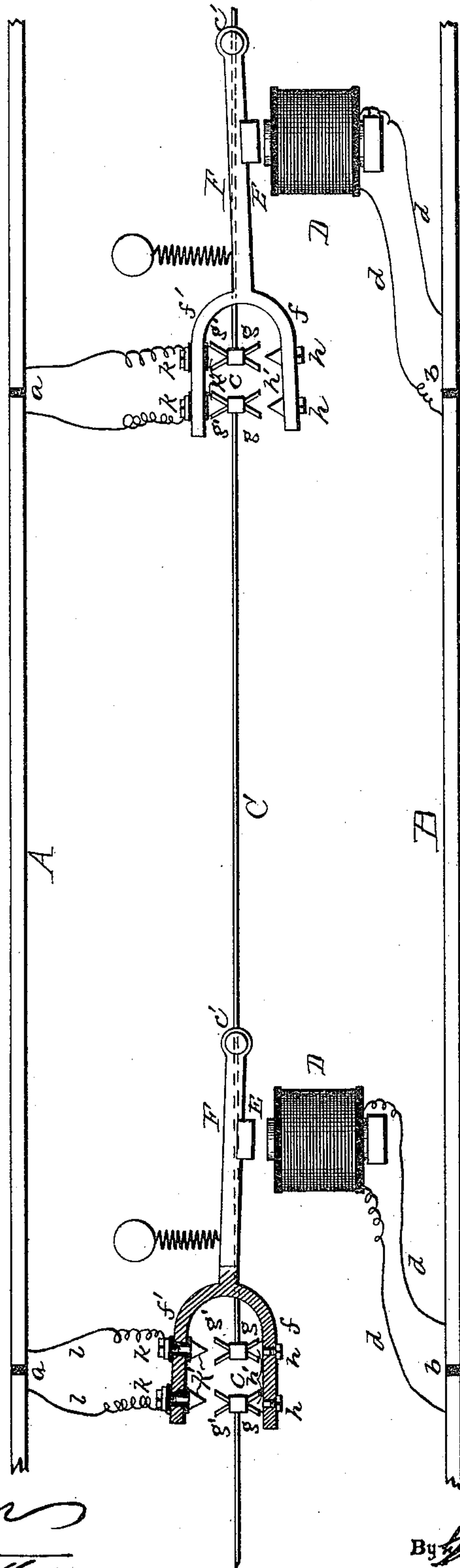


(No Model.)

M. WHELESS.
ELECTRIC SWITCH.

No. 440,213.

Patented Nov. 11, 1890.



WITNESSES:

Percey Bowen
Attorney

INVENTOR

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UNITED STATES PATENT OFFICE.

MALONE WHELESS, OF NASHVILLE, TENNESSEE, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE WHELESS ELECTRIC RAILWAY COMPANY, OF ALEXANDRIA, VIRGINIA.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 440,213, dated November 11, 1890.

Application filed September 24, 1889. Serial No. 324,910. (No model.)

To all whom it may concern:

Be it known that I, MALONE WHELESS, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Electric Switches; and I do 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, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The figure represents the application of the device, the latter being in plan to the right and partly in section to the left.

This invention relates to an improved switch to be used with electric circuits, more especially with such a one as is shown in United States Patent No. 413,637, dated October 22, 1889. In such application there is contained an electric circuit separated at intervals, the points of separation being normally closed by armatures of magnets, the circuit or main conductor being connected on each side of the point of separation with a line of conductors, consisting of sections insulated from one another.

It is the object of the present invention to simplify the said device, so that the operation of the armatures of the magnets makes and breaks the connection of the main circuit with the line of conductors.

The invention consists in a bifurcated armature, one fork of which is on each side of the main circuit at the point of separation, as will be hereinafter fully explained.

In the annexed drawings, the letter A indicates a line of conductors—for example, track-rails—insulated at *a*. B represents a similar line insulated at *b*.

C is the main circuit, having the points of separation *c*.

Connected to each side of the insulation *b* is the wire *d*, also connected with the magnet D. The armature E of the magnet is provided with a lever F, hinged at *c'*, which is the pivot of the armature. At its other end this lever is bifurcated, one fork *f* coming on one side and the other fork *f'* coming on the

other side of the point of separation *c* of the main circuit C. On each side of this point the main circuit is provided with two sockets *g g'*, pointing in opposite directions. Secured in the forks *f* are screws *h*, having the points *h'* fitted to the sockets *g*. Secured in the fork *f'* are screws *k*, having points *k'* fitted to the sockets *g'*. The screws *k* are insulated, but the screws *h* are not. The screws *k* are connected by wires *l* with the line of conductors A on opposite sides of the insulation *a*. From this construction it will readily be seen that normally the screws *h h* rest in the sockets *g g* and close the points of separation of the main circuit, making a continuous circuit. Upon the magnet D being vitalized, the screws *h h* are withdrawn from the sockets *g g*, breaking the circuit. At the same time the screws *k k* are brought into the sockets *g g*, connecting the main circuit through the wires *ll* with the line of conductors A on opposite sides of the insulation *a*.

By reference to the application referred to it will be seen that the magnet D is vitalized from a source of electricity upon a car. At the same time that this source of electricity is put in circuit with the magnet D a motor-circuit on the car spans the insulation *a* and contacts with the line of conductors A on opposite sides of the point of insulation. The current of the main circuit therefore is circulated around the point of separation and through the motor-circuit on the car. This continues all along the line as the car passes from one magnet-circuit to another.

Having described my invention, what I claim is—

An electric circuit separated at intervals and having at each side of the points of separation sockets pointing in opposite directions, in combination with magnets placed at such points of separation, the armatures of the magnets being bifurcated, and the forks being on opposite sides of the main circuit and having screws fitting the sockets, as set forth.

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

MALONE WHELESS.

Witnesses:

S. E. WHEATLEY,
WM. R. SINGLETON.