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N. LA JONE, SR

2,284,097

CONTINUOUS ELECTRICAL OUTLET

Filed July 20, 1939

Fig. 1.

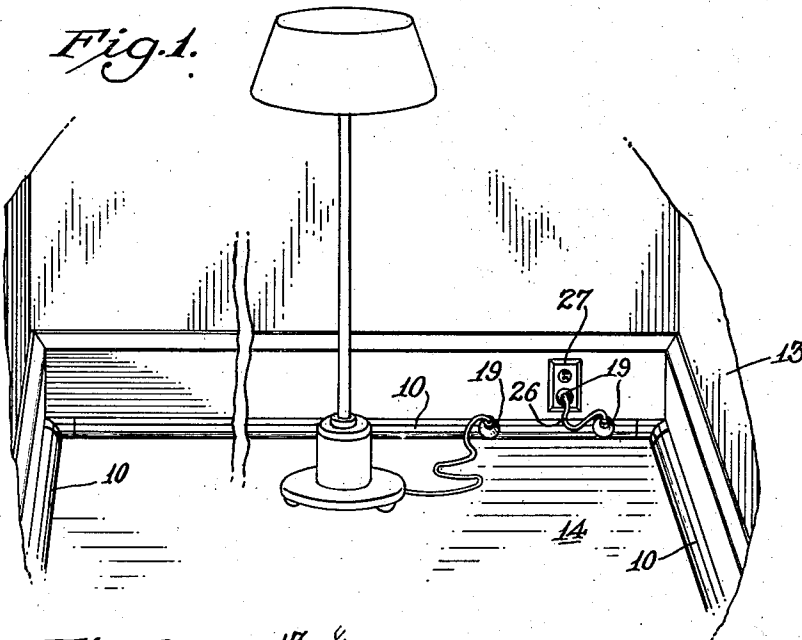


Fig. 2.

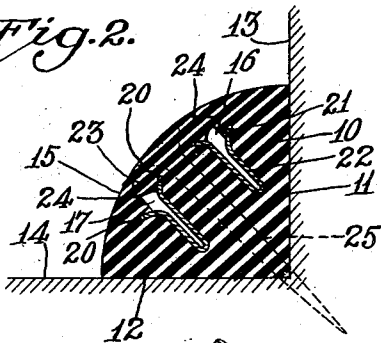


Fig. 3.

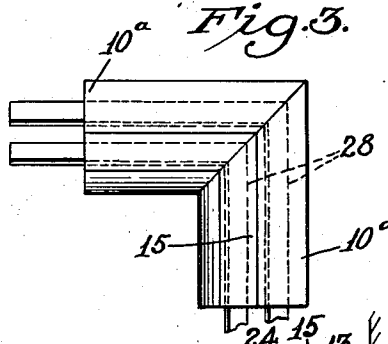


Fig. 5.

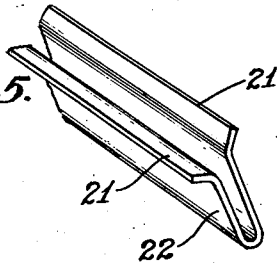
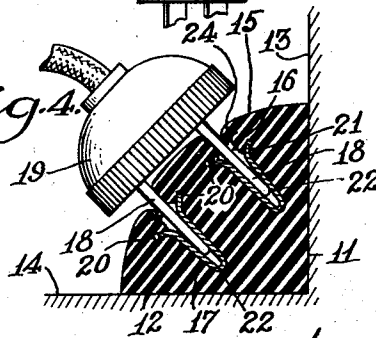


Fig. 4.



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CONTINUOUS ELECTRICAL OUTLET

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1 Claim. (Cl. 173-334.1)

The invention relates to a continuous electrical outlet and particularly to outlets of the type which are formed as strips of indeterminate length arranged to be cut to a desired dimension and fashioned to receive a conventional pronged connector anywhere along its length.

An object of the invention is to provide an improved continuous electrical outlet which is easy to install and when installed affords a current outlet at any point along its length, and which embodies novel means for preventing accidental or unintended access to the live conductors therein.

Another object is to provide new and improved continuous outlet means formed of a flexible dielectric material, such as rubber, and having a pair of continuous, parallel contact strips of U-shaped cross section securely seated in slots which are closed by interfitting retractable body portions adapted normally to seal the slots but readily permit the insertion of the connector prongs.

Another object is to provide novel means for establishing electrical connection between the adjacent ends of two outlet strips at a corner.

Other objects and advantages will become apparent in the following description and from the accompanying drawing, in which:

Figure 1 is a somewhat diagrammatic view of a room having installed therein a continuous electrical outlet embodying the features of the invention.

Fig. 2 is a cross sectional view through the body of the outlet.

Fig. 3 is a plan view of a member for effecting a corner union between two outlet sections.

Fig. 4 is a view similar to Fig. 2 showing a prong connector operatively associated with the outlet.

Fig. 5 is a perspective view of a section of contact strip.

While the invention is susceptible of various modifications and alternative constructions, I have shown in the drawing and will herein describe in detail the preferred embodiment, but it is to be understood that I do not thereby intend to limit the invention to the specific form disclosed, but intend to cover all modifications and alternative constructions falling within the spirit and scope of the invention as expressed in the appended claim.

The form of continuous outlet, which has been selected for illustration of the invention, is shaped and dimensioned to take the place of the quarter-round strip that is conventionally used

at the corner of a wall and the floor. A number of features of the illustrated construction are applicable to forms of continuous outlets other than the quarter-round shape herein shown. In its exemplary form, the outlet comprises a body 10 (Figs. 2 and 4) which is generally triangular in cross section, having angularly related flat sides 11 and 12 for abutment respectively with an upright wall 13 and the floor 14 and a smoothly arcuate third side 15. The body is formed of a flexible, yielding and resilient, dielectric material such as rubber.

Extending inwardly of the body from the arcuate face 15 is a pair of longitudinal parallel slots 16, 17 spaced apart the distance between the prongs 18 of a conventional connector 19 and dimensioned to receive the prongs. Each slot has a pair of longitudinally extending grooves 20 formed in approximately opposed relation in the side walls of the slots. The grooves 20 in each slot are preferably angularly disposed with respect to the plane of the slot and open toward the slot base. Each groove receives an outturned lip 21 (Fig. 5) formed marginally on a contact strip 22 of generally U-shaped cross section. The contact strips may be formed inexpensively of relatively thin gauge flexible and resilient metal, such as copper or copper alloy, which is a good electrical conductor. The gap between the sides of the strip is less than the thickness of a connector prong to insure good circuit connection. Moreover, the resiliency of the rubber body acts to press the strip sides toward each other.

It will be noted that the contact strips are located well within the strip body. Outwardly of the strips each slot is normally closed by an integral body portion in the form of a rib 23 (Fig. 2) preferably arranged to seat in an opposing recess 24 of complementary shape. As shown, the ribs and recesses are V-shaped in cross section and the ribs are formed on opposite sides of the body material between the slots. The ribs and recesses form abutting, interfitting means which effectively close the slots against the unintended insertion of other bodies and seal the slots, as well, against the entrance of dirt, water and the like. Yet the prongs of a connector may be easily inserted between the meeting edges of the slot closing means thereby flexing the body material and allowing the prongs to be seated, each between the sides of a contact strip. The gripping action exerted by the contact strips, and by the resilient body acting indirectly through the contact strips, as well as by direct engagement with the prongs, firmly holds

the connector in operative engagement with the outlet.

In an installation of the outlet, as shown in Fig. 1, the outlet is secured as by screws 25 (Fig. 2) in the corner between the floor and the walls. Prong connectors at each end of a short length of electric wiring 26 may be used to connect the contact strips in the continuous outlet with the terminals in a conventional wall outlet 27. This connection may be more or less permanent and located in an out of the way position.

In installing the continuous outlet in a room, corner unions may conveniently be made in the following manner. The outlet section along each wall of the room is cut to stop short of the corner, as shown in Fig. 1. The strips 22, being of thin gauge metal, cut easily. The gap between adjoining section ends at a corner may be closed by a corner member 10* (Fig. 3) having a molded body shaped to correspond to the form of the outlet body and, if desired, having ornamental lines arranged to extend in continuation of the lines of the slot mouths. The member 10* has molded therein elongated conductor bars 28 which project beyond the opposite ends of the member as prongs for endwise insertion into the exposed

ends of the contact strips on adjoining sections. Such corner members may have the required angularity, although the conventional form will be right angular, as shown, and separate members may be provided for inside and outside corners. The members may be secured in place by screws (not shown) similar to the screws 25.

It will be evident from the foregoing that an improved continuous electrical outlet has been provided having novel means for sealing the access openings to the live conductors and embodying an improved relationship for mounting the contact strips in the dielectric body. The outlet may be easily installed and, due to the simplicity of its construction, may be manufactured for sale at relatively low cost.

I claim as my invention:

An electrical outlet comprising, in combination, a body in the form of an elongated rubber strip having parallel slots opening in one face thereof, electrical conductors in said slots, and complementary interfitting ribs and grooves on opposite sides of the slots adjoining the open faces of the slots arranged yieldingly to close said slots.

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