

(No Model.)

W. E. BROWN & L. H. SMITH.
RAILWAY SWITCH.

No. 488,263.

Patented Dec. 20, 1892.

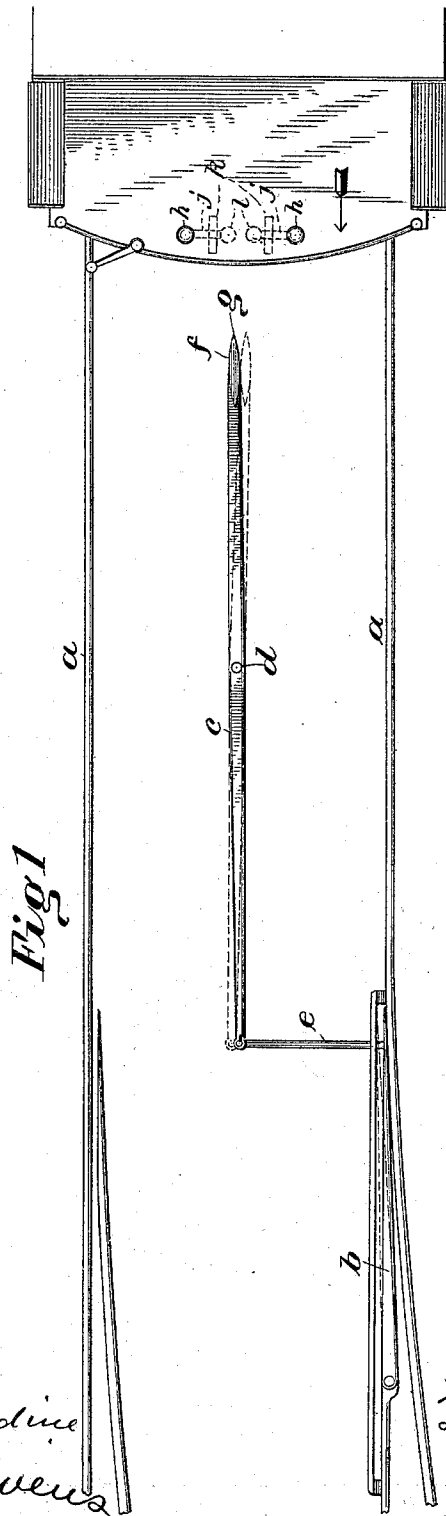


Fig 1

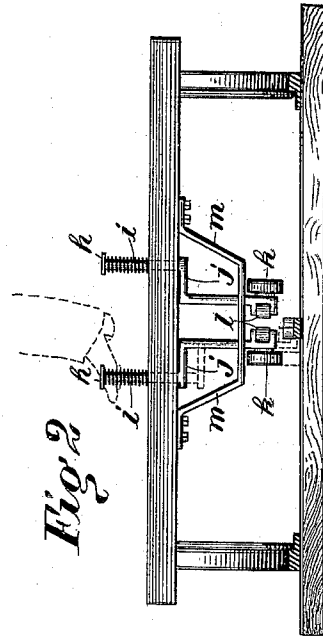


Fig 2

Attest;
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UNITED STATES PATENT OFFICE.

WILLIAM E. BROWN, OF WILAWANA, PENNSYLVANIA, AND LEWIS H. SMITH,
OF ELMIRA, NEW YORK, ASSIGNORS OF ONE-THIRD TO ALBERT G. MILLER,
OF ELMIRA, NEW YORK.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 488,263, dated December 20, 1892.

Application filed March 12, 1892. Serial No. 424,700. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM E. BROWN, residing at Wilawana, in the county of Bradford and State of Pennsylvania, and LEWIS H. SMITH, residing at Elmira, in the county of Chemung and State of New York, citizens of the United States, have invented certain new and useful Improvements in Railway-Switches; and we do 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 the letters of reference marked thereon, which form a part of this specification.

Our invention relates to that class of railroad switches adapted to be operated by a device suspended from a passing car, and our object is to provide more simple, durable, cheap and effective mechanism for accomplishing such a purpose.

To this our invention consists in the peculiar features and combination of parts, more fully described hereinafter and pointed out in the claims.

In the accompanying drawings: Figure 1 represents a plan of our device as applied to an ordinary street car, and Fig. 2 an end view of the car.

The reference letter *a* denotes the rails of a track, provided with a switch tongue *b*. Midway between the rails and extending substantially parallel therewith is located a lever *c* fulcrumed near its center at a point *d*. One end of this lever is attached to the free end of the switch tongue *b* by means of a rod *e*, and the other end of the lever has upon it an upwardly projecting cam *f*. This cam is oblong or oval in general outline to form a point *g* and to permit it to be more readily operated by the arms attached to the passing vehicle. The mechanism on the vehicle by means of which the switch is operated consists of two vertically movable rods *h*, provided with springs *i* which normally hold them in elevated adjustment. That portion of the rods which extends beneath the platform of the car is provided with an elbow portion *j* which ex-

tends toward the center of the car and brings the lower portion of the rods closer together. The lower ends of the rods are provided with rollers *k* adapted to be forced down against the ground, and smaller rollers *l*, which are located opposite the rollers *k* and serve to reduce friction between the cam *f*, when the rods are forced down to bring them in contact with the curved sides thereof. The rods *h* are braced by hangers *m* through which they pass.

From this construction it will be seen that all that is necessary to actuate the switch tongue as the car approaches it is to depress either one of the rods *h* which depression will force the rollers *k* down in contact with the ground or pavement under the car and at the same time bring the antifriction roller *l* in line with one of the curved sides of the cam so that when the car reaches the cam it will engage one side thereof and throw the switch to the right or left. When the driver depresses the rod *h* as shown in Fig. 2 the antifriction roller will be brought into a position to strike the side of the cam *f* and throw the switch to the left as shown in dotted lines in Fig. 1, in which position it will remain until the left hand rod *h* is depressed to change it.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. The combination with a lever for actuating the switch of a pair of spring-actuated arms depending from the car and having rollers *k* and *l* fixed to their lower end, substantially as described.

2. The combination with the herein described lever for actuating a switch, of a pair of inwardly bent arms depending from a car, springs for actuating the arms, hangers through which the arms pass, and two sets of rollers fixed to the arms, one for supporting or carrying the same and the other for actuating the switch, substantially as described.

3. The combination with the herein described lever for actuating a switch, of one or more arms depending from a car, and two sets of rollers secured to the lower end of the

arm or arms, one set serving to engage and actuate the lever and the other set being used to support the arm to which it is attached, substantially as described.

- 5 4. The combination with a railway switch of a lever located between the rails having one end connected to the switch, a cam fixed on the other end, a pair of inwardly bent spring-actuated arms depending from the car,
10 and rollers *k* and *l* secured to the lower ends

of the arms, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM E. BROWN.
LEWIS H. SMITH.

Witnesses:

HARRY M. CLARKE,
CHAS. H. KNIPP.