

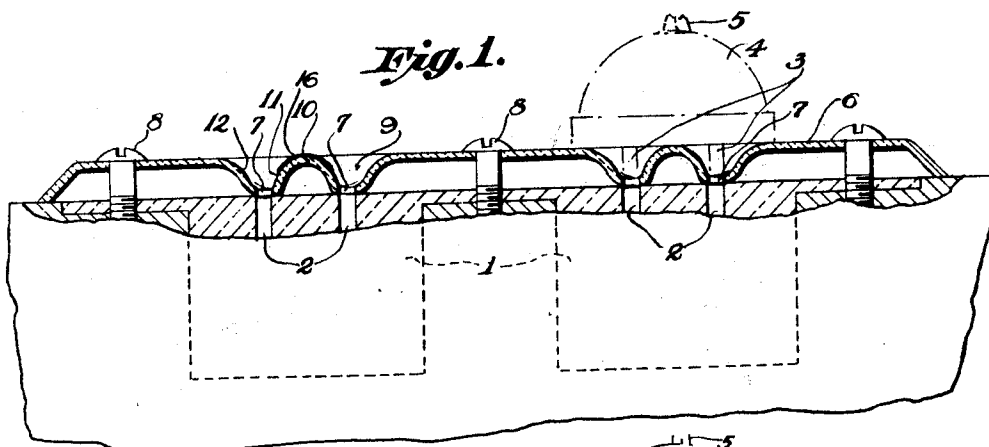
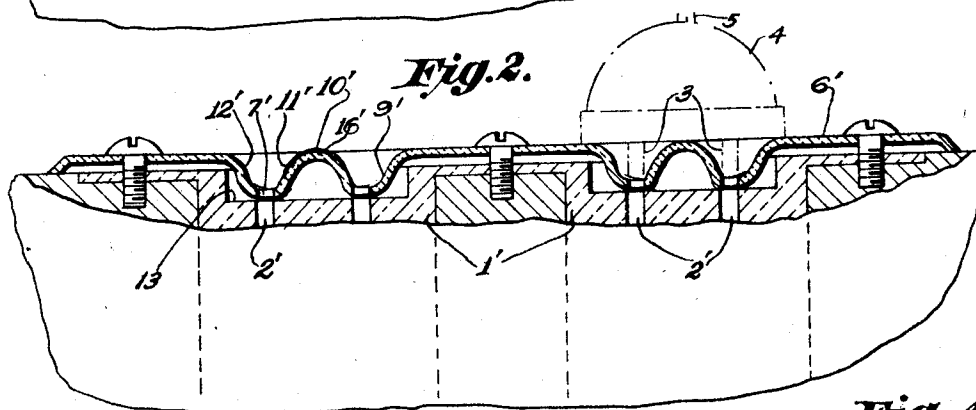
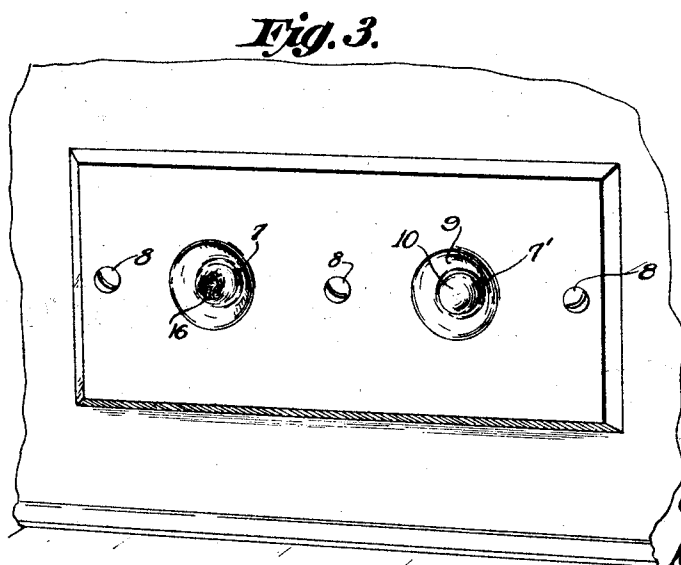
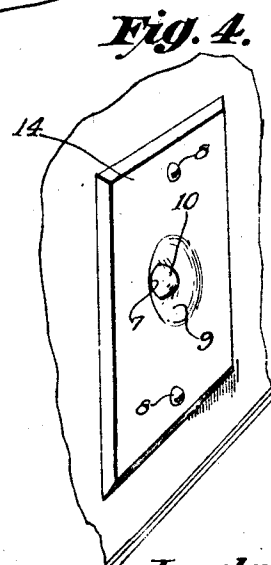
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WALL OR FLOOR RECEPTACLE

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WALL OR FLOOR RECEPTACLE

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This invention relates to electrical equipment and more particularly to wall or floor receptacles to which different electrical devices may be conveniently connected, such as floor lamps, heaters, hot plates and flat irons, which devices are usually equipped with an electric cord terminating in a plug part having spaced posts for plugging into a wall or floor receptacle to establish the desired electrical connection with the source of electrical energy.

In effecting an electrical connection by plugging in a plug or cap into a wall or floor receptacle, considerable difficulty is encountered in causing the two posts of the plug member to find the post holes of the wall receptacle. In my Patent No. 1,745,233, patented January 28, 1930, application Ser. No. 182,644 filed April 11, 1927, on which this invention is an improvement, I have shown a receptacle having its outer face provided with means to facilitate such finding of the post holes.

The present invention has for its primary object to provide a face or finishing plate, for wall or outlet receptacles, with means to facilitate the finding of the post holes of such underlying or concealed wall receptacle.

The invention further resides in the features of construction and the arrangements and combinations of parts hereinafter described and claimed, reference being had to the accompanying drawings wherein,

Fig. 1 is a longitudinal, sectional view through a face plate embodying the present invention, the same being shown in a position attached to a floor or wall receptacle which latter is shown in fragment,

Fig. 2 is a similar view of a slightly modified form of face plate,

Fig. 3 is a perspective view of the face plate shown in either Figs. 1 or 2, and

Fig. 4 is a perspective view of a face plate for a single receptacle.

Referring more in detail to the accompanying drawings, I have shown in Fig. 1 an outlet box having two receptacles 1, which may be of any suitable construction and mounted in the customary housing (not shown), each receptacle being provided with two post

sockets 2 to receive the spaced posts or blades 3 of the plug or cap 4. This plug member 4 is similar to that found attached by an electric cord such as indicated at 5, to certain electrical devices such as lamps, toasters and the like. Within the sockets 2 are arranged contact members (not shown) with which the posts 3 are designed to make electrical connection in the customary and well known manner.

These receptacles are usually set in substantially flush with the wall surface, and being of a rough finish it is desired to conceal them by finishing or face plates, thereby presenting a finished appearance to such wall or floor receptacles. The face plates may be of a simple design or suitably ornamented to harmonize with the other electrical fixtures within the room, or to present a pleasing effect. They may be stamped from sheet metal or be molded from a body of insulating material, such as porcelain, bakelite or the like.

Referring to Fig. 1, I have shown a face plate 6 which is provided with spaced post holes 7 which are secured in registry with the sockets 2 by means of the plate-attaching screws 8. If the plate is stamped of sheet metal, it is preferred to line the post holes 7 with an insulation to avoid any short circuiting between the posts 3. However, in the present instance, the face plate is shown constructed of an insulating material which is preferably molded into the shape shown in Figs. 1 and 3. An annular groove 9 is provided in the face plate for each receptacle with the post holes 7 opening into the bottom of the groove at substantially diametrically opposite points. This, in effect, provides a construction in which each post hole has an arcuate guideway leading thereto, the guideways for the two post holes being concentrically related. The annular groove produces a central knob 10 having a guide wall 11, abruptly rising from the hole 7, and a base or maximum diameter substantially equal to the minimum distance between the posts 3, whereby the posts will embrace the knob without material play or looseness so that upon plugging in the member 4 the posts, after straddling the knob 10 and engaging in

the bottom of the groove 9, will be insured of finding the holes 7 upon a purely rotative, manipulative movement. The outer wall 12 of the groove 9 flares upwardly from the holes 7 and is shaped to facilitate the posts 3 finding the bottom of the groove, the distance between any portion of the wall 12 and the remote side of the knob 10 being substantially equal to the distance between the posts 3 so that after one post engages the wall 12 and the other post extends at any place within the upper marginal portion of said wall 12, said posts will ride down said wall, or down said wall and the wall 11 of the knob, to the bottom of the groove whereupon a purely rotative movement of the plug member will cause the posts to find the post holes 7. The walls 11 and 12 therefore definitely delineate a path of movement for the posts 3.

In some types of outlet boxes or wall receptacles the same are set inwardly from the wall surface providing recesses 13 such as is indicated in Fig. 2. In the form shown in Fig. 1, it will be noted that the plate portions around the holes 7 rest in contact with the flush outer face of the receptacles 1. It is preferable to have this close fitting relation between the plate and the receptacle and therefore if it is desired for receptacles that are set inwardly from the wall surface, such as is shown in Fig. 2, the plate portions about the holes 7' may be extended downwardly so as to be in a plane below the marginal portions of the plate 6'. The depth of the groove 9' will be substantially the same as the groove 9 in Fig. 1 and the centering knob 10' will be substantially equal in height to knob 10 whereby the ordinary length of posts 3 will effect the desired electrical connection in the same manner as set forth in connection with the showing in Fig. 1. Obviously, the plate 6' will be made shallower or have narrower marginal flanges below the plane of which the depressed plate portions about the holes 7' will extend. This will bring the post holes 7' in proximity to the post sockets 2' of the receptacles 1'.

While the knob 10 may extend slightly above or below the plane of the outer surface of the face plates it is preferred to have them substantially flush therewith so as not to present any projecting portions beyond the body lines of the plate. The face plates may be provided with any number of guiding grooves or depressions therein to accommodate a like number of receptacles. In Figs. 1, 2 and 3, the plate is shown especially adapted and designed for association with two receptacles, while in Fig. 4 a body plate 14 is shown having a post-guiding formation for a single receptacle.

To facilitate the finding of the face plate or the centering knob in the dark, said centering knob may be provided with a light-emitting surface, such as is indicated at 16.

This may be easily effected by coating the knob with phosphorous paint or the like, or the outer portion of the knob may form the glass dome of a miniature electric bulb, not shown.

From the foregoing it will be observed that the outer flaring wall 12 (12'), by reason of its flare at the base of the groove, provides ample space about the centering knob 10 (10') to avoid the cap posts 3 from binding on or against said outer wall. These posts are usually flat strip-like blades of rectangular cross section and when they are in a knob-straddling position with their free ends arranged at the base of the knob, the longitudinal edges of the posts extend tangentially away from the knob. The outwardly flaring wall therefore does not present any surface parallel to the axis of the knob against which the longitudinal corners or edges of the posts might bind. On the other hand, the flaring outer wall is annular and extends outwardly beyond the post holes so as to present a guiding surface which will deflect or guide the posts, when engaged therewith, laterally or radially inwardly against the centering knob which latter insures the posts finding the post holes upon a purely rotative motion.

What is claimed is:

1. A detachable face plate for a separable electrical wall or floor receptacle having post sockets, comprising a body of insulating material having spaced post holes therethrough for registry with the post sockets of a related receptacle, the outer face of said body having integral concentric, arcuate guideways forming a central post-guiding knob, each of the post holes being disposed in the bottom of a respective guideway at the base of the guiding knob.

2. A detachable face plate for a separable electrical receptacle having spaced post sockets, comprising a body of insulating material for being secured over the receptacle and having in its outer face an integral annular groove with its inner and outer concentric walls forming a definite post path in the bottom of the groove of a diameter equal substantially to the distance between the post sockets of the associated receptacle, said body provided with diametrically opposite post holes opening through the bottom of the groove and adapted for registry with the post sockets of the associated receptacle.

3. A detachable formed face plate for a separable electrical receptacle having substantially uniform thickness throughout and comprising a molded body of insulating material having an integral annular groove in its outer face and post holes opening through the bottom of the groove for registry with the post sockets of an associated receptacle, said annular groove defining a central knob having a base diameter substantially equal

to the distance between the post holes, the wall of said knob defining an abruptly rising annular guide shoulder leading substantially to the inner edges of the post holes.

5 4. A detachable molded face plate for a separable electrical receptacle having spaced post sockets, comprising a body of insulating material having an integral annular groove in its outer face and post holes opening through
10 the bottom of the groove for registry with the post sockets of the associated receptacle, said annular groove defining a central knob having a maximum diameter substantially equal to the distance between the post holes,
15 the wall of said knob defining an abrupt guide shoulder leading substantially to the inner edges of the post holes, the outer wall of the groove flaring outwardly from the post holes and upwardly to the plane of the
20 plate body.

5. In combination with a wall receptacle having spaced post sockets therein, of a detachable face plate of insulating material having post holes therein for registry with
25 the sockets of the receptacle, the outer face of said face plate being provided with an integral annular depression sharply defining an annular post path at its bottom to receive and retain the spaced posts of a separable
30 plug member in a defined circular path of movement, the post holes of said face plate opening into said defined path.

6. In combination with a wall receptacle having spaced post sockets therein, of a detachable face plate of insulating material having post holes therein for registry with
35 the sockets of the receptacle, said face plate being provided with an integral annular depression seating on the outer face of said
40 receptacle about its sockets with the post holes in registry with the post sockets.

7. A detachable face plate for a separable electrical receptacle having spaced sockets adapted to receive spaced posts of a terminal
45 member, comprising a body having a face annularly grooved, and spaced openings therethrough for registry with the post sockets of the receptacle, these openings extending into the bottom of the groove so that
50 the walls of the groove present sloping coaxial guiding faces to the posts.

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