This invention relates to an adapter device for use with electrical appliance cords having a third or ground wire extending therefrom.

The invention contemplates an adapter for use in connection with the conventional three socket receptacle or with use in connection with a modified grounding device illustrated in my copending application Serial No. 37,435, filed June 20, 1960, now Patent 3,034,083, issued May 8, 1962. Conductors of the three wire type normally have a lateral extension wire that constitutes a ground wire and that is adapted to be connected to a grounding element in the electrical circuit and to obviate electrical shocks to the users of power tools or other electrical appliances.

The invention contemplates a flat plastics plate that is recessed at one side and slotted to receive the prongs of either a cylindrical or a rectangular two-pronged plug and with the plate having a metallic strip and a binding post to which the ground wire of the conductor is attached and with the strip also having a tubular socket to be used with a prong as embodied in the application above identified and also a prong extending from the opposite side of the plate to constitute a third prong similar to the conventional three pronged receptacle for use in conventional three socket receptacles. The device is thus useful to accommodate a grounding connection for conventional three socket receptacles or a grounding connection for that type of prong embodied in the application above identified.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

FIGURE 1 is a perspective view of an adapter device in combination with a conventional two pronged plug having an extended grounding connection,

FIGURE 2 is a perspective view of the device in the assembled relation with respect to a conventional outlet receptacle having the modified prong extensions in accordance with the invention presented in the application above identified,

FIGURE 3 is a fragmentary vertical section showing the adapter in the assembled relation to the outlet receptacle as presented in the application identified, and

FIGURE 4 is a perspective view of the adapter plate from the opposite side.

FIGURE 5 is a fragmentary edge view of the adapter shown in use with respect to a 3-socket receptacle.

Referring specifically to the drawings, there has been illustrated a plug device 5, having metallic prongs 6. The plug 5 is molded or otherwise connected to a cord extension 7 carrying at least three wires 8. One of the wires 8 extend outwardly from one side of the plug 5 to constitute a flexible ground connection 9. The connection 9 is provided with a terminal 10 that is secured to the side of a metallic strip 11, by screw 12. The strip 11 is also provided with a tubular socket device 13. The strip 13 is molded or otherwise connected to a flat plastic plate 14, cylindrically recessed at one side at 15 to form a relatively thin wall section 16. The wall section 16 is slotted at 17 for the passage of the prongs 6. The plate 14 upon its opposite side has molded or otherwise connected thereto an L-shaped strip 18. The upper leg of the strip 18 is electrically connected to the strip 11 by a socket rivet 19 being a continuation of the socket 13 and with the rivet terminating substantially flush with the face of the strip 18. The vertical leg 19 of the strip is positioned between the slots 17 and the leg 19 is provided with a forwardly projecting prong 20 detachably connected to the leg 19 adjacent its lower end. The socket 13 extends through the strip 11 and through an opening formed in the plate 14 and an opening in the strip 18 and in one position of the device is adapted to have electrical contact with a cylindrical prong 21, carried by a metallic clip 22 that is fastened in grounding connection with the attaching leg 23 commonly employed in mounting the usual two socket receptacles 24 in a wall box 25. In the application above identified, the wall box and the receptacle 24 have been modified to provide a permanently mounted forwardly projecting prong 21 so that the device constitutes a conventional two socket receptacle and a ground wire connection.

The use of the device so far described comprises the plate 14 that is adapted to be engaged with the prongs 6 and with the prongs extending outwardly beyond the slots 17. With the plate 14 in assembled relation to the plug 5, the device is then engaged into the receptacle 24, with the prongs 6 entering the conventional slots of the receptacle, while the socket 13 frictionally engages the prong 21 thus, providing a very definite grounding of the circuit from the wire 7. When the device is to be employed in the modified receptacle, as illustrated in FIGURE 3, the prong 20 is removed, permitting the plate 14 to bear against the cover plate of the receptacle and to ensure of a proper engagement of the prongs 6 with the receptacle.

When the device is to be employed in connection with a conventional three socket receptacle, the prong 20 is engaged with the lower end of the leg 19 of the strip 18 and engaged with the plug 5 and with the face of the plug seating within the recess 15. The prongs 6 of this case project beyond the face of the plate 14 and with the prong 20, constitutes a three pronged connector that may be engaged with the conventional three socket receptacle in a conventional manner. The adapter plate 14 and associated elements thus offer a very definite and highly desirable grounding means for plugging into conventional wall receptacles that have been modified in the manner illustrated in the co-pending application or, may constitute a definite three prong connection for conventional three socket receptacles when the prong 20 is attached. In each use of the adapter, the plug 5 sets into the recess 15.

It will be apparent from the foregoing that a very desirable grounding device has been provided to accommodate the conventional prong plug and an associated grounding wire either to the modified ground connection as illustrated in FIGURE 3 or to accommodate the grounding connection for use with a conventional three socket receptacle presently in use. The device offers a very definite protection to prevent electrical shocks due to improperly grounded appliances, is simple in construction, cheap to manufacture, is strong, durable and most effective as a grounding connection for the usual two pronged plugs that have a third or grounding wire projecting from the plug device. The plate 14 is made of relatively thin plastics material and calculated to engage the prongs of the plug in a manner that provides adequate depth engagement of the prongs of the plug into a receptacle and also to assure of a proper grounding between the appliance wire and the source of electrical current.

It is to be understood that the invention is not limited to the precise construction shown, but that changes are con-
templated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

An adaptor device for use with appliance conductors of the type that embody three wires and with the plug having a pair of parallel forwardly directed flat prongs that are connected to two of the wires and a third wire projecting laterally from the side of the plug to constitute a ground wire, the adaptor embodying a flat non-metallic plate of insulating material and with the plate being cylindrically recessed at one side to accommodate appliance plugs of various shapes, the base of the recess being relatively thin and provided with spaced apart slots that are spaced in accordance with the spacing of the prongs of the plug, a flat metallic strip fixed to that side of the plate that is provided with the recess, a second metallic strip fixed upon the opposite face of the plate and with the last named strip being L-shaped, having a horizontal leg portion and a vertical leg portion, the vertical leg portion being disposed between the slots and provided at its lower end with a removable cylindrical prong, a threaded rivet extending through the plate from side to side and connected with the strips, the said rivet constituting a binding post for the ground wire, the said strips also being connected together by a tubular rivet, forming a socket, the said adaptor adapted to receive the plug into its recess with the prongs of the plug extending through the slots for engagement into corresponding sockets formed in a receptacle and with the cylindrical prong simultaneously engaging a third socket of a three-socket receptacle and whereby the appliance may be grounded with respect to a three-socket receptacle.

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