J. G. PETERSON.

ELECTRIC LAMP SOCKET.

APPLICATION FILED MAY 27, 1910.

966,240.

Patented Aug. 2, 1910.

Fig. 1.

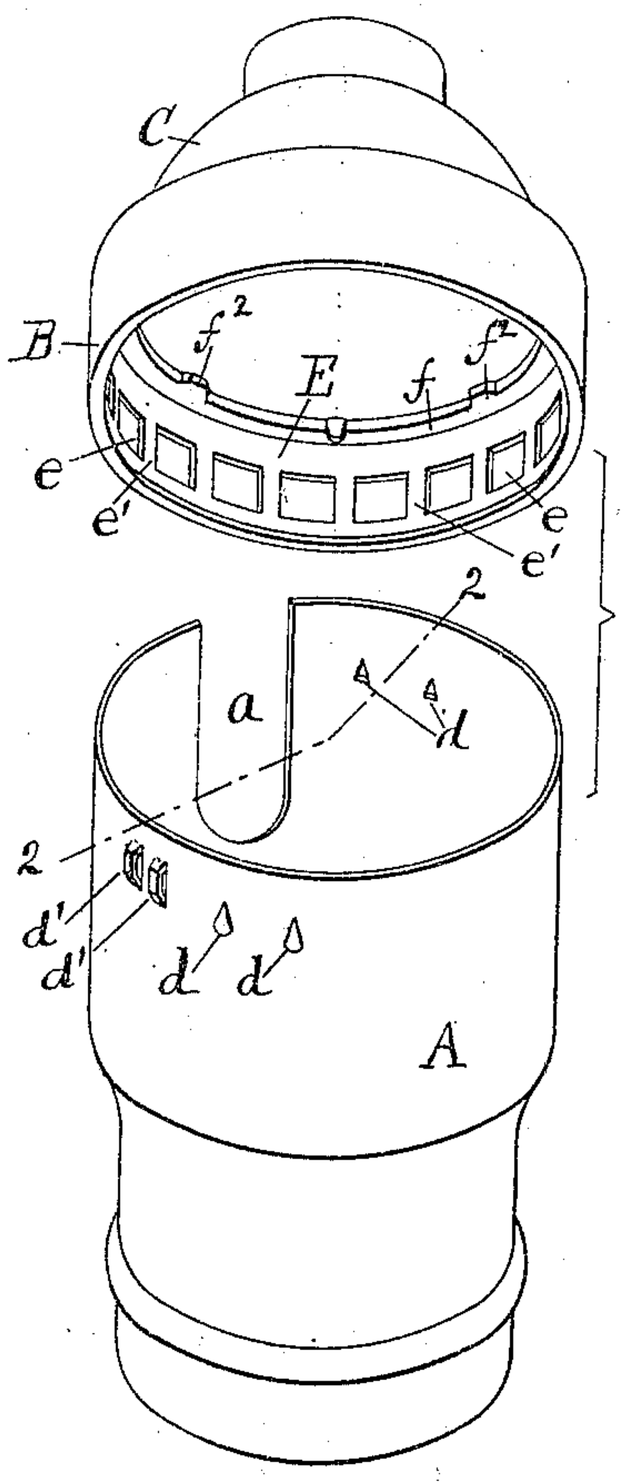


Fig. 2

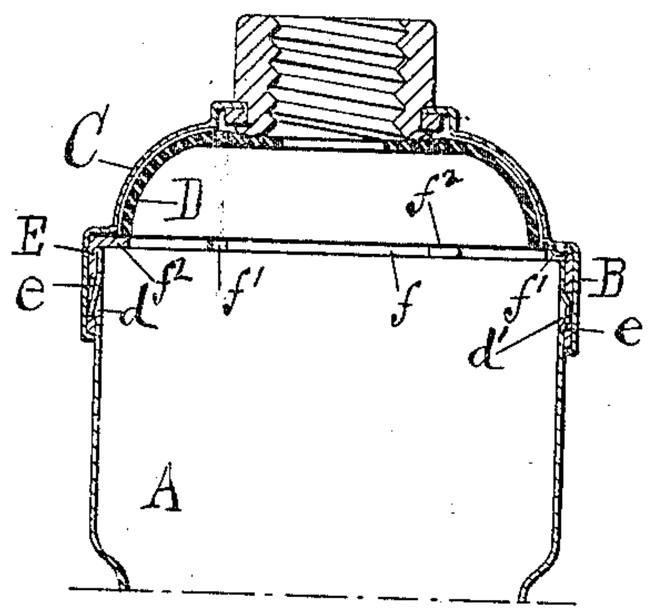


Fig. 5.

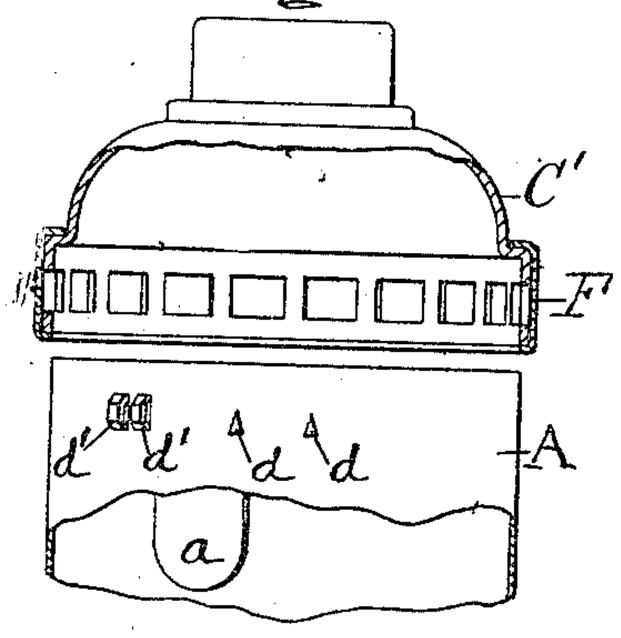


Fig. 3.

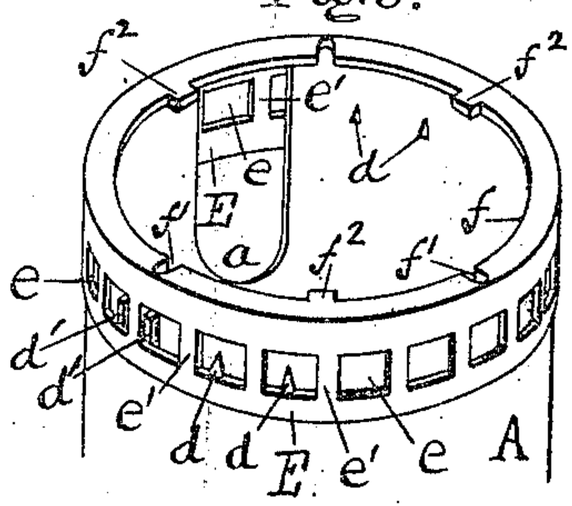
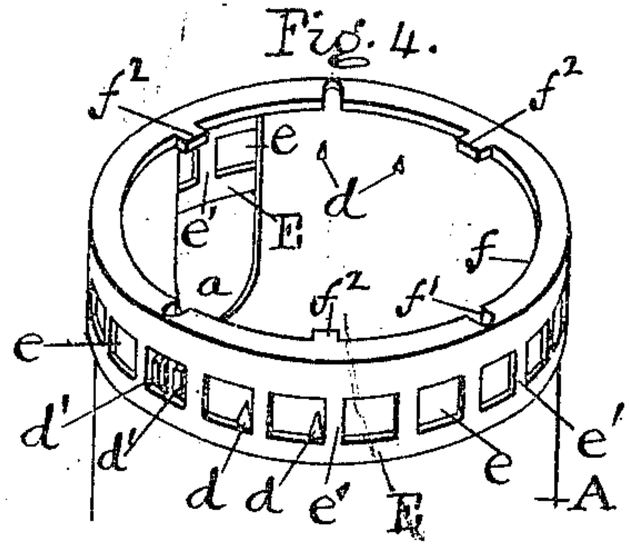


Fig. 4.



Witnesses:
L. L. Grote
M. E. Keir

Inventor
Johann G. Peterson
By his Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE.

JOHANN G. PETERSON, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE ARROW ELECTRIC COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ELECTRIC-LAMP SOCKET.

966,240. Specification of Letters Patent. Patented Aug. 2, 1910.

Application filed May 27, 1910. Serial No. 563,780.

To all whom it may concern:

Be it known that I, JOHANN G. PETERSON, a citizen of the United States of America, residing in the city of Hartford, in the county of Hartford, in the State of Connecticut, have invented certain new and useful Improvements in Electric-Lamp Sockets, of which the following is a specification.

My invention relates to the inclosing shells and caps of incandescent electric lamp sockets and the like electric devices, and the main object of my invention is to provide improved means for detachably securing the shell and cap together in any one of many different positions rotarily.

A further object is to provide a convenient means for securing the insulating lining within the cap.

These objects I attain in the manner which I will now describe.

In the accompanying drawings, Figure 1 is a perspective view of my preferred construction of shell and cap separated from each other, the cap being shown in perspective from the underside, while the shell is shown in perspective from the upper side; Fig. 2 is a sectional view of the cap and shell when latched together, the section being taken on the line 2—2, Fig. 1; Fig. 3 is a perspective view of the shell and locking ring latched together in certain relative positions, the cap lining having been removed; Fig. 4 is a similar perspective view of the shell and ring latched in another position; Fig. 5 is a sectional view of a modification.

Referring to Figs. 1 to 4, A is the shell provided with a suitable longitudinal slot *a* at its upper edge to permit that upper edge to be readily compressible and elastic, as is commonly required in these shell and cap fastenings of the "snap shell" type, to which my invention mainly relates. In the drawings this slot is shown as sufficiently wide to serve also for the passage of the stem of the key of the internal switch mechanism, not shown. The upper end of the shell is intended to telescope into the flange B of the cap C, and this flange and the upper end of the shell carry the inter-engaging latching and locking devices. I prefer to provide outwardly projecting latching devices on the shell and openings in the cap part for this purpose. The outward projections on the shell are of two types, one type being the beveled projections or lips *d* with sharp latching edges on the underside to engage the lower edges of the openings *e* in the cap part to secure the latter from endwise disengagement when latched, while the other engaging projections consist of a part of adjacent strips d^1, d^1 punched out of the metal by slitting the shell longitudinally, as shown in Fig. 1, and arranged to bear against the side edges of the holes or, in other words, the metal between the holes in the cap part, so as to hold the cap and shell against rotary motion with reference to each other, when latched. I use two of these projections d^1, d^1, near together for a purpose explained hereinafter. I also prefer to employ pairs of the beveled catches *d* on nearly diametrically opposite sides of the shell. The advantage of using pairs of them with the two projections of each pair near together is that then they may be smaller, that is, they need not be punched up to as great a distance from the shell as is the case where but one projection is used. Excessive strain on these large single beveled latches in an endeavor to detach a shell before it is fully unlatched will sometimes rip the metal at the ends of the transverse cut by which the beveled latch was formed. The two short projections will not tear. Only one pair of projections d^1 to prevent rotation is needed.

I prefer to form the engaging openings of the cap part, not in the metal of the body of the cap itself, but in a ring E, of relatively thick metal within the flange of the cap, as shown in Figs. 1 and 2. These openings *e* are preferably made rectangular and of a width to permit the pair of anti-rotating projections to enter freely within any opening, but with reasonable snugness. These openings *e* are symmetrically arranged around the ring and are sufficiently numerous to give a wide range of positions in which the shell and cap can be latched together rotarily, as is usual in these types of sockets. The number and size of these openings in a given ring are such that there will be left in the metal of the ring between adjacent openings, bars e^1 of such width that any bar e^1 will enter with reasonable snugness between the two projections d^1, d^1, on the shell, when in position to do so. This will be understood by reference to Figs. 3 and 4. In Fig. 3, the shell and ring are

shown engaged in such relative positions that the two projections d^1, d^1 straddle a bar e^1, whereas in Fig. 4, the engagement of the shell and cap is shown as changed rotarily to bring the two projections d^1, d^1 into the same opening e, or in other words, between two bars e^1, e^1. The advantage of this is that with a limited number of openings I can get a relatively large number of possible latching positions. Thus, if I have twenty openings in the cap part, that will give me forty different latching positions.

I prefer to make the ring E a flanged ring, that is, with a flange f at its upper edge, and to provide in this flange notches f^1 into which metal of the cap may be staked, as shown at the right of Fig. 2, to secure the ring from turning within the cap. I also form on the ring inward projections f^2, Figs. 1, 2, 3 and 4, to take under the edge of the paper or other insulating disk D, and hold the disk in place in the cap.

As I have said, I prefer to make the cap openings in an internal ring E, and this mainly because it has the especial advantage that the cap itself can be made of thin metal, which latter gives a sufficiently wide holding surface with sharp and permanently true edges for the engaging projections on the shell. Nevertheless, if desired, the holes may be formed in the flange of the cap C^1, as shown in Fig. 5, the holes being covered up by an external ring F.

I claim as my invention

1. An electric lamp socket, having a cap and shell fitting together telescopically, and provided with readily freed automatic endwise latching means, and means to prevent rotation when the parts are latched, said last mentioned means comprising a pair of adjacent projections on one part, and a cooperating series of holes on the other part, each hole being large enough to receive the two projections, and the space between said projections being sufficient to receive the metal between adjacent holes, for the purpose described.

2. An electric lamp socket, having a cap with a series of holes at the flange, in combination with a shell having endwise latching lips, and having also a pair of adjacent projections to enter said holes to prevent rotation of the cap and shell when latched, each said hole being large enough to receive the said two projections on the shell, and the space between the projections being sufficient to receive the metal between adjacent holes of the cap, for the purpose described.

3. An electric lamp socket having a cap with a series of holes at the flange, in combination with a shell having endwise latching lips and also having a pair of adjacent strips punched outwardly from the metal of the shell to enter said holes, each of which is large enough to receive said two strips, and the space between the strips being sufficient to receive the metal between adjacent holes of the cap, for the purpose described.

4. An electric lamp socket, having a shell with latching projections in combination with a cap having within its flange a ring with holes in it, the ring having a flange at its upper edge with notches in the flange to receive indented metal of the cap, for the purpose described.

5. An electric lamp socket, having a shell with latching projections in combination with a cap having within its flange a ring with holes coöperating with said projections on the shell, the said ring having inwardly projecting fingers to engage and hold the insulating lining disk in the cap.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

JOHANN G. PETERSON.

Witnesses:
HERMAN T. HARTWIG,
CLIFFORD H. DURANT.