D. ROWE.

Safety Switch-Rod.

No. 164,398. Patented June 15, 1875.

Fig. 1.

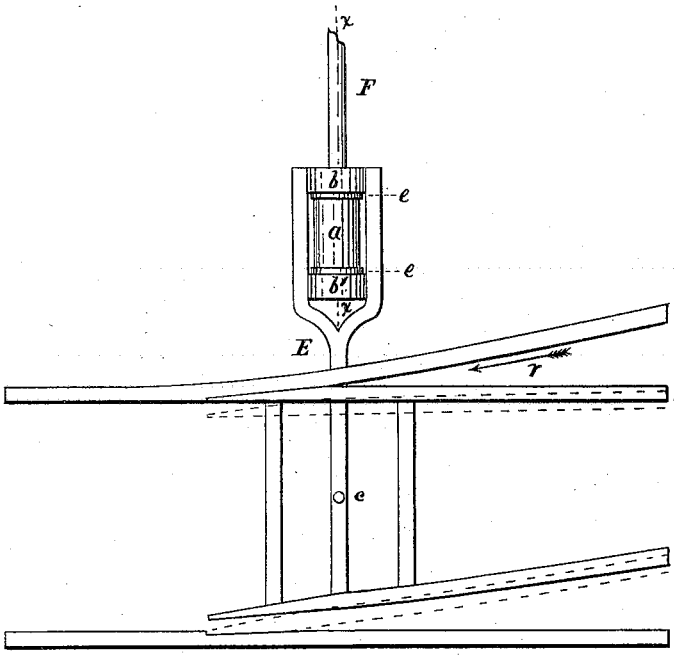
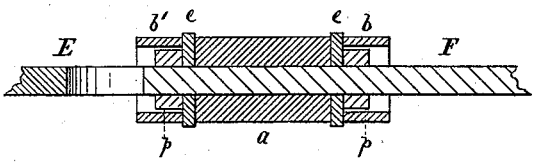


Fig. 2.



WITNESSES;

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UNITED STATES PATENT OFFICE.

DAVID ROWE, OF LOUISIANA, MISSOURI.

IMPROVEMENT IN SAFETY SWITCH-RODS.

Specification forming part of Letters Patent No. **164,398**, dated June 15, 1875; application filed May 13, 1875.

To all whom it may concern:

Be it known that I, DAVID ROWE, of Louisiana, in the county of Pike and State of Missouri, have invented a new and Improved Safety Switch-Rod; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

This invention relates to self-acting railroad safety-switches, and is an improvement on my patent of October 15, 1872. The present device appertains to that class of switches which are held in position to keep the main line open by means of springs, which yield by the action of the flanges of the wheels, so as to permit the passage of trains from a side track onto the main line; and consists of such peculiar construction and adaptation to each other of the two sections composing the switch-rod as to make one spring answer the same purpose as the two shown in my former invention above referred to; and, therefore, not only reduce the first cost, but, at the same time, render the device more compact and substantial. The parts to which this invention relates are the two sections composing the switch-rod, the other parts shown in the drawing being those which necessarily co-operate therewith.

In the drawing, Figure 1 is a plan view of the switch. Fig. 2 is an enlarged longitudinal sectional view of the central part of the switch-rod, taken in the line *x x*, Fig. 1.

E, Fig. 1, represents a rod having a bifurcation in one end, within which are secured two collars, *b b'*. Between the inner edges of these two collars, and filling the space betwen them, is a cylindrical rubber spring, *a*, provided at each end with an iron washer, *e*. Through the center of this spring is passed, longitudinally, the inner end of the outer section F of the switch-rod, the spring being secured to the latter by nuts, as shown at *p p*, Fig. 2. The outer end of the rod F, Fig. 1, is connected with an ordinary switch-stand. The opposite end of the rod E is pivoted at the point *c* to one of the cross-bars of the movable rails.

The operation of the device is as follows: When the main line is open the position of the switch-points is as shown in full lines in the drawing. Therefore, a car or train passing from the side line, as indicated by the arrow *r*, operates the switch-points automatically by the flanges of the wheels, and compresses the spring *a* by the action of the collar *b* upon its outer end, the rod F being held in position by its connection with the switch-stand. As soon as the flanges of the wheels have passed out from between the rails the spring, by its reaction, returns the points to their former position. When the points are set so as to retain the switch-line open, the spring is acted upon at the opposite end in a manner strictly similar to that just described, and, consequently, performs a similar function in an opposite direction.

It may here be observed that the collars *b b'* are made sufficiently broad to prevent them from falling down on either side of the nuts *p p* when the spring is compressed.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, in a railroad safety switch-rod, of the bifurcated rod E, provided with collars *b b'*, with the rod F, provided with washers *e e*, and spring *a*, substantially as described.

This specification signed and witnessed this 6th day of May, 1875.

DAVID ROWE.

Witnesses:

F. M. REYNOLDS,

J. D. BOUMAN.