

1,033,340.

S. MORRIS.
ELECTRIC SWITCH.
APPLICATION FILED MAY 25, 1909.

Patented July 23, 1912.

Fig. 1.

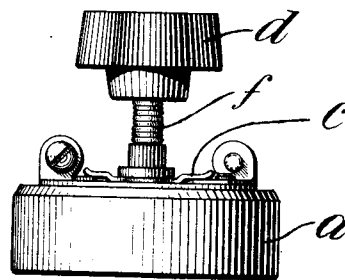
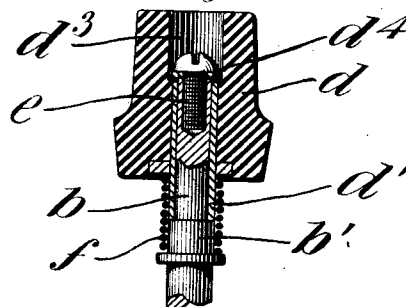


Fig. 2.



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UNITED STATES PATENT OFFICE.

SHIRAS MORRIS, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE HART & HEGEMAN MANUFACTURING COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ELECTRIC SWITCH.

1,033,340.

Specification of Letters Patent.

Patented July 23, 1912.

Application filed May 25, 1909. Serial No. 498,218.

To all whom it may concern:

Be it known that I, SHIRAS MORRIS, 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 an improved form of driving connection between the handle or turn-button of an electric switch and the operating spindle, and particularly to produce such a driving connection which will permit the rearward rotation of the turn-button.

In the drawings—Figure 1 is a side view of a switch embodying my invention. Fig. 2 is a detail view on enlarged scale and partly in central vertical section of the handle and spindle connection.

Referring to the drawings *a* is the base, *b* the spindle, *c* the movable contacts which are connected to the spindle by a spring and held against rotation during the initial movement of the spindle in order that the spring may be made tense to throw the contacts with a quick snap action when they are released; all of which is usual in mechanisms of this character. The spindle *b* has a hub *b'* and a handle or turn-button *d* has a hub *d'* of the same diameter as the hub *b'*. The handle is pierced to fit over the spindle permitting the hub *d'* to butt against the hub *b'*. The end of the handle is recessed as at *d²* to form a shoulder *d⁴* even with the end of the spindle. A screw *e* is threaded into the end of the spindle and its head has

a bearing on the shoulder *d⁴*, thus holding the handle on the spindle but leaving it free to turn with respect thereto. A coil spring *f* whose inside diameter is normally slightly smaller than the diameter of the hubs *b'* *d'* is forced onto these hubs. Forward movement of the handle tends to wind up this spring, causing it to bind the hubs with sufficient force to produce a driving connection between the handle and the spindle so that the forward rotation of the handle will turn the spindle and operate the switch. Rearward rotation of the handle, however, tends to unwind the spring and reduce the gripping effect of the spring on the hubs and so permits the handle to be turned to the rear and at the same time the screw *e* prevents the handle from coming off the spindle.

The handle may if desired be provided with means for permitting a movement lengthwise of the spindle, such as illustrated in Patent No. 745,011, of November 24th, 1903.

I claim:

In an electric switch an operating spindle, a handle secured thereon free to turn, hubs of even diameter on the spindle and handle, a coil-spring mounted on said hubs, the interior diameter of said spring being normally slightly smaller than the diameters of said hubs, substantially as described and for the purposes set forth.

SHIRAS MORRIS.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."