

(No Model.)

C. H. CROPSEY.

SWITCH CLEARING, SALTING, AND OPERATING DEVICE.

No. 507,261.

Patented Oct. 24, 1893.

Fig: 1.

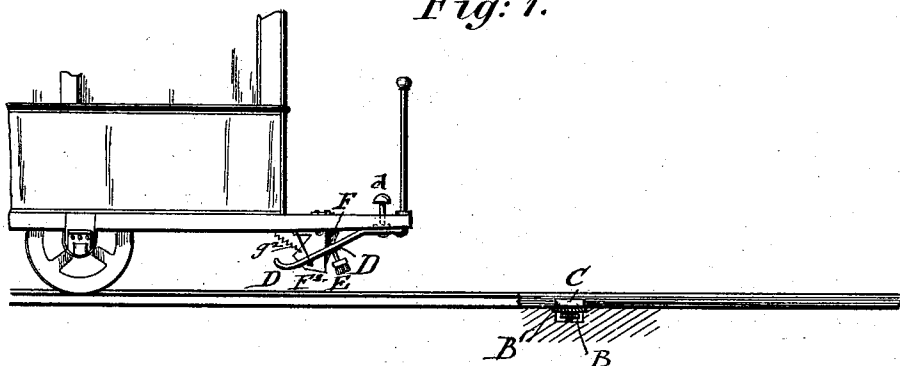


Fig: 2.

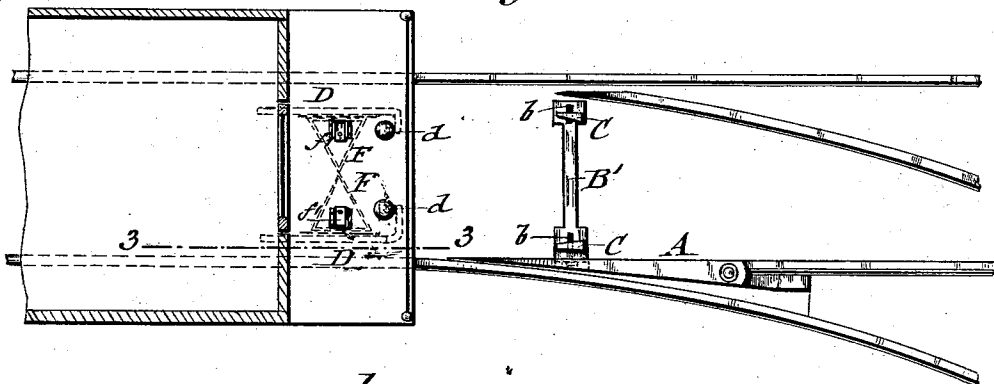


Fig: 3.

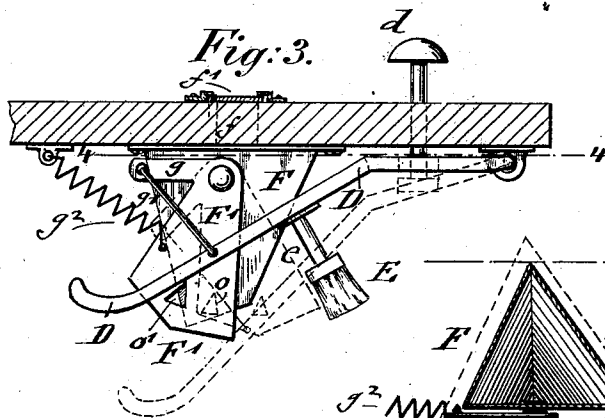


Fig: 4.

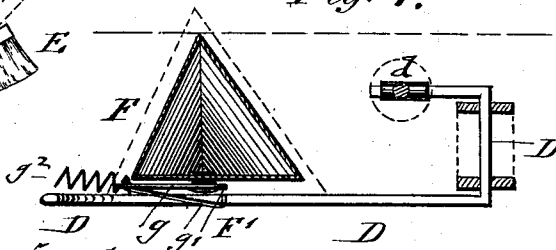
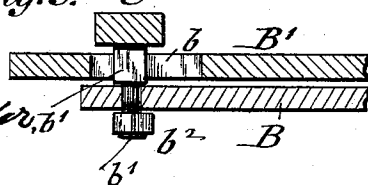


Fig: 5.



WITNESSES:

H. Chermayer.
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INVENTOR

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UNITED STATES PATENT OFFICE.

CHARLES H. CROPSEY, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO THOMAS T. HAYDEN, OF SAME PLACE.

SWITCH CLEARING, SALTING, AND OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 507,261, dated October 24, 1893.

Application filed January 17, 1893. Serial No. 458,665. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. CROPSEY, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Switch Clearing, Salting, and Operating Devices, of which the following is a specification.

This invention relates to an improved switch turner for electric, cable and other railways, in which the switch-tongue is set by the motor-man of the car to the required position by simply depressing a pedal-lever.

In the accompanying drawings, Figure 1, represents a side-elevation of a street or other car, with my improved attachment for operating the switch from the car-platform, partly in section. Fig. 2, is a plan-view of the car and switch partly in horizontal section. Fig. 3, is a vertical longitudinal section of the car-platform, showing one of the pedal-levers and the salt-box on a larger scale. Fig. 4, is a horizontal section on line 4 4, Fig. 3, and Fig. 5, is a detail vertical transverse section through the slide-plate and main-plate on line 5 5, Fig. 2, drawn on a still larger scale.

Similar letters of reference indicate corresponding parts.

Referring to the drawings A represents a switch-tongue which is pivoted to a suitable foundation at the point where the side-track diverges from the main-track. A transverse slide-plate B is pivoted to the middle-portion of the switch-tongue and guided at the underside of a covering main-plate B', which is provided with slots *b* for the shanks *b'* of two tapering cams C, one near each end of the slide-plate B. The upper ends of the shanks *b'* are made of rectangular cross-section while the lower ends are made round and attached by keys or nuts *b²* to the under side of the slide-plate B' as shown clearly in Fig. 5. The outer edges of the cams C are tapered at an inclination toward the center line of the track so as to be engaged by the curved lower ends of two pedal-levers D which are hinged to the under side of the car-platform and which are acted upon by suitable springs so as to be supported in raised position above the track. Each pedal-lever D is depressed by the shank of a pedal *d* which is operated by the motor-

man who is stationed on the platform. On depressing the pedal-lever D as shown in dotted lines in Fig. 3, the lower curved end of the same passes along the inclined edge of its corresponding cam C and produces thereby the lateral shifting of the slide-plate B and of the switch-tongue A according as the switch is to be set for running the car in a straight direction over the main-track or for switching the same over on to the side-track. As soon as the switch-tongue is set, the pressure on the pedal *d* is released and the lever returned to its raised position by its spring. The pedal-lever D on that side adjacent to the switch-tongue A is provided with an arm *e* which extends from the middle part of the lever and carries a cleaning brush E, by which small stones, dust or other obstructions are readily brushed away, so that the oscillating motion of the switch-tongue is not impeded by accidental obstructions.

To the under side of the car and adjacent to each pedal-lever D is attached a salt-box F which is made of hopper-shape and which communicates at its upper part with an opening *f* and the slide-plate *f'* in the platform to provide for the convenient filling of the box with salt. One side of the salt-box adjacent to the pedal-lever D is made perpendicular, perfectly straight and provided with a discharge opening *o* at its lower end. A valve F' is pivoted to the straight side of the box F and provided with an arm *g* which is connected by a pivot-rod *g'* with the pedal lever D, and said valve F' has an opening *o'* in its lower part that corresponds in size with the opening *o* at the lower part of the straight side of the salt-box, so that when the valve F' is moved by the oscillating motion of the pedal-lever over the salt-box a small quantity of salt is taken up into the registering opening of the valve and discharged during the downward and upward motions of the pedal-lever D. In this manner the switch is supplied with salt when either pedal-lever is depressed for setting the switch-tongue, so as to keep it clear of accumulating snow and ice. A helical spring *g²* is connected to the oscillating valve F' and to the under side of the platform, so as to return the valve F' and the pedal-lever D to their initial positions after each

depression. When a salt-box is arranged in connection with the pedal-levers for operating the switch, the spring g^2 which is used for operating the valve, also serves for the purpose of raising the pedal-lever, so that a separate spring for doing this may be dispensed with.

By my construction, the setting of the switches is accomplished with great facility, whether the car is to be moved over the main or side-track. The distance between the lower ends of the pedal-lever D and the wheels of the car is preferably such that the wheel engages the switch-tongue and locks the same in position before the pedal-lever releases the cam of the slide-plate, so that any changing of the position of the switch-tongue is prevented but the same held in the required position for the car.

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

1. The combination of a car platform, a lever hinged to the under side thereof and inclined backward from said platform, said lever having a tongue at its rear end adapted to serve as a switch shifter, a brush attached to said lever forward of said shifter, and means for depressing and raising said lever, substantially as described.

2. The combination of a car platform, a lever hinged to the underside thereof and inclined backward from said platform, said lever hav-

ing a tongue at its rear end adapted to serve as a switch shifter, a salt box, a pivoted valve for closing and opening said box, and means for connecting said valve with said switch shifting lever, substantially as described.

3. The combination of a car platform, a pedal lever hinged to the under side thereof and inclined backward from said platform, said pedal lever having a tongue at its rear end adapted to serve as a switch shifter, a salt box attached to the under side of said platform one side of said box adjacent to the pedal lever being perpendicular and having an opening in its lower portion, a valve pivoted to said perpendicular side, a link connecting said valve with said lever, and a spring for retracting said valve and lever, substantially as described.

4. The combination of a car platform, a dependent salt box attached to the under side thereof and provided with a discharge opening, a valve for opening and closing said port, a mouth for said box extending through said platform, and a lid on said platform for closing said mouth.

In testimony that I claim the forgoing as my invention I have signed my name in presence of two subscribing witnesses.

CHARLES H. CROPSEY.

Witnesses:

PAUL GOEPEL,
H. WILLARD GRIFFITHS.