No. 859,200. PATENTED JULY 9, 1907.

C. A. CLARK.

ELECTRIC SWITCH HANDLE.

APPLICATION FILED MAY 7, 1907.

Fig. 1

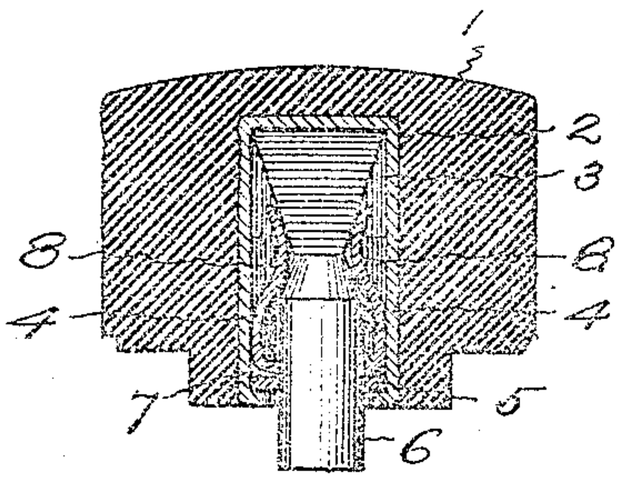


Fig. 2

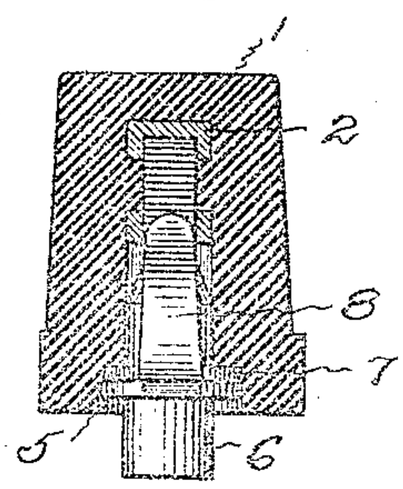


Fig. 3

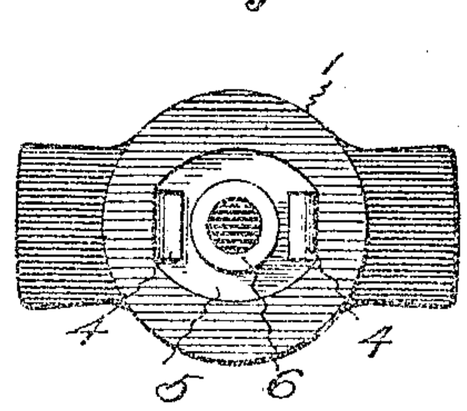


Fig. 4

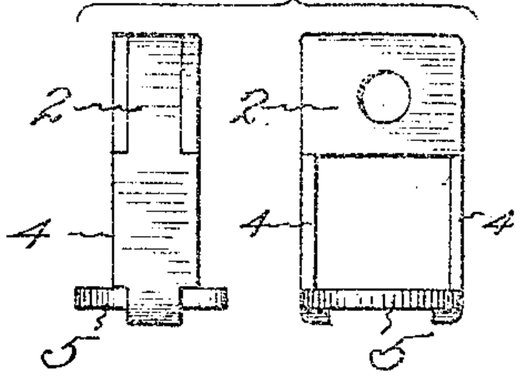


Fig. 5

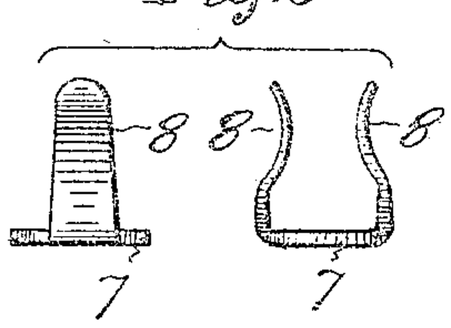


Fig. 6

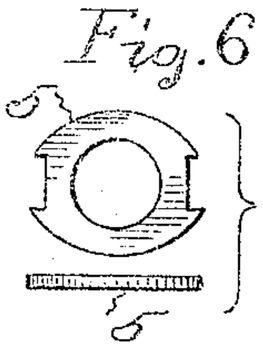


Fig. 7

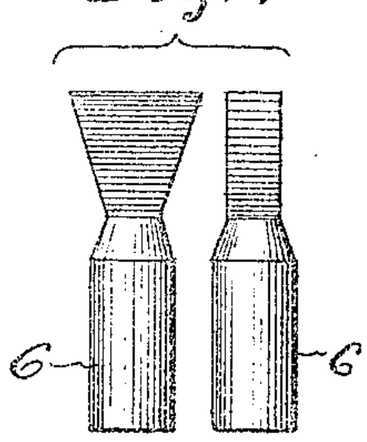


Fig. 8

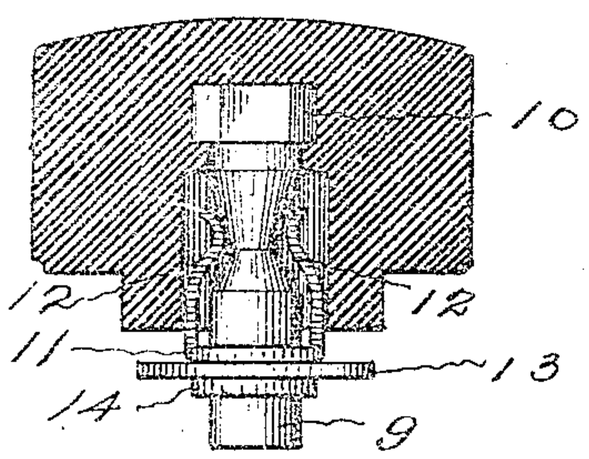
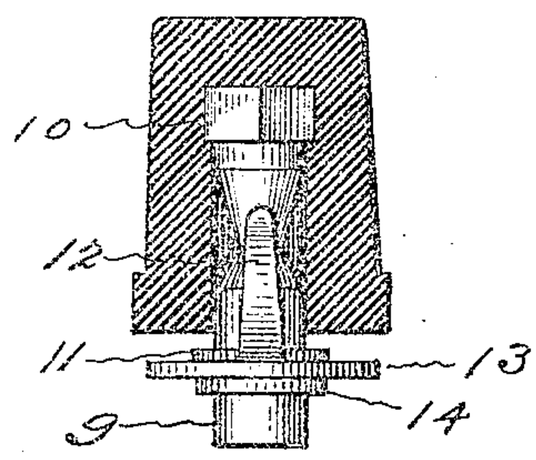


Fig. 9



Witnesses:
Lena C. Berry.
Daniel B. Westin

Inventor:
Charles A. Clark by
Harry P. Williams
Atty.

UNITED STATES PATENT OFFICE.

CHARLES A. CLARK, OF HARTFORD, CONNECTICUT, ASSIGNOR TO CHARLES G. PERKINS, OF HARTFORD, CONNECTICUT.

ELECTRIC-SWITCH HANDLE.

No. 859,200. Specification of Letters Patent. Patented July 9, 1907.

Application filed May 7, 1907. Serial No. 372,348.

To all whom it may concern:

Be it known that I, CHARLES A. CLARK, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Electric-Switch Handle, of which the following is a specification.

This invention relates to a handle for an electric rotary snap switch, which is provided with yielding means whereby it may be attached to the switch spindle in such manner as to hold the cover or plate in position with the proper tension, without requiring the spindle to be of exact length with relation to the base or frame.

The object of the invention is to provide a very simple and cheap construction for a handle of this nature which will be rigid and strong yet will have sufficient elasticity to desirably accomplish its purpose.

Figure 1 of the accompanying drawings shows a central longitudinal section of a handle that embodies the invention. Fig. 2 shows a central transverse section. Fig. 3 shows a bottom view. Fig. 4 shows edge and side views of the frame which is preferably molded into the handle for supporting the spring fingers and the spindle end. Fig. 5 shows edge and side views of the spring fingers. Fig. 6 shows face and edge views of the washer that is fastened to the lower edge of the frame for the purpose of holding the spring fingers in position. Fig. 7 shows front and edge views of the spindle end. Fig. 8 shows a central longitudinal section of a modified form of the invention. And Fig. 9 shows a central transverse section of the modified form.

The handle 1 may be formed any desired shape of porcelain, hard rubber, or any other suitable insulating compound. Preferably molded within the handle, when it is formed, is a frame 2. This frame is shaped to provide a socket 3 at its inner end, and to have outwardly projecting arms 4 which extend through, and when the device is assembled, are bent over the edges of the washer 5. The walls of the frame are preferably perforated so that when the material of the handle is molded it will flow into the perforations and so prevent the frame from being pulled out from the handle.

The outer end of the spindle-end 6 is interiorly threaded so that it may be screwed upon the ordinary switch spindle in the usual way. A portion of the spindle-end is reduced in diameter and the walls taper to the smaller section. The inner end of the spindle-end is desirably flattened and made of such size that it will loosely fit within the socket in the frame that is embedded in the handle. This flattened section also tapers to the reduced section of the spindle-end. The cylindrical portion of the spindle-end extends through a plate 7 that is provided with spring fingers 8 which are so bent as to clasp the flattened tapering inner end of the spindle-end at the reduced section.

The plate with the spring fingers is first pushed upon the spindle-end and then the spindle-end with the plate and spring fingers is thrust into the frame that is embedded in the handle, after which the washer is slipped in the outer ends of the arms of the frame against the spring finger plate and the ends of the arms bent over on the under side, so as to hold the washer, and consequently the other parts, from removal from the frame in the handle.

When the spindle-end is screwed upon the spindle of a switch, the handle yields as its inner end encounters the cover or the plate of the switch, so that the handle will hold that cover or plate in position with a yielding pressure. The spring fingers yield outwardly as the spindle-end is drawn out of the socket in the handle when it is screwed on, and the tendency, of course, is for the spring fingers to force themselves toward each other as much as possible and consequently to hold the handle down close upon the cover or plate. With this construction the spring fingers can be made very stiff and the spindle-end can fit the holding frame so that all of the parts will be rigid and yet there will be a sufficient yielding of the handle when it is being screwed to position on a switch spindle.

In the modified form of the invention the spindle-end 9 has an angular head 10 that is preferably molded in when the handle is formed. The spindle-end is reduced at one portion and preferably tapers each way toward the smaller section. In this form of the invention the plate 11 with the spring fingers 12 is movable upon the spindle-end which is held stationary with relation to the handle. A washer 13 is held upon the spindle by a collar 14 in position to hold the plate with the spring fingers bearing against and clasping the tapering section of the spindle-end. In this form of the invention when the handle is screwed onto a switch spindle the washer yields as it engages with the cover or plate of the switch and holds the plate or cover in position with a yielding pressure. The spring fingers, as the washer yields, open from each other on the tapering section of the spindle-end, but with a tendency to close and slide down to the smallest part of the spindle-end, which of course causes them to hold the washer from unrequired outward movement: This form of the invention is very simple to make and easy to assemble, and the construction is rigid and strong and yet there is sufficient yield to the washer to hold the cover or plate of the switch in position in a desirable manner.

The invention claimed is:—

1. A switch handle having a recess, a spindle-end,

adapted to be attached to a spindle, extending into said recess, said spindle-end having an inclined section, and spring fingers between which the spindle-end extends, that bear against the inclined section of the spindle-end, substantially as specified.

2. A switch handle having a frame embedded therein, a spindle-end extending into the frame, said spindle-end having a tapering section, and spring fingers held in place by the frame and arranged to bear against the tapering section of the spindle-end, substantially as specified.

3. A switch having a recess, a spindle-end with a tapering section extending into the recess and outwardly yielding spring fingers located in the recess and adapted to clasp the tapering section of the spindle-end, substantially as specified

CHARLES A. CLARK.

Witnesses:
HARRY R. WILLIAMS,
LENA C. BERRY.