

G. T. JACOBS.
Railway-Switch.

No. 163,780.

Patented May 25, 1875.

Fig. 1.

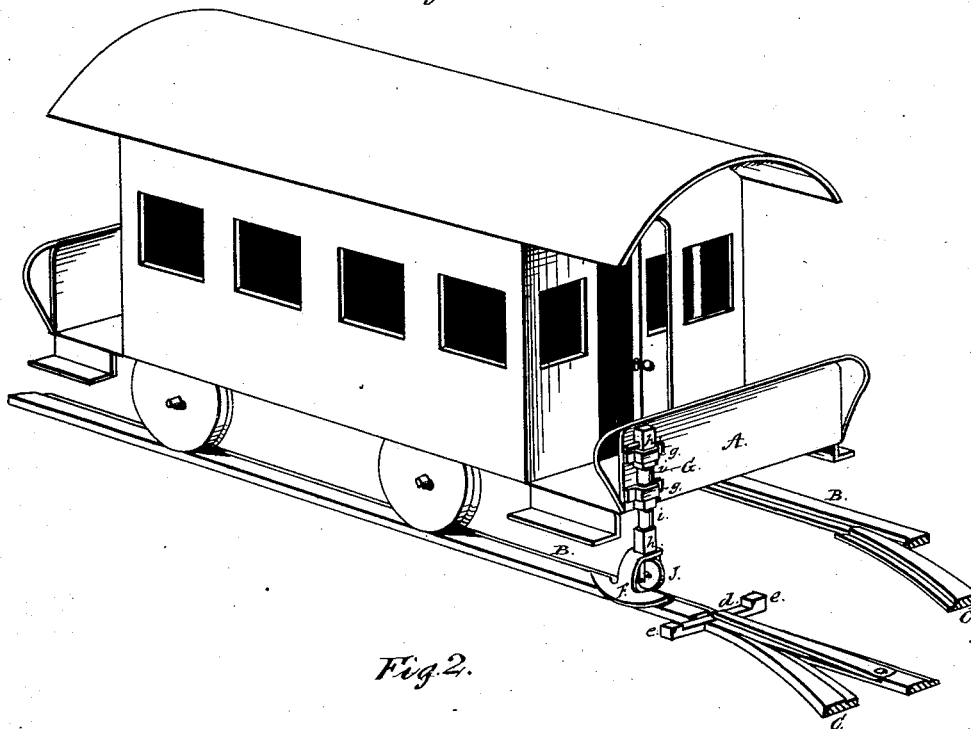
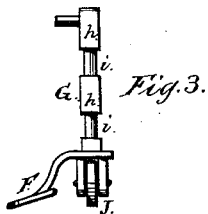
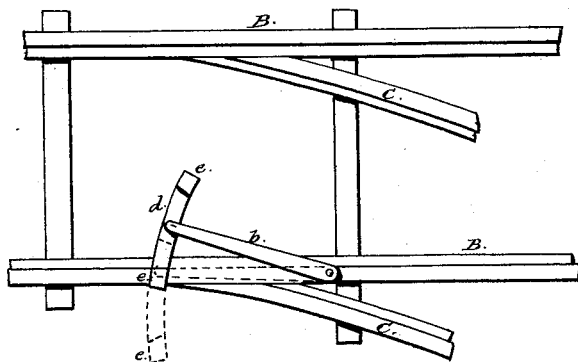


Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

GEORGE T. JACOBS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
OF ONE-HALF HIS RIGHT TO THOMAS A. MITCHELL, OF SAME PLACE.

IMPROVEMENT IN STREET-RAILWAY SWITCHES.

Specification forming part of Letters Patent No. **163,780**, dated May 25, 1875; application filed
April 1, 1875.

To all whom it may concern:

Be it known that I, GEORGE T. JACOBS, of Washington city, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Automatic Switch-Shifter for Street-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The object of this invention is to effect the required change of the switch at the intersection of two lines of tram or street railways without stopping the car or requiring the driver to leave his place; and it consists of a reversible cam placed at the lower end of a shaft under the control of the driver, which may, at will, be adjusted either to the right or left, and be depressed to cause it to engage with a suitable stud attached to the switch, so as to move it in the required direction before the arrival of the car-wheels.

That others may fully understand my invention, I will particularly describe it.

A is the front platform of an ordinary street-car, and B C represent the rails of the intersecting lines with the switch *b*, which controls the passage of the car A upon the one or the other line B C. Near the point of the said switch there is a cross-bar, *d*, with a stud, *e*, at each end, wherewith the cam F engages and pushes said switch to one side or the other, according as said cam is adjusted to open or close the same. The cam F is placed at the lower end of a vertical shaft, G, which is mounted in clips or boxes *g*, secured, preferably, to the front of the platform A and directly over the rails. The shaft G may be caused to slide up and down in its boxes *g*, so that when not required for use the cam may be raised up out of the way of any obstructions which may be on or near the rail. The shaft G is constructed with rectangular or square portions *h h*, and the boxes *g* are of

corresponding shape, so that when the said shaft is pushed down to bring the cam in position to engage with the stud *e*, as shown in Fig. 1, the same will be held from turning around by the square boxes *g*, within which the square portion of the shaft will then be. When the shaft and cam are elevated, so that the cylindrical portions come within the said boxes, it may be rotated therein, so that if at first said cam would have engaged with the outer stud and closed the switch, so as to cause the car to turn off into the lateral line, the position of said cam may be reversed and engage with the inner of said studs *e* and open said switch. It will, therefore, be seen that the switch may be automatically opened or closed at the will of the driver and by the motion of the car itself. A small gage-wheel, J, is placed at the lower end of the shaft G, so that when the shaft is pushed down to bring the cam F into operative position, said gage-wheel will run upon the track and gage the position of said cam, so that it will properly engage with the studs *e*.

It is apparent that the construction of the cam and the mode of controlling it may be considerably varied without in any way changing the nature of the invention, which essentially consists of an automatic shifter for the switches of street-railway tracks.

Having described my invention, what I claim as new is—

1. Combined with the switch *b*, provided with the studs *e e*, an adjustable and reversible cam, F, substantially for the purpose set forth.
2. The cam F, combined with the shaft G, constructed with the rectangular portions *h h* and cylindrical portions *i i*, and moving in the boxes *g g*, substantially as described.
3. Combined with the cam F and shaft G, the gage-wheel J, substantially as set forth.

GEORGE T. JACOBS.

Witnesses:

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