

E. R. KNOWLES.
Electric Light Switch.

No. 227,365..

Patented May 11, 1880.

FIG. 1.

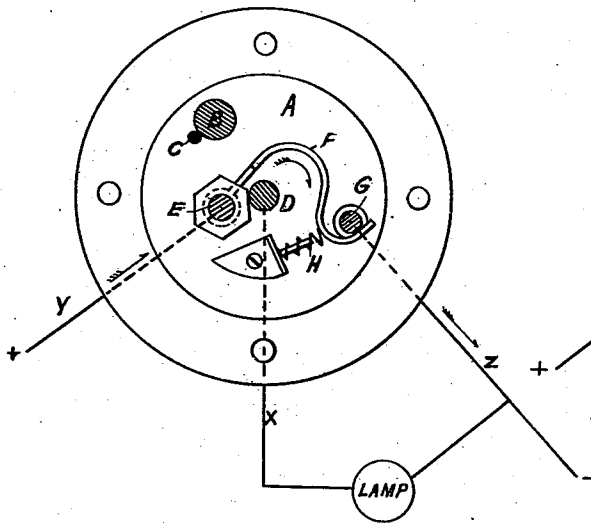


FIG. 2.

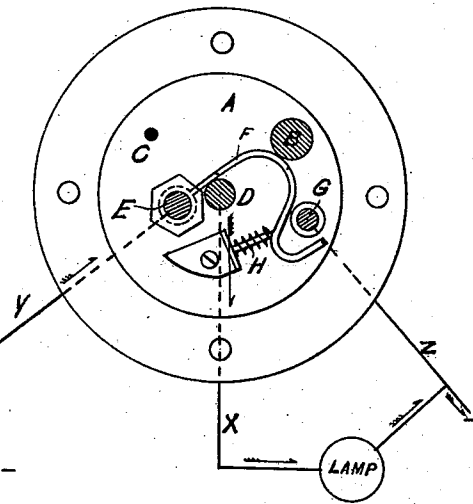


FIG. 4.

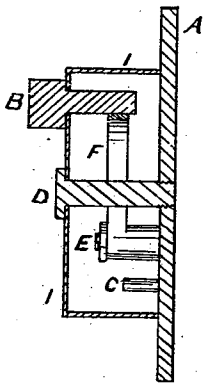
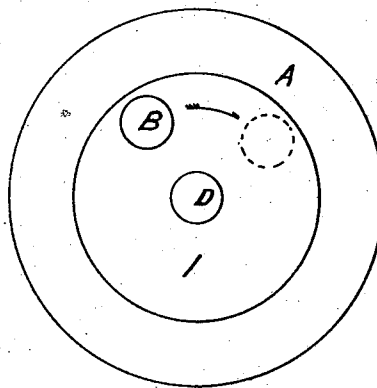


FIG. 3.



WITNESSES.
G. C. Thatcher
Leonard Sawyer

INVENTOR.
E. R. Knowles.

UNITED STATES PATENT OFFICE.

EDWARD R. KNOWLES, OF BROOKLYN, N. Y., ASSIGNOR TO THE EASTERN
ELECTRIC MANUFACTURING COMPANY, OF MIDDLETOWN, CONN.

ELECTRIC-LIGHT SWITCH.

SPECIFICATION forming part of Letters Patent No. 227,365, dated May 11, 1880.

Application filed February 16, 1880.

To all whom it may concern:

Be it known that I, EDWARD R. KNOWLES, 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 Electric-Light Switches; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a simple and effective circuit-continuity-preserving switch which shall avoid any possibility of the manipulator receiving a shock from the passing current, and at the same time preserve the working parts from dust or dirt.

Referring to the drawings accompanying and constituting a part of this specification, Figures 1, 2, 3, and 4 are different views of the apparatus, Fig. 4 being a section through the pivot D and stud B of Fig. 2.

A is an insulating-base, upon which, on pivot D, rotates a metallic cup, I, Fig. 3. F is a bent lever, pivoted at E and normally kept in contact with stud G on the base by coiled spring H. B is a stud fixed to the inner side of the cup I. Turned to the left, the rotation of the cup I is stopped by stud B coming in contact with pin C in the base, as shown in Fig. 1. Turned to the right, the rotation of the cup is stopped by stud B riding up upon lever F, as shown in Fig. 2.

Wires X, Y, and Z show the connection of the switch with the lamp. When the switch is turned to the left the current, entering at the $\pm$ point, passes, by way of the wire Y, lever

F, and stud G, outward to the — point by wire Z, the lamp being cut out of circuit.

To light the lamp the switch-cup I is turned to the right, and the result is, that the instant the circuit described is broken by the stud B coming into contact with lever F, and thereby breaking the connection between the lever F and the stud G, the circuit of the lamp is established, as shown in Fig. 2, the current entering at the $\pm$ point passing, by way of wire Y, lever F, stud B, cup I, and wire X, to the lamp, and outward at the — point.

By means of this switch the continuity of the circuit is never destroyed; and since the manipulator can never touch but one pole of the battery—that connected with the inclosing-cup I—no shock can be obtained, and the parts are preserved from dust and dirt.

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

1. An electric-lamp-lighting switch in which the contact-points are inclosed in a movable cap, substantially as shown and described.

2. A circuit-continuity-preserving switch inclosed in a movable cap, in combination with an electric lamp, as specified.

3. In an electric-lamp-lighting switch, the lever F and stud G, the whole inclosed in a movable cap, I, substantially as shown and described.

EDWARD RICHARDSON KNOWLES.

Witnesses:

G. C. THATCHER,
LEONARD SAWYER.