(No Model.)

A. AYRES.

RAILROAD SWITCH.

No. 317,434. Patented May 5, 1885.

Fig: 1.

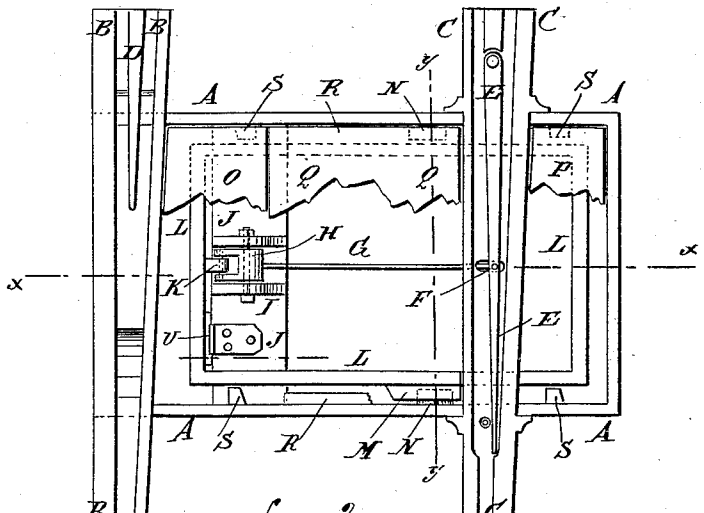


Fig: 2.

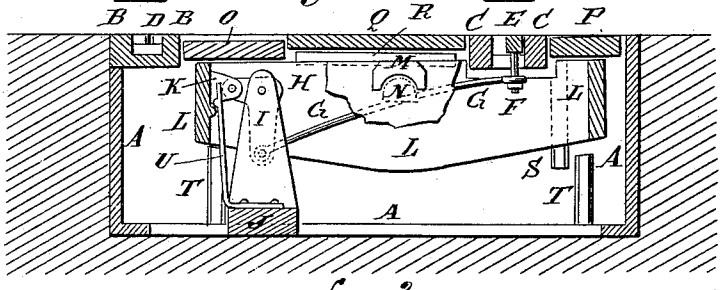
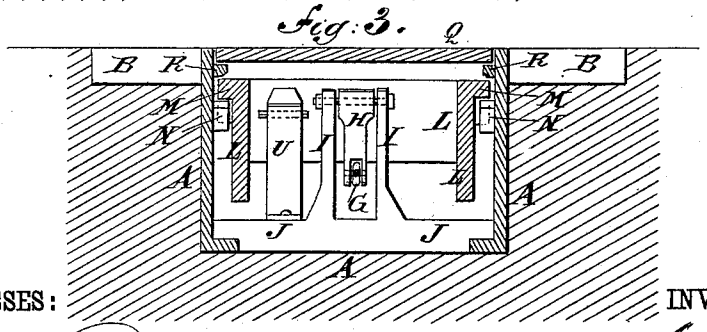


Fig: 3.



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UNITED STATES PATENT OFFICE.

ABRAHAM AYRES, OF NEW YORK, N. Y.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 317,434, dated May 5, 1885.

Application filed February 19, 1885. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM AYRES, of the city, county, and State of New York, have invented a new and useful Improvement in Railroad-Switches, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a railroad-switch to which my improvement has been applied. Fig. 2 is a sectional elevation of the same, taken through the line *x x*, Fig. 1, part of the rocking frame being shown in side elevation. Fig. 3 is a sectional elevation of the same, taken through the line *y y*, Fig. 1.

The invention relates to that class of railroad-switches that are operated by the weight of the horses drawing the cars, and has for its object to prevent the rebounding of the rocking frame, causing a partial return of the tongue after it has been shifted by the movement of the said rocking frame under the weight of a horse.

The invention consists in the combination, with the stationary frame and the rocking frame of a railroad-switch, of a spring attached to one of the said parts and pressing against the other part, whereby the rebounding of the said rocking frame after being rocked is prevented, as will be hereinafter fully described.

A represents the case or frame of the switch, which is open at top and bottom, and is designed to be sunk in the road-bed with its upper edge flush with the surface of the said road-bed.

B C are the switch-plates, which are placed in recesses in the upper edge of the frame A so that their upper surfaces may be about upon a level with the upper edge of the said frame A; or the switch-plate B can be set in the ground at the end of the frame A. The plate B is made with a stationary tongue, D. The plate C is made with a movable tongue, E, which is hinged at its base to the said plate C at the fork of its groove.

To the middle part of the tongue E is attached a pin, F, which passes down through a slot in the switch-plate C, and with its lower end is connected, by a nut or other suitable means, the end of a rod, G. The other end of the rod G is pivoted to the end of the downwardly-projecting long arm of the elbow-lever H, which is pivoted at its angle to and between the upper ends of two standards, I, formed upon or attached to the plate or bar J, attached to or cast in one piece with the frame A. The end of the short arm of the elbow-lever H is pivoted to a lug, K, formed upon the end of the frame L.

Upon the centers of the upper parts of the side bars of the frame L are formed lugs M, which are concaved upon their lower sides to receive and rest upon the rounded upper sides of the lugs N, formed upon the upper parts of the sides of the frame A, so that the frame L will rock upon the said lugs N.

Upon the upper sides of the end parts of the frame L are formed, or with them are connected, plates O P, so that the said frame L will be rocked to set the tongue E by the weight of a horse walking upon one or the other of the said plates O P. When the plates O P are cast solid with the frame L the lug K can be cast upon the lower side of the plate O. The space between the plate O and the switch-plate C is covered by a stationary plate, Q, the ends of which rest upon cleats or shoulders R, formed upon the inner upper parts of the sides of the frame A. Lateral movement of the rocking frame L is prevented by cleats S, formed upon the upper parts of the sides of the frame A, and the downward movements of the ends of the said rocking frame L are limited by cleats or projections T, formed upon the lower parts of the sides of the frame A.

To the plate or bar J, or some other part of the frame A, is attached the lower end of a spring, U, the upper part of which presses against the end or side of the rocking frame L to hold the said rocking frame from rebounding after being rocked in either direction, and thus causing a partial return of the tongue E to its former position.

The friction between the spring U and the rocking frame L can be increased, if desired, by forming a cross-rib upon the said spring to pass over a corresponding cross-rib or depression in the said rocking frame.

By this construction the operation of the switch is made more reliable.

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

In a railroad-switch, the combination with the stationary frame A and the rocking frame L, of a spring, U, substantially as herein shown and described, whereby the rebounding of the said rocking frame after being rocked is prevented, as set forth.

ABRAHAM AYRES.

Witnesses:

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