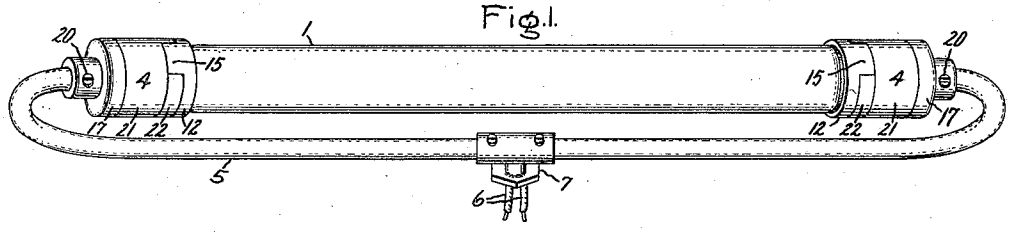
April 4, 1939. W. G. DARLEY 2,153,366

LAMP SOCKET

Filed March 3, 1937

Fig.1.



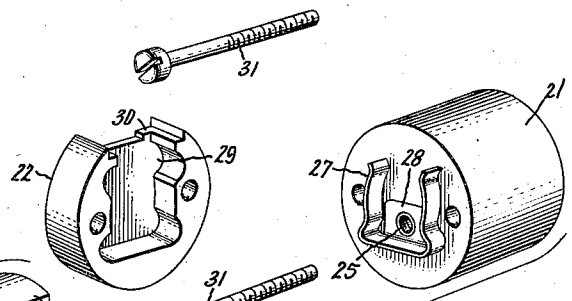


Fig.2.

Fig.3.

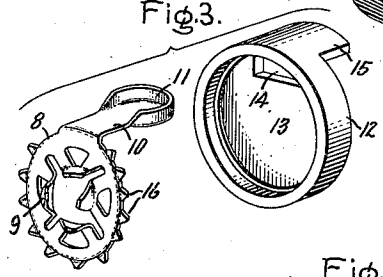


Fig.4.

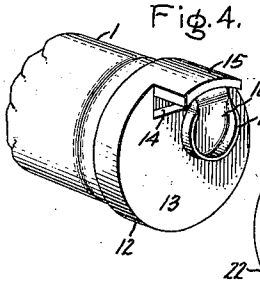


Fig.5.

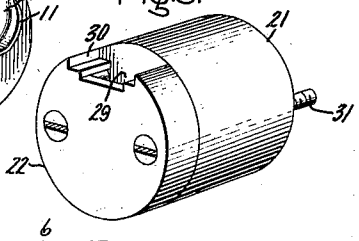


Fig.6.

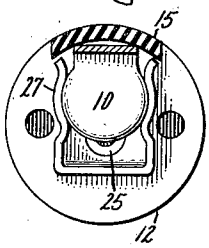
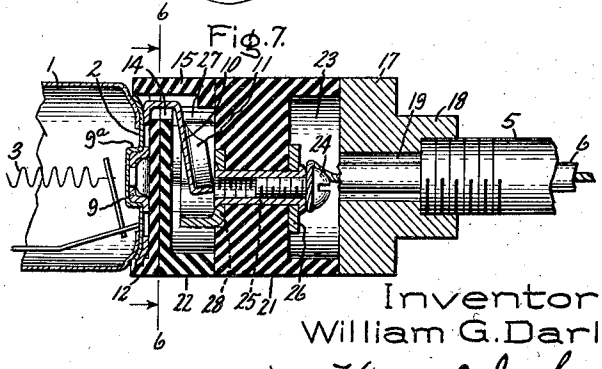


Fig.7.



Inventor:
William G. Darley,
by Harry E. Dunham
His Attorney.

Patented Apr. 4, 1939 2,153,366

UNITED STATES PATENT OFFICE

2,153,366

LAMP SOCKET

William G. Darley, Cleveland Heights, Ohio, assignor to General Electric Company, a corporation of New York

Application March 3, 1937, Serial No. 128,805

7 Claims. (Cl. 173—328)

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.

One object of my invention is to provide a lamp socket or holder of this type adapted to be connected to the end of a tubular bracket wherein the lamp socket is substantially of the same diameter as the lamp. This serves to give a neat appearance to the lamp and its holder.

A further object of the invention is to provide a socket in which the contacts are adequately protected and which is simple in construction so that it is capable of being manufactured at low cost.

A further object of the invention is to provide a socket which is easily wired in a known way and in which the lamp is inserted and removed by a direct linear movement and without endwise movement.

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

In the drawing, Fig. 1 is a perspective view of a lamp supported in sockets or holders embodying my invention, the sockets being supported by a bracket; Fig. 2 is an exploded view of the fixed or bracket part of the lamp socket; Fig. 3 is an exploded view of the lamp part of the socket which may be termed an adapter; Fig. 4 is a perspective view of an end of a lamp with an adapter attached thereto; Fig. 5 is a perspective view of a stationary portion of the socket; Fig. 6 is a section taken on line 6—6 of Fig. 7, and Fig. 7 is a sectional view of a lamp socket with a lamp mounted therein.

Referring to the drawing, I indicates a cylindrical lamp of known construction having metal contact ferrules 2 at its two ends through which electrical connection is made to the lamp filament 3. In Fig. 1, the lamp is shown as being mounted in lamp sockets 4 embodying my invention, the sockets 4 in turn being shown carried by a tubular bracket 5 through which the conductor wires 6 extend to the sockets, it being understood that one wire goes to each socket. At 7 is a coupling by means of which the bracket may be mounted on a wall or other support.

The lamp socket comprises a lamp portion or adapter which is connected to and carried by an end of the lamp and a stationary portion which is carried by the bracket. Two lamp sockets are required for each lamp, the two being mounted in spaced relation to each other, as shown in Fig. 1 with the lamp located between them.

The lamp portion of the socket comprises a metal disk 8 having projecting spring fingers 9 which are adapted to engage in the usual recess or socket 9a in the ferrule of the lamp, the fingers having sufficient resiliency to make good contact with the ferrule and hold the adapter firmly in engagement therewith. Projecting from disk 8 at an edge thereof is a forwardly extending contact tongue 10 having a contact flange 11. The metal disk 8 is carried by an insulating housing 12 which has an open side adapted to fit against the end of a lamp and a closed side 13 provided with an opening 14 through which the tongue 10 projects. Extending outwardly from housing 12 adjacent opening 14 so that it overlies the tongue 10 is an integral curved flange 15. On the peripheral edge of disk 8 are teeth 16 which are embedded in the wall of housing 12 and serve to hold the disk firmly in position therein. Fig. 3 shows the two parts of the adapter ready to be assembled relatively to each other. In assembling the two parts, tongue 10 is passed through the opening 14 and the disk 8 forced into the housing 12, the teeth 16 biting into the wall of the housing to hold the disk in place. Following this, the outer end of tongue 10 is bent downwardly at an angle so as to be approximately parallel with the wall 13, as shown in Fig. 4, and as will be seen from Fig. 4, the outer end of the tongue is housed under the curved flange 15. In Fig. 7, an adapter is shown attached to the end of the lamp 1, the spring fingers 9 being located in the recess 9a in the ferrule 2. An adapter is mounted on each end of the lamp 1 and when in position they form in substance a part of the lamp, although they are readily detachable therefrom.

The stationary part of the holder comprises a disk 17 of metal or other suitable material having a central projecting nipple 18. The nipple and disk are provided with a central opening 19 for the passage of a conductor wire and the nipple is counterbored and threaded to enable it to be attached to the end of tubular bracket, such as bracket 5. The nipple may be locked on the bracket by means of a set screw 20 as shown in Fig. 1.

Attached to the face of disk 17 is an insulating body comprising a base 21 and a cap 22. The end of the base next to disk 17 is provided with a recess 23 which houses a binding post 24. Binding post 24 threads into the end of a

hollow threaded rivet 25 which extends through base 21 and has its ends peened over to hold it in position. In the recess 23, a washer 26 is located between the peened-over portion of the rivet and the insulating material. The other end of the rivet holds in place a U-shaped spring contact comprising spring arms 27 and a base 28 with which the end of the rivet engages. This is shown particularly in Fig. 2. Spring arms 27 are spaced apart a distance to receive and make good contact with the flanged end of contact tongue 10. Cap 22 fits against the end of body 21 and serves to house the U-shaped spring contact. At a point, its periphery is cut away as indicated particularly in Fig. 5 to provide a passage 29 for contact tongue 10 and a seat 30 for curved flange 15 which flange serves to close passage 29 when the adapter is in position on the stationary part of the holder as shown in Fig. 7. The base and cap are attached together and to disk 17 by means of threaded bolts 31 which pass through holes in the cap and base and thread into tapped openings in the disk.

In the use of the invention, an adapter is attached to each end of the lamp and the stationary portions of the socket are attached to the fixture or bracket which is to hold the lamp, in correct spaced relation to receive a lamp between them. The circuit wires are connected one to each binding screw 24 as shown in Fig. 7. To mount a lamp in the circuit, it is necessary merely to pass the contact tongue 10 radially through openings 29 into engagement with spring contact arms 28, bring curved flanges 15 into engagement with seats 30. And to remove a lamp, it is necessary merely to pull it out radially. This provides a very simple way of inserting a lamp into circuit and removing it therefrom, and one requiring no end motion. Flanges 15 are curved to conform to the curvature of cap 22 so that when a lamp is in position, the socket presents a continuous smooth exterior surface. Also, the socket is about the same diameter as the lamp and has no laterally projecting parts. This serves to give a neat pleasing appearance to an assembled structure.

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

1. A lamp holder for a cylindrical lamp comprising a stationary cylindrical casing having a radially opening recess at one end, contact means in the recess and a cylindrical adapter of substantially the same diameter as said casing having a contact member disposed within the recess and engaging the contact means, the adapter being movable laterally of said stationary casing to bring the contact means and contact member into interengagement with the cylindrical adapter located at the end of the casing in axial alinement with the cylindrical casing to form a lamp holder having a substantially smooth, continuous exterior surface.

2. A lamp holder for a cylindrical lamp comprising a stationary cylindrical casing having a radially opening recess at one end and contact means in the recess, a cylindrical adapter having a contact member within said recess and engaging the contact means with the adapter located at the end of the casing, and a projection formed on said adapter for closing said recess.

3. A lamp holder for a cylindrical lamp comprising a stationary cylindrical casing, a cylindrical cap having a radially opening passage secured to one end of said casing in axial alinement therewith, said passage forming a recess, U-shaped contact means in said recess mounted on said casing, and a binding post at the other end of said casing electrically connected to said contact.

4. An adapter for a cylindrical lamp having end ferrules comprising a cylindrical member having an axially extending opening spaced from the axis of said member, a contact carried by the member on one side of and in line with the axis of said member for connection to the end ferrule of a lamp, said contact having a plurality of teeth gripping a wall of said member, and a contact tongue carried by said contact which projects laterally through said opening and has an angular portion located on the other side of said member in line with the axis of said member.

5. In a lamp holder, a unitary structure comprising the combination of a disk having a passage for a conductor, a cylindrical casing having one end fixed to an end of the disk, the adjacent disk and casing ends being formed to provide a recess, a binding screw in the recess, the other end of the casing being provided with an enclosed recess having a radial opening, a contact in the radially opening recess electrically connected to said binding screw, and means to secure said casing and disk together.

6. In a lamp holder, a unitary structure comprising a cylindrical element having a projecting nipple at one end for connecting the structure to a bracket, a cylindrical insulating member connected at one end to said cylindrical element, a cylindrical cap having a radially opening passage secured to the other end of said member, said passage forming a recess having a radial opening, a contact located in said radially opening recess, and means to secure said cap, member and element together.

7. A lamp holder comprising a cylindrical casing having a radially opening recess at one end and an annular recess at the other end, a contact in said radial recess, a binding post in said annular recess electrically connected to said contact, a cylindrical housing having an opening in a wall thereof and a conducting disk nested in said housing on one side of said wall and having a prong passing through said opening and being bent at an angle on the other side of said wall to engage said contact with said cylindrical housing and casing in axial alinement, said conducting disk having spring fingers adapted to engage the ferrule of a lamp.

WILLIAM G. DARLEY.