W. D. THROOP.

ELECTRIC SWITCH.

APPLICATION FILED NOV. 11, 1919.

1,339,306. **Patented May 4, 1920.**

Fig. 1.

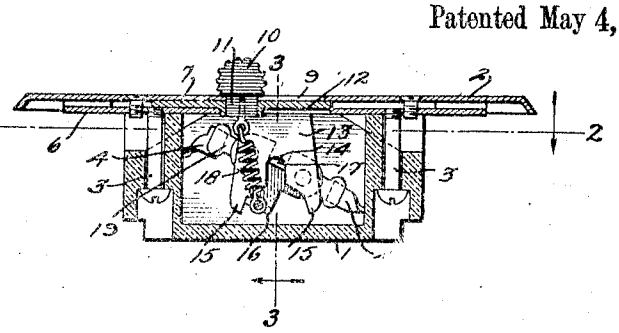


Fig. 2.

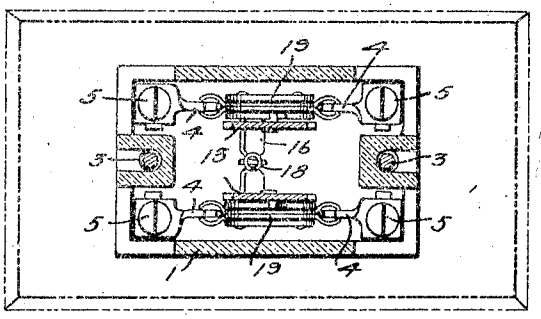
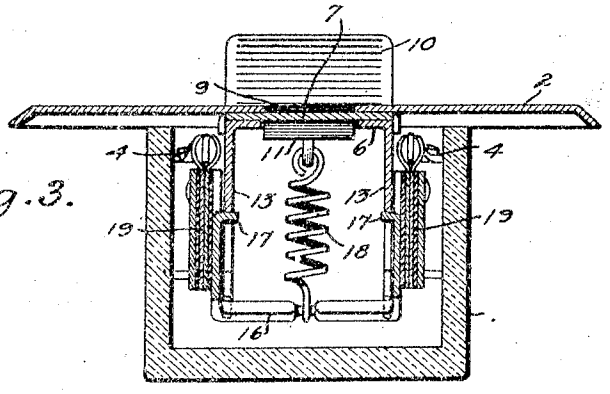


Fig. 3.



WITNESSES

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ELECTRIC SWITCH.

1,339,306. Specification of Letters Patent. Patented May 4, 1920.

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To all whom it may concern:

Be it known that I, WILLIAM D. THROOP, a citizen of the United States, and a resident of the city of Norwich, in the county of New London and State of Connecticut, have invented a new and Improved Electric Switch, of which the following is a full, clear, and exact description.

This invention relates to improvements in electric switches, an object of the invention being to provide a quick acting switch operated by a laterally movable or slide member and which can be utilized for higher currents.

A further object is to provide a switch of the character stated which can be manufactured and sold at an extremely low price, which will be strong and durable in use and which will most effectually perform the function for which it is intended.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings:

Figure 1 is a view in longitudinal section illustrating my improved switch.

Fig. 2 is a view in section on the line 2—2 of Ffg. 1.

Fig. 3 is an enlarged view in section on the line 3—3 of Fig. 1.

1 represents a porcelain box and 2 a wall plate secured thereto by means of screws 3. The box is provided in its ends with two pairs of diagonally arranged contacts 4 secured in the box 1 by means of screws 5.

A longitudinally positioned guide strip 6 is secured to the under face of the plate 2 and spaced therefrom, and a sliding plate 7 is located between the plate 2 and strip 6 and serves to close a slot 9 in plate 2.

A button 10 preferably of the corrugated bar shape shown, is movable against the outer face of plate 2 and extends across the slot 9. This button 10 is provided with a tenon 11 which extends through the slide plate 7 and is movable in a longitudinal slot 12 in guide strip 6.

The guide strip 6 is made with parallel bracket arms 13, 13, having central recesses 14 in their free ends, and also provided with lugs 15 at the edges of their free ends forming shoulders or stops.

A bail 16 is provided at its ends with inwardly projecting lugs 17 located in the recesses 14, and a coiled spring 18 connects the intermediate portion of the bail 16 with the tenon 11 of button 10.

The ends of the bail 16 outside of bracket arms 13, support switch arms 19 which are of just the proper length to engage the contacts 4 in box 1 when the switch arms are in one diagonal position.

The operation is as follows:

When the button 10 is moved from one position to another its first operation is to swing the end or spring 18 past the pivotal connection of lugs 17 in recesses 14 and in so doing the spring will be under tension and will quickly swing the bail 16 to its other extreme position. The stops 15 limit the movement of the bail and it is of course to be understood that when the bail is in one position the switch arms 19 engage the contacts 4 and when in the other extreme position the circuit is open.

The operation of the switch arms is therefore controlled by the spring which insures a quick action and the movement of the button operates to change the angle of the spring and cause it to operate to swing the bail and change the position of the switch arms.

Various slight changes might be made in the general form of the parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. An electric switch, comprising a support, electric contacts on the support, a wall plate secured to the support, and having a slot therein, a strip secured to the inner face of the plate, bracket arms on the strip having recesses in their ends, a bail, lugs on the bail located in the recesses, switch arms secured to the bail, a sliding button movable on the plate, and a spring connecting the intermediate portion of the bail with the button.

2. An electric switch, comprising a support, electric contacts on the support, a wall plate secured to the support, and having a slot therein, a strip secured to the inner face of the plate, bracket arms on the strip having recesses in their ends, a bail, lugs on the bail located in the recesses, switch arms

secured to the bail, a sliding button movable on the plate, a spring connecting the intermediate portion of the bail with the button, and lugs on the bracket arms spaced from the said recesses and limiting the movement of the bail.

3. An electric switch, comprising a box, electric contacts in the box, a wall plate secured to the box, and having a slot therein, a guide strip secured to the inner face of the wall plate, spaced therefrom, and having a slot therein, a slide plate located between the wall plate and guide strip and covering the slot in the wall plate, a sliding button on the wall plate extending across the slot therein, a tenon on the button projecting through the slide plate and movable in the slot in the guide strip and switch arms operatively connected to said tenon.

4. An electric switch, comprising a box, electric contacts in the box, a wall plate secured to the box, and having a slot therein, a guide strip secured to the inner face of the wall plate, spaced therefrom, and having a slot therein, a slide plate located between the wall plate and guide strip and covering the slot in the wall plate, a sliding button on the wall plate extending across the slot therein, a tenon on the button projecting through the slide plate and movable in the slot in the guide strip, a pivotally supported bail in the box, switch arms on the bail, and a spring connecting the bail and tenon.

5. An electric switch, comprising a box, electric contacts in the box, a wall plate secured to the box and having a slot therein, a guide strip secured to the inner face of the wall plate, spaced therefrom, and having a slot therein, a slide plate located between the wall plate and guide strip and covering the slot in the wall plate, a sliding button on the wall plate extending across the slot therein, a tenon on the button projecting through the slide plate and movable in the slot in the guide strip, bracket arms on the guide strip having recesses in their ends, a bail, lugs on the bail located in the recesses, switch arms secured to the bail, a spring connecting the central portion of the bail with said tenon, and lugs on the bracket arms limiting the swinging movement of the bail.

WILLIAM DAN THROOP.