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SAFETY BASE RECEPTACLE

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Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

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SAFETY BASE RECEPTACLE

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3 Claims. (Cl. 247—3)

The invention relates to base receptacles for the connection of attachment plugs for attaching lamps or other electric appliances; and the object of the invention is to provide a continuous base receptacle which may be located entirely around the walls of a room, benches, show cases, counters, etc., and adapted to receive attachment plugs at any point through its length.

An important object of the invention is to provide a safety base receptacle having a dead front produced by providing tortuous passages extending inward from the front face thereof for the reception of flexible plug-in blades of a plug-in device.

Another and very important object of the invention is to provide a continuous base receptacle of this character provided with a dead front so as to prevent a child or other person or creature from being injured or shocked by inserting any metallic object into the base receptacle.

A further object is to provide a base receptacle including a strip of insulation material having spaced continuous parallel slots therein, these slots being curved in cross section and having conductor strips located at their inner ends.

A further object is to provide a special attachment plug for connection to the base receptacle, the attachment plug being provided with flexible metal blades adapted to be inserted into the tortuously curved slots of the base receptacle.

Still another object is to provide a special adaptor plug for connecting the ordinary form of attachment plug or socket to the base receptacle.

A still further object is to provide means for electrically connecting the improved continuous base receptacle within the box of the ordinary base receptacle.

The above objects, together with others which will be apparent from the accompanying drawing and the following description or which may be later pointed out, may be attained by constructing the improved base receptacle in the manner illustrated in the accompanying drawing, in which

Figure 1 is a front elevation of a portion of the improved continuous base receptacle, parts being broken away for the purpose of illustration;

Fig. 2, an enlarged transverse sectional view through the base receptacle showing an attachment plug connected thereto;

Fig. 3, a transverse section through the improved attachment plug, taken as on the line 3—3, Fig. 4;

Fig. 4, an elevation of the inner side of the improved attachment plug;

Fig. 5, a transverse section through a slightly modified form of the continuous base receptacle;

Fig. 6, a fragmentary sectional elevation showing the manner of connecting the conductor strips together;

Fig. 7, a transverse sectional view through an adaptor by means of which the ordinary form of attachment plug may be used with the improved base receptacle; and

Fig. 8, an elevation of the outer side of said adaptor.

Similar numerals refer to similar parts throughout the drawing.

The improved base receptacle is formed of strips of sufficient length to extend around the walls or baseboard of a room, being connected to said walls, baseboard or the like, and housing a spaced pair of continuous electric conductors. The receptacle includes a strip indicated generally at 10, preferably formed of insulation material and provided with a longitudinal central depression to receive the outer strip 11 which may also be of insulation material.

A longitudinal rib 12 may be formed upon the strip 10, being located centrally within said longitudinal depression and adapted to fit snugly within a corresponding longitudinal recess 13 formed in the outer strip 11, the two strips being connected together as by screws 14 or the like.

The contours of the strips 10 and 11 are such that when connected together as shown in Figs. 1, 2, and 5, two spaced longitudinal grooves or slots 15 are formed in the front face of the continuous base receptacle, each of these slots being tortuously curved inward whereby portions of the cross section of the slots are in planes defining a dihedral angle, as shown in Figs. 2 and 5.

A conductor of copper, brass or other suitable material is enclosed within the inner portion of each of the curved grooves or slots 15. Each of these conductors is in the form of a folded strip open towards its outer edge to receive and clamp the blades of the attachment plugs.

These conductor strips may be of any suitable or desirable cross sectional shape, two preferred forms being illustrated at 16 in Fig. 2 and at 16a in Fig. 5, and have sufficient spring therein to tightly clamp and hold the blades of the attachment plug when they are inserted therein, as will be later described.

As shown at 16 in Fig. 2, each strip may include a substantially tubular portion 17 at its inner or rear edge, the sides of the strip being flat and

parallel to each other as at 18, terminating in the outturned forward edge portions 19 to facilitate the insertion of the blades of the attachment plugs.

As shown at 16a in Fig. 5, each strip may be bent into U-shaped form, one leg of the U having the inturned angular flange 20 between which and the other leg the blades of the attachment plug are adapted to be received and clamped.

For the purpose of electrically connecting the conductor strips 16 or 16a to the house circuit, spaced apertures 21 may be located through the rear side of the insulation strip 10 in staggered relation and on opposite sides of the central rib 12 through which terminals 22 or 22a, as shown in Figs. 2 and 5 respectively, may be located.

Each of these terminals is provided at its inner end with a substantially U-shaped portion 23 or 23a, shaped to fit snugly around the corresponding conductor strip 16 or 16a and to be soldered or otherwise connected thereto. The rear or outer ends of the terminals may be angularly disposed to fit against the back of the strip 10, as indicated at 24, terminating in an angular flange portion 25 and provided with a binding screw 26 by means of which a wire or cable may be connected thereto.

If desired, as shown in Fig. 5, the terminals may extend straight back in substantially horizontal position as indicated at 24a terminating in the angular flanges 25a and provided with the binding screws 26a. Such a construction of terminal may be used for connection to the wires or cables within the box of the ordinary base receptacle where the present improved continuous base receptacle is substituted for the ordinary form of base receptacle.

Any suitable means may be provided for electrically connecting together sections of the conductor strips 16 or 16a so that a plurality of strips or sections of the improved base receptacle may be connected end to end to form a continuous receptacle extending entirely around the walls or baseboard of a room. In Fig. 6 is shown a preferred method of thus electrically connecting sections of the strips 16 by means of a wire or rod 27 having its opposite end portions inserted into the tubular portions 17 of two abutting sections of the conductor strip 16 and soldered or otherwise firmly connected thereto.

Supplemental to the wire or rod 27, or as an alternative therefor, the conductor strips 16 or 16a may be connected together by U-shaped members such as the U-shaped portions 23 or 23a shown in Figs. 2 and 5 respectively, which may be soldered or otherwise connected to the conductor strips, it being of course understood that these U-shaped connecting members would not be provided with the terminals shown in said figures.

The attachment plug for use with the improved base receptacle is best shown in Figs. 3 and 4 and comprises a block of suitable insulation material indicated at 28, having a central opening 29 to receive one end of the usual electric cord such as is ordinarily provided upon lamps and other electric appliances. The rear or inner side of the insulation block 28 may be recessed as at 30 to receive the plug-in blades 31 and the binding screws 32 by means of which the two wires in the electric cord are connected to the two plug-in blades.

For the purpose of connecting these parts to the rear side of the insulation block 28, metal bars 33 may be imbedded in the block, one above and one below the opening 29, each of these bars having an integral nut 34 formed at one end thereof. The inner end of each of the plug-in blades 31 is bent at right angles as at 35 and a strip 36, preferably of insulation material, is placed over the angular end of each blade and connected to the corresponding bar as by a rivet 36a and the corresponding binding screw 32.

The plug-in blades 31 are formed of any suitable metal sufficiently flexible to permit these blades to be easily flexed as they are inserted into the grooves or slots 15 so as to pass through said grooves or slots and be received and clamped in the conductor strips, as shown in Fig. 2. It should be noted that the slots or grooves 15 are of just sufficient width to easily receive the plug-in blades, the outer edges only of these slots or grooves being flared as at 15a to facilitate the insertion of the plug-in blades therein.

Where it is desired to use the usual and ordinary type of attachment plug, an adaptor as shown in Figs. 7 and 8 may be provided for connection to the improved base receptacle and to receive the plug-in points or blades of the ordinary attachment plug. This adaptor includes a block 37 of suitable insulation material having two spaced sockets 38 therein, each of which may house a pair of spring contacts 39 and 40 for contact with the parallel or aligned plug-in points respectively, such as are provided upon the usual and ordinary types of attachment plugs.

An insulation cover plate 41 may be connected to the outer or front side of the adaptor and provided with the T-shaped slots 42 adapted to receive either the parallel or aligned plug-in points of the ordinary attachment plug.

A pair of flexible plug-in blades 31a, similar to the blades 31 above described, are connected to the rear or inner side of the adaptor and electrically connected with the spring contacts 39 and 40 as by the rivets 43. With this construction, it will be seen that the adaptor may be connected to the continuous base receptacle at any desired point in the same manner that the attachment plug is shown connected thereto in Fig. 2, and any usual and ordinary type of attachment plug may then be connected to the adaptor.

I claim:

1. A base receptacle comprising an insulation member having two spaced longitudinal slots curved in cross section and open to the face of the insulation member, at least a portion of the cross section of the slots being in planes defining a dihedral angle, and requiring a plug-in member having flexible plug-in strip blades adapted to enter the slots, and conductors located at the inner ends of the slots for contact with said plug-in blades.

2. A base receptacle comprising an elongated strip of insulation material, and two spaced substantially U-shaped conductor strips enclosed within said insulating strip, spaced longitudinal grooves in said insulation strip communicating with said conductor strips, the planes of the conductor strips or their corresponding grooves forming a dihedral angle, the apex of which is parallel to the longitudinal axis of the base receptacle, an adaptor comprising an insulation block, and a pair of flexible metal plug-in blades carried by said insulation adaptor block and adapted to be inserted into said grooves and received in said conductor strips, spaced sockets in said insulation adaptor block adapted to receive the plug-in points of an ordinary attachment plug,

and contacts in said sockets connected to said flexible blades.

3. A base receptacle comprising an insulation member having two spaced longitudinal slots open to the face of the insulation member, at least a portion of the cross section of the slots being in planes defining a dihedral angle, a plug-in member requiring flexible plug-in strip blades adapted to enter the slots, conductors located at the inner ends of the slots for contact with said plug-in blades, said insulation strip having a staggered series of spaced openings through its rear side, and a pair of terminals connected to said conductors through the adjacent openings.

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