Sept. 27, 1927. 1,643,655

I. F. GILES

ELECTRIC SOCKET

Filed Sept. 26, 1925

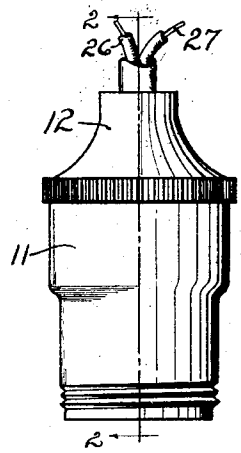


FIG. 1

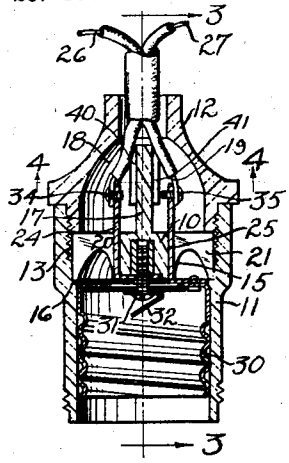


FIG. 2

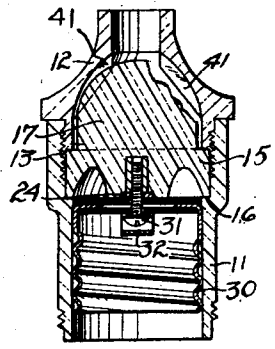


FIG. 3

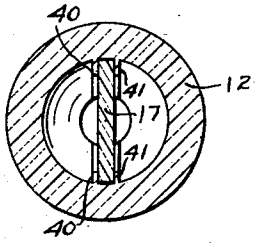


FIG. 4

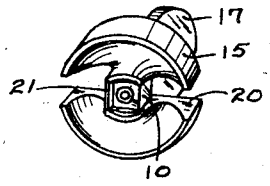


FIG. 5

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UNITED STATES PATENT OFFICE.

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ELECTRIC SOCKET.

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Electric lamp sockets made of insulating material are very desirable for use in many installations, as for instance, where the socket is likely to come in contact with metal which might cause a short circuit if either of the lead-in wires should happen to contact with the socket. To provide for such uses, sockets have been made of porcelain, but they are objectionable, because likely to be broken and also are unduly bulky.

One of the objects of the present invention is the provision of an electric socket fixture which may be made of molded electrical insulating material, a bakelite yet which will present a pleasing appearance and may be subjected to rough usage without breaking.

A further important object of the present invention is to eliminate as much as possible the occurrence of a short-circuit within the fixture, especially when conductors having fine wires which are woven in the form of a cable are used for the current-carrying medium.

In this connection my invention contemplates the provision of an electric socket fixture which shall be light in weight, and in which the binding screws may be readily accessible for the assembling operation but are thoroughly protected. The internal terminal connections are mounted on a peculiarly formed insulating carrier which provides a separator for the leads and is prevented from inadvertent displacement due to turning of a plug or lamp bulb into the socket.

I carry out the above objects by utilizing a substance such as bakelite which may be readily molded to any desired shape, and I so mold this substance to form a core and an enclosing housing therefor. The current-carrying members are arranged to be mounted upon the core so that the electrical connections may be readily made independently of the connections between the core and the housing. Moreover, I make the housing in two parts with suitable means such as a threaded connection for holding the members together and I utilize the locking connection between the members for locking the core in adjusted position with reference to the housing. In making the core, I provide a partition wall which divides the housing into two compartments into each of which one of the terminal connections extends. In this way, the electrical conductors which are led into the fixture may be readily insulated from each other even though there may be exposed wire adjacent the binding screws.

The means for carrying out my invention is illustrated in the accompanying drawings in the preferred form, wherein Fig. 1 is a side elevation of a socket fixture made in accordance with my invention; Fig. 2 is a section taken vertically through the fixture shown in Fig. 1 and on a plane indicated by the line 2—2 in Fig. 1; Fig. 3 is a section taken vertically through the fixture on a plane at right angles to that shown in Fig. 1, as indicated by the lines 3—3 in Fig. 2; Fig. 4 is a horizontal section taken through the fixture on a plane indicated by the line 4—4 in Fig. 2; Fig. 5 is a perspective of the insulating terminal carrier which is located within the socket shell.

A socket fixture made in accordance with my invention embodies an insulating core indicated at 10 and a housing which surrounds the core and provides a support therefor. The housing is illustrated as comprising a substantially cylindrical member 11 and a cooperating closure 12, which may be locked together by a threaded connection 13. The core as well as the housing is made of a substance such as bakelite, which may be readily formed under heat and pressure to any desired shape.

The core has a disk-like body 15, the bottom of which is arranged to engage a shoulder 16 in the member 11 and to be supported thereby. The body as shown, is substantially cylindrical in shape and has a partition 17 which extends upwardly from the central portion thereof and which divides the chamber in the member 12 into two compartments 18 and 19 respectively. The core moreover has openings in the nature of slots 20 and 21 therein through which terminal conductors 24 and 25 respectively, may extend.

The terminal conductors are shown as being substantially L-shaped members having sufficient length to project beyond the upper end of the member 11. The lower end of the conductor 25 is electrically connected to a shell 30 while the lower end of the conductor 24 is electrically connected as by a securing member 31 to the central spring contact 32. The securing member 31 also functions to hold the shell and the conductors in locked position with reference to

the core. The electrical connections with the lead-in wires 26 and 27 may be made on the core before the core is assembled within the housing.

By making the conductors 24 and 25 of sufficient length to project slightly beyond the end of the member 11, the binding screws 34 and 35 may be visible without necessitating removal of the core from the member 11 and without requiring the electric plug or other electric article which is mounted within the shell 30 to be removed therefrom, thus permitting ready inspection of the connections.

To prevent the core from rotating whenever a plug or lamp bulb is threaded into the shell, I have shown the interior portion of the cap as having spaced lug 40 and 41 which engage opposite sides of the partition 17 as shown in Figs. 3 and 4. This construction locks the core against rotation with reference to the housing when the cap is threaded tightly into the member 11. By putting this lock on the cap rather than the shell, I enable the interior of the shell to be cylindrical and closely embrace the screw threaded sleeve and the core without waste of space or material. Each of the three insulating parts is so formed that it may be readily molded.

In view of the foregoing description, it will be evident that I have provided a socket fixture which may be made almost entirely of molded insulating material and may be assembled in a very expeditious manner. Thus, I obtain a device which presents a finished appearance without necessitating the use of metallic stampings and having a housing construction with no risk of short-circuiting the connections. Moreover, my socket may be very cheaply manufactured.

Having thus described my invention, I claim:—

1. An electric socket having a shell and cap each made of insulating material threaded one into the other, the shell having an internal shoulder, a supporting member carrying the screw threaded sleeve, the central contact, the conductors thereto and the binding screws, said supporting member engaging the shoulder in the shell, and having a partition between the binding screws of the two contacts, which partition coacts with the cap to prevent independent rotation.

2. A socket fixture comprising in combination a two-part housing composed of an insulating shell and an insulating cap screw threaded thereto, an insulating member for supporting electrical contacts arranged to be held against longitudinal movement within the shell when the two parts of the housing are assembled and flanges extending inwardly from the cap and outwardly from the supporting member, one in engagement with the other, for preventing turning movement of the supporting member with reference to the housing.

3. An electric socket fixture comprising, in combination, a substantially cylindrical insulating shell, an insulating cap in threaded engagement therewith and provided with an opening near its end for receiving conductor wires, a core member maintained in place against longitudinal movement within the housing by the threaded engagement, and a web carried thereby dividing the interior of the second-named housing member substantially into two chambers, lead-in contact plates secured to the core and extending on either side of the web, each adapted to be secured to its conductor wire within its respective chamber at one end and at the other to contact members within the first-named housing member, and projections on the interior of the cap adapted to engage the partition to prevent independent rotation of the cap with reference to the core member.

In testimony whereof, I hereunto affix my signature.

ISAAC F. GILES.