A. E. JACOBS.

REGISTERING BANK.

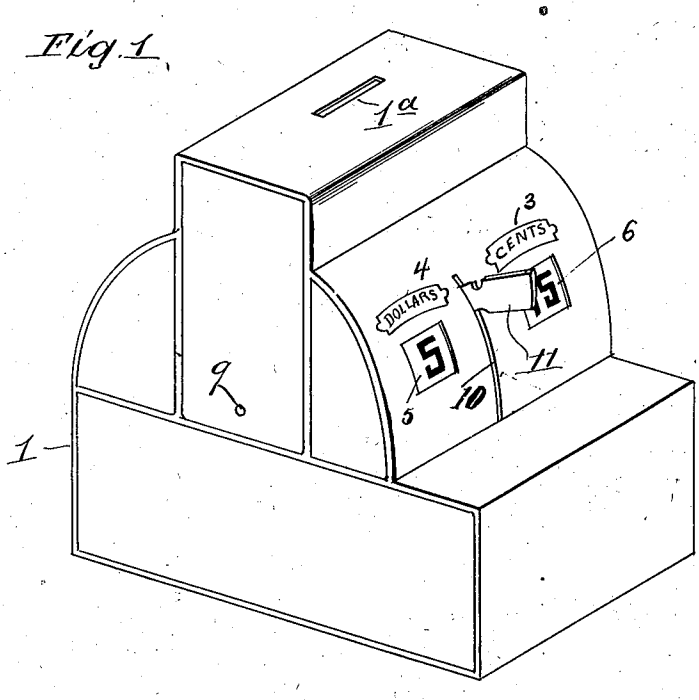
APPLICATION FILED SEPT. 10, 1908.

964,025.

Patented July 12, 1910.

3 SHEETS—SHEET 1.

Fig. 1.



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3 SHEETS—SHEET 2.

Fig. 2

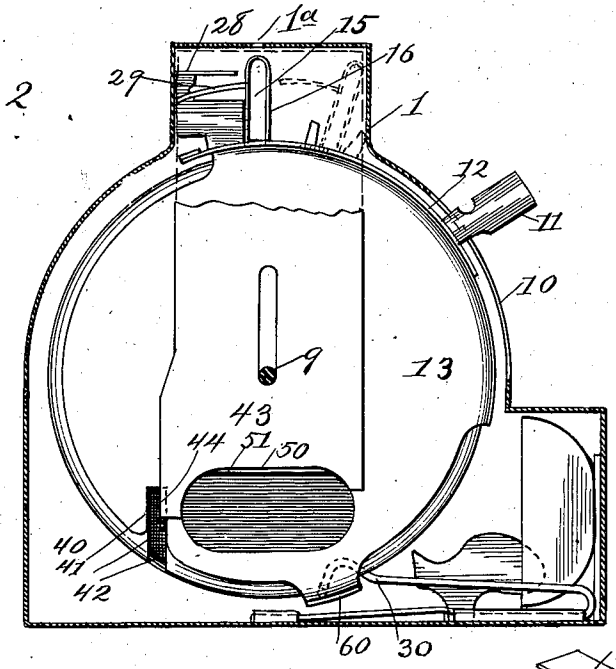


Fig. 3

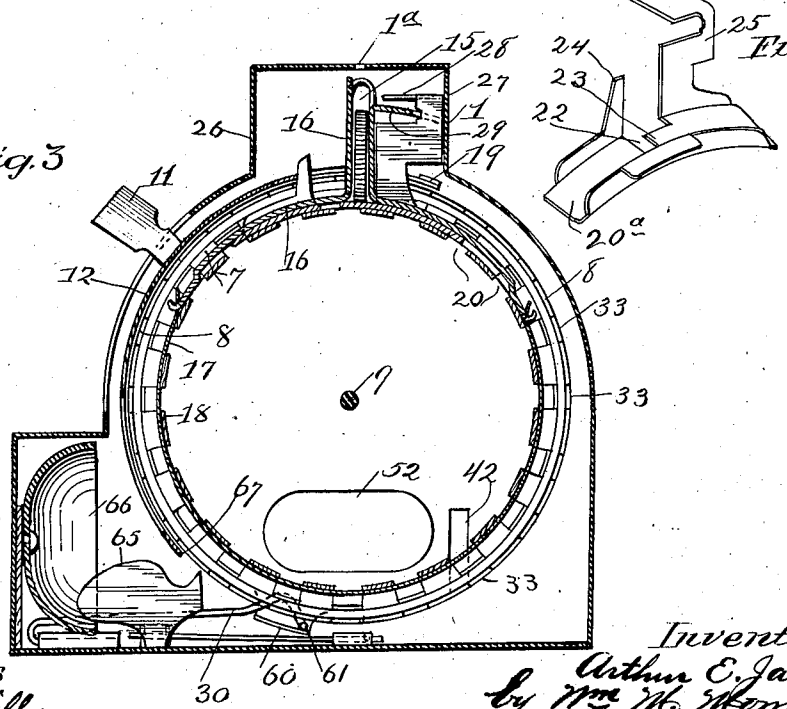
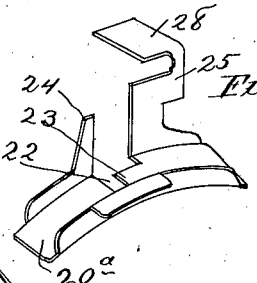


Fig. 8.



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3 SHEETS—SHEET 3.

Fig. 4

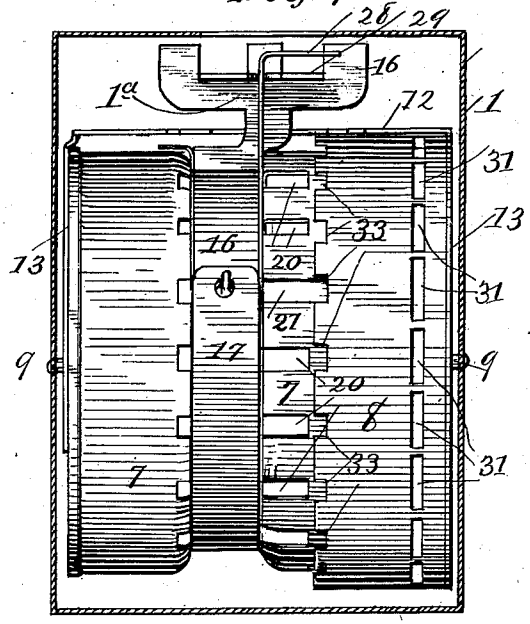


Fig. 5

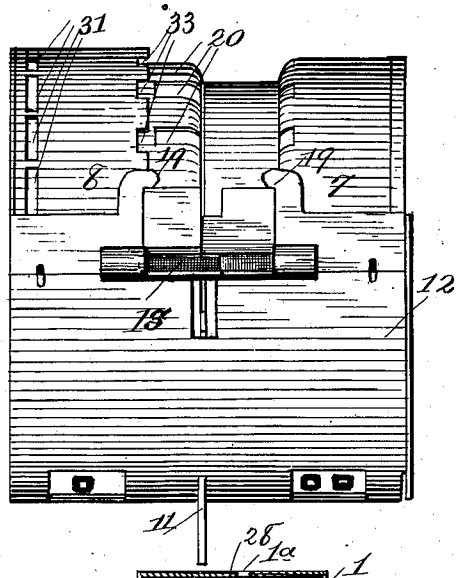


Fig. 6

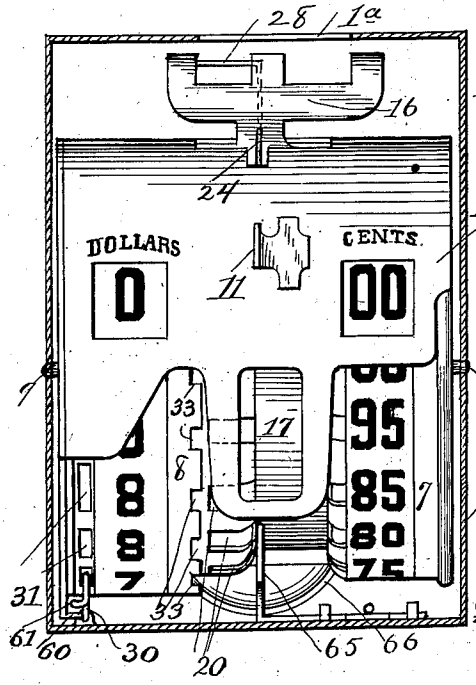


Fig. 7

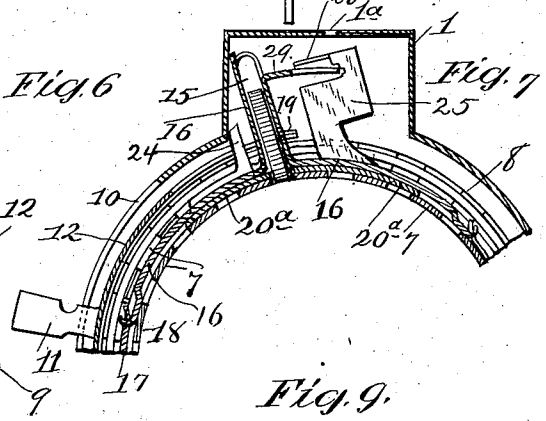
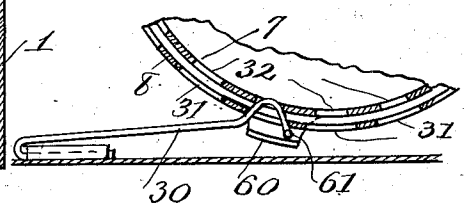


Fig. 9.



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UNITED STATES PATENT OFFICE.

ARTHUR E. JACOBS, OF CLEVELAND, OHIO.

REGISTERING-BANK.

964,025. Specification of Letters Patent. Patented July 12, 1910.

Application filed September 10, 1908. Serial No. 452,489.

To all whom it may concern:

Be it known that I, ARTHUR E. JACOBS, a citizen of the United States, and resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Registering-Banks, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

The objects of the invention are to provide a self registering coin safe in which the operating parts form the vault or protected inclosure, and hence the addition of gearing and counting and registering mechanism to the vault is dispensed with, and the construction and arrangement of parts is simplified and made practicable and efficient in every way.

A further object is to provide a form of construction preferably employing sheet metal parts, whereby the device can be made quickly and in large quantities, with the minimum amount of skilled labor expended thereon.

The invention comprises, a rotatable vault composed of cylindrical and cup shaped parts, one sleeved over the other and perforated at regularly spaced intervals for the insertion of the coin, one portion provided with numerals representing units and the other provided with numerals representing tens.

Other features of the invention are coin operated means for rotating the vault portions and a ratchet device which will permit of the movement of one portion while detaining the other portion. Also a key plate which prevents the entrance of a coin until the unit portion has been rotated through a spaced interval to present to view the register number required, and one or more elongated slots in the units portion adapted to register in turn with marginal slots in the tens portion and adapted to receive the coin, the tens portions then rotating together one or more times in a complete rotation of the unit member.

The device also consists in the combination and arrangement of the various parts and construction of details, as hereinafter described, shown in the accompanying drawings, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the complete registering bank; Fig. 2 is a transverse section through the outer case showing the cylindrical vault in elevation and showing the sliding door opened to release the coin; Fig. 3 is a vertical section through both case and vault; Fig. 4 is a rear elevation of the vault; Fig. 5 is a plan view of the device; Fig. 6 is a front elevation of the vault; Fig. 7 is a transverse section of the upper portion of vault and coin slot showing the slot opened to receive the coin; Fig. 8 is a detail view in perspective of the key plate; Fig. 9 is a transverse section of a part of both portions of the vault through the ratchet openings and showing the ratchet spring engaging the same.

In these views 1 is the outer case provided with the horizontal coin opening 1^a, and with observation openings 3, 4, 5, and 6 in its front wall, through which can be read the amount deposited in dollars and cents, or other denominations representing at 6 the units and at 5 the multiple number or numerals of those members.

Within the case 1 are pivotally mounted the cylindrical drum 7, which also comprises the units wheel, and the cup shaped portion 8, which also comprises the tens wheel. The nickel coin or five cent piece is taken by way of example to represent the unit, in this description and the dollar represents the multiple thereof, there being twenty divisions upon each vault portion. The total sum registerable by means of the tens wheel is therefore $10.00. These two portions form a vault adapted to store the coins and the cup shaped portion is sleeved over the open end of the other or cylindrical portion. A central pivot pin 9 which also passes through the case supports the vault in its position, and upon this pin the portions are adapted to rotate.

The units wheel is marked on its cylindrical face with the regularly spaced numerals 0 to 95 inclusive, increasing by intervals at 5, each 5 representing one unit. The tens wheel is marked at regular intervals with the numerals 0 to 9 inclusive each numeral being repeated to correspond with the twenty intervals necessary in the nickel or unit column, to complete one dollar.

In the front of the outer case is a vertical slot 10 in which plays the lever 11 which is secured to a curved flash plate 12, which moves between the vault and the case, and

is provided with vertical side portions 13, 13 pivoted upon the central pivot pin 9 described. By means of this flash plate the vault portions can be rotated as soon as a coin is introduced into the coin opening 1ª in the following manner. The coin falling into this opening is received into a coin chute 15 formed preferably by bending upon itself a sheet metal plate 16 and making the coin slot therein. The extremities of this plate are secured to a strap 17 and the plate and strap are secured upon a reduced portion 18 of the unit cylinder so as to turn freely circumferentially thereon. This flash plate is provided with inwardly turned lugs 19, 19 which pass underneath the coin slot 15 one on each side of the center thereof. These lugs engage with a coin introduced into the coin slot. The opening between these lugs is just right so that the desired coin is engaged but they will not engage smaller coin.

In the units cylinder are a number of regularly spaced coin openings 20, 20 corresponding in number with the number of numerals in the series marked thereon and corresponding preferably in position therewith, and also adapted to register therethrough when permitted to do so. Two of these openings as 21 are shown longer than the others and the use of these openings will be described farther on, and they are employed in the revolution of the tens wheel which occurs twice in the complete revolution of the units wheel, in this instance.

To prevent the coin from falling directly through the coin slot and through the slot in the units wheel or cylinder which registers therewith, a key plate 20ª is employed, movably secured underneath the coin slot plate 16. This is provided also with a slot 22 through which the coin can pass when the parts register, and with a guard plate 23 which when moved over the coin opening in the cylinder will prevent the coin from falling until it is removed. The key plate is also provided with elevated lugs 24 and 25 adapted to alternately strike against the sides 26 and 27 of an elevated portion of the case, or against other suitable stop devices for limiting the movement of the key plate. When the flash plate is pulled down and the lug 24 strikes against the stop 26, the stop will be moved back from the coin slot and the coin will fall through and the key plate is moved back again to cover the coin slot when the flash plate moves up again and the lug 25 strikes against the side 27. The shape of the case however is not essential to the invention but its cash register appearance is convenient for use and increases its stability.

A platform is formed by means of horizontal portions 28 and 29 of the coin slot and key plates, which prevents the introduction of a coin when these parts are pulled over by the movements of the flash plate.

To control the movements of the units and tens wheels and to prevent them from both turning together except when the long slots register with the slots in the units wheel, a spring pawl 30 is employed which as shown is secured to the case, and is shaped to enter the ratchet slots 31 and 32 in the units and tens wheels respectively and in this manner to engage them both simultaneously. When therefore the units wheel is pulled around from one interval to the other, the pawl is adapted to still engage with one of the ratchet openings in the tens wheel and prevent it from revolving until one of the elongated slots permits the coin to engage with the tens wheel and pull both wheels over together. To accomplish the action last referred to the tens wheel is provided with partial coin slots 33 in its inner margin which when one of them registers with one of the elongated slots or openings 21 in the units wheel, receive the coin, which can not however pass until the stop plate is removed. Therefore while the coin is in the elongated slot thus formed the movement of the flash plate will revolve both of the vault portions or hollow wheels and thus bring to view the multiple number which represents either 10 or 20 times the amount of each deposit, which if nickels would represent fifty cents or one dollar, and each complete revolution would bring up the next higher multiple and so on until $10.00 are registered when the record commences anew. The total amount being adapted to the desired capacity of the bank.

In résumé of the operation of this device when the lever is pulled down through one movement, the flash plate covers the openings during the first half of the movement, then the coin dropped into the coin chute or slot is engaged by the horizontal lugs on the flash plate and is pulled around together with the units cylinder, through one spaced interval, and until one of the lugs on the stop plate engages the side of the case. At this time the pawl 30 will have engaged with a fresh ratchet slot in the units wheel and locked the parts, and the guard plate will have been pushed aside to release the coin, which will fall into the interior of the vault. Meanwhile the horizontal plates on the stop and coin slot plates will bar the way of introduction of another coin until the flash plate is thrown up again. When the required number of coins are in the vault, the slots 40, 41 and 42 respectively in the outer edges of the concentric flash plate, and two vault portions will register with each other, and a sliding door 43 provided with a lug 44 normally placed exterior to the vault can be moved, the said lug sliding freely in these registering slots, and

the door will uncover the openings 50, 51 and 52 in the flash plate and two vault portions, so that the coin can be readily removed.

To prevent the spring pawl from being pressed down from the ratchet openings by means of a tool introduced into one of the observation openings in the case, an edge of the flash plate is turned inwardly at 60, and the spring extremity 61 will be retained thereby until the flash plate has moved far enough to cover said openings. The hammer 65 of a bell 66 may be tripped by an extension 67 of the flash plate if desired and thus will sound when the flash plate is moved.

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

1. In a registering bank, a vault therefor, and a case in which said vault is pivoted, the said vault comprising separately rotatable portions and provided with coin openings at spaced intervals in its periphery, a common coin chute therefor, and means for preventing the entrance of a coin thereto until one of said vault portions has been moved through one of said intervals, and means for rotating said vault portions.

2. In a registering bank for coins, registering wheels spaced to represent respectively units and a multiple thereof, said wheels comprising vault portions and means for introducing the coins into said vault portions.

3. A vault for a registering bank, comprising hollow registering wheels pivoted together and provided with spaced numerals representing units and a multiple thereof respectively, said wheels also provided alike with spaced coin admission openings corresponding in number with the number of numerals on each wheel.

4. A hollow wheel for a coin vault, said wheel provided with a series of spaced numerals thereon and with a corresponding series of spaced coin admission openings and a support upon which said wheel is pivotally mounted.

5. A coin vault for a registering bank, comprising hollow wheels representing respectively units and a multiple thereof, said multiple wheel sleeved over a portion of the units wheel, a common pivoted support for said wheels, said wheels provided with corresponding openings for the introduction of coins, one of the openings in the unit wheel being longer than the others and adapted to register in turn with the openings in the said multiple wheel.

6. In a registering bank, the combination with a case, of hollow wheels, comprising a coin vault, pivoted in case, said wheels provided each with a series of numerals representing respectively units and a multiple thereof, the said wheels having a series of coin admission openings therein, corresponding in number to the numerals thereon, one of the openings in the units wheel being adapted to register in turn with the openings in the multiple wheel.

7. In combination with a case, a cylindrical rotatable coin vault, provided with coin admission openings, spaced at intervals therein, a coin chute slidably mounted upon said vault, and provided with a coin admission opening, a key plate slidably mounted upon said vault and provided with a corresponding coin opening, and a guard on the key plate adapted to close the coin admission opening in said coin chute, means for rotating said vault through one interval to present a fresh opening to the coin chute, and means for detaining said key plate and coin chute during the latter part of said movement to remove said guard and to bring said coin chute to register with said fresh opening.

8. The combination with a cylindrical vault, provided with spaced coin admission openings, of a coin chute circumferentially movable thereon and adapted to register in turn with said openings therein, a key plate provided with a guard portion adapted to cover said openings in turn, and a circumferentially movable operating plate on said vault, said circumferentially movable plate provided with lugs adapted to engage a coin in said chute when resting on said guard and pull over said coin chute the distance of one interval and limiting instrumentalities engaged by said key plate when moved by said operating plate and adapted to detain said key plate and to alternately remove and return the same and said guard thereon.

9. The combination with a case of a vault pivoted therein, said vault composed of two portions pivoted therein, one overlapping the other and independently rotatable thereon, the inner portion provided with a series of circumferential spaced coin admission openings, one of said openings being longer than the others, and the outer portion provided with a corresponding series of marginal openings adapted to register in turn with said longer opening, a series of numerals upon said vault portions, a flash plate concentric therewith, a coin chute provided with a coin opening, and adapted to register with a guard for said opening, and with lugs adapted to strike alternately against the sides of said case, as said key plate is moved, and lugs on said flash plate adapted to engage with a coin in said coin chute and move said coin chute and key plate one interval and to remove said guard from said opening.

10. In a bank, a case having a coin opening, a rotatable vault pivoted therein, comprising outer and inner cylindrical portions, the said inner portion provided with a se-

ries of spaced coin openings, one of which is longer than the others, and the outer portion provided with corresponding marginal openings, said vault portion provided with registering ratchet openings, a spring pawl on said case adapted to engage with the said ratchet openings in both portions, and to permit of the rotation of the inner portion while detaining the outer portion, a coin chute having a coin slot therein, and a key plate movable on said vault, and provided with a coin slot guard plate, a flash plate provided with lugs adapted to engage the coin in said chute and move said coin chute over one interval, lugs on said key plate adapted to strike the walls of said case and move said guard to alternately cover and uncover said coin slot, the said marginal slots adapted to receive said coin when the long slot registers therewith, the walls of which are adapted to thereby rotate said outer portion through one interval.

11. In a registering bank, the combination with a case provided with a coin opening and with observation openings, of a vault rotatably mounted therein, said vault comprising outer and inner portions, one overlapping the other, and provided with spaced coin and marginal openings respectively, one coin opening being longer than the others, a flash plate provided with observation openings and having a common axis with said vault, a common coin chute and a key plate having a guard and movable circumferentially on said vault, devices on said flash plate for engaging the coin in said chute and by the agency of said coin adapted to move said chute through one interval, devices for alternately moving said key plate to cover and uncover the slot in said coin chute, as said flash plate and coin chute are moved, a pawl and ratchet device for said vault, adapted to normally engage with both said vault portions, but permitting the movement of the inner portion while retaining the other portion, and means for preventing the removal of said pawl when the observation openings in the said case and flash plate register with each other, substantially as described.

ARTHUR E. JACOBS.

In presence of—
WM. M. MONROE,
LUCILLE O'NEILL.