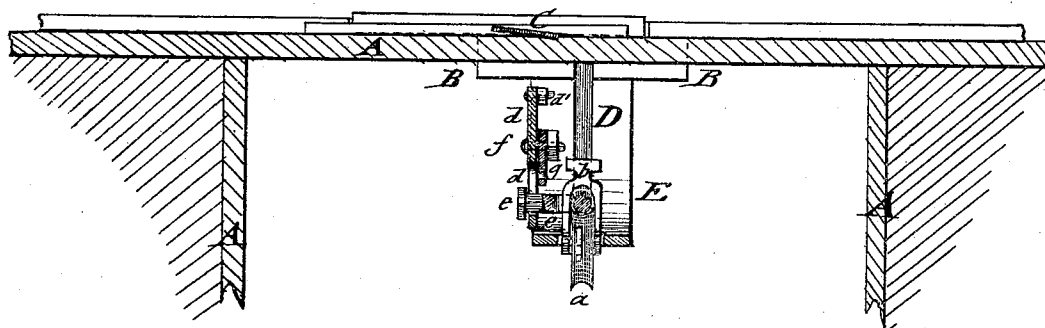
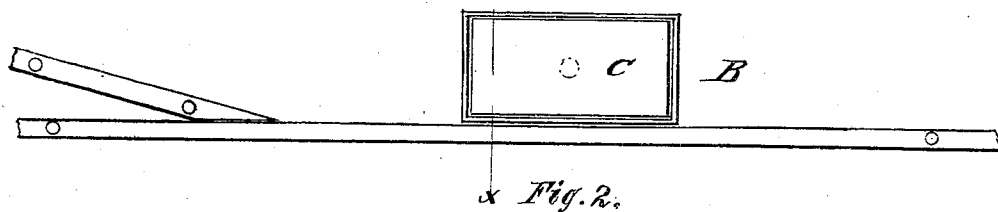
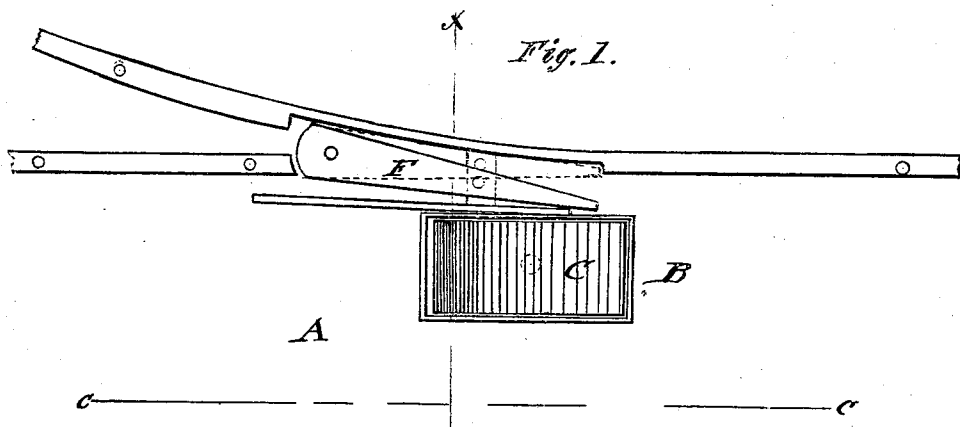


J. E. PATTISON.
Street-Railway Switches.

No. 140,433.

Patented July 1, 1873.



Witnesses,
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Per

Inventor.

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UNITED STATES PATENT OFFICE.

JOHN E. PATTISON, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN STREET-RAILWAY SWITCHES.

Specification forming part of Letters Patent No. **140,433**, dated July 1, 1873; application filed May 5, 1873.

To all whom it may concern:

Be it known that I, JOHN E. PATTISON, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Switch, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view of my improved switch; Fig. 2, a vertical transverse section of the piston and lever arrangement on the line *c c*, Fig. 1; and Fig. 3 is a vertical transverse section of track and oscillating platform, showing side elevation of piston and lever arrangement on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention is an improvement in the class of switches which are operated by the weight of the draft animal applied to a tilting or oscillating platform; and it consists in the construction and arrangement of two hinged, connected, and reciprocally operating platforms, and other parts in combination therewith, as herein described, and explicitly set forth in the claim.

In the drawing, A represents the casing or frame-work of suitable material, which is laid on the ground below the track; B, the boxes with oscillating platforms C of the length of a horse, placed sidewise and parallel to the track-rails. The bottoms of the boxes C are perforated equidistant from the central axis of the track, to admit the passage of the semicircular piston-rod, D. The ends of the piston-rod D bear on the oscillating platforms C, which may be pivoted to boxes B, or placed loosely on the piston ends and guided by grooves to the boxes, or connected to the piston ends in other suitable manner. The platforms C receive the weight of the draft animals of the car, and act as a piston-head, forcing that piston end downward on which the weight of the animal rests. The other platform is raised thereby by the opposite end of the piston-rod D, so that a reciprocating motion of the same is produced as the platforms are alternately forced down by the horses passing over the main or side track. The piston-rod D is of suitable material, and moves on a friction-roller, *a*, placed centrally to the piston ends into a forked vertical post or standard, *b*, secured either centrally below the track, or on a semicircular metallic band, E, as indicated in the drawing.

Band E may be cast in one piece with the boxes B, or riveted to the outer sides of the same, and must be of sufficient strength to support the bearing of the semicircular piston D. The ends of the piston protrude slightly above the level of the roadway, lifting thereby the platforms C. The action of the animals on the piston-rod D is transferred by suitable lever connection to the switch-rail, the vertical lever *d* being provided with a pronged head, *e*, applied firmly to piston D around post *b*, so that the prongs are equidistant from forked standard *b*, and their distance corresponding to the length by which one piston end projects above the level of the track when the other is depressed. The fulcrum *f* of lever *d* may be attached to the vertical post *b*, or to a connecting bar or piece, *g*, of band E, the other end being pivoted to the horizontal lever-rod *d* connected to switch-rail F. The fulcrum *f* may be made adjustable to shorten and lengthen the lever, as required.

By the arrangement of a reciprocating piston-rod in connection with two narrow platforms, the switch can be adjusted from the main track to the side track, and vice versa, as required, whether one or two animals are used for the car. The animal whose weight is not required passes over the space between the platforms.

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

1. The reciprocating semicircular piston D, in combination with the oscillating platforms C arranged in boxes B, and operated by the weight of the draft animals, forked post *b*, or supporting band E, switch-levers *d d'*, and casing A, substantially as and for the purposes described.

2. The vertical lever *d* having pronged head *e*, applied to piston D around post *b*, to limit motion of piston, substantially as specified.

3. Boxes B, having perforated bottoms for passage of piston-rod D and platforms C, as described.

The above specification of my invention signed by me.

JOHN E. PATTISON.

Witnesses:

P. A. CONAND,
ANDREW HERO, Jr.