H. C. GRANT.

ELECTRIC SWITCH.

APPLICATION FILED JULY 9, 1908.

961,693. Patented June 14, 1910.

Fig. 1.

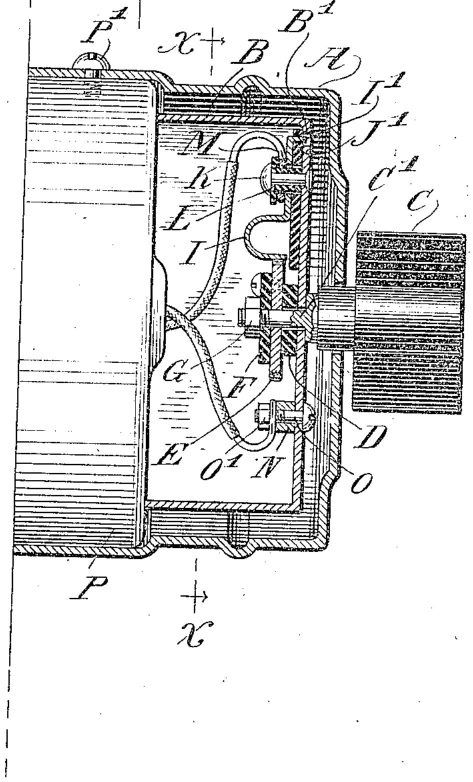


Fig. 2.

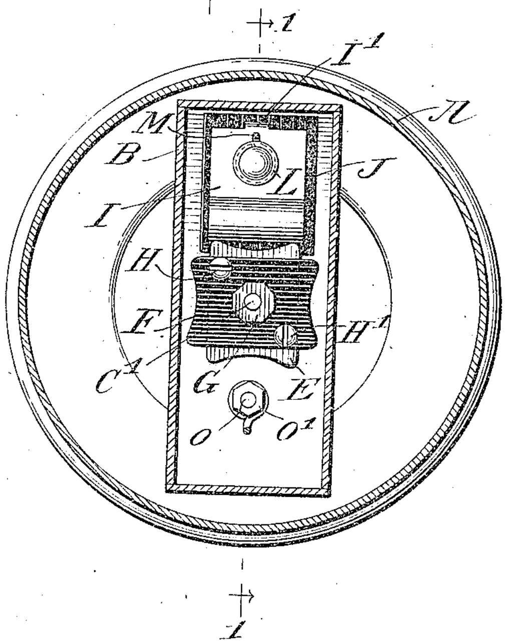
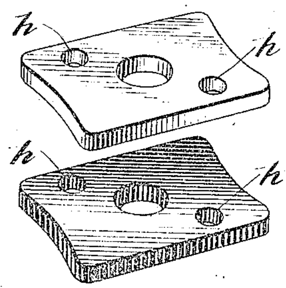


Fig. 3.



WITNESSES

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ELECTRIC SWITCH.

961,693. Specification of Letters Patent. Patented June 14, 1910.

Application filed July 9, 1908. Serial No. 442,640.

To all whom it may concern:

Be it known that I, HARRY C. GRANT, a citizen of the United States, and a resident of Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

My invention relates to electric switches of the snap type, and the object of my invention is to provide a simple switch which may be made at a low cost.

Referring to the drawings which form a part of this specification, Figure 1, is a cross sectional view of my improved switch. Fig. 2, is an inverted plan view on line X—X of Fig. 1; and Fig. 3, is a perspective view of the elements which contact with the spring in the switch, one of which is a conductor of electricity and the other of which is made of insulating material.

A, indicates the outer casing in which is held an inner casing B, which incloses all of the switch members.

C, indicates a handle by means of which the switch is manually operated, and is provided with a shank C′ which carries an insulating washer D, a switch member E which is a conductor, and a switch member F which is a non-conductor of electricity, and a nut G which serves to clamp the said parts together. The members E and F are formed exactly alike and may be punched by the same die, and are connected together by screws H and H′ as illustrated in Fig. 2, in cross relation, the holes *h*—*h*—*h*—*h* being all formed at the same distance from the center of the member, so that they will register with each other, as will readily be understood.

Connected to the casing B is a spring element I, which is insulated from the said casing by a strip of insulating material J, which is of greater length and width than that of said element I, and is provided with a slot J′ into which a projection I′ is inserted to prevent element I from swiveling on element J, and directly under this point a slot B′ is provided in casing B to prevent said projection from contacting with the casing B, which would cause a short circuit in the switch. The spring element I and insulating element J are held to the casing B by a rivet K which passes through an insulating nipple L, between the flange of which and the element I, a conducting wire M is clamped in electrical contact with said element I, but is insulated from the casing B. A conductor N, is connected to the casing B and in electrical contact therewith, by a screw and nut O and O′ respectively.

P indicates a porcelain base piece which is held to casing A by a screw P′ as shown and is provided with a hole in its center through which the conducting wires pass, and this base piece serves as a base for the casing B.

The switch operates as follows:—Assuming the current to be entering through wire M to switch member I, in the position shown in drawings, it will flow through the rotating switch member E to shank C′ and thence to the casing B which serves as a conductor, to screw O and return by wire N. By turning the switch member C on its axis one eighth of a turn, the two adjacent corners of switch members E and F will be in contact with the spring surface of element I, which will be forced back during the turning movement of the element C and will be in position to exert its stored energy to force the members E and F the rest of the way to complete a quarter turn of the element C, and the circuit will be instantly broken between spring I and element E, and it will be noticed that in breaking the circuit, the corner of element E is practically lifted from contact with spring I, in a quick and proper manner to break the circuit.

The member C may be turned in either direction to make or break the circuit.

By this construction, a cheap and efficient switch is provided which may be made to occupy very little space.

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

An electric switch having a casing, a spring switch member made of sheet metal and insulated from said casing, a pair of switch members, one of which is a conductor

and the other a non-conductor of electricity, connected together and alike in form, and means for rotating said last named members, said means being a conductor of electricity and connected in circuit with said spring member and said casing.

Signed at New York in the county of New York and State of New York this 1st day of July A. D. 1908.

HARRY C. GRANT.

Witnesses:
FRANK M. ASHLEY,
A. T. SCHARPS.