

Dec. 25, 1928.

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W. F. CLEGG ET AL

SAFETY MONEY CONTAINER

Filed April 5, 1926

2 Sheets-Sheet 1

Fig. 1.

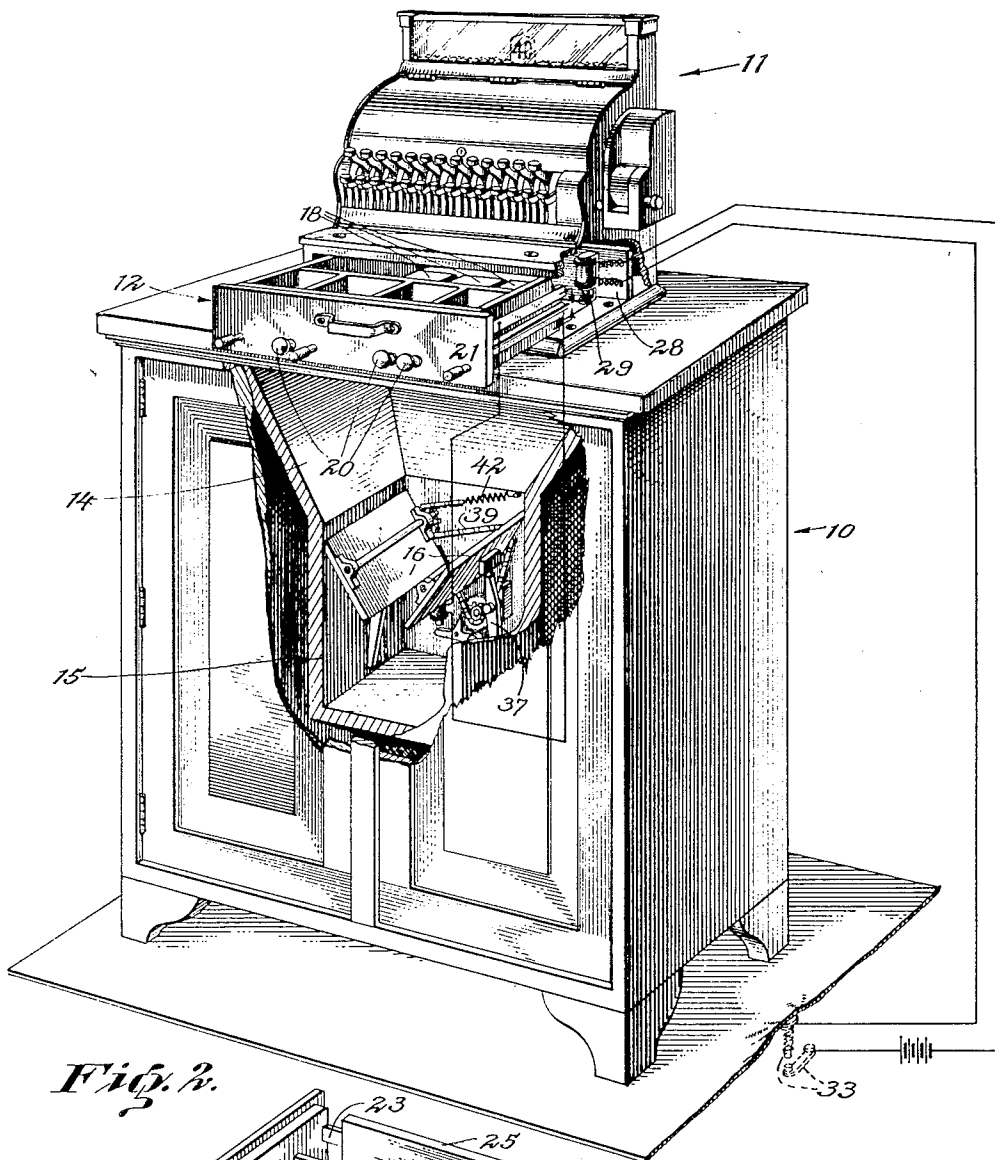
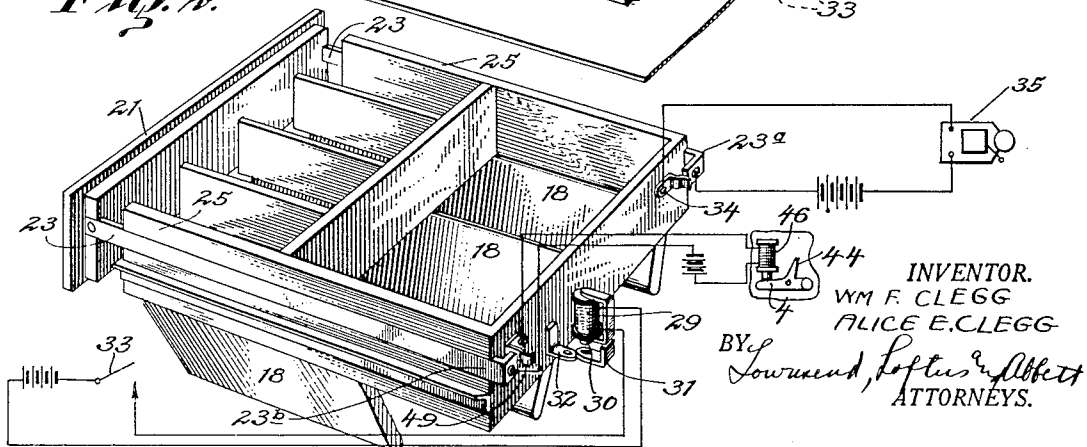


Fig. 2.



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2 Sheets-Sheet 2

Fig. 3.

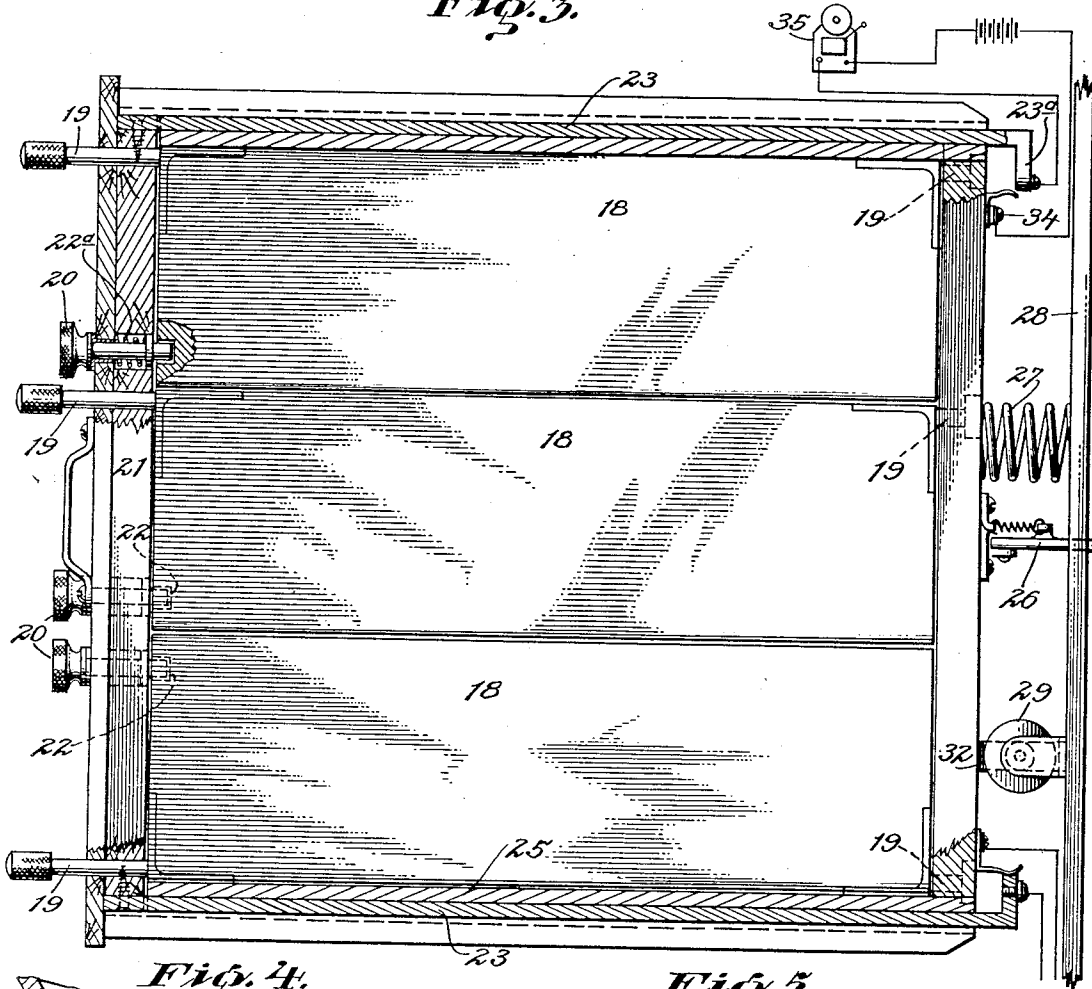


Fig. 4.

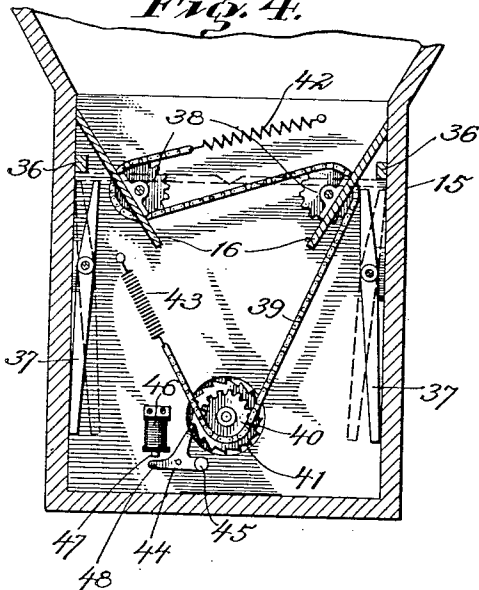
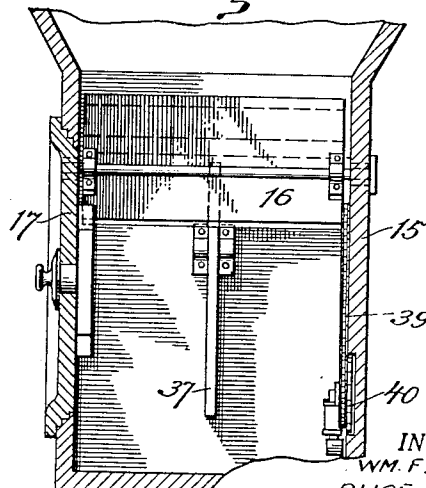


Fig. 5.



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UNITED STATES PATENT OFFICE.

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SAFETY MONEY CONTAINER.

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This invention relates to devices designed for the prevention of robbery of the cash on hand in commercial establishments during business hours.

Heretofore in business establishments, particularly branch banks and stores in outlying districts of the city, have depended entirely upon a cash register or till for containing the cash on hand for money changing purposes. As the money accumulated, the amount in excess to the necessary cash for changing purposes was transferred from time to time to a safe or was banked.

This prior practice permitted thieves and robbers to hold up the clerk in charge of the register and rifle the till with comparative ease and dispatch. Due to the small amount of time consumed in the entire operation, the robbers were seldom interrupted and were able to escape observed by no one except the clerk.

It is the principal object of the present invention to provide a money receiving device wherein the usual cash for changing purposes may be kept, and from which the excess cash may be expeditiously transferred by the clerk, without being observed, to a safety box at frequent intervals, and which will frustrate any attempt to rifle the till by automatically transferring the cash contained therein to the safety box when an unauthorized attempt is made to open the till; the safety box being safe from attack within the period of time usually at the disposal of this type of mauler.

In carrying out this object we provide a money receiving device embodying a cash drawer having an opening bottom. Beneath this drawer a safety box is disposed which is provided with a normally open top. The space between the drawer and the top of the safety box is enclosed to prevent access to the top of the safety box or bottom of the drawer. The bottom of the drawer may be opened at desired intervals, without opening the drawer, to transfer all or part of its contents to the safety box. This drawer is provided with an electrically controlled lock having a hidden control switch which may be actuated by an authorized person, without the latter being observed, to release the drawer so that it may open. In the event that an attempt is made to open the drawer without operating the control switch, the bottom of the drawer opens automatically and the contents gravi-

tate into the safety box, the top of which automatically closes. This safety box is disposed and constructed to frustrate any attack thereon within the period of time usually at the disposal of a robber during the business hours of a commercial establishment.

One form which the invention may assume is exemplified in the following description and illustrated by way of example in the accompanying drawings, in which:

Fig. 1 is a perspective view of an apparatus embodying the preferred form of our invention with parts broken away and in section to more fully disclose certain details of construction.

Fig. 2 is a perspective view of the drawer diagrammatically illustrating the manner in which certain features are obtained.

Fig. 3 is a plan view of the drawer disclosing its construction and the connecting mechanism between it and the rear of the cash register.

Fig. 4 is an enlarged fragmentary view in vertical section through the safety box disclosing the mechanism for closing the top thereof.

Fig. 5 is a vertical section through the safety box taken at right angles to that of Fig. 4 disclosing the disposition of certain of the operating mechanism for closing the top of the safety box.

Referring more particularly to the accompanying drawings, 10 indicates a cabinet or a portion of a counter of a commercial establishment, such as a store or branch bank. Arranged on this cabinet is a cash register 11 of any preferred design capable of registering the amount of cash received. This cash register is bolted or otherwise secured to the top of the cabinet to prevent its quick removal therefrom. The bottom of this cash register is open and immediately above the bottom it is provided with a till or cash drawer 12.

Communicating with the bottom of the cash register is a chute 14 which extends between the opening in the bottom of the cash register and the top of a safety box 15 disposed beneath the cash register and within the cabinet 10. At the junction between the safety box and the chute, the former is provided with a pair of top members 16 which are normally open but which are capable of uniting and forming a complete closure for the top of the safety box. At one side the safety box is provided with a door 17 having a com-

bination or other type of lock, which is normally effective in preventing access to be had to the safety box.

The bottom of the cash drawer or till in the register is formed in three sections 18, which are pivotally connected to opposite ends of the drawer by pivot pins 19, which are rigidly secured to the bottom sections at the sides thereof. At the front of the drawer these pivot pins 19 are provided with knobs, which are arranged at a spaced distance from the front of the drawer. These knobs may be utilized when the drawer is closed to turn the bottom sections 18 and thus open the bottom of the drawer to permit its contents to discharge into the safety box 15. To retain the pivotal bottom sections 18 of the drawer in position closing the bottom of the drawer, we provide spring-pressed latch pins 20. These latch pins are slidable through the front section 21 of the drawer and are adapted to be engaged with recesses 22 formed in the ends of the bottom sections contiguous to the front section of the drawer. Spring 22^a normally act to maintain the latch pins in engagement with these notches.

At the exterior of the front section of the drawer, the latch pins are provided with knobs which are abutted against the front section 21 of the drawer so that any movement of the front section 21 of the drawer relative to the bottom sections will disengage the pins from their respective recesses and permit the bottom sections of the drawer to swing downwardly by gravity, thus opening the bottom of the drawer and permitting its contents to discharge into the chute 14.

To permit this latter operation, the front of the drawer is frictionally held in place relative to the sides and bottom sections of the drawer by metallic arms 23 which are fixed at their forward ends to the front section 21 of the drawer, and extend along grooves formed in the sides of the side sections 25 of the drawer. At the rear of the drawer the arms 23 extend beyond the inner end of the drawer and are intumed permitting a slight amount of relative movement between the front section 21 and the drawer proper. The amount of movement permitted is just sufficient to cause disengagement of the latch pins 20 with their respective recesses, and thereby permit opening of the bottom of the drawer.

It should be stated that the drawer 12 is normally latched in closed position by a latch mechanism 26 of any preferred design and usually embodied in the construction of a cash register. This latch mechanism 26 is automatically released by depressing the keys of the cash register and when it is released the drawer is automatically thrown open by an expansion spring 27 interposed between the rear of the drawer and the rear wall 28 of the cash register.

In addition to this latching mechanism, we provide an electrically controlled lock for normally locking the drawer in closed position. This lock includes a solenoid magnet 29 having a vertically disposed armature 30. A keeper 31 is secured to the rear wall 28 of the cash register and has an aperture therein adapted to register with an aperture in a keeper 32 when the drawer 12 is in closed position. The keeper 32 is fixed to the rear section of the drawer 12. When the circuit of the solenoid magnet 29 is open, the armature 30 thereof protrudes through the registered apertures of the keepers 31 and 32 and locks the drawer 12 in closed position. When the magnet is energized, its armature 30 is withdrawn from the apertures in the keepers 31 and 32, permitting the drawer to be opened.

The circuit of the magnet includes a control switch 33 which may be placed in a secret place, known only to the authorized operator of the register. Prior to operating the cash register, this switch is closed energizing the magnet 29 and releasing the electrical lock. The register is then operated in an ordinary manner by depressing its keys, which registers the amount of the sale and simultaneously releases the latch 26 and opens the drawer.

If an attempt is made to open the drawer without closing the circuit of the solenoid magnet 29, the drawer will be held closed by the armature 30 of the magnet 29. Thus the effect of a pull exerted on the front of the drawer will be to move the front section 21 of the drawer outwardly from the drawer proper, releasing the bottom sections 18 which will swing downwardly and discharge the contents of the drawer into the chute 14, and thence into the safety box 15, thus frustrating any attempt to rifle the drawer of its contents.

We intend that such unauthorized attempt to open the cash drawer 12 be accompanied by sounding an alarm and closing the top of the safety box. We accomplish this by utilizing the intumed ends of the arms 23 connected with the front section 21 of the drawer to close an alarm circuit. One of the arms 23, or that indicated at 23^a, is electrically connected to one side of an electrical circuit. The other side of the electrical circuit is connected to a terminal 34 at the rear of the drawer 12, so that when the front section 21 of the drawer is moved forwardly relative to the drawer proper, the intumed rear end of the arm 23^a will contact with the terminal 34 and complete a circuit through an alarm member 35 interposed in the circuit. Simultaneous with the closing of the alarm circuit, the top members 16 of the safety box 15 are actuated to form a closure for the top of the safety box.

From Fig. 3 it will be noted that the closure members 16 of the safety box are pivotally mounted and are adapted to swing downwardly to close the top of the safety box 15.

When in such a position their opposite sides will abut against stop members 36 when they reach closed position.

Within the box 15 are two pivoted latch fingers 37 which will automatically swing to latching position the instant that the top sections 16 of the safety box 15 assume closed positions, thus preventing the top sections of the safety box from being forced downwardly.

The pivotal shaft of each top section 16 of the safety box 15 is fitted with a sprocket 38 over which a sprocket chain 39 is led. This sprocket chain is also led over a sprocket wheel 40, which has a relatively fixed ratchet wheel 41. The opposite ends of this chain 39 are connected with tension springs 42 and 43, which are anchored at their other ends to the safety box.

When the top sections 16 are in open position, the spring 42 is placed under tension, and when the sprockets are free to turn, will impart sufficient rotation to them to close the top sections. To control the sprocket wheels a pivotal pawl 44 is provided having a weighted arm 45, which normally tends to hold the pawl in engagement with the ratchet and prevent rotation of the sprocket 40, consequently holding the chain 39 from movement against the tension of the spring 42. Arranged in cooperative relation to the pawl 44 is a solenoid magnet 46 having an armature 47. When the circuit of this solenoid magnet 46 is open, the armature 47 will bear on an extension 48 of the pawl and overcome the weighted arm 45 thereof, and disengage the pawl from the ratchet 41.

Normally, when the device is in operation with the top sections 16 of the safety box 15 in open position, a circuit is maintained completed through the solenoid magnet 46. This permits the pawl 44 to remain in engagement with the ratchet 41 and thereby retain the top sections 16 in open position.

It is intended, however, that when an unauthorized attempt is made to open the drawer 12 that the circuit of the solenoid magnet 46 be opened. This, as described, will disengage the pawl 44 from the ratchet and permit the spring 42 to actuate the chain 39 to move the top sections 16 to closed position. This is accomplished by connecting the arm 23^b of the drawer 12 with one side of an electrical circuit in which the magnet 46 is interposed. The other side of this circuit is connected with a switch blade 49 fixed at the rear of the drawer 12. When the front section 21 of the drawer 12 is in normal position relative to the remainder of the drawer, the intumed end of the arm 23^b is in contact with the switch blade 49.

When an unauthorized attempt is made to open the drawer which results in moving the front section 21 away from the remainder of the drawer, the intumed end of the arm 23^b

moves out of contact with the switch blade 49 and opens the circuit of the solenoid magnet 46, as normally the circuit is closed through the solenoid magnet 46 permitting the pawl 44 to engage the ratchet. This, as described, holds the top sections 16 in open position. When the circuit through the magnet 46 is open, its armature 47 will drop by gravity and disengage the pawl 44 from the ratchet 41 and permit the spring 42 to close the top sections 16 of the safety box as described.

In operation of the device, when the clerk desires to deposit money in the cash drawer, he first closes the circuit through the electrical lock and then actuates the cash register in the usual manner. This will open the cash register drawer and permit money to be deposited therein or removed therefrom. At any time the clerk may, if he desires, transfer a portion or all of the money in the cash drawer to the safety box by merely releasing the latch pins 20. After the money has been transferred, the bottom sections may be turned back to normal position and relatched into place.

Should a thief enter and attempt to open the cash register drawer by operating it, pressing the cash register buttons will merely release the cash register lock. It will not however, release the electrical lock and should the thief exert a pull on the front section of the drawer, the latch pins 20 will disengage from the bottom sections and the latter will swing downwardly transferring the contents of the drawer to the safety box. Simultaneous with this, a circuit will be completed through the alarm member 35 and sound an audible alarm. Also the circuit will be broken through the electro-magnet 46 releasing the pawl from engagement with the ratchet and permit the tension spring 42 to exert a pull on the chain and thus close the top sections of the safety box. As soon as these top sections assume a closed position, the pivotal latch fingers will latch the same in position rendering it very difficult to open the safety box without entirely destroying it. It is intended, however, that the construction of this box be such that it will resist attack within a period of time usually at the disposal of the robber preying upon such establishments.

We intend that the clerk in charge of the device be unsupplied with the key to the safety box or combination thereof. This will prevent the robber from forcing the clerk to open it. This will be of particular advantage in branch banks and chain stores where a regularly armed and guarded agent calls at the branches at regular intervals to collect the surplus cash. In such instances the clerks may regularly transfer the excess cash in the cash register to the safety box retaining

only sufficient money for change making purposes. The excess cash being deposited in the safety box may be removed by the agent when making his call. As such agents usually employ armored cars and personal guards, there is slight danger of hold-up when removing the cash from the safety box. Should an attempted robbery occur, after it has been frustrated by the cash automatically transferring into the safety box, the clerk may put in a call for the agent to open the safety box and return a certain amount of cash to the register drawer.

Although in the present instance we have shown the device for use in connection with a cash register, it is obvious that the cash register is not entirely necessary to the success of the invention, as the ordinary drawer may be used in a casing enclosing it and the safety box.

From the foregoing it is obvious that we have provided a simple and inexpensive money receiving apparatus which will be ample protection against robbers during business hours of an establishment.

While we have shown the preferred form of our invention, it is to be understood that various changes may be made in its construction by those skilled in the art without departing from the spirit of the invention, as defined in the appended claims.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:

1. A device of the character described including a safety box, a drawer adapted under normal operation to retain its contents, lock means normally maintaining the drawer closed, and means adapted to be actuated by an attempt to open the drawer without releasing the lock means to permit the contents of the drawer to automatically transfer to the safety box.

2. A device of the character described including a safety box, a drawer having an opening bottom adapted under normal operation to retain its contents in the drawer, a lock having secretly located releasing means, and means adapted to be actuated by an attempt to open the drawer without releasing the lock to open the bottom of the drawer and permit its contents to transfer to the safety box.

3. A device of the character described including a safety box, normally open closure members for said box, a drawer adapted under normal operation to retain its contents, a lock normally retaining the drawer closed, and means whereby an attempt to open the drawer without releasing the lock will permit the contents of the drawer to automatically transfer to the safety box and actuate the closure members to close the safety box.

4. A device of the character described in-

cluding a safety box, normally open closure means for said safety box, a drawer having an opening bottom arranged above the safety box, adapted under normal operation to retain its contents, a lock having secretly located releasing means retaining said drawer closed, and means adapted to be actuated by an attempt to open the drawer without releasing the lock to open the bottom of the drawer and actuate said closure means to close the safety box.

5. A device of the character described comprising a cabinet, a safety box therein, a drawer in the cabinet above the safety box, an electrical lock for said drawer having a normally open circuit, a secretly positioned switch in said circuit to release the lock, and means whereby an attempt to open the drawer without releasing the lock will permit the contents of the drawer to automatically transfer to the safety box.

6. A device of the character described comprising a cabinet, a safety box therein, a drawer in said cabinet above the safety box, an electrical lock for said drawer having a normally open circuit, a secretly positioned switch for closing said circuit and releasing said lock to permit the drawer to open, said drawer having an opening bottom, and means whereby an attempt to open said drawer without releasing said lock will cause said bottom to open and permit the contents of the drawer to discharge into the safety box.

7. A device of the character described comprising a cabinet, a safety box therein, closure members for the top of said safety box, electrical means having a normally closed circuit for maintaining said closure members in open position, means for automatically moving said members to closed position when said circuit is opened, a drawer in said cabinet above the safety box, said drawer having an opening bottom, an electrical lock for said drawer having a normally open circuit, a secretly positioned switch for closing said circuit to release the lock, and means whereby an attempt to open said drawer without releasing said lock will simultaneously permit the bottom of the drawer to open and to open said normally closed circuit and cause said closure members of the safety box to close.

8. A device of the character described comprising a cabinet, a drawer therein having an opening bottom, said drawer having a front section capable of outward movement relative to the remainder of the drawer, said front section when in normal position retaining the bottom of the drawer in correct position, lock means having secretly positioned release mechanism normally retaining the drawer in closed position, a pull exerted on the front section of the drawer without releasing the lock causing the bottom of the drawer to open and discharge the contents of the drawer.

9. A device of the character described comprising a cabinet, a safety box therein, a drawer in the cabinet above the safety box and having an opening bottom, closure members for the top of said safety box, said closure members being normally in open position, the bottom of said drawer being operative from the exterior of the drawer without opening the same to discharge the contents of the drawer into the safety box, lock means having secretly located releasing mechanism, and means whereby a pull exerted on the drawer to open the same without releasing the lock will cause the bottom of the drawer to open and the closure members of the safety box to close.

10. A device of the character described comprising a cabinet, a safety box therein, a drawer above the safety box having an opening bottom, normally open closure means on the top of said safety box, lock means nor-

mally retaining said drawer closed, and means whereby an attempt to open the drawer without releasing said lock will open the bottom of the drawer and cause said closure means to close the top of the safety box. 25

11. A cash register drawer having sides and a back relatively fixed together, a front section for the drawer capable of outward movement relative to the sides and back, a bottom section for the drawer pivotally connected to the front and back sections, latch means between the front section and the bottom section normally maintaining the bottom section in correct position relative to the remainder of the drawer, said latch means being rendered ineffective and permitting said bottom section to swing about its pivots when said front section is moved outwardly relative to the remainder of the drawer. 30 35

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