Aug. 8, 1939 F. C. DE REAMER 2,169,091

LAMP SOCKET

Filed May 22, 1937

Fig. 1.

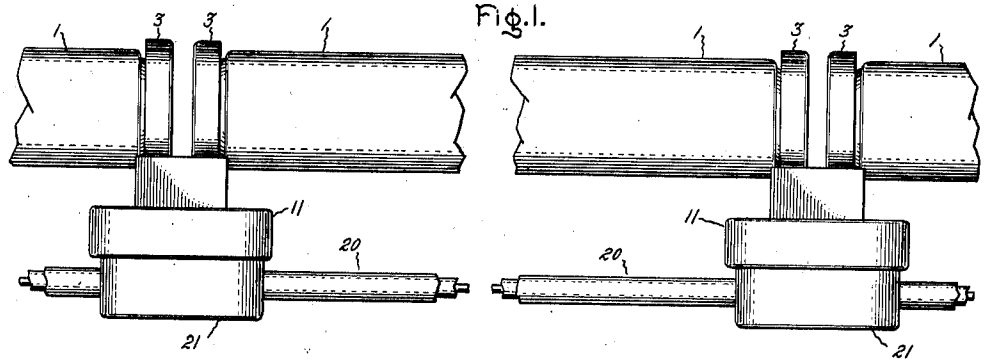


Fig. 2.

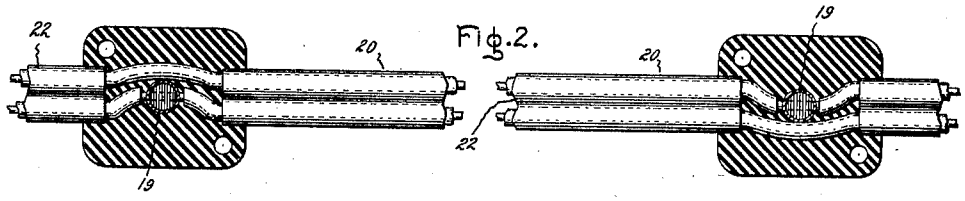


Fig. 3.

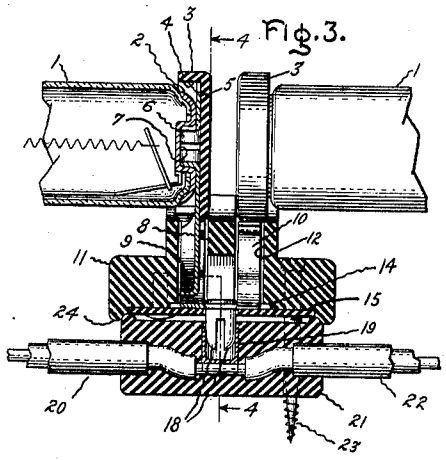


Fig. 4.

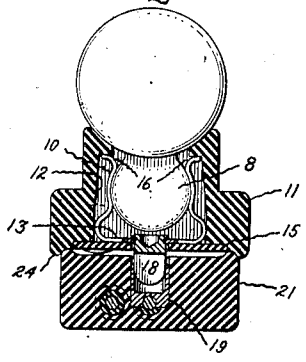


Fig. 5.

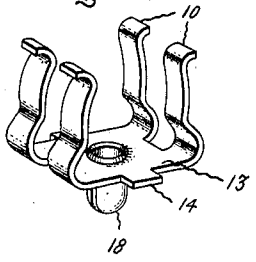
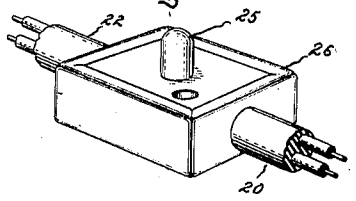


Fig. 6.



Inventor:
Frank C. De Reamer,
by Harry E. Dunham
His Attorney.

Patented Aug. 8, 1939

2,169,091

UNITED STATES PATENT OFFICE

2,169,091

LAMP SOCKET

Frank C. De Reamer, Bridgeport, Conn., assignor to General Electric Company, a corporation of New York

Application May 22, 1937, Serial No. 144,204

1 Claim. (Cl. 173—328)

The present invention relates 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 construction for supporting sockets or holders of this type and in particular to provide a construction which is adapted for outdoor use.

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

In the drawing, Fig. 1 is a side elevation of a string of lamp holders embodying my invention supporting lamps of the type having a contact at each end; Fig. 2 is a top plan view broken away to show the connections to the line conductors; Fig. 3 is a sectional elevation of the lamp holder; Fig. 4 is a sectional view taken on line 4—4 of Fig. 3; Fig. 5 is a perspective view of the contact for making connection with the prongs of the lamp holders; and Fig. 6 is a perspective view of a modification.

Referring to the drawing, 1 indicates a long cylindrical lamp having a contact ferrule 2 at each end. The lamp is supported at each end by a holder which comprises a cap 3 of insulating material having a recess 4 in one face. In this recess is secured a metal disk 5 having outwardly projecting spring fingers 6 at its central portion which form a spring head adapted to engage in a recess 7 in the metal ferrule 2. When the spring fingers enter the recess they make firm electrical contact therewith and hold the cap on the end of the lamp. Integral with the disk 5 is a prong 8 projecting outside the cap 3. The prong 8 is of circular section and has a peripheral flange 9 which increases the contact area. The prong cooperates with one of two pairs of spring clips 10 mounted on a receptacle 11. The receptacle has a body portion or base of molded insulating material having openings 12 through which the prongs extend to make contact with the spring clips. Two such openings are provided so that the lamp holders for adjacent lamps may be connected to the same receptacle. Only one opening is required if a single holder for one end of a lamp is to be connected to the receptacle. The spring clips are integral with a plate 13 having tabs 14 projecting therefrom. The spring clips are inserted into the base of the receptacle 11 from the bottom and the tabs 14 rest in recesses on the underside of the base. A plate 15 of insulating material secured to the underside of the base clamps the tabs 14 against the base and secures the contact clips therein. Projecting through the plate 15 are spring fingers 18 which are riveted to the plate 13. The spring fingers are adapted to enter and make electrical contact with a thimble 19 connected to one of the line conductors of a conductor cord 20. Molded around the thimble 19 and the conductor cord 20 is a base 21 of rubber. In the manufacture the external rubber covering 22 of the conductor cord is stripped for a short portion of its length and one of the conductors is bared and connected to the thimble 19. The conductor cord and thimble are then placed in a mold and the base 21 is molded around the thimble and the conductor cord. The outer rubber covering 22 is embedded in the base so that water can not leak into the base around the ends of the conductor cord. The thimble is likewise embedded in the base. As shown in Fig. 2 alternate thimbles are connected to different conductors so that the lamps are connected across the conductors.

In use the conductor cord is strung along a surface, for example along the side of a building. The receptacles 11 are then mounted on the bases 21, the spring fingers 18 entering and making firm electrical contacts with the thimbles 19. The receptacles at each end of the string have only a single opening 12 for the reception of a lamp holder. The receptacles 11 are clamped to the bases 21 and the assembly secured to the surface by screws 23 threaded into the surface. The receptacles 11 have lips 24 overhanging the edge of the bases 21 which make a watertight seal with the upper edges of the bases. The lamp holders may now be plugged into the receptacles.

In the modification shown in Fig. 6 the connection to the line conductors is made by a thimble 25 which projects from a base 26 of rubber molded around the conductor cord and the thimble. The connection between the thimble 25 and one of the conductors of the conductor cord is made in the same manner as in the previously described construction and the base 26 is thereafter molded around the conductor cord, the thimble, and the connection to the thimble. To cooperate with the thimble 25 suitable spring fingers are provided on the contact clips 10.

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

In combination, a pair of line conductors, spaced holders for a lamp having a terminal at each end, each of said holders including a terminal engageable with the lamp terminal and a plug type receptacle comprising a body carrying a terminal engageable with a contact connected to

one of the line conductors whereby the lamp is connected across the line conductors, a base of rubber molded around said contact and said conductors and the connection therebetween, said base being adapted to be secured to a surface and having a face adapted to lie flat on said surface with the contact on the opposite face and engageable by said receptacle, and means for clamping the receptacle to the base, the body of the receptacle overlapping the base and providing a water-tight seal between it and the base.

FRANK C. DE REAMER.