C. B. BARLOW.

Street Railway Switch.

No. 162,790. Patented May 4, 1875.

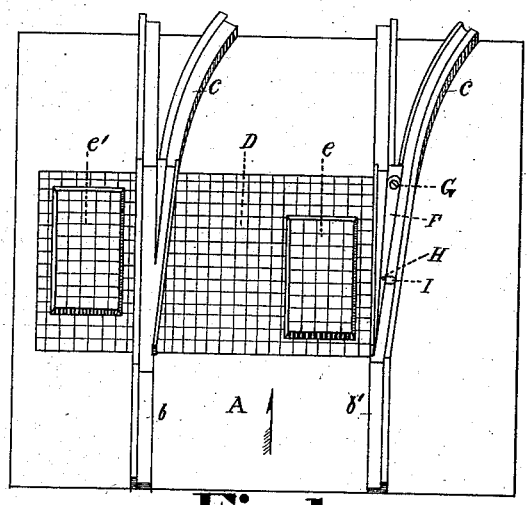

Fig. 1.

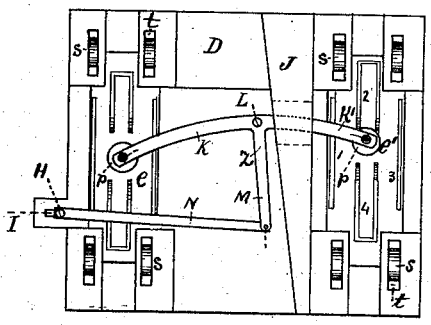

Fig. 2.

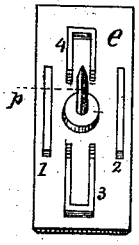

Fig. 3.

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THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

CHARLES B. BARLOW, OF PORTSMOUTH, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN I. SHAVER, OF BELLEVILLE, CANADA.

IMPROVEMENT IN STREET-RAILWAY SWITCHES.

Specification forming part of Letters Patent No. **162,790**, dated May 4, 1875; application filed February 3, 1875.

To all whom it may concern:

Be it known that I, CHARLES B. BARLOW, of Portsmouth, in the county of Rockingham, State of New Hampshire, have invented a certain new and useful Improvement in Automatic Railway-Switches, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a plan of the top of my improved switch; Fig. 2, a plan of the bottom of the same, and Fig. 3 a plan of the bottom of one of the sliding tables or platforms.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

My invention relates more especially to that class of switches which are employed on horse or street railways, being designed as an improvement upon the switch described in Letters Patent No. 151,155, issued June 2, 1874; and consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a simpler and more effective device of this character is produced than is now in ordinary use. In said patented switch the sliding tables or platforms which actuate the switch-tongue are both disposed between the tracks, being supported on wheels or trucks which are journaled or mounted on axles suspended from the bed-plate of the switch. The sliding tables are also flush with the top of the bed-plate, and so attached to the shifting-lever as to make the working parts inaccessible through the opening beneath the tables, rendering it necessary to use a special trap or man-hole to enable repairs to be made, and for clearing out the pit, while the bed-plate itself, being cast or formed in one piece, makes it inconvenient to arrange either of the tables upon the outside of the track, as is sometimes desirable. The arrangement of the tables flush with the bed-plate is also imperfect on account of the ways in which the tables slide becoming easily obstructed.

My invention is designed to obviate these difficulties and objections, and to that end I construct and arrange the parts in a manner which I will now proceed to describe more in detail.

In the drawing, D represents the bed-plate; *e e'*, the sliding tables or platforms; *b b'* C C, the track, and F the switch-tongue, which is pivoted to the track at G. The tables are each provided upon their under surfaces with strengthening fins or ribs 1 2, stops 3 4, and a centrally-projecting pin or stud, *p*. Beneath the bed-plate, and pivoted thereto at L, there is a bell-crank lever, *z*, having the arms K, M, and K'. The arms K K' are provided with holes in their ends, in which the pins *p* work when the platforms are in position, the arm M being jointed or connected to the switch-tongue F by the rod N and screw H working in the slot I. Beneath each of the platforms *e e'* there are boxes (not shown in section) attached to or suspended from the bed-plate. These boxes contain a series of loose independent friction supporting-rollers, *s s*, on which the tables rest, and are provided with rectangular openings or slots *t t*, for the free passage of gravel, ice, or any other obstructing substances which may chance to find their way into the boxes. The rollers are of sufficient diameter to elevate the tables slightly above the plane of the bed-plate, through which, and immediately beneath the tables, there are elongated openings into the boxes containing the rollers, and into a pit beneath the track or roadway A, in which the principal working parts of the device are disposed. That part of the bed-plate carrying the table *e'* is not cast integral with the main plate or part between the tracks, but may be shifted with its table to the outside of the track *b'* as occasion requires, the proper pit being first provided therefor.

By enlarging the tables *e e'* so as to entirely cover the openings beneath them, and by elevating them very slightly above the bed-plate, I have overcome two important imperfections in the patented switch referred to—viz., the tables are prevented from clogging or becoming obstructed, and afford a surer or better foothold for the horses, which I have also found to be less frightened than when the tables are depressed, as described.

When the rollers upon which the tables rest are coupled together, or two or more of them journaled upon the same axle, I have found that if one of the rollers becomes clogged the table will also be obstructed in its movements, and the switch work imperfectly—difficulties which are almost entirely overcome by the independent rollers used in my improved switch.

From the foregoing it will be obvious to all conversant with such matters that when the horses drawing the car are proceeding in the direction indicated by the arrow in Fig. 1, if not turned from the direct pathway, the horse nearest the track *b'* will pass onto the table *e*, pulling it backward or away from the track C, acting upon the lever *z*, and, through the rod N, upon the tongue F, producing what is known as a "right-hand switch," and changing the car onto the track C C, in a manner which will be readily apparent without a more explicit description. A "left-hand switch" may be effected by turning the horses in such a manner as to bring the near horse upon the table *e'*, allowing the off horse to pass over that part of the bed-plate D in which there is no table.

Having thus explained my invention, what I claim is—

In a street-railway switch, substantially such as described, the tables *e e'*, arranged to work above the bed-plate D, in combination with the loose independent friction-rollers *s s*, substantially as and for the purpose specified.

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Witnesses:

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