July 8, 1941. J. YODER 2,248,598

TUBULAR LAMP BASE AND SOCKET

Original Filed Nov. 9, 1938

Fig. 1.

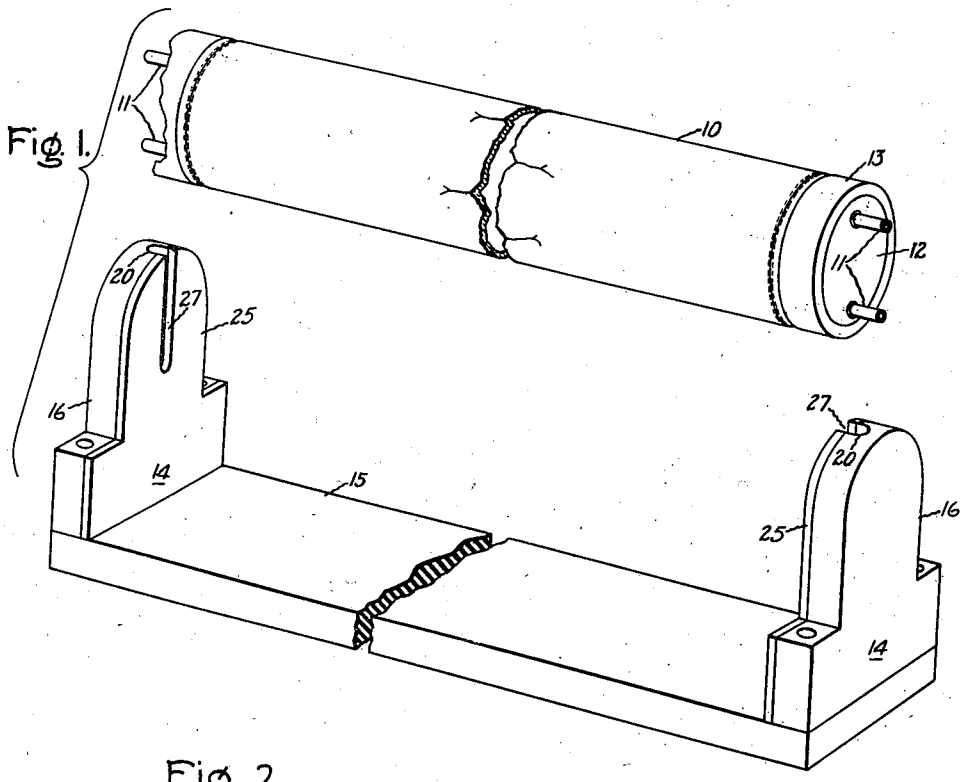



Fig. 2.

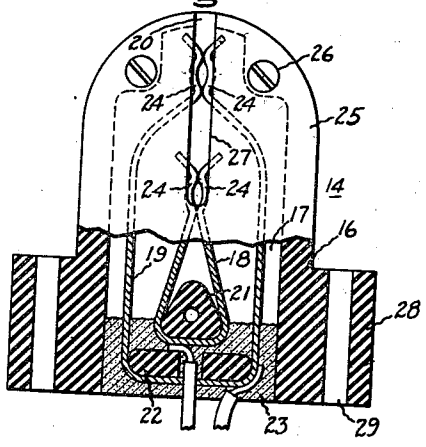
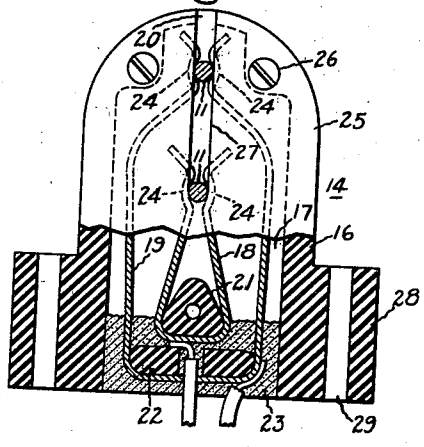



Fig. 3.

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# UNITED STATES PATENT OFFICE

2,248,598

## TUBULAR LAMP BASE AND SOCKET

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Original application November 9, 1938, Serial No. 239,625. Divided and this application September 11, 1940, Serial No. 356,293

4 Claims. (Cl. 173—328)

My invention relates to sockets for electric lamps and similar devices, and more particularly to a socket construction for electric lamps of the double-ended discharge type in which a filamentary electrode is mounted at each end of the lamp, electrical connection to the electrode being obtained by means of spaced contact prongs at each end of the lamp. This application is a division of my copending application Serial No. 239,625, for Tubular lamp base and socket, filed November 9, 1938, and assigned to the same assignee as the instant application.

One object of my invention is to provide a socket construction for electric lamps having spaced contact pins in which the socket is provided with a slot having contact members disposed therein, whereby the lamp may be readily inserted and locked in said socket by a straight inward movement of the pins into said slot.

Another object of my invention is to provide an electric lamp socket in which the contact terminals are entirely concealed and unexposed so that the danger of shock or of short circuits is absent.

Further objects and advantages of my invention will appear from the following detailed description thereof and from the accompanying drawing, in which Fig. 1 is a perspective view of a base provided with sockets constructed in accordance with my invention with a lamp disposed in position to be mounted in the socket; Fig. 2 is a view, partly in section, of a socket constructed in accordance with my invention; and Fig. 3 is a view similar to the showing of Fig. 2 with the lamp prongs mounted in position.

Referring to Fig. 1, I have shown a tubular lamp 10, for example, a fluorescent lamp of the well-known commercial type. At each end the lamp is provided with a filamentary electrode (not shown) connected to contact pins or prongs 11, set in a wall of insulating material 12 carried by a metallic ferrule 13, secured to the end of the lamp. Each end of the lamp cooperates with a socket member 14 mounted in spaced relationship upon a suitable fixture 15.

Referring to Fig. 2, my socket comprises a base member 16 formed of any suitable insulating material, such as a phenolic condensation product and filler, and the base member is hollowed out or recessed, as shown at 17, to receive a pair of U-shaped contact members comprising an inner spring contact member 18 and an outer spring contact member 19. At one end of the base member a slot 20 extends from the recess 17 to an outer edge of the base member. The contact member 18 is properly located in the base member by means of a stud 21, while the contact member 19 is similarly located within the housing by means of a stud 22. Both of the studs 21 and 22 are formed integral with the housing, and are upstanding from the bottom of the recess 17. The base portions of the contact members 18 and 19 engage suitable locating shoulders on the studs to locate the contact members in position, as shown by Figs. 2 and 3. The contact members are secured in position by any suitable means such as a wax or asphaltic compound 23. The forward extremity of each arm of the U-shaped contact member is formed so as to provide a notch 24. The notches on the arms of the respective contact members are opposed to one another to receive the contact prongs of the lamp. The prong receiving means thus formed by the arms of each contact member lie in vertical alignment when the socket is mounted in the position shown by the drawing.

The recess 17 of the housing is closed by a cover plate 25 which overlies the contact members and assists in holding them in position within the housing. The cover plate is held in position by any suitable fastening means such as the screws 26. In order to guide the lamp connector prongs for engagement with the contact members of the socket, the cover plate 24 is provided with an elongated slot 27, the arrangement being such that the flexible notched portions of the contact members are positioned immediately adjacent the slot to receive the connector prongs as the latter are moved downwardly longitudinally through the slot. At the outer edge of the cover member the slot 27 is in alignment with the slot 20 in the base member.

To mount the lamp in the socket, it is simply necessary to align the connector prongs 11 at each end of the lamp with the slot 27 in the corresponding socket and then move the lamp straight downwardly so that the connector prongs enter the slot in the socket and engage the notched portions of the respective contact members. The lamp connector prongs do not engage the contact members of the socket until after they have entirely entered the slot 27 so that there is no danger of shock to the person inserting the lamp. The frictional engagement created by the notches 24 and the contact members is sufficient to maintain the lamp mounted securely in position on the socket so that it cannot be accidentally displaced even though the sockets are mounted in an inverted position such as from the ceiling of a room. For mounting

the socket on a supporting fixture the base member is provided with lateral projections 28 provided with openings 29 for receiving any suitable fastening means.

While my socket has been described and illustrated as constructed of two pieces, it should be manifest that the base member and cover plate may be molded as a single piece and the contact members inserted into the recess through the end of the base.

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

1. A socket for electric lamps and similar devices comprising a member of insulating material, said member being provided in a face thereof with a straight line elongated slot extending to an edge of said face, and a pair of spring contact members mounted within said insulating member and having portions disposed adjacent said slot at spaced points along the length of said slot at different distances from said edge.

2. A socket for use with lamps having spaced contact prongs adapted to be mounted by straight line movement transverse to the axis of the lamp comprising, in combination, a base of insulating material, said base being provided in a face thereof with a straight line elongated slot extending to an edge of said face, and a pair of spring contact members on said base and having portions disposed adjacent said slot at longitudinally spaced points corresponding to the spacing of the lamp prongs at different distances from said edge for receiving the lamp prongs as the latter are moved longitudinally through said slot.

3. A socket for use with electric lamps having spaced connector prongs comprising, in combination, a housing of insulating material, said housing being provided in a face thereof with an elongated slot extending to an edge of said face, and a pair of spring contact members mounted within said housing and having portions disposed adjacent said slot at longitudinally spaced points corresponding to the spacing of the lamp prongs at different distances from said edge, each of said contact members being provided with notched portions engaging edges of the lamp prongs as the latter are moved longitudinally through the slot into seated position on the lamp socket, said slot guiding the connector prongs into engagement with the contact members.

4. A socket for use with lamps having spaced contact prongs adapted to be mounted by movement transverse to the axis of the lamp comprising, in combination, a housing of insulating material, contact members carried by said housing for engaging the prongs of the lamp, said contact members being mounted in axial alignment at different distances from an edge of the housing and being spaced apart a distance corresponding to the spacing of the lamp prongs, and means on said housing for guiding the lamp prongs in straight line movement into engagement with the contact members.

JOE YODER.