Dec. 24, 1940. F. H. WESTON 2,226,292

LAMP HOLDER

Filed March 23, 1939

Fig. 1.

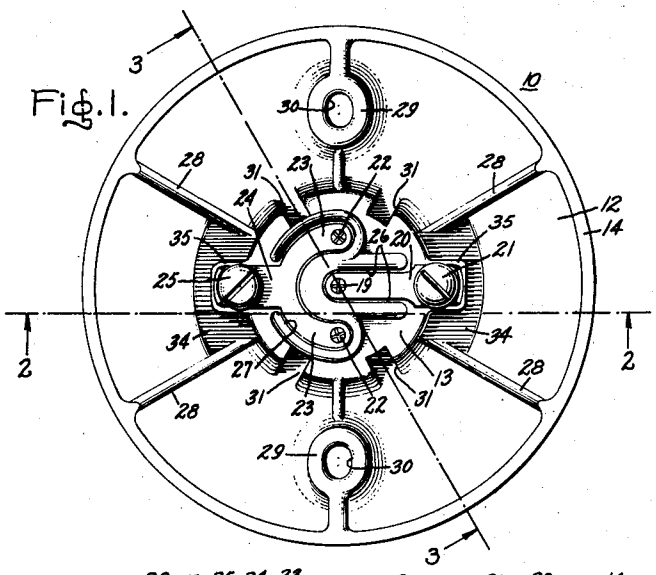


Fig. 2.

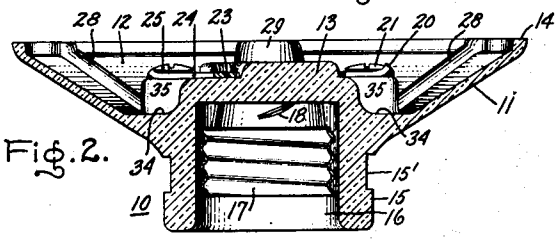


Fig. 3.

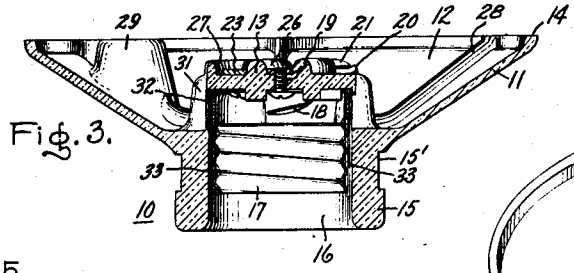


Fig. 5.

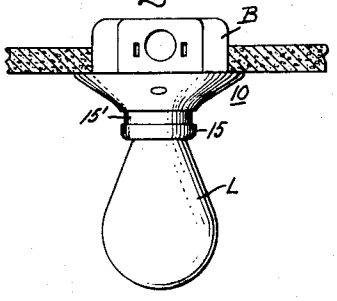
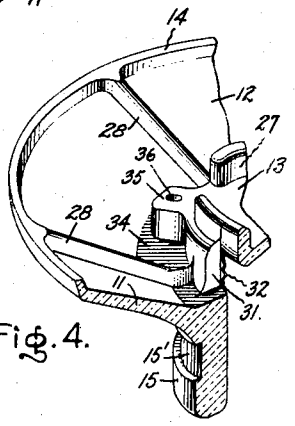


Fig. 4.



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LAMP HOLDER

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4 Claims. (Cl. 240—85)

My invention relates to lamp holders, and more particularly to a lamp holder adapted for ceiling mounting.

An object of my invention is to provide a new and improved lamp holder so constructed as to protect the elements thereof from damage or deterioration when the lamp holder is used in damp or wet locations.

In the accompanying drawing Fig. 1 is a view of the interior of the lamp holder; Fig. 2 is a sectional view along the line 2—2 of Fig. 1; Fig. 3 is a sectional view along the line 3—3 of Fig. 1; Fig. 4 is a perspective view of a portion of the lamp holder, and Fig. 5 is a view showing the lamp holder mounted in operative position.

Referring to the drawing, I have illustrated my invention incorporated in a lamp holder 10 having a body 11 of insulating material, for example, a molded plastic material. The body is of a substantially conical formation with the inner wall 12 sloping toward a central hub or boss 13. The inner end of the hub is located below the upper edge 14 of the body wall and the outer end extends beyond the outer confines of the body wall to form a sleeve 15. While the contour of the body 11 has been shown as circular, it should be manifest that the contour may be of polygonal or other non-circular formation. The hub is provided with a recess 16 for receiving lamp holder contacts comprising a screw shell 17 and a center contact 18. An annular groove 15' formed in the outer wall of the sleeve provides for mounting a shade. The center contact is electrically connected by a screw 19 to one end of a terminal member 20 having a terminal screw 21. The screw shell 17 is connected by screws 22 to the arms 23 of a second terminal member 24 having a terminal screw 25. Both the terminal members 20 and 24 are disposed on the top of the hub 13 and the connecting screws 19 and 22 pass through the top of the hub to a point within the recess 16 where they engage the corresponding lamp holder contacts. In this manner the lamp holder contacts are fastened securely within the recess 16 and the terminal members are exposed on the top of the hub within the body member for easy connection to electrical conductors. The terminal members 20 and 24 rest within recesses 26 and 27, respectively, formed in the top face of the hub; the recesses serve to insulate the terminal members from one another.

The body member 11 is of relatively thin cross-section. In order to reinforce the body member a plurality of ribs 28 extend from the upper edge of the body member in a radial direction inwardly to the hub member. In the form of the invention illustrated, six of the reinforcing ribs are provided, but manifestly the number of ribs may be increased or decreased at will. Two of the diametrically opposite ribs are provided with abutments 29 having openings 30 for receiving screws for mounting the lamp holder in position. By this construction a considerable saving is effected in the amount of material used in the body of the lamp holder.

In one use of the lamp holder for a ceiling light, it is fastened to an outlet box B, as shown by Fig. 5. In this position the lamp holder is suspended from the outlet box to which it is secured by screws (not shown) passing through the openings 30 in the body of the lamp holder and a lamp L may be threaded into the screw shell. When installed in suspended position in locations which are wet or damp, there is a considerable tendency for moisture to condense within the body 11 and run down the inner sloping wall 12. Unless provision is made to drain off this condensate considerable corrosion of the terminal members, as well as the terminal connections, will take place and, if the body becomes filled with water, the terminals will be short circuited.

In order to provide for drainage of the condensate the hub member is formed with a plurality of grooves 31 disposed on each side of the terminal members and which are provided with knockouts 32 communicating with the interior of the recess 16. This means that the knockouts may be shattered by means of a screw driver, or other implement, permitting the condensate to drain continuously through the opening in the groove to the interior of the recess 16 where it will flow down through a space 33 between the wall of the recess and the screw shell 17. Since the condensate will adhere to and flow down the wall of the recess 16, it will not come into contact with the screw shell nor tend to cause corrosion of this element. At the left hand side of Fig. 3, a knockout 32 is shown in position prior to its removal whereas at the right hand side of Fig. 3 the opening formed by removal of the knockout is shown. One of the grooves and knockouts is placed in the hub in communication with the sloping inner wall of the body member between each pair of the reinforcing ribs 28, with the exception of that portion of the hub occupied by the ends of the terminal members and the terminal screws. At these latter points the body wall is built up or thickened to form drain surfaces or plates 34 which will guide the condensate over

the adjacent rib 28 into the adjoining wall surface where it will pass through the knockout opening. The reinforcing ribs 28 divide the inner sloping surface of the body into a plurality of distinct drainage surfaces. However, by the construction described, the condensate from each drainage surface is directed to a knockout opening. On those surfaces between the terminal members, such as in the showing of the upper and lower portions of Fig. 1, the condensate drains directly into the knockout openings while on the surfaces adjacent the terminal members, such as in the showing at the sides of Fig. 1, the condensate flows over the drain plates 34 onto the adjoining sloping surface of the body and thence through the knockout opening.

In addition to providing a drainage surface for the condensate the thickened portions of the base form a reinforcing shoulder for the ends of the terminal members and the terminal screws. The ends of the terminal members extend beyond the confines of the hub toward the drainage surfaces and rest on a projection 35 extending from the wall of the hub 13 and the ends of the terminal screws extend into openings 36 formed in the projections 35. The thickened plate portion 34 strengthens the lamp holder body at a point where considerable pressure is likely to be applied in tightening the terminal screws about a conductor.

In some cases, such as when the lamp holder is installed in a moisture-free location, it is not necessary to break out the knockouts 32. Since the knockouts are left in position the interior of the lamp holder is completely insulated from the lamp holder contacts in the recess 16. This is advantageous over constructions in which permanent openings are utilized in lieu of the knockouts because it is impossible for any of the connecting wires to pass accidentally through such opening into engagement with the lamp holder contacts thereby increasing the chances of short circuits.

While I have illustrated and described my invention in the preferred form as utilizing knockouts in the grooves 31, it should be manifest that it might be desirable to omit the knockouts and provide a passage direct from the grooves to the recess 16. In such a case, the sloping walls of the body and the drainage plate 34 would function in the manner described to guide the condensate through the passage.

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

1. In a lamp holder, a body having inner walls extending toward a central hub portion, said hub portion being provided with a recess therein extending outside said body, contact elements including a screw shell mounted in said recess, terminal members mounted on said hub inside said body and being electrically connected to said contact elements, and knockouts interconnecting the inside of said body and said recess and being capable of removal to form a drain passage for moisture collecting on the walls of said body, said drain passage including a space between the screw shell and the wall of the recess.

2. In a lamp holder, a body of insulating material having an inner wall sloping toward a central hub portion, said body being provided with a plurality of reinforcing ribs extending radially from said hub portion and dividing said inner wall into a plurality of drainage areas separated by said ribs, said hub portion having a recess therein and extending outside said body, contact elements mounted in said recess, terminal members mounted on said hub portion inside said body, portions of said terminal members extending beyond the confines of said hub portion into some of said drainage areas, knockouts in the wall of said hub between said recess and others of said drainage areas, removal of said knockouts forming a drain passage to said recess for moisture collecting on said other drainage areas, the first-mentioned drainage areas occupied by said terminal members being provided with thickened portions adjacent said hub forming a drain plate to conduct moisture over the adjacent reinforcing ribs to the adjoining drainage areas for passage through said knockout openings.

3. In a lamp holder, a body of insulating material having an inner surface sloping toward a central hub portion, said body having a plurality of reinforcing ribs extending radially from said central hub portion and dividing said inner walls into a plurality of drainage areas, said hub portion extending outside said body and being provided with a recess therein, contact elements including a screw shell mounted in said recess, terminal members mounted on said hub portion within said body and being electrically connected to said contact elements, and an opening in the wall of said hub between said recess and each of said drainage areas to form a drain passage for moisture collecting on each of said drainage areas, said drain passage including a space between the screw shell and the wall of the recess.

4. In a lamp holder, a body of insulating material having an inner wall sloping toward a central hub portion, said body being provided with a plurality of reinforcing ribs extending radially from said hub portion and dividing said inner wall into a plurality of drainage areas separated by said ribs, said hub portion having a recess therein extending outside said body, contact elements mounted in said recess, terminal members mounted on said hub portion inside said body, portions of said terminal members extending beyond the confines of said hub portion into some of said drainage areas, openings in the wall of said hub between said recess and others of said drainage areas to form drain passages to said recess for moisture collecting on said other drainage areas, the first-mentioned drainage areas occupied by said terminal members being provided with thickened portions adjacent said hub forming a drain plate to conduct moisture over the adjacent reinforcing ribs to the adjoining drainage areas for passage through said opening.

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