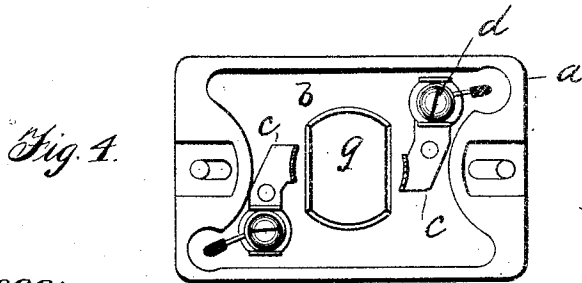
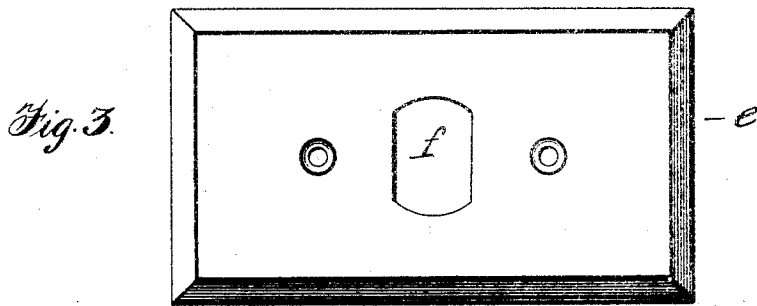
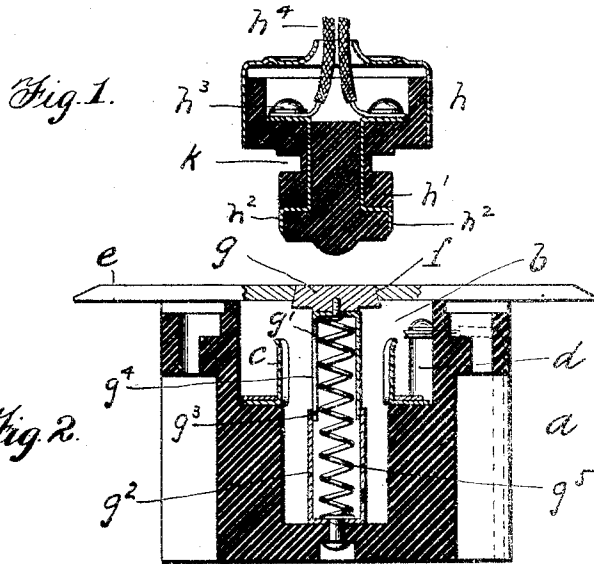


E. A. LA HAR.
ELECTRIC SWITCH.
APPLICATION FILED JULY 30, 1904.

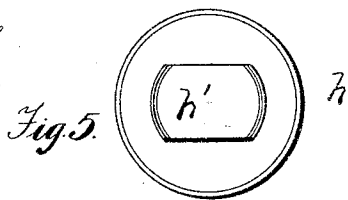
NO MODEL.



Witnesses:

J. G. Campbell.

Wm. A. Dahl.



Inventor:

Edwin A. LaHar

by T. E. Hart

Attorney

UNITED STATES PATENT OFFICE.

ELLSWORTH A. LA HAR, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO
THE HART MANUFACTURING COMPANY, OF HARTFORD, CONNECTI-
CUT, A CORPORATION OF NEW JERSEY.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 776,855, dated December 6, 1904.

Application filed July 30, 1904. Serial No. 218,894. (No model.)

To all whom it may concern:

Be it known that I, ELLSWORTH A. LA HAR, a citizen of the United States of America, residing at New Britain, 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.

This invention relates more particularly to what are known as "plug cut-outs." In devices of this character there is a box or receptacle into which a plug may be inserted as described, the purpose being to permit a lamp or other translating device to be introduced into an electrical circuit at any convenient point, the receptacles being arranged at different points about a room or building where it may be desired to use a translating device of some sort.

The object of the invention is to provide a device of the class specified having features of novelty and advantage.

In the drawings, Figure 1 is a sectional side elevation of a plug. Fig. 2 is a sectional side elevation of the receptacle. Fig. 3 is a plan view of the face-plate of the receptacle. Fig. 4 is a plan view of the receptacle with the face-plate removed. Fig. 5 is a bottom view of the plug.

The body of the receptacle *a* is made, preferably, from insulating material hollowed out, as at *b*, to receive the contacts *c*, binding-posts *d*, and other operative parts. It is provided with the face-plate *e*, which may be of metal or any material which will take a good finish. These receptacles are very often set into the floor, and through the opening in the face-plate, which must be left to permit of the insertion of the plug, dirt and foreign matter will readily pass and clog up or short-circuit the device and cause considerable trouble. It has been customary heretofore to provide shutters, sometimes in the shape of hinged doors and sometimes in other forms, to close this opening through the face-plate; but these closing devices have not met the requirements fully. Attempts have also been made to provide some closing means for the

opening through the face-plate which will be operated automatically; but these are objectionable for many reasons. So far as I know there is no automatically-closing shutter for the face-plate of a plug-receptacle which has a smooth unbroken surface, so that when it is in its normal position, closing the opening in the face-plate, the complete face-plate and shutter present an unbroken surface. By my invention I provide an automatically-closing shutter for the face-plate of plug-receptacles whose surface is smooth and unbroken and which when it is in position is flush with and completely closes the opening in the face-plate, the plate and shutter as a whole presenting an unbroken surface.

In carrying out my invention I form an opening *f* in the face-plate which is of less width than the distance between the contacts contained within the receptacle. The length of this opening is substantially the same as the distance between the contacts. The edges of this opening are slightly beveled inwardly. The shutter *g* fits closely within this opening, coming flush with the surface of the face-plate. This shutter is carried by a tubular sleeve *g'*, which telescopes into a tubular sleeve *g''*, mounted in the receptacle. A spring *g'''*, located in the sleeves *g'* *g''*, exerts a pressure to force the shutter up to close the opening in the face-plate. A suitable device, such as a pin *g''''*, working in the slot *g'''''* will prevent relative rotation of the sleeve *g'* with respect to the sleeve *g''*.

The plug *h* has its lower end *h'* shaped to the shape and size of the shutter, as seen in Figs. 1 and 5. It is preferably made of insulating material and has the contacts exposed at its lower end, as at *h''*, these contacts passing up through insulating material to the binding-posts *h'''*, where they are connected with the wires *h''''*.

It will be noted that the shutter being of less width than the distance between the contacts is free to move down between the contacts without touching them. The plug is applied to the shutter and pressed down, causing the shutter to recede before it and itself

passing through the face-plate until it is in line with the contacts *c*. In order to bring the contacts on the plug into connection with the contacts in the receptacle, it is necessary
 5 to give the plug a quarter-turn, the plug being notched, as at *b*, in order to take the face-plate when it is turned. This interlocking of the plug with the face-plate prevents the spring from forcing the plug out of the contacts *c*.
 10 To remove the plug, it is simply necessary to turn it a quarter-turn and withdraw it, the spring forcing the shutter up into place. It will thus be seen that both the surface of the face-plate and of the shutter are unbroken
 15 and that when the receptacle is not in use it is completely closed and presents no depression to catch dirt and dust or other foreign matters.

I claim as my invention—

20 1. In a device of the class specified, the receptacle and contacts located therein, a face-plate having an opening therethrough at a point between said contacts, a shutter to close said opening free to move downwardly between
 25 said contacts without touching them, and a contact-carrying plug free to pass through the opening in the face-plate, and adapted by rotation to connect said contacts in the receptacle.

30 2. In a device of the class specified, the receptacle and contacts located therein, a face-plate having an opening therethrough at a point between said contacts, a spring-supported shutter to close said opening free to move
 35 downwardly between said contacts without touching them, and a contact-carrying plug free to pass through the opening in the face-plate and adapted by rotation to connect said contacts in the receptacle.

40 3. In a device of the class specified, the receptacle and contacts located therein, a face-

plate having an opening therethrough at a point between said contacts, a shutter to close said opening free to move downwardly between
 45 said contacts without touching them, telescoping sleeves on said shutter and receptacle and a spring located within said sleeves and exerting an upward pressure on said shutter, and a contact-carrying plug free to pass
 50 through the opening in the face-plate and adapted by rotation to connect said contacts in the receptacle.

4. In a device of the class specified, the receptacle and contacts located therein, a face-plate having an opening therethrough at a
 55 point between said contacts, a shutter to close said opening free to move downwardly between said contacts without touching them, and a contact-carrying plug free to pass through the opening in the face-plate, and
 60 adapted by rotation to connect said contacts in the receptacle, said plug being notched to receive said face-plate.

5. In a device of the class specified, the receptacle and contacts located therein, a face-
 65 plate having an opening therethrough, a shutter for closing said opening free to move downwardly between said contacts without touching them, a plug adapted in size and shape to said shutter, said plug carrying contacts at
 70 its lower end and being adapted to be passed through said opening and to be turned to bridge the contacts in said receptacle, and means permitting the rotation of said plug, substantially as described. 75

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

ELLSWORTH A. LA HAR.

Witnesses:

EDWARD L. STEELE,
 H. E. HART.