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ATTACHMENT CONTROL FOR TOGGLE SWITCH

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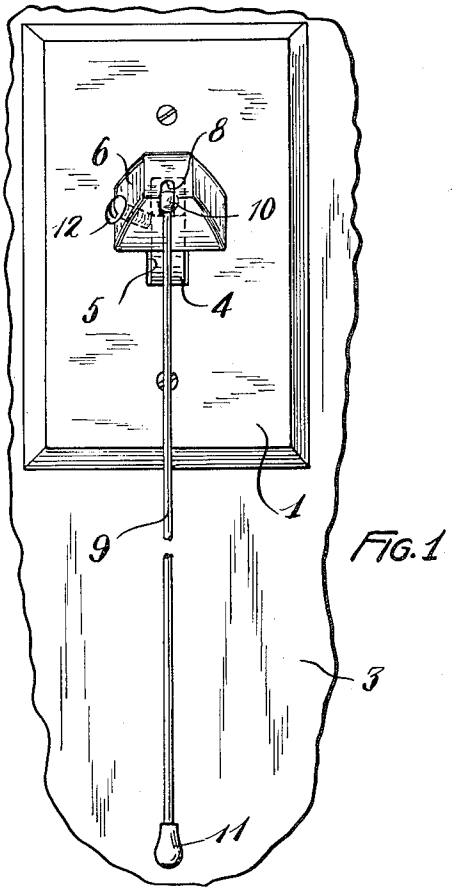


FIG. 1

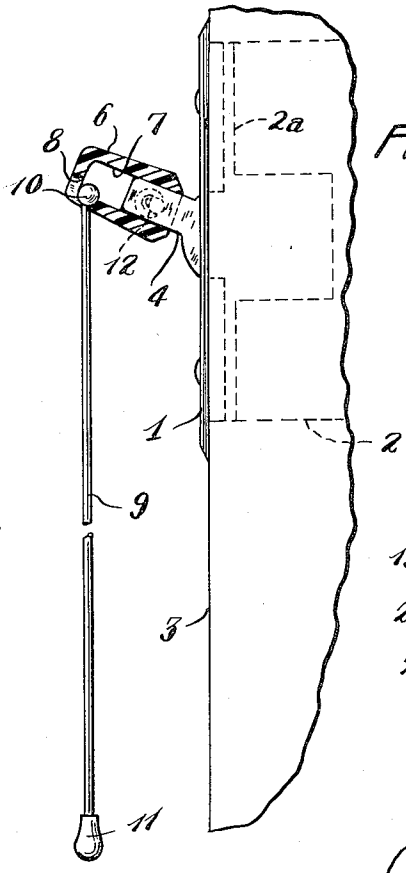


FIG. 2

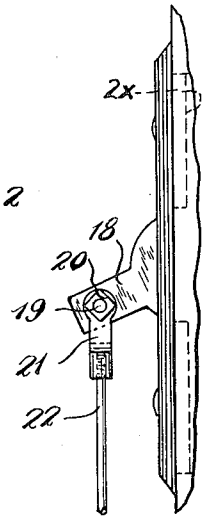


FIG. 5

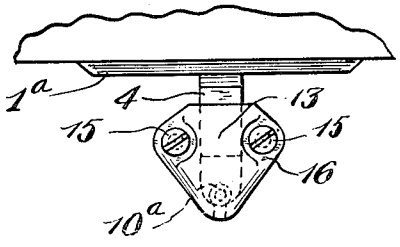


FIG. 4

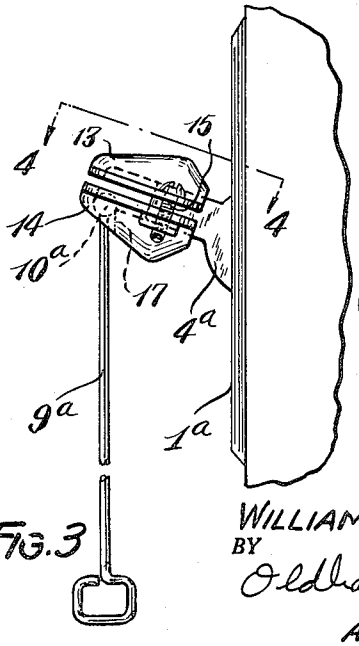


FIG. 3

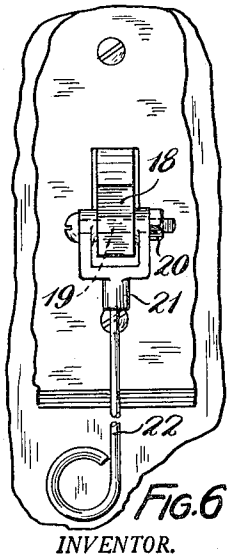


FIG. 6

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ATTACHMENT CONTROL FOR TOGGLE SWITCH

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This invention relates to an attachment, or attachment control for use with a pivotally positioned control arm used to operate a toggle or other similar type of a wall switch.

Switches of the type referred to herein are the conventional wall switch as used in most residences and commercial buildings today. Such switches have a toggle arm pivotally extending through a cover plate for controlling the setting of the switch, usually by a snap action. Of course, other types of switches, such as mercury switches and other types of rotary or pivotal movement switches are in use and the invention is applicable to use with any type of a switch having a pivotally positioned control arm extending from the switch.

It is well known that wall switches of the type referred to are positioned at a height of 4 to 5 feet above the floor usually so that the switches can be easily operated by adults. Thus small children attempting to operate such a switch either must pull a chair over to the switch in order to reach it, or else the children stretch up along the wall so that the children frequently deposit a lot of dirt or make other unsightly marks on the wall adjacent the switch. Furthermore, the small child may climb upon a chair or other relatively high article for the child in order to reach the switch. Obviously, it is dangerous for the small children to be climbing on the chairs and reaching out or leaning out from the chair for switch operation, particularly where the switch may be near an open stairway.

Accordingly, it is the general object of the present invention to provide a new and improved control attachment for use with conventional wall switches, which control is characterized by the simplicity of design thereof and by the ease of attachment or securement of the control to the light switch.

Yet another object of the invention is to provide a control attachment for use with a pivotal control arm type of a switch wherein the control can be attached to the light switch on the exposed control arm thereof without any interference with or change of the means positioning the electric switch and cover plate to the wall.

Another object of the invention is to provide a relatively inexpensive control attachment for a light switch which attachment is completely safe for use with the switch.

Still another object of the invention is to provide a cap member for engagement with the operating lever of an electric switch, and to provide a control suspended from such cap member for operating the switch at a point remote from the switch.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

As indicated hereinbefore, the control member of the invention particularly relates to a cap means that is adapted to cover the exposed end of a control arm which protrudes pivotally from a conventional wall switch, and

means are provided for securing the cap to the control arm, while a control is carried by the cap means and extends therefrom so that the control arm and the switch connected thereto can be operated at a point remote from the switch by the control.

Attention now is respectfully directed to the accompanying drawings wherein:

Fig. 1 is an elevation of a conventional type of an electric switch having a pivotally positioned control arm with a control attachment embodying the principles of the invention being associated therewith;

Fig. 2 is a side elevation, partially broken away and shown in vertical section, of the switch and control attachment of Fig. 1;

Fig. 3 is a side elevation of a control member comprising a modification of the control of the invention;

Fig. 4 is a plan view taken on line 4—4 of Fig. 3;

Fig. 5 is a fragmentary side elevation of a further modification of the invention; and

Fig. 6 is a front elevation of the structure shown in Fig. 5.

Referring now to the details of the structure shown in the drawings, the numeral **1** is used to refer to a cover plate secured to a conventional switch box **2** which is positioned in a suitable recess formed in a wall **3**. Any desired type of a known electric switch **2***a* is positioned within the switch box **2** and has a control arm **4** protruding through a hole **5** provided in the cover plate **1**. Pivotal movement of the control arm **4** is provided in the switch for controlling the setting or action of the switch to determine whether or not electrical energy is transmitted through the electrical circuit connected to such switch. Usually the electric switch may be some type of a toggle arm control switch wherein the control arm **4** can be pivoted relatively readily from its upper to its lower position or vice versa to change the setting of the switch.

The novel features of the invention particularly relate to an attachment control provided for engagement with the control arm **4** to permit operation of such control arm from a point remote thereto. Thus a suitable cap member is engaged with the outer end of the control arm **4**. In Figs. 1 and 2 a plastic molded cap **6** is shown provided with a hollow recessed inner surface **7** extending from the base portion of the cap member and with such recess **7** smoothly engaging the outer end of the control arm **4**. The cap member **6** extends axially beyond the control arm **4** and has a suitable opening **8** formed therein for receipt of a control arm **9** usually threaded through the opening **8** prior to engagement of the cap **6** with the control arm **4**. Usually the control arm **9** has a ball or knob **10** formed on or suitably secured thereto on its inner end for engaging the cap **6** at the margins of the opening **8** in a pivotal manner for free pivotal action of the control arm **9**. The control arm **9** is of any desired length and normally would be suspended directly vertically from the cap **6**. If desired a little knob **11** is formed on or threadedly or otherwise engaged with the lower end of the control arm to facilitate engagement therewith.

The cap **6** is retained in engagement with the control arm **4**, for example, by a set screw **12** carried by the cap **6** and brought into pressurized engagement with the adjacent surface of the control arm **4** so that the cap is fixedly secured in position.

In the modification of the invention shown in Figs. 3 and 4, a control arm **4***a* extends from a cover plate **1***a* and is in pivotal engagement with the switch for controlling the flow of current therethrough. In this instance, a pair of cover plates **13** and **14** are provided for engaging with opposed faces of the control arm **4***a*.

The cover plates **13** and **14** are brought into engagement with the control arm by conventional means, such as bolts **15**, that engage flanges **16** provided on the cover plates **13** and **14** and extend therebetween for securing the cover plates in position in a desired manner. The inner surfaces of the cover plates are suitably recessed complementary to the control arm **4***a* to engage therewith readily and snugly. The cover plate **14** has a slot or hole **17** provided in an end portion thereof and such slot **17** receives a control rod or arm **9***a* therein which is at least substantially rigid. The control rod or arm **9***a* has a ball **10***a* or other engaging member provided on or secured to its inner end which is retained in pivotal engagement with such cover plate **14** when the cover plates are engaged with the control arm **4***a*. This embodiment of the invention avoids any possible danger of excessive localized pressures being applied to the control arm of the electric switch and avoids any possibility of damage to such control arm.

The structure shown in Figs. 5 and 6 is one type of a control that may be engaged with a control arm having a hole therethrough for switch control from a point remote to the switch. A conventional switch **2X** has a pivotal control arm **18** extending therefrom for arcuate movement to control the switch. Control arm **18** has a hole **19** extending therethrough and it receives a bolt **20**, or similar member, used to secure a yoke **21** carried by a control rod **22** thereto. Hence proper movement of the control rod **22** will move the control arm **18** to actuate the switch and turn it on or off. In some instances, other connection means may be used to secure the control rod **22** to the control arm **18** by engaging a hole or recess therein and such means may comprise a shaft, or ball portion provided on the control rod.

The cap means of the invention, including the cap **6** and the cover plates **13** and **14** may be made from any suitable material, such as metal or plastic, and they may be of any desired color. The recess **7** may be made smaller than shown to have the ball **10** seat in the recess for pivotal movement but to be held against objectionable vertical motion in turning a switch on and off. In some instances, the cap and cover means provided in the invention could be in resilient or snap engagement with a control arm, for example, by securing the cover plates **13** and **14** together by spring means. The outer shape of the cap and cover means may be of any suitable design, or shape.

From the foregoing, it will be seen that a relatively simple, inexpensive type of an attachment has been provided which can be readily and easily engaged with a conventional electric switch by being secured to the control arm of the switch so that such switch can be operated at a remote point, usually a place below the switch so that a small child can operate the switch safely without having to climb upon any chair or similar member to reach the light switch. Of course, after the child grows and can reach the switch at its normal height, then the attachment of the invention can be removed from the control arm without any permanent injury thereto and the switch can be used in a conventional manner thereafter. In view of the foregoing and as the attachment of the invention avoids any difficulties in small children reaching a light switch positioned at a conventional height, it is contended that the objects of the invention have been achieved.

While two embodiments of the invention have been disclosed herein, it will be appreciated that modification of these particular embodiments of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

I claim:

1. An attachment control for a wall switch with a control arm pivotally extending therefrom, which control comprises cap means for engaging a control arm, means for securing said cap means to the control arm, and a control member carried by said cap means by a ball and socket joint for universal movement and extending therefrom for actuation of the control arm from a point remote thereto.

2. An attachment control as in claim 1 wherein said cap means comprises a pair of members for engaging opposed surfaces of the control arm, and means extending between said members to secure them to the control arm.

3. An attachment control as in claim 1 wherein said cap means comprises a unitary hollow plastic member snugly engaging two pairs of opposed surfaces of the control arm, and said securing means comprises a set screw carried by said cap means for bearing on the control arm.

4. An attachment control for a wall switch with a control arm pivotally extending therefrom, which control comprises a plastic cap means having a slot in one wall thereof and a ball socket on an inner surface at the slot therein for engaging the end portion of a control arm, means for securing said cap means to the control arm, and a control member having a ball shaped end pivotally engaging said ball and socket of said cap means and extending therefrom through said slot.

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