May 1, 1962 R. D. HOWELLS 3,032,736

WIRING DEVICE

Original Filed June 9, 1955 3 Sheets-Sheet 1

Fig. 1.

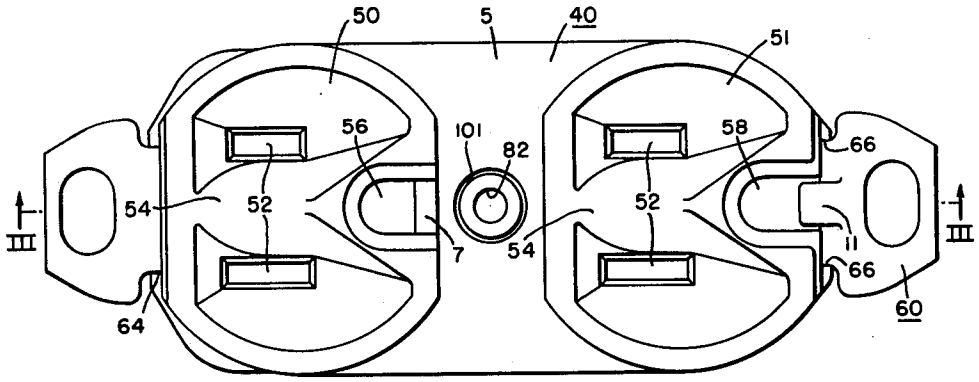
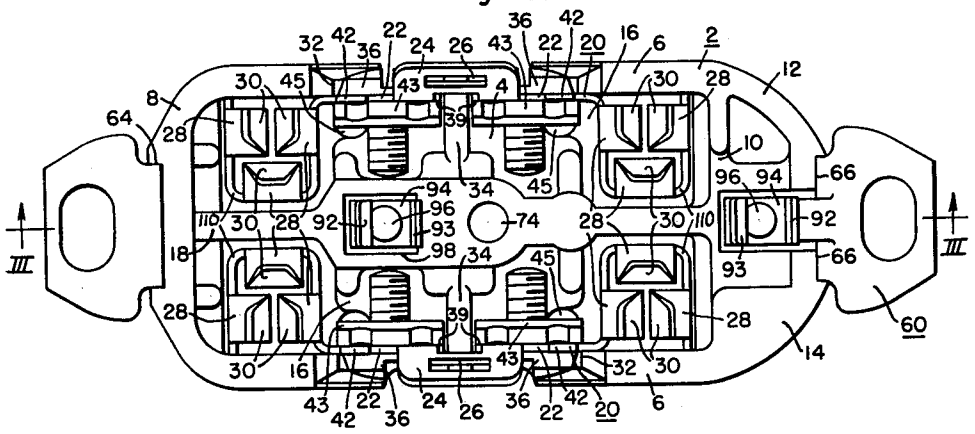


Fig. 2.



INVENTOR

Robert D. Howells.

BY

ATTORNEY

Fig. 3.

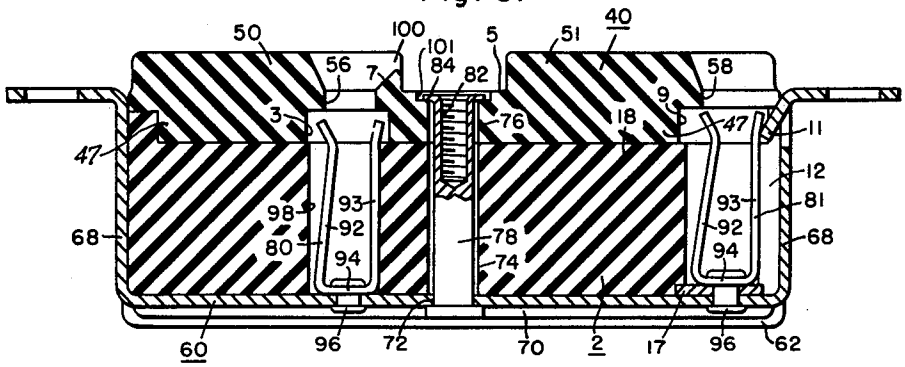


Fig. 4.

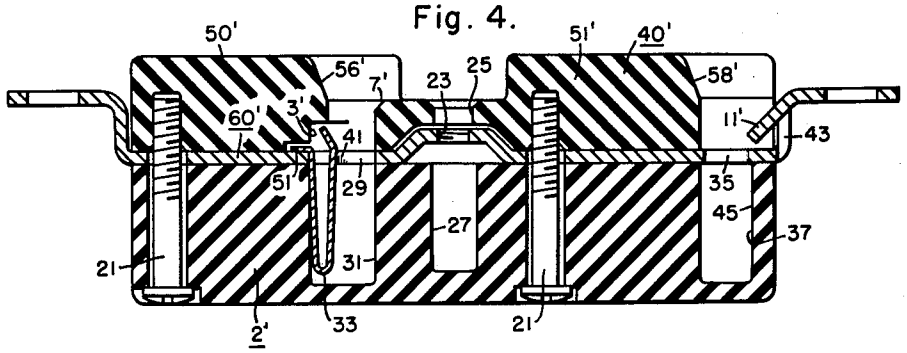
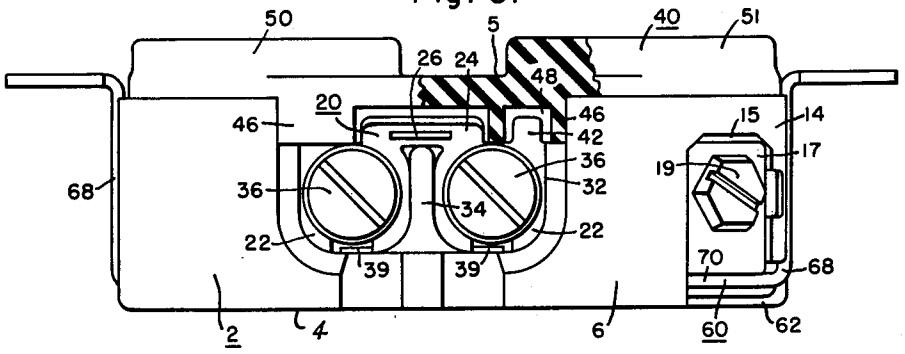


Fig. 5.



May 1, 1962 R. D. HOWELLS 3,032,736

WIRING DEVICE

Original Filed June 9, 1955 3 Sheets-Sheet 3

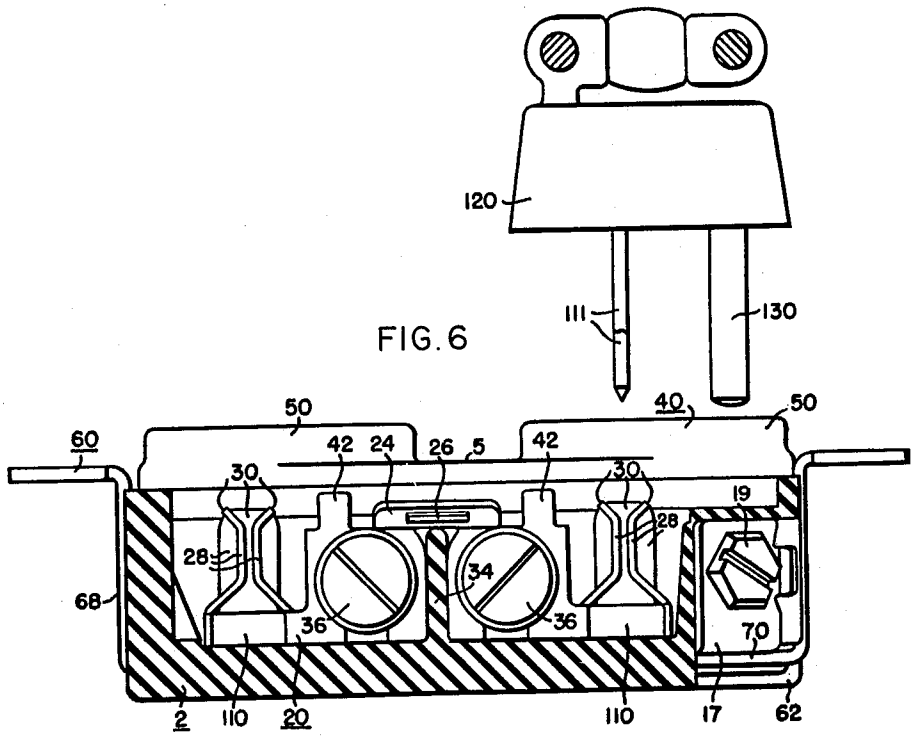


FIG. 6

FIG. 7

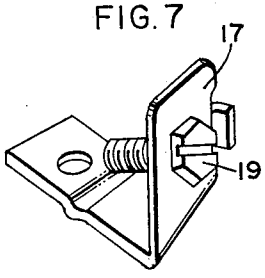
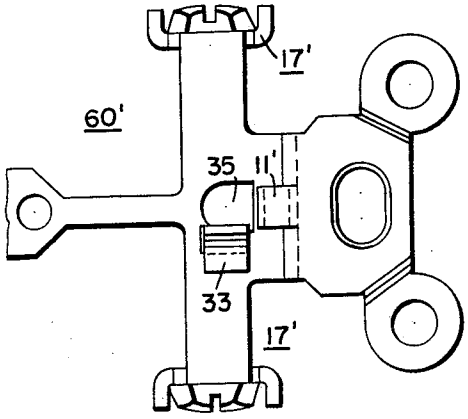


FIG. 8



United States Patent Office 3,032,736 Patented May 1, 1962

3,032,736

WIRING DEVICE

Robert D. Howells, Fairfield, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut

Continuation of application Ser. No. 514,274, June 9, 1955. This application July 16, 1959, Ser. No. 827,563
9 Claims. (Cl. 339—14)

The present invention relates to a new and improved grounding wiring device, and, more particularly, to a 3-wire grounding convenience outlet. This application is a continuation of an application of R. D. Howells, entitled "Wiring Device," Serial No. 514,274, filed June 9, 1955, now abandoned, and assigned to the present assignee.

As is well known, the electrical industry has standardized upon the size and location of various electrical components which are used in order that the components may be used interchangeably without regard to their manufacture. In the case of outlets, their design was originally predicated on the use of a two-wire system, with each outlet having one or more pairs of openings and contacts, each of which is adapted to receive a standard type of plug having a pair of contact prongs. However, when an additional grounding contact is added to these devices, considerable difficulty has been encountered in doing so within the established dimensional limitations, due to breakage encountered during normal use. One example of breakage commonly encountered occurs adjacent a slot or opening when an attachment cap is inserted or withdrawn at an angle other than 90 degrees to the face of the outlet, because the design is such that considerable force can then be exerted against the material of the casing of the outlet by engagement of the grounding prong or blade of the attachment cap. Such force has frequently been of sufficient magnitude as to break a part of the casing. The device may thus be rendered useless.

Accordingly, one object, generally speaking, of my invention is to provide a new and improved grounding wiring device.

A more specific object of my invention is to provide a new and improved grounding convenience outlet having a cover having a novel, formed ground prong receiving opening.

Another more specific object of my invention is to provide a new and improved grounding convenience outlet which has an elongated slot open at one end in the cover to receive the grounding prong of an inserted attachment cap.

Another object of my invention is to provide a new and improved grounding wiring device having an elongated grounding contact located within the device and a yoke member engageable with a free end of the grounding contact to limit movement thereof when a grounding prong is inserted within the device.

Still another object of my invention is to provide a new and improved grounding wiring device having an elongated grounding contact supported by the device which is located below a slot in the cover of the device and a yoke member which is engageable with a free end of the grounding contact to limit movement of the contact when a grounding prong is inserted therein.

These and other objects of my invention will become more apparent upon consideration of the following detailed description of wiring devices constructed in accordance with the principles of my invention when taken in conjunction with the attached drawings, in which:

FIG. 1 is a top plan view of a wiring device constructed in accordance with the principles of my invention;

FIG. 2 is a top plan view of the body of the wiring device, as shown in FIG. 1, with the cover thereof removed so as to show the terminals and yoke located with respect thereto;

FIG. 3 is a longitudinal cross-sectional view of the wiring device shown in FIG. 1 taken along the lines III—III of FIGS. 1 and 2;

FIG. 4 is a longitudinal cross-sectional view of another form of wiring device constructed in accordance with the principles of my invention;

FIG. 5 is a side elevational view of the wiring device, as shown in FIG. 1, having a part thereof broken away;

FIG. 6 is a vertical section of the wiring device as shown in FIGS. 1 to 3, showing the terminals in elevation therein and a side elevational view of a grounding plug;

FIG. 7 is a perspective of a grounding conductor as used in the wiring device as shown in FIGS. 1 to 3;

FIG. 8 is a partial view of a yoke member which forms a part of the wiring device of FIG. 4.

Referring to FIG. 2, it will be noted that a convenience outlet constructed in accordance with the principles of my invention comprises an elongated cup-shaped body **2**, which may be formed from any suitable insulating material, and is preferably formed from a molded phenolic insulating material which may readily be provided with the structure as hereinafter described. Body **2** comprises an approximately rectangular base **4** having upwardly extending formed opposed side wall portions **6** which are joined together at one end of base **4** by an upwardly extending end wall portion **8**. Side walls **6** are also joined together by means of another end wall portion **10** extending upwardly from base **4** which is located longitudinally inwardly of the other end of body **2** and which is longitudinally spaced from end wall **8**. As more fully described hereinafter, end wall **10** of body **2** is also provided with a pair of laterally spaced projections **12** and **14** which extend longitudinally outwardly from the outer surface of end wall **10**. In order to provide support for a cover **40**, hereinafter described, the upper surfaces of projections **12** and **14** are in the same plane as the upper edges of side walls **6** and end wall **8**.

Body **2** is also provided with an integral irregularly formed barrier **18** which extends longitudinally between the end walls **8** and **10** and centrally between the side walls **6** so that the body **2** is divided into two identically formed longitudinally extending chambers **16**. Each chamber **16** is formed to slidably receive an elongated electrical terminal **20** therein which may be fabricated from any suitable electrical conducting material which may readily be formed as hereinafter described, such as copper or an alloy thereof such as brass.

Each terminal **20** comprises a pair of generally square terminal portions **22** which are longitudinally spaced from each other and extend longitudinally outward in opposite directions from the center of the terminal **20**. An upwardly and outwardly angularly extending tab **24** is formed integral with a portion of the adjacent upper edges of each terminal portion **22** and extends across the space therebetween so as to electrically connect terminal portions **22** together. If it is desired to electrically isolate terminal portions **22** from each other, the tab **24** need only be removed, and in order to facilitate such removal the junction line between tab **24** and terminal portions **22** may be scored. To further facilitate such removal, tab **24** is provided with a longitudinally extending slot **26** into which any suitable means such as the blade of a screwdriver may be inserted so that the tab **24** may be bent around its scored junction. In order to provide prong engaging means at each end of the terminal **20**, the lower portion of the opposite sides of terminal portions **22** is provided with an integral U-shaped end **110** which is formed so that its bight portion is approximately parallel

to, but laterally spaced from, the terminal portions 22 and is on the opposite side of the terminal portions 22 from which the tab 24 extends. The open end of each U-shaped end 110 of terminal 20 is approximately in the same longitudinal plane as the terminal portions 22. Each arm and the bight portion of each U-shaped end 110 are provided with an upwardly extending blade 28, each of which is bent inwardly towards the middle of the U-shaped end 110 but being slightly spaced from each other so as to form a T-shaped opening therebetween. If desired, each blade 28 may be provided with an integral angularly upwardly and outwardly extending outer projection 30 for guiding the prongs of an inserted attachment cap within the T-shaped opening. In order to provide external access from the body 2 to the terminal portions 22, each side wall 6 is provided with a longitudinally elongated opening 32 which extends downwardly from the upper edge of side walls 6 to the upper surface of base 4 of body 2.

By such construction, a terminal 20 may be easily inserted in each chamber 16 of body 2 by placing the longitudinally spaced U-shaped ends 110 in opposite ends of a chamber 16 so that the terminal portions 22 are located in a plane adjacent the inner surface of sidewalls 6 and so that they extend longitudinally across opening 32. Each side of barrier 18, is provided with a laterally outwardly extending intermediate wall 34 which also extends upwardly from base 4. Each intermediate wall 34 extends between the adjacent sides of terminal portions 22 of the terminal 20 adjacent thereto and has its upper edge located adjacent the lower edge of tab 24. Each terminal portion 22 is provided with an elongated open-ended upwardly extending slot of a size to receive the shank of a terminal screw 36 in order that electrical connections may readily be made thereto. In order to prevent adjacent portions of the terminal portions 22 from being forced inwardly of body 2 when electrical connections are made thereto, base 4 is provided with an upwardly extending ledge 39 which extends longitudinally outwardly from each intermediate wall 34 at each side thereof so that their outer longitudinally extending edges engage the inner surface of the portion of each of the terminal portions 22 adjacent the intermediate walls 34. The upper edge of each terminal portion 22 is provided with an upwardly extending projection 42 which is longitudinally spaced away from the tab 24 and which is engageable with a portion of the cover 40, as hereinafter described to additionally support the terminal portions 22. It will also be noted that the shank of each of the terminal screws 36 is provided with a floating rectangular clamping nut 43 so that electrical connections may readily be made to either side of the terminal portions 22 of terminal 20 in the well-known manner. In order to permit internal wiring of the outlet, base 4 is provided with an opening 45 inwardly adjacent each terminal portion 22 at the side of the shank of terminal screw 36.

Referring to FIG. 5, body 2 is enclosed by means of an elongated cover 40 which may be fabricated from any suitable insulating material, such as a molded phenolic material which may be readily provided with the necessary structure as hereinafter described. Cover 40 is formed so as to be cooperable with body 2 so that an overall unitary housing is obtained. Each side of cover 40 is provided with a pair of downwardly extending projections 46 with the projections at each side being longitudinally spaced so as to extend into opposed sides of opening 32 so that when cover 40 is placed on body 2 projections 46 are located between and in engagement with the opposite edges of opening 32 and cover 40 is definitely located longitudinally with respect to body 2. Although not shown, the undersurface of cover 40 is provided with a plurality of downwardly extending projections which are located so as to be adjacent the inner surfaces of sidewalls 6 and end walls 8 and 10 at their junction point so that the cover 40 is both longitudinally and laterally located with respect to body 2. Also, each projection 46 is provided with a centrally upwardly extending recess 48 for closely receiving the upper end of the adjacent projection 42 so that the terminals 20 are additionally secured against deflection inwardly of body 2 when wiring connections are made thereto. As shown in FIG. 3, the undersurface of cover 40 is centrally provided with an extending longitudinally centrally located inner rib 47 which engages the upper surface of barrier 18.

Cover 40 is also provided with a pair of longitudinally spaced approximately circular projections 50 and 51 which extend upwardly from an upper surface 5 on cover 40 in each of which extend upwardly from an upper surface 5 on cover 40 in each of which are located a pair of laterally spaced longitudinally elongated slots 52. Slots 52 are provided (FIG. 1) in order that the prongs of an attachment cap, not shown, may be inserted in the longitudinally extending opening between contacts 28 to engage the contacts 28 at one end of each of the terminals 20. If desired, laterally spaced laterally extending slots (not shown) may be provided in cover 40 so that prongs 111 of one type of attachment cap 120, shown in FIG. 6, may be inserted in the laterally extending opening between contacts 28 to engage contacts 28. In order to facilitate the insertion of such prongs 111, the outer surfaces of projection 50 are slightly dished inwardly and an integral divider 54 is provided on each projection 50 which extends longitudinally between the slots 52. As is well known, an attachment cap 120 which is used to engage the contacts 28 at one end of each terminal 20 comprises a pair of spaced contact engaging prongs 111, which are parallel with each other, and a grounding prong 130 which is located centrally between the contact engaging prongs and offset to one side of the plane passing through the center of the contact engaging prongs 111. Such prong spacing and their size have been standardized by the electrical industry as well as the size of the outlet box for receiving a convenience outlet. In order to comply with such standards, it will be noted that a grounding prong receiving opening 56 is provided in projection 50, which is located longitudinally inwardly of the slots 52 in the projection 50 and a similar purpose opening 58 for the projection 51 is located longitudinally outwardly of the slots 52 of the projection 51 in order that projections 50 and 51 will be substantially identically formed. As shown, opening 56 has a straight side extending laterally between the sides of cover 40, the ends of which are joined together by means of a curved segment so that a reversed D-shaped opening is formed.

Referring to FIGS. 1, 2 and 3, it will be noted that the assembly comprising the cover 40 and base 2 with the terminals 20 therein is adapted to be supported in a standard outlet box by a generally U-shaped yoke 60 which may be made of any suitable material having sufficient structural strength, such as sheet steel, and which may be formed as herein described. In order to locate yoke 60 with respect to body 2, the outer portion of base 4 of body 2 is provided with a central longitudinally extending slot 62, which has a lateral width to receive the bight portion 70 of yoke 60 therein. One end of slot 62 is in alignment with an upwardly extending slot 64 in the outer surface of the end wall 8. Similarly, the outer ends of projections 12 and 14 are each provided with an open-ended laterally extending recess 66, the ends of which are laterally spaced apart the same distance as the lateral width of slot 62 and are in alignment with the other end of slot 62. By this construction, body 2 may easily be placed upon the yoke 60 by merely permitting spaced arms 68 of yoke 60 to enter the spaced recesses 66 and slot 64 and thereafter lowering the body 2 between the arms 68 until the bight portion 70 of yoke 60 enters slot 62. It will be noted that the entire assembly is adapted to be secured together by any suitable means extending therethrough which, as shown, may comprise a bolt 78 extending through aligned openings 72, 74, 76 in yoke 60, barrier 18 of housing 2 and a portion of cover 40 between

the projections 50 and 51, respectively. The upper end of bolt 78 is provided with a centrally located downwardly extending threaded opening 82 in order that a standard face plate may be secured to the convenience outlet in the well-known manner. By providing opening 82, thin side walls 84 are formed at the upper end of bolt 78 which may be forced outwardly in any suitable manner such as by being spun over the upper surface of cover 40 to clamp the cover 40, body 2 and yoke 60 between the turned side walls 84 of bolt 78 located in engagement with the outer surface of yoke 60. In order to obtain a flush surface, it will be noted that the turned side walls 84 are located in a counterbore 101 at the upper end of opening 76 in cover 40. It will also be noted that each arm 68 of yoke 60 is provided at its upper edge with a longitudinally outwardly extending tab having suitable openings therein which are spaced a distance to comply with the electrical standards so that the convenience outlet may be secured to the standard outlet box in the well-known manner.

In order that grounding connections may be made at the projections 50 and 51, a pair of identically formed U-shaped spaced contacts 80 and 81 are secured to yoke 60 so as to be in alignment with the spaced openings 56 and 58, respectively, in cover 40. As shown in FIG. 3, contacts 80 and 81 each are provided with a pair of elongated longitudinally spaced upwardly extending contact arms 92 and 93. As shown, contact arm 92 extends angularly toward the other contact arm 93 in order to obtain a better spring action between the arms 92 and 93 of each contact. Accordingly, contacts 80 and 81 are fabricated from any suitable electrical conducting material having sufficient resiliency so as to function as described, such as a copper alloy. Arms 92 and 93 of each contact are joined together at their lower ends by means of an integral bight portion 94 which may be secured to yoke 60 by any suitable means, such as by a rivet 96 extending through aligned openings in bight portion 94 of contacts 80 and 81 and bight portion 70 of yoke 60. In order to prevent any accidental electrical contact between either of the adjacent terminal screws 36 with the contact 80, the portion of barrier 18 under opening 56 has been laterally enlarged between the terminals 20, which enlarged portion extends upwardly to a plane beyond the upper edge of the terminal portions 22 and laterally spaced from each side thereof. In order to permit the contact 80 to extend through body 2, an opening 98 is provided in the enlarged portion of the barrier 18 which is of a size so as to closely receive the contact 80 therein. As shown, the arms 92 and 93 of contact 80 are spaced in opening 98, and opening 98 is so formed that its side adjacent the center of body 2 engages the upwardly extending arm 93 of contact 80 so that arm 93 of contact 80 is restrained from moving away from arm 92 when a grounding prong is inserted through opening 56. Also, if desired, the upper end of arms 92 and 93 of contact 80 upwardly beyond the opening 98 may be bent angularly outwardly from each other to provide a flanged portion which is engageable with the free end of an inserted grounding prong 130 so as to guide the free end of the grounding prong 130 properly between the arms 92 and 93. Accordingly, to provide clearance for the upper ends of arms 92 and 93 in alignment with opening 56, the undersurface of cover 40 in alignment with opening 56 is provided with an upwardly extending recess 3.

The method of making a grounded electrical connection by means of the grounding prong 130 of an attachment cap 120 being inserted through the opening 56 is believed to be obvious. Such grounding prong 130 is initially inserted through the opening 56 and forced downwardly so as to engage the flanges at the upper ends of arms 92 and 93 of contact 80. Inasmuch as the diameter of the grounding prong 130 is known, the opposed surfaces of arms 92 and 93, at their closest point, are spaced apart a distance somewhat less than the diameter of the inserted grounding prong 130 so that upon such insertion the grounding prong 130 forces the arm 92 of contact 80 outwardly from the arm 93 thereof. During such bending of arm 92, the arm 93 is restrained by the inner surface of opening 98 adjacent the center of housing 2 engaging arm 93. Withdrawal of the grounding prong 130 will obviously break the ground connection and permit the arm 92 to spring toward arm 93 and extend angularly toward the arm 93 of contact 80. Also, the spaced contact engaging prongs 111 of the attachment cap 130 will engage the blades 28 of terminals 20 in somewhat the same manner to make and break the electrical circuit between the outlet and the attachment cap 130 in a manner which is well known in the art. In general, the grounding prong 130 extends outwardly from the attachment cap a distance somewhat greater than that which the contact engaging prongs 111 extend. As contact 80 and blades 28 of terminals 20 all have their upper ends in approximately the same plane, the grounding connection will be made first and broken last upon the insertion and removal of the grounding prong, respectively.

As can be appreciated, the insertion and withdrawal of the attachment cap 120 is often done in various ways which, as indicated, has caused damage to the cover 40. Accordingly, it will be noted that the projection 50 is provided with an open-ended slot 100 which extends longitudinally inwardly from the side of the projection 50 adjacent the projection 51 above the straight side of the D-shaped opening 56. The lower side of the slot 100 is located outwardly of the outer surface 5 of cover 40 so as to form an outwardly extending projection 7 between the surface 5 and opening 56. In order to facilitate inserting a grounding prong 130, the portion of projection 7 adjacent opening 56 is provided with a surface which extends angularly from the upper edge of projection 7 towards opening 56. Also, if desired, the upper portion of the opening 56 and slot 100 may be provided with an angularly outwardly extending slope so as to guide an inserted grounding prong 130 during insertion. Thus, it will be noted that a grounding prong 130 may be inserted or withdrawn at any angle with relation to opening 56 without causing any damage to the cover 40, as such prong will engage either the curved portion of the D-shaped opening 56, the sloping sides of the D-shaped opening 56, or the projection 7, all of which parts are of a size and have sufficient structural strength to prevent fracturing thereof by a stress which would normally be placed thereon due to such insertion or withdrawal of the grounding prong 130. In particular, it will be noted that if a grounding prong 130 engages the projection 7 during the period it is being withdrawn, it may rock over the upper sloping surface of projection 7 to facilitate its withdrawal.

As indicated, projections 12 and 14 are laterally spaced from each other so as to form a U-shaped opening at their end of body 2 in conjunction with the outer surface of end wall 10 in which the other contact 81, which is in alignment with opening 58, is located. As also described, one arm 68 of yoke 60 extends over the outer surface of each projection 12 and 14 and therebetween so as to close the open side of the U-shaped opening and provide a rectangular opening for the contact 81 similar to the opening 98 in which the contact 80 is located. Similarly, the undersurface of cover 40 adjacent the opening 58 is provided with a longitudinally extending open-ended slot 9 to provide clearance for the angularly outwardly extending free ends of contact 81. Opening 58 differs substantially from an opening 56 and comprises a longitudinally extending elongated slot which is open at the adjacent outer end of cover 40 adjacent the arm 68 of yoke 60 and extends above the projections 12 and 14. The upper portion of opening 58 is provided with an angularly outwardly extending surface for the same purpose as the similar surface on opening 56. Further, it will be noted that the portion of the arm 68 of yoke

60 extending between the projections 12 and 14 is provided with an integral inwardly and downwardly extending lance 11, the free end of which is in engagement with the arm 93 of the contact 81 so as to support the arm 93 from being deflected by the insertion of the grounding prong. Lance 11 also supports the grounding prong during withdrawal in the same manner as projection 7. The insertion of the grounding prong 130 between the arms 92 and 93 of contact 81 may readily be accomplished by aligning the grounding prong with the opening between the arms 92 and 93 of contact 81.

Referring to FIGS. 3 and 5, it will be noted that projection 14 of body 2 is provided with an inwardly extending recess 15, of which only the outer end is shown and over which one end of the arm of an L-shaped conductor 17 extends so as to be substantially flush with the outer surface of base 4, and is provided with a slot, not shown, which extends from recess 15 to slot 62, so that the other leg of conductor 17 may extend therethrough and be connected to yoke 60 by any suitable means. As shown, an opening is provided in the other arm of conductor 17 in alignment with the opening in the yoke through which rivet 96 extends, so that such rivet 96 may be utilized to secure the other arm of the conductor 17 as well as contact 81 to the yoke 60. A terminal screw 19 is threadedly secured to the arm of conductor 17 located over the recess 15 so that its shank portion, not shown, extends inwardly of the recess 15, and so that a ground connection may readily be made to conductor 17, and consequently yoke 60, by placing the conductor between the head of the terminal screw 19 and the arm of conductor 17.

FIG. 4 illustrates another embodiment of my invention which is similar to the convenience outlet previously described, and accordingly, similar components have been identified with the same reference numerals used previously primed. As shown, an elongated cup-shaped body 2' is provided which is adapted to have its open side closed by an elongated cover 40'. The construction of this modification of my invention differs primarily from that previously described in that an elongated yoke 60' is located between the cover 40' and body 2'. Accordingly, the structure of body 2 which is cooperable with yoke 60 as previously described has been eliminated. The outer ends of yoke 60' and the general construction of cover 40' and body 2' are however, similar to the cover 40 and body 2 previously described. Body 2', cover 40' and yoke 60' are adapted to be secured together by suitable means such as a pair of longitudinally spaced elongated bolts 21 which extend upwardly from the base of body 2' through aligned openings in the body 2', yoke 60' and cover 40' and which threadedly engage the openings in cover 40'. Inasmuch as body 2', cover 40' and yoke 60' are secured together by bolts 21, the central portion of yoke 60' is provided with a threaded opening 23 in alignment with a centrally located opening 25 in cover 40' so that a face plate may be secured to the outlet by means of a screw extending through opening 25 and threadedly engaging the opening 23 in yoke 60'. Body 2' is also provided with a recess 27 which extends laterally in body 2' in alignment with opening 25 in cover 40' and opening 23 in yoke 60' so as to provide clearance for such a face plate securing screw.

Cover 40' is provided with projections 50' and 51' having openings 56' and 58' which are substantially identical to projections 50 and 51, and openings 56 and 58 previously described. Due to the different yoke 60' a different type of ground contact is required and certain modifications of the body 2' and cover 40' have been made as a consequence of utilizing a different type of grounding contact. As shown, yoke 60' is provided with a longitudinally elongated opening 29 having a portion in alignment with opening 56' which is also in alignment with a laterally elongated recess 31 in body 2'. An upwardly open U-shaped grounding contact 33 is secured to yoke 60' within opening 29 in any suitable manner so that one arm of the contact 33 is located adjacent one side of recess 31 and its other arm is spaced outwardly from such one side of recess 31 so as to be in alignment substantially with the adjacent side of the opening 56'. Contact 33 may be so supported within opening 29 of yoke 60' by providing the opening 29 with a pair of laterally inwardly extending projections 41, only one of which is shown, at approximately the center of opening 29. Contact 33 may then be secured to the yoke 60' by merely being inserted through a portion of the opening 29 at one side of projection 41 so that the arms of contact 33 are biased toward each other and so that good electrical contact is established between the arms of contact 33 and the yoke 60'. With such construction the inner arm of contact 33 is located so as to be substantially in alignment with one edge of the opening 56' so that it may be engaged by an inserted grounding prong of an attachment cap and deflected by such prong toward its other arm. Inasmuch as the inner arm of contact 33 may be deflected within body 2' and cover 40' it will be noted that cover 40' has been provided with a recess 3' similar to the recess 3 previously described. It is unnecessary however, to provide a recess 3 which extends on each side of the recess 31 and accordingly, it will be noted that the inner edge of the projection 7' is in alignment with the side of the recess 31 opposite from that which is engaged by contact 33. The function of the grounding contact and the projection 7 with this construction is similar to that previously described and accordingly, need not be repeated. If desired, the outer arm of contact 33 may be provided with an outwardly extending arm 51 which extends over the upper surface of yoke 60' and which may be welded to yoke 60 to insure that contact 33 is properly secured to yoke 60'.

Yoke 60' is also provided with a laterally elongated opening 35 having at least a part in alignment with opening 58' for the purpose of receiving another grounding contact 33, as viewed in FIG. 8, at one end of opening 35, in a manner similar to that in which a contact 33 is supported in the opening 29. Body 2' is provided with a laterally elongated recess 37 in alignment with opening 35 in yoke 60' to receive the lower portion of such other grounding contact 33. It, of course, will be realized that the cover 40' must be provided with sufficient clearance so that the other contact 33 supported in opening 35 may function as described previously It is to be realized that yoke 60' can be provided with one or more L-shaped conductor portions 17', similar to conductor 17 previously described, one arm of any one of which extends laterally outward from yoke 60', as viewed in FIG. 8, and the other arm of which extends downwardly and is located in a suitable recess in body 21 so as to be accessible externally of body 2.

It will be noted that the other end of yoke 60' adjacent opening 58' has a portion 43 which extends upwardly adjacent the lower portion of the open side of opening 58'. Portion 43 of yoke 60' is provided with an inwardly extending lance 11' which is generally similar to the lance 11 previously described. Lance 11' extends angularly downward toward the recess 37 in body 2' and is located so as to have its free end approximately in alignment with the outer wall 45 of recess 37. By this construction, lance 11' directly engages the grounding prong 130 of an attachment cap 120 when it is inserted or withdrawn to support the grounding prong 130 during such operations similar to the manner in which projection 7, previously discussed, functions. Upon such insertion of the grounding prong through opening 56' such other contact 33 supported in opening 35 will be engaged in the same manner as contact 33 supported in opening 29 is engaged as previously discussed.

Having described preferred embodiments of my invention, it is desired that the invention be not limited to the particular form specifically illustrated and described herein as it will readily be apparent to persons skilled

in the art that various changes and modifications may be made in the particular structure shown without departing from the broad spirit and scope of the invention. Accordingly, it is desired that the foregoing be interpreted as illustrative and not in a limiting sense.

I claim as my invention:

1. A wiring device comprising an insulating body having a pair of spaced walls so as to define at least one opening therebetween, said body including an insulating cover located so as to extend over said opening, said cover having front and side surfaces and having a slot therein extending therethrough and being open through one of said side surfaces, an elongated resilient electrical contact located in alignment with said slot so as to be engageable by contact means inserted through said slot, one end of said contact being freely located adjacent the undersurface of said cover, a yoke member secured to said body having a portion thereof adjacent said one end of said contact, means on said portion of said yoke extending into said slot toward said contact to limit movement of said one end of said contact theretoward, and means for securing said body and said contact in its aforedescribed relationship.

2. A grounding electric outlet for receiving a plug having at least one contact prong and a grounding prong, said outlet comprising a casing of insulating material including a hollow opensided base and a cover secured thereon, at least one electric contact and a grounding contact mounted in said base, openings in said cover aligned respectively with said contacts to permit access of said plug prongs to said contacts, one of said openings being aligned with said grounding contact and having one portion of its outer end extended laterally outward through a side of said cover, and a yoke being secured to said casing and having a portion thereof located in said portion of said one opening to limit the deflection of said grounding contact theretoward.

3. A wiring device comprising an elongated insulating base including a pair of longitudinally spaced walls so as to define an opening therebetween, an insulating cover being apertured for receiving power blades of a plug and being located so as to extend over said base opening between said spaced walls of said base and to form a housing therewith, said cover having a portion thereof extending outwardly beyond one of said base walls, a slot in said portion of said cover extending therethrough, said one base wall having a pair of laterally spaced projections extending longitudinally outwardly therefrom so as to be located adjacent the undersurface of said portion of said cover, said slot in said cover being in alignment with a channel between said projections, a yoke member having a strap portion thereof extending along the side of said base opposite said cover and across said channel which is between said base projections, another portion of said yoke extending laterally of said strap portion and laterally of said base adjacent the longitudinal limit of said base projections, an elongated resilient grounding contact located in said channel between said projections and having one end portion thereof secured to said strap portion of said yoke, said contact being in alignment with said cover slot so that at least said opposite end portion thereof is engageable by grounding prong means inserted through said slot, means on said other portion of said yoke for limiting lateral movement of said opposite end portion of said contact theretoward, and means for securing the parts of said housing and said yoke together.

4. A wiring device comprising an elongated insulating base including a pair of longitudinally spaced walls so as to define an opening therebetween, an insulating cover being apertured for receiving power blades of a plug and being located so as to extend over said base opening between said spaced walls of said base and to form a housing therewith, said cover having a portion thereof extending outwardly beyond one of said base walls, a slot in said portion of said cover extending therethrough, said one base wall having a pair of laterally spaced projections extending longitudinally outwardly therefrom so as to be located adjacent the undersurface of said portion of said cover, said slot in said cover being in alignment with a channel between said projections, a yoke member having a strap portion thereof extending along the side of said base opposite said cover and across said channel which is between said base projections, an elongated resilient grounding contact located in said channel between said projections and having one end portion thereof secured to said strap portion of said yoke, said contact being in alignment with said cover slot so that at least the opposite end portion thereof is engageable by grounding prong means inserted through said slot, another portion of said yoke extending laterally of said strap portion and laterally of said base adjacent the longitudinal limit of said base projections so as to retain said grounding contact within said channel against outward deflection in the base longitudinal direction, and means for securing the parts of said housing and said yoke together.

5. A grounding electric outlet for receiving a plug having at least one contact prong and a grounding prong, said outlet comprising a casing of insulating material, at least one electric contact and a grounding contact mounted in said casing, a face side of said casing having openings extending therethrough in alignment with said contacts, respectively, to permit access of said plug prongs to said contacts, one of said openings being aligned with said grounding contact and extending outwardly to face through another casing side which is generally transverse to said face side, and a yoke being secured to said casing and having a portion thereof extending across the outer extent of said one opening so as to define said one opening as an aperture of predetermined size for receipt of said grounding prong.

6. A grounding electric outlet for receiving a plug having at least one contact prong and a grounding prong, said outlet comprising a casing of insulating material, at least one electric contact and a grounding contact suitably located in said casing, a face side of said casing having openings extending therethrough in alignment with said contacts, respectively, to permit access of said plug prongs to said contacts, one of said openings being aligned with said grounding contact and extending outwardly to face through another casing side which is generally transverse to said face side, and a yoke being secured to said casing and having a portion thereof extending across an outer portion of said one opening, and means extending inwardly from said one yoke portion so as to define said one opening as an aperture of predetermined size for receipt of said grounding prong.

7. A grounding electric outlet for receiving a plug having at least one contact prong and a grounding prong, said outlet comprising a casing of insulating material, at least one electric contact and a grounding contact mounted in said casing, a face side of said casing having openings extending therethrough in alignment with said contacts, respectively, to permit access of said plug prongs to said contacts, one of said openings being aligned with said grounding contact and extending outwardly face through another casing side which is generally transverse to said face side, and a yoke being secured to said casing and having a portion thereof extending across an outer portion of said one opening so as to define said one opening as an aperture of predetermined size for receipt of said grounding prong.

8. A wiring device comprising an elongated insulating housing having a pair of longitudinally spaced laterally extending walls, said housing having its front side formed by a facing wall extending longitudinally between said laterally extending walls, said facing wall having a portion thereof extending longitudinally outwardly of one of said laterally extending walls, a slot extending through said facing wall portion, said one laterally extending wall having a pair of laterally spaced projections extending

longitudinally outwardly therefrom so as to be located inwardly of said facing wall portion, said facing wall portion slot being in alignment with a channel between said spaced projections, a yoke member having a strap portion thereof extending along the side of said housing opposite said front housing side and across said channel, an elongated resilient grounding contact located in said channel and having one end portion thereof secured to said yoke strap portion, said contact being in alignment with said facing wall portion slot so that at least the opposite end portion thereof is engageable by grounding prong means inserted through said facing wall portion slot, another portion of said yoke extending laterally of said yoke strap portion and laterally of said housing adjacent the longitudinal limit of said spaced projections so as to retain said contact within said channel against outward deflection in the housing longitudinal direction, and means for securing said yoke to said housing.

9. A wiring device comprising an elongated insulating housing having a pair of longitudinally spaced laterally extending walls, said housing having its front side formed by a facing wall extending longitudinally between said laterally extending walls, said facing wall having a portion thereof extending longitudinally outwardly of one of said laterally extending walls, a slot extending through said facing wall portion, said one laterally extending wall having at least one projection extending longitudinally outwardly therefrom so as to be located inwardly of said facing wall portion, a yoke member having a strap portion thereof extending along the side of said housing opposite said front housing side, another portion of said yoke extending laterally of said yoke strap portion and laterally of said housing adjacent the longitudinal limit of said one projection, said facing wall portion slot being in alignment with a channel at least partially defined laterally by said one projection and said other yoke portion, an elongated resilient grounding contact located in said channel and having one end portion thereof secured to said yoke strap portion, said contact being in alignment with said facing wall portion slot so that at least the opposite end portion thereof is engageable by grounding prong means inserted through said facing wall portion slot, said other yoke portion retaining said contact within said channel against outward deflection in at least the housing longitudinal direction, and means for securing said yoke to said housing.

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