L. H. MOULTHROP.

PUSH BUTTON ELECTRIC SWITCH.

APPLICATION FILED NOV. 12, 1908.

932,883. **Patented Aug. 31, 1909.**

Fig. 1.

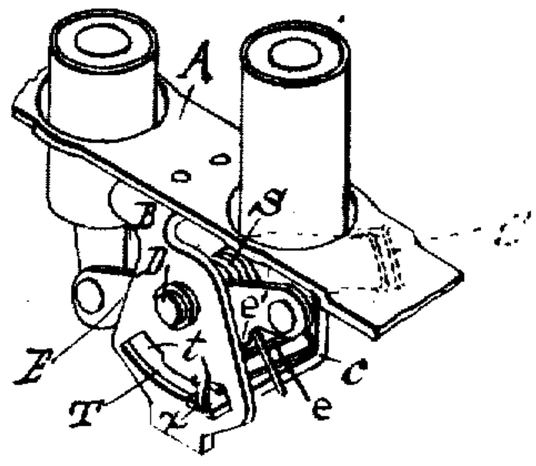
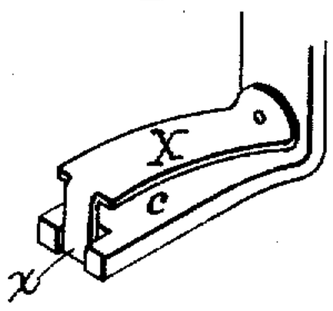


Fig. 2.



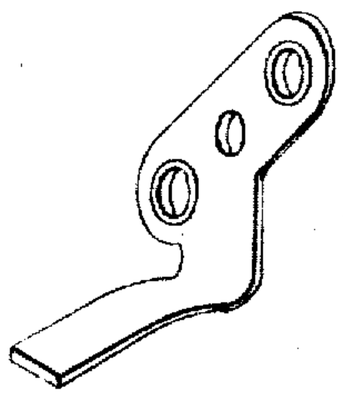
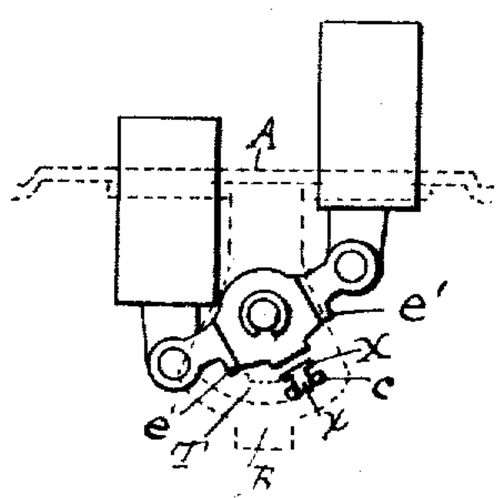


Fig. 4.

Fig. 3.



WITNESSES

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PUSH-BUTTON ELECTRIC SWITCH.

932,883. Specification of Letters Patent. Patented Aug. 31, 1909.

Application filed November 12, 1908. Serial No. 462,302.

To all whom it may concern:

Be it known that I, LEMBERT H. MOULTHROP, a citizen of the United States of America, and residing in the city of Bridgeport, in the county of Fairfield, in the State of Connecticut, have invented certain new and useful Improvements in Push-Button Electric Switches, of which the following is a specification.

My invention relates to electric switches particularly to push button switches and the object of my invention is to provide an improved escapement mechanism.

In the accompanying drawings Figure 1 is a perspective of the operating mechanism of a switch in which my invention is illustrated; Fig. 2 is a perspective of the detent device drawn to a larger scale; Fig. 3 is a rear elevation of the operating mechanism; and Fig. 4 is a perspective of a modified form of detent.

The present invention will be readily understood by those skilled in the art without illustrating the usual porcelain shell and its common accessories. The operating mechanism carried by the usual standard B, riveted to the yoke A comprises an oscillating contact piece C mounted on the spindle D, and a coöperating rock lever E adapted to actuate the former through the spring S in the usual manner by means of lugs *c* and *e* embraced by the ends of the spring.

My improved detent as shown in Figs. 1 to 3 comprises a spring X mounted on the contact member and extending with the lug *c* into the slot T in the standard. The slot T is provided with notches *t* into which the spring X naturally rises at the end of the stroke across the slot. Until the spring is depressed by the cam shoulder e^1 on the rock lever so as to clear the edge of the notch, it acts as a detent preventing the contact member from following the oscillation of the rock lever when the latter is actuated by the out push button. As soon as the spring X is pushed down to clear the edge of the notch *t*, the contact member snaps across, thus insuring a quick break or make for the switch. To relieve the spring X of any unnecessary strain from the stroke of the switch, it is made slightly narrower than the lug *c* and the latter therefore takes the full impact against the end of the slot T. Additional rigidity is also imparted to the spring by providing the same with a tongue *x* which works in a slight recess in the end of the lug *c*.

My device may be varied in detail considerably without departing from my invention. For instance instead of making the lug *c* rigid and securing thereto the spring X, I may make the lug *c* itself of spring metal and so form it that it springs into the notches *t* in like manner as the spring X at the end of the switch stroke.

Other variations will readily suggest themselves and I do not limit myself to the details shown.

I claim as my invention:

1. In an electric switch an oscillating contact-carrying member and a detent moving therewith, said detent comprising a spring which itself acts directly as the retaining member, in combination with means for freeing said detent.

2. In an electric switch an oscillating contact-carrying member, a standard carrying the same and having a guideway with retaining notches cut therein, a detent moving with said contact-carrying member and working in said guideway, said detent comprising a spring which itself acts directly as the retaining member, in combination with means for freeing said detent.

3. In an electric switch, a standard having a slot, an oscillating contact-carrying member, a rock lever and spring means for operating the former, upon the actuation of the latter, a lug on said contact-carrying member working in said slot, a spring extending lengthwise of said lug and acting directly as a detent and means in combination with said rock lever for freeing said detent, substantially as described.

4. In an electric switch, a standard having a slot, an oscillating contact-carrying member, a rock lever and spring means for operating the former upon the actuation of the latter, a lug on said contact-carrying member working in said slot; a spring of less width than said lug extending lengthwise thereof, and acting directly as a detent and means in connection with said rock lever for freeing said detent, substantially as described.

5. In an electric switch, a standard having a slot, an oscillating contact-carrying member, a rock lever and spring means for operating the former upon the actuation of the latter, a recessed lug on said contact-carry-

ing member working in said slot, a spring extending lengthwise of said lug and provided with a guide tongue working in the recess in said lug, said spring acting directly as a detent, together with means in connection with said rock lever for freeing said detent, substantially as described.

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

LEMBERT H. MOULTHROP.

Witnesses:

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