

Jan. 23, 1934.

D. D. GORDON

1,944,342

ELECTRIC SOCKET

Filed March 23, 1927

Fig. 1.

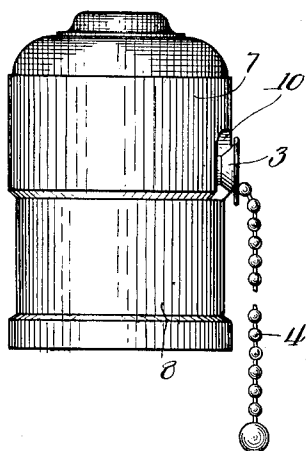


Fig. 2.

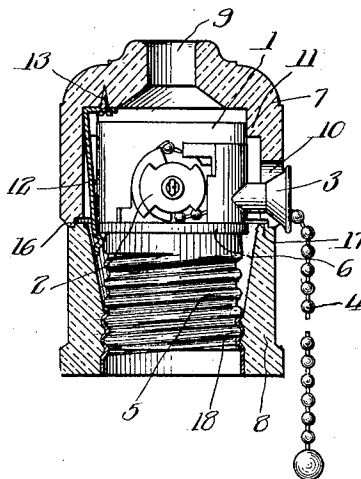


Fig. 3.

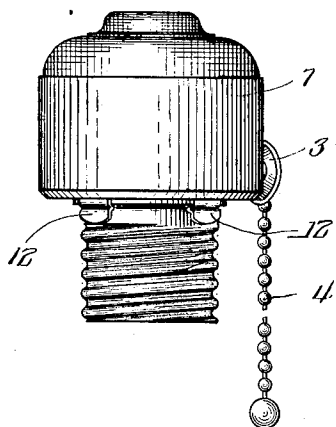


Fig. 4.

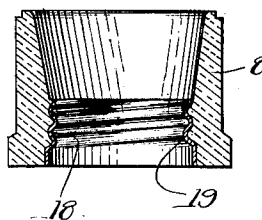
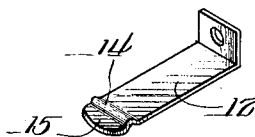


Fig. 5.



Inventor:

David D. Gordon,

By Wilkinson, Huxley, Bryan & Knight  
Attys.

## UNITED STATES PATENT OFFICE

1,944,342

## ELECTRIC SOCKET

David D. Gordon, Chicago, Ill., assignor to Economy Fuse and Manufacturing Company, Chicago, Ill., a corporation of New York

Application March 23, 1927. Serial No. 177,480

3 Claims. (Cl. 173—362)

The present invention relates to electric sockets.

Electric sockets as commonly used include an insulating member providing a supporting means for binding posts or the like for connection to the two wires of an electric circuit. Said insulating member also provides supporting means for an electric socket member. Said supporting means is commonly housed within a two-part shell.

An object of the present invention is to provide an electric socket mechanism which may be readily assembled and which will remain securely in assembled relationship.

A further object is to provide an electric socket assembly which is cheap to manufacture, which may be assembled on a quantity basis at a relatively low cost, and which is sturdy and complies with the various State requirements relative to safety.

Further objects will appear as the description proceeds.

Referring to the drawing—

Figure 1 is a view in side elevation of an electric socket embodying the principles of the present invention;

Figure 2 is a longitudinal sectional view of the structure shown in Figure 1;

Figure 3 is a view similar to Figure 1 but showing the skirt portion removed;

Figure 4 is a sectional view illustrating the skirt for cooperation with the parts shown in Figure 3; and

Figure 5 is a perspective view of a holding member used in the practice of the present invention.

The particular socket assembly chosen for illustration embodies switching means, the switching means illustrated being of the pull chain variety. The present invention is not limited to socket mechanisms embodying switching means, and for this reason the switching mechanism need not be described in detail.

The numeral 1 indicates a supporting member which will preferably be composed of insulating material. Said supporting mechanism provides a base for a pair of binding posts (not shown) for connection to the two sides of an electric circuit. The switching mechanism referred to is indicated as a whole by the numeral 2, and includes a bell mouth 3 which forms a chain guide for the pull chain 4. The insulating member 1 also provides a support for the shell 5, which according to ordinary practice may be formed of sheet metal. Said shell 5 is screw-threaded both externally and internally, the thin sheet metal providing said internal and external

screw-threads. The insulating member 1 and the parts supported thereby may take the form usual in present practice, but should be provided with a shoulder 6, for a purpose which will appear hereinafter. According to the disclosure in the present application, the shoulder 6 is an annular one provided by a disk disposed coaxially with the shell 5 and rigidly connected to said insulating member 1 and shell 5.

The insulating member 1, the shell 5 and the parts connected thereto are mounted within a housing comprising the cap 7 and the skirt 8, which in a preferred embodiment of the present invention are both made of insulating material. If made of other than insulating material, it will be understood, of course, that the electrical conducting parts of the socket will be properly insulated from said housing comprising the cap 7 and the skirt 8.

The cap 7 provides the aperture 9 for the admission of the two wires of an electric circuit. Said two wires will be connected to the two binding posts (not shown) which are commonly provided within an electric socket. Said cap 7 is also slotted at its edge portion, as indicated by the numeral 10, for the reception of the chain guide 3. The insulating member 1 fits within a shouldered portion 11 on the interior of the cap 7 close to the upper extremity thereof. Secured to the cap 7 are a plurality of resilient holding members or latches 12—12 having bent over portions adapted to be secured to the cap 7 by means of screws 13 or other preferred holding means. Each of the resilient holding members 12 is provided with the shoulder 14 disposed adjacent to the lower extremity of the corresponding holding member 12. Said shoulders 14 are adapted to snap over the annular shoulder 6 which is rigid with the insulating member 1, whereby to hold the insulating member 1 and its associated parts releasably within the cap 7. The free end of each of the holding members 12 is provided with the piloting portion 15 at its extremity, whereby the annular shoulder 6 may be readily snapped into cooperating relationship with the shoulders 14—14 of the holding members 12. Said shoulders 14—14 are preferably rounded, whereby to simplify the matter of snapping the annular shoulder 6 past said shoulders.

The lower extremity of the cap 7 is provided with the shouldered portion 16 and adapted to receive a corresponding shouldered portion 17 on the upper side of the skirt 8. The interior of the skirt 8 is screw-threaded, as indicated by the numeral 18, which screw-threaded portion is

adapted to mesh with the external screw-threads of the shell 5. If preferred, a metal lining 19 may be provided within the screw-threaded portion of the skirt 8 for engagement with the shell 5.

It will be clear without detailed explanation that the parts may be readily disassembled by unscrewing the skirt 8 from the shell 5, after which the insulating member 1 may be snapped past the shoulders 14 of the holding members 12 and whereby the extremities of the two wires of an electric circuit may be conveniently secured to the binding posts (not shown) on said insulating member 1. After the electric circuit wires have been secured in place, the insulating member 1 and its attached parts may be snapped into position with the shoulders 14 of the holding members 12 in holding relationship with the annular shoulder 6. The skirt 8 may then be placed in position upon the shell 5 and screwed home. The result of this action will be to hold the shell 5 and insulating member 1 securely in place, whereby shaking is eliminated. From an inspection of the drawing it will be noted that the free extremities of the members 12 are prevented from spreading by reason of their engagement with the inner wall of the skirt 8. By reason of this construction the pulling of the shoulder 6 past the shoulders 14—14 of the holding members 12—12 is prevented.

By reason of the fact that the shell is a complete cylinder, the skirt 8 may be screwed home without danger of stripping the threads upon said shell member. A tight wedging action is therefore had between the screw-threads of the shell 5 and the skirt 8, whereby said skirt 8 is held securely in position.

The present invention presents the advantages not only that the cost of assembly at the factory is greatly reduced, but the task of the person installing the socket is very greatly simplified.

Though a preferred embodiment of the present invention has been described in detail, many modifications will occur to those skilled in the art. It is intended to cover all such modifications that fall within the scope of the appended claims.

What is claimed is:

1. In an electric socket, in combination, a two part housing comprising a cap and a skirt, means within said housing for supporting a circuit connector, said means having a portion cooperating with said cap stopping relative rotation between said means and said cap, said means including a continuous annular shoulder and an externally screw-threaded shell, said skirt being internally

screw-threaded for engagement with said shell, and latch means secured to said cap and adapted to engage over said annular shoulder toward the axis of said socket to releasably hold said first-mentioned means within said cap, said cap and skirt having abutting portions, the direction of reaction of said abutting portions being parallel with the axis of said screw-threaded shell whereby when said skirt is screwed home upon said shell the screw-threads of said shell and said skirt will have a jamming effect relative to one another.

2. In an electric socket, in combination, a cap, a skirt, means within said cap and skirt, said means including a continuous annular shoulder, a portion cooperating with said cap stopping relative rotation between said means and said cap and an externally screw-threaded cylindrical socket member, said skirt having screw-threads cooperating with said externally screw-threaded socket member, releasable holding means adapted to engage over said annular shoulder and extend toward the axis of said socket for holding said first-mentioned means within said cap, said cap and skirt having portions positioned to abut when said skirt is screw-threaded upon said socket member whereby when said skirt is screwed home upon said socket member the screw-threads on said skirt and upon said socket member will be brought into jamming relationship with one another, said skirt having a portion cooperating with said holding means for preventing the accidental release of said holding means from said shoulder.

3. In an electric socket, in combination, a cap, a skirt, means within said cap and skirt including a screw-threaded shell adapted to receive an electric plug, said means including a continuous annular shoulder and a portion cooperating with said cap stopping relative rotation between said means and said cap, and latch means within said cap adapted to engage with said shoulder and to extend toward the axis of said socket to retain said first-mentioned means within said cap, said skirt having a screw-threaded portion engaging the screw-threads of said shell and adapted to hold said cap, shell and skirt in rigid relationship with one another, said skirt having a portion cooperating with said latch means for preventing the accidental release of said latch means.

DAVID D. GORDON.