

(No Model.)

C. G. PERKINS.
ELECTRIC SNAP SWITCH.

No. 569,299.

Patented Oct. 13, 1896.

Fig. 1

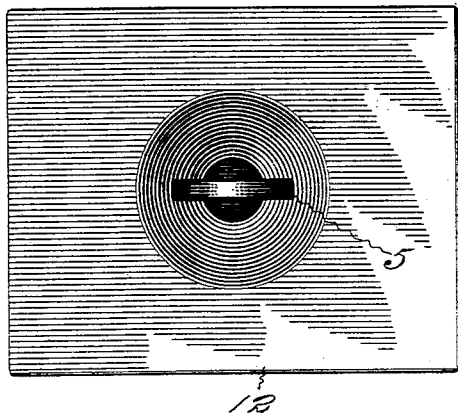


Fig. 3

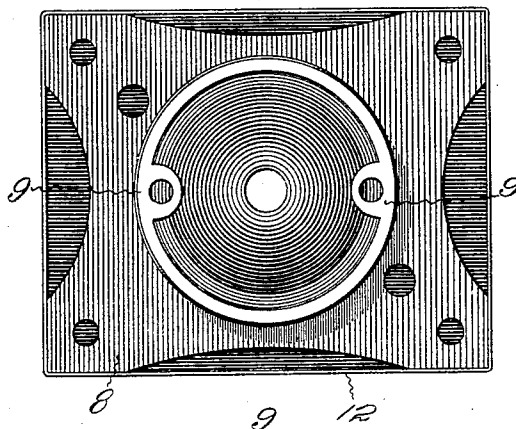


Fig. 2

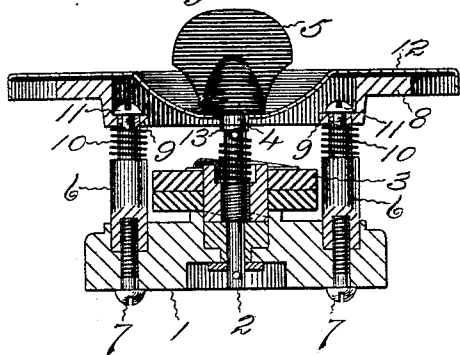
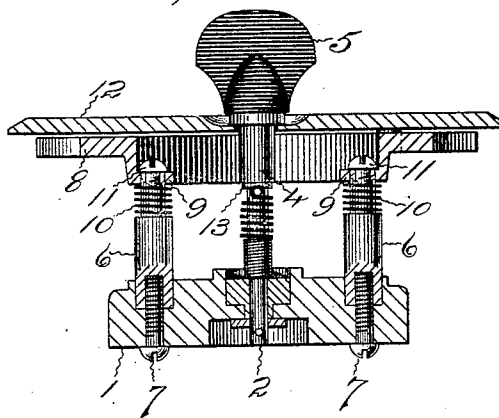


Fig. 4



Witnesses:

E. J. Hyde.

C. E. Burdett.

Inventor:

Charles G. Perkins, by

Harry R. Williams,
att.

UNITED STATES PATENT OFFICE.

CHARLES G. PERKINS, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE PERKINS ELECTRIC SWITCH MANUFACTURING COMPANY, OF SAME PLACE.

ELECTRIC SNAP-SWITCH.

SPECIFICATION forming part of Letters Patent No. 569,299, dated October 13, 1896.

Application filed July 31, 1896. Serial No. 601,178. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. PERKINS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Electric Snap-Switches, of which the following is a specification.

The invention relates to those rotary snap-switches or cut-outs which have a holding-plate for securing the switch in position and a cover-plate outside of the holding-plate that is held in place tightly by invisible means.

The object of the invention is to provide a simple and inexpensive construction which will permit the cover to be held positively in place without shake or rattle by the handle, a part connected with the handle or a part similarly attached to the spindle, regardless of the exact location of the holding-plate or the exact position of attachment of the cover-plate-holding part to the spindle.

To this end the invention resides in a rotary snap-switch which may be employed for cutting in or out incandescent-lamp or other circuits, as desired, having a holding-plate that is adapted to be rigidly secured to the supporting part, as the wall of a building, a yielding connection between the holding-plate and the base of the switch, a cover-plate outside of the holding-plate, and a handle or other part connected with the operating-spindle and having a part bearing against the cover-plate for holding it in position, as more particularly hereinafter described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a plan of a flush switch embodying the invention. Fig. 2 is a central vertical section of the same. Fig. 3 is a bottom plan of the holding-plate and the cover-plate, and Fig. 4 is a sectional view showing a modified form of cover-plate.

In the views, 1 indicates the insulating-base, which supports the rotary spindle 2 and the usual contacts and brushes. Upon the spindle is a block of insulating material that carries the conducting-pieces that connect and disconnect the brushes and contacts

when the block is rotated by the movement of the spindle in the ordinary manner.

To the end of the spindle is screwed or otherwise attached the shank 4 of the handle 5.

On the base are supporting-posts 6, which are usually held firmly connected with the base by screws 7. Mounted so as to move upon the ends of these posts is the holding-plate 8. The holding-plate may be made of any ordinary metal and left in an unfinished state, and it is preferably provided with perforated lugs 9, that pass over the ends of the posts 6. Spiral springs 10 are placed between shoulders formed on these posts and the under side of the plate, or, rather, the perforated lugs that project from the plate, and screws 11 are threaded into the ends of the posts to prevent the complete removal therefrom of the holding-plate. These springs normally force the posts inward, and thus the base, with the operating mechanisms of the switch, is pushed with yielding force away from the holding-plate. In the views the posts are shown as rigidly connected with the base and loosely connected with the holding-plate, the springs pushing between shoulders on the posts and the holding-plate. Of course the same action would be effected by rigidly connecting the posts with the holding-plate and loosely connecting the posts with the base and causing the springs to thrust between shoulders on the posts and the base. Both of these constructions provide yielding connections between the holding-plate and the base.

If desired, rubber cushioning-springs could be employed instead of the spiral springs shown. The cover-plate 12, which has a high polish or other ornamental finish, is placed outside of the holding-plate, and the shank of the handle is thrust through the perforation in the cover-plate and screwed upon the threaded end of the spindle, drawing the cover-plate and base toward each other until the end of the shank of the handle butts against a stop or shoulder 13, formed on the spindle, so that further rotation of the handle will cause the spindle to be rotated. The inner edge of the handle or a shoulder on the

shank bears against the outer face of the cover-plate.

The cover-plate may be stamped to shape of thin sheet metal, as shown in Fig. 2, with a flanged rim and a central depression for the handle, or it may be a flat piece formed of heavier metal, as shown in Fig. 3, with which latter plate the shank of the handle must be somewhat longer than the shank of the handle for the former plate.

The flush switches that are shown are fastened in position to the wall of a room or other part by securing the holding-plate rigidly in position with screws that pass through the perforations provided.

The finished cover-plate is then placed over the rougher holding-plate and the handle connected with the spindle. When the handle is screwed upon the spindle, the cover-plate will be pressed against the wall, and the base will be drawn outward against the pressure of the springs until the handle is turned tightly home on the spindle. The pressure of the springs will force the base in such manner that the shoulder on the handle or shank of the handle will bear against the cover-plate and hold the cover-plate tightly in position. If the threads are not cut exactly the same on all of the handles and spindles, or the cover-plates should vary in thickness, or the holding-plates should not be set exactly flush with the face of the wall, the yielding connections between the holding-plates and the bases will give, so that the handles may be screwed down to their positions for properly turning the spindles and holding the cover-plates in place. With this construction the cover-plates will be held tightly in place, so that they will not shake, rattle, or work loose, regardless of the exact setting of the holding-plates in the wall or of the exact length of the threaded connections between the handles and the spindles. This is particularly advantageous for use in connection with single flush switches, and it can of course be used with gang flush-switches or such switches as have a number of keys or handles and a single plate that is invisibly held in position by the handles.

I claim as my invention—

1. In an electric switch, in combination, a holding-plate adapted to be firmly secured to a supporting part, a base bearing the operating mechanisms, yielding connections between the holding-plate and the base, a cover-plate outside of the holding-plate, and a handle for moving the operating mechanisms said handle having a part bearing against the cover-plate, substantially as specified.

2. In an electric switch, in combination, a holding-plate adapted to be firmly secured to a supporting part, a base bearing contacts and a rotary spindle carrying contact connecting and disconnecting parts, yielding connections between the holding-plate and the base, a cover-plate outside of the holding-plate, and a handle connected with the rotary spindle borne by the yielding base and having a part bearing against the cover-plate, substantially as specified.

3. In an electric switch, in combination, a holding-plate adapted to be firmly secured to a supporting part, a base bearing contacts and a rotary spindle carrying contact connecting and disconnecting parts, posts yieldingly connected with the holding-plate and firmly connected with the base, a cover-plate outside of the holding-plate, and a handle for moving the operating mechanisms and having a shoulder bearing against the cover-plate, substantially as specified.

4. In an electric switch, in combination, a holding-plate adapted to be firmly secured to a supporting part, a base bearing contacts and a rotary spindle carrying contact connecting and disconnecting parts, posts firmly connected with the base and passing through perforations in the holding-plate, spiral springs mounted upon the posts and thrusting between shoulders on the same and the under side of the holding-plate, a cover-plate outside of the holding-plate, and a handle for moving the operating mechanisms, said handle bearing against the cover-plate and holding the same in position, substantially as specified.

CHARLES G. PERKINS.

Witnesses:

H. R. WILLIAMS,
E. J. HYDE.