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W. T. WRIGHT, SR

2,776,090

NIGHT DEPOSIT SAFE HAVING CARD-RECEIVING APPARATUS

Filed April 27, 1953

2 Sheets-Sheet 1

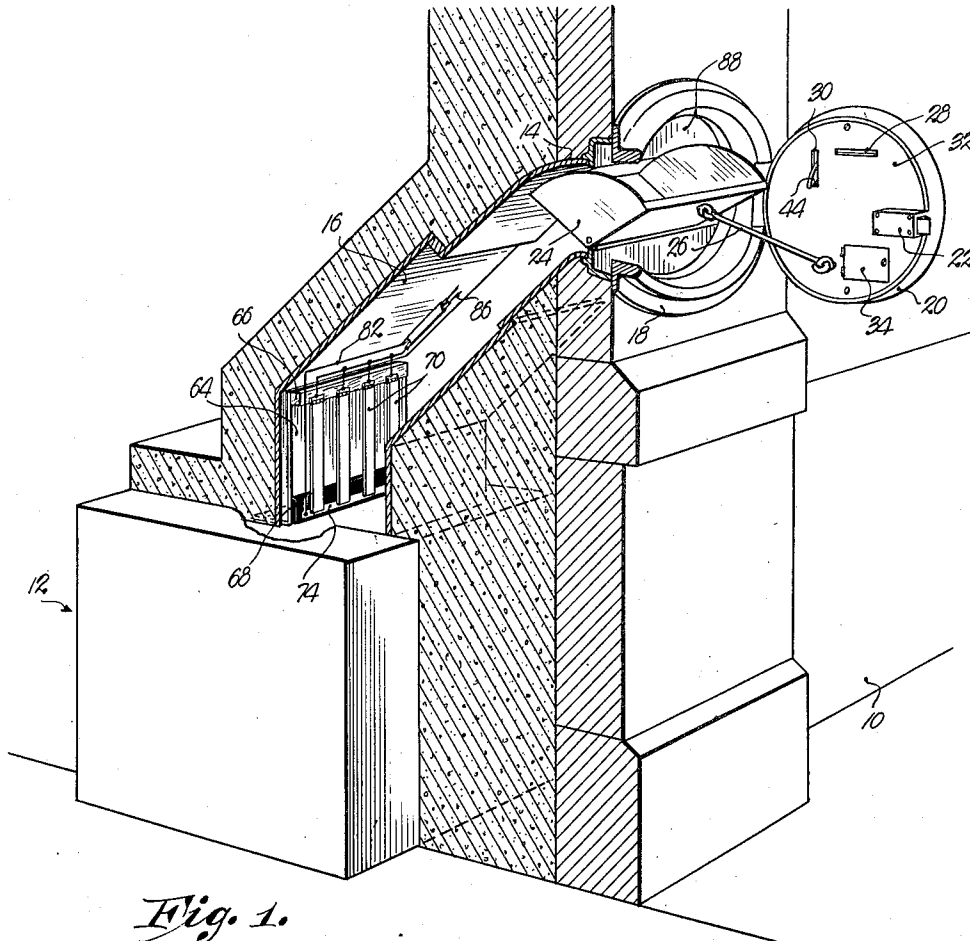


Fig. 1.

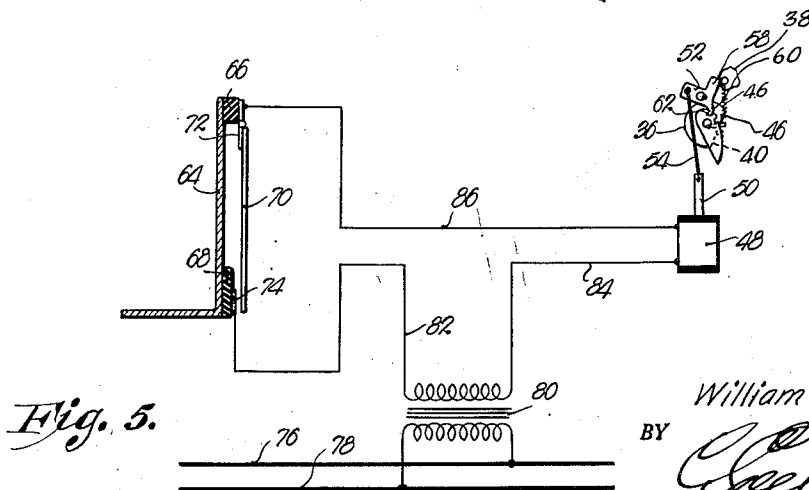


Fig. 5.

INVENTOR.
William T. Wright, Sr.
BY
Carl Young
ATTORNEY.

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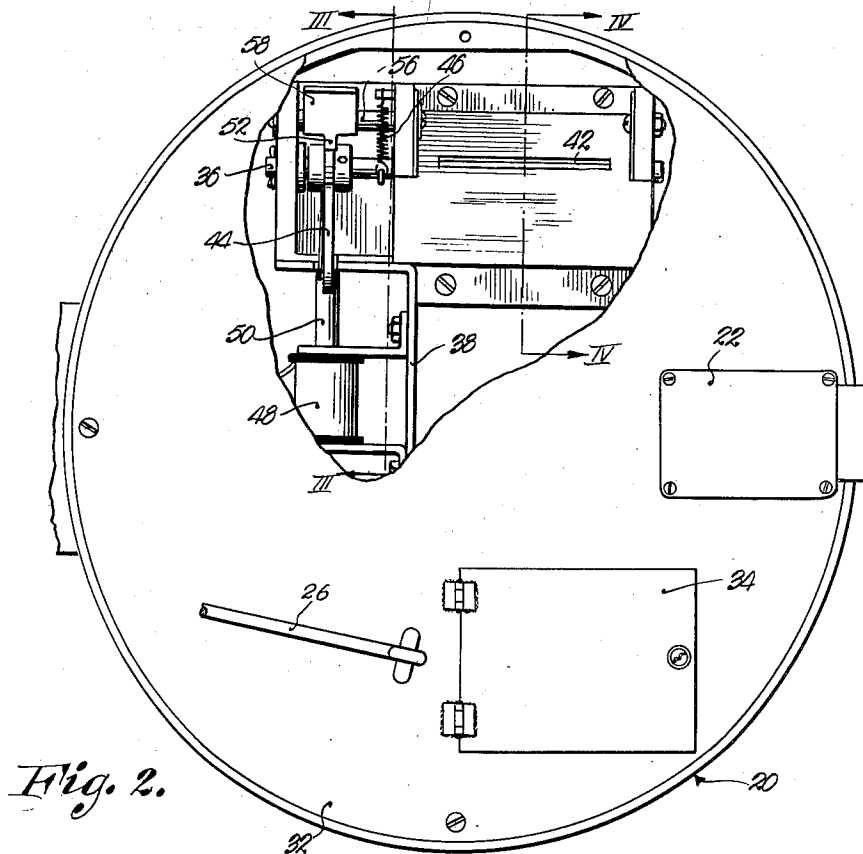


Fig. 2.

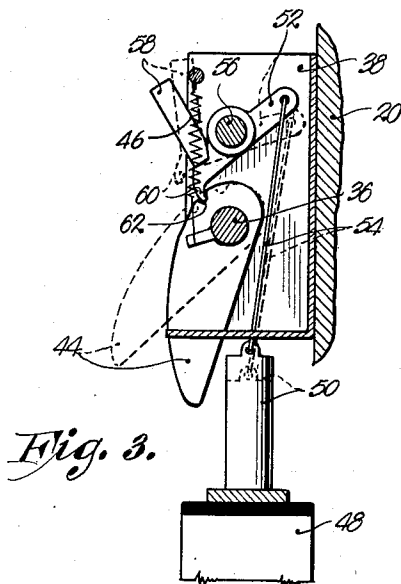


Fig. 3.

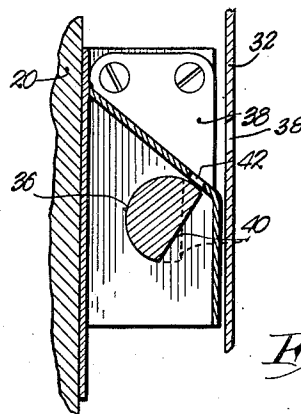


Fig. 4.

INVENTOR.
William T. Wright, Jr.
BY *Charles Henry*
ATTORNEY.

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NIGHT DEPOSIT SAFE HAVING CARD-RECEIVING APPARATUS

William T. Wright, Sr., Winfield, Kans.

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5 Claims. (Cl. 232-44)

This invention relates to improvements in night deposit systems for banks, and has for its primary object the provision of structure forming a part thereof to eliminate confusion and mistake resulting from failure by the bank to receive deposits alleged to have been made by its customers and to in effect establish a presumption that the deposit was not in fact made by placing a burden upon the customer to insert a card, deposit slip or the like each time a deposit is made.

Night deposit systems include a safe within the bank coupled with a chute leading through one wall of the bank and provided with an entrance door that may be unlocked by a customer from the outside of the bank. The deposit is normally made by dropping bags or other containers into the chute, whereupon the door is again locked by the customer. On the next business day an official of the bank opens the safe, removes the deposits and the necessary entries are made, usually when the depositor calls at the bank. Occasionally a customer will claim that a deposit has been made, whereas the bank did not receive the same and usually such embarrassing situation is an honest mistake on the part of the customer who inadvertently failed to make the deposit which he positively believed he had made. Whenever the cause for the discrepancy is not determined, it becomes necessary for the bank, in order to maintain its goodwill, to make good for the claimed deposit through its insurance protection or otherwise. The presumption of fraud is always present however, and therefore, it is extremely advantageous to provide a night deposit system wherein the chance for malicious accusations is eliminated or at least substantially diminished.

It is the most important object of the present invention therefore, to provide in a night deposit system a receiver for a card or the like, much in the nature of a deposit slip, which the depositor is required to insert each time a deposit is made so that in the absence of a card having been inserted, there will be a strong presumption that the customer also failed to make the deposit which he believed was made and which was not received by the bank.

Another important object hereof is to provide a card-receiving assembly for night deposit systems that includes a card-receiving slot in the hollow entrance door aforementioned, together with a gate that can only be opened to permit insertion of the card after the customer makes his deposit by inserting the same into the chute of the night deposit system that leads to the internal safe.

Another object of this invention is to provide a card-receiving assembly wherein the slot closing gate is automatically closed when the main entrance door of the night deposit system is closed and locked and which gate cannot be opened except upon contact by the deposit bag with gate control mechanism mounted in the chute and within the path of travel of the descending deposit bag.

Other objects include many important details of construction all of which will be made clear or become

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apparent as the following specification progresses, reference being had to the accompanying drawings, wherein:

Figure 1 is a cutaway, perspective view of a night deposit safe, the deposit receiving chute leading thereto, the access door and its associated frame, all illustrating the card-receiving apparatus forming the subject matter of the present invention.

Fig. 2 is an enlarged, inside elevational view of the entrance door of a night deposit system, parts being broken away to illustrate part of the card-receiving apparatus of this invention.

Fig. 3 is a fragmentary, cross-sectional view taken on line III-III of Fig. 2.

Fig. 4 is a fragmentary, cross-sectional view taken on line IV-IV of Fig. 2; and

Fig. 5 is a schematic wiring diagram showing the electrical components of the invention, together with parts of the card-receiving apparatus that are associated therewith.

A wall 10 forming a part of a bank or other business establishment using night deposit systems or other means for receiving material or articles when the business or office is closed, is illustrated in Fig. 1 of the drawing.

The aforementioned night deposit system normally includes a safe broadly designated by the numeral 12, mounted within the bank for receiving the deposits. The wall 10 has an opening 14 therein for receiving one end of an inclined chute 16 that communicates with the safe 12 and for receiving a frame 18 that also communicates with the chute 16. The frame 18, together with a swingable door 20 hingedly secured thereto, provides for closure means and the door 20 may be opened only after releasing a lock 22 through use of a key furnished to the customer.

Night deposit systems of this type normally have a swingable hopper 24 hingedly secured within the chute 16 at its uppermost end and joined to the door 20 by a connecting arm 26. When the door 20 is open the hopper 24 is tilted to the position shown in Fig. 1 of the drawings, making it virtually impossible to gain access to the safe 12. The deposit is placed in the hopper 24 and when the door 20 is re-closed, such deposit gravitates along the chute 16 into the safe 12.

In accordance with the present invention the hollow door 20 is modified by cutting a pair of slots 28 and 30 in the innermost panel 32 thereof, and a small access door 34 is provided for in the panel 32 to permit removal of deposit cards or the like that are inserted into the slot 28 by the customer. Door 34 may likewise be locked so that the same can only be opened by an official of the bank.

An elongated gate 36 for the slot 28 is rotatably mounted within the hollow door 20 behind and below the slot 28, gate 36 being carried by a frame 38 secured to the door 20 therewithin. The gate 36 has a flat surface 40 thereon whereby upon rotation of the gate 36 to the dotted line position shown in Fig. 4 of the drawings, a card may be inserted into slot 28 and through a slot 42 in frame 38 that registers with the slot 28 in panel 32, the card then descending into a receptacle within door 20.

An elongated finger 44 is secured rigidly to the gate 36 for swinging movement therewith and this finger 44 projects through the slot 30 as shown in Fig. 1. A spring 46 interconnecting the gate 36 with the frame 38 in the manner shown in Figs. 2 and 3 of the drawings, yieldably holds the finger 44 swung to the dotted line position shown in Fig. 3 of the drawings, extending outwardly through the slot 30 and therefore, yieldably holds the gate 36 open relative to the slots 28 and 42 as shown by dotted lines in Fig. 4.

A stop (not shown) limits the extent of swinging move-

ment of the gate 36 counter-clockwise, viewing Fig. 4, under influence of the spring 46.

The frame 38 also mounts a solenoid 48 within the door 20 below the gate 36 and the vertically reciprocable core 50 of the solenoid 48 which is spring-loaded and biased upwardly, is connected with a latch 52 by a link 54. Latch 52 is mounted for swinging movement on an axis parallel with the axis of rotation of gate 36 by means of a short shaft 56 carried by the frame 38. Latch 52 has a counter-weight 58 thereon which acts in conjunction with link 54 to hold the pawl 60 on latch 52 biased downwardly in engagement with the finger 44. Finger 44 in turn is provided with a notch 62 which receives the pawl 60 when the finger 44 is in the position shown by full lines in Fig. 3 of the drawings.

Means for controlling the solenoid 48 is disposed within the chute 16 and includes an L-shaped support 64 rigidly mounted within the chute 16 and having a pair of insulating strips 66 and 68 secured thereto. A plurality of elongated strips 70 of metallic or other conductive material are mounted upon the strips 66 through the medium of hinges 72 and a conductor bar 74 is secured to the strip 68 behind the strips 70. A pair of primary lines 76 and 78 coupled with a suitable source of electrical energy not shown, are coupled with a transformer broadly designated by the numeral 80, one side of the secondary for transformer 80 being joined to the bar 74 by line 82 and the other side of said secondary winding being coupled with solenoid 48 by a wire 84. The hinges 72 are all coupled with the solenoid 48 by line 86.

When the door 20 is closed, the finger 44 moves into engagement with an abutment 88 forming a part of the frame 18, thereby swinging the finger 44 inwardly to the full line position shown in Fig. 3 and rotating the gate 36 to the position shown by full lines in Fig. 4, closing the slots 42 and 28. The latch 52 thereupon swings downwardly under influence of the weight 58 which moves the core 50 upwardly to a position where the pawl 60 engages within the notch 62. The gate 36 is thereby locked in the closed position and remains closed when the door 20 is re-opened by the next customer to make a deposit into the safe 12. As soon as the latter's deposit is placed in the hopper 24 and the door 20 closed sufficiently to permit the deposit to gravitate along the chute 16, such deposit will come into contact with one or more of the strips 70 and swing the latter inwardly to a position engaging the conductor bar 74. This momentarily closes the circuit through the solenoid 48 and when the core 50 is retracted downwardly, the latch 52 will be swung by virtue of the link 54 connected therewith, to a position moving pawl 60 out of the detent 62. Thereupon, spring 46 will swing the finger 44 outwardly to the dotted line position shown in Fig. 3, opening the slots 28 and 42 and permitting the customer to reopen the door 20 and, after reopening the door to insert a deposit card therein. Thereafter, when the door 20 is fully closed within the frame 18 and locked, the gate 36 will again be closed by virtue of finger 44 moving against the abutment 88 and being swung back to the full line position of Fig. 3, against the bias of spring 46.

The deposit cards to be inserted in the slots 28 and 42 each have thereon the name of the depositor and the date and amount of his deposit. When the deposits are removed from the safe 12 by an official of the bank, he also opens the door 20 and the door 34 to remove the deposit cards that have been placed in the door 20 by the customers of the bank making deposits and reconciles the cards with corresponding deposits when the latter are taken from the depository, whereupon a record is kept of both the card and the deposit.

It is now seen that the requirement by the bank that the customers insert a card in the slot 28 each time a deposit is made will minimize arguments and tends to place the bank in a more favorable position when it informs any customer that a deposit alleged to have

been made, was not in fact found in the safe 12 on the day following the alleged deposit.

The apparatus hereof is easily installed within existing night deposit systems, is inexpensive to manufacture and as became clear from the above description, it is positive in its operation and capable of fulfilling all of the objects initially set forth herein.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. In a night deposit system for banks having a wall provided with an opening; a receiving safe within the bank; a chute interconnecting said opening and said safe; closure means for said opening including a frame and a hollow door provided with a card-receiving slot and means for rendering cards therewithin accessible; a gate for said slot; means mounting the gate on the door; means connected with the gate for yieldably holding the same biased open; structure connected with the gate and engageable with said frame when the door is closed for closing the gate; latch means on the door and normally engaging said structure for locking the gate closed; and means in the chute within the path of travel of deposits inserted in the chute when the door is open for engagement thereby and operably coupled with said latch for releasing the latter.

2. In a night deposit system for banks having a wall provided with an opening; a receiving safe within the bank; a chute interconnecting said opening and said safe; closure means for said opening including a frame and a hollow door provided with a card-receiving slot and means for rendering cards therewithin accessible; a gate for said slot; means mounting the gate on the door; means connected with the gate for yieldably holding the same biased open; structure connected with the gate and engageable with said frame when the door is closed for closing the gate; latch means on the door and normally engaging said structure for locking the gate closed; a solenoid mounted on the door and connected with said latch for releasing the latter; and means in the chute within the path of travel of deposits inserted in the chute when the door is open for engagement thereby and operably coupled with said solenoid for energizing the latter.

3. In a night deposit system for banks having a wall provided with an opening; a receiving safe within the bank; a chute interconnecting said opening and said safe; closure means for said opening including a frame and a hollow door provided with a card-receiving slot and means for rendering cards therewithin accessible; a gate for said slot; means mounting the gate for rotation on the door; means connected with the gate for yieldably holding the same rotated to an open position; a swingable finger connected with the gate and engageable with said frame when the door is closed for rotating the gate to a closed position; latch means on the door and normally engaging said finger for locking the gate closed; and means in the chute within the path of travel of deposits inserted in the chute when the door is open for engagement thereby and operably coupled with said latch for releasing the latter.

4. In a night deposit system for banks having a wall provided with an opening; a receiving safe within the bank; a chute interconnecting said opening and said safe; closure means for said opening including a frame and a hollow door provided with a card-receiving slot and means for rendering cards therewithin accessible; a gate for said slot; means mounting the gate on the door; means connected with the gate for yieldably holding the same biased open; structure connected with the gate and engageable with said frame when the door is closed for closing the gate; latch means on the door and normally engaging said structure for locking the gate closed; a solenoid mounted on the door and connected with said latch for releasing the latter; an electric circuit for said solenoid; and switch means coupled with said circuit

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and disposed in the chute within the path of travel of deposits inserted in the chute when the door is open for engagement thereby for energizing the solenoid.

5. In a night deposit system for banks having a wall provided with an opening; a receiving safe within the bank; a chute interconnecting said opening and said safe; a hollow card-receiving body on the wall exteriorly thereof, said body having a card-receiving slot and means for rendering cards therewithin accessible; a gate for said slot; means mounting the gate on the body; means 10

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connected with the gate for yieldably holding the same biased open; structure connected with the gate and movable to and from a position for closing the latter; latch means on the body and normally engaging and structure for locking the gate closed; and means in the chute within the path of travel of deposits inserted in the chute for engagement thereby and operably coupled with said latch for releasing the latter.

No references cited.