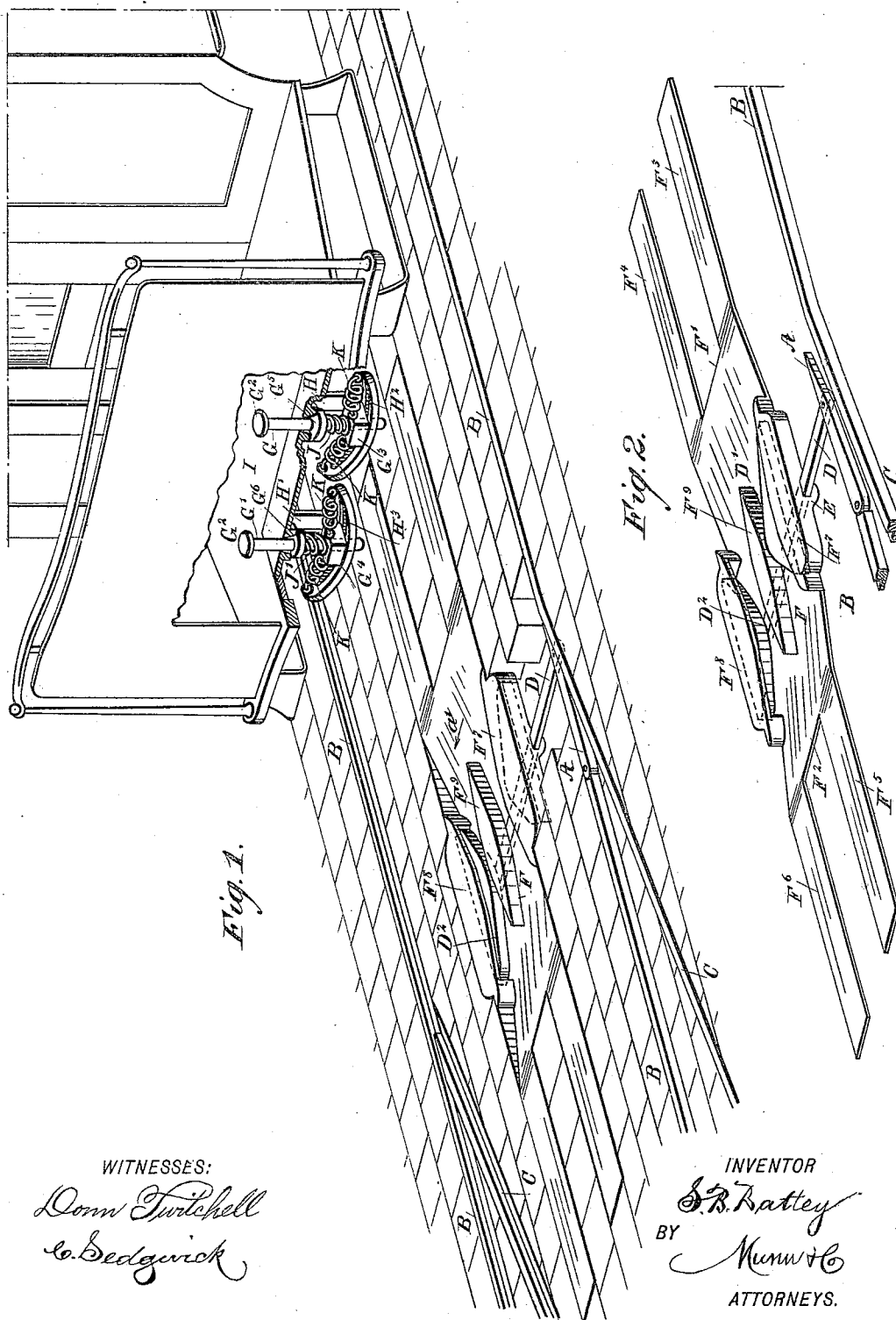


(No Model.)

S. B. BATTEY.
SWITCH MECHANISM.

No. 529,515.

Patented Nov. 20, 1894.



WITNESSES:
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SUMTER B. BATTEY, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND
JOSEPH W. HARTLEY, OF SAME PLACE.

SWITCH MECHANISM.

SPECIFICATION forming part of Letters Patent No. 529,515, dated November 20, 1894.

Application filed January 9, 1893. Renewed January 27, 1894. Serial No. 493,261. (No model.)

To all whom it may concern:

Be it known that I, SUMTER B. BATTEY, of the city, county, and State of New York, have invented a new and Improved Switch Mechanism, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved switch mechanism, which is simple and durable in construction, very effective in operation, and more especially designed for use on street railroads, to enable the operator in charge of the car to set the switch according to the direction in which the car is to travel.

The invention consists of a switch bar mounted to slide transversely and connected with the switch rail, blocks held on the said bar, and spring-supported rods fitted to slide on the car platform and adapted to engage the said blocks to shift the bar laterally.

The invention also consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a perspective view of the improvement as applied, parts of the car being shown in section; and Fig. 2 is a perspective view of the rail shifting mechanism.

The pivoted switch rail A is arranged to open and close the main track B to the side track C, in the usual manner. The free end of the pivoted switch rail A is pivotally connected with a switch bar D, mounted to slide transversely in suitable bearings E, formed in a plate F, arranged in a depression between the track rails, and having its ends F' and F² bent upward to the level of the street, as plainly shown in the drawings.

Extensions F³, F⁴ and F⁵, F⁶, lead from the ends of the plate F a short distance along the track, parallel to the rails, the top surfaces of the said extensions being flush with the pavement between the rails.

On the top of the switch bar D are secured the lugs D' and D² preferably rounded off at their opposite sides, as plainly shown in the drawings, the said rounded off sides being

adapted to be engaged by rods G and G' respectively, mounted to slide vertically in suitable bearings arranged in brackets H secured to the under side of the platform I of the car. The rods G and G' extend to the top of the platform I and are provided on their upper ends with suitable foot pieces G³ adapted to be pressed on by the foot of the operator in charge of the car. The rods G and G' are held in an uppermost position by means of springs J and J' respectively, resting with their lower ends on brackets G³ and G⁴ respectively, through which loosely pass the said rods G and G' respectively, near the lower ends thereof. The upper ends of the springs J and J' press against the under side of collars G⁵ and G⁶ adapted to abut against the under side of the platform I.

The blocks G³ and G⁴ rest on the upper side of transversely extending curved plates H² and H³ extending from the brackets H and H' respectively, each of the said plates being slotted transversely for the passage of the lower end of the respective rod G or G'. Springs K are connected with the outer ends of each plate H² or H³ and extend transversely to connect at their inner ends with opposite sides of the blocks G³ and G⁴ respectively, so that the rods G and G' are held normally in a vertical position by the action of the said springs, which latter, however, permit the rods to yield transversely in case of the lower ends of the rods meeting an obstruction in the road-bed, or when the rods first engage the blocks D' and D², as hereinafter more fully described. The rods G and G' are held in an uppermost position by the springs J and J' respectively, so that the extreme lower ends of the said rods are a suitable distance above the ground, to prevent the rods from coming in contact with obstructions in the track. The blocks D' and D² are adapted to be seated in suitable housings F⁷ and F⁸, respectively, formed on the plate F at the sides thereof and at its lowermost part, as plainly shown in the drawings.

On the top of the plate F, between the housings, is arranged a central tongue F⁹, preferably almond shaped, corresponding to the oppositely arranged inner faces of the housings F⁷ and F⁸ and the like sides of the blocks D'

and D². The tongue F⁹ forms, with the curved inner sides of the housings, a wide entrance for the respective rod G or G', to lead the lower end of the same in contact with the corresponding block D' or D² at the time the corresponding rod G or G' is pressed downward by the operator as above mentioned and for the purpose hereinafter more fully described.

10 The operation is as follows: When the car is approaching a switch, as shown in Fig. 1, and the switch rail A is closed and it is desired that a car should go from the main track B onto the side track C, then the operator in charge of the car and standing on the platform I, presses the rod G' so that the lower end of the said rod first comes in contact with the extension F⁴ and finally slides down the inclined end F' of the plate F, to pass through 20 the wide entrance between the tongue F⁹ and the housing F⁸ into contact with the block D² to shift the latter transversely in the direction of the arrow a'. By this movement, the bar D is moved in the same direction, 25 whereby a swinging motion is given to the switch rail A which thus swings open, thereby connecting the main track B with the side track C. It will be seen that by the movement of the switch bar D in the direction, as described, the block D² is moved into the housing F⁸, while at the same time, the other block D' is moved out of its housing F' into the space between the housing F' and the tongue F⁹. This block D' is now in the path of the rod 35 G of the next following car, while the other block D² is out of the path of the corresponding rod G'. Now, in case the next car coming along the track is to remain on the main track, then the operator in charge of that car, 40 presses the rod G, on approaching the switch, so that the lower end of the said rod moves in contact with the block D' and shifts the latter in the inverse direction of the arrow a', so as to close the switch rail A, as shown in Fig. 1. 45 By this operation the block D' again moves into its housing F', while the other block D² moves out of its housing into the space be-

tween the housing F⁸ and the tongue F⁹ to be in the path of the rod G' on the next following car. It will be seen that as soon as the operator releases the pressure on the respective rod G or G', after passing the switch, the said rod returns to its normal position by the action of the corresponding springs J and J'. It will further be seen that by this arrangement, the operator standing on the platform I can shift the switch rail A at will, so as to open or close the main track B to the side track C, according to the direction in which the car is to travel.

I do not claim the car mechanism specifically, as this will be made the subject-matter of a separate application.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a switch mechanism the combination with a track plate having its ends inclined upward and formed with extensions at each end, of a switch bar pivotally connected with the switch rail, rounded off blocks held on the said bar, and spring-pressed rods fitted to slide on the platform of the car and each adapted to engage one of the said blocks to shift it transversely with the said bar, and to open or close the switch rail; substantially as shown and described.

2. A switch mechanism provided with a track plate having its ends bent upwardly and formed with extensions, and housings formed on the said track plate near the sides thereof, substantially as shown and described.

3. A switch mechanism provided with a track plate having its ends bent upwardly and formed with extensions, housings formed on the said track plate near the sides thereof, and a pointed tongue arranged on the said track plate between the said housings, substantially as shown and described.

S. B. BATTEY.

Witnesses:

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