Aug. 8, 1933. F. J. KENNEDY 1,921,162

ELECTRICAL WIRING APPLIANCE

Filed July 24, 1930

FIG.1.

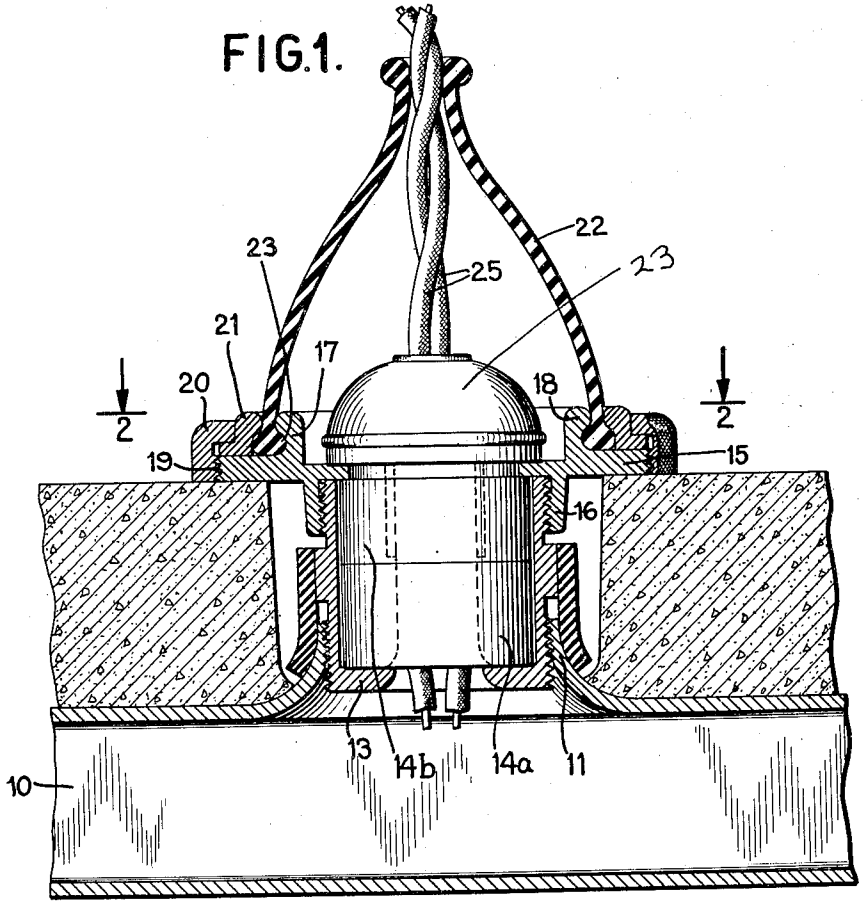
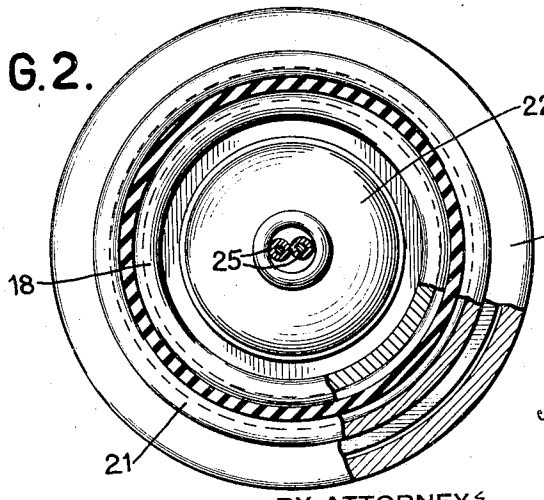


FIG.2.



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ELECTRICAL WIRING APPLIANCE

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9 Claims. (Cl. 247—18)

This invention relates to an electrical wiring appliance which is particularly adapted for use with floor receptacles upon underfloor conduit systems. Heretofore plug receptacles have been provided in such underfloor systems which were intended to receive attachment plugs and with such arrangements difficulty has been experienced in protecting the receptacle and attachment plug against damage and in preventing water from leaking into the plug receptacle and into the interior of the underfloor conduit. Such leakage frequently occurred when the floors were washed. Heretofore to protect the plugs against damage and to prevent the leakage of water, metallic shells, caps or hoods were used and such hoods were provided with intervening gasket material between the hood and receptacle fitting parts. Such metallic hoods, while affording good protection for the attachment plug and receptacle afforded little protection for the wires emerging from the upper portion or nozzle of the hood because when strains were put upon the emerging wires such wires would take a decidedly sharp bend and would almost always invariably ultimately break off at this point. Furthermore the waterproofing of the fittings by the employment of gaskets has not been altogether satisfactory. Furthermore such rigid metallic hoods of the type which have heretofore been employed have been found objectionable to persons who were employed where such fittings were installed inasmuch as such persons frequently stumbled against the relatively rigid hoods, scuffed their shoes against them or skinned their ankles by inadvertently kicking their feet against the rigid metallic hoods or standpipes.

The present invention is directed to a novel protecting hood having a construction which will obviate the above mentioned disadvantages of previous constructions.

One object of the present invention resides in the provision of a protecting hood of yielding material with parts thereof so disposed and related that the hood itself will serve for its own gasket.

Another object of the present invention resides in the provision of a protecting hood for the plugs fitting floor receptacles which hood is of yielding character so that the hood will itself yield toward the direction of pull upon the wires emerging therefrom and thus prevent sharp bending of and ultimate damage to the wires.

A further object of the present invention resides in the provision of a yielding hood fitting of resilient rubber which will bend and yield when inadvertently kicked against and thus obviate injury and aggravations to persons who inadvertently kick and stumble against the hood fittings.

Further and other objects of the present invention will be hereinafter set forth in the accompanying specification and claims and shown in the drawing, which by way of illustration shows what I now consider to be a preferred embodiment of the invention.

In the drawing:

Figure 1 is a detail view of an underfloor conduit provided with a flush receptacle and provided with my improved device; and

Fig. 2 is a detail sectional view taken substantially on lines 2—2 of Fig. 1.

In the drawing, 10 is an underfloor conduit provided with the usual outlet necks 11 which are interiorly threaded, each and all of which directly receive a nipple-like fitting 12 and provided with a lower shoulder 13 which supports the two-part plug receptacle generally designated 14*a* and 14*b*. The upper threads of the nipple fitting receive a floor ring 15 which is preferably interiorly threaded to receive the nipple threads and which is provided with a shoulder portion 16 to overlie the receptacle part 14*b* and secure it in position. The floor ring 15 is also provided with a comparatively short upwardly extending annular portion 17 which is provided with an outwardly extending curved shoulder portion or bead 18 for a purpose hereinafter to be explained. The periphery of the flanged portion of the floor ring is provided with threads 19 to receive a securing flange 20 which in turn clamps down a beaded flange 21. Preferably flange 20 is exteriorly knurled as shown. The protecting hood 22 is according to the present invention, made of yielding resilient material such as soft vulcanized rubber and has a lower periphery or edge which is bulbous in cross section as shown at 23. This bulbous lower end of the hood is preferably of such proportions that it must be stretched slightly in fitting the bead 18 of the annulus 17. After the hood is stretched over the bead the clamping ring 20 is tightened up. This action brings the beaded portion of the beaded flange 21 into engagement with the outer bulbous part of the hood and securely fastens the hood part to the floor flange of the receptacle fitting. The inner engagement of the bulbous part of the hood with the parts at the floor provides a water tight seal and it will be appreciated that the hood itself serves for its own gasket.

The plug receptacle 24 is of the conventional

type and the wires 25 which lead thereinto pass through the neck portion of the flexible hood 22 as shown.

It will be appreciated that the hood 22 serves as a housing and provides a protection for the floor plug 23 and also prevents the ingress of water into the plug receptacle and into the conduit below. By reason of the yielding character of the hood it is also adapted to bend or yield when the wires which emerge therefrom are pulled. This bending action of the hood obviates objectionable sharp bending of the wires. The yielding hood is also adapted to yield when kicked against and in this way the objections which have heretofore been raised against rigid hoods or standpipes are obviated.

It will be understood that a user desiring to make or break the plug connection between the plug 23 and the receptacle 14*b* may do so without removing the hood 22. It is only necessary to pull the cord 25 to withdraw the plug to break the contact and to replace the plug the flexibility of the hood 22 will permit the plug 23 to be pushed down to engaging position with the receptacle. The hood device is also adaptable for other installations such as uses in connection with floor boxes or other outlets provided with plug receptacles and also may be used as a protection for wires emerging from various openings.

I claim:

1. A floor attachment plug assembly comprising parts adapted to receive an attachment plug, a floor ring associated with such parts and secured in the floor and provided with an upstanding annular portion having a beaded flange, and a hood for protecting the plug, said hood being formed of yieldable material so as to be adaptable to be stretched over the beaded flange for releasably securing the hood thereto and providing a watertight seal therewith.

2. The invention set forth in claim 1 in which an exterior ring is provided adapted to be clamped against the exterior of the lower part of the hood to firmly clamp the same in position against the cooperating annular beaded flange.

3. A floor plug and protecting hood assembly comprising a plug with wires extending thereto, a hood formed of thin yielding rubber and completely spaced from the plug and having a portion in encompassing engagement with the wires at a point substantially remote from the juncture of the wires and plug, the lower periphery of the said hood being shaped to engage parts of a floor receptacle, and said hood being substantially spaced from the wires intermediate the point of encompassing engagement of the hood and wires and the point of juncture of the wires and plug, to provide for free bending of the hood.

4. A floor outlet assembly comprising a floor outlet member for underfloor duct or the like, a hood of flexible yielding material having a wire-surrounding upper portion to guide and support wires extending from the outlet and having a lower portion adapted to engage the outlet member, and releasable clamping means associated with the outlet member and hood for securing the hood in watertight relation with the outlet member adjacent the floor.

5. A floor outlet assembly comprising a floor outlet member for underfloor wiring having a wiring-enclosing portion secured in the floor, a wire-supporting hood of flexible yielding material having a lower flexible portion for engaging the periphery of the wiring-enclosing portion of the outlet member, and securing means for maintaining the lower hood portion in watertight sealing engagement with the periphery of said outlet member portion and for providing a sealed closure of all wiring parts adjacent the floor and outlet.

6. A floor attachment plug assembly comprising parts adapted to receive an attachment plug, an annular member associated with such parts adjacent the floor, said parts and member being constructed to provide a sealed wiring housing with a plug-receiving opening, an attachment plug, a hood for protecting the plug and wires extending therefrom, said hood being formed of flexible yieldable material with a lower peripheral portion for engaging the said annular member, and releasable securing means for maintaining the lower hood portion in watertight engagement with the said member, to provide a complete watertight seal of all wiring adjacent the floor surface.

7. A floor attachment plug assembly comprising a wiring plug receptacle and floor mounting for same, said mounting including a member surrounding the receptacle adjacent the floor surface; an attachment plug, a hood of flexible yielding material for the plug, to guide and support wires extending therefrom, said hood having its lower portion adapted to engage the surrounding member of the receptacle mounting; and an annular member in screw-threaded engagement with the first-mentioned member for clamping the said lower hood portion in sealing relation with the first-mentioned member.

8. In an electrical outlet assembly, the combination of an annular member for mounting an outlet fixture in and closely engaging a structural surface, a hood of flexible yielding material for protecting and supporting wiring arrangements extending from the outlet, said hood having a circumferential bead at its lower portion engageable with the annular member, and a clamping device for holding the hood in watertight sealing relation with the annular member, said clamping device including a member adapted to engage the bead of the hood and compress same against the annular member, and cooperating means for maintaining such compression.

9. In an electrical wiring system, in combination, an underfloor conduit; and an outlet device for the conduit having a watertight seal for the wiring adjacent the floor surface, said outlet device including an outlet housing associated with the conduit and extending upward therefrom, a wire-protecting hood of flexible yielding material having its lower portion peripherally beaded to engage an upper portion of said housing and clamping means for compressing the beaded hood portion against said housing to provide sealed engagement of the hood with the housing.

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