(No Model.)

H. T. RIGGS.

ELECTRIC SWITCH.

No. 408,194. Patented July 30, 1889.

Fig. 1.

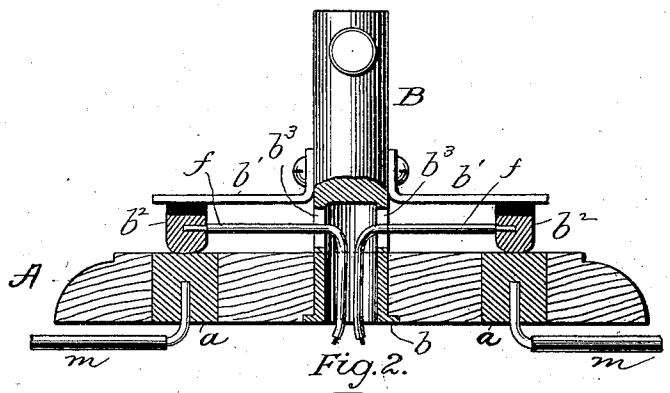


Fig. 2.

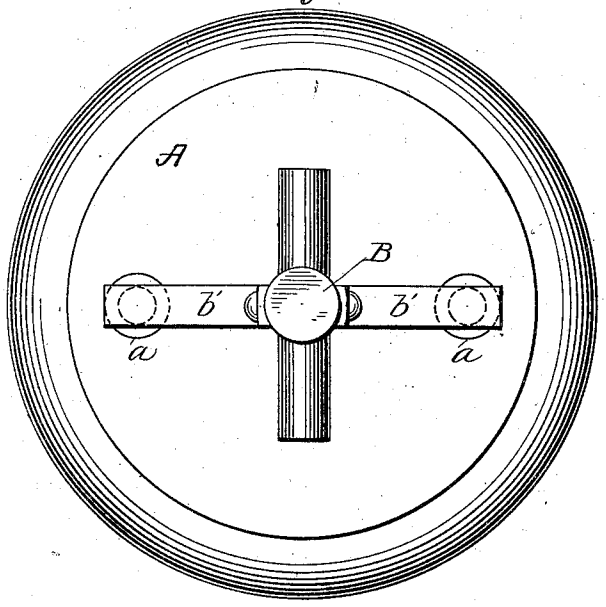
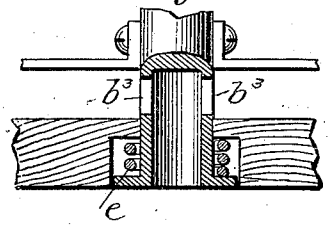


Fig. 3.



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HARRY TILDEN RIGGS, OF FARMINGTON, MAINE, ASSIGNOR OF ONE-HALF TO ALVIN S. RIGGS, OF SAME PLACE.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 408,194, dated July 30, 1889.

Application filed February 19, 1889. Serial No. 300,417. (No model.)

To all whom it may concern:

Be it known that I, HARRY TILDEN RIGGS, a citizen of the United States, residing in Farmington, in the county of Franklin and State of Maine, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

My invention relates to electric switches, the object being to provide a switch which may be used in connection with motors for reversing the current or for opening the circuit.

A further object is to provide a switch of very simple and yet of cheap construction.

The invention consists in the details of construction which will now be fully described, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a vertical central section of my improved switch. Fig. 2 represents a plan of the same; and Fig. 3 is a detail view, in section, of a modification of the switch.

Referring to the drawings by letter, A represents a base or support, made, preferably, of hard rubber or other suitable insulating material. There is inserted in the base two blocks of metal *a a*, to which are electrically connected the terminals *m m* of the main circuit. These blocks of metal are inserted in the base, so that their upper surfaces are flush with the upper surface of the base.

B represents a center rotating post. This is fixed in the base-piece A, so that it may be easily rotated in either direction. It is held in its position by a flange *b* at its lower end and by the arms carrying the contacts, as will appear later on. The lower end of this post is hollow, the chamber extending some distance up into the post. There is attached to opposite sides of the post, by means of rivets or in any other desired and efficient manner, two spring-arms *b' b'*. At their outer ends these arms have attached to them downwardly-projecting lugs b^2 b^2. These lugs are composed of metallic portions and portions of hard rubber or other insulating material located between the metallic portions and the spring-arms *b'*. The metallic lugs b^2 rest upon the surface of the base, and they are pressed in contact therewith by the spring-arms *b'*. The terminals *f f* of the branch circuit are led in through the hollow post, and, extending through lateral openings b^3 in the post, are attached, respectively, to the metallic lugs b^2. It will thus be seen that when the lugs b^2 are in contact, respectively, with the blocks *a* the circuit is completed through the branch. The upper end of the post is provided with a cross-head or other form of device to aid in turning.

The operation of the switch is obvious. By rotating the post the lugs b^2 are brought into contact with the blocks *a a* to complete the circuit, or are moved out of contact therewith to break the circuit, or may be given a half-turn and their position reversed, thus reversing the direction of the current through the branch. This, as will be seen, is accomplished by a very simple movement.

I do not confine myself to any particular manner or arrangement of springs for maintaining the lugs b^2 in contact with the surface of the base A or blocks *a*. This may be done by making the arms *b'* springs, as described; or, as shown in Fig. 3, a coil-spring *e* may be placed around the base of the post to bear upon the flange upon the end thereof and upon the base-piece. The tendency of this spring would be to draw the lugs against the base-piece. In this instance, also, the arm supporting the lugs b^2 may be made of stiff metal or of wood.

My object in running branch wires directly to the lugs b^2, instead of connecting them with the springs *b'*, is to obviate the difficulty heretofore encountered in switches where the operative springs serve as conductors for the current. In such instances the heating effects of the current will in time draw the temper of the springs.

Having now described my invention, I claim—

1. In an electric switch, a center rotating post having attached thereto by means of lateral arms two contact pieces or lugs, the said post being hollow and the two terminals of the circuit entering the structure of the switch through the hollow post and extending through lateral openings in said post to the contact pieces or lugs mentioned, all in com-

bination with a base-piece, which supports the said post, and also two terminals of a circuit corresponding to the terminals fixed to the post, substantially as described.

2. In an electric switch, a rotating hollow post having attached thereto two spring-arms bearing at their outer ends metallic circuit-terminals, the spring-arms being insulated from the terminals, and the circuit-wires leading in through the hollow post and connecting, respectively, with the insulated terminals.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HARRY TILDEN RIGGS.

Witnesses:
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A. S. RIGGS.