

Dec. 27, 1932.

W. A. CORNYN

1,892,330

ALARM SWITCH

Filed Feb. 18, 1931

2 Sheets-Sheet 1

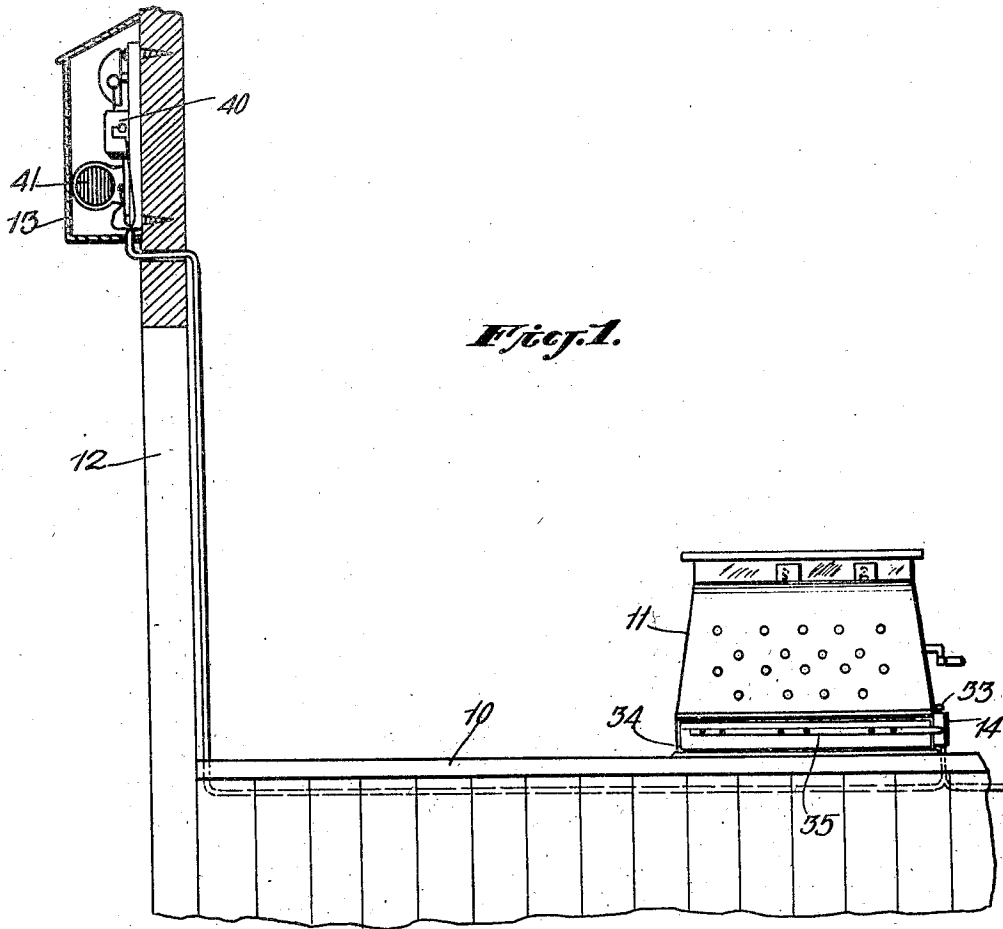


Fig. 1.

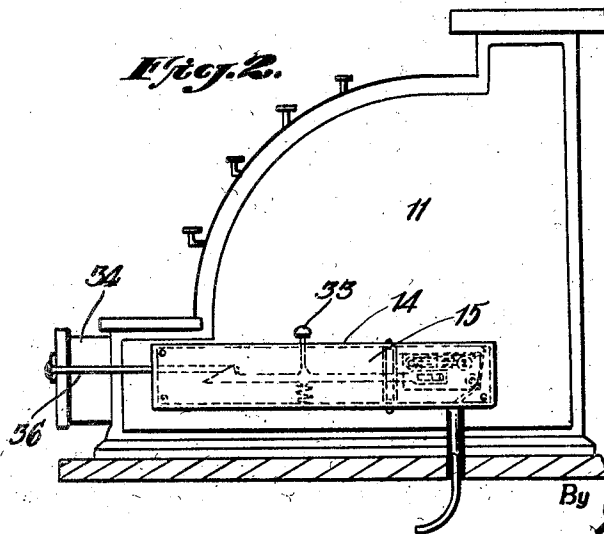


Fig. 2.

Inventor
W. A. CORNYN

By *Clarence A. O'Brien*
Attorney

Dec. 27, 1932.

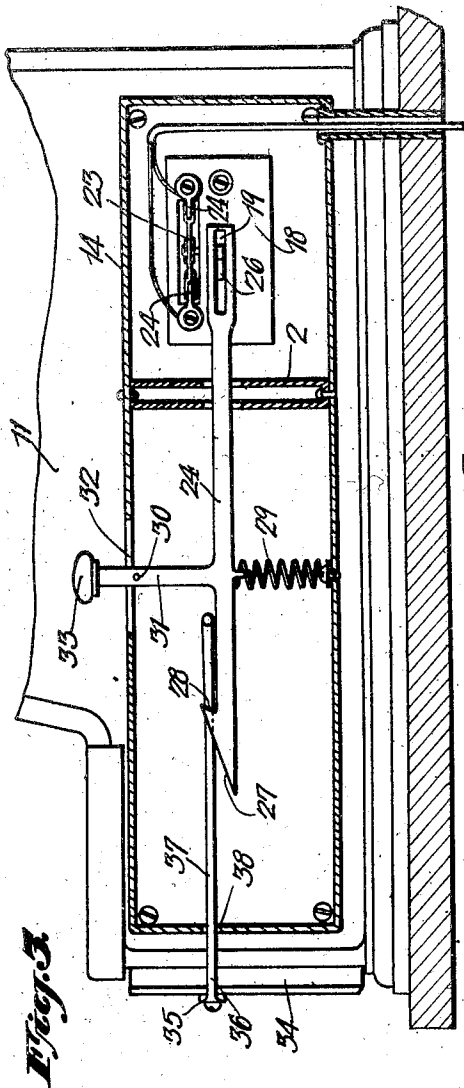
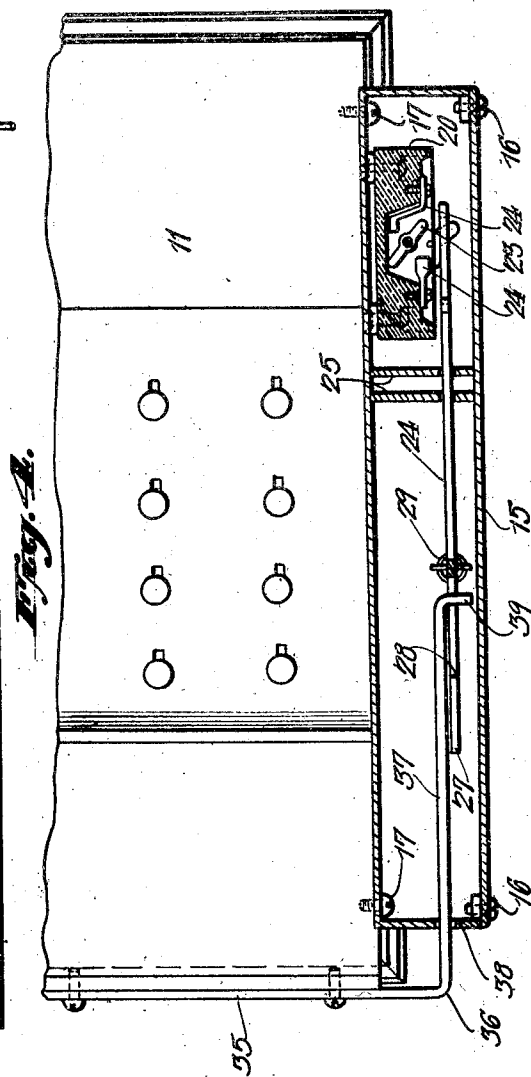
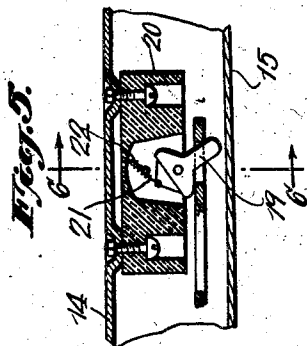
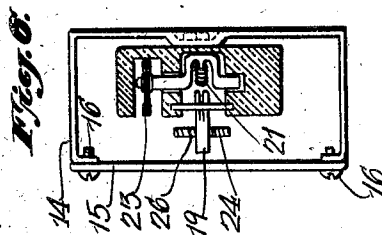
W. A. CORNYN

1,892,330

ALARM SWITCH

Filed Feb. 18, 1931

2 Sheets-Sheet 2



Inventor

W. A. CORNYN

By *Alvanor A. O'Brien*
Attorney

UNITED STATES PATENT OFFICE

WILLIAM A. CORNYN, OF NEW YORK, N. Y.

ALARM SWITCH

Application filed February 18, 1931. Serial No. 516,748.

This invention relates to improvements in alarm switches, and more particularly to such devices for use in connection with money drawers.

5 The primary object of the invention is to provide an attachment for cash register and other kinds of money drawers in which an audible and/or visible alarm is set off should an attempt be made to open the drawer by
10 one unfamiliar with the operation thereof. It will therefore be apparent that thefts from drawers containing money or other valuables may be detected and the thieves caught in the attempt.

15 Another object is to provide a money drawer alarm which may be applied to cash registers and money drawers now in use without requiring alterations in the construction thereof.

20 With these and other objects in view, the invention resides in the certain novel construction, combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly
25 pointed out in the appended claims, and are illustrated in the accompanying drawings, in which:

Figure 1 is a side elevational view with parts in section showing my invention in use.

30 Figure 2 is an end elevational view of a cash register equipped with my invention, and showing the drawer in partially open position.

35 Figure 3 is a vertical longitudinal sectional view through the house enclosing certain of the working parts of my invention, and showing the cash register drawer in closed position.

40 Figure 4 is a fragmentary top plan view of a cash register with the housing of the invention in horizontal section.

Figure 5 is a detail sectional view of the electrical switch.

45 Figure 6 is a vertical transverse sectional view on the line 6—6 of Figure 5.

Referring to the drawings by reference characters, the numeral 10 designates a counter or like support on which a cash register 11 is supported, while 12 designates a wall of
50 a building which supports a casing 13 on the

outer side thereof for housing certain parts to be presently explained.

My invention includes a rectangular shaped casing 14 which is provided with an open side normally closed by a removable
55 cover plate 15, and which is secured to the casing 14 by screws or like fastening elements 16. The casing 14 is secured to one side of the cash register 11 and is fastened thereto
60 by screws or the like 17.

Mounted within the housing 14 and supported from one of the walls thereof adjacent the rear end is an electric control switch 18 which is of the well known construction and preferably of the snap type wherein a pivoted
65 manipulating member 19 is mounted in a block of insulation 20. A spring 21 has one end connected to the inner end of the manipulating member 19 and its opposite end seated
70 against the bight portion of a crank 22, which has its bearings in the block 20, while fixedly secured to one of the trunnions of the crank is a cross contact arm 23 adapted to make contact when the switch is in "on" position
75 with spaced contact members 24, also fixed to the block 20. As before stated, the switch is of the well known construction wherein movement is transmitted from the manipulating member 19 to the contact arms
80 23 through the spring 21 and crank 22. In other words, as the point of connection between the spring 21 and the inner end of the manipulating member 19 is moved off center, the contact arm 23 will be moved into and out of engagement with the fixed contact 24,
85 depending of course upon whether the manipulating member is moved to "on" or "off" position.

Mounted within the housing 14 and extending lengthwise thereof is a catch member 24, the same being freely slidable through
90 bearings or partitions 25. The rear end of the member 24 is provided with an elongated slot 26 through which the manipulating end 19 of the electric switch extends, while the
95 forward end of the said member is provided with an upwardly inclined face 27, and with a shoulder 28. A spring 29 is interposed between the bottom wall of the casing 14 and the under side of the arm 24 to normally po-
100

sition the said arm in a predetermined plane, but which outward movement of the arm is limited by a stop pin 30 extending from opposite sides of an upwardly extending manipulating arm 31, which is formed integral with the member 24. The arm 31 extends through a slot 32 provided in the top wall of the housing, and terminates in a manipulating knob 33. The spring 30 abuts the underside of the top wall of the housing 14 when the parts are in normal position.

Fixed to the front of the sliding drawer 34 of the cash register 11 is the leg 35 of a substantially L-shaped bracket 36. The other leg or arm 37 of the bracket slides through an opening 38 in the front wall of the housing 14 and terminates in an angularly disposed shoulder or finger 39 which is always disposed on a plane just above the plane of the member 24 when the said member is in normal position. By this arrangement, the angular finger or stop 39 will be disposed in the path of the shoulder 28 on the catch member 24 for a purpose to be presently explained.

The electric switch 18 is in an electric circuit with an electric bell 40 and with a signal light 41, both of which are contained within the casing 13, although a window may be provided in the casing for visibly displaying the lights 41.

In operation, assume that the cash drawer 34 of the cash register is in closed position, and the parts are in normal position as best seen in Figure 3 of the drawings. The cashier or person authorized to operate the cash register when wishing to gain access to the contents of the drawer 34 will prior to the operation of the cash register, push downward upon the knob 33 which will of course move the shoulder 28 of the catch member 24 out of the path of the finger 39 provided on the inner end of the arm 37 which arm is in turn connected to the drawer 34. By so doing, the drawer 34 will open in the usual manner without in any way affecting the operation of the alarm device. In the event that the cash register is operated by one unfamiliar with the workings of the alarm device and assuming that the parts are as shown in Figure 3, it will be apparent that unless the knob 33 is pushed downward, the money drawer 34 in its outward movement will cause the finger 39 to engage the shoulder 28 provided on the forward end of the member 24. This engagement of the parts 39 and 38 will cause the member 24 to be drawn forward as it will be appreciated that the money drawers of cash registers and the like are spring actuated to automatically move the same to open position upon manipulation of the cash register. Thus outward movement of the drawer 34 as before mentioned will exert a pull upon the member 24, and which pull is transmitted to the manipulating member 19 of the electric switch 18 and will there-

fore cause the switch to snap to an "on" position, thus causing the contact member 23 to bridge the contacts 34 and close the electric circuit in which the bell 40 and light 41 are arranged. Both an audible and visible signal will be given so that an attempt of robbery of the contents of the money drawer will be frustrated. After the alarm is sounded, the parts may be returned to former position by pushing rearwardly upon the knob 33 to turn the switch to an "off" position, and upon closing of the money drawer 34, the finger 39 will ride up the inclined face 27 so as to be disposed behind the shoulder 28. It will of course be understood that the finger 39 also rides up the inclined face 27 on each actuation of the drawer 34 from open to closed position.

While I have shown and described what I deem to be the most desirable embodiment of my invention, it will be understood that various changes in construction may be resorted to if desired, and I do not limit myself to any thing less than the whole of the invention as set forth in the appended claims.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination with a support having a drawer slidably mounted therein, a housing mounted on said support, an arm secured to said drawer and extending into said housing, a shoulder on the free end of said arm, an electric circuit control switch mounted within said housing having a pivoted actuating member, a catch member loosely connected to said actuating member, a shoulder formed on the free end of said catch member, spring means acting upon said catch member to dispose said shoulder thereon in the path of the shoulder on said arm, and a manipulating element carried by said catch member and extending exteriorly of said housing by which said catch member may be moved against the action of said spring means to dispose the shoulder thereon out of the path of the shoulder on said arm.

2. In combination with a support having a drawer slidably mounted therein, a housing mounted on said support, an arm secured to said drawer and extending into said housing, a shoulder on the free end of said arm, an electric circuit control switch mounted within said housing having a pivoted actuating member, a catch member loosely connected to said actuating member, a shoulder formed on the free end of said catch member, spring means acting upon said catch member to dispose said shoulder thereon in the path of the shoulder on said arm, and a manipulating element fixedly carried by said catch member and extending exteriorly of said housing by which said catch member may be moved against the action of said spring means to dispose the shoulder thereon out of the path

of the shoulder on said arm, the extreme free end of said catch member being provided with an inclined face to be engaged by the shoulder on said arm when moving said drawer from a fully open position to closed position.

3. An alarm actuating device for use in connection with a slidable drawer comprising a housing, an electric control switch mounted within said housing and having a pivoted manipulating member, a catch member mounted in said housing and having one end loosely connected to said switch actuating member, a shoulder provided on the front end of said catch member, a manipulating arm fixed to and extending at an angle from said catch member and passing exteriorly through a slot in said housing, a spring acting upon said catch member to force said manipulating arm outwardly of said housing, stop means for limiting the outward movement of said manipulating arm to normal position said shoulder on a predetermined plane, and an actuating arm adapted to be fixedly connected to a cash drawer and slidable through a wall of said housing, the inner end of said actuating arm being provided with an angularly disposed finger for engagement with said shoulder upon outward movement of said actuating arm relative to said housing.

In testimony whereof I affix my signature.
WILLIAM A. CORNYN.

35

40

45

50

55

60

65