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PANEL MOUNTED ELECTRIC LIGHT SOCKET

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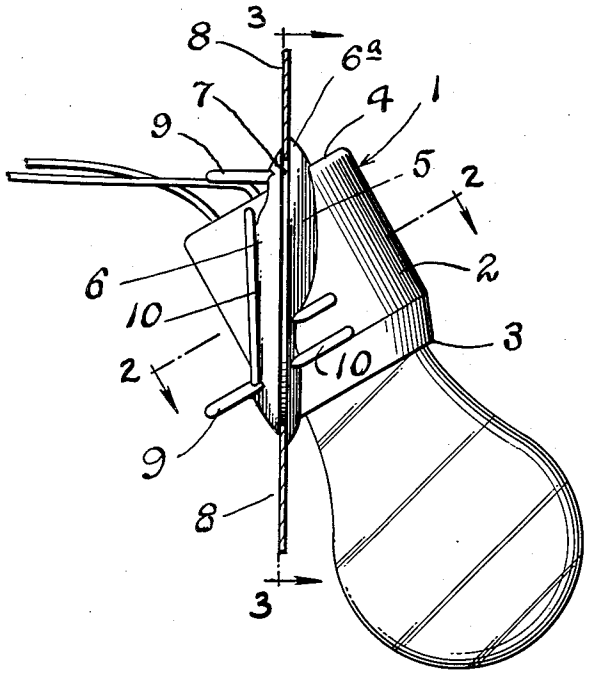


FIG. 1.

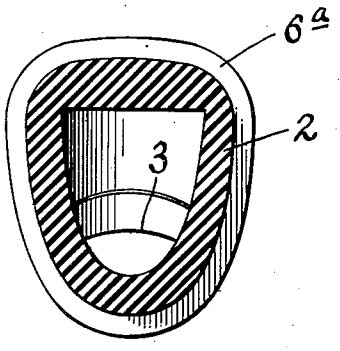


FIG. 3.

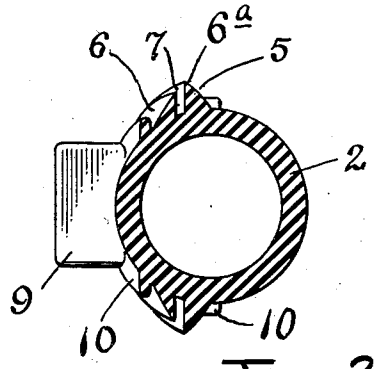


FIG. 2.

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PANEL MOUNTED ELECTRIC LIGHT SOCKET

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1 Claim. (Cl. 173—339)

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This invention relates to a casing for an electric light bulb socket and more particularly to a casing made from a resilient material and designed to be mounted in an aperture through a wall whereby the resiliency of the material provides the gripping means by which the light socket and casing are attached to the wall.

In certain installations, such as refrigerators, it is necessary to provide a casing for an electric light bulb socket capable of protecting the socket and wiring from condensation of moisture and frost characteristic of the operating conditions of such installations. Frequently these sockets are seated in an opening in the wall of the chilled chamber and it becomes important that the seated socket and casing seal the opening. Unless such a seal is provided the confluence of the warmer and cooler airs will provide excessive frost deposit on the fixture. Such frost and moisture conditions not only tend to corrode the interior wiring of the socket but make the installation dangerous by fostering conditions creating short circuits. Thus, it is desirable to design a casing for the socket which is both electrically non-conductive and an effective seal against escape of moisture through the wall and access of moisture to the interior of the socket.

To facilitate installation and reduce the costs of the light socket casing, it is preferable to utilize the resiliency of the rubber or rubber-like material from which the mounting is formed as the means of installation and of sealing the opening in which the casing is mounted. Although this expedient has been used in previously designed devices of this type by providing a pair of resilient lips for gripping the wall about the opening, these devices have not proved satisfactory in use because of the extreme difficulty experienced in installing them. The difficulty has been to insert the mount through the aperture in the wall and then properly to seat the lips one on each side of the wall. Unless some means is provided for maneuvering these lips, it is substantially impossible to insert the casing in the opening. After the casing is inserted it is even more difficult to separate the lips and seat one lip entirely on one side of the wall and to seat the other lip entirely on the other side of the wall. The lips tend to flatten and fold under as the fitting is mounted in the aperture and thereafter they have to be unfolded by use of a knife or screw driver or other thin bladed object to the damage of both the lip and the finish of the wall. This damage is in addition to the time wasted in this maneuvering of the lips into position. In view of these difficulties, it is desirable to provide some type of handle means whereby the lips may be separated for inserting the socket through the opening and maneuvering and separating the lips into seated position.

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Therefore, it is a primary object of my invention to provide a resilient, insulating casing or cover for an electric light socket which may be slightly collapsed for insertion through an opening.

It is a further object of my invention to provide such a casing for an electric light bulb socket in which the resiliency of the material is utilized to attach the casing on the wall through which it is inserted.

It is an additional object of my invention to provide gripping means on my electric light bulb casing whereby the lips for engaging the walls of the opening through which it is mounted may be manipulated to effect proper installation.

It is a further additional object of my invention to provide such a casing which may be economically fabricated as a single unit.

These and other objects and advantages of my invention will be immediately seen by persons acquainted with the design of specialized housings for light bulb sockets upon reading the following specification and the accompanying drawings.

In the drawings:

Figure 1 is a side elevation view of my improved light bulb socket casing mounted in an aperture in a thin wall section.

Figure 2 is a sectional view of my light bulb socket casing taken along the plane 2—2 of Figure 1.

Figure 3 is a sectional view of my improved light bulb socket casing taken along the plane 3—3 of Figure 1.

In executing the objects and purposes of my invention, I have provided a tubular housing or casing for the mechanism of the light bulb socket about which there is an outwardly extending flange having a pair of spaced lips having a channel between for receiving the walls of the aperture in which the casing is mounted. A pair of gripping tabs are provided for manipulating the casing as it is being installed.

Referring to the drawings in greater detail, the numeral 1 refers to a casing having a hollow or tubular body member 2. The body member has an open end 3 and a closed end 4. The body member 2 is of such diameter and length that it will receive and cover an electric light bulb socket of conventional design. Holes are provided through the closed end 4 of the body member 2

for passage of the wires supplying electric current to the socket and light bulb.

Surrounding the body member 2 is an outwardly extending ring 5. The plane of the ring 5 is inclined at a substantial angle to the axis of the body member 2. Thus, the ring contacts one edge of the body member 2 adjacent the open end 3 and extends around the side of the body member 2 and across one corner of the closed end 4. Since the ring 5 crosses a corner of the closed end 4 of the body member 2, its resulting shape is somewhat triangular rather than circular (Fig. 3). At its outward extremity, the ring 5 is provided with a pair of spaced lips 6 and 6*a* defining a groove or channel 7 therebetween. The channel is of such width that it will snugly receive the wall section 8 therebetween. The wall section 8 is provided with an aperture of such size and shape that the casing 1 may be inserted through it and the edges of the wall section surrounding this aperture will seat down into the channel 7. The width of the channel 7 is such that when the lips 6 and 6*a* are seated on each side of the wall section 8, they will clamp against the wall section 8 to provide a tight seal about the aperture through the wall.

On the lip 6, i. e., the lip on the side of the channel 7 remote from the open end 3 of the body member 2, a pair of handles or tabs 9 extend outwardly from the lip 6 at substantially a right angle thereto. The tabs 9 are spaced apart approximately 180° about the ring 5 whereby they are convenient for being gripped between the operator's fingers and pressed toward each other for deflecting the lip 6 when the casing 1 is inserted. The tabs 9 may be of any suitable shape, such as rectangular, and of such size that they may be conveniently gripped. The tabs 9 are mounted to the casing 1 adjacent the base of the ring 5 where the ring 5 joins the body member 2. The purpose of locating the tabs 9 at this point is to facilitate deflection of the lip 6 away from the channel 7 when the tabs 9 are pressed toward each other.

At suitable locations on the body member 2, reinforcement beads 10 are provided. These reinforcement beads 10 provide a limited amount of rigidity to the portions of the body member 2 thus reinforced.

The body member 2 and the ring 5 are both formed of resilient material, such as rubber or a suitable plastic. Although they may be fabricated as separate parts and vulcanized or cemented together, it is preferable that they be molded as a single, integrated unit. The tabs 9 may be made as separate parts and joined to the ring 5 at the time the ring 5 is molded, or they may be formed integral with the ring 5. Although other materials may be used to fabricate my improved electric light bulb socket casing, so long as they have the desired resiliency, resistance to moisture and electrical insulating properties, rubber is a preferable material because of its desirable combination of all of these factors.

To install the casing 1, the casing 1 is passed through the aperture in the wall section 8 from the side having the open end 3 of the body member 2, i. e., by passing the tabs 9 through first. When the lip 6 of the ring 5 contacts the wall section 8, the tabs 9 are pressed toward each other to deflect the lip 6 outwardly for widening the channel 7. At the same time, the height of the lip 6 above the bottom of the channel 7 is decreased, thus facilitating the entrance of the wall section 8 into the channel 7. The tabs 9 are of equal importance in serving as a means for pulling the casing 1 into place in the aperture. Unless some means such as the tabs 9 is provided for pulling casing 1 into seated position in the aperture, there is no means on the casing whereby it may be gripped to exert a pulling force on it. Since the casing and the ring are both of resilient material, it is substantially impossible to push the casing into place. Until my invention of these gripping tabs, it has been difficult and sometimes impossible to install this type of electric light bulb socket casing. Where it is desired, more than two tabs may be provided. However, such a multiplication of the number of tabs 9 would be merely a refinement upon the principle I have already disclosed.

Certain modifications of my invention may be made, such as the suggested multiplication of the number of tabs 9, but each of these modifications is to be considered as included in the following appended claim, unless the language of the claim expressly provides otherwise.

I claim:

In a casing for an electric socket having a tubular body element with which a light bulb is adapted to be connected, the improvement comprising, a continuous ring of resilient material integrally connected to and projecting from said socket therearound, said ring having a continuous groove therein between opposite sides of the ring, dividing the ring at its outer portion into two continuous lips spaced from each other by said groove, one lip extending outwardly farther than the other, and a pair of integral handles connected with said ring adjacent the bottom of said less outwardly extending lip, said handles being located substantially diametrically opposite each other and extending away from the ring in a direction generally substantially perpendicular to the plane of said ring, said handles being adapted to be pressed toward each other for deflecting said less outwardly extending lip from the other lip to widen the groove between said lips at opposed sides of the ring, each of said handles being adapted to be grasped and pulled in a direction substantially perpendicular to the plane of said ring, whereby said other less outwardly projecting lip may be pulled through an opening in a wall section and upon release of the handles, said lips press against said wall section continuously around said opening on both sides thereof.

ARTHUR HAFKE.

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