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COVERS FOR ELECTRIC WALL RECEPTACLES

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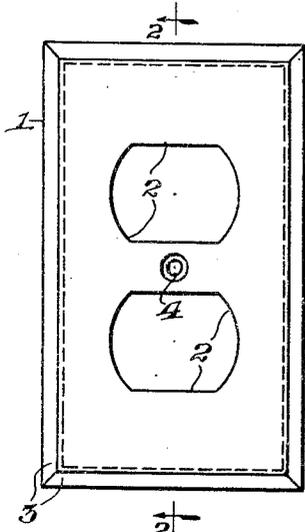


Fig. 1.

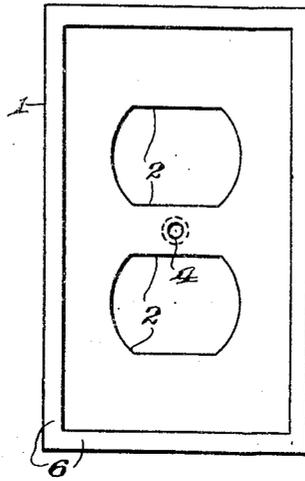


Fig. 3.

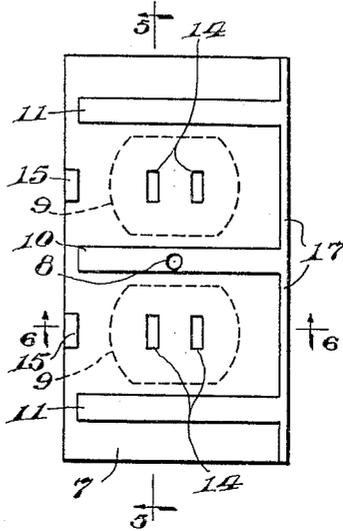


Fig. 4.

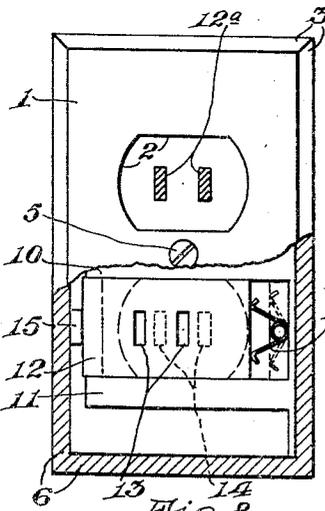


Fig. 8.

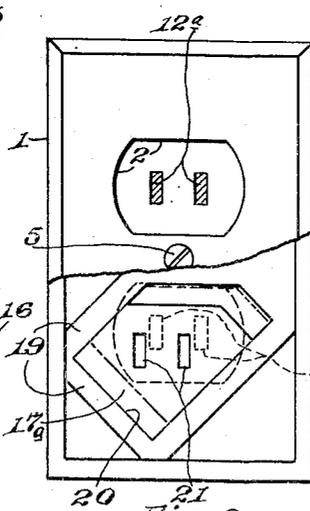


Fig. 9.

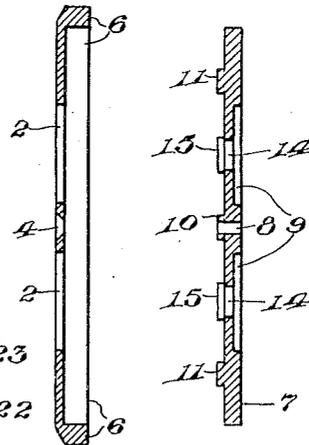


Fig. 5.

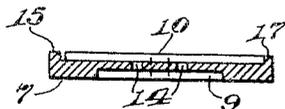


Fig. 6.

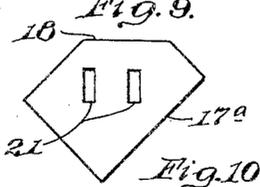


Fig. 10.

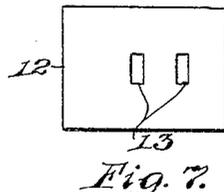


Fig. 7.

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COVERS FOR ELECTRIC WALL RECEPTACLES

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3 Claims. (Cl. 339-40)

The object of the invention is to provide improvements in receptacle covers such as are commonly used in homes, offices and similar locations to protect electric receptacle outlets in the wall and like surfaces.

Another object is to provide a receptacle cover, that includes within a self-contained unit an automatically positioned guard or mask for each of the one or more receptacle units and the corresponding orifices leading thereto, each of said guards or masks being mounted to reciprocate into and from operative position, either horizontally or along a diagonal or sloping path, so as to respectively mask and unmask the receptacle orifices normally covered and protected thereby with a minimum extent of movement, consistent with the usually vertically elongated and horizontally narrower orifices that characterize such receptacle units.

A further object is to provide a receptacle cover that essentially comprises a pair of initially separate front and rear plates of metal, plastic, or other suitable material, and one or more masking disks slidably positioned between said plates and guided by irregularities in or projecting from the inner surface thereof, together with one or more resilient means to normally maintain said disk or disks in operative position, and from which position such disk can be readily moved as by a plug's contact finger, and from which removed position such mask is automatically returned by said resilient means upon the withdrawal of said contact finger, or fingers.

Still another object is to provide a protective receptacle cover of this type, that is so designed as to simplicity and details of construction, that it can be made and assembled inexpensively and substantially entirely automatically, with a minimum degree of manual handling and operation connected therewith.

A further and more specific object is to provide in one embodiment of the invention, a receptacle cover of this type, comprising an outer plate having an aperture for each of the one or more receptacle units covered by it, and also a rearwardly projecting peripheral flange, a rear plate housed within and sheltered in its own plane by the flanges of said outer plate, and provided with apertures that register in position and substantially in size with the apertures of a receptacle operatively positioned to the rear of it, a masking disk slidably positioned between said plates and also having apertures that for one position of said disk register with said first-mentioned apertures, resilient mean operative to normally shift said disk into its operative position, wherein the apertures of said disk are positioned laterally of said first-mentioned apertures and said receptacle apertures, and said disk having a laterally positioned unapertured portion covering said first-mentioned apertures and the apertures in said receptacle, and thereby preventing the direct insertion of an extraneous object thereinto, and means to secure said plates together

And a still further object is to provide a modified form of receptacle cover, in which the one or more masking disks are restrained to reciprocate in a diagonal or sloping

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path, wherein they automatically gravitate diagonally into operative masking position, upon the withdrawal of a plug and its contact fingers or points from within said receptacle, and thereby obviating the need otherwise of providing the resilient means above referred to.

With the objects thus set forth, the invention comprises further details of construction and operation, which are hereinafter fully brought out in the following description, when read in conjunction with the accompanying drawings, in which Fig. 1 is a front elevation of the front or outer plate of a receptacle cover comprising one embodiment of the invention; Fig. 2 is a vertical section on the line 2-2 of Fig. 1; Fig. 3 is a rear elevation of said front or outer plate; Fig. 4 is a front elevation of the rear plate of such a cover; Fig. 5 is a vertical section on the line 5-5 of Fig. 4; Fig. 6 is a horizontal section of the same on the line 6-6 of Fig. 4; Fig. 7 is a plan view of one of the masking disks; Fig. 8 is a part front elevational view and part fragmentary section of the assembled cover as an operative unit; Fig. 9 is a combined front elevation and fragmentary section showing a modified form of the device in which the masking disks are mounted to reciprocate by gravity into masking position; and Fig. 10 is a plan of the shape of masking disk used in the modification of Fig. 9.

In the drawings it will be understood that the overall thickness of the cover as an assembled unit is somewhat exaggerated in order to represent the several layers of material being used, and which as a matter of fact may be individually much thinner. Also, whereas the several parts are illustrated as being opaque, they are all except the springs adapted to be molded out of certain of the plastics, of which one or more of said parts might be transparent, if desired.

Essentially the cover is composed of two plates, an outer and an inner, and internally with a masking disk for each receptacle unit that is intended to be covered and protected, which in the present instance is two in number, while each disk in the form shown in Figs. 1 to 8 is actuated by a resilient steel spring, but which spring is absent from the device shown in Figs. 9 and 10, since the disks of this modified form are actuated by gravity.

Referring to Figs. 1 to 8, there is an outer plate 1, Figs. 1, 2 and 3, provided in this instance with two apertures 2 of a shape to conform to the usually slightly protruding portions of a twin receptacle unit, and more specifically each such aperture having upper and lower straight edges, connected at their opposite ends with arcuate edge portions. This plate may be bevelled peripherally for artistic reasons as at 3, while centrally it is provided with an aperture 4 for the passage of a small bolt or screw 5 by which said outer plate is detachably secured to a rearwardly positioned plate (Figs. 4, 5 and 6) while its own rear surface is provided with a peripheral flange 6.

Said rear plate 7 is normally positioned within and surrounded by the flange 6 of said front plate, and is provided with a central aperture 8, through which said screw 5 or the like extends. This rear plate is furthermore provided upon its rear surface with a pair of similar recesses 9, that correspond in shape and position with the apertures 2 in said front plate, and are for the purpose of receiving the protruding portions of the twin receptacle above referred to.

The forward surface of said rear plate is provided with a central flat ridge 10 and a pair of similar upper and lower ridges 11, that with said central ridge form guides for the two masking disks 12 (Fig. 7). Each such disk is provided with a pair of horizontally spaced vertically arranged apertures 13, that in one position of such disk register with similar apertures 14 in said rear plate, and with which said disk apertures correspond in shape and arrangement.

Said rear disk is also provided with forwardly projecting lugs 15, which arrest movement of said disks in one direction, and towards which lugs said disks are normally forced by suitable springs 16, that push in the opposite direction against an arresting flange 17, that preferably connects said ridges 10 and 11, and in addition to forming stops for said springs, also with said ridges and said disks complete housings for said springs, it being understood that, instead of the particular shape of spring illustrated, any desired type of resilient means may be employed.

In the operation of this device, when assembled as shown in Fig. 8, each of said disks is in its spring-pressed masking position as shown in the lower portion of Fig. 8 and in which position so effectively cover the apertures 14 in the rear plate, as to prevent the direct insertion of any extraneous object into the corresponding apertures in a receptacle, that lead to the respective metallic contact elements therein. From this masking position, each of said disks may be shifted independently to the right, by inserting the contact points 12a of an electric plug, first into the apertures 13, and then by means of said contact points shifting the disk to the right until said points can be pushed through the rear plate apertures 14, and then directly into operative engagement with the receptacle contact elements (not shown). Upon withdrawal of said plug contacts, the adjacent spring immediately forces the masking disk into protective position.

Referring to Figs. 9 and 10, the front and rear plates here shown are similar to and bear the same identifying numerals as the corresponding parts of Figs. 1 to 8, except that instead of the simple oblong shape of disk shown in Figs. 7 and 8, together with its actuating spring 16, the masking disk 17 is tilted up upon one corner (Fig. 10), and its diagonally opposite upper corner is cut away as at 18. Also, the rear plate, instead of being provided with the vertically spaced parallel ridges 10 and 11, is provided with a diagonally arranged, peripherally closed set of ridges 19, that together surround spaces 20 in which the modified form of disks are positioned, and by which the reciprocation of said last-mentioned disks is limited to a slanting path towards the lower end of which each disk is automatically actuated solely by gravity (the solid line position in Fig. 9), upon the withdrawal of plug contact elements 12a from the disk apertures 21, and the corresponding apertures 22 in the rear plate 23 of this modified form of the device.

One of the advantages of the present improved type of guard or cover resides in the fact that anyone can install it operatively, after merely removing the wall plate previously covering a wall receptacle or the like, and fastening the new cover unit by means of the screw 5, and accordingly not requiring any particular receptacle, or the frequently dangerous disconnection of an existing receptacle from charged wires, and the connection of an entirely new receptacle to such wires in place of the former.

Having thus described our invention, what we claim and desire to protect by Letters Patent of the United States is:

1. A cover unit for protecting an electric receptacle having vertically elongated apertures, comprising an outer plate and an inner plate normally secured together and substantially enclosing a space surrounded upon three sides by a U-shaped flange carried by said inner plate, a disk slidably positioned within said space and normally masking said receptacle apertures, said disk being provided with apertures which when said disk is in one position correspond with and permit plug contact fingers to enter the apertures of and engage the contacts within a receptacle, and generally V-shaped resilient means comprising divergent arms normally bearing against and positioning said disk so as to mask said receptacle apertures, and yieldable to permit said disk to be shifted so as to permit access by such plug fingers through its apertures to and through said receptacle apertures.

2. A cover unit for protecting an electric receptacle having apertures leading to its internal contacts, comprising an outer plate having a relatively large aperture for each receptacle unit covered by it and also a rearwardly projecting peripheral flange, a rear plate housed within and sheltered laterally in its own plane by said flange and provided with relatively smaller apertures, that register in position and substantially in size with the apertures of a receptacle positioned to the rear of it, a masking disk slidably positioned between said plates and also having apertures that for one position of said disk register with said rear-plate apertures, and generally V-shaped resilient means comprising divergent arms having angularly outwardly directed terminal portions bearing against and operative to yieldingly maintain said disk in operative position closing said rear-plate and receptacle apertures.

3. A cover for protecting an electric receptacle having apertures leading to its internal contacts, comprising an outer plate having a relatively large aperture for each receptacle unit covered by it and a rearwardly projecting flange, a rear plate housed within and sheltered laterally in its own plane by said flange, a masking disk slidably positioned in a recess formed by and between said plates and having apertures that in one position of said disk register with the receptacle apertures, and resilient means comprising divergent arms connected by a loop, said arms bearing against said disk and said loop bearing against a side of said recess to yieldingly maintain said disk in operative position closing the receptacle.

References Cited in the file of this patent

UNITED STATES PATENTS

2,477,803	Huber	Aug. 2, 1949
2,507,654	Stubbs	May 16, 1950

FOREIGN PATENTS

620,186	Great Britain	Mar. 21, 1949
653,862	Great Britain	May 30, 1951