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2,728,894

SAFETY CLOSURE FOR ELECTRICAL OUTLETS

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Fig. 1

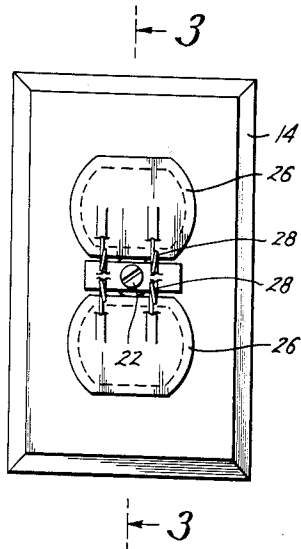


Fig. 2

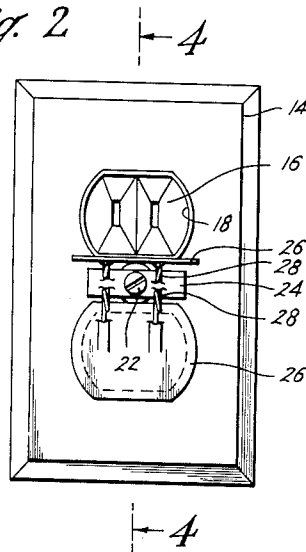


Fig. 3

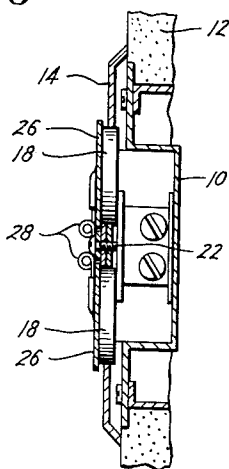


Fig. 4

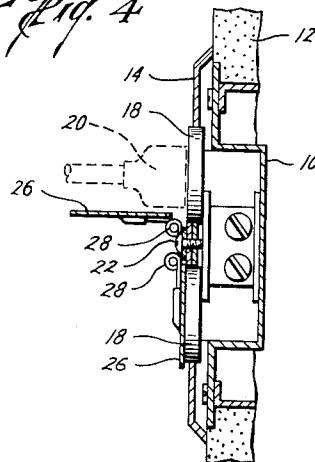
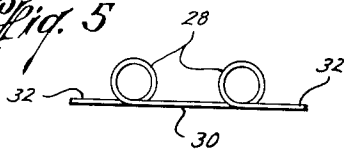


Fig. 5



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SAFETY CLOSURE FOR ELECTRICAL OUTLETS

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2 Claims. (Cl. 339—44)

This invention relates to a safety closure for electrical outlets, and more particularly to a device adapted to be attached to electrical outlet fixtures and which serves as a safety cover for the electrical plug receptacles of such fixtures to prevent the inadvertent or accidental insertion of foreign objects into the receptacles.

The invention finds particular application in connection with electrical outlet fixtures of the duplex type, wherein a plurality of plug receptacles are provided in a single fixture, which is customarily set in a wall or other supporting structure, and furnished with a face plate attached to the fixture by a single centrally located screw. The face plates or cover plates of such fixtures are provided with openings therein which are positioned in substantial registration with the plug receptacles, and through which electrical plugs may be inserted. This arrangement possesses the disadvantage that the receptacles are left in an uncovered condition, so that the electrical contacts are unprotected against foreign objects or substances which may come into engagement therewith, thus presenting a hazard to small children or others who may by inadvertence or accident insert objects into the receptacles.

It is the chief object of the present invention to provide a safety closure for electrical outlets, whereby the inadvertent or accidental insertion of objects into the plug receptacle is prevented.

A further object of the invention is the provision of a safety closure of the kind referred to which may be readily attached to existing outlet fixtures, without modification of any part thereof, and by the use of attaching means which is already present in the fixture.

A further object of the invention is to provide a safety closure for electrical outlets which is automatic in operation, and remains at all times closed until positively actuated for the insertion of a plug into a plug receptacle of the fixture.

A still further object of the invention is the provision of a safety closure of the type mentioned, which is of simple design and rugged construction, and which may be economically manufactured.

The above and other important objects and advantages of the invention will best be understood from the following detailed description, constituting a specification of the same, when considered in conjunction with the annexed drawings wherein—

Figure 1 is a front elevational view of the invention as applied to an electrical outlet fixture;

Figure 2 is a view similar to that of Figure 1, showing the invention in position on an electrical outlet fixture, with one of the cover portions thereof in open position;

Figure 3 is a cross-sectional view taken along the line 3—3 of Figure 1, looking in the direction indicated by the arrows;

Figure 4 is a cross-sectional view taken along the line 4—4 of Figure 2, looking in the direction indicated by the arrows; and

Figure 5 is a side elevational view, on a somewhat en-

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larged scale of a closure spring employed in the invention.

Referring now to the drawings in greater detail, the invention is illustrated in its application to an electrical outlet fixture of conventional design, indicated generally at 10, and which may have one or more receptacles such as that indicated at 16 for the insertion therein of an electrical plug connection. Such outlet fixtures are customarily inserted within an opening in a wall or other supporting structure indicated at 12, with the front of the fixture in a more or less flush condition, with the surface of the wall, and a face plate or wall plate 14 is usually provided, which overlies the front of the fixture, and is secured thereto by a single screw extending through the face plate and threadably secured to the fixture. Such cover plates are provided with openings 18, which are in substantial registration with the receptacle openings of the fixture, so that electrical connector plugs, such as that indicated at 20 may be readily inserted through the cover plate into the receptacles into contact with the electrical contacts of the fixture.

The invention comprises a central, anchoring plate 24, having a central opening therethrough, through which the screw 22 may extend, and one or more closure plates 24, each of which is disposed to cover one of the openings 18 of the wall plate 14, when the device is attached to the fixture. The anchor plate and closure plates may be of any suitable material such as metal, plastic, or the like, and the closure plates are attached to the anchor plate by resilient means such as wire springs formed with loops 28, preferably positioned in overlying relation to the adjacent edges of the anchor plate and closure plate. In the present illustration each of the wire springs is formed with two loops 28, connected together by an intervening portion 30, which may overlie, or be embedded in the anchor plate, and the outwardly extending ends 32 of the springs may likewise be embedded in or overlie the closure plates. The springs may be attached to the anchor plate and to the closure plates by welding, soldering, or other suitable means, or when the springs are attached to the plate by embedding therein, the plate may be cast of suitable plastic material with the springs embedded therein during the casting of the same, so that the device may be economically manufactured by a single moulding operation. Other suitable means, such as flat leaf springs may be employed, if desired, in place of the wire springs illustrated.

In making use of the invention, constructed as described above, the screw 22 is removed from the face plate 14, and inserted through the opening in the anchor plate whereupon the screw may be reinserted through the face plate, with the closure plates in position to close the openings 18 of the face plate, thus securely anchoring the device in position on the fixture. Because of the tension of the wire springs whose loops 28 extend outwardly away from the face plate, the closure plates will be retained in closed position, as illustrated in Figures 1 and 3, and when it is desired to insert a plug in one of the receptacles, a closure plate may be swung outwardly, in the manner indicated in Figures 2 and 4, to uncover the receptacle, and permit the insertion of the plug. It will be apparent that the closure plate will be retained in open position by the plug when the plug is inserted in the receptacle, but immediately upon removal of the plug from the receptacle the closure plate will be moved by the springs into closing position, to effectively prevent the entrance of foreign objects or materials into the receptacle. The closure plates 26, may be of any desired configuration, and are preferably of a size to extend somewhat beyond the margins of the openings in the face plate to insure that the openings will be effectively covered when the closure plates are in closed position.

It will thus be seen that the invention provides a safety

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closure for electrical outlets which is of simple design, and which may be manufactured as an attachment for electrical outlet fixtures of conventional design, without the necessity for modifying the structure of such fixtures in any manner, but which serves to effectively prevent the inadvertent or accidental insertion of objects into the plug receptacles.

While the invention has been disclosed herein in connection with a certain specific embodiment of the same, it will be understood that this is intended by way of illustration only and that numerous changes can be made in the construction and arrangement of the various parts, without departing from the spirit of the invention or the scope of the appended claims.

Having thus clearly shown and described the invention, what is claimed new and desired to secure by Letters Patent is—

1. A safety closure for an electrical outlet fixture having outlet receptacles in adjoining relation comprising, an anchoring element formed of moldable material adapted to be attached to the fixture mediate said receptacles, closure members formed of moldable material disposed in positions to cover said receptacles, spring means forming the sole connection between said members and said element and having end portions molded into said members and portions mediate their ends embedded in said

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element, each of said means having resilient loops located between said ends and said mediate portion in position to coact with said element and members to yieldingly urge said members toward said positions.

2. A safety closure for an electrical outlet fixture having outlet receptacles in adjoining relation comprising an anchoring element adapted to be attached to the fixture mediate said receptacles, closure members disposed on opposite sides of said element in positions to cover said receptacles, spring means forming the sole connection between said members and said element and having opposite end portions secured to said members and an intermediate portion anchored to said element, said means also having resilient loops between said end and intermediate portions in position to coact with said element and members to yieldingly urge said members toward said positions.

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