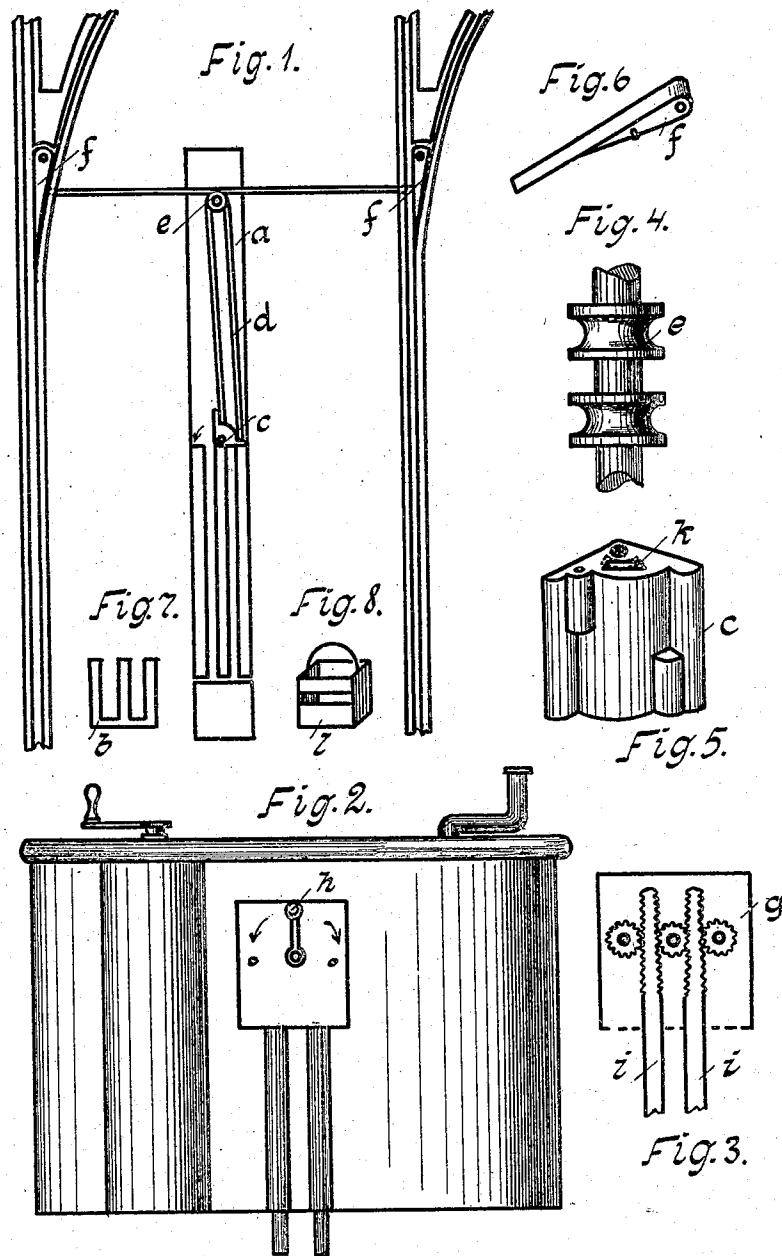


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 SWITCH FOR TRAMWAYS.
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942,288.

Patented Dec. 7, 1909.



Witnesses.
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UNITED STATES PATENT OFFICE.

NATHAN SCHWARZ, OF POSEN, GERMANY.

SWITCH FOR TRAMWAYS.

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Specification of Letters Patent.

Patented Dec. 7, 1909.

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To all whom it may concern:

Be it known that I, NATHAN SCHWARZ, subject of the King of Prussia, and resident of Posen, Germany, have invented certain new and useful Improvements in Switches for Tramways, of which the following is a specification.

The present invention relates to a switch for tramways which is constructed in such a manner that the conductor of the tramcar can move the switch without stopping the car or without leaving the platform.

The improved device is shown in the accompanying drawings.

Figure 1 in ground plan. Fig. 2 is a view of the apparatus for operating the switch from the car. Fig. 3 represents the inner construction of the apparatus shown in Fig. 2. Fig. 4 shows the guide-rollers for the cables. Fig. 5 represents the guide-piece for the shifting of the cables. Fig. 6 shows the switch-piece to be placed between the fixed and the movable rail. Fig. 7 is a cross section of the auxiliary rail. Fig. 8 represents the dust-collector.

The improved switch is constructed as follows:—

At the place where the switch is to be installed, an auxiliary rail *a* is fixed between the rails. This auxiliary rail *a* has two longitudinal guide grooves *b* extending over half its length. The guide piece *c* for the shifting of the cables *d* is pivoted upon the auxiliary rail *a* at the end of the guide grooves *b*. This guide piece *c* has two borings for the reception of one of the ends of the cables *d*, *d*, the other ends of which are attached to the corresponding switch pieces *f*, *f*, after they have been guided over the guide rollers *e*, *e*.

The dust collector *l* is located below the auxiliary rail *a* so that the dust removed from the guide grooves *b*, *b* can be collected in the same, the dust collector being provided with suitable slots.

At the front end of the car the apparatus for the operating of the switching device is fixed in easy access for the conductor of the car. This apparatus consists of a casing *g* in which pinions are provided adapted to be revolved in both directions by means of a

hand-lever *h*. Between said pinions the toothed upper ends of vertical bars *i*, *i* are guided so that the one of the bars is lifted when the other bar descends according to the direction in which the hand lever is turned.

The device operates as follows:—If the switch has to be moved to the left, the conductor of the tramcar turns the hand-lever *h* to the right, so that the right hand side bar *i* descends. The end of this bar penetrates into the corresponding guide groove *b* of the auxiliary rail *a* in which it slides along until it strikes against the guide piece *c* which thus is swung around its pivot and shifts the cables *d* so that the left hand side switch *f* is moved. To secure the guide piece *c* in its positions a blade spring *k* is provided which engages with the corresponding guide groove *b* of the auxiliary rail *a*.

I claim:—

An improved switch for tramcars adapted to be operated from the car comprising in combination, an auxiliary rail fixed between the ordinary rails, having two longitudinal guide grooves in its upper surface, a guide piece for shifting the cables pivoted upon said auxiliary rail in front of the guide grooves, means for securing said guide piece in its position, two cables fixed with one end to said guide piece, the one at the front end and the other at the rear end of the same, switch pieces between the fixed and the movable rails to which the other ends of said cables are attached and rollers for guiding said cables, means for operating the guide piece from the car consisting of vertical rods and a suitable device for lowering the one or the other of said rods so that it penetrates into the corresponding guide groove of the auxiliary rail and strikes against the guide piece to make the same swing around its pivot, substantially as described and for the purpose set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

NATHAN SCHWARZ.

Witnesses:

BRUNO BERENDT,
KURT BERG.