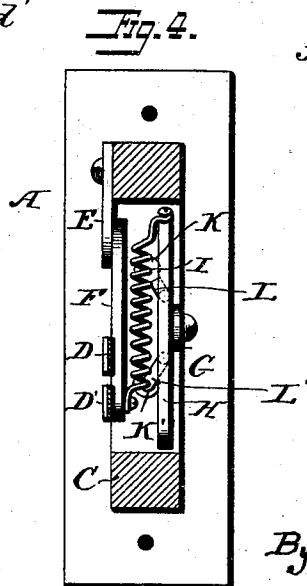
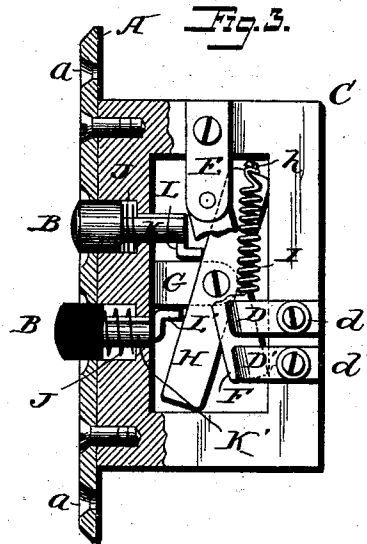
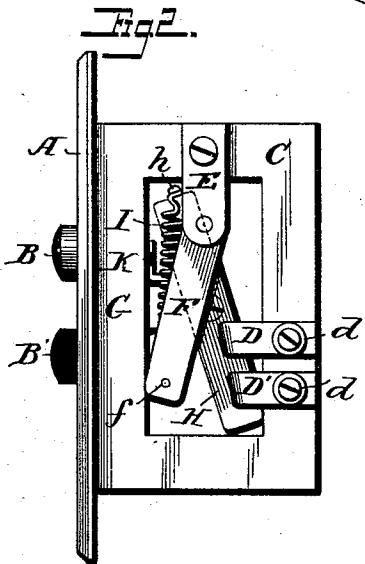
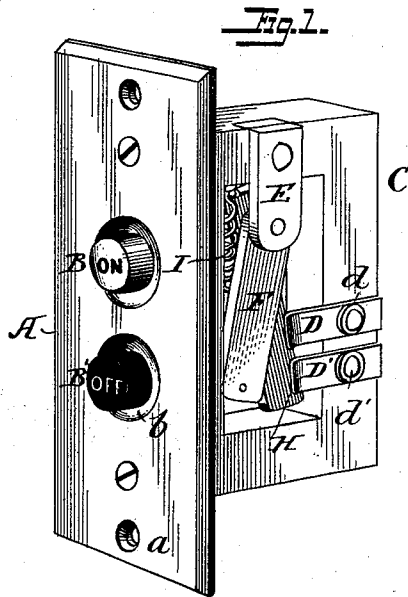


(No Model.)

F. STEVENS.
ELECTRIC SWITCH.

No. 506,563.

Patented Oct. 10, 1893.



Witnesses
Geo. G. Hinkel
A. N. Dobson

Inventor
Frank Stevens
By *Forster & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

FRANK STEVENS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO SAMUEL WELSH, OF SAME PLACE.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 506,563, dated October 10, 1893.

Application filed April 21, 1893. Serial No. 471,317. (No model.)

To all whom it may concern:

Be it known that I, FRANK STEVENS, a citizen of the United States, residing in Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

My invention relates to electric switches or circuit breakers and it has for its object to provide a simple, cheap and effective switch, which may be applied and used in a house or room without disfigurement and which shall insure the complete making or breaking of the circuit when operated, and to these ends my invention consists in a switch embodying the features of construction, arrangement and mode of operation substantially hereinafter more particularly pointed out.

Referring to the accompanying drawings wherein I have shown the preferred embodiment of my invention: Figure 1 is a perspective view of the complete switch. Fig. 2 is a side view showing the switch open. Fig. 3 is a part sectional view showing the mode of operating the switch, and Fig. 4 is a vertical rear section of the switch.

As above indicated the switch is intended more particularly to be applied to a house, desk or wall where it shall be exposed to the smallest extent and interfere the least therewith and to this end it is adapted to be inserted in a proper mortise or recess in the wall or desk leaving only the face plate with the push-buttons exposed.

Thus, in the drawings A represents the face plate which may be of any suitable material preferably capable of a high finish as metal and it is provided with openings *a*, whereby it may be secured in position. Extending through the face-plate are the push-buttons B, B', and these are fitted in openings in the face-plate the edges of which are reamed or chamfered as shown at *b*. Secured to the face-plate is a frame C which is preferably of insulating material and which may be rectangular in shape and is adapted to support the terminals of an electric circuit. In the present instance I have shown the spring contacts D D' as secured to the side of the frame by screws *d*, *d'*, which may also be binding screws for the wires or conductors. Also secured to

the side of the frame is a pivot block E, and pivotally connected therewith is a circuit closing bar or plate F, which is arranged to be moved so as to close the contact between the terminals D D' or to be moved away therefrom to break the circuit. Also mounted on the frame C is a standard G, extending about mid-way into the recess of a frame and mounted on this standard is a rocking arm or lever H. This rocking lever is connected to the circuit breaking lever F by means of a spring I, one end of which is pivotally connected at or near the free end of the contact lever F as at the point *f*, while the other end is connected to one end of the rocking lever H, as at *h*.

The push-buttons B B' are mounted in sockets in the frame and provided with springs J, which normally press them outward, and they are provided with stems K, K', passing through openings in the frame and carrying fingers or toes L L'. These fingers or toes are L-shaped and serve the above accomplishment of preventing the push-buttons slipping out of their sockets and for operating the rocking lever H, in the manner hereinafter set forth.

Such being the construction of the device its operation will be clearly understood and may be stated as follows: The parts being in the position shown in Fig. 1, the push-button B, which may be designated by the word "On," or may be white in contradistinction to the other which may be black to better distinguish them, is pressed inward its toe bearing on the rocking lever H. This forces the lever over and the end of the spring being carried thereby is moved past the fulcrum of the contact lever F, and as soon as this occurs the spring exerts its tension on said contact lever causing it to quickly close the contact between the terminals as indicated in dotted lines in Fig. 3, when the push-button resumes its normal position. The circuit is now closed and so remains until the push-button B' is similarly operated when its toe L, impinging on the rocking lever H, on the opposite side of its pivotal point restores it to its position as shown in Figs. 1 and 2, and the end of the spring H being carried therewith its fulcrum point is changed to the other side of the pivoted lever F, and exerting its force on said lever it causes it to move quickly from the

terminals breaking the circuit with what is called a snap or quick break. It will be seen that in whichever position the parts are left either with the circuit closed or broken the tendency of the spring is to maintain the pivoted and the rocking levers in that position, until forcibly made to assume a contrary position, and when the circuit is made or broken it is instantaneously accomplished, avoiding the danger of arcing and the contact lever sliding over the contact the parts are kept bright and afford good electric communication. In order to prevent the push-buttons turning in their sockets I provide a feather 7 on the side of the extension which operates in a recess in the socket and maintains the toes L in proper position to impinge upon the rocking lever H.

What I claim is—

- 20 1. A spring-actuated electric switch, comprising a hollow frame supporting the electric terminals on one side thereof, a pivoted contact lever mounted within the hollow frame and engaging the terminals, a rocking lever 25 independently mounted within the frame, a spring connecting the free end of the contact

lever with one end of the rocking lever, and separately movable push-buttons extending through one side of the frame and having toes arranged to engage the rocking lever, substantially as described. 30

2. A spring-actuated electric switch, comprising a face plate, an insulating, hollow frame secured to the face plate and supporting the electric terminals on one side, separately movable push-buttons mounted in sockets in the plate and frame and having toes projecting into the recess of the frame, a pivoted contact lever mounted within the frame and engaging the terminals, a separate rocking lever independently mounted on a standard and supported within the frame, and a spring connecting the free end of the contact lever with one end of the rocking lever, substantially as described. 35 40 45

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK STEVENS.

Witnesses:

R. R. KESTEVIN,
C. E. WILSON.