Model.)

F. B. ERWIN.
RAILWAY SWITCH.

No. 466,491.

Patented Jan. 5, 1892.



Witnesses,
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UNITED STATES PATENT OFFICE.

FRANK B. ERWIN, OF CHICAGO, ILLINOIS.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 466,491, dated January 5, 1892.

Application filed September 17, 1891. Serial No. 405,977. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. ERWIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Switches for Railways, of which the following is a specification.

This invention relates to improvements in switches for railways, and while it can be applied to and is operative on any kind of a railway, yet it is more especially adapted for and designed to be used for street-railways; and it consists in certain peculiarities of the construction and novel arrangement and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The object of my invention is to provide a switch which shall be strong, durable, simple, and effective in operation and inexpensive in construction, whereby when in its normal position the rails of the main track are kept continuous, thus leaving the track open and preventing accidents, which so often occur in the case of cable, electric, and locomotive trains by reason of a misplaced switch.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a plan view of a portion of a track and switch with my device attached, showing the rails in their normal position. Fig. 2 is a transverse sectional view taken on line *x x* of Fig. 1. Fig. 3 is a longitudinal sectional view of a portion of Fig. 1, taken on line *y y* thereof. Fig. 4 is an enlarged detail view, partly in section, of a portion of Fig. 2. Figs. 5 and 6 are detail views of the operating-lever and handle.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the road-bed, upon which is laid in the ordinary manner the rails B and B' of the tracks. One of the rails B may be united or connected to one of the rails B' of the other or side track by means of a frog, as shown in Fig. 1 of the drawings, or otherwise, if desired. The other rail B of the main track is broken, as at *a*, and is connected and disconnected by means of a movable rail C, which

is pivotally secured at one end to a bed-plate D, which plate is laid about flush with the surface of the road-bed and forms a covering for the chamber E, in which the operating mechanism of my device is located, as well as a smooth floor or surface upon which the movable rails C and C' may slide. Near one end this plate is provided with a transverse slot *b*, through and in which pass and operate the connections *c* between the movable rails C C', and a guiding-plate F, which plate is provided with one or more openings *e* for the reception and retention of the projections or connections *c*, and is adapted to operate on the under surface of the plate D, as will be presently explained.

On the outside of the tracks and preferably in alignment with the slot *b* the plate D is formed with an opening G, through which the rod *g* of the handle H for operating the lever passes in its movements.

To the lower surface of the plate D and between the slot *b* and the nearer end of the plate is secured a depending bracket I, to the lower end of which is fulcrumed the lower arm *h* of a compound lever K, which lever is preferably bent to form a right angle, as shown, and has pivotally secured at its angle or elbow the end of the arm *f* of the plate F, and at the end of its upper arm *h'* the lower end of the operating-rod *g*. Near the end of the arm *h'* is secured an adjustable weight L, which is of sufficient size to overbalance, through the medium of the lever, the weight of the rails C and C', and thus keep the connection of the rails of the main track continuous when the device is not being operated.

The rail C' is placed parallel alongside of the rail C and is pivotally secured near the end of one of the rails B' of the side track to the plate D, and like the rail C has its other end provided with a connection or projection *c*, which passes down through the slot *b* and openings *e* in the plate F, and is there firmly secured by screw and bolt *d* or otherwise.

In the drawings (see Fig. 3) I have shown the ends of the rails C C' bent over to extend through the slot *b*; but I do not desire to limit myself to this construction, as I may employ other forms of a connection.

The operation of my device is simple and as follows: When it is desired to switch a car

from the main track to the other one, the operator raises the lever K by means of the rod *g* and handle H to the position indicated by dotted lines in Figs. 2 and 4, which operation
5 will force the movable rails C C' to the position indicated by dotted lines in Fig. 1, thus changing the unity of the rails from the main track to the other or side one, as is apparent. As soon as the car is switched the main track
10 is again opened by the operator allowing the handle to be drawn down by the weight L till it (the handle) is flush with the surface of the plate D, when the parts will be firmly secured or held in their normal positions.

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

In a switch for railways, the combination

of the rails B and B' with the bed-plate D, having the slot *b*, the opening G, the bracket 20 I, the movable rails C C', pivotally secured at one end to the bed-plate and having the projections *c* at their other ends, the lever K, fulcrumed at its lower end to the bracket I and having the adjustable weight L at its 25 other end, the operating-rod *g*, having the handle H, the guiding-plate F, having the openings *e*, and arm *f*, pivotally secured to the lever K, all constructed, arranged, and operating substantially as and for the purpose set 30 forth.

FRANK B. ERWIN.

Witnesses:

C. C. TILLMAN,

CHAS. E. GORTON.