

H. HUBBELL.  
SEPARABLE ATTACHMENT PLUG.  
APPLICATION FILED FEB. 26, 1903.

NO MODEL.

Fig. 1.

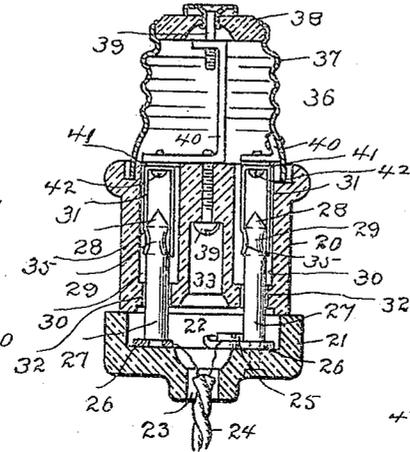


Fig. 2.

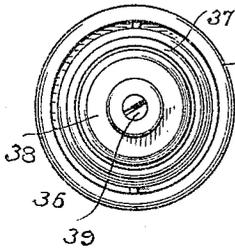


Fig. 3.

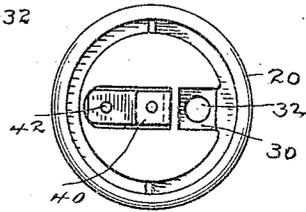


Fig. 4.

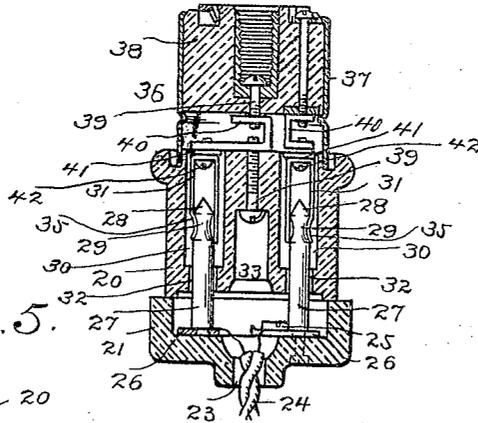


Fig. 5.

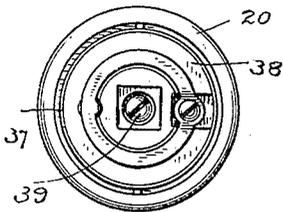
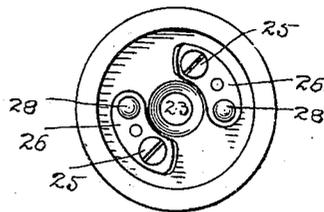


Fig. 6.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

HARVEY HUBBELL, OF BRIDGEPORT, CONNECTICUT.

## SEPARABLE ATTACHMENT-PLUG.

SPECIFICATION forming part of Letters Patent No. 774,250, dated November 8, 1904.

Application filed February 26, 1903. Serial No. 145,212. (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 Separable Attachment-Plug, of which the following is a specification.

My invention has for its object to provide a separable attachment-plug in which the cost of construction shall be reduced to the minimum and which shall do away with the possibility of arcing or sparking in making connection, so that electrical power in buildings may be utilized by persons having no electrical knowledge or skill in the use of tools in attaching lights, fans, motors, heating apparatus, surgical instruments, or any of the various appliances requiring the use of an electric current to fixtures in the circuit, the removable parts being interchangeable and one of said parts being connected to each light, group of lights, fan, or other appliance which it may be required to place in the circuit.

With these and other objects in view I have devised the simple and novel separable attachment-plug which I will now describe, referring to the accompanying drawings forming part of this specification, and using reference characters to indicate the several parts.

Figure 1 is a longitudinal sectional view illustrating the application of my invention to an Edison socket; Fig. 2, a plan view corresponding therewith; Fig. 3, a plan view of the body with the base removed; Fig. 4, a view corresponding with Fig. 1, illustrating the application of my invention to a Thomson-Houston socket; Fig. 5, a plan view corresponding therewith, and Fig. 6 is a plan view of the interchangeable cap detached.

My novel attachment-plug comprises, essentially, a body 20 and a cap 21, the caps being made interchangeable and adapted for use in connection with any body irrespective of whether the body is adapted to the Edison, Thomson-Houston, or any other form of socket. The interchangeable cap is made of porcelain or other suitable insulating material and is provided with a recess 22 and a central opening 23, leading into the recess, through which the electrical connections 24 of a lamp,

group of lamps, fan, motor, or other appliance pass. These connections are attached to binding-screws 25, which engage the bottom of the recess and also serve to attach plates 26, which carry contact-posts 27, to the cap. The contact-posts extend outward from the cap and are provided with heads 28, below which are reduced necks 29, the purpose of which will presently be explained.

The body consists of a single piece of porcelain having recesses 30 to receive locking contact-springs 31 and leading into said recesses guide-holes 32. I also preferably provide a central recess 33 to receive a connecting-screw, as it enables me to use a relatively short connecting-screw instead of a screw passing entirely through the body. Locking contact-springs 31 are strips of metal bent to substantially U shape, one or both sides being more or less concaved, if preferred, and one of the sides, or both, if preferred, being provided with inwardly-curved engaging portions 35, which engage the necks of the contact-posts and detachably secure the cap to the body and place the lamp, group of lamps, fan, or other appliance to which the cap is connected in the circuit. As the entire body is made of porcelain or other insulating material, it follows necessarily that there can be no imperfect connections and no sparking. The guide-holes in the body direct the contact-posts and steady them as they are pushed to place, insuring immediate and certain engagement of the contact-posts with the locking contact-springs as soon as the cap is pushed to place.

36 denotes a base which may be adapted to an Edison socket, as in Figs. 1 to 3, inclusive, or a Thomson-Houston socket, as in Figs. 4 to 6, inclusive, or any other form of socket that may be required. The base consists, essentially, of a shell 37 and a "button," so called, of porcelain or other insulating material 38. The button is ordinarily secured to the shell by crimping the metal of the shell about it, and the base is connected to the body by means of screws 39, engaging brackets 40.

It is well understood by those familiar with the art that it is impossible to procure porcelain bodies of exactly the same size. In

order that I may be able to use porcelain bodies as they run and still insure perfect connection between the locking contact-springs and the contact-posts, I make the springs 5 slightly short and interpose one or more washers 41 between the brackets and the bases of the contact-springs, the contact-springs being secured to the brackets by screws 42, which also pass through the washers.

10 In use, to make the connection, the operator simply passes the contact-posts of the cap through the guide-holes in the body and engages the necks of the posts with the locking contact-springs. This engagement of the 15 contact-posts with the locking contact-springs retains the cap securely in place under all the ordinary conditions of use and insures perfect electrical connection. To detach the cap from the body and break the connection, 20 it is simply required to pull the cap away from the body with sufficient force to overcome the resistance of the locking contact-springs.

Having thus described my invention, I 25 claim—

1. A separable attachment-plug comprising an insulating-body having independent recesses, locking contact-springs in said recesses and independent guide-holes leading 30 into said recesses, and a cap having contact-posts adapted to pass through the guide-holes and engage the locking contact-springs, the walls of said recesses and guide-holes closely surrounding the said contact-springs and extending beyond the ends thereof, whereby a 35 connection can be established only upon the passage of the contact-posts through the guide-holes and into the inner spaces constituting said recesses.

40 2. A separable attachment-plug comprising an insulating-body having independent recesses, U-shaped locking contact-springs provided with curved engaging portions in said recesses and independent guide-holes leading 45 into said recesses, and a cap having contact-posts adapted to pass through the guide-holes and engage the locking contact-springs, the walls of said recesses and guide-holes closely

surrounding the said contact-springs and extending beyond the ends thereof, whereby a 50 connection can be established only upon the passage of the contact-posts through the guide-holes and into the inner spaces constituting said recesses.

3. A separable attachment-plug comprising 55 an insulating-body having independent recesses, locking contact-springs in said recesses and independent guide-holes leading into said recesses, a cap having contact-posts adapted to pass through the guide-holes and 60 engage the locking contact-springs, a base and brackets to which the locking contact-springs are secured and which are themselves secured to the base, the walls of said recesses and guide-holes closely surrounding the said 65 contact-springs and extending beyond the ends thereof, whereby a connection can be established only upon the passage of the contact-posts through the guide-holes and into the inner spaces constituting said recesses. 70

4. A separable attachment-plug comprising 70 an insulating-body having independent recesses, U-shaped locking contact-springs in said recesses and independent guide-holes leading into said recesses, a cap having contact- 75 posts adapted to pass through the guide-holes and engage the locking contact-springs, a base, brackets to which the locking contact-springs are secured and which are themselves secured to the base and washers interposed between 80 the bases of the contact-springs and the brackets to compensate for variations in the size of the bodies, the walls of said recesses and guide-holes closely surrounding the said contact-springs and extending beyond the ends there- 85 of, whereby a connection can be established only upon the passage of the contact-posts through the guide-holes and into the inner spaces constituting said recesses.

In testimony whereof I affix my signature in 90 presence of two witnesses.

HARVEY HUBBELL.

Witnesses:

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