

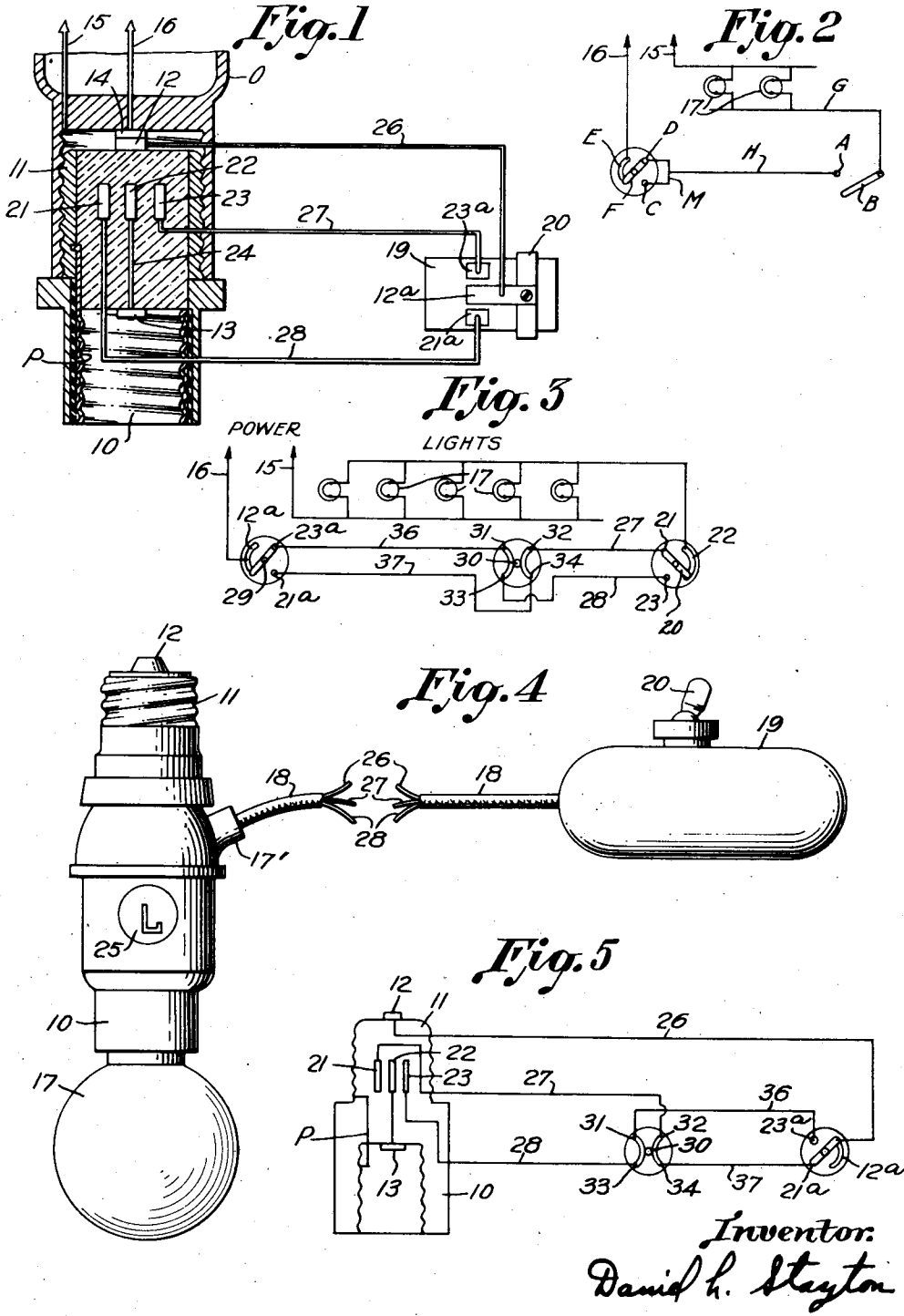
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EXTENSION SWITCH

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## EXTENSION SWITCH

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3 Claims. (Cl. 171-97)

This invention relates to improvements in electrical circuit makers and breakers and associated appliances and more particularly to switches.

One of the main objects of the present invention is to provide a simple, efficient and inexpensive device for the distinct purpose of increasing the control of an electrical circuit from more than one location in such a manner that both controls need not be brought into functioning at the same time.

Another purpose of the present invention is to provide, in a device of the kind described a combination plug and socket unit having a local switch and having a cord extension carrying remote switch, the wiring connections between switches being such that any switch may control the circuit independently of other switches.

It is well known that the manner in which switches are now constructed for controlling the circuit on and off conditions of an electric device such as one or more lamp or lamps is to provide a main master switch for supplying feed current to the conductors leading to a device or to the lamps, and to equip one or more of the individual lamps with a local switch, so that without placing the master switch in circuit off position, the local switch may open or close the circuit to the lamps independently of the master switch. In circuit with the series of lamps or with the electrical device may be different switches located at remote points from the lamps or device, and in some cases a separate local switch for each lamp or a switch controlling simultaneously all the lamps located adjacent to the switch; but none of the remote switches will be adapted to control the circuit on or off conditions of the lamp circuit independently of the circuit off or on conditions of the local switch or switches; since if the local switch has been placed in circuit off position, it would be necessary to close the circuit to the lamps from this point, unless a remote switch directly was wired to close the lamp circuit as is the case of the present invention.

A further object of my invention is to provide means capable of being connected in a lamp circuit or similar circuit which provides at the same time a local circuit control for the lamp circuit and an independent remote circuit control for the same circuit.

A still further object of the present invention consists in providing a cord attachment to an electrical circuit outlet which permits one or more remote switches connected to this cord attachment to control the electrical circuit re-

motely when desired, or locally by means of the usual or conventional switch carried by the electrical device associated with the cord attachment. In this way an existing circuit line obtaining current from outside wires may have a line extension connected therewith, and, at the same time may receive a lamp or other electrical device connected in an electrical contact therewith, so that a local switch carried by the lamp and remote switches carried by the line extension may separately and selectively control the lamp circuit.

Another object of the present invention is to provide an electrical means adapted to be plugged into a circuit outlet and having provision for receiving itself an attachment cord or contact device of an electrical device, with a switch control to the circuit to this device, and in addition having provision for wiring a series of separate switches at some remote point from but in circuit with the device electrical circuit, and in such a manner that if it is desired to open an electrical circuit leading to the attachment cord or to the electrical device which has already been closed by the first-named switch, it will not be necessary to manipulate this last named switch to place it in circuit open position. The operator may operate any of the remote switches for opening the circuit to the electrical device.

With the above and other objects in view my invention consists in the combination, arrangement and details of construction disclosed in the drawing and specifications, and then more particularly pointed out in the appended claims.

Figure 1 is a diagrammatic view of a circuit embodying my invention.

Figure 2 is a diagrammatic view of my invention.

Figure 3 is a diagrammatic view of my invention.

Figure 4 is a fragmental view, in side elevation of the parts of my invention, and

Figure 5 is a diagrammatic view of my invention showing some of the electrical principles in detail.

The details of my invention are disclosed in the drawing. In order to explain what now takes place when an electrical circuit, say to a lighting system is controlled, reference is made to Figure 2. Here the line wires 15, 16 connect respectively to the lamps 17, and to point or contact E of a three way switch whose other points are designated C and D being connected by wire M. The movable switch element F is designed to sweep across the contact E and to connect

same with either contact point C or D. Wire H leads from wire M and connects with a fixed contact point A, designed to be engaged by the movable switch element B to which the wire G leads also to the lamps 17. In this figure the circuit to the lamps is shown open since switch element B does not contact point A; no matter which contact point, C or D the switch element F engages, it is evident that there will still be an open lamp circuit until switch element B is closed.

My invention consists of a combination plug and socket unit, of which the socket is designated 10, the plug 11. The inside construction of the unit may vary as to the manner of providing a three-way switch but by way of illustration Figure 1 discloses a circuit arrangement suitable to my invention. The usual socket contact 12 is provided designed to engage the outlet contact 14 when the plug is screwed home in the usual outlet. A nipple 17, see Figure 4, is provided upon the socket part of my unit, out of which leads an extension cord 18 which connects to a distant switch device 19, the movable switch element of which is designated 20. The three points of the three-way switch of my invention are designated respectively 21, 22 and 23, and a conductor 24 connects point 22 with the contact 13. A conductor P connects the plug and the socket parts of my invention, as is usual, in such cases. The movable switch element 22 associated with the two points 21 and 23 may be of any approved design of construction. The three contact points of the remote switch device 19 connected to the line or cord 18 are designated respectively 23a, 12a and 21a. A conductor 26 connects socket contact 12 with point 12a, conductor 27 connects point 23 with point 23a, while conductor 28 connects point 21 with point 21a, it being understood that all three conductors 26, 27, and 28 may be connected together in the cord 18.

A four-way movable switch element 30 is pivoted conventionally so as to connect either the two contact points 31, 32—33, 34 or else the points 31, 33—32, 34 of a four-way switch. In Figure 5 it will be seen that wire 27 connects point 21 of the right-hand three-way switch to

point 32 of the four-way switch, wire 36 connects point 31 of the four-way switch to point 23a of the other three-way switch; wire 37 connects point 21a of the left-hand three-way switch to point 34 of the four-way switch while wire 28 connects point 33 of the four-way switch to the point 23 of the right-hand three-way switch.

In operation, reference being made to Figure 3, with the positions of the switches as here shown the circuit is opened to the lamps 17. Current flows by way of wire 16, contact 12a, switch element 29, point 23a, wire 36, point 31, point 33, wire 28, and point 23, which latter is not contacted by movable switch element 20. If it is desired to close this circuit either switch element 20 or 29 of either of the two three-way switches may be placed to contact point 23 or point 21a, as the case may be. I do not confine myself to the exact details of construction.

What I desire to claim and seek protection on is as follows:—

1. In combination an adapter unit having an attachment plug, a receptacle for receiving an electrical device and a three-way switch, an extension cord having one or more switches connected thereto and connected to selected contacts of said adapter, said switches and connections being so arranged as to provide selective control of said electrical device from any of said switches.

2. In combination an adapter unit having an attachment plug, a receptacle for receiving an electrical device and a switch, an extension cord having one or more switches connected thereto and connected to selected contacts of said adapter, said switches and connections being so arranged as to provide selective control of said electrical device from any of said switches.

3. In combination an adapter unit having means of connection to an electrical circuit, a means for receiving an electrical device and a switch, an extension line having one or more switches connected thereto and connected to selected contacts of said adapter, said switches and connections being so arranged as to provide selective control of said electrical device from any of said switches.

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