Aug. 16, 1932. P. C. BUTTE 1,872,618

ELECTRIC SWITCH

Filed Jan. 30, 1928

FIG. 1.

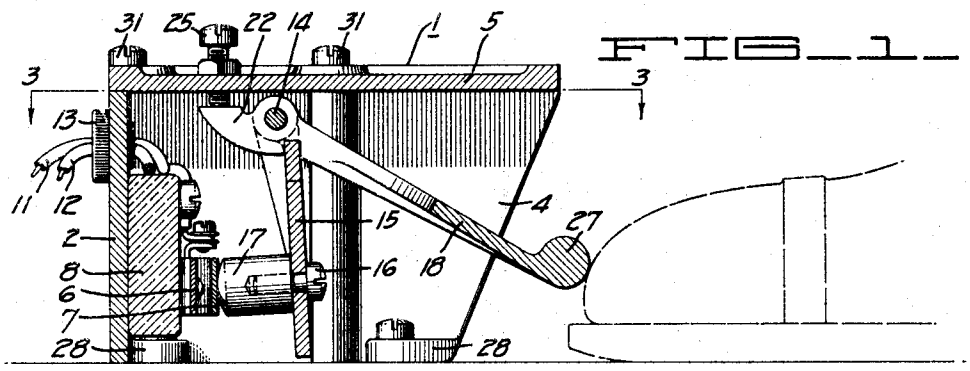


FIG. 2.

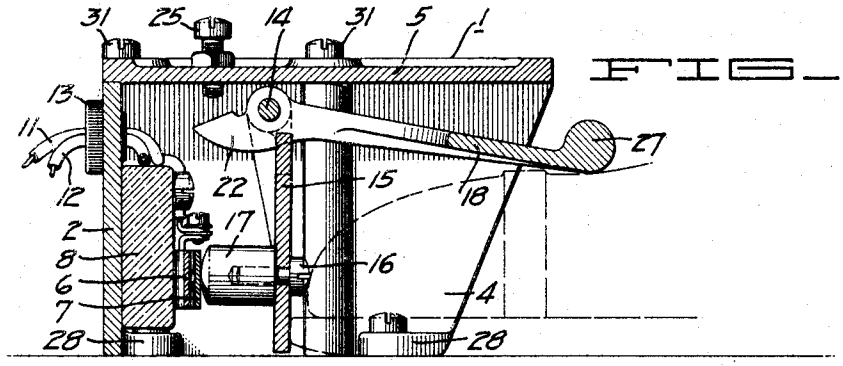
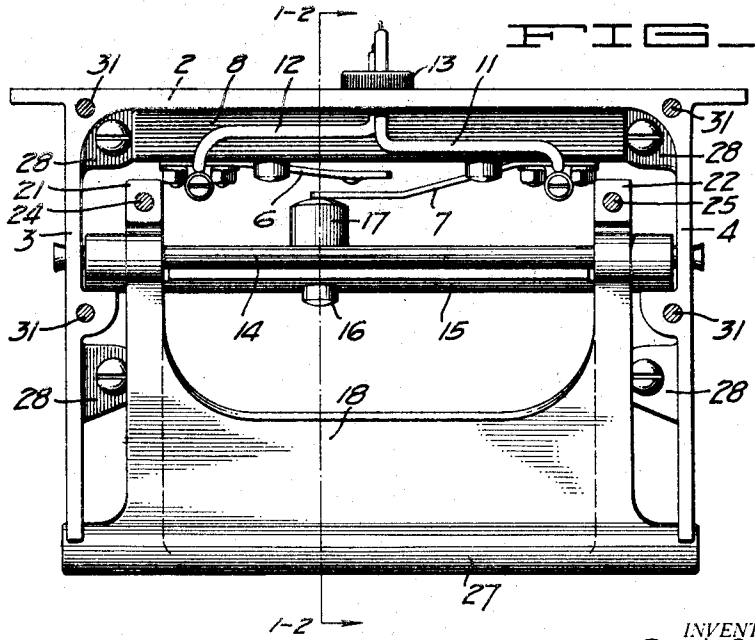


FIG. 3.



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ELECTRIC SWITCH

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My invention relates to switches and particularly to switches adapted to be used in banks in connection with burglar alarm systems. They are mounted on the floor at a point readily accessible to the bank teller so that in the event that the necessity arises, the teller can close the switch by means of his foot thereby tripping the alarm circuit without making such an act evident to strangers on the outside of his window. The great objection to the switches now in use is that they are subject to frequent accidental operation.

In general it is the object of my invention to provide a burglar alarm switch capable of being readily operated by a positive act of the teller but so constructed that two distinct foot movements are required to effect its operation.

Another object of my invention is the provision of a switch provided with an open ended hood in which is mounted a pair of relatively movable contacts adapted to be operated by the foot of a teller but protected by a pivoted guard which normally closes the open end of the hood and which must be raised by the foot of the teller before the contacts can be actuated.

Another object of my invention is the provision of a switch comprising an open ended hood within which are mounted a pair of relatively movable contacts, the accidental operation of which is prevented by a horizontally pivoted adjustable guard which normally extends across the open end of the hood.

My invention possesses other advantageous features, some of which with the foregoing will be set forth at length in the following description, where I shall outline in full that form of the invention which I have selected for illustration in the drawing accompanying and forming part of the present specification. Although I have shown but one embodiment of my invention in the drawing, it is to be understood that I do not limit myself to such form, since the invention as set forth in the claims may be embodied in other forms also.

Referring to the drawing:

Fig. 1 is a transverse section of my switch in its normally open position.

Fig. 2 is a transverse section of my switch in its closed position showing the manner in which it has been operated by the foot of a teller.

Fig. 3 is a section taken on the line 3—3 of Fig. 1 and looking in the direction as indicated by the arrows.

My invention comprises a hood generally designated as 1 and consisting of a rear wall 2, side walls 3 and 4, and a roof 5. A pair of relatively movable spring contacts 6 and 7 are secured to an insulating block 8 which in turn is mounted in any desirable manner to the rear wall 2 of the hood 1. Lead wires 11 and 12 may be passed thru the rear wall 2 thru an insulating bushing 13 and secured to their respective spring contacts by any suitable means such as binding posts as shown in the drawing. A rod 14 is supported by the side walls 3 and 4 and as shown in the various figures of the drawing this rod is positioned slightly below the roof 5 and intermediate the ends of the side walls 3 and 4. Journaled on this rod is an apron or contact actuating member 15 to which is secured by means of a screw 16, an insulating button 17. This insulating button 17 is so positioned on the apron that it normally engages the free end of the spring contact 7. A guard 18 is also journaled on the rod 14 and as shown in Fig. 1 normally projects downwardly and outwardly so as to extend across the open end of the hood 1. Extending rearwardly and integral with the movable guard member 18 are a pair of fingers 21 and 22. A pair of set screws 24 and 25 are threadedly secured thru the roof 5 and are adapted to register with the rearwardly extending fingers 21 and 22 respectively. The purpose of these set screws and the rearwardly extending fingers is to adjust the height of the outer end of the guard 18 so that it may be low enough to prevent any accidental entrance into the hood and at the same time be at such a height that the foot of a teller may be passed beneath it at will. The outer portion 27 of the guard 18 is preferably rounded so as to make it easily operated by the toe of the shoe. The end wall 2 and side walls 3 and 4 may be made of a single casting and may be provided with inwardly extending apertured lugs 28 by

means of which the entire device may be secured to the floor by screws or bolts. The roof 5 may be secured to the rear and side walls by any suitable means such as screws 31. In the form as shown in the drawing the end and side walls are first secured to the floor before the roof is placed in position. Although it is preferable to use a roof, as it serves to protect the operating mechanism, the switch may be used without it by merely providing lugs on the side walls for carrying the adjusting screws 24 and 25. Without a roof the structure or compartment so formed may be characterized as a stall in that it has but three sides.

The operation of my device is as follows:

The switch is anchored in any convenient readily accessible position on the floor and the leads 11 and 12 from the burglar alarm system are properly connected with the spring contacts 6 and 7. The height of the outer end 27 of the outwardly extending guard 18 is properly adjusted by means of the set screws 24 and 25 so that it prevents accidental entrance into the hood but still may be raised at will by the foot of a teller. When the teller desires to close the contacts of the switch he places the toe of his shoe beneath the outer end 27 of the guard, lifts it up slightly thereby permitting the toe of his shoe to be passed beneath the guard 18 and to come into contact with the apron or contact actuating member 16, thereby closing the relatively movable contacts 6 and 7 and consequently tripping the alarm. The switch circuit may be either of the open or closed type.

From the above disclosure it will be seen that I have provided a switch particularly adapted for use in banks and so constructed that its accidental operation is practically prevented but at the same time is readily operated by a positive act of the teller when so desired, is economically constructed and readily mounted.

I claim:

1. A switch comprising an open ended hood, a pair of relatively movable contacts supported within the hood, means for actuating said contacts, and a horizontally pivoted, outwardly projecting guard extending transversely across the open end of said hood, rearwardly extending fingers secured to said guard, and adjusting screws adapted to engage said fingers.

2. A foot operated switch comprising relatively movable cooperating switch contacts, a member movable by engagement of the foot of the operator with the same for effecting relative movement of said contacts, a guard arranged in front of said member to preclude accidental actuation of said switch contacts, and means for movably supporting said guard whereby it can be moved to an out of the way position by the foot of an operator to afford access to said first member when it is desired to actuate the switch.

3. A foot operated floor switch comprising relatively movable cooperating switch contacts, a member movable by engagement of the foot of the operator with the same for effecting relative movement of said contacts, a pivoted guard extending in front of said member and spaced from the floor a distance sufficient to enable displacement of said guard by the foot of the operator, said guard serving to preclude accidental actuation of said switch and adapted to be moved to a non-interfering position by the foot of the operator when it is desired to actuate the switch, and adjusting means for varying the normal position of said guard.

In testimony whereof, I have hereunto set my hand.

PAUL C. BUTTE.