April 18, 1939. F. C. DE REAMER 2,155,240

LAMP SOCKET

Filed May 22, 1937

Fig. 1.

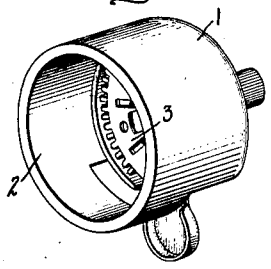


Fig. 2.

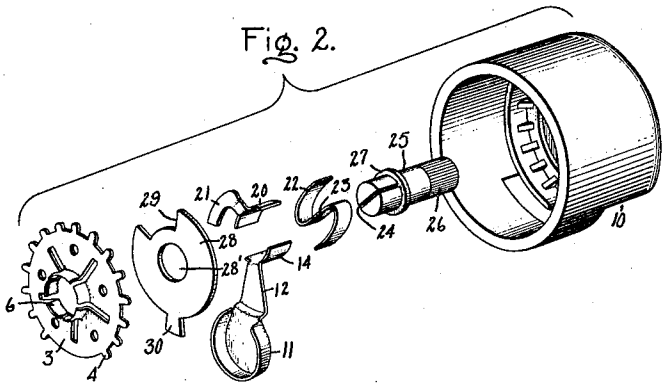


Fig. 3.

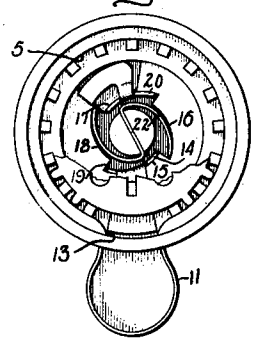


Fig. 4.

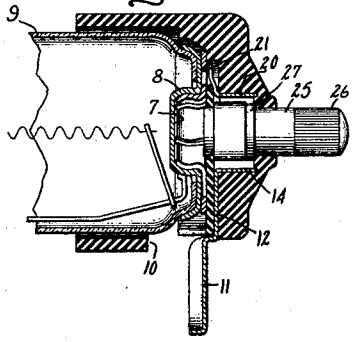


Fig. 6.

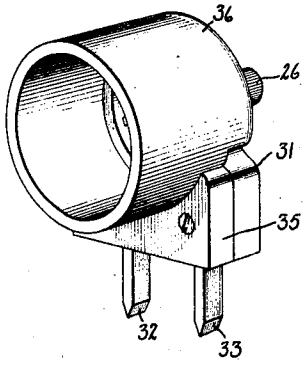
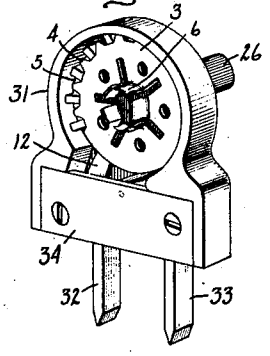


Fig. 5.



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2,155,240

LAMP SOCKET

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Application May 22, 1937, Serial No. 144,205

3 Claims. (Cl. 173—350)

The present invention relates to lamp sockets or holders and especially to lamp sockets or holders for long cylindrical lamps having a contact ferrule at each end.

The object of my invention is to provide an improved socket or holder for a lamp of this type having a switch for controlling the circuit to the lamp.

For a consideration of what I believe to be novel and my invention attention is directed to the following description and the claims appended thereto.

In the drawing, Fig. 1 is a perspective view of a lamp socket embodying my invention; Fig. 2 is an exploded view of the socket; Fig. 3 is an end elevation of the socket; Fig. 4 is a sectional elevation of the socket; and Figs. 5 and 6 are perspective views of modifications.

Referring to the drawing, the socket comprises a base 1 of insulating material having a cylindrical recess 2 in one face. Located in the recess is a metal disk or contact 3 having spring teeth 4 projecting from its periphery which wedge against the side walls of the recess into notches 5 to hold the disk in position. At its central portion the disk is provided with outwardly projecting spring fingers 6 which form a spring head adapted to engage in the recess 7 in the metal ferrule 8 at one end of a lamp 9. When the spring fingers 6 enter the recess 7 they make firm electrical contact therewith and serve to hold the socket on the end of the lamp. On the under side of the base is an opening 10 through which projects a prong 11 which is adapted to make connection with suitable spring terminals connected to a line conductor. The prong has an offset portion 12 which fits in a notch 13 in the opening 10 and has an axially extending contact 14 which rests on a circumferentially inclined surface 15 of a ratchet molded in the base. The ratchet comprises inclined surfaces 15, 16, 17 and 18 each of which terminates in an abrupt shoulder 19. Diametrically opposite the contact 14 is a contact 20 resting on the inclined surface 17. The contact 20 has a resilient arm 21 which bears against the inner surface of the disk 3 and makes contact therewith. The circuit between the prong 11 and the disk 3 is controlled by an S-shaped bridging member 22 having an intermediate portion 23 in a slot 24 in a spindle 25 and having its ends projecting from opposite sides of the spindle. The ends of the bridging member conform with the inclined surfaces of the ratchet. The spindle, which serves as the operating member, is journaled in the base and has a knurled handle 26 projecting beyond the end of the base. Outward movement of the spindle is prevented by a collar 27 on the spindle. Upon rotation of the spindle in a counterclockwise direction as viewed in Fig. 3 the ends of the bridging member 22 alternately rest on the inclined surfaces 16 and 18 and on the contacts 14 and 20. The circuit between the contacts is therefore successively made and interrupted upon rotation of the spindle. A disk 28 of insulating material is arranged between the disk 3 and the switch. The disk has an opening 28' providing a bearing for the spindle, a notch 29 through which the spring arm 21 extends to make contact with the rear face of the disk 3, and a tab 30 which covers the offset portion 12 of the prong 11.

In the assembly of the socket the spindle 25 is inserted through the recess 2. The prong 11 and the contact 20 are then fitted in place, the contact 14 of the prong resting on the inclined surface 15 and the contact 20 resting on the inclined surface 17. The S-shaped bridging member is then fitted in the slot 24 in the spindle and the disk of insulating material laid in place. The disk 3 is now pressed into the recess holding the parts in assembled relation. As best shown in Fig. 4 the portion of the recess 2 in which the spindle 25 is positioned is of reduced cross-section. This forms a shoulder around the inclined surfaces 15 or 18 against which the offset portion 12 of the tang 11 and a portion of the arm 21 are held by the disk 3.

Upon rotation of the switch spindle, the circuit between the prong 11 and the disk 3 will be successively made and interrupted as described above.

Fig. 5 shows a modified form of lamp socket which is adapted to be connected to a plug receptacle. The lamp contact and switch are of the same construction as that shown in Figs. 1 to 4, inclusive, and the corresponding parts are denoted by the same reference characters. The base 31 is of slightly different shape at its lower end. In the front face of the base are grooves (not shown) in which rest terminal blades 32 and 33. The blades are held in place by a plate 34 of insulating material which is fixed to the base. The terminal blade 33 is a dummy blade having no electrical connection with the parts of the socket. It serves merely as a support for the lamp socket. The terminal blade 32 is suitably connected to the arm 12 which, as in the construction above, is integral with the contact 14.

When the socket is plugged in a receptacle the terminal blades 32 and 33 provide a firm support

for the socket and the terminal blade **32** provides an electrical connection to the connection at one end of the lamp, this connection being controlled by the rotation of the switch spindle **25**.

The socket shown in Fig. 6 is identical with that shown in Fig. 5 except for the construction for holding the terminal blades **32** and **33** in the socket. This construction comprises a plate **35** which is integral with a cylindrical extension **36**. The plate **35** serves the same function as the plate **34** in the construction shown in Fig. 5. The cylindrical extension **36** fits around the upper end of the base **31** and serves to house the same so as to protect the metal contacts located therein.

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

1. A socket for a lamp having contacts at its end comprising a base having a recess in one face, a switch spindle projecting from said base, a prong for connection with a line conductor projecting from said base, spaced contacts in said recess, a contact member for one of said lamp contacts fixed to said base and clamping said contacts in said recess, said contacts being respectively connected to said prong and said contact member, and a contact for making and breaking the circuit between said spaced contacts upon movement of the spindle.

2. A socket for a lamp having contacts at its ends comprising a base having a recess in one face, a switch spindle projecting from the opposite face of said base, a ratchet member in said recess surrounding said spindle and having surfaces extending axially along said spindle and inclined circumferentially, a shoulder in said recess outside said axially extending surfaces, a prong for connection with a line conductor projecting from said base, spaced contacts in said recess having portions resting respectively on alternate surfaces and having portions resting on said shoulders around said surfaces, a contact member for one of said lamp contacts fixed to said base and clamping said contacts against said shoulder, said contacts being respectively connected to said contact member and said prong, and a bridging member carried by said spindle for successively making and breaking the circuit between said contacts upon rotation of the spindle.

3. A socket for a lamp having contacts at its ends comprising a base having a recess in one face, a switch in said recess comprising contacts, a bridging member for making and breaking the circuit between said contacts and a switch spindle in the recess for operating the bridging member, said switch spindle projecting from the opposite face of the base, a member of insulating material having a bearing in the recess for said spindle, a prong for engagement with a line conductor projecting from the base and connected to one of said switch contacts, and a contact member for connection with one of the lamp contacts electrically connected to the other of said switch contacts, said contact member being fixed to said base and forming a closure for said recess whereby the switch is held in said recess.

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