

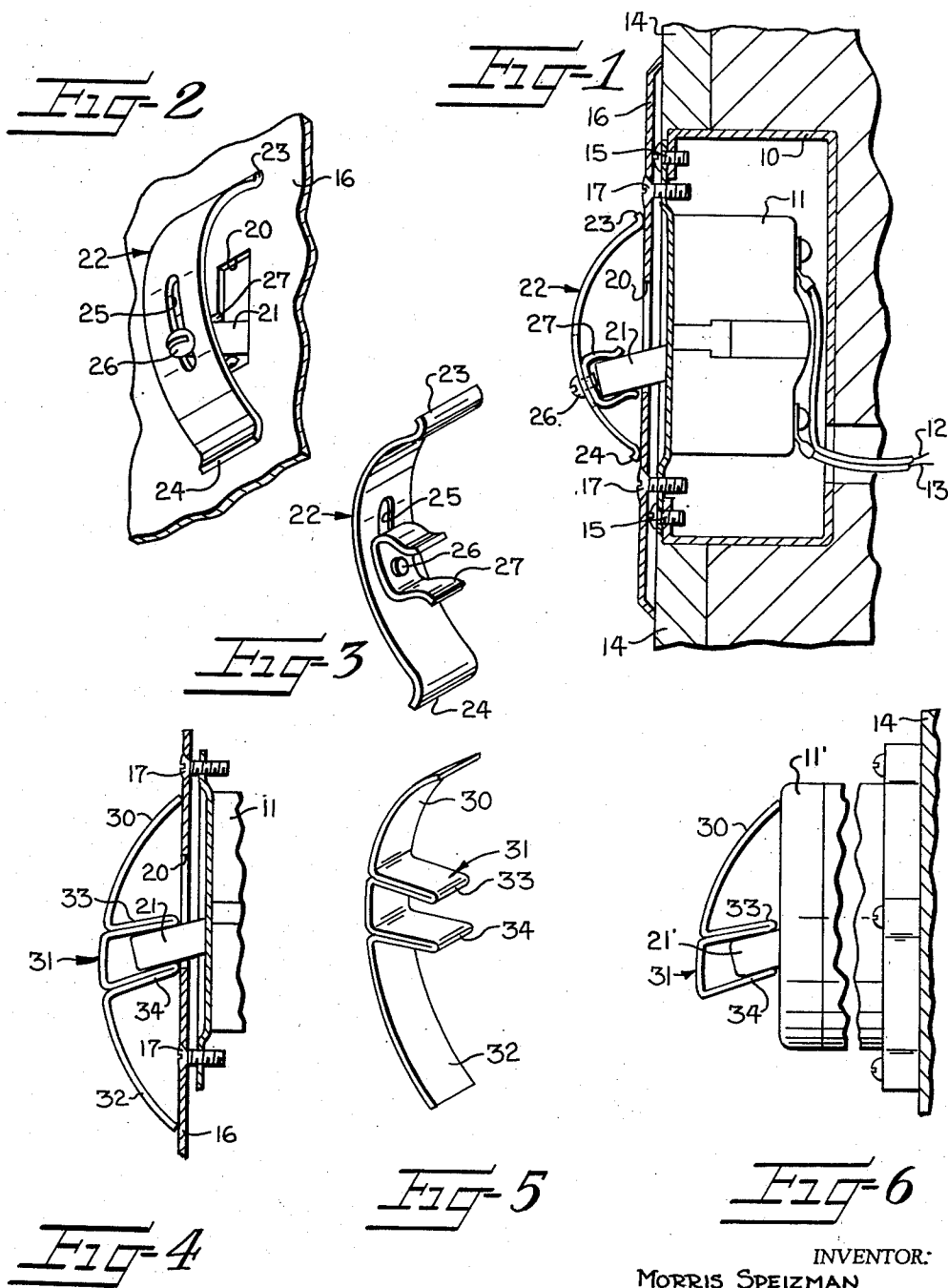
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PROTECTIVE DEVICE FOR ELECTRICAL SWITCHES

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1

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PROTECTIVE DEVICE FOR ELECTRICAL SWITCHES

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This invention relates to protective covers for electrical switches and more particularly to a safety device for insuring that a switch will not be accidentally dislodged from its desired position.

As is well known, switches employed in this type of circuit commonly comprise an outlet box or switch box containing the body of the switch and are provided with a cover plate having an aperture therein, through which the actuating lever of the switch extends. In many instances, particularly where the switch is associated with machinery and the like, it frequently occurs that the switch lever presents a hazard in that it may be inadvertently moved to actuate the motor controlled by the switch, or, a switch controlling a refrigeration unit, for example, may be accidentally moved to the "off" position.

It is an object of this invention to eliminate this type of hazard by providing a protective covering for the actuating lever of such switches, which covering may be instantly positioned about said lever in such a manner as to eliminate the danger of the switch being accidentally actuated. The invention is constructed in such a manner as to be also instantly removable from the switch when actuation of the switch is desired.

It is still another object of this invention to provide a protective cover of the type described which is constructed in such a manner as to be universally applicable to all types of switch actuating levers.

It is another object of this invention to provide a protective cover for switch levers which is supported solely by the switch handle and which may be attached to said handle without the necessity of employing any type of fastening means.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds, when taken in connection with the accompanying drawings, in which—

Figure 1 is a vertical sectional view of an outlet box having a switch disposed therein and showing the improved protective cover in elevation;

Figure 2 is an enlarged perspective view of the protective cover mounted on the switch lever and showing a fragmentary portion of the switch box cover;

Figure 3 is a perspective view of the protective cover removed from the switch lever.

Figure 4 is a view similar to Figure 1 but omitting a portion of the switch and showing a modified form of the invention;

Figure 5 is a perspective view of the modified form shown in Figure 4 removed from the switch;

Figure 6 is a view similar to Figure 4, but illustrating another type of switch and a modification of the form shown in Figures 4 and 5.

Referring more specifically to the drawings, it will be observed that the present invention is associated with a conventional outlet box 10 having a switch 11 fixed therein, as by screws 15. The switch 11 is interposed in a circuit comprising wires 12 and 13. The outlet box

2

10 is fixed within a recess in a wall or the like 14, in the usual manner, and a suitable cover or face plate 16 is positioned over the outlet box and secured to switch 11, as by screws 17. The cover 16 is provided with an aperture or opening 20 therein through which extends a switch actuating lever 21.

The switch described is conventional and is commonly employed in circuits of the type used for wiring and for electric motors, and it is with this type of switch that the present invention is adapted to be associated. The invention comprises an arcuate strap or body portion 22 having outturned end portions 23 and 24. The body portion 22 is provided with a centrally disposed longitudinally extending slot 25 loosely penetrated by a screw 26. The inner end of the screw 26 threadably engages the web portion of a substantially U-shaped member 27 which is preferably formed from spring steel so as to be readily adjustable to snugly engage the periphery of the handle 21. The slot 25 is provided to permit ready adjustment of the U-shaped member 27 so as to conform with the angle at which the handle 21 extends from the switch box 11.

In practice, the member 27 is clamped over the lever 21 as clearly shown in Figure 1 and assuming it is desired to maintain the lever 21 in a downward position shown in Figure 1, it will be readily observed that the upper extremity of the body portion 22 will tend to dig into the switch cover 16 upon an attempt to move the lever 21. Of course, if it is desired to maintain the lever 21 in the upper position, the screw 26 may be repositioned adjacent the upper end of the slot 25 whereupon the lower extremity of the body portion 22 will tend to dig into the cover plate 16 upon downward pressure being exerted.

Referring now to Figures 4 and 5 there will be observed a second form of the invention wherein the arcuate configuration of the body portion is retained but the longitudinally extending slot is omitted and the protective device is formed as an integral piece.

The form of invention shown in Figures 4 and 5 is constructed from a single piece of material in such a manner as to form an upper leg 30, an intermediate U-shaped gripping or clamping portion 31 and a lower leg 32. As clearly shown in the drawings, this is accomplished by crimping the elongated strip of material from which the protective device is formed at two adjacent points intermediate its ends to define inwardly directed double-ply prongs 33 and 34 which comprise the U-shaped clamp 31. The clamp 31 is fitted about the handle 21 in an identical manner as the clamp 27 of the first form of the invention.

The sharp bends which form the juncture between the two plies of material which comprise each of the prongs 33 and 34 provide a convenient point for separating either of the legs 30 or 32 from the clamp 31, as desired. It has been found that by moving the outer ply relative to the inner ply the two will become separated at their juncture thereby removing the outer ply and its appended leg (either 30 or 32) from the clamp 31. This result is illustrated in Figure 6, wherein the protective device is associated with a switch 11' of circular configuration which is somewhat smaller than the rectangular switch of Figure 1. It will be observed in Figure 6 that upon the clamp 31 being mounted on the lever 21', the upper leg 30 bears against the cover plate of the switch 11' in the same manner as heretofore described. However, since there is no surface upon which the lower leg 32 may bear, this leg may be removed as hereinabove described. The protective device will nevertheless continue to receive its sole support by means of the clamp 31 frictionally engaging

3

the actuating lever 21' and the leg 30 will function to prevent accidental actuation of the switch.

It is thus seen that there is provided an inexpensive but effective protective device for electrical switches which may be readily installed and instantly removed as desired.

In the drawings and specification there has been set forth a preferred embodiment of the invention and although specific terms are employed, they are used in a generic and descriptive sense only, and not for purposes of limitation, the scope of the invention being defined in the claims.

I claim:

1. In combination with an electrical switch having an actuating lever and cover plate provided with an aperture through which said lever extends, a protective device for lockingly securing the actuating lever in its off or on position, comprising a body portion having at least one end only frictionally engaging the cover plate on the side of the actuating lever toward which movement is to be prevented, and a clamp extending from the body portion and lockingly engaging said actuating lever, the engagement of said clamp with the lever serving as the sole means for maintaining the end of the body portion in engagement with the cover plate, and said clamp being immovable relative to the body portion whereby movement of said lever is prevented.

2. A structure according to claim 1 wherein said clamp is formed integral with said body portion and extends from a medial portion thereof.

3. A structure according to claim 1 wherein said clamp is formed with said body portion and defines one end thereof.

4. A structure according to claim 1 wherein the clamp is a separate member and is adjustably secured to said body portion.

5. In combination with an electrical switch having an actuating lever and cover plate provided with an aperture through which said lever extends, a protective device for lockingly securing the actuating lever in its off or on position, comprising a body portion of substantially arcuate configuration defining a concave surface and a convex surface, at least one end of the body portion only frictionally engaging the cover plate on the side of the actuating lever toward which movement is to be prevented, and a U-shaped clamp extending from the concave surface of said body portion and engaging opposite side portions of said actuating lever, the engagement of said clamp with the lever serving as the sole means for maintaining the end of the body portion in engagement with the cover plate, and said clamp being immovable relative to the body portion whereby movement of said lever is prevented.

6. In combination with an electrical switch having an actuating lever and cover plate provided with an aperture through which said lever extends, a protective device for

4

lockingly securing the actuating lever in its off or on position, comprising a body portion of substantially bowed configuration defining a concave surface and a convex surface, opposed free ends of said body portion only frictionally engaging the cover plate on opposite sides of said actuating lever with respect to the path in which the lever is adapted to be moved, and a clamp extending from the concave surface of said body portion and engaging said actuating lever, the engagement of said clamp with the lever serving as the sole means for maintaining the ends of the body portion in engagement with the cover plate, and said clamp being immovable relative to the body portion whereby movement of said lever is prevented.

7. In combination with an electrical switch having an actuating lever and cover plate provided with an aperture through which said lever extends, a protective device for lockingly securing the actuating lever in its off or on position, comprising a body portion overlying said actuating lever, opposed ends of said body portion only frictionally engaging the cover plate on opposite sides of said actuating lever with respect to the path in which the lever is adapted to be moved, and a clamp extending from the inner surface of said body portion and engaging said actuating lever, the engagement of said clamp with the lever serving as the sole means for maintaining the ends of the body portion in engagement with the cover plate, and said clamp being immovable relative to the body portion whereby movement of said lever is prevented.

8. In combination with an electrical switch having an actuating lever and cover plate provided with an aperture through which said lever extends, a protective device for lockingly securing the actuating lever in its off or on position, comprising a body portion having at least one end only frictionally engaging the cover plate on the side of the actuating lever toward which movement is to be prevented, and means on the body portion lockingly engaging opposite side portions of said actuating lever, the engagement of said means with the lever serving as the sole means for maintaining the end of the body portion in engagement with the cover plate, and said means being immovable relative to the body portion whereby movement of said lever is prevented.

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