

No. 680,634.

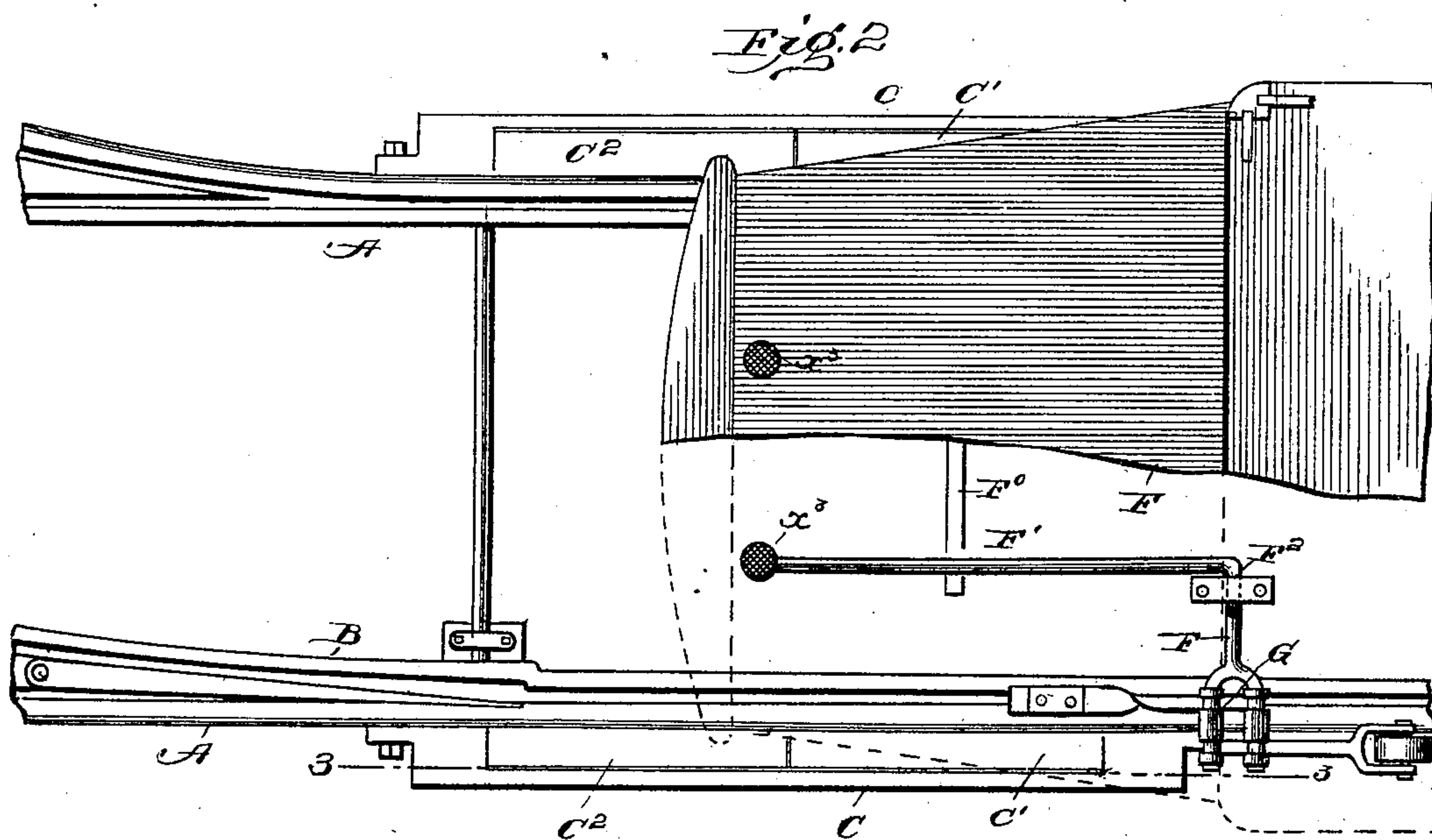
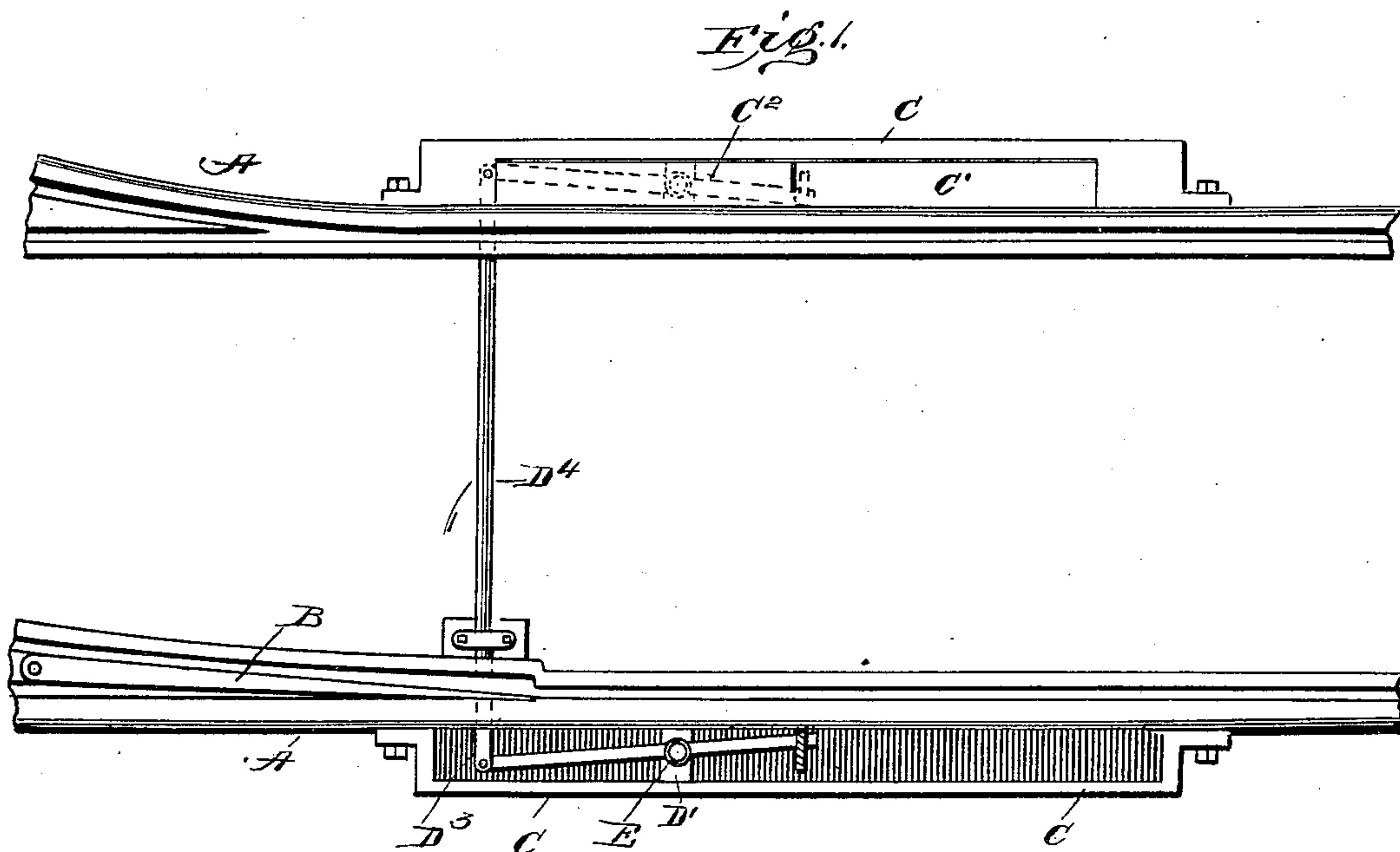
Patented Aug. 13, 1901.

S. W. BAER.
RAILWAY SWITCH.

(Application filed Feb. 8, 1901.)

(No Model.)

2 Sheets—Sheet 1.



witnesses:
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UNITED STATES PATENT OFFICE.

SAMUEL WESLEY BAER, OF ATLANTA, GEORGIA, ASSIGNOR OF ONE-THIRD
TO CHARLES J. HADEN, OF SAME PLACE.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 680,634, dated August 13, 1901.

Application filed February 8, 1901. Serial No. 46,532. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL WESLEY BAER, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Railway-Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention involves mechanical devices whereby the motorman, driver, or other operator may while upon his car and without stopping it set a switch at which he arrives, so that his car will take the desired direction. It also includes devices whereby the car in passing sweeps out the path of the switch-rail. These ends are attained by providing upon each side of the car-platform a brush and an arm so arranged that the motorman by pressure of his foot may at will depress the brush and arm upon either side of the car, and may thereby throw the switch-point to the right or to the left.

In the accompanying drawings, Figure 1 is a plan view showing a switch provided with switch-operating devices to be actuated from the car. Fig. 2 is a plan view showing one end of a car at the switch, a part of the platform being broken away. Fig. 3 is a side elevation showing the same devices, parts being broken away on the line 3 3, Fig. 2. Fig. 4 is a section at 4 4, Fig. 3. Fig. 5 is a detail view of certain brush-operating devices. Fig. 6 is a detail view of rollers engaging the end portions of certain brush and wheel operating devices.

In the views, A represents the rails, and B the switch-rail or pivoted switch-point. Upon opposite outer sides of the track at the switch a downwardly-open case C is fixed to the outer side of the rail A, and within this casing is pivoted a bar C', parallel to the rail and nearly in the plane of its upper surface. Beneath the end of this bar lies the end of a second bar C², pivoted at C³ and forming a continuation of the first. Below these bars is a lever D, pivoted to swing horizontally about a point D² and having at one end a pivoted arm D³, which projects through the

rail A and abuts directly against the switch-rail B. The second arm is normally pressed upward by a spring E and itself supports the first bar, the latter having at C⁴ a shoulder which limits the upward movement. The bar C² has upon its lower side a rigid projection C⁵, provided with an inclined face C⁶, which when the bar is depressed impinges on the lever D and forces it to swing, and thereby move the switch-rail. The apparatus upon the other side of the car is like that already described, except that the arm D⁴ is longer than the arm D³ and acts of course to swing the switch-rail in the opposite direction. Beneath the platform F of each car, and upon both the right and left sides thereof, are mounted bell-crank levers F', pivoted at F², and each having one end carried up through the platform to receive at F³ the pressure of the foot, and normally held in raised position by a spring F⁰. The opposite arm of the lever is bifurcated, and the branches bear parallel rollers G, lying in a horizontal plane.

To the truck-frame H or a bracket extending therefrom are pivoted two inclined or bent levers I I', the former in the vertical plane of the bars C' C² and the latter in the vertical plane of the rail-groove or wheel-flange. The lever I bears at its lower end a roller J, and the lever I' has at its lower end a geared segment I², engaging a like segment I³ upon the upper end of a lever I⁴, pivoted at I⁵ and bearing at its lower end a brush I⁶. The free upper ends of the levers I I' lie in the grooves of the roller G, so that as the lever F' swings upon its pivot the levers I I' must also swing and depress or raise both the wheel J and the brush I⁶.

Now if the foot press down the upturned end of the bell-crank lever, the spring yields, and both the wheel and the brush are forced downward, each in its own plane, so that they pass along the outer and inner faces of the rail, respectively. Thus the brush sweeps out the path of the switch-point, and the wheel rolling along the pivoted bars C' C² depresses them, and thereby moves the switch-rail in the manner already set forth. It is to be observed that the brush may, if desired, be readily removed without affecting the op-

eration of the other devices, and also that the foot need not begin to act at the precise instant when the wheel is above the bars C' C², it being sufficient that the wheel be
5 pressed down while passing this point and immaterial when the pressure begins, for if the wheel be pressed down before this point is reached it will ride up on the inclined ends of the casing C and pass upon the bars.

10 The casing C is downwardly open, as has been stated, and preferably a pocket of considerable size is formed below it at L, so that dust and the like may fall below the working parts and be removed from time to time, as
15 occasion may require.

It is obvious that the precise construction shown and described need not be followed, and I wish, therefore, to claim my invention both specifically and in broader terms.

20 What I claim is—

1. The combination with a car-body and its truck, of a switch-operating bar centrally pivoted upon the truck-frame and normally having its upper arm approximately vertical,
25 a pivoted arm depending from the car-body and engaging said upper arm to slide freely thereon as the relative height of the car-body changes and to swing it when itself swung from side to side, and means operable from
30 the platform to swing the depending arm.

2. The combination with a car-body and its truck, of a switch-operating bar centrally pivoted upon the truck-frame and having its upper end portion approximately vertical, a
35 bell-crank lever pivoted upon the car-body and normally having one arm in sliding engagement with said upper end portion and its opposite end portion carried forward and extended up through the car-platform.

40 3. The combination with the car-body and its truck, of the switch-actuating bent bar pivoted upon the truck-frame and normally having its upper end portion approximately vertical, the bell-crank lever pivoted upon the
45 car-body with its horizontal arm extending forward to the platform and its vertical arm provided with grooved rollers engaging said upper end portion and a spring tending to hold the movable parts in normal position.

50 4. The combination with a car-body and its truck, of a switch-operating bar centrally pivoted upon the truck and having its upper

end portion vertical, a brush-carrying bar pivoted upon the truck-frame and having a gear-segment at its upper end, a second gear-
55 segment engaging the first, pivoted to the truck-frame and having an upwardly-extending arm alongside said upper end portion, a pivoted arm depending from the car-body and provided with grooved rollers engaging both
60 said upper end portion and said upwardly-extending arm, and means operable from the platform to swing said depending arm.

5. The combination with a car-body and its truck, of a switch-operating bar pivotally
65 supported on the truck-frame to swing toward the road-bed, a normally elevated track-cleaning device mounted in front of said bar, a foot-actuated member borne by the car-body, and devices operatively connecting said mem-
70 ber to said bar and said device while permitting relative vertical motion of the car-body.

6. The combination with a switch-rail, of a transversely-sliding bar arranged to push the switch-rail by its own longitudinal movement,
75 a lever centrally pivoted to swing horizontally and having one end engaging said bar, a member depressible by suitable devices carried by passing cars and provided with an inclined projection to force the opposite end of
80 the lever aside as it descends, and a spring offering yielding resistance to the depression.

7. The combination with a main rail and a switch-rail swinging to and from the inner
85 side of the same, of a downwardly-open casing located upon the outer side of the rail and having at each end an incline, bars pivoted near the ends of the casing, respectively, and closing the casing above, a spring resist-
90 ing depression of the central ends of said bars, a lever below the bars, centrally pivoted to swing horizontally, a wedge-like projection upon one of the bars acting when that bar is depressed to force the swinging of the lever,
95 and a bar attached to one end of said lever, passing through the main rail, and acting upon the switch-rail to swing it.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

SAMUEL WESLEY BAER.

Witnesses:

B. W. BLACKSTOCK,
J. L. TRAVIS.