I. JASCULCA.

BURGLAR ALARM.

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1,311,233. Patented July 29, 1919.

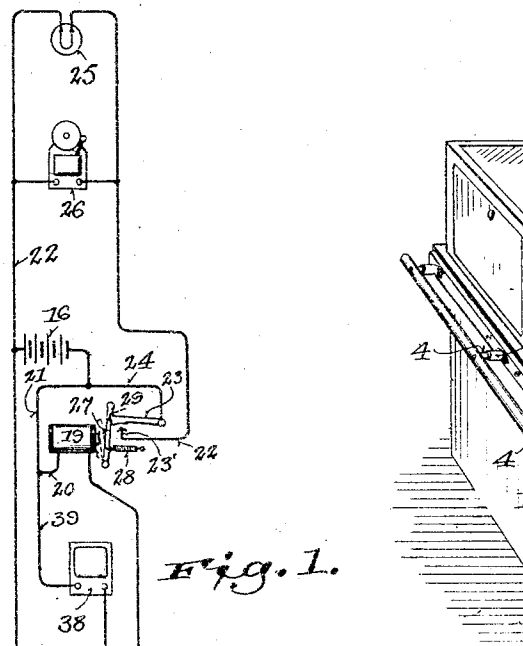
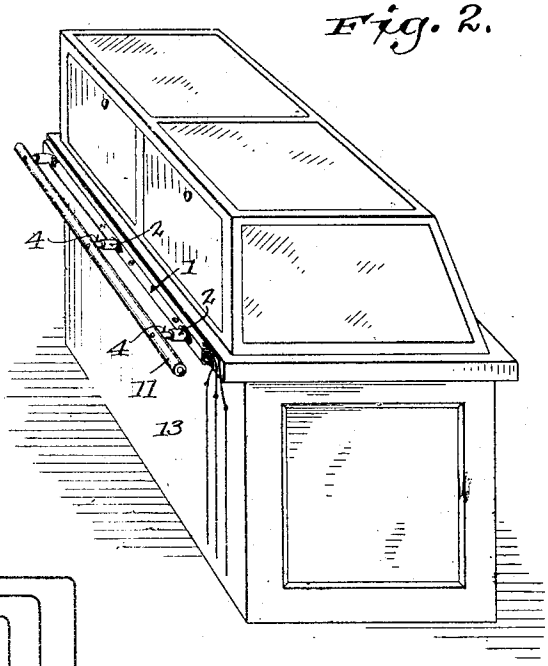
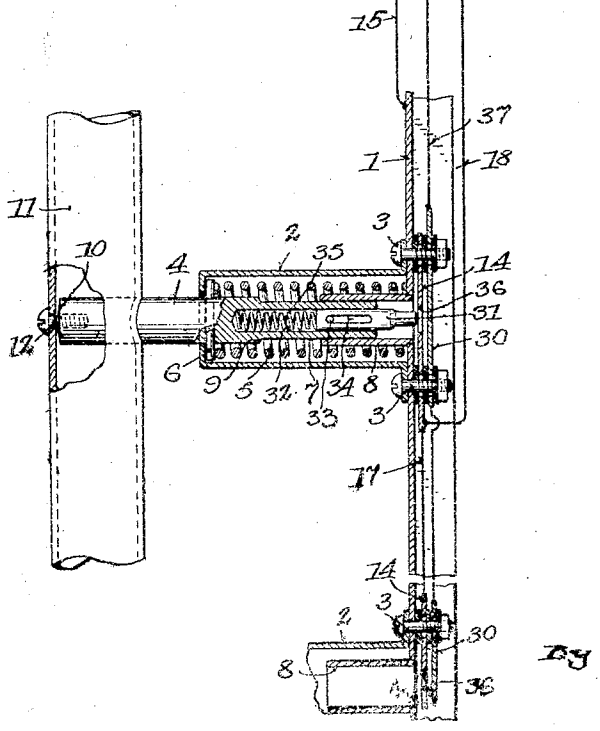


Fig. 1.

Fig. 2.





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By

UNITED STATES PATENT OFFICE.

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BURGLAR-ALARM.

1,311,233. Specification of Letters Patent. Patented July 29, 1919.

Application filed February 12, 1918. Serial No. 216,782.

To all whom it may concern:

Be it known that I, ISADORE JASCULCA, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Burglar-Alarms, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

The invention relates to burglar alarms and more particularly to alarms in case of day-light robberies of business and banking institutions.

When a robbery is made the parties in charge are generally covered by a revolver or other weapon by one or more of the burglars and asked to hold up their hands with the intention of preventing any one from sounding an alarm or offering any resistance. The present invention is designed to sound an alarm without the use of one's hands by the pressure of the body against a railing conveniently positioned behind a counter, office railing, desk, pay window or any other suitable support. With the present invention the party held up can readily grant the request to hold up his hands and at the same time by leaning or slightly pushing against the railing with his body can without arousing the suspicion of the burglar, sound an alarm at a distant point as in a police station, police box or other place where aid can be obtained.

The invention is further designed to provide a preliminary signal to any of the attendants in case they should accidentally lean against the railing when it is not desired to give an alarm.

With these and other objects in view the invention consists in the novel parts and combinations of parts hereinafter described and more particularly pointed out in the claims.

In the drawings: Figure 1 is a view of the device embodying the invention, showing it applied to a store counter.

Fig. 2 is a detail sectional view of one of the circuit closures connected to the railing showing diagrammatically the electrical connections for sounding the alarm.

In general the device comprises a member adapted to be pressed against by the body of the operator, a plurality of circuit closures, any one of which is adapted to be actuated by the movement of said member, and an electrically operated alarm at a distant point sounded on the closure of the circuit.

Referring to the drawings, the numeral 1 designates a metal supporting member to which tubular housings 2 are secured by bolts 3. A metal rod or plunger 4 is slidably mounted in each housing and is normally held in outer position by a coiled spring 5 within the housing and disposed between the member 1 and a stop pin 6 on the rod 4. The inner end 7 of each rod is of smaller diameter than the outer end and is slidably movable within a metal tube 8 secured to the member 1 within each housing 2, the shoulder 9 adapted to abut against the outer end of the tube 8 when said rod is moved to its innermost position. Each of these rods 4 has a preferably convex outer end 10.

The numeral 11 designates a railing which is shown as a tubular rod having openings therein in which the ends of the rods 4 are loosely mounted, said rods being secured to the inner side of the railing by screws 12 passing through the railing and the convex outer ends of the rods 10. The ends are made convex so as to permit a slight swinging movement between the rods and the railing so that pressure upon the railing at any point will serve to press inwardly the nearest rod without injuring the connection between the railing and the other rods. The supporting member 1 which carries the rods 4 and the railing 11 is adapted to be secured to any suitable support, such as the counter 13 and in such a position as to permit the railing 11 to be pressed against by the body of the operator. As shown in Fig. 1 the device is positioned below the edge of the counter below the waist line of the person behind the counter so that when he leans forwardly portions of his body will strike against the railing and move it forwardly thereby pressing the rods inwardly against the action of the springs 5. While I have shown the railing attached to a counter it will be understood that it may be secured to the edge of desks, office railings, pay windows in a bank from which it may be continued to the vault, directors' ante-room, etc., or in fact in any convenient location where it may be pressed against by the body of the operator but preferably in such a position as to be concealed or not readily noticeable to a party in front of the operator.

Circuit closures are adapted to be operated by each of the rods 4 when the railing is pressed inwardly. Each of these circuit closures consists of a fixed contact plate 14 and the rods 4 forming the movable contact. The rods 4 through their connection with the tubes 8, secured to the support 1, are in circuit with a conductor 15 which leads to a battery or other suitable source of current 16. The fixed contacts 14 for each of the closures are secured within the support 1 by the bolts 3 in a position to be engaged by the inner end of the rod 4 and are connected in series with each other through conductors 17 (only one being shown) and one of the contacts 14 is connected by a conductor 18 to one end of a relay 19, the other end of said relay being connected by conductors 20 and 21 to the other side of the battery 16 whereby when any one of the closures are operated, the circuit will be completed through the relay. The springs 5 normally hold the rods 4 out of contact with the plates 14 but when the railing 11 is moved inwardly one or more of the rods 4 will be brought into contact with its cooperative contact 14 and thus close the circuit through the relay 19 and the battery 16.

The relay 19 controls the operation of an alarm circuit which is formed by a conductor 22 connected at one end to the conductor 15 leading to the battery, a detent switch member 23 adapted to be brought into contact with the other end 23′ of the conductor 22 and connected to the other side of the battery by a conductor 24. Within this circuit is a visible signal, such as a light 25 and an audible signal, such as a bell 26 which are located at a place where aid can be obtained. The pivoted armatures 27 of the relay 19 is normally held in open position by a spring 28 and the member 23 has a detent notch 29 engaging the upper end of the armature 27 and is thus normally held open. When however the relay 19 is energized by the closing of the circuit as previously described, the armature will be attracted and release the member 23 which moves down into contact with the conductor 22 and the current from the battery 16 then flows through the conductor 24, member 23, conductor 22, light 25, bell 26 and back to the battery and because of the kind of connection used between the armature 27 and member 23 the alarm circuit will be closed until the relay is reset regardless of the opening of the main circuit by a withdrawal of pressure from the railing 11. Thus when the man behind the counter or railing is called upon to hold up his hands he may lean forwardly against the rail with his body thus closing one or more of the circuit closures which will energize the relay and thus close the alarm circuit and summon aid.

Under ordinary conditions to provide against accidental sounding of the alarm I have provided auxiliary circuit closures actuated by the inward movement of the rods 4. Each of these closures consists of a fixed contact plate 30 secured to the member 1 by the bolts 3, and a movable contact or plunger 31 which is slidably mounted within the bore 32 in the rod 4 and is limited in its outward movement in said bore by a pin 33 disposed in a longitudinal slot 34 within said plunger. This plunger is normally held in its outer position by a spring 35 disposed within the inner end of the bore 32 and acting against the head of plunger 31. An opening 36 is provided in the plate 14 to permit the end of the plunger 31 to pass through and contact with the plate 30. The contact plate 30 is connected by a conductor 37 to a buzzer 38 or other warning signal, such as a light which is connected by a conductor 39 to the conductor 21. As shown in the drawing, the plates 14 and 30 are insulated from each other and from the support 1. The plate 30 is connected in series with similar plates for the other closures which are identical with that just described. The movable contact 31 being secured within the rod 4 is in circuit with the battery 16 through the conductor 15.

When the operator presses accidentally against the railing 11 the plunger or plungers 31 will be moved inwardly against the plate or plates 30 completing the circuit through the buzzer 38 before the main contact is made to sound the alarm, the slotted connection between the plunger 31 and the rod 4 providing for this. The buzzer is located within hearing distance of the operator so that he is then warned to keep away from the railing and it also provides a means for testing out the circuit to see whether the line is working properly. When the plunger 31 is in contact with the plate 30 the current passes from the battery 16 through the conductors 21 and 31, buzzer 38, conductor 37, plate 30, plunger 31, through the device to the support 1 and thence through the conductor 15 to the battery. Of course the buzzer is operated when the operator presses inwardly to bring the main contacts together but on a release of the pressure upon the railing the buzzer stops while the alarm circuit remains closed until restored.

It will be understood that while I have shown the railing-operated circuit closures in circuit with a control circuit for an alarm I may use in this circuit other protective devices, such as an electrically operated vault door which is automatically closed when the railing is pressed against. In other words the railing-operated circuit closing device may be used in connection with different forms of alarm system and protective devices.

I am aware that the details of construc-

tion herein shown and described are subject to some modification and change and I therefore desire it to be understood that such changes in construction as come within the scope of the appended claims I deem to be within the spirit of my invention.

What I claim as my invention is:

1. In a burglar alarm, the combination, with a supporting member adapted to be secured to a supporting base, of a tubular housing fixed to the supporting base, a plunger having one end confined in the housing and normally yieldingly urged to its outward limit of movement, a railing pivotally connected with the other end of the plunger, a circuit closure in said housing adapted to be operated when the plunger is moved inwardly, electrical means controlled by the operation of said circuit closure for giving an alarm at a distance from the operator, and means for warning the operator against accidental operation of the alarm.

2. In a burglar alarm, the combination, with a supporting member adapted to be secured to a support adjacent the body of the operator, of a railing, connections between said member and said railing including a circuit closure adapted to be operated when said railing is pressed against by the body of the operator, electrical means controlled by the operation of said circuit closure for giving an alarm at a distance from the operator, and means for warning the operator against accidental operation of the alarm.

3. In a burglar alarm, the combination, with a railing and its support of movable connections between said railing and support to permit movement of said railing toward said support when pressed upon by the body of the operator, a circuit closure operated by the movement of said railing, a warning signal, electrical means for actuating said signal on the operation of said circuit closure to warn the operator against accidental movement of said railing, a second circuit closure, an alarm signal at a point distant from the operator, and electrical means for actuating said alarm signal on the operation of said second closure, said second closure being operated by pressure upon the railing after the warning signal is given.

4. In a burglar alarm, the combination, with a railing and its support, of rods secured to the railing and slidably mounted on said support, an electrical circuit including a source of current and a relay, switches in said circuit including said rods to close said circuit when any one of said rods is moved inwardly a predetermined distance by pressure against the railing, an alarm circuit controlled by said relay for sounding an alarm at a distance from the operator when said first circuit is closed, and means for warning the operator against accidental operation of the alarm.

5. In a burglar alarm, the combination, with a railing and its support, of rods secured to the railing and slidably mounted on said support, an electrical circuit including a source of current, switches in said circuit including said rods to close said circuit when any one of said rods is moved inwardly a predetermined distance by pressure against the railing, means for giving an alarm at a distant point when said first circuit is closed, auxiliary switches operated on the inward movement of said rods before the actuation of said main switches, and a warning signal in circuit with said source of current and said switches operated by the actuation of any one of said auxiliary switches.

In testimony whereof I affix my signature.

ISADORE JASCULCA.