

No. 817,484.

PATENTED APR. 10, 1906.

H. HUBBELL.
INSULATING SCREW SHELL.
APPLICATION FILED JUNE 28, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

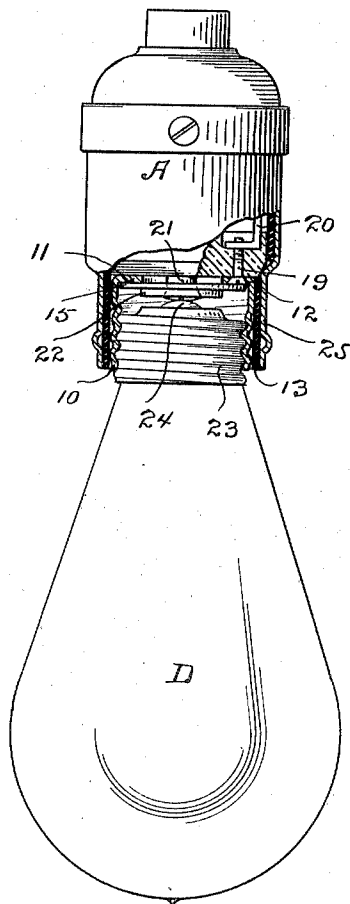


Fig. 2.

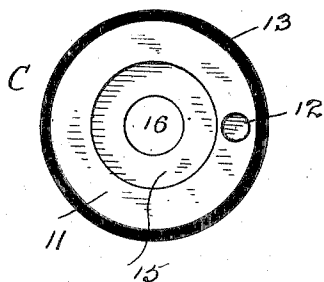


Fig. 3.

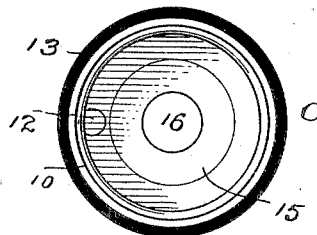
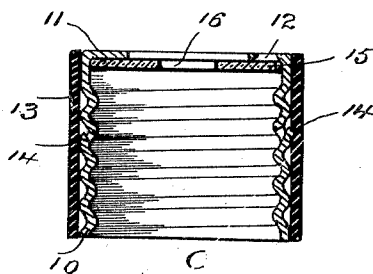


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 5.

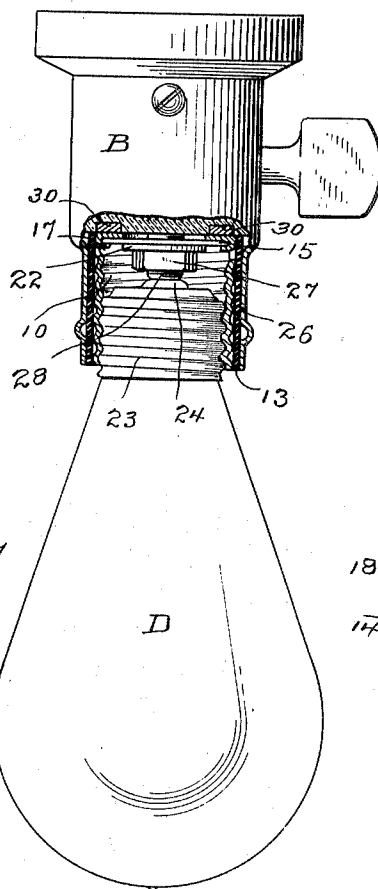


Fig. 6.

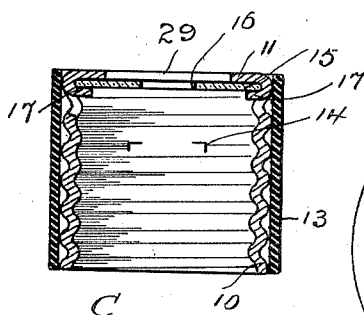


Fig. 7.

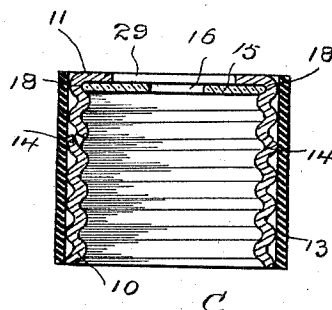
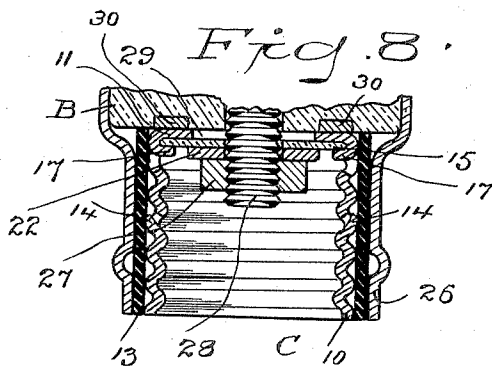


Fig. 8.



WITNESSES

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UNITED STATES PATENT OFFICE.

HARVEY HUBBELL, OF BRIDGEPORT, CONNECTICUT.

INSULATING SCREW-SHELL.

No. 817,484.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed June 28, 1905. Serial No. 267,357.

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 Insulating Screw-Shell, of which the following is a specification.

This invention has for its object to provide a simple and inexpensive insulating screw-shell adapted for general use, and especially adapted for use as a socket-shell for incandescent electric lamps of the Edison type and as an adapter to adapt Thomson-Houston sockets to receive Edison lamps. This structure has been devised to meet the requirements of the trade and for the reason that it is cheaper and very much better in every way to have the insulating-lining, which is an essential feature of construction, an integral part of the screw-shell rather than of the socket, the requirements being that the insulating screw-shell be so constructed as to permit of its being quickly and conveniently attached to either an Edison or a Thomson-Houston socket, that when attached it be firmly secured in place, so that there will be no danger of its detachment in removing a lamp, and at the same time that it be adapted for convenient removal especially when used for an adapter for Thomson-Houston sockets, leaving the sockets again in condition to receive Thomson-Houston lamps.

With these and other objects in view I have devised the simple and novel insulating screw-shell of which the following description, in connection with the accompanying drawings, is a specification, reference characters being used to indicate the several parts.

Figure 1 is an elevation, partly broken away, showing the use of my novel insulating screw-shell in connection with an Edison socket. Fig. 2 is a plan view, on an enlarged scale, of the screw-shell detached. Fig. 3 is an inverted plan view corresponding therewith. Fig. 4 is a longitudinal section showing the manner in which the upper end of the shell is formed when the mica disk is self-retaining in place. Fig. 5 is an elevation, partly broken away, showing the use of my novel insulating-shell as an adapter of an Edison lamp to a Thomson-Houston socket. Figs. 6 and 7 are longitudinal sections corresponding with Fig. 4, showing variant modes of retaining the mica disk in place; and Fig. 8 is a sectional view showing my novel insulating screw-shell as applied to a Thomson-

Houston socket ready to receive an Edison lamp.

A denotes an Edison socket, B a Thomson-Houston socket, and C my novel insulating screw-shell as a whole. 10 denotes the screw-shell, which is made of metal and is provided with an inwardly-turned contact-flange 11, which is provided with a screw-hole 12 to adapt it for use in an Edison socket, as will be more clearly explained, and a central opening 29, of greater diameter than the center screw, so that no current can pass from either form of center screw to screw-shell 10.

13 denotes an external insulating-sleeve, which fits the shell closely. Prongs 14 may be struck out from the shell to engage the insulating-sleeve and make its detachment from the shell impossible under the ordinary conditions of use.

15 denotes a relatively thin insulating-disk, preferably of mica, which lies in the base of the screw-shell and is provided with a central opening 16, through which the center screw passes freely. This disk may be made large enough to fit closely and be self-retaining in the screw-shell, as in Fig. 4, or it may be retained in place by inwardly-turned lugs 17, struck out from the metal of the screw-shell and turned inward, as in Fig. 6, or a groove 18 may be provided to receive it and retain it in place, as in Fig. 7.

When my novel insulating screw-shell is used in connection with an Edison socket, as in Fig. 1, a screw 19 is passed through hole 12 in the contact-flange and into engagement with the usual terminal 20 within the socket. In addition to screw 19 the insulating screw-shell is held in place by a center screw 21, which passes through a washer 22, through the insulating-disk, and through the contact-flange of screw-shell 10, but without contact therewith. This center screw serves as the other terminal of an Edison socket.

D indicates an Edison lamp, having the usual screw-shell 23 and center contact 24.

The operation is precisely the same as in attaching an Edison lamp to an ordinary Edison socket—that is, an Edison socket without my novel insulating screw-shell. The screw-shell of the lamp is turned into the insulating screw-shell until the center contact 24 of the lamp engages the center screw 21 of the insulating screw-shell. The current passes through center screw 21 and center contact 24 to the carbon filament of the lamp, thence to the screw-shell 23 of the lamp,

screw-shell 10 of the insulating screw-shell, and through screw 19 to terminal 20 of the socket, insulating-sleeve 13 acting to insulate screw-shell 10 from the neck of the socket, which is unlined and is indicated by 25.

When my novel insulating screw-shell is used in connection with a Thomson-Houston socket, as in Fig. 5, the insulating screw-shell is locked in the socket within the neck thereof, which is unlined and is indicated by 26, by means of a nut 27, which engages the center screw 28 of the socket, a washer 22 being interposed between the nut and the insulating-disk. The contact-flange of the insulating screw-shell lies closely in engagement with the contact-ring 30 of the socket. The current passes through center screw 28 and the center contact of an Edison lamp, as before, to the carbon filament, thence to the screw-shell 23 of the lamp, screw-shell 10 of the insulating screw-shell, and thence through the contact-flange to the contact-ring of the socket.

By interposing a washer 22 between the nut and the insulating-disk the connection of the adapter to the socket is made perfectly safe and secure, as in the other form, and it is made practically impossible to turn the insulating screw-shell out of the socket with the lamp in removing the lamp. Should the lamp-base stick in the insulating screw-shell tightly enough to cause the latter to turn, the washer will turn with it slightly, but without starting the nut, rotation of the washer acting to lock the washer tightly to the nut, so

that it is made practically impossible for the insulating screw-shell to be turned out without first turning off the nut.

Having thus described my invention, I claim—

1. An insulating screw-shell of the character described, comprising a screw-shell which receives an externally-threaded lamp-base, an insulating-disk having an opening to receive the center screw of an internally-threaded lamp-socket, a washer to engage the disk, a nut which engages the center screw and bears upon the washer and an external insulating-sleeve secured to the screw-shell.

2. The combination with a socket-shell having an unlined neck, of an insulating screw-shell comprising a screw-shell which receives an externally-threaded lamp-base and is provided with a contact-flange, an insulating-disk lying in contact with the flange and having an opening for a center screw, an external insulating-sleeve secured to the screw-shell, a washer lying in contact with the insulating-disk and a nut engaging a center screw to retain the insulating screw-shell in place, said contact-flange having a central opening of greater diameter than said center screw.

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

HARVEY HUBBELL.

Witnesses:

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