C. B. BARLOW.

Street Railway Switches.

No. 151,555. Patented June 2, 1874.

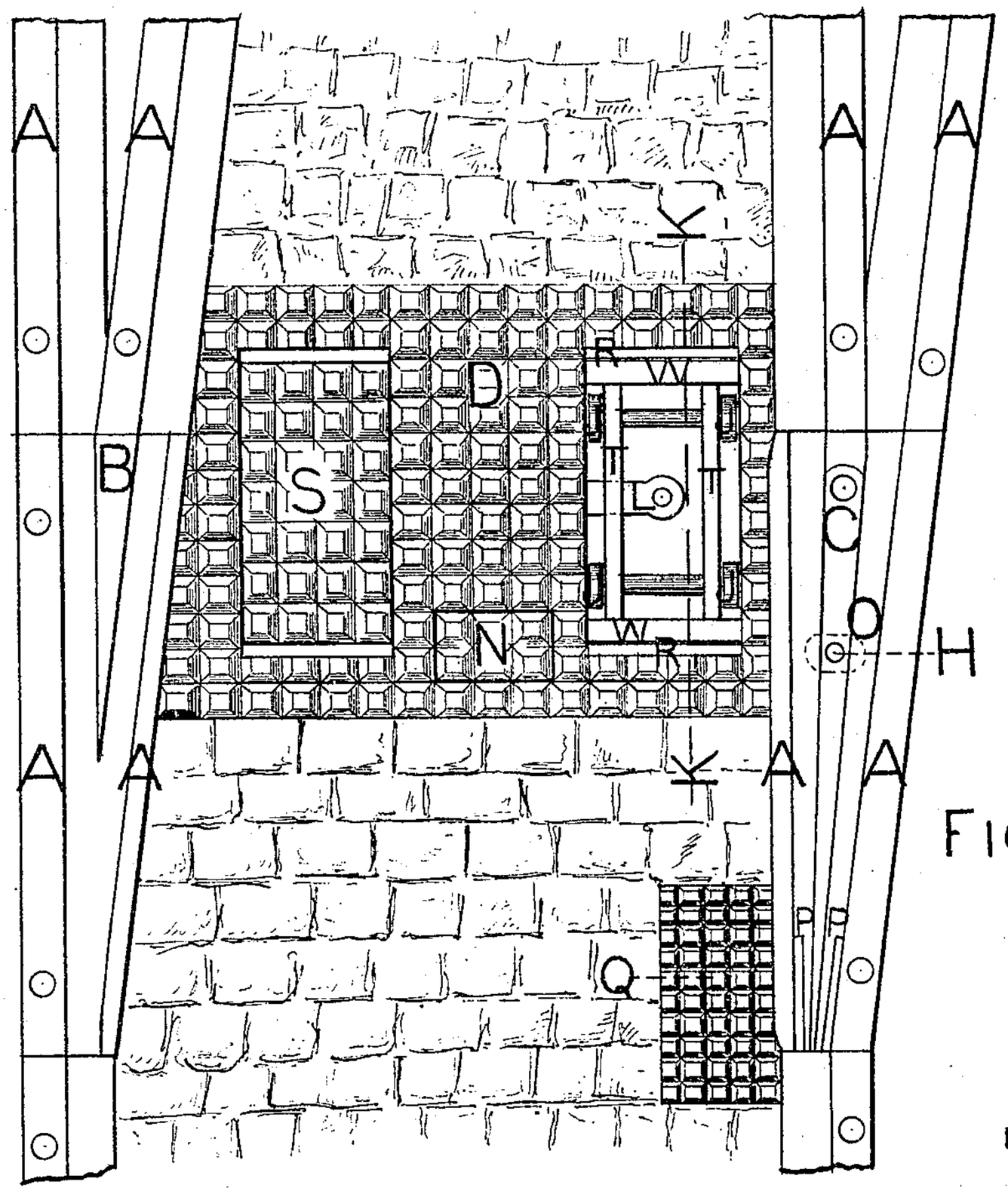

FIG 1

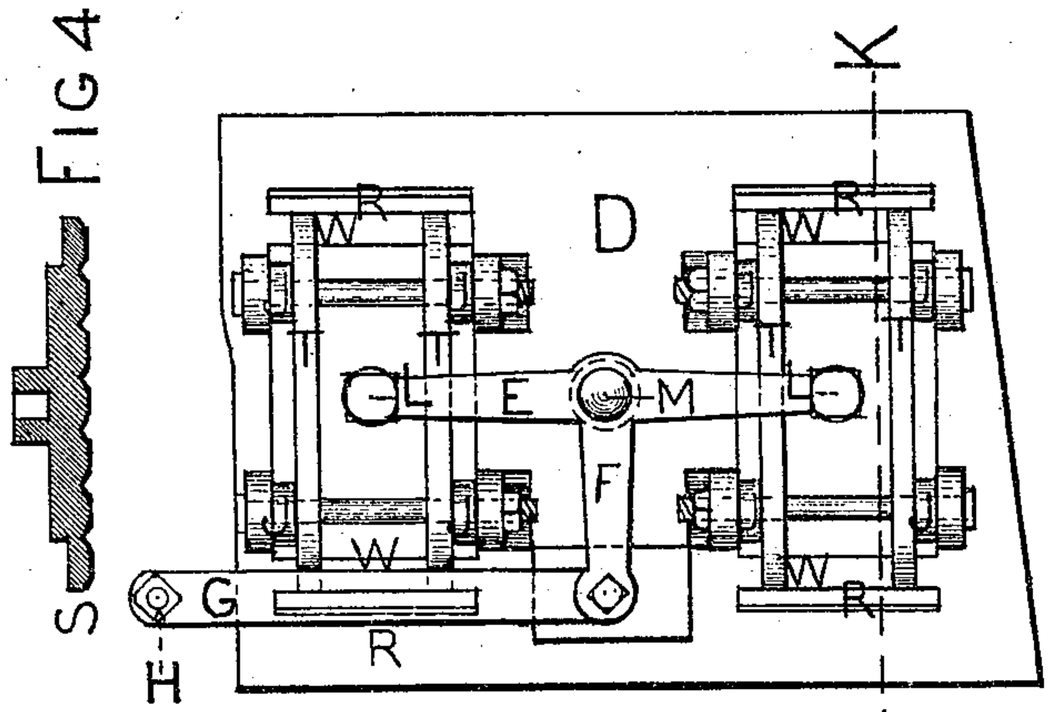

FIG 2

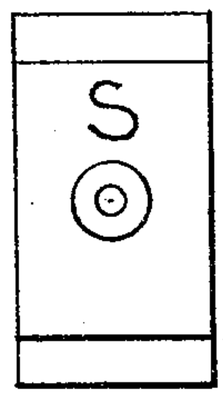

FIG 3

FIG 4

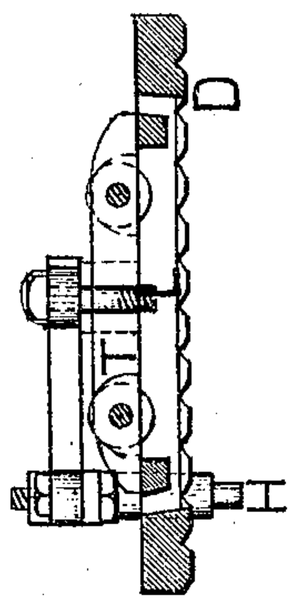

FIG 5

Witnesses:

N. D. Jarvis.
F. L. Livermore

Inventor:

Chas. B. Barlow.

UNITED STATES PATENT OFFICE.

CHARLES B. BARLOW, OF PORTSMOUTH, N. H., 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. **151,555**, dated June 2, 1874; application filed November 29, 1873.

To all whom it may concern:

Be it known that I, CHARLES B. BARLOW, of Portsmouth, State of New Hampshire, have invented a Switch for Horse-Railways, of which the following is a specification:

The object of my invention is to use the power of the animals attached to a car to shift a switch which the car is approaching in either direction at the option of the driver; and it consists of one or more horizontal tables between the rails and flush with the road-bed of a railway so adjusted upon suitable bearings that they are capable of being moved toward the car by the feet of the draft animals in the act of pulling the car, and so attached to mechanism connected with the switch-point that the stress of the pulling of the animals will shift the switch-point; and also of a bed-plate to mount these tables and their bearings in, a system of rollers for these tables to run upon, and mechanism for connecting them with the switch tongue or point.

Figure 1 is a view of a section of a railway, showing a switch, the bed-plate, one of the movable tables mounted therein, and the rollers and their bearings on which the movable tables run. Fig. 2 is a view of the under side of the bed-plate, the rollers, and their bearings above named, and the mechanism which I have devised for connecting said tables with the switch-point. Fig. 3 is a view of the under side of one of said tables. Fig. 4 is a sectional view of one of said tables and the socket for the pivot connecting it with said mechanism. Fig. 5 is a sectional view of the bed-plate and the rollers and their bearings on the line K K, Figs. 1 and 2.

A A are the stationary rails of the railway converging into a switch. B is the stationary point of the switch, and C is the movable point of the switch. D is the bed-plate, which is of iron or other suitable metal, and may be corrugated, as shown in the drawing, to prevent slipping of the animals' feet. In this bed-plate there are rectangular openings for the reception of the movable tables S S, the surface of which, as well as that of the bed-plate, is to be flush with the top of the road-bed. The tables S S fit these openings closely upon their sides, but they are shorter than these openings, so as to leave an orifice at each end, as shown in Fig. 1, R R, and at R R, Fig. 2, for dust, melted ice, and snow and other obstructions to the free movement of the tables to pass through into the cavity beneath the bed-plate D. In Fig. 1 one of the movable tables is shown properly mounted on its bearings in one of the openings of the bed-plate D, while another opening, without its table S, shows the rollers on which the tables S are mounted and their bearings. The rollers J J support the tables S S and aid their movements. Of these rollers there are two pairs under each table, and each pair is mounted on a journal having its bearings in lugs on the under side of the bed-plate D, and also in bars T, which run lengthwise in the opening in the bed-plate, and are supported at their ends by sections W W of the bed-plate, which run across these openings under the tables S S. The bars T are straight on their upper edges, as seen in Fig. 1, but may be curved on their lower edges to enable the journals to be set as low as is desirable. From each of the movable tables S S a pivot, L, extends downward, and an arm, E, is pivoted at each end on these pivots, and at its center on the pivot M, which is fixed in the under side of the bed-plate D. From the center of the arm E a rigid arm, F, projects horizontally and at right angles, at the free end of which is pivoted another arm, G, extending horizontally and at right angles toward the movable switch-point C, to which its free end is affixed by a rigid pin, H, which extends perpendicularly upward through a slot, O, in the rail-bed. The parts being thus adjusted and connected a horse stepping upon the left-hand movable table and pulling will move it backward, and thereby move backward the end of the arm E attached to it. This will throw the free end of the rigid arm F to the right, which will carry the arm G to the right in the direction of its length, it carrying the switch-point C over against the right-hand rail. The pulling of a horse in the same direction on the other table will produce a reverse of these movements, and will throw the switch-point C over against the left-hand rail. Thus the driver of the car, without stopping, by reining the off horse over, so that he will

not step on the table S in front of him and causing the near horse to step on the table in front of him, or, if there is but one horse, by reining him on the left-hand table, may throw the switch-point over to the right, and vice versa. A cavity of suitable dimensions made under the bed-plate D gives room for the bearings of the tables S S, and for the mechanism which connects them with the switch-point, and at the same time will afford a receptacle for the dust and melted snow and ice which pass through the orifices R R, and a suitable means of clearing this cavity will readily occur to any one constructing it. A man-hole, N, in the bed-plate D, will also afford a means of coming at the connection between the arms F and G. A cavity may also be made under the switch-point C, into which, through orifices P P, snow, water, and other obstructions may pass, and a man-hole, Q, will serve for clearing it out, and a drain may be laid from it to to the cavity under the bed-plate D.

It is obvious that the tables may be used to actuate a switch-point on either side of the track by a suitable adjustment of the connecting mechanism.

I disclaim the invention of the slots P P, in combination with the movable switch-point, as shown in the drawings.

I claim—

1. The movable tables S S in the road-bed of a railway, combined with a movable switch-point, C, by any mechanism suitable to actuate the same, as herein described.

2. The bed-plate D, in the road-bed of a railway combined with the movable tables S S and switch-point C, by any suitable mechanism, for the purposes herein described.

3. The movable tables S S in the road-bed of a railway, upon the rollers J J in suitable bearings, combined with a movable switch-point, C, by suitable mechanism, for the purposes herein described.

4. The movable tables S S in the road-bed of a railway, combined with a movable switch-point, C, by the arms E, F, and G, pivoted and connected as and for the purposes herein described.

CHAS. B. BARLOW.

Witnesses:

H. D. JARVES,

T. L. LIVERMORE.