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WALL SWITCH EXTENSION

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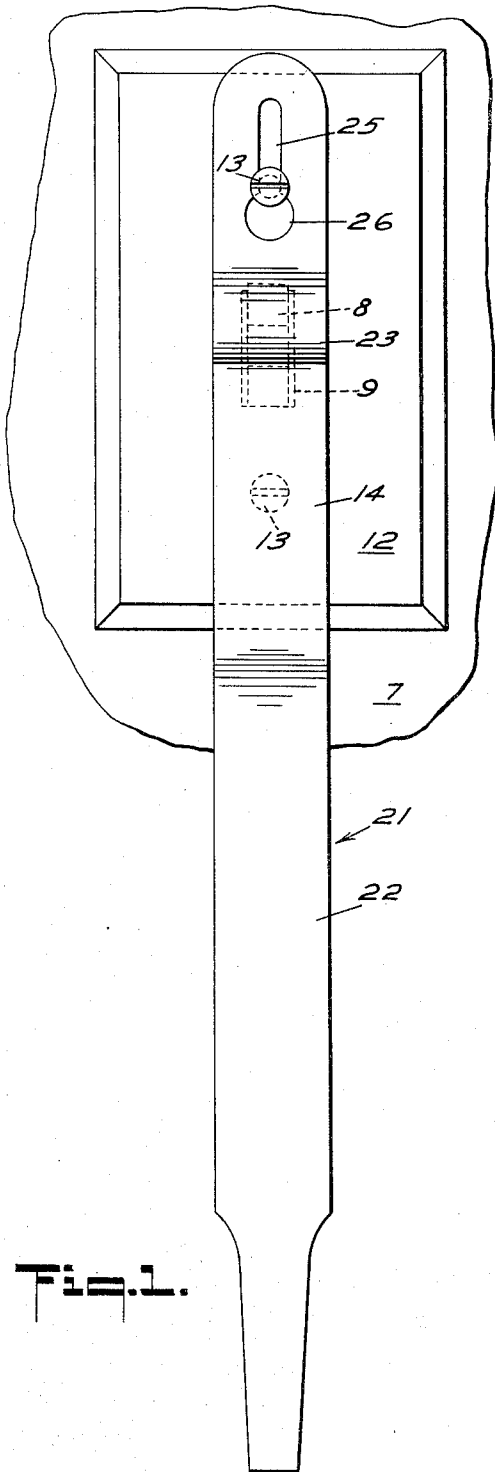


Fig. 1.

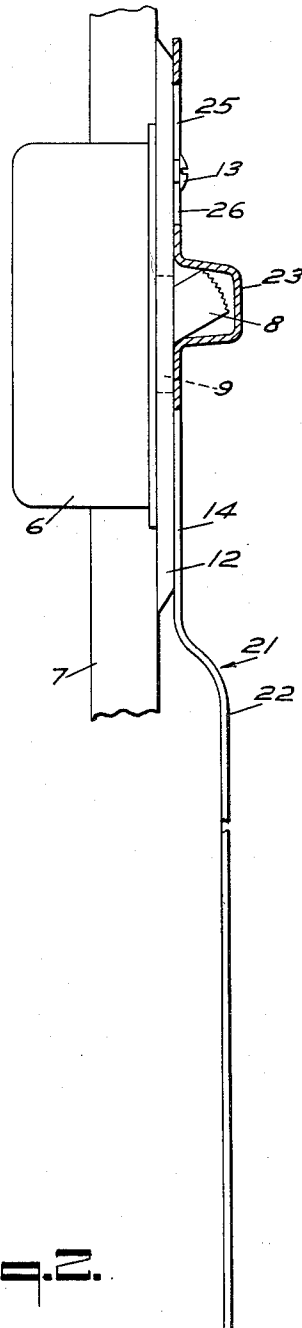


Fig. 2.

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1

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WALL SWITCH EXTENSION

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4 Claims. (Cl. 200—172)

This invention relates to devices for actuating electrical wall switches, and is more particularly directed towards an extension adapted to be operatively associated with such a switch so as to effect movement of the latter from a remote position.

In many instances it is necessary or desirable to have some form of extension or attachment for wall switches so as to permit the actuation thereof from a vertically lower position. This permits small children to reach the toggle or switch lever without requiring such children to stand on chairs or other vertically raised platforms. Heretofore, numerous types of such extensions have been patented and placed on the market, but none of such devices have acquired any widespread acceptance by the trade for a number of various unrelated reasons. For example, many of such extensions were relatively complex in construction, permitted damage to the wall surface on which the switch and extension is mounted, and possibly more important, permitted the switch to be damaged upon accidental movement of the extension in a direction other than that required for normal actuation of the switch.

Accordingly, it is an object of the present invention to provide an extension for a toggle-type wall switch which is extremely simple in construction and which may be operatively positioned relative to the switch by merely removing or loosening a single screw from the switch face plate.

Another object of the invention is to provide an integrally formed and relatively rigid extension of the character described in which means are provided for positively insuring proper switch actuation upon raising or pulling downwardly on the extension, yet which is so arranged so as to preclude the possibility of damage to the switch upon lateral movement of the extension.

A further object of my invention is to provide a device of the character described which is freely pivotable on the switch plate above the level of the toggle, such pivot forming the sole connection of the extension, and in which the extension may freely rock about the pivot without danger or injury to the toggle.

Yet another object of the invention is to provide a device of the aforementioned type in which the portion thereof engageable with the toggle for moving the latter, is readily engageable by the hands of a person so as to readily permit actuation of the toggle from either the distal end of the extension (as in the case of a child) or by directly engaging such portion of the extension adjacent the toggle (as in the case of an adult or taller person).

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the drawing accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawing and description may be

2

adopted within the scope of the invention as set forth in the claims.

Referring to said drawing:

Figure 1 is an elevational view of a portion of a wall, a switch face plate and switch lever or toggle, with the apparatus of the present invention shown in operative position thereon.

Figure 2 is a side elevational view of the structure shown in Figure 1.

Conventional wall switches are well known in the art and no detailed explanation is deemed necessary as to either their form of construction or mode of operation. It is believed sufficient to state that such switches generally include a casing 6 arranged to be positioned within a recess formed in a wall 7. The switch lever or toggle, generally indicated by the numeral 8, extends outwardly of the wall surface through an opening 9 formed in a plate 12 which comprises the covering for the casing and is in substantially coplanar relationship with the wall surface. The plate is secured to the casing 6 by means of a pair of screws 13 and after connection of suitable conduits to portions of the switch casing, vertical reciprocation of the toggle 8 will result in an opening and closing of the electrical circuit for the desired electric light or other electrical fixture.

For numerous reasons, the switch boxes and consequently the toggles therefor, are usually positioned approximately four feet from the floor surface. This distance renders the toggles very accessible to grown persons, but extremely inaccessible to small children who nevertheless may possess the intelligence and ability to turn the switch to its on or off position. Accordingly, it is the intention of the present invention to provide an extremely simple extension whereby the toggle may be actuated from a position below the level of the toggle.

As will be seen in the drawing, the extension, generally designated by the numeral 21, comprises a substantially rigid member 14 which may be stamped from metal or formed from a suitable moldable plastic material, such as one of the phenol-aldehyde resins. The lower distal end of the member may be flared outwardly as indicated at 22 so as to space the manually engageable portion thereof from the wall surface and permit the more ready grasping thereof by the hands of a child as well as preventing damage to the wall upon movement of the member. Means are provided intermediate the ends of member 21 for actuating the toggle 8 upon vertical reciprocation of the member. It will be appreciated that in view of the single pivotal mounting for the member, that the latter may be rotated about a horizontal axis, and consequently care must be taken so that such rotation has no deleterious effect on the switch toggle. In some of the prior art devices, an aperture was provided in such an extension member for receiving the toggle, and due to this arrangement, any side movement of the member would result in a lateral force being exerted upon the toggle and subsequent weakening or breaking thereof.

Therefore, as a principal feature of the present invention, the portion of the member 21 which is adapted to engage and actuate the toggle 8 comprises an offset integral portion 23 of generally U-shaped configuration with the legs thereof extending generally normal to the plane of the member and the base thereof disposed in offset parallel relationship thereto. In this manner, notwithstanding any pivotal or lateral movement of the extension, there is no danger of exerting any lateral or side forces on the switch lever or toggle. Instead, as the portion 23 is entirely open at the sides or edges thereof, the member may be freely moved laterally and completely pass the toggle without striking the latter. It is only upon vertical reciprocation of the member, when the latter is aligned with the toggle that any force is

3

imposed upon the latter, and obviously such force will tend to move the toggle into its off or on position. Furthermore, as will be presently explained, the entire member is only capable of limited vertical reciprocating movement so that there is no danger of causing the member to raise the toggle into, for example, its uppermost position, and then still permit further force to be placed on the toggle which might result in the breakage thereof.

In order to attach the member to the face plate 12, a slot 25 extending for a short distance along the length of the member adjacent the upper end thereof is provided, such slot terminating in an enlarged circular portion 26. This slot is arranged to receive the upper face plate holding screw 13 through the portion 26, and the slot, having a normal width smaller than the diameter of the head of the screw 13, will permit movement of the member about the screw 13 as a pivot. Obviously, the degree to which the screw is tightened will control the force required to vertically raise and lower the member and it is contemplated that the member be permitted substantially free movement relative to the screw. It will be understood that the extension, due to gravitational forces, will tend to remain in a vertical position and in engagement with the toggle, unless the extension is deliberately forced to rock about said screw. It will likewise be understood that the slot portion 26 is utilized only upon installing the member, and after such installation, the screw will be aligned with the slot 25 so as to prevent accidental dislodgement of the member.

The lower end of the slot portion 26 is substantially immediately adjacent the upper leg of the U-shaped portion 23 of member 21 and the length of the slot is such that vertical movement of member 21 is restricted to that required to completely move the toggle between its upper and lowermost positions. In other words, the length of the slot determines the vertical movement permitted of the member and consequently by restricting this movement, there will be no danger of continuing to exert force on the toggle after the same has reached its two limits of travel. This of course is extremely important in preventing damage to the toggle by continued force being exerted thereon notwithstanding its having reached its extreme position of movement.

4

From the foregoing description, it will be appreciated that the extension of the present invention is extremely simple in construction and operation, will adequately fulfill the desired objectives of this type of device, and will insure against any damage to the toggle or other parts of the switch mechanism or to the wall or plate surface through which the toggle extends.

What is claimed is:

1. A manually engageable extension for a wall switch provided with a toggle extending outwardly from a wall plate having a mounting screw disposed above and below said toggle, comprising: a flat longitudinally extending member, said member having longitudinally extending slot means for pivotally attaching said member to one of said wall plate screws while permitting vertical movement of the member relative thereto, and means extending outwardly from the plane of said member adapted to engage upper and lower portions of said toggle for actuating the latter upon vertical reciprocation of said member while permitting free transverse movement of said member about said pivotal attachment relative to said toggle.

2. A device of the character described comprising: a generally flat longitudinally extending member, means on said member defining a longitudinally extending slot therethrough, and a portion of said member adjacent said slot being provided with a pair of spaced offset portions extending generally normal to the plane of said member and a connecting portion bridging the ends of said offset portions so as to provide an open sided U-shaped form of substantially the same width as said member.

3. A device as set forth in claim 1 in which the distal end of said member remote from said slot means is offset from the plane of said member.

4. Apparatus as set forth in claim 1 in which said slot means has an end portion thereof provided with an enlarged aperture for receiving the head of said screw.

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