M. GUETT.

ELECTRIC SWITCH.

APPLICATION FILED APR. 25, 1908.

**972,365.** Patented Oct. 11, 1910.

*Fig. 1.*

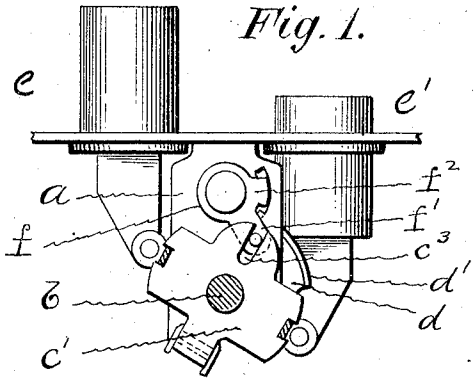



*Fig. 2.*

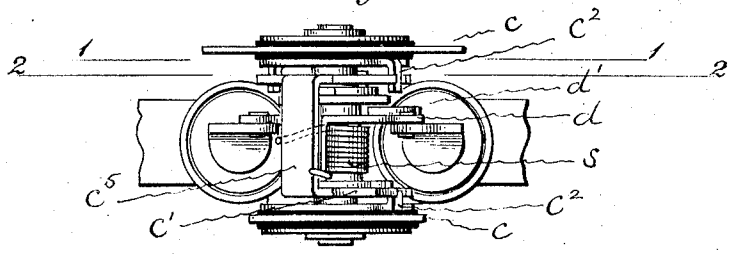



*Fig. 3.*

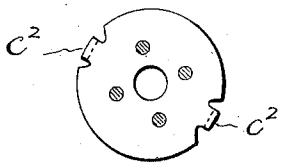



*Fig. 4.*

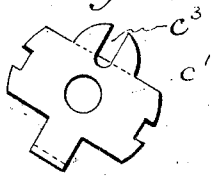



*Fig. 5.*

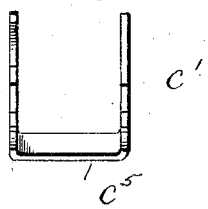



*Fig. 6.*

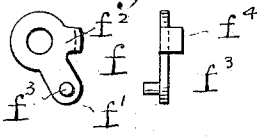



*Fig. 7.*

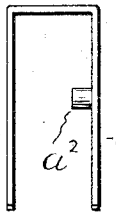



*Fig. 8.*

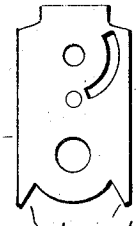



*Fig. 9.*

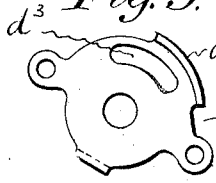
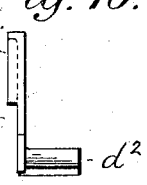



*Fig. 10.*

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# UNITED STATES PATENT OFFICE.

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## ELECTRIC SWITCH.

972,365. Specification of Letters Patent. **Patented Oct. 11, 1910.**

Application filed April 25, 1908. Serial No. 429,191.

*To all whom it may concern:*

Be it known that I, MONROE GUETT, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

The object of the invention is to produce a compact and durable switch easy to manufacture by introducing certain new features of construction.

In the drawings—Figure 1 is a side view of the switch mechanism with one pair of poles removed in order to show construction. Fig. 2 is a bottom view of the complete switch. Fig. 3 is a detail side view of one of the hub-plates of the pole pieces. Fig. 4 is a detail showing the pole-plate. Fig. 5 is a side view of the same. Fig. 6 are front and edge views of the hub with the locking pin and lug. Fig. 7 is an edge view of the frame. Fig. 8 is a side view thereof. Fig. 9 is a side view of the escape-plate. Fig. 10 is an edge view thereof.

Referring to the drawings $a$ is the frame formed as shown to substantial U-shape, the lower edge of each side being cut away to form shoulders $a'$ $a'$ by which the throw of the poles is limited.

$b$ is the spindle supported in the frame; $c$ $c$ are the poles mounted on the spindle; $c'$ is a U-shaped pole-plate each side of which lies next to one of the poles and is secured thereto by downturned ears $c^2$; in one side of the pole-plate there is a slot $c^3$. $d$ is an escape-plate having a locking-flange $d'$; $e$ $e'$ the push-buttons connected with the escape-plate and by means of which the escape-plate is moved; $f$ a hub pivoted on the frame having two radial arms $f'$ $f^2$ on one of which there is a locking-pin $f^3$ which coöperates with the slot $c^3$ in the pole-plate, there being a downturned lug $f^4$ on the other arm coöperating with the locking-flange $d'$ on the escape plate. A projection $d^2$ on the escape-plate underlies the connecting bar $c^5$ of the pole-plate and a spring $s$ is coiled on the spindle with its ends projecting on either side of the projection $d^2$ and bar $c^5$. A pin $a^2$ on the frame rides in a slot $d^3$ in the escape-plate, limiting the extent of its oscillation.

The operation is as follows: As seen in Fig. 1 the lug $f^4$ rides on the outer side of the locking-flange $d'$. As the left-hand push-button is pressed in the escape-plate turns to the left, the locking-flange $d'$ riding under the lug $f^4$. At the same time the projection $d^2$ carries one end of the spring around the spindle, the other end being held against movement for the reason that it rests against the opposite side of the bar $c^5$ on the pole-plate which is connected with the poles, this pole-plate being held against movement during this initial movement of the push-buttons and escape-plate by reason of the fact that the pin $f^3$ is in engagement with the slot $c^3$ in the pole-plate and the hub is kept from turning by reason of the engagement of the lug $f^4$ with the locking-flange $d'$. As soon as the locking-flange passes completely from under the lug $f^4$ the poles and connected parts are free to turn and they are thrown with a quick sharp action by the spring until the bar $c^5$ of the pole-plate strikes against one of the shoulders $a'$.

It is to be noted that the point of engagement of the locking-pin with the pole-plate is inside of the point of engagement of the lug with the locking-flange and that the locking-flange moves through an arc of a circle which is to one side of the median line through the center of the hub and spindle while the locking-pin travels the arc of a circle which cuts this median line.

By this arrangement and construction of the parts a very compact switch is produced, yet one having a long break, very efficient in its action and very strong in its construction.

I claim as my invention:—

1. In an electric switch, a frame, a spindle, a pole-plate, poles secured thereto, an escape-plate, push-buttons connected with the escape-plate, a locking-flange on said escape-plate, a hub, radial arms extending therefrom, a pin on one arm in engagement with said pole-plate, a lug on the other arm cooperating with said flange on said escape-plate, and a spring connecting said escape-plate with said pole plate.

2. In an electric switch, a frame, a spindle mounted therein, a pole-plate mounted on the spindle, poles secured to the pole-plate, an escape-plate mounted to oscillate on the spindle, push-buttons connected therewith, a hub pivotally mounted on the frame movable independently of said escape plate, interengaging parts on said hub and said pole-plate,

interlocking parts on said hub and said escape-plate, the point of engagement of the former being inside of the point of engagement of the latter, and a spring connecting the escape-plate with the pole-plate, substantially as described.

3. In an electric switch, a frame, oppositely disposed stopping shoulders thereon, a spindle mounted in the frame, a pole-plate having a cross-bar coöperating with said stopping shoulders, poles secured to said pole-plate, an escape plate mounted to oscillate on the spindle, push-buttons connected therewith, a lug on said escape-plate underlying the cross-bar on said pole-plate, a spring wound about the spindle with its ends located on opposite sides of said projection and cross-bar and connecting said escape-plate with said pole-plate, said pole-plate having a slot in one edge thereof, a hub pivotally mounted on the frame, radial arms extending from said hub, a pin on one of said arms riding in the slot in said pole-plate, a locking-flange on the escape-plate, a lug on the other arm coöperating with said locking-flange, the path of movement of said pin crossing the median line connecting said spindle and hub, the path of movement of said lug being wholly to one side thereof, substantially as described and for the purposes set forth.

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