Aug. 26, 1930. O. H. VAN AMBURG 1,774,461

INCANDESCENT LAMP SOCKET

Filed July 29, 1922

Fig. 1.

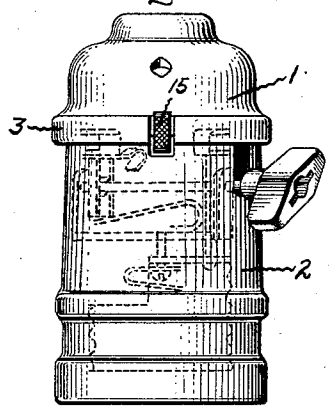


Fig. 2.

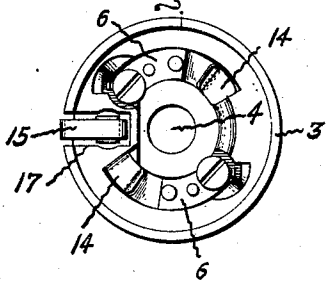


Fig. 3.

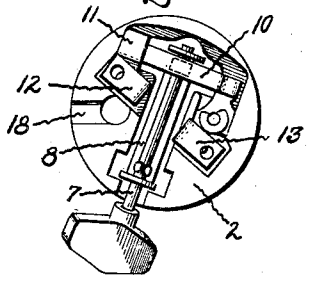
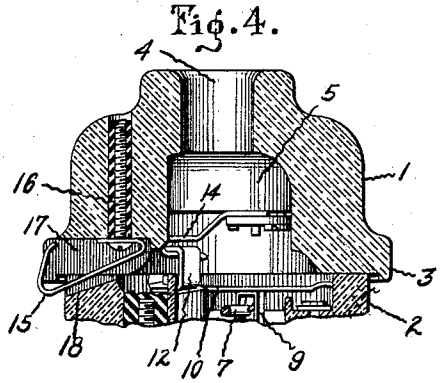


Fig. 4.



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UNITED STATES PATENT OFFICE

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INCANDESCENT-LAMP SOCKET

Application filed July 29, 1922. Serial No. 578,313.

The present invention relates to sockets for incandescent lamps and more especially to what is known in the trade as porcelain sockets, in which both the cap or base and body portions are composed of porcelain or other insulating material instead of sheet metal.

During recent years the snap connection between the cap and body portions of the metal shells of sockets has displaced almost entirely the prior constructions which required the use of a screw driver or other tool for their connection and disconnection. In porcelain sockets the old cumbersome connections between cap or base and body parts have persisted despite many attempts to provide satisfactory snap or manually operated connections therefor.

The object of my invention is to provide an improved porcelain socket in which the body portion may be connected and disconnected with facility to the cap portion by mere manipulation, and when the parts are in connected position they will be securely held against relative movement and accidental displacement.

One embodiment of the invention is shown in the accompanying drawing in which Fig. 1 is a side elevation of my improved socket; Fig. 2 is an under side view of the cap or base portion; Fig. 3 is a top view of the body portion, and Fig. 4 is an enlarged vertical section of the upper part of the socket.

The cap or top portion 1 and the body portion 2 have the general construction of the porcelain sockets heretofore in use.

The cap or top portion 1 is formed with a plain lower surface bounded by a peripheral drip flange 3, a central aperture 4 and chamber 5 for the usual knotted conductor wires, and binding plates 6 secured in arcuate recesses on opposite sides of the chamber 5.

The body portion 2 has in a recess in its lower end the usual center and screw shell contacts for engagement with the base of an incandescent lamp and in a recess in its upper end an ordinary switch mechanism comprising a key shaft 7 journalled in a yoke 8 connected by an axial screw with the center contact, and having on its inner end an oblong block 9 normally engaging a flat spring contact 10, the free end of which is adapted to engage a contact toe 11 projecting horizontally from a U-shaped or overhanging connection bracket 12 secured to the end of the body portion on one side of the key shaft 7, while on the opposite side thereof a second connection bracket 13 is secured by a screw having electrical connection with the screw shell contact.

In order that the body portion 2 may be readily connected to and disconnected from the cap or top portion 1 by a simple manipulation, I provide the binding plates 6 with yielding connection hooks 14, made of spring metal, such as phosphor bronze, and shaped as indicated in Fig. 4 with inclined outer ends adapted, upon being brought by a slight angular movement into engagement with the outturned ends of the connection brackets 12 and 13, to yield sufficiently to insure good spring contact at both points of connection and also to permit the porcelain surfaces at the meeting ends of the socket members to slide upon each other without interference from the sharp particles common to such surfaces or from irregularities of manufacture.

On account of the tendency of the socket members to creep or work loose under mechanical vibrations, alternating current impulses and unequal expansion and contraction between porcelain and metal parts, I provide a positive lock between the body portion 2 and the cap or top portion 1 consisting of a latch 15 in the form of a phosphor bronze leaf spring secured by a screw 16 at its inner end in a parallel sided radial recess 17 formed in the lower end of the cap or top portion and extending downwardly and outwardly therefrom to a point somewhat below the end plane of the cap or top and then bent upwardly and inwardly so that while its free end is positioned between and guided by the parallel walls of the recess the bent portion will be disposed slightly outside the periphery of the cap or top where its surface is roughened to permit of its being readily engaged by the finger of the wireman. The body portion 2 is provided in its upper end with a shouldered notch 18 into which the spring latch 15 snaps when the socket portions have been rotated

relatively to each other to fully connect their engaging means.

When the wireman desires to install my socket, he presses upwardly with his thumb on the exposed portion of the latch 15 and gives the body portion 2 a slight rotary movement relative to the cap or top portion 1 to disconnect the brackets 12 and 13 from the spring hooks 14. Upon removal of the body portion the conductors are threaded through the central aperture 4 of the cap or top portion, a knot tied in them and their ends secured to the exposed binding plates 6. The body portion is replaced and rotated until the latch 15 snaps home in the notch 18.

While I have shown and described the best embodiment of the invention known to me, I do not desire to be restricted thereto.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. A separable socket comprising insulating cap and body portions, members mounted on said portions movable to interlock the cap and body, a latch keeping notch in one of said portions, a U-shaped spring latch detachably mounted within the other portion and normally extending into said notch to prevent unlocking movement of the cap and body, and means carried by the latch and extending outside the socket operable to withdraw the latch from the notch.

2. A separable socket comprising insulating cap and body portions, members mounted on said portions movable to interlock the cap and body, a latch keeping notch in one of said portions, a U-shaped spring latch mounted within the other portion and normally extending into said notch to prevent unlocking movement of the cap and body, and means carried by the latch and extending outside the socket operable to withdraw the latch from the notch.

3. A lamp socket comprising a moulded body portion having lamp receiving contacts at one end, a cap portion fitting the opposite end of said body, means for interlocking said cap and body, a latch keeping recess in one of said portions extending to the outside of said portion, means for interlocking said cap and body, and a U-shaped spring mounted in said recess, having a handle extending to the outside of said portion and having a latching engagement with the other portion to prevent its rotation.

4. A lamp socket comprising moulded body and cap portions, interlocking conducting members carried by adjacent ends of the body and cap portions adapted to be connected by a longitudinal and rotary movement, one of said portions having a recess in the end adjacent the other portion, the latter portion having a latch engaging notch, and a snap latch member mounted in said recess and adapted to engage the notch in the other portion when the conducting members are interlocked, and said latch member having an operating handle extending to the outside of the socket.

5. In a lamp socket having a top portion and an independent body portion of insulating material directly engaging each other, the combination of metal brackets mounted on one of said portions, cooperating yieldable hooks mounted on the other of said portions and adapted to engage said brackets upon one of said portions being moved angularly to the other about their longitudinal axis, and an insulated spring latch for releasably preventing retrograde movement between said portions.

6. In a lamp socket having a top portion and an independent body portion of insulating material directly engaging each other, the combination of binding plates attached to said top portion and provided with spring hooks, contact brackets mounted on said body portion and engageable with said spring hooks upon slight angular movement of said portions relative to each other about their longitudinal axis, and an insulated spring latch for releasably preventing retrograde movement between said portions.

7. In a lamp socket having a top portion and an independent body portion of insulating material directly engaging each other, the combination of interengageable yielding mean for connecting said members upon slight angular movement of one relative to the other about their longitudinal axis, said top portion having a radial parallel sided recess adjacent the periphery thereof, said body portion having a notch adjacent one end thereof, and a bent spring latch secured to said top portion and projecting through said recess and adapted to snap into said notch upon completion of said relative angular movement of said portions.

In witness whereof I have hereunto set my hand this 22d day of July, 1922.

OTTO H. VAN AMBURG.