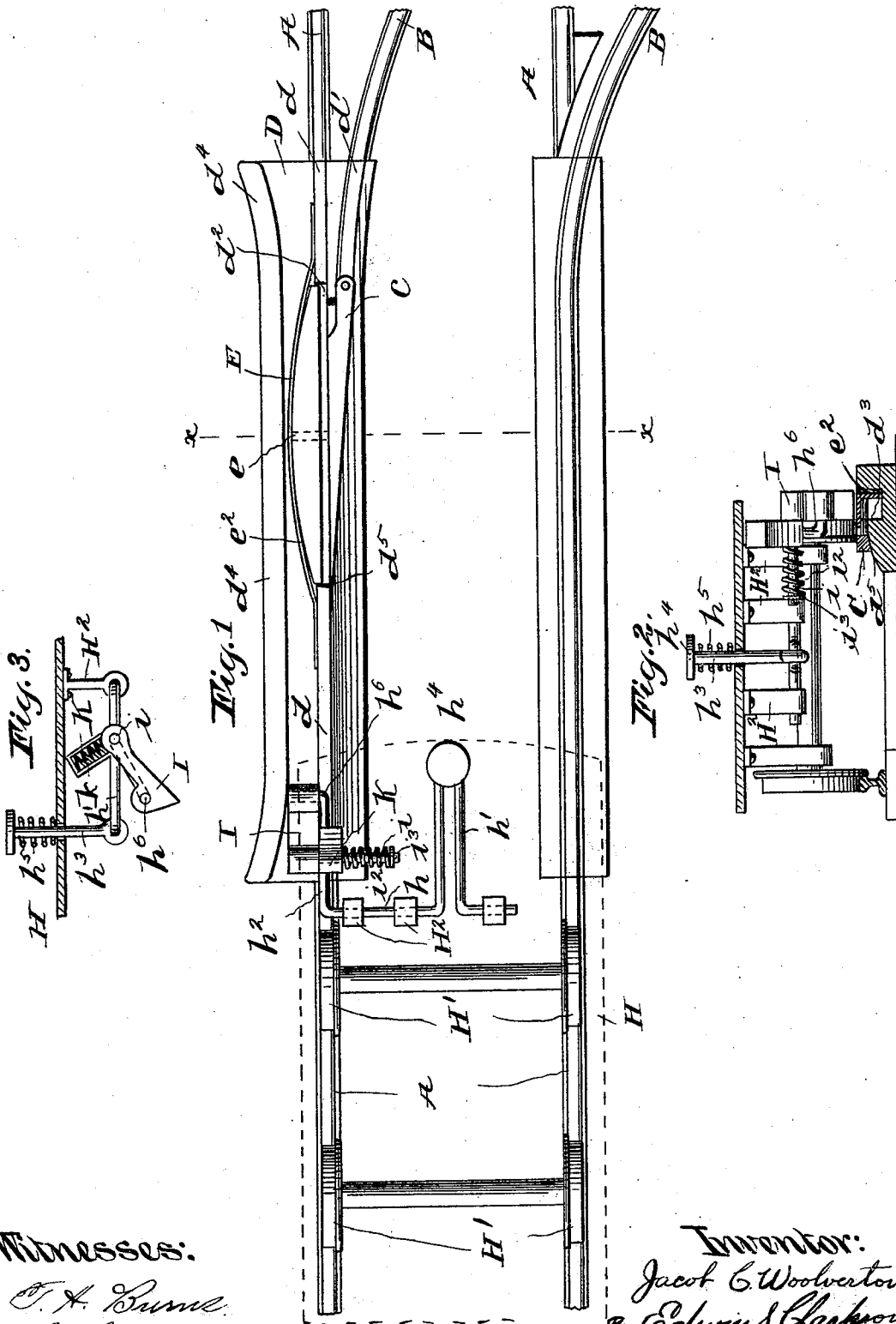


(No Model.)

J. C. WOOLVERTON.
RAILROAD SWITCH.

No. 517,090.

Patented Mar. 27, 1894.



Witnesses:

T. A. Burns.
C. Sumnerford

Inventor:

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UNITED STATES PATENT OFFICE.

JACOB C. WOOLVERTON, OF BROOKLYN, NEW YORK.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 517,090, dated March 27, 1894.

Application filed May 12, 1893. Serial No. 473,956. (No model.)

To all whom it may concern:

Be it known that I, JACOB C. WOOLVERTON, a citizen of the United States, and a resident of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Railroad-Switches, of which the following is a specification.

My invention relates to an improvement in switches for street railways generally but more particularly to cable and electric railways; and it consists of the construction and arrangement of parts and combination of parts as will be hereinafter more fully set out and claimed.

The object of my invention is to provide a switch which may be operated from the car by the driver, thus obviating the necessity of the driver or conductor leaving the car or stopping the car and the employment of a switch tender by placing a lever on the platform of the car which lever extends above and below the platform which the driver operates with his foot thus operating mechanism underneath the car and the switch.

In the drawings Figure 1 is a plan view of a switch with my invention applied thereto. Fig. 2, is a section of Fig. 1 on the line X—X. Fig. 3 is a detail view of the track and switch plate.

A represents the main track, and B the side or switch track.

At the juncture of the main and switch tracks is pivoted the switch tongue C.

D is the switch plate, on which the tongue C is pivoted. This plate has projections d and d' formed on it that form a continuation of the rails A, B. The rail d has a cut away portion d^2 , and under this cut away portion an opening d^3 is made.

E is a sliding rail, one side of which is straight while the other side is curved. This rail E is adapted to slide in the cut away portion d^2 while a pin or rod e , which is formed on the under side of this rail E, is adapted to work in the opening d^3 . The rail E is preferably formed L shaped.

e^2 is a flexible band secured to the rail E and to the rail d on each side of the cut away portion.

d^4 is a projection formed on the extreme outer edge of plate D the ends of which flare

outwardly. The inner portion of the switch plate D is convex as at d^5 so as to prevent water, &c., pooling on it.

H represents the platform of a car and H' the wheels thereof.

H² are brackets secured underneath the car, in which is swung the frame h , which has a link h' and arm h^2 extending toward the front of the car. A rod h^3 is loosely secured to the link h' and extends up through the car platform and is provided with a head h^4 .

h^5 is a spiral spring secured around the rod h^3 and adapted to be compressed between the head h^4 and the car platform.

Loosely secured to the arm h^2 , which is bent at right angles as at h^6 , is a shoe I.

K is a bracket extending upward from the arm h^2 in which is secured a spiral spring k .

On the rear of the shoe I is secured a rod i around which is secured a spiral spring i^2 , said rod i passing through the bracket K, under the spring k , and extending beyond the bracket, the spring i^2 being confined between the bracket and the head i^3 of the rod.

The operation is as follows: To open the switch, the driver presses, with his foot upon the rod h^3 thereby lowering the frame h and its connections until the shoe I is between the track rail d and the projection d^4 . The shoe is held down in that position by the driver until it strikes, in its passage the sliding rail E which, sliding in the cut away portion is pushed over toward the switch tongue C by reason of the shoe I forcing its passage between the rail E and projection d^4 , until the pin or rod e strikes the switch tongue C thereby forcing it away from the rail d thus throwing the switch open. As soon as the car has passed the switch the driver releases the rod h^3 of its pressure and the shoe and frame to which it is attached swings up to its normal position by means of the spiral spring h^5 . As soon as the car has passed the switch the rail E is drawn back to its normal position by means of the flexible band or strip e^2 while the switch is closed by means of a spring suitably arranged for such purpose.

The shoe is arranged to trip if it strikes an obstacle in such a manner that no matter how the obstruction is met it will trip automatically. For instance, should the shoe I strike an obstacle the rear end of the shoe would be

raised carrying with it the rod *i* which moves under the spring in the bracket *K* and as soon as the obstruction is passed the spring *k* forces the rod *i* and shoe back to their normal position.

I do not herein claim the specific switch operating shoe and its mechanism attached to the car as it will form the subject matter of another application which I am about to file.

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

1. In a switch, the switch plate having rails formed thereon one of which has a cut away portion, a rail adapted to slide in said cut away portion and a switch tongue pivoted on said plate and adapted to be operated by said sliding rail, when moved, substantially as described.

2. In a railway switch, the switch plate having rails formed thereon, one of which has a cut away portion and an opening below said portion, a rail, provided with a pin or rod said rail and pin adapted to work in the cut away portion and opening respectively; and a switch tongue pivoted to said plate, substantially as described.

3. In a railway switch, the switch plate having rails formed thereon, one of which has a cut away portion, a rail adapted to work in said cut away portion, an elastic band or strip connecting said movable rail with the main rail and a switch tongue pivoted on the switch plate and a spring holding said tongue normally closed substantially as described.

4. In a railway switch, the switch plate, having rails formed thereon one of which has a cut away portion; a rail adapted to work in said cut away portion; a projection formed on the outer edge of said switch plate; and a switch tongue pivoted on said plate, in combination with a car having shoe adapted to engage the projection, and movable rail, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 24th day of April, 1893.

JACOB C. WOOLVERTON.

Witnesses:

THEODORE CLARKSON,
WILLIAM H. CLARKSON.