A. C. M. DEURLOO & C. VANDERWEEL.

STREET RAILWAY SWITCH.

APPLICATION FILED MAR. 27, 1911.

1,026,431.

Patented May 14, 1912.

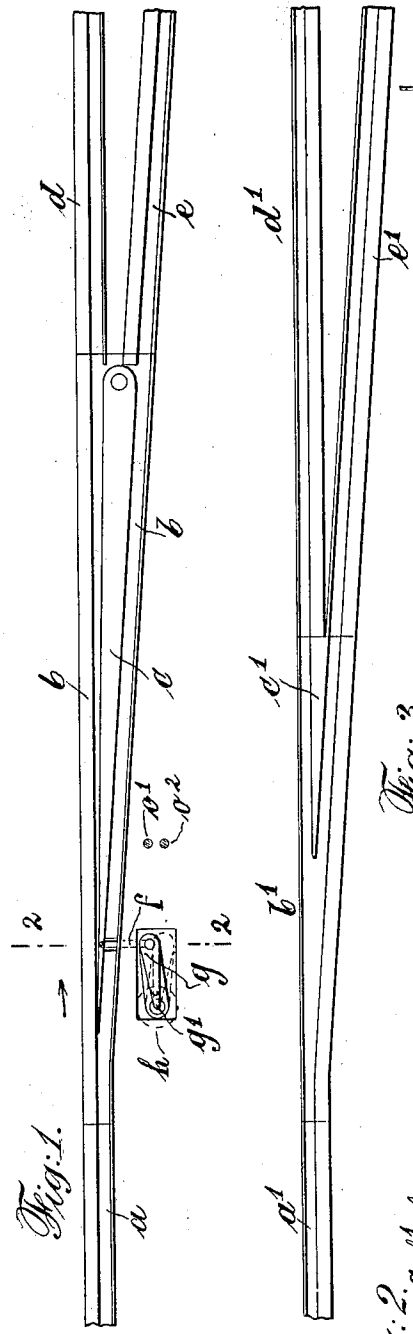


Fig. 1.

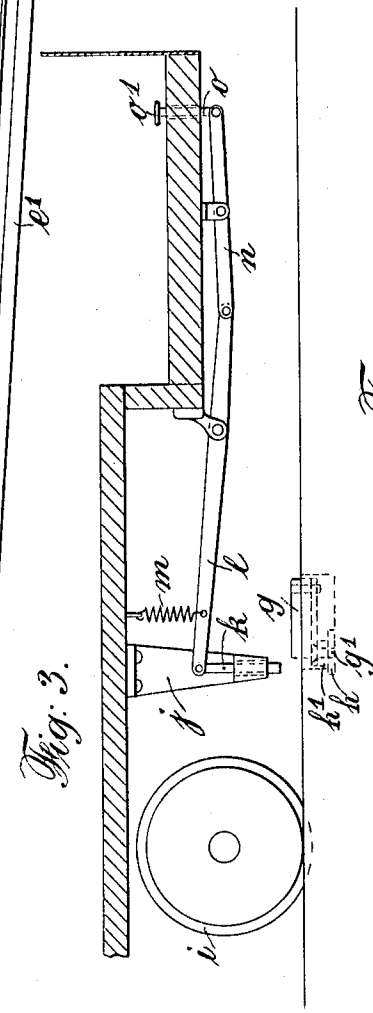


Fig. 3.

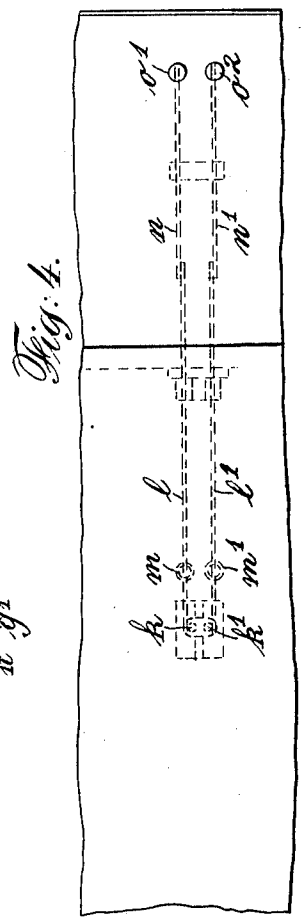


Fig. 4.

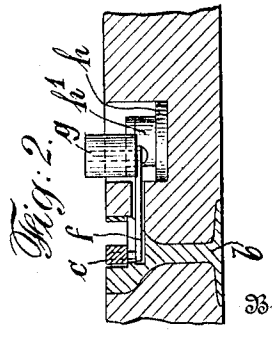


Fig. 2.

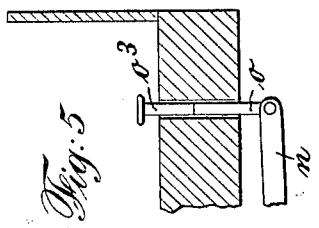


Fig. 5.

Witnesses:
Max B. A. Doring
Corinne Myers.

Inventors:
Anthony C. M. Deurloo
Cornelius Vanderweel
By their Attorney
L. K. Böhme.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ANTHONY C. M. DEURLOO AND CORNELIUS VANDERWEEL, OF LODI, NEW JERSEY.

STREET-RAILWAY SWITCH.

1,026,431. Specification of Letters Patent. Patented May 14, 1912.

Application filed March 27, 1911. Serial No. 617,022.

To all whom it may concern:

Be it known that we, ANTHONY C. M. DEURLOO and CORNELIUS VANDERWEEL, both citizens of the United States of America, and residents of Lodi, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Street-Railway Switches, of which the following is a specification.

This invention relates to improvements in street railway switches and pertains to that type of switches which are operated from the front platform of a car while said car is in motion. When a switch of this kind is used the wages for switchmen is saved whereby the running expenses of a system are greatly reduced. In addition to this main object it has been sought to produce a compact and durable device. By simplicity in construction the cost of production has been reduced and care has been taken to provide a device that may be easily applied to any existing system of street railways, all as will be fully described hereinafter with reference to the accompanying drawings in which:

Figure 1 represents in plan view a track to which a switch is applied that embodies in desirable form the present improvements. Fig. 2 is a cross section on an enlarged scale on line 2—2 of Fig. 1. Fig. 3 shows in side elevation the lower part of a car with the switch operating mechanism attached thereto. Fig. 4 is a top plan view of Fig. 3 and Fig. 5 is a detail view of a modified form of part of the switch operating mechanism.

Similar characters of reference denote like parts in all the figures.

In the drawings in Fig. 1, a, a^1 represent the single rails of a track. The rail a has connected thereto a piece or part b that enlarges gradually toward the end opposite the rail a for the purpose of providing space for the tongue c, pivoted thereto in the usual manner. A like piece b^1 forms the continuation of the rail a^1 and a tongue c^1 is provided thereon which is stationary. Beyond the tongue c, c^1 there are two rails on each side. The tongue c extends into the rails d, e, and the tongue c^1 into the rails d^1, e^1. Cars passing over the rails d, d^1 or e, e^1 will shift the movable tongue c by the moving front wheel of the car in the usual manner. However cars passing in the opposite direction may find the switch closed against the intended movement of said car. In order to effect the operation of the switch without the aid of switchmen we have devised the switch forming the subject matter of this invention. This novel switch is operated by the motorman directly from the front platform of the car.

The novel switch comprises essentially a movable rod secured to the front portion of the movable tongue, a wedge shaped lever pivotally connected to the second end of the rod and also pivotally connected with its opposite narrow end to suitable supporting members, and mechanism provided on the lower part of the car for operating the switch.

As shown in Figs. 1 and 2 the rod f is pivotally secured to the narrow front portion of the tongue c. The rod f passes through an opening in the side wall of the part b and its second end is pivotally connected to the wedge shaped lever g. The bottom portion of the wedge shaped piece g has a lateral extension with opening through which passes a pivot g^1. This pivot g^1 passes into a short neck or hub h^1 of a bottom plate h which rests in the ground like the rails and the piece b. This switch is operated by the mechanism located on the lower part of the car. Before the front wheel i of the car there is a support j attached to the bottom portion of the car floor. This support carries a vertical pin k connected to a lever l pivotally supported on the front platform, as shown in Fig. 3. A spring m supported on the car floor and engaging with its other end the inner portion of the lever l near the support j keeps the lever and pin normally in a raised position. The other end of the lever l is linked to a lever n pivotally secured underneath the front platform. The second end of the lever n connects with a rod o provided with a top knob o^1 adapted to be pressed down by the foot of the motorman. When the rod o is pressed down the inner end of the lever n rises and carries the portion of the lever l along that is pivotally connected thereto. Now the pin k descends and upon reaching the wedge shaped lever or pin g travels along same from the narrow portion to the wide portion moving same sidewise because the pin travels in a straight line. The wedge g carries along the pin f which in turn draws the movable tongue c over to the other side whereby the track is opened

for the car to pass in the desired direction. The wedge shaped piece g is then in the position indicated in dotted lines in Fig. 1. Assuming that another car comes along on the track a, a^1, and that the wedge shaped piece g is in the position indicated in dotted lines, then the motorman has to operate a second device of the kind described constructed exactly like the device above referred to, composed of a pin k^1, a lever l^1, a spring m^1, a lever n^1, a rod on said lever n^1 having a knob o^2 to be pressed down by the motorman. The pin k^1 will then shift the wedge shaped piece g in the opposite direction as above described and thereby place the tongue c back into its original position shown in Fig. 1, in full lines. Thus the new car coming on can pass along the rails e, e^1.

In order to prevent passengers tampering with the knobs or buttons which are operated by the motorman when the car travels in the opposite direction the rods o may be made in two parts as shown in Fig. 5 so that the motorman when leaving the one platform and going to the other may lift out the upper half o^3 with the button attached thereto. Passengers are then prevented from operating the device either by accident or intentionally.

We claim as our invention:

In a street railway switch, a wedge shaped piece a rod pivotally connected with said piece, a lateral extension on the lower portion of said wedge, and a stationary bottom plate in the ground having a short neck, and means for actuating the device.

In witness whereof we have hereunto set our hands this 24th day of March, 1911.

ANTHONY C. M. DEURLOO.
CORNELIUS VANDERWEEL.

Witnesses:
CORINNE MYERS,
VERA PAULSEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."