



US006036330A

United States Patent [19] Sanguedolce

[11] Patent Number: **6,036,330**
[45] Date of Patent: **Mar. 14, 2000**

- [54] LIGHT SWITCH EXTENDER
- [76] Inventor: **Michael Sanguedolce**, 154 Clinton Ave., Mastic, N.Y. 11950
- [21] Appl. No.: **09/010,401**
- [22] Filed: **Jan. 21, 1998**
- [51] Int. Cl.⁷ **F21V 33/00; H01H 15/24**
- [52] U.S. Cl. **362/95; 362/399; 200/330; 200/331**
- [58] Field of Search **362/95, 253, 399; 200/330, 331**

4,105,884	8/1978	Damsky	200/331
4,295,026	10/1981	Williams et al.	200/331
4,454,401	6/1984	Powis, Jr.	200/331
4,914,265	4/1990	Mongeau	200/331
5,577,602	11/1996	Conner et al.	200/331

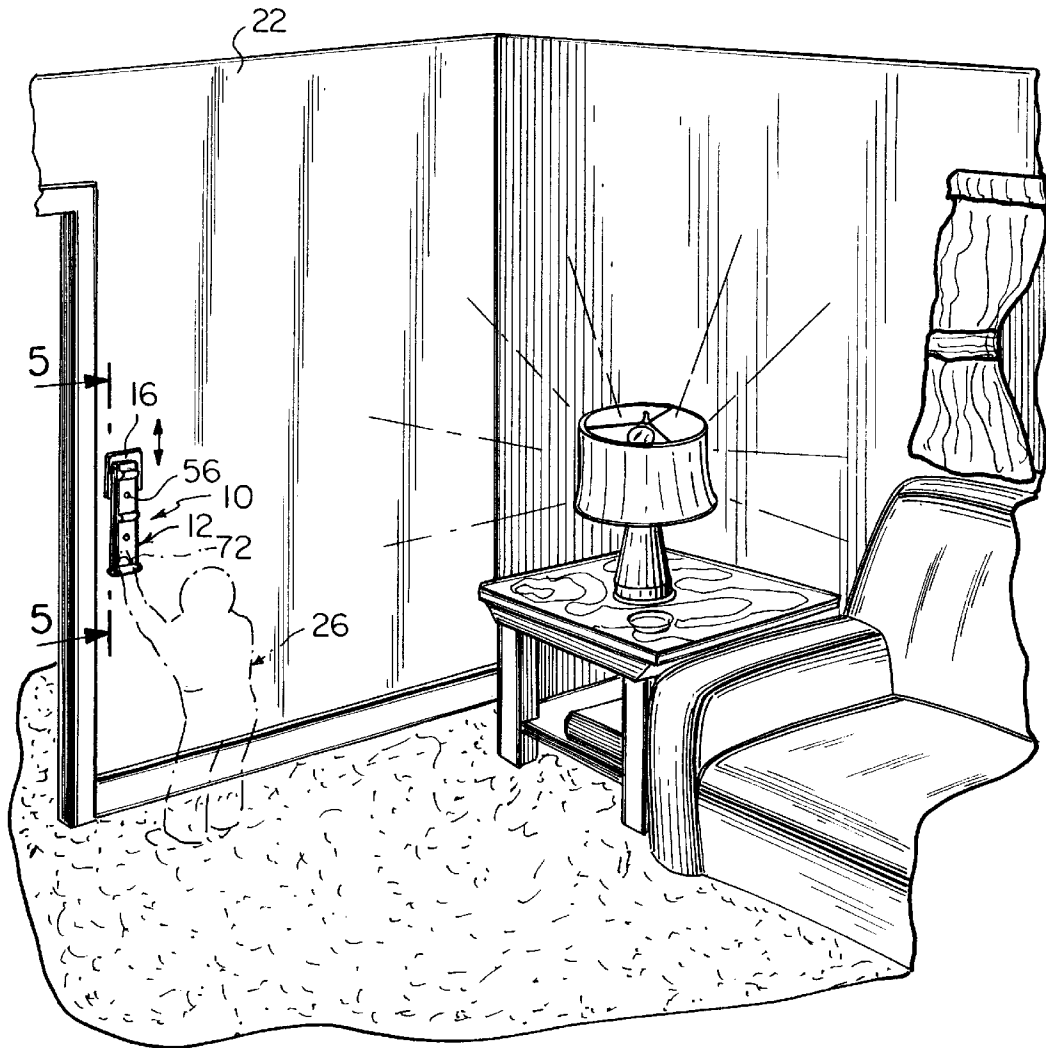
Primary Examiner—Laura K. Tso
Attorney, Agent, or Firm—Michael I Kroll

- [56] **References Cited**
- U.S. PATENT DOCUMENTS**
- 2,389,220 11/1945 Tredeau 200/331
- 2,668,456 2/1954 Meistrell 200/331 X
- 3,590,648 7/1971 Gorman 200/331 X
- 3,839,615 10/1974 Bradford 200/331
- 3,892,935 7/1975 Patterson 200/331

[57] **ABSTRACT**

A light switch extender (10) comprising an elongate actuator (12). An assembly (14) is for vertically mounting the elongate actuator (12) in a sliding manner to a switch plate (16) of a light switch (18) located in a junction box (20) in a wall (22). The elongate actuator (12) engages a lever (24) of the light switch (18) and extends downwardly therefrom. A small child (26) who normally cannot reach the lever (24) of the light switch (18) can now operate the lever (24) of the light switch (18) between an on and off position, by sliding the elongate actuator (12) up and down.

16 Claims, 4 Drawing Sheets



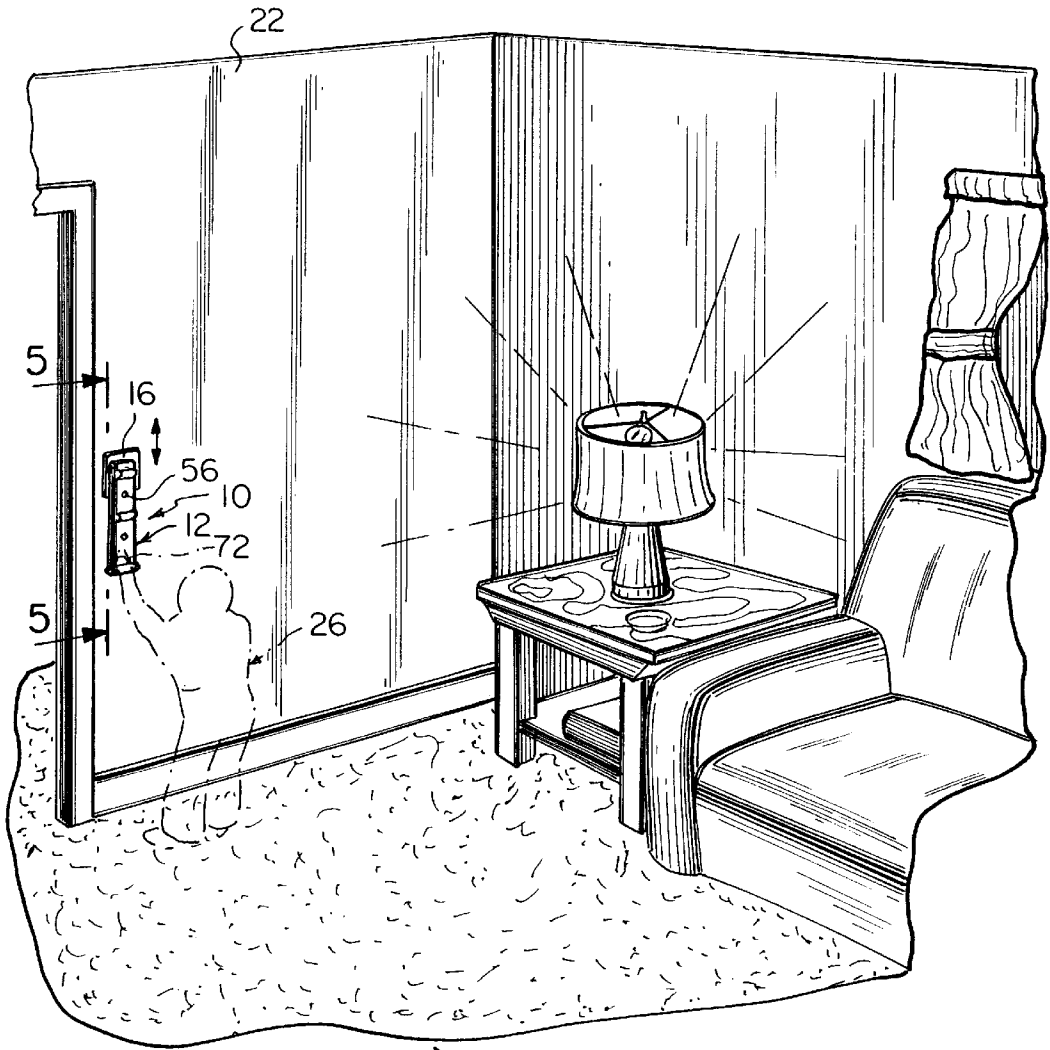


Fig. 1

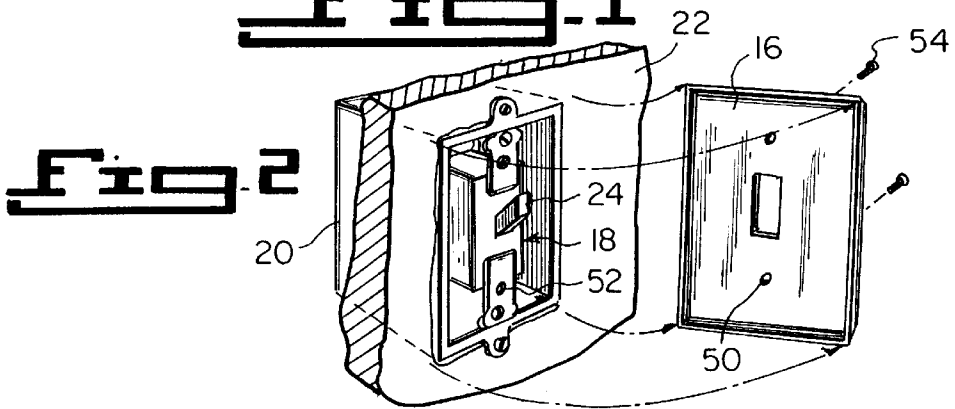


Fig. 2

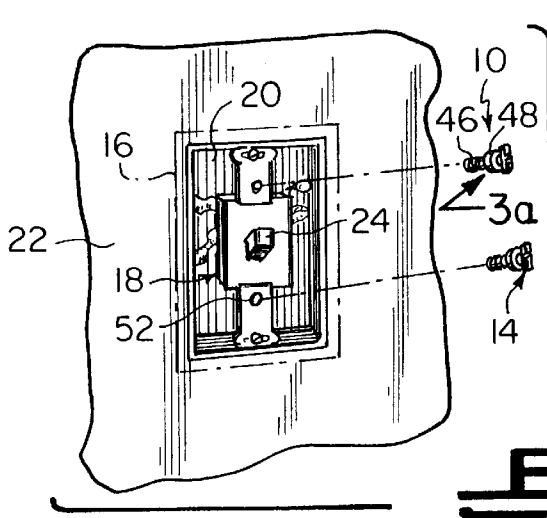


Fig. 3

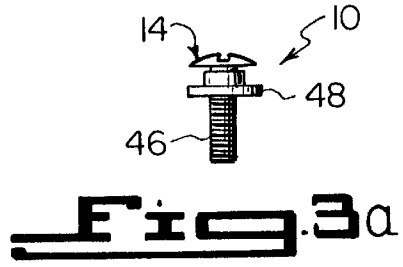
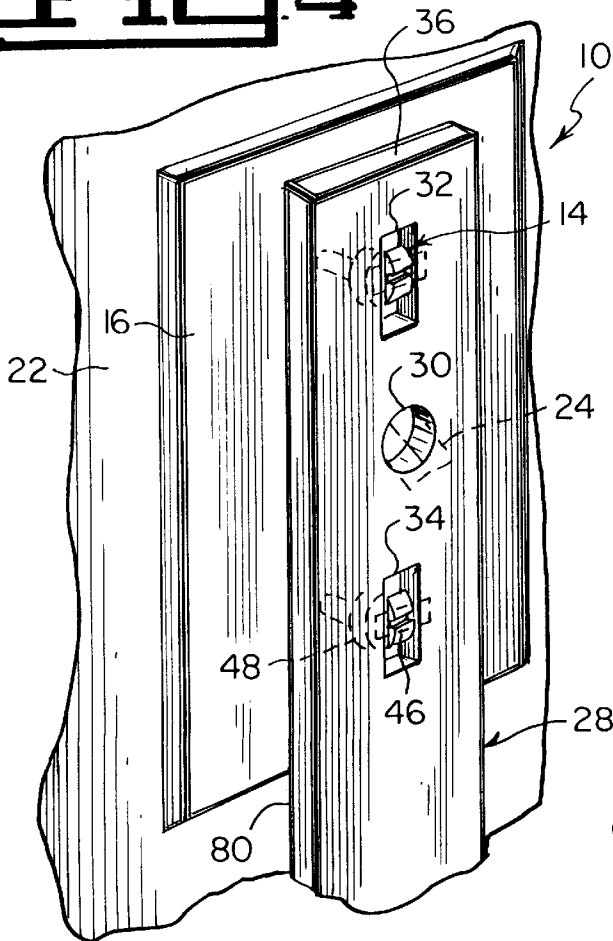
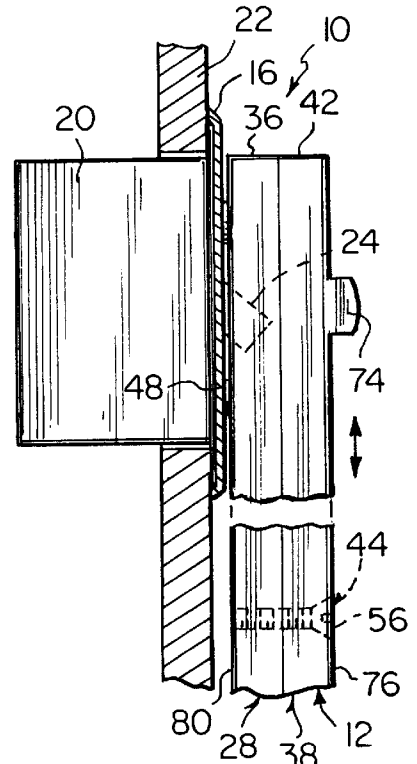


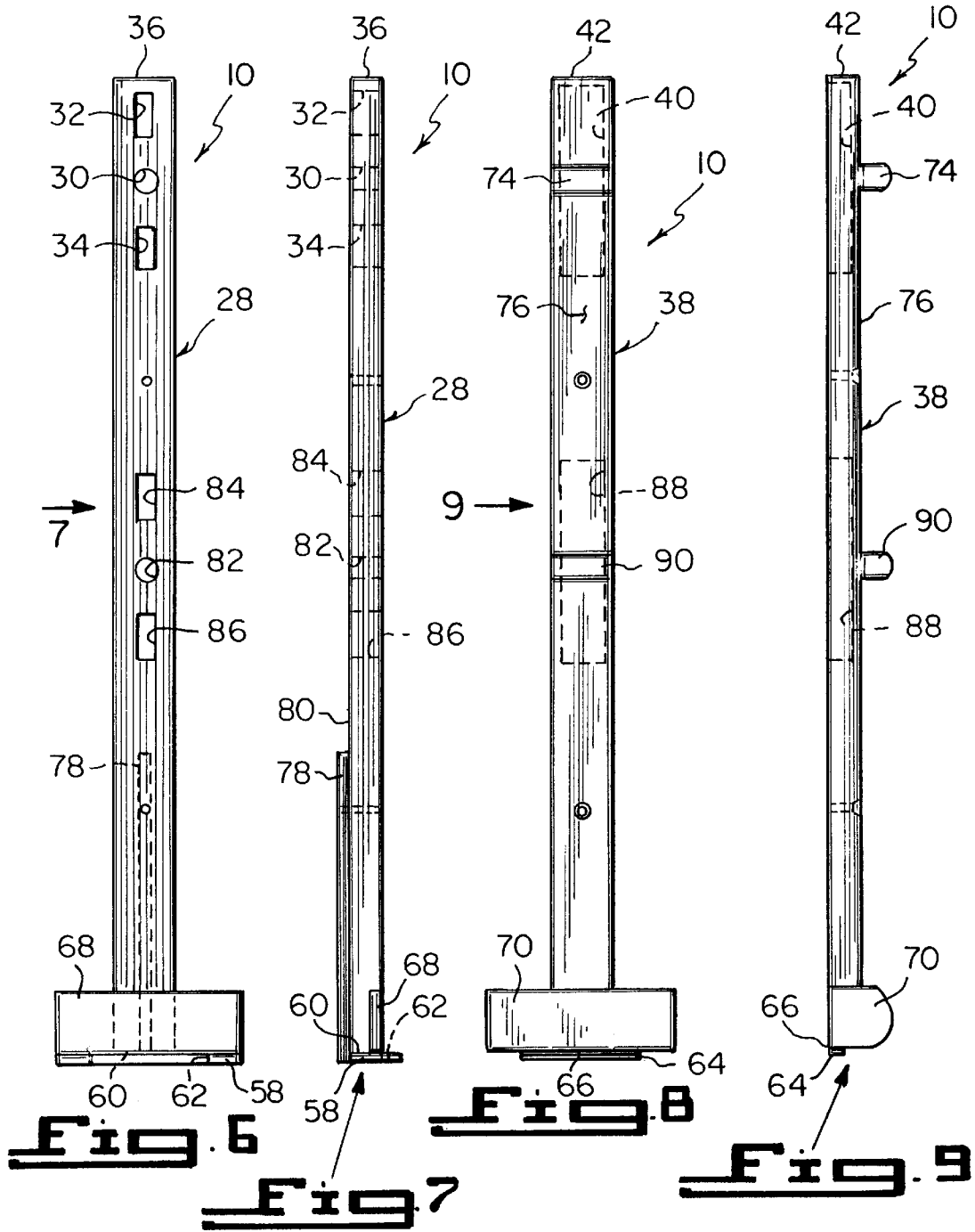
Fig. 3a

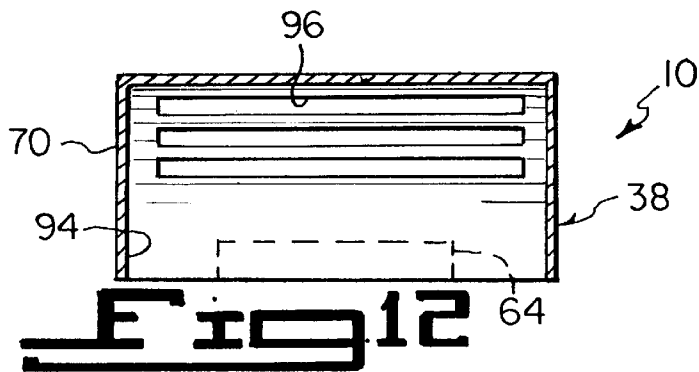
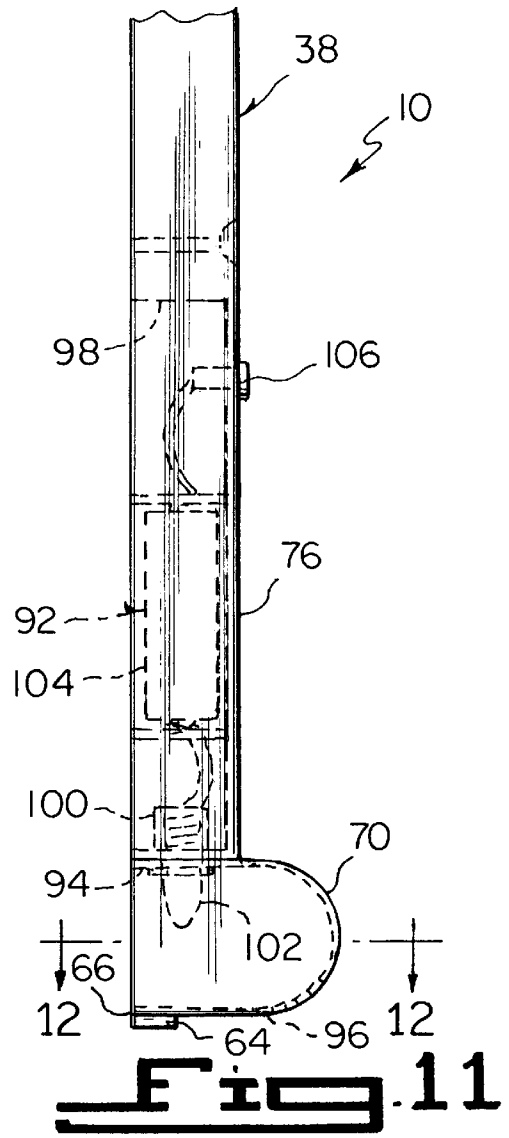
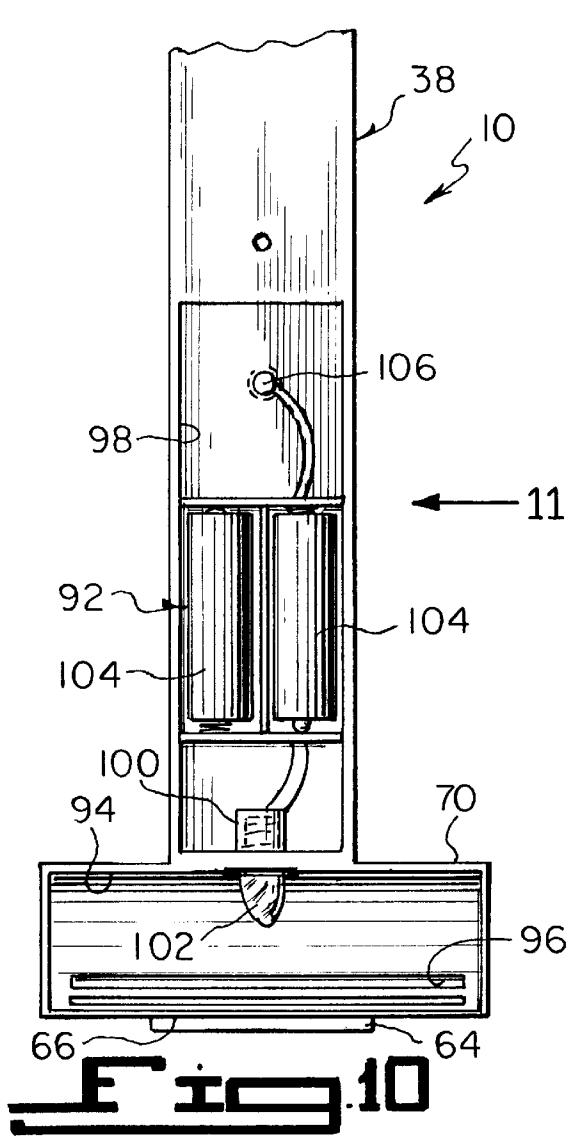
Fig. 4



Figs







LIGHT SWITCH EXTENDER

BACKGROUND OF THE INVENTION

1. Field of the Invention

The instant invention relates generally to electrical wall switch installations and more specifically it relates to a light switch extender. The light switch extender is attached in a sliding manner to a switch plate, so that a small child can safely and conveniently operate the lever of a light switch. The light switch extender has dual mounting positions to allow an additional length to be added thereto for the child's reach. It can be used in a bedroom, bathroom or any other room a child might want to go in.

2. Description of the Prior Art

Numerous wall switch installations have been provided in prior art. For example, U.S. Pat. No. 4,105,884 to Damsky; U.S. Pat. No. 4,454,401 to Powis, Jr.; U.S. Pat. No. 4,914,265 to Mongeau and U.S. Pat. No. 5,577,602 to Conner et al. all are illustrative of such prior art. While these units may be suitable for the particular purpose to which they address, they would not be as suitable for the purposes of the present invention as heretofore described.

DAMSKY, ARNOLD M.

ELECTRICAL TOGGLE SWITCH LEVER EXTENDER

U.S. Pat. No. 4,105,884

A substitute toggle switch cover plate has an elongated opening within which is reciprocatively captured. An actuating member having a recessed carrier portion at the inside is adapted to loosely enclose the control lever of an electrical toggle switch. A slide knob at the outside is for moving the carrier member together with the toggle switch lever between "on" and "off" positions.

POWIS, JR., GEORGE S.

SAFETY EXTENSION LEVER FOR WALL SWITCH

U.S. Pat. No. 4,454,401

A modified wall plate for a standard toggle switch outlet is equipped with an arm or lever adapted to slide on the plate. The arm or lever is provided with a hollowed protuberance extending outwardly from the front face of the arm and arranged to receive and enclose the actuating finger of a standard toggle switch when the modified wall plate is attached at an existing wall outlet for the switch. The arm or lever is equipped with a detachable rod extending to a substantial distance below the bottom of the wall plate to a level within reach of a small child, thus enabled to safely operate the switch.

MONGEAU, FRANCOIS

EXTERIOR COVER FOR AN ELECTRICAL SOCKET OR SWITCH

U.S. Pat. No. 4,914,265

New cover assemblies for electrical fixtures in buildings allow conventional outlet and (toggle) light switches to be cheaply converted into a variety of different color designs and/or colors without changing the electrical infrastructure

of the fixture. The cover assemblies comprise a cover plate with an appropriate number of orifices, each orifice being covered by a slider, so that the whole cover assembly shields the conventional parts of the fixtures normally visible in building interiors.

CONNER, GLENN C.

RAPOZA, MARTIN J.

PERRY, SCOTT M.

SWITCH EXTENDER APPARATUS

U.S. Pat. No. 5,577,602

A switch extender for electrical switches having a front plate slideably coupled to a back plate which in turn is attached to a wall-mounted switch plate. The back plate includes a knock-out portion which allows use of the invention with both toggle switches and rocker switches. A pair of cylindrical bars are positioned within an opening in the front plate. A toggle switch fits within a slot between the bars, and the corners of a rocker switch fit within slots outside of the bars on the front plate. Sliding the front plate relative to the back plate actuates the switch.

SUMMARY OF THE INVENTION

A primary object of the present invention is to provide a light switch extender that will overcome the shortcomings of the prior art devices.

Another object is to provide a light switch extender that is attached in a sliding manner to a switch plate, so that a small child can safely and conveniently operate the lever of a light switch.

An additional object is to provide a light switch extender which has dual mounting positions to allow an additional length to be added thereto for the child's reach, whereby it can be used in a bedroom, bathroom, or any other room a child might want to go in.

A further object is to provide a light switch extender that is simple and easy to use.

A still further object is to provide a light switch extender that is economical in cost to manufacture.

Further objects of the invention will appear as the description proceeds.

To the accomplishment of the above and related objects, this invention may be embodied in the form illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that changes may be made in the specific construction illustrated and described within the scope of the appended claims.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

Various other objects, features and attendant advantages of the present invention will become more fully appreciated as the same becomes better understood when considered in conjunction with the accompanying drawings, in which like reference characters designate the same or similar parts throughout the several views, and wherein;

FIG. 1 is a perspective view of a portion of a room in a building with the present invention installed in place and in use by a small child, shown in phantom.

FIG. 2 is a perspective view of the wall switch in a junction box in the wall with the switch plate and mounting screws exploded therefrom.

FIG. 3 is a perspective view of the wall switch in the junction box in the wall, the switch plate in place in phantom and the slot head screws with shoulder washers exploded therefrom.

FIG. 3a is an enlarged elevational view of one of the slot head screw and shoulder washer taken in the direction of arrow 3a in FIG. 3.

FIG. 4 is a perspective view of the inner actuating arm with parts broken away connected in a sliding manner to the wall switch.

FIG. 5 is an enlarged cross sectional view taken along line 5—5 in FIG. 1, with parts broken away.

FIG. 6 is a front elevational view of the inner actuating arm.

FIG. 7 is a side elevational view of the inner actuating arm taken in the direction of arrow 7 in FIG. 6.

FIG. 8 is a front elevational view of the outer actuating arm.

FIG. 9 is a side elevational view of the outer actuating arm taken in the direction of arrow 9 in FIG. 8.

FIG. 10 is a rear elevational view of a modified outer actuating arm with parts broken away, showing a built-in lighting unit therein.

FIG. 11 is a side elevational view taken in the direction of arrow 11 in FIG. 10.

FIG. 12 is a cross sectional view taken along line 12—12 in FIG. 11.

Similar reference characters denote corresponding features consistently throughout the attached drawings.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Turning now descriptively to the drawings, in which similar reference characters denote similar elements throughout the several views, FIGS. 1 through 12 illustrate the present invention being a light switch extender 10. With regard to the reference numerals used, the following numbering is used throughout the various drawing figures.

10	light switch extender
12	elongate actuator of 10
14	vertically mounting assembly of 10
16	switch plate of 18
18	light switch in 20
20	junction box in 22
22	wall
24	lever of 18
26	small child
28	inner actuating arm of 12
30	aperture in 28
32	vertical slot in 28
34	vertical slot in 28
36	upper end of 28
38	outer actuating arm of 12
40	rear recess in 38
42	upper end of 38
44	attaching facility of 12
46	slot head screw of 14
48	shoulder washer of 14
50	hole in 16
52	hole in 18
54	switch plate screw
56	mounting screw of 44
58	flange on 28
60	lower end of 28
62	slot in 58
64	tongue on 38

-continued

66	lower end of 38
68	T-shaped handle plate of 28
70	T-shaped handle projection of 38
72	hand of 26
74	finger projection on 76
76	front surface of 38
78	guide rib on 80
80	rear surface of 28
82	second aperture in 28
84	vertical slot in 28
86	vertical slot in 28
88	second rear recess in 38
90	second finger projection
92	built-in lighting unit in 38
94	rear compartment in 70
96	narrow opening in 94
98	rear chamber in 38
100	light socket of 92 between 94 and 98
102	light bulb in 100
104	battery of 92 in 98
106	photo electric eye of 92 in 98

The light switch extender 10 comprises an elongate actuator 12. An assembly 14 is for vertically mounting the elongate actuator 12 in a sliding manner to a switch plate 16 of a light switch 18 located in a junction box 20 in a wall 22. The elongate actuator 12 engages a lever 24 of the light switch 18 extends downwardly therefrom. A small child 26 who normally cannot reach the lever 24 of the light switch 18 can now operate the lever 24 of the light switch 18 between an on and off position, by sliding the elongate actuator 12 up and down.

The elongate actuator 12 includes an inner actuating arm 28 having an aperture 30 and a pair of vertical slots 32, 34, which are located above and below the aperture 30 adjacent an upper end 36, whereby the lever 24 of the light switch 18 extends into the aperture 30. An outer actuating arm 38 has a rear recess 40 therein adjacent an upper end 42 to extend over and cover the aperture 30 and the pair of vertical slots 32, 34 of the inner actuating arm 28. A facility 44 is for attaching the outer actuating arm 38 to the inner actuating arm 28.

The vertically mounting assembly 14 consists of a pair of slot head screws 46 and a pair of shoulder washers 48. The slot head screws 46 with the shoulder washers 48 are inserted through holes 50 in the switch plate 16, threaded into holes 52 in the light switch 18 after the switch plate screws 54 are removed. The slot head screws 46 are backed off until heads of the slot head screws 46 are in a vertical position to allow the pair of vertical slots 32, 34 in the inner actuating arm 28 to fit over the heads of the slot head screws 46. The heads of the slot head screws 46 can be turned a quarter turn clockwise until the heads are horizontal in a retained position.

The attaching facility 44 consists of a pair of mounting screws 56, which are threaded through the outer actuating arm 38 and into the inner actuating arm 28. The inner actuating arm 28 has a right angle flange 58 at a lower end 60 with a slot 62 therethrough. The outer actuating arm 38 has a tongue 64 extending downwardly at a lower end 66, which is inserted into the slot 62 in the flange 58 before the mounting screws 56 are utilized.

The inner actuating arm 28 has a T-shaped handle plate 68 at the lower end 60 above the flange 58. The outer actuating arm 38 has a T-shaped handle projection 70 at the lower end 66 above the tongue 64. When the outer actuating arm 38 is attached to the inner actuating arm 28, the combination of

the T-shaped handle plate **68** and the T-shaped handle projection **70** can be grasped by a hand **72** of the small child **26** to operate the lever **24** of the light switch **18**.

A finger projection **74** is horizontally formed on a front surface **76** of the outer actuating arm **38** adjacent the upper end **42**, so that an adult person can engage the finger projection **74** to operate the lever **24** of the light switch **18**. A guide rib **78** is vertically formed on a rear surface **80** of the inner actuating arm **28** adjacent the lower end **60**, so that the guide rib **78** can ride against the wall **22** when the lever **24** of the light switch **18** is being operated.

The light switch extender **10** further includes the inner actuating arm **28** having a second aperture **82** and a second pair of vertical slots **84, 86**, which are located above and below the second aperture **82** approximately midway. The lever **24** of the light switch **18** can extend into the second aperture **82**, while the second pair of vertical slots **84, 86** can fit over the heads of the slot head screws **46**. The outer actuating arm **38** has a second rear recess **88** therein approximately midway to extend over and cover the second aperture **82** and the second pair of vertical slots **84, 86** of the inner actuating arm **28**. When the attaching facility **44** connects the outer actuating arm **38** to the inner actuating arm **28**, the length of the light switch extender **10** will be shortened for a taller child. A second finger projection **90** is horizontally formed on the front surface **76** of the outer actuating arm **38** approximately midway, so that an adult person can engage the second finger projection **90** to operate the lever **24** of the light switch **18**.

As shown in FIGS. **10** through **12**, the light switch extender **10** can further include a built-in lighting unit **92** in the outer actuating arm **38** above the T-shaped handle projection **70** for illumination in a darkened room. The built in lighting unit **92** consists of the outer actuating arm **38** having a rear compartment **94** in the T-shaped handle projection **70** with a plurality of narrow openings **96** along the bottom thereof. A rear chamber **98** extends above the rear compartment **94**. A light socket **100** is mounted vertically between the rear compartment **94** and the rear chamber **98**. A light bulb **102** in the light socket **100** extends into the rear compartment **94**.

A pair of batteries **104** in the rear chamber **98** are electrically connected to the light socket **100**. A photo electric eye **106** in the rear chamber **98** extends outwardly through the front surface **76** of the outer actuating arm **38** and is electrically connected to the batteries **104**. The photo electric eye **106** being sensitive to motion, will cause the light bulb **102** to turn on and radiate light downward through the narrow openings **96** in the rear compartment **94**.

It will be understood that each of the elements described above, or two or more together may also find a useful application in other types of methods differing from the type described above.

While certain novel features of this invention have been shown and described are pointed out in the annexed claims, it is not intended to be limited to the details above, since it will be understood that various omissions, modifications, substitutions and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can, by applying current knowledge, readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention.

What is claimed is new and desired to be protected by Letters Patent is set forth in the appended claims:

1. A light switch extender comprising:

an elongate actuator including:

- i) an inner actuating arm having an aperture and a pair of vertical slots, which are located above and below said aperture adjacent an upper end, whereby the lever of the light switch extends into said aperture;
- ii) an outer actuating arm having a rear recess therein adjacent an upper end to extend over and cover said aperture and said pair of vertical slots of said inner actuating arm; and

iii) means for attaching said outer actuating arm to said inner actuating arm, said attaching means including a pair of mounting screws which are threaded through said outer actuating arm and into said inner actuating arm, wherein said inner actuating arm having a right angle flange at a lower end with a slot therethrough; and said outer actuating arm having a tongue extending downwardly at a lower end which is inserted into said slot in said flange before said mounting screws are utilized; and

b) means for vertically mounting said elongate actuator in a sliding manner to a switch plate of a light switch located in a junction box in a wall, said elongate actuator engages a lever of the light switch and extends downwardly therefrom, so that a small child who normally cannot reach the lever of the light switch can now operate the lever of the light switch between an on and off position, by sliding said elongate actuator up and down.

2. A light switch extender as recited in claim 1, wherein said vertically mounting means includes:

a) a pair of slot head screws; and

b) a pair of shoulder washers, whereby said slot head screws with said shoulder washers are inserted through holes in the switch plate, threaded into holes in the light switch after the switch plate screws are removed, said slot head screws are backed off until heads of said slot head screws are in a vertical position to allow said pair of vertical slots in said inner actuating arm to fit over the heads of said slot head screws, so that the heads of said slot head screws can be turned a quarter turn clockwise until the heads are horizontal in a retained position.

3. A light switch extender as recited in claim 1, further including:

a) said inner actuating arm having a T-shaped handle plate at the lower end above said flange; and

b) said outer actuating arm having a T-shaped handle projection at the lower end above said tongue, so that when said outer actuating arm is attached to said inner actuating arm the combination of said T-shaped handle plate and said T-shaped handle projection can be grasped by a hand of the small child to operate the lever of the light switch.

4. A light switch extender as recited in claim 1, further including a finger projection horizontally formed on a front surface of said outer actuating arm adjacent the upper end, so that an adult person can engage said finger projection to operate the lever of the light switch.

5. A light switch extender as recited in claim 1, further including a guide rib vertically formed on a rear surface of said inner actuating arm adjacent the lower end, so that said guide rib can ride against the wall when the lever of the light switch is being operated.

6. A light switch extender as recited in claim 2, further including:

- a) said inner actuating arm having a second aperture and a second pair of vertical slots, which are located above and below said second aperture approximately midway, whereby the lever of the light switch can extend into said second aperture, while said second pair of vertical slots can fit over the heads of said slot head screws; and
- b) said outer actuating arm having a second rear recess therein approximately midway to extend over and cover said second aperture and said second pair of vertical slots of said inner actuating arm, so that when said attaching means connects said outer actuating arm to said inner actuating arm, the length of said light switch extender will be shortened for a taller child.

7. A light switch extender as recited in claim 6, further including a second finger projection horizontally formed on a front surface of said outer actuating arm approximately midway, so that an adult person can engage said second finger projection to operate the lever of the light switch.

8. A light switch extender as recited in claim 3, further including a built-in lighting unit in said outer actuating arm above said T-shaped handle projection for illumination in a darkened room.

9. A light switch extender as recited in claim 8, wherein said built-in lighting unit includes:

- a) said outer actuating arm having a rear compartment in said T-shaped handle projection with a plurality of narrow openings along the bottom thereof and a rear chamber extending above said rear compartment;
- b) a light socket mounted vertically between said rear compartment and said rear chamber;
- c) a light bulb in said light socket extending into said rear compartment;
- d) a pair of batteries in said rear chamber electrically connected to said light socket; and
- e) a photo electric eye in said rear chamber extending outwardly through said front surface of said outer actuating arm and electrically connected to said batteries, so that said photo electric eye sensitive to motion will cause said light bulb to turn on and radiate light downward through said narrow openings in said rear compartment.

10. A light switch extender as recited in claim 2, further including:

- a) said inner actuating arm having a T-shaped handle plate at the lower end above said flange; and
- b) said outer actuating arm having a T-shaped handle projection at the lower end above said tongue, so that when said outer actuating arm is attached to said inner actuating arm the combination of said T-shaped handle plate and said T-shaped handle projection can be grasped by a hand of the small child to operate the lever of the light switch.

11. A light switch extender as recited in claim 10, further including a finger projection horizontally formed on a front surface of said outer actuating arm adjacent the upper end, so that an adult person can engage said finger projection to operate the lever of the light switch.

12. A light switch extender as recited in claim 11, further including a guide rib vertically formed on a rear surface of said inner actuating arm adjacent the lower end, so that said guide rib can ride against the wall when the lever of the light switch is being operated.

13. A light switch extender as recited in claim 12, further including:

- a) said inner actuating arm having a second aperture and a second pair of vertical slots, which are located above and below said second aperture approximately midway, whereby the lever of the light switch can extend into said second aperture, while said second pair of vertical slots can fit over the heads of said slot head screws; and
- b) said outer actuating arm having a second rear recess therein approximately midway to extend over and cover said second aperture and said second pair of vertical slots of said inner actuating arm, so that when said attaching means connects said outer actuating arm to said inner actuating arm, the length of said light switch extender will be shortened for a taller child.

14. A light switch extender as recited in claim 13, further including a second finger projection horizontally formed on a front surface of said outer actuating arm approximately midway, so that an adult person can engage said second finger projection to operate the lever of the light switch.

15. A light switch extender as recited in claim 14, further including a built-in lighting unit in said outer actuating arm above said T-shaped handle projection for illumination in a darkened room.

16. A light switch extender as recited in claim 15, wherein said built-in lighting unit includes:

- a) said outer actuating arm having a rear compartment in said T-shaped handle projection with a plurality of narrow openings along the bottom thereof and a rear chamber extending above said rear compartment;
- b) a light socket mounted vertically between said rear compartment and said rear chamber;
- c) a light bulb in said light socket extending into said rear compartment;
- d) a pair of batteries in said rear chamber electrically connected to said light socket; and
- e) a photo electric eye in said rear chamber extending outwardly through said front surface of said outer actuating arm and electrically connected to said batteries, so that said photo electric eye sensitive to motion will cause said light bulb to turn on and radiate light downward through said narrow openings in said rear compartment.

* * * * *