

G. PASCHKE.

DEVICE FOR OPERATING SWITCHES FOR STREET RAILWAYS.

No. 539,823.

Patented May 28, 1895.

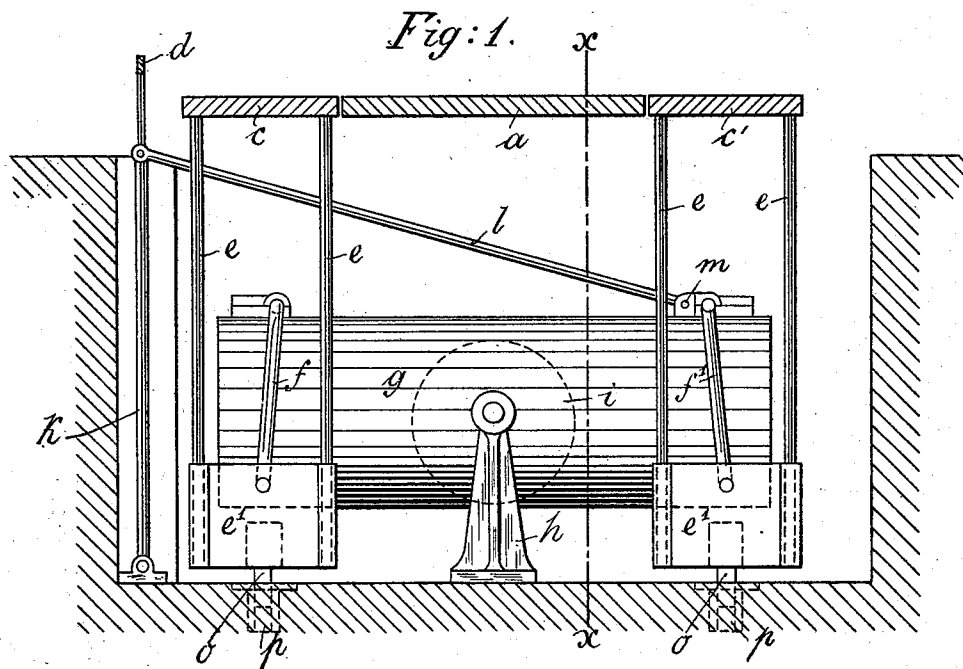
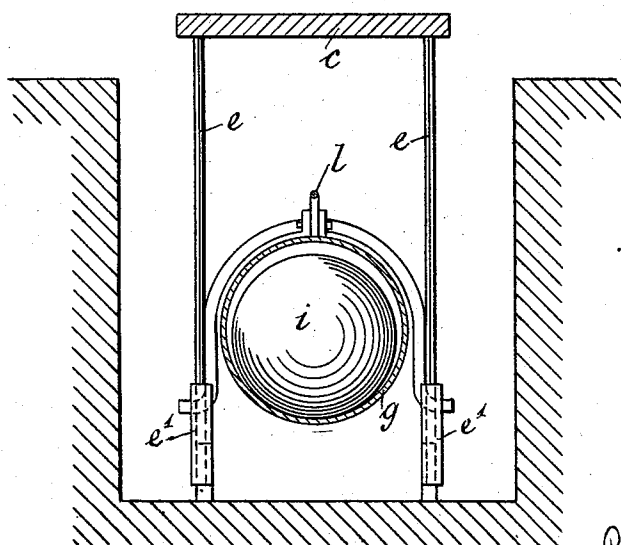


Fig:3.



Witnesses

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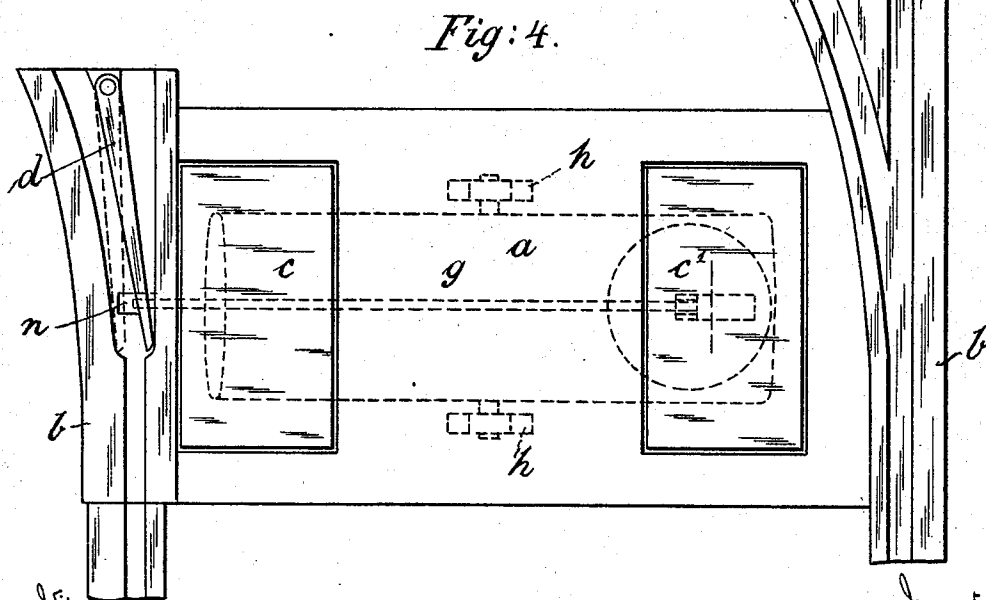
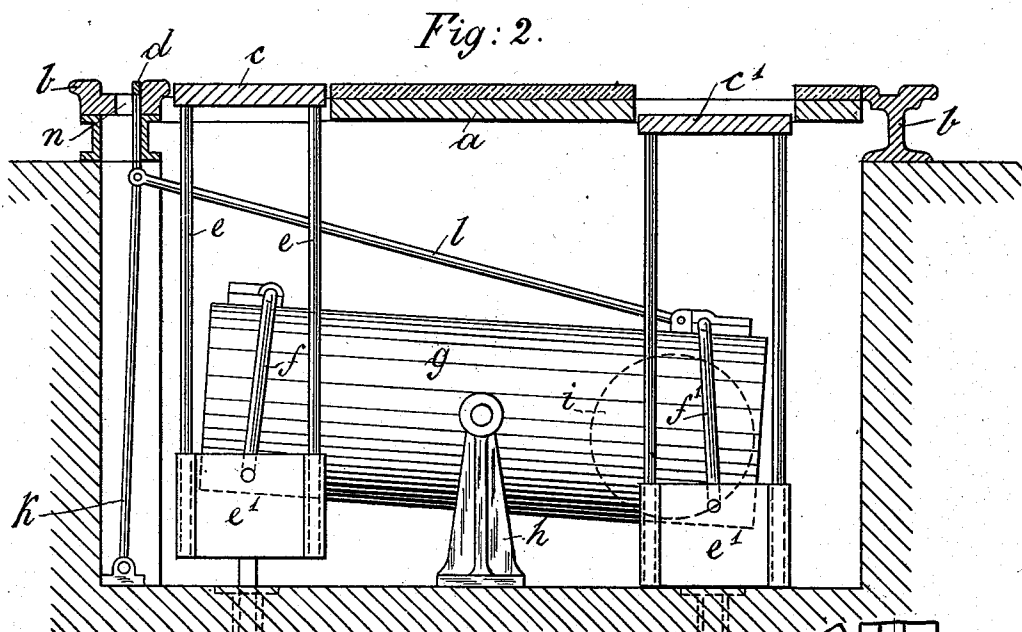
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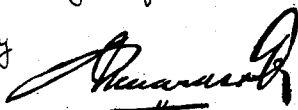
DEVICE FOR OPERATING SWITCHES FOR STREET RAILWAYS.

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Witnesses
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UNITED STATES PATENT OFFICE.

GOTTHELF PASCHKE, OF BERLIN, GERMANY.

DEVICE FOR OPERATING SWITCHES FOR STREET-RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 539,823, dated May 28, 1895.

Application filed February 26, 1895. Serial No. 539,788. (No model.)

To all whom it may concern:

Be it known that I, GOTTHELF PASCHKE, butcher, a subject of the Emperor of Germany, and a resident of 148 Wilhelmstrasse, in the city of Berlin, in the Empire of Germany, have invented a new and Improved Device for Operating Switches for Street-Railways and Similar Purposes, of which the following is a full, clear, and exact description.

This invention relates to a device for operation the sliding tongues of switches in connection with street railways and to hold same in the open or closed position so as to avoid an accidental displacement by the wheels of the car or vehicle coming in contact with the point of the tongue. At the same time, it is possible by this arrangement to reverse the position of the tongue by means of the wheels of the car coming in the other direction of the track. The tongue is operated directly by movable plates, arranged on the same plane as the street pavement, such plates being depressed either by the horses or by a suitable device operated by the car driver. A casing, preferably in the form of a cylinder, closed at both ends and pivotally mounted in standards is thus made to tip in the one or the other direction according to the plate depressed, and at the same time a heavy ball in said casing rolls to the corresponding depressed end of the casing and holds same in position. These movements of the casing are transmitted to the switch-tongue by suitable connecting rods.

Referring to the accompanying drawings, Figure 1 is a vertical section of the switch arrangement, the tilting casing being shown in horizontal position. Fig. 2 is a section showing the switch-tongue in its moved position—*i. e.*, for turning the car onto a branch line. Fig. 3 is a section on line *x x* of Fig. 1, and Fig. 4 a plan view of Fig. 2.

a is the street pavement in which the rails are embedded. At those parts where a switch is to be laid, the pavement is opened for receiving plates *c, c'* which operate the switch tongue *d* either by the horse treading on the plates *c, c'* or by means of a suitable device (not shown on the drawings) worked by the driver. On plates *c, c'* being thus depressed, they operate the cylindrical casing *g* through the medium of rods or supports *e* and their

connections *f, f'*. The casing *g* mounted in standard *h* is provided with a heavy ball *i* which rolls toward the depressed end of the casing and thus not only operates the tongue *d* to its extreme limit in the one or other direction, but also prevents same from accidentally falling back again.

In order to transmit the movement of the casing *g* to the tongue *d* a rod *k* turning on pivots is connected to the latter. The rod *k* is then pivotally connected at *m* to the casing *g* by the rod *l*.

The rods or supports *e* are connected at their lower ends to strong sheet-metal plates or cross pieces *e'* which latter are provided with bolts *o* screwed or riveted to same and entering the boxes or sockets *p* let into the ground. By this means the plates *c, c'* together with their rods *e* are kept in their proper position and guided during the ascending and descending movements of same. Moreover the pressure exerted on the plates *c, c'* by other vehicles passing over same is taken up by said rods *e* and cross-pieces *e'*. The cylindrical casing *g* and its connections, therefore, cannot be damaged even when very heavy wagons, &c., pass over the plates *c, c'*.

The weight of the ball *i* is such that even when the tongue *d* is more or less impeded in its movements for any reason it will cause the complete movement of the tongue *d* and retain same there, without any danger of the tongue *d* being accidentally forced back by the wheels of a car.

It will be evident that the switch of which the illustrations shown in the drawings is given as an example only, may be carried out in many different ways, without departing from the spirit of this invention. Moreover, it is not restricted to use in connection with street railways, tramways, &c., but may also be used for similar purposes.

Having now particularly described and ascertained the nature of this invention, I declare that what I claim, and wish to secure by Letters Patent, is—

1. An improved device for operating switches for street railways, consisting of the tilting casing *g* the connecting rods (*k, l*) transmitting the movements of the said tilting casing (*g*) to the switch-tongue (*d*) such casing being provided with a heavy ball moving freely

in same and securing the complete movement of the switch-tongue, also holding same in position, substantially as described and shown in the drawings.

5 2. In combination, the switch tongue, the tilting casing *g*, the ball therein, the connections from the casing to the tongue, the vertically movable plates *c*, *c'* and the connections therefrom to the opposite ends of the
10 tilting casing to operate the same reversely, substantially as described.

3. In combination the switch tongue, the tilting casing having the ball therein, the ver-

tically movable plates, the rods extending down therefrom with means for guiding the 15 parts including the cross pieces *e'* the links *f'* between the cross pieces and the tilting casing and connections from the tilting casing to the tongue, substantially as described.

In witness whereof I have hereunto signed 20 my name in the presence of two subscribing witnesses.

GOTTHELF PASCHKE.

Witnesses:

WM. HAUPT,
F. KOLLM.