No. 679,316. Patented July 30, 1901.

H. HUBBELL.

ELECTRIC SWITCH SHELL.

(Application filed Jan. 28, 1901.)

(No Model.)

Fig. 1.

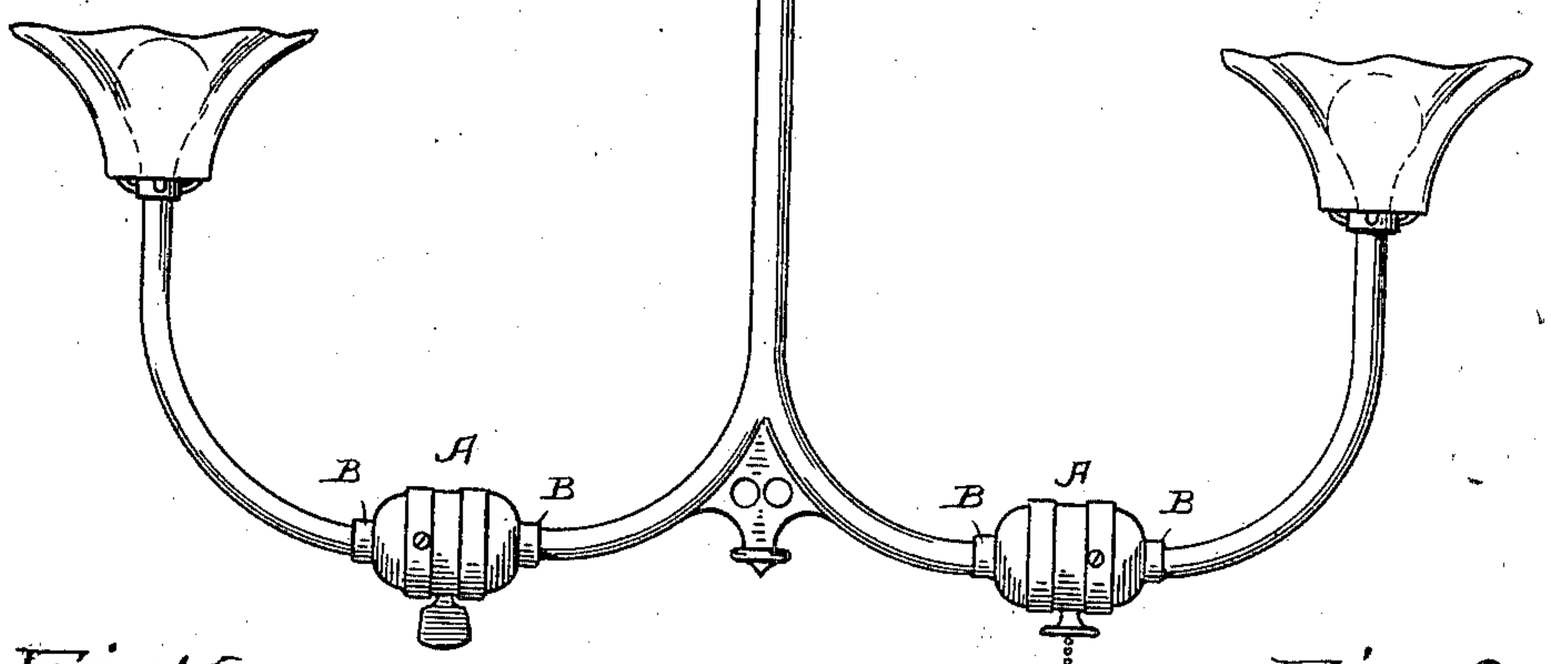


Fig. 5.

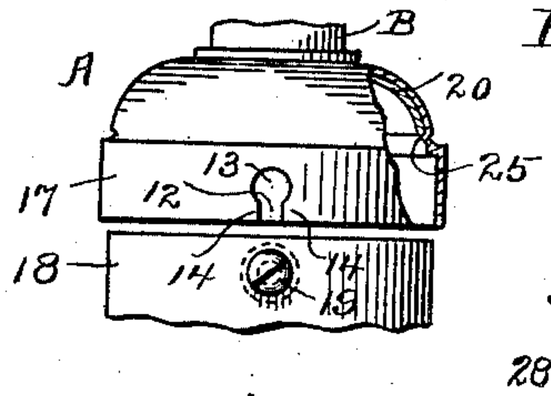


Fig. 6.

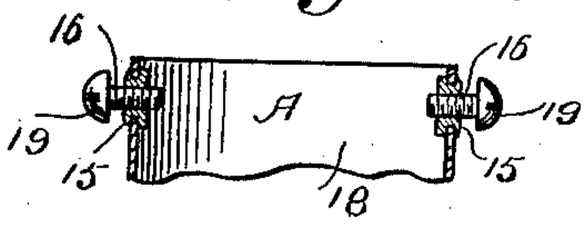


Fig. 7.

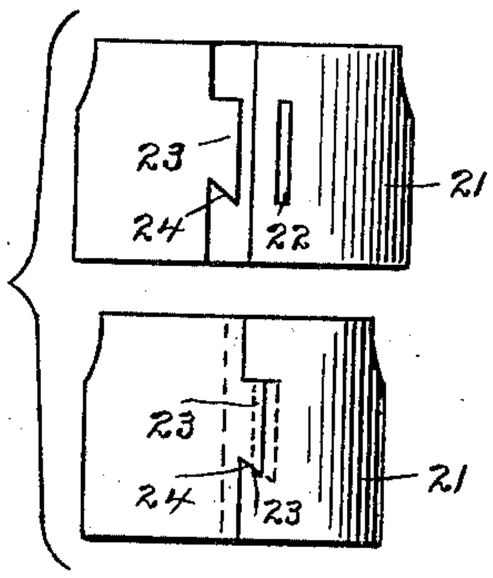


Fig. 4.

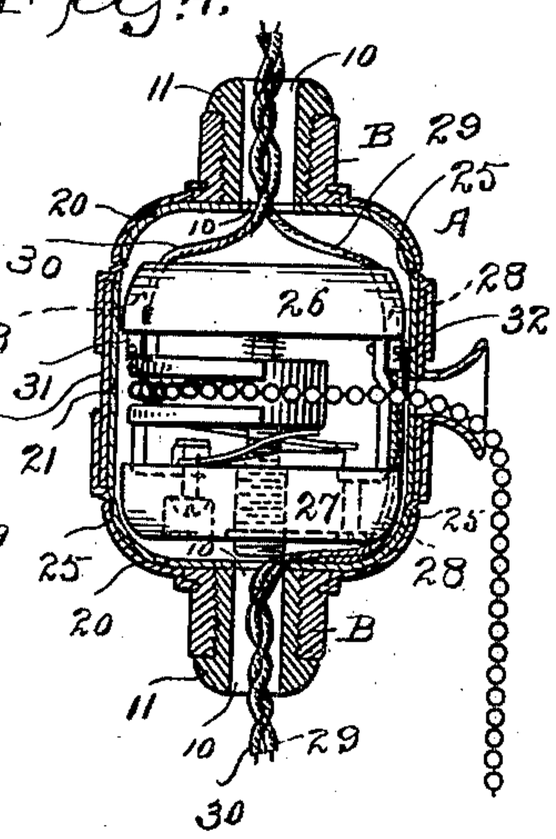


Fig. 2.

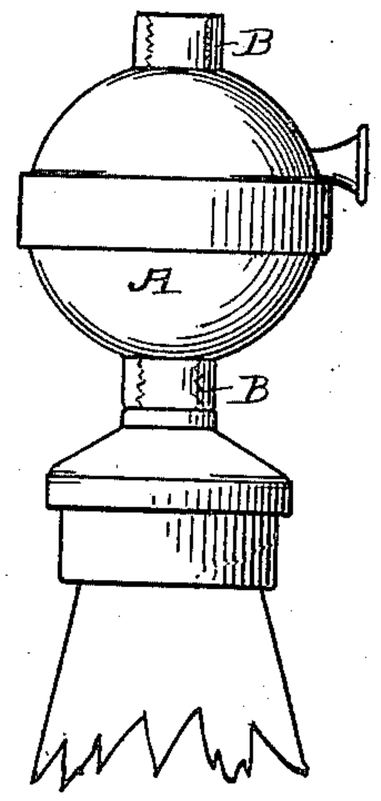
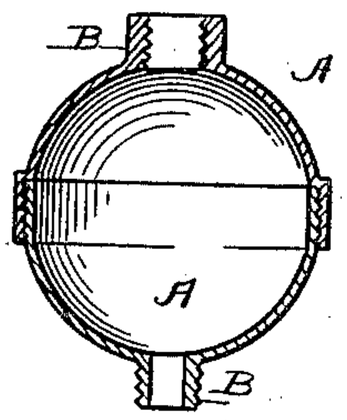


Fig. 3.



WITNESSES.

H. A. Lamb.

S. N. Atherton

INVENTOR.

Harvey Hubbell

By A. W. Wooster

Atty.

UNITED STATES PATENT OFFICE.

HARVEY HUBBELL, OF BRIDGEPORT, CONNECTICUT.

ELECTRIC-SWITCH SHELL.

SPECIFICATION forming part of Letters Patent No. 679,316, dated July 30, 1901.

Application filed January 28, 1901. Serial No. 44,999. (No model.)

To all whom it may concern:

Be it known that I, HARVEY HUBBELL, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Electric-Switch Shell, of which the following is a specification.

My invention relates to electric switches generally, more especially single-pole switches, and has for its object to provide a simple and inexpensive means for readily yet detachably locking the two parts of the shell together.

With these ends in view I have devised the simple and novel electric-switch shell which I will now describe, referring to the accompanying drawings, forming part of this specification and using reference characters to designate the several parts.

Figure 1 is an elevation illustrating the use of my novel double-ended switch in a chandelier, one side of the view showing a pull-switch, the other a key-switch; Fig. 2, an elevation, on an enlarged scale, illustrating the use of my novel double-ended switch in connection with a lamp having a plain socket, the switch being a pull-switch; Fig. 3, a section of the type of shell or case illustrated in Fig. 2 with the switch removed, one of the hubs being shown as provided with a male thread and the other with a female thread; Fig. 4, a sectional view illustrating a form of my novel double-ended switch especially adapted for use upon a cord, the switch being a pull-switch; Fig. 5, a detail view illustrating a special mode of attaching the parts of the shell together, which is an important feature of my invention, and also illustrating my novel means for retaining the ends of the pieces of the insulating-lining in place; Fig. 6, a detail sectional view of one of the parts of the case on a plane at right angles to the plane of Fig. 5, and Fig. 7 is a view illustrating the mode of connecting the ends of the strip of insulating material which comprises the intermediate portion of the insulating-lining.

Similar reference characters denote like parts in all the figures of the drawings.

A denotes the shell of my novel switch, the essential feature of which is that both ends thereof are provided with hubs B, having central openings 10 through them. These hubs may be provided with non-threaded insulating-blocks 11, as in Fig. 4, or both of said hubs may be provided with female threads, as indicated in Fig. 1, or one of said hubs may be provided with a female thread and one with a male thread, as in Figs. 2 and 3, this form being frequently used for the attachment of a lamp and for attachment to a base. (Not shown in the drawings.)

In the form illustrated in Figs. 2 and 3 I have shown the shell or case as substantially spherical and the parts as secured together in any suitable manner at the center. As it is in practice, however, required that the parts of the shell be readily separable, I have devised a novel means of rigidly yet detachably locking the two parts of the shell together. One of the parts, preferably the upper part, which I have specifically indicated by 17 in Fig. 5, is provided in its edge with slots 12, which lead into holes 13 of greater diameter than the slots, so that tongues 14 are left on opposite sides of the slots, one only of the slots and holes being shown in Fig. 5, the other slot and hole being diametrically opposite thereto. The other part of the shell, which I have specifically indicated by 18, is provided with corresponding bosses 15, which are tapped to receive screws 16, these bosses in practice being eyelets, which are set into holes in part 18 of the shell and headed down on opposite sides thereof, it being essential that bosses 15 be perceptibly prominent on the outer side of the shell. In use the operator loosens the screws and with the bosses and slots in alinement presses part 17 over part 18, tongues 14 yielding sufficiently to pass over the bosses and springing down again as soon as the bosses have passed into holes 13, which are just large enough to receive the bosses. To lock the parts in place, the operator simply tightens down the screws upon the bosses, it being obvious that when the screws are turned down so that their heads 19 rest upon the bosses radial or outward movement of the tongues will be impossible, and other movement of said tongues being practically impossible at all times. No amount of power therefore that can possibly be brought to bear under the ordinary conditions of use will separate the two parts of the shell. Upon loosening the screws, how-

ever, slight downward pull upon the lower part will cause the tongues to spring over the bosses and the two parts will separate. The insulating-lining for this form of my novel shell consists, preferably, of three pieces—two end pieces 20, which are pressed to the required shape and are provided with central openings 10, and a central strip 21. Near one end of the strip is a vertical slot 22, the other end of said strip being provided with a tongue 23, the outer end of which is wider than the length of the slot, one side of the tongue being straight and the other undercut, as at 24, so that said tongue requires to be placed in the slot with an oblique movement, and when once in place the ends of the strip are securely locked so far as concerns the ordinary conditions of use.

As a means of securing the end pieces 20 of the lining in place I provide the end pieces of the shell with indentations or internal bosses 25, against which the end pieces of the lining rest and by which they are securely held in place, said lining-pieces being inserted by simply springing them over the bosses.

In Fig. 4 I have illustrated, in connection with my novel double-ended shells, the form of pull-switch which constitutes the subject-matter of Letters Patent No. 649,308, granted to me May 8, 1900. As already indicated, however, the special form of switch mechanism used is not of the essence of my invention, which is equally applicable to any type of pull-switch or key-switch that is adapted to be placed in my novel double-ended shell, it being necessary, however, that both the upper insulating-block 26 and the lower insulating-block 27, or, as they are commonly termed in the art, upper and lower "buttons," be provided with suitable recesses 28, through which the wires may be passed.

It should be noted as a vitally-important feature of my invention that both of the wires, which I have indicated, respectively, by 29 and 30, pass through both of the hubs B in the shell, one of the wires (in the present instance wire 29) passing directly through—that is, not being cut—and lying between the shell and the insulating-blocks in recesses 28, and the other wire (in the present instance wire 30) being cut and one end thereof attached to pole 31 of the switch and the other to pole 32, as is clearly shown in Fig. 4.

Having thus described my invention, I claim—

1. A switch-shell comprising two detachable parts, one of said parts having slots in its edge leading into holes so that tongues are formed and the other part having corresponding bosses adapted to engage the holes, and headed screws, the tongues being adapted to spring over the bosses and resume their normal position when the bosses enter the holes and the screws when turned down acting to prevent the tongues from springing over the bosses again.

2. In an electric-switch shell the combination with a part 17 having slots leading from its edges into holes whereby tongues are formed on opposite sides of the slots, of a part 18 having corresponding bosses and a headed screw in each boss, the tongues being adapted to spring over the bosses and to resume their normal position after the bosses have entered the holes and the heads of the screws when turned down preventing the tongues from slipping over the bosses again so that the parts are rigidly locked together.

In testimony whereof I affix my signature in presence of two witnesses.

HARVEY HUBBELL.

Witnesses:
A. M. WOOSTER,
S. W. ATHERTON.