

(No Model.)

J. C. WOOLVERTON.
SWITCH OPERATING DEVICE.

2 Sheets—Sheet 1.

No. 535,435.

Patented Mar. 12, 1895.

Fig. 1

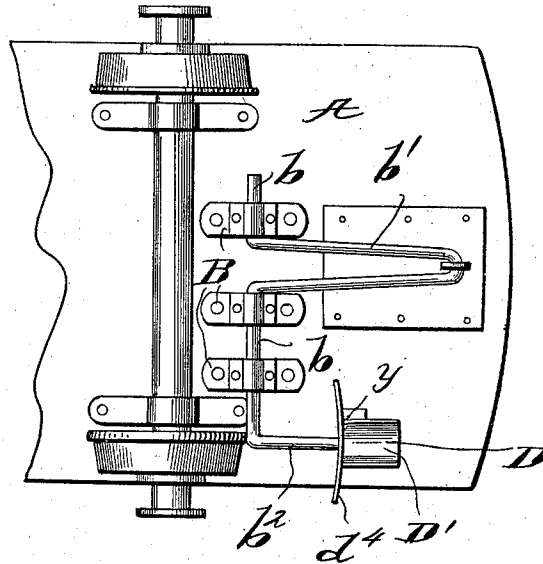


Fig. 2

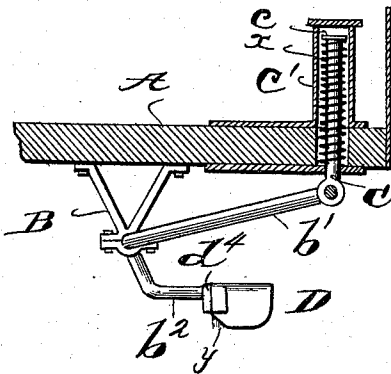


Fig. 3

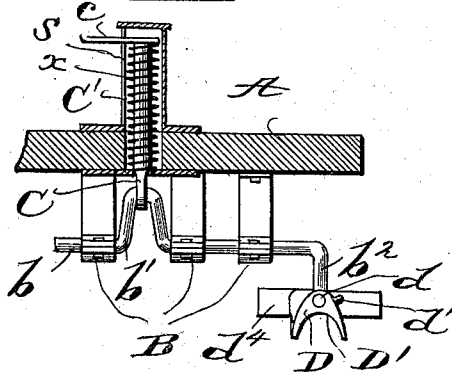


Fig. 4

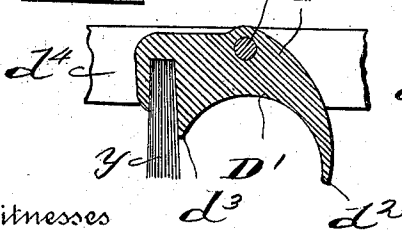
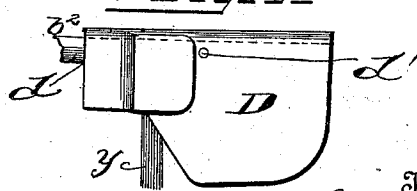


Fig. 5



Witnesses
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2 Sheets—Sheet 2.

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Fig. 5

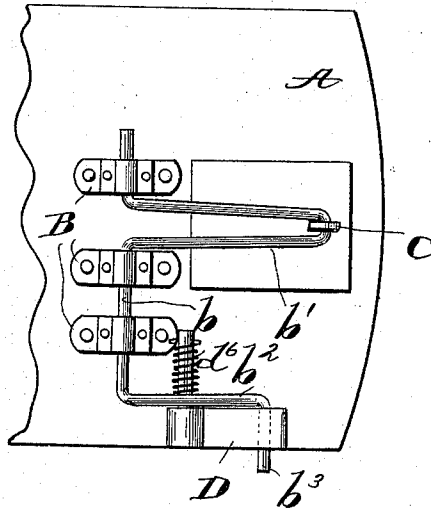


Fig. 7

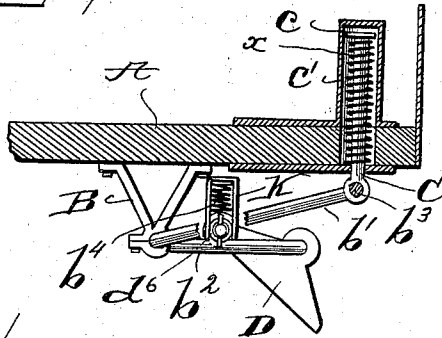


Fig. 10

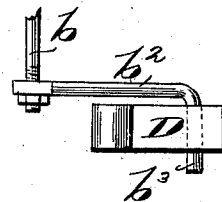


Fig. 8

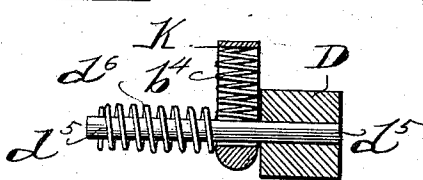
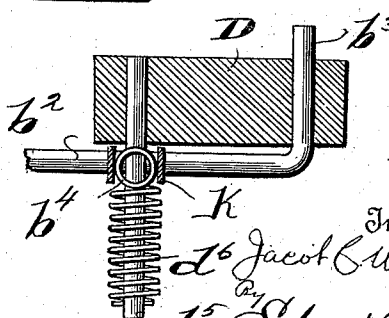


Fig. 9



Witnesses

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UNITED STATES PATENT OFFICE.

JACOB C. WOOLVERTON, OF BROOKLYN, NEW YORK.

SWITCH-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 535,435, dated March 12, 1895.

Application filed October 14, 1893. Serial No. 488,144. (No model.)

To all whom it may concern:

Be it known that I, JACOB C. WOOLVERTON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Switch-Operating Devices; 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.

My invention relates to switch operating devices for railway cars; and it consists of the construction and arrangement of parts and combination of parts as will be hereinafter more fully set out and claimed.

The object of my invention is to provide mechanism for operating a switch from the car, by the driver, thus obviating the necessity of the driver or conductor leaving or stopping the car and the employment of a switch tender or operator, by securing a lever on the platform of the car; said lever extending above and below the platform and connected to a switch operating shoe, thereby enabling the driver to operate the switch by pressing his foot on the lever secured to the platform thus forcing the shoe into engagement with the switch mechanism.

Figure 1 is an inverted plan view of my invention. Fig. 2 is a central longitudinal section. Fig. 3 is a cross section through foot pedal spring. Fig. 4 is an enlarged cross section of the shoe through the brush. Fig. 5 is an enlarged side elevation of the same. Fig. 6 is an inverted plan of a slight modification. Fig. 7 is a central longitudinal section of the same. Figs. 8 and 9 are detailed sections of the modified shoe. Fig. 10 is a plan in detail showing modification.

A represents the platform of a car and A' the wheels thereof.

B are brackets secured underneath the car in which is swung the frame b ; said frame being provided with a link b' and an arm b^2 extending toward the front of the car. A lever C is loosely secured to the link b' and extends through and above the car platform terminating in a pedal-like head c .

C' is a housing for that portion of the lever C above the car platform in which is secured the coiled spring X which is coiled around

the lever C. One side of this housing is slotted as at s thus permitting the lever to be depressed by means of the pedal c .

D is a shoe having a concave face D' . d is an opening extending from the front to the rear of said shoe, at the top, through which passes the arm or lever b^2 of the frame b .

d' is a split or other key which passes through the opening d and arm b^2 , as shown, thereby securing the shoe to said arm.

It will be noticed that the shoe is substantially U shaped in cross section and that one side d^2 is shorter than the side d^3 . The side d^2 is the part of the shoe that throws the switch while the side d^3 acts in a manner as a guide. On the inner side of the shoe is formed a projection having an aperture or opening in which is secured a brush y of any material found most desirable which serves as a cleaner for the rails and switch plate. On the rear of this shoe D I secure, in any well known manner, a plate d^4 which projects beyond the shoe on each side. This plate acts as a scraper to clean the track of ice, snow, &c., while the brush sweeps the dirt, &c., so that the switch will close tightly after the car has passed.

In Figs. 6, 7 and 8 I have shown a modified form of the shoe. In this connection it will be understood that the frame b is substantially like the frame shown in the other figures. In these figures the end of the arm b^2 of the frame is bent at right angles as at b^3 . The shoe D is secured to this portion b^3 .

K is a bracket extending upward from the arm b^2 in which is secured a spiral spring b^4 under which passes an arm d^5 on the end of which is secured a spiral spring d^6 one end of said spring d^6 being secured to the end of the arm d^5 while the other end bears against the bracket K. The arm d^5 is rigidly secured to the shoe D, the shoe being pivoted on the portion b^3 . The object of this construction is to provide a tripping shoe. For instance should the shoe strike an unmovable obstruction it may slide sidewise on the arm d^5 under the tension of spring d^6 which will, after the obstruction has been passed, pull the shoe back into position. Again in the event of an obstruction the shoe may turn on its axis b^3 . In other words, should the shoe strike an obstruction the rear part of the shoe will be

elevated, thus causing the arm d^5 to ride up in the bracket against the spring b^4 . Thus the shoe will trip over the obstruction and as soon as it has so tripped the spring b^4 will force the arm d^5 back to its normal position thereby putting the shoe into position.

This invention is more especially adapted to be used in connection with switches of the character shown in my application filed May 12, 1893, and patented March 27, 1894, No. 517,090.

What I claim, and desire to secure by Letters Patent, is—

1. Mechanism for operating a railway switch consisting of a frame suspended under a car, a shoe provided with depending sides and a brush secured in one of said sides and extending below said side, substantially as described.

2. Mechanism for operating a railway switch

which consists of a frame suspended from a car, a shoe secured to said frame and provided with depending sides, a brush secured in one of said sides and a scraping bar or plate secured to the rear of said shoe, all substantially as described.

3. In a switch operating mechanism, the combination with a frame suspended under a car in brackets, a V shaped link, extending forwardly from said frame, a foot pressure rod, connected to said link, of a shoe provided with depending sides, a brush secured to said shoe and extending below one of said sides, substantially as described.

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

JACOB C. WOOLVERTON.

Witnesses:

THEODORE CLARKSON,
WILLIAM H. CLARKSON.