Sept. 4, 1928.

1,682,930

J. V. PARENT

LAMP SOCKET

Filed Jan. 25, 1926

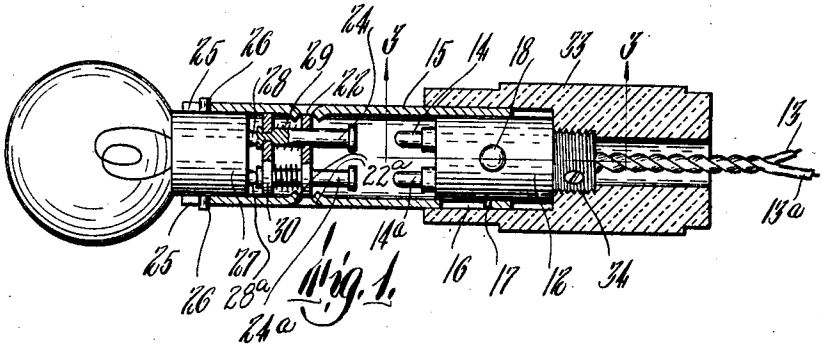

Fig. 1.

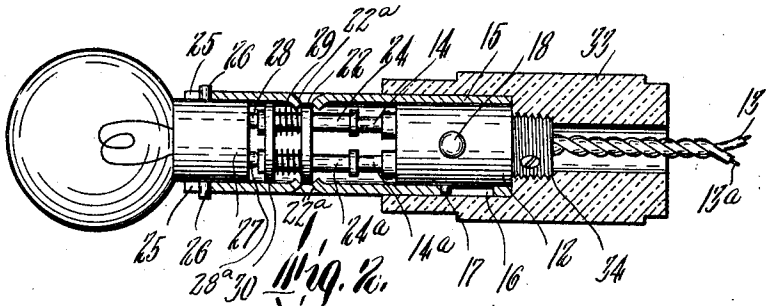

Fig. 2.

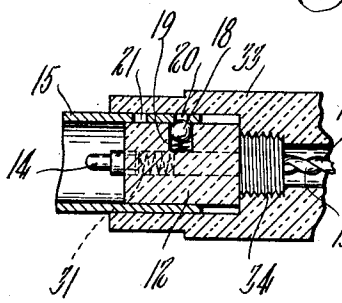

Fig. 3.

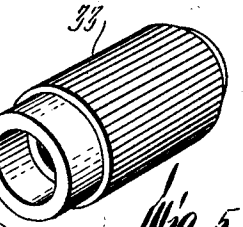

Fig. 5.

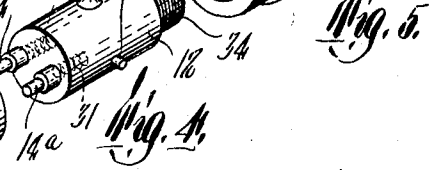

Fig. 4.

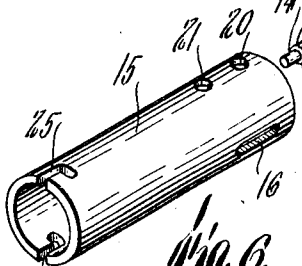

Fig. 6.

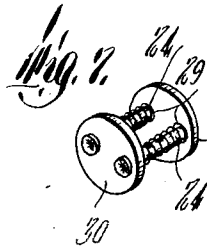

Fig. 7.

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UNITED STATES PATENT OFFICE.

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LAMP SOCKET.

Application filed January 25, 1926. Serial No. 83,531.

This invention relates to a lamp socket adapted to be coupled to the base of an incandescent electric lamp, and conduct current thereto, and including relatively movable parts carrying conducting members arranged in pairs and adapted by a movement in one direction, to render the conducting members operative and light the lamp, and by a movement in a different direction, to render the conducting members inoperative and extinguish the lamp.

The chief object of the invention is to provide an improved construction, permitting the lighting and extinguishment of the lamp by a rectilinear endwise movement of one of the socket parts, and maintaining the conducting members of each pair in longitudinal alinement with each other, so that said members may be pressed into close contact with each other, to light the lamp, and may be separated from each other by a rectilinear endwise movement of one member of each pair away from the other member.

Other objects will hereinafter appear.

Of the accompanying drawings forming a part of this specification,—

Figure 1 shows my improved lamp socket partly in section and partly in elevation, the conducting members of each pair being separated from each other.

Figure 2 is a view similar to Figure 1, showing the conducting members of each pair contacting with each other.

Figure 3 is a section on line 3—3 of Figure 1.

Figures 4, 5, 6 and 7 show in perspective, parts of the socket.

The same reference characters indicate the same parts in all of the figures.

In the drawings, 12 designates a cylindrical terminal insulating plug engaged with a pair of wires 13, and having two inner conducting members 14 and 14ª, each connected with a wire 13, and projecting from one end of the plug. 15 designates a tubular casing, preferably of metal, in which the plug 12 is movable endwise. The casing is provided near its inner end with a longitudinal guiding slot 16. The plug is provided with a lateral stud 17, projecting into the slot. Said slot and stud permit limited rectilinear endwise movements of the plug, and prevent rotary movement thereof, so that the plug may be projected as shown by Figure 2, and retracted as shown by Figure 1, without rotating in the casing. The plug and casing are provided with semi-positive clutch members, adapted to yieldingly confine the plug in either its projected or retracted position, said members being preferably embodied in a ball 18, radially movable in a recess in the plug and pressed outward by a spring 19, and two spaced apart orifices 20 and 21 in the casing 15, into either of which the ball may be pressed by the spring. The arrangement of the ball and orifices is such that when the ball is pressed into the orifice 20, the plug is yieldingly confined in its retracted position (Figure 1), and when the ball is pressed into the orifice 21, the plug is yieldingly confined in its projected position (Figure 2).

22 designates a disk of insulating material, having two orifices, in which two outer conducting members 24 and 24ª are longitudinally movable. The disk 22 is rigidly secured to the casing 15, as by tongues 22ª, with the outer conducting members 24 and 24ª, in longitudinal alinement with the inner conducting members 14 and 14ª. The arrangement is such that the inner conducting members are separated from the outer conducting members when the plug is retracted, and are pressed closely against the outer members by the projection of the plug.

The outer end of the casing is provided with coupling parts, such as bayonet-joint slots 25, arranged to cooperate with complemental coupling parts, such as studs 26, on a lamp base 27, inserted in the casing, in holding the usual contacts 28 and 28ª on the base in longitudinal alignment with the outer conducting members 24 and 24ª. The outer conducting members are pressed yieldingly against the lamp base contacts by outer springs 29, which bear on the fixed insulating disk 22, and exert outward endwise pressure on the outer conducting members, preferably through a disk or head 30 of insulating material, rigidly secured to said conducting members, the periphery of the head being in sliding contact with the internal surface of the casing, so that the head maintains the outer members parallel with each other and prevents contact between the springs 29 and the casing.

The inner conducting members 14 and 14ª are yieldingly pressed outward by inner springs 31, indicated by dotted lines in Figure 4. Said inner springs press the inner members 14 and 14ª against the outer mem-

bers 24 and 24ª when the plug is projected.

It will now be seen that the socket is operable to light and extinguish the lamp by rectilinear endwise movements of the plug. The projection of the plug causes the compression of the inner and outer springs, so that the inner conducting members are pressed closely against the outer conducting members, and the outer members are pressed closely against the lamp base contacts.

Accidental endwise movements of the plug are prevented by the described semi-positive clutch members, which permit endwise movements of the plug by suitable force exerted thereon. The plug 12 is preferably provided with a tubular handle or grip 33, having an internal screw-thread engaged with an externally threaded shank 34, formed on the plug. The handle is formed to overlap a portion of the casing 15, and cover the guiding slot 16, and the orifices 20 and 21 therein, thus excluding dust and moisture from the casing.

The described socket is designed particularly for use with spot lights, but may be otherwise used if desired.

I claim:

A lamp socket comprising, in combination, an insulating plug engaged with a pair of wires, two spring-pressed inner conducting members connected with said wires guided by the plug, and projecting from one end thereof, a tubular casing in which the plug is movable endwise, the casing being provided with a longitudinal slot and the plug with a stud entering and movable in the slot, so that the plug may be projected and retracted without rotation in the casing, the plug being provided with a recess opening on its periphery, and with a spring-pressed ball in said recess, the sleeve being provided with orifices, into either of which the ball may be forced by its spring, said ball and orifices providing a semi-positive clutch adapted to yieldingly confine the plug, either projected or retracted, an insulating disk rigidly fixed within the casing, two spring-pressed outer conducting members longitudinally movable in said disk and maintained thereby in longitudinal alinement with the inner members, the inner members being separated from the outer members by the retraction of the plug and pressed against the outer members by the projection of the plug, the outer end of the casing being provided with coupling parts to engage complemental coupling parts on a lamp base, and a tubular handle fixed to and slidable with the plug, and overlapping a portion of the casing to cover and exclude dust and moisture from the guiding slot and the ball-receiving orifices therein.

In testimony whereof I have affixed my signature.

JOSEPH VICTOR PARENT.