

(No Model.)

A. J. ATKINSON.
RAILWAY SWITCH.

No. 376,465.

Patented Jan. 17, 1888.

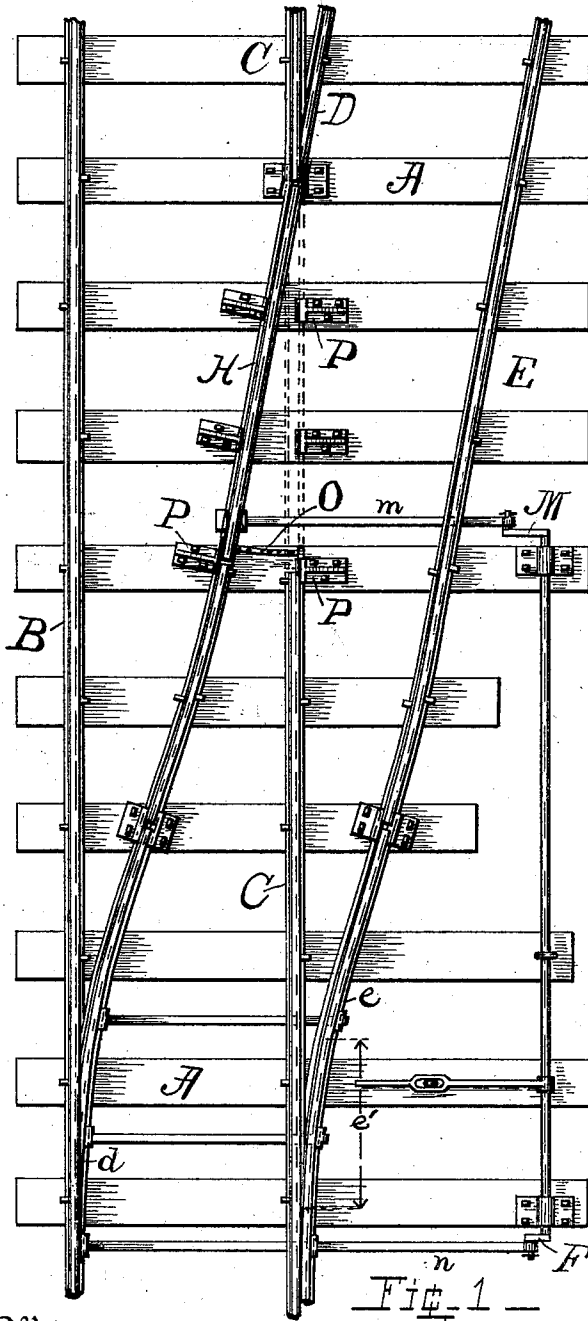
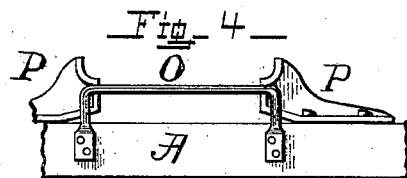
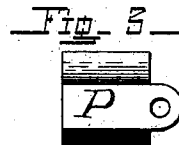
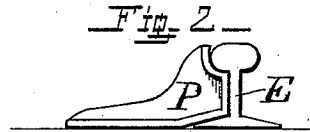


Fig. 1



Witnesses:
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By his Attorney
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UNITED STATES PATENT OFFICE.

ANDREW J. ATKINSON, OF ASTOR, ASSIGNOR OF TWO-THIRDS TO HORATIO W. FAIRBANKS AND JOHN T. STOCKS, BOTH OF ATLANTA, GEORGIA.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 376,465, dated January 17, 1888.

Application filed October 3, 1887. Serial No. 251,364. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. ATKINSON, a citizen of the United States, residing at Astor, in the county of Clayton and State of Georgia, have invented a new and useful Railway-Switch; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to railway-switches, the object being to give additional security by improved construction, the details of which will be hereinafter fully described.

In the accompanying drawings, Figure 1 is a plan of a road-bed of a railway, showing the main line and the rails leading to a side track, the switch being open to the siding. In this figure the position of the moving parts when the switch is closed to the siding and the main line open is shown by dotted lines. Fig. 2 is a side view of the supports for the sides of the moving rail. Fig. 3 is a view of the face of the support against which the rail rests, but showing one of these supports at the free end of the rail. Fig. 4 shows the rod that guides the rail as being secured to a tie instead of to the supporting-bracket, as shown in Figs. 1 and 3.

In the figures like reference-marks indicate corresponding parts in the several views.

A are the ties; B and C, the rails of the main line of a railway, and D and E the rails of a side track, these rails being attached to the ties in the usual manner, except the movable ones, the attachment of which will be hereinafter fully set forth.

d and *e* are movable switch-rails, and are connected together by a bar, and are moved by means of the crank F. In the position shown in Fig. 1 the switch is open to the siding by reason of the scarfed rail *d* being pressed against the inner side of the rail B on the main line, and the rail *e* being raised sufficiently between the points indicated by the arrows *e'* to carry the flanges of the wheels over the rail C

on the main line, from which point outwardly the rail *e* is sloped to the general level of the track.

All the portion of the switch above described is in use, and is shown as a desirable device for deflecting the train from the main line, as in it the main track is not cut, either for the insertion of frogs or otherwise.

The rails C and D are brought together, as shown in Fig. 1, by being scarfed equally on both rails, or by reducing the end of one rail only sufficiently to reduce the width of both to about that of one at the extreme point of the one scarfed, and the frog-rail H is abutted against the reduced ends of the rails C and D, and is held even with them, but held with sufficient freedom or looseness to allow it to swing, as will be hereinafter set forth.

The rail H fills the gap and makes continuous either the rails C or D, and is moved simultaneously with the rails *d* and *e* by the rock-shaft K, which is operated by the lever L and partially rotates the cranks M and F to either extreme, and the connections *m* and *n* move the rail H to a position that will make either the track C or D continuous and move the rails *d* and *e* to the required position.

Either side of the rail H is the outside, according to its position of filling the gap in the rail C or D, and abuts against the bracket P, which prevents the spreading of the track by the displacement of the frog-rail, and leaves sufficient room between the rail and the bracket not in use to allow of the passage of the wheels.

The rod O extends across the space traversed by the free end of the frog-rail H and through the web of the rail, and is attached at its ends to the brackets P, as shown in Figs. 1 and 3; or it may be bent downwardly at the ends and fastened to the tie, as shown in Fig. 4, and should be curved to about the radius of the circle described by the point of the rail at which it is placed. The functions of this rod are to carry the rail in its transverse movement, preventing its being lifted by an obstruction, and to prevent its longitudinal movement. By reason of the longitudinal movement of the rail being prevented, an equal and sufficient space may be left at each end of the

1 rail to provide for the expansion of the rails
without danger of the frog-rail slipping and
leaving the amount of both spaces at one end.
By this device the frog is dispensed with, and
5 the track in use is made continuous without
the use of the frog.

Having thus described my invention, what I
claim as new, and desire to secure by Letters
Patent of the United States, is—

10 1. In a railway-track, the combination of the
tie A, the rail H, the brackets P, and the
curved rod O, passing through the web of said
rail, fastened to the said tie, and extending be-

tween and supported against the said brackets,
substantially as set forth.

2. In a railway-switch, the combination of
the rails B, C, D, and E, the movable rails d,
e, and H, the rock-shaft K and cranks F and
M, the rod O, and the bracket P, as and for the
purpose set forth.

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

ANDREW J. ATKINSON.

Witnesses:

A. P. Wood,

ALBERT A. Wood.