A. E. JACOBS.

THREE COIN REGISTER BANK.

APPLICATION FILED MAR. 25, 1912. RENEWED NOV. 14, 1917.

1,269,608.

Patented June 18, 1918.

2 SHEETS—SHEET 1.

Fig. 1

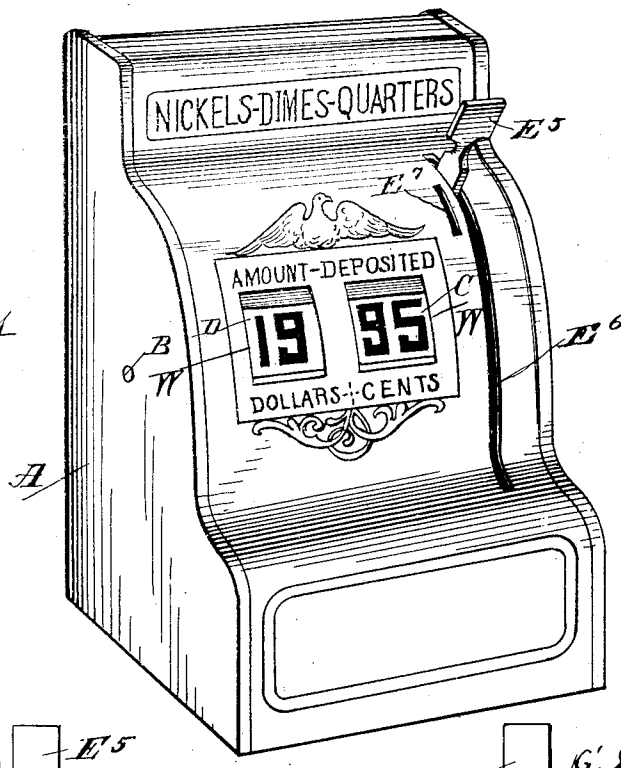


Fig. 2

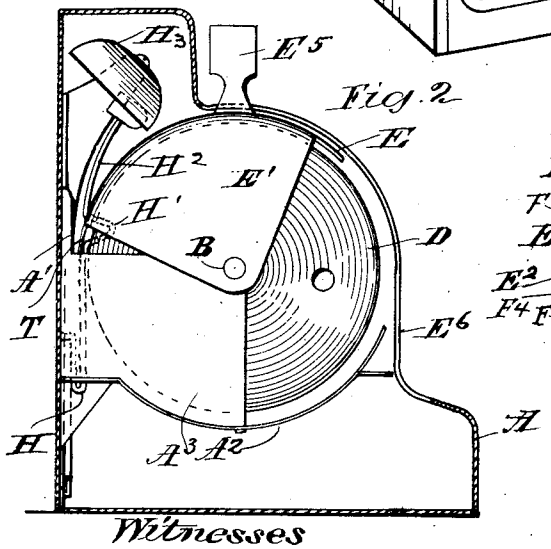
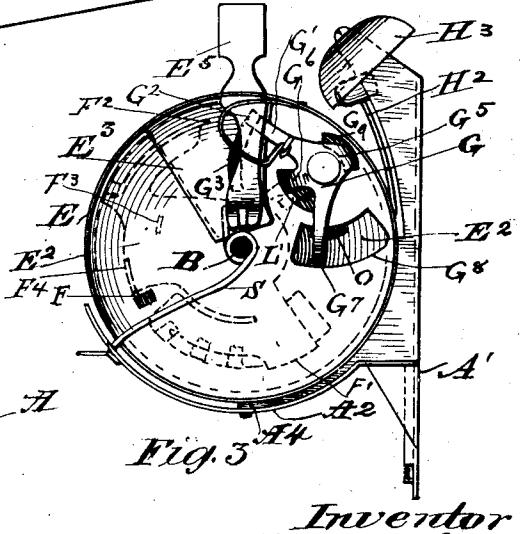


Fig. 3



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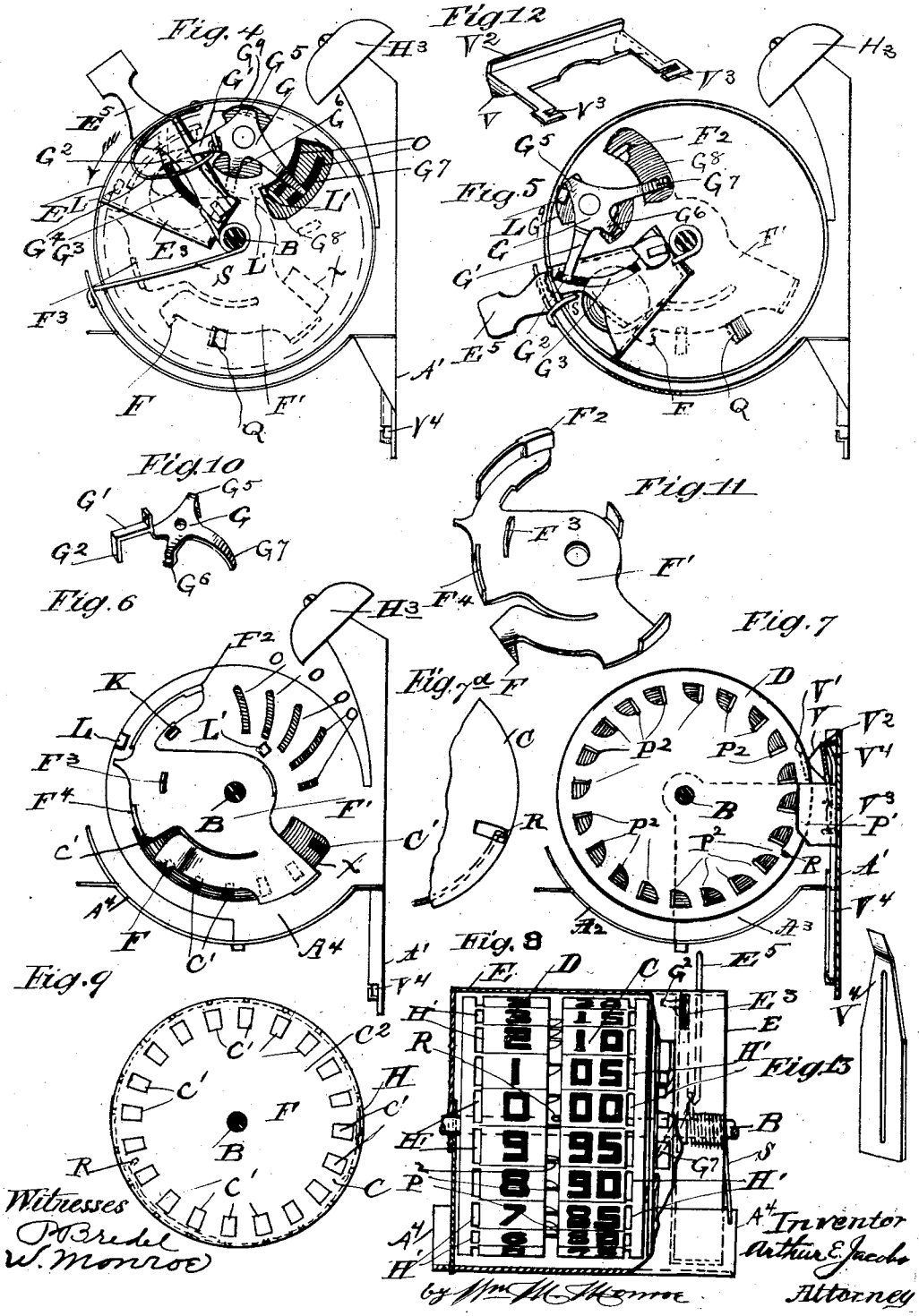

UNITED STATES PATENT OFFICE.

ARTHUR E. JACOBS, OF CLEVELAND, OHIO.

THREE-COIN-REGISTER BANK.

1,269,608. Specification of Letters Patent. Patented June 18, 1918.

Application filed March 25, 1912, Serial No. 686,147. Renewed November 14, 1917. Serial No. 202,073.

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 Three-Coin-Register 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 bank for a variety of coins, such as nickels, dimes, and quarters, in which the coins of larger denomination are multiples of the others, and in which the registering mechanism is automatically operated by the coin as it is propelled into the coin vault of the bank, and in which no coin can be removed until the entire sum has been deposited for which the bank has been designed to receive and register.

It also comprises a self releasing means permitting the removal of the entire sum after the last unit completing the same has been deposited.

The invention comprises two registering cups or dials one spaced to correspond with successive deposits of the coin of lowest value and the other dial operated to move one or more spaces at each complete revolution of the other dial, and capable of registering the sum of all the amounts deposited. Each of the dials shown is divided into twenty spaces for the accommodation of the coins to be used with it and their multiples.

In this bank nickels, dimes, and quarters are registered and means are provided for excluding other coins, but is applicable in principle to coins of other denominations, and to coins of other countries when the parts are so proportioned and arranged so as to be suitably operated by said coins and to exclude the entrance of other coins.

The invention comprises means for pivotally supporting the said dials, means for operating the dollar dial once in a complete revolution of the other dial, a pawl device controlled by each coin in turn deposited, and adapted to be operated only by the three mentioned coins. This pawl device rotates the dial registering nickels and multiples thereof.

An important feature of the invention is found in a rotatable flash plate concentric with the said dials, and provided with a coin chute through which the coins fall into the vault within the case. Upon this flash plate is pivoted or otherwise movably secured a member having the important function of operating the ratchet device to move it and its corresponding dial through one or more spaces corresponding to the value of the coin deposited. Thus the ratchet and dial must move over one space when a nickel is deposited and over five spaces when a quarter of a dollar is deposited, and hence this member controls the movements of the registering dial of low denomination.

The invention also comprises means for preventing the backward movement of the flash plate when a coin has been deposited in the slot, so that it cannot be withdrawn, and also a closure for the vault and means for releasing the closure at a predetermined time.

The invention also includes means for signaling the deposit of a coin, and comprises the additional feature of novelty and combination and arrangement of parts hereinafter described, shown in the accompanying drawings, and particularly pointed out in the claims.

In the accompanying drawings Figure 1 is a perspective view of the bank, showing the outer case and dial and flash plates; Fig. 2 is a transverse section of case showing flash plate and dial of high denomination; Fig. 3 is an end view of dial plate showing the opposite side from that shown in Fig. 2, and also shows the coin chute and pawl controlling member, the coin chute being in position for receiving the coin; Fig. 4 is a similar view showing the next position of the coin chute, and the ratchet controlling member in engagement with the coin (a nickel) and also in position to engage the pawl device and move it and its dial through one space only; Fig. 5 is a similar view showing the coin chute and coin therein at the angle for discharging the coin into the vault; Fig. 6 is an end elevation of a division wall between the end walls of the nickel dial and flash plate, and shows the ratchet plate in position and also the rack openings in the wall; Fig. 7 is a transverse section of case showing ratchet upon the end wall of the dial of larger denomination, and shows the deflector plate upon the rear wall, and also shows the rear door and locking device therefor; Fig. 7ª shows a detail of a portion

of one end of the cup shaped nickel dial, showing a spring pawl therefor extending through an opening therein; Fig. 8 is a longitudinal section of the inner case and flash plate, showing the dial faces of the two dial members; Fig. 9 is an end elevation of the dial member for nickels, showing spaced ratchet openings therein; Fig. 10 is a perspective view of the spider shaped member which controls the movements of the ratchet plate; Fig. 11 is a perspective view of the ratchet plate; Fig. 12 is a perspective view of the hood which prevents raising the rear door, and Fig. 13 is a perspective view of the door.

In these views A is the outer case to which is secured an inner wall A′ and curved bracket portion A^2 having end plates A^3, A^4. Through the end plates and case passes the central shaft B upon which are pivoted cup shaped dials C and D respectively for spaces of five cents each and spaces of $1.00 each, and over these dials is sleeved the flash E having end plates E′, E^2 pivoted on said shaft and carrying in the end plate E^2 a coin chute E^3 and the coin controlled pawl controller G.

The flash plate is revolved by hand by means of a projection E^5 thereon which moves in a slot E^6 in the outer wall of the chute E^3 and the coin is deposited in a slot E^7 in the outer case which registers with the coin chute when the flash is raised.

The dial C for spaces of five cents each is rotated through one space at a time by means of the ratchet openings C′ equally spaced about the end wall C^2 which are engaged through an opening X in the wall E^2, by the ratchet pawl F upon the plate F′ which is rotatably mounted upon the shaft B.

This ratchet plate is engaged by the ratchet controlling member G on the flash plate and is rotated thereby to operate the five cent spaced dial.

To enable the bank to register multiples of five cents, such as dimes and quarters, as well as nickels, it is necessary that the ratchet plate should move the dial C through five spaces when the quarter is deposited, through two spaces when the dime is deposited, and through one space when a nickel is deposited.

To insure positive engagement between the flash plate and a pawl plate at the proper times to obtain these spaces the pawl plate is provided with lug F^2 to be engaged by the controller G when a quarter is deposited. This lug is upon the outer edge of the ratchet and is advanced to rotate the ratchet through five spaces. A lug F^3 on the dial serves to rotate the dial two spaces for dimes and is spaced three spaces from the end of the lug F^2. A lug F^4 is engaged when nickels are deposited and is advanced only one space from the limit of movement of the flash.

The controller is caused to engage the ratchet plate at the different points mentioned by the coins, (of different denominations) themselves, so that all movements of the registering dials are entirely automatic and are controlled by the size of each coin deposited and operate in the following manner.

The pawl controller G is provided with a spring pressed arm G′ which is provided with a downwardly curved extremity G^2 which extends into the coin chute through a slot G^3 in the outer plate of the coin chute. When a coin is dropped into the chute through the opening and the flash is pulled down in the direction of the arrow Fig. 4, the arm G′ will engage the edge of the coin since a spring G^4 will always tend to press this extremity inward.

When the arm is engaging the coin the extremity G^2 will be in the path of one of the projections F^2, F^3 or F^4 on the pawl plate selectively according to the size of the coin. As shown in Fig. 4 a nickel being used the extremity G^2 will move through four spaces and will finally engage the lug F^4 on the pawl plate and there move the nickel dial one space, and the controller will move to permit the coin to fall out of the chute.

This movement will be accomplished as shown in Fig. 5 by means of a lug L on the stationary frame plate which a second arm G^5 on the controller will strike and rotate it so that the arm G′ will release the coin.

A spring S will return the flash when it is released and when raised a second lug L′ on the inner frame plate will engage a third arm G^6 on the pawl controller which passes through an opening G^9 and restore the controller to its first position as shown in Fig. 3.

The pawl member F′ is returned by means of a lug Q on the flash engaging the lug F^3.

To prevent the flash from being rotated backward after a coin has been inserted in the chute a series of ratchet openings O, O, O are formed in the stationary plate and a fourth arm G^7 serving as a spring pawl extends through an opening G^8 in the wall of the plate and the pawl arm engages these openings in turn so that it cannot turn backward when the coin is in the chute but when the coin is removed the spring turns the controller around and the pawl arm will escape the ratchet grooves until another coin is inserted in the chute. A stop K is so spaced on the stationary plate A^4 that the arm G^2 will strike it when a penny is inserted in the bank and the flash cannot turn thus preventing the entrance of pennies into the vault. On the outer edge of

each dial cup are formed a number of openings H correspondingly spaced with the dial spaces. These serve as ratchet openings and spring pawls H′ engage them and stop the dials when turned to each space.

The pawl for the nickel dial is elongated at H^2 and serves as a bell clapper for the bell H^3, so that a signal is given to indicate the number of five cent pieces or five cent values registered.

The dials must be operated until the flash has rotated far enough to cover the windows W in the frame, since otherwise the registry could be confused by manipulating the dials through the openings. Hence each flash plate is provided with strips T, T which extend over the spring pawls H′ and prevent them from leaving the ratchet openings H until the flash has covered the registry openings W, and hence lock the dials.

The nickel dial is provided with a spring pawl R which is pressed inwardly by a rigid cam plate P′ once in a complete revolution of the nickel dial. When pressed inward the spring pawl R will engage one of a series of lugs P^2 spaced upon the dollar dial plate and rotate that dial one space.

The dollar dial contains twenty spaces and may register up to twenty dollars or ten dollars repeated, as desired.

When the predetermined even sum is registered spring pressed pawls V fall into openings V′ V′ in both the dollar and nickel dials and permit a hood V^2 pivoted at V^3 on the back plate to fall so as to release a door V^4 closing an opening in the back plate, and this door can be raised and the accumulated coins can be withdrawn.

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

1. In a self registering bank adapted to register coins of several denominations, in combination, a cent dial spaced in divisions of five cents each, with a total indication of one dollar, a flash rotatable about the dial, a case having a reading opening and a shaft on which said dial and flash are mounted in said case, said dial provided with a series of ratchets, corresponding to said divisions on said dial, a pawl member adapted to engage said ratchets, said pawl member provided with as many engaging parts as there are denominations of coins, and a coin controlled and spring actuated member pivotally mounted on said flash and having a coin engaging member common to all the coins, and also provided with a member, adapted to selectively engage said engaging parts on said pawl member so as to rotate said dial through a sufficient number of spaces to make up the value of said coin deposited, and whereby the value of the coins deposited will be progressively indicated on said dial.

2. In a self registering bank, adapted to register coins of several denominations, a cent dial having a spaced ratchet, a dollar dial, an inclosing frame having reading openings, a flash plate, a common supporting shaft for the dials and flash plate, a pawl member arranged between said cent dial and said flash plate, said pawl member adapted to engage in turn said ratchets on said cent dial, said pawl member having spaced engaging parts, a coin controlled member pivoted on said flash and provided with an arm adapted to selectively and alternately engage with said engaging parts on said pawl member when a coin is deposited, so as to cause the pawl member to rotate the said cent dial when the flash is turned a predetermined distance, determined by the size of the coin, and means for operating the dollar dial once in a complete revolution of the cent dial.

3. In a self registering bank, in combination, a regularly spaced cents dial having a corresponding series of ratchets thereon a flash plate, a shaft on which said dials and flash plate are mounted, a case inclosing said dials and flash plate, said case having a reading opening, a coin chute on said flash closed at its inner end, a pawl member pivoted on said shaft and interposed between said flash and cents dial, and adapted to engage in turn said spaced ratchets on said cents dial, and said pawl member provided with spaced points of engagement and a separate controlling member for said pawl member pivoted upon said flash plate, said controlling member provided with an arm adapted to enter said coin chute and engage the coin deposited therein, and with a second arm adapted to selectively engage one of said spaced points of engagement on said pawl member, so as to rotate said pawl and cents dial when said flash is rotated, a retaining spring for the controlling member, and means for returning said flash, pawl member and controlling member to their original positions.

4. In a self registering bank, the combination with rotatable dial members, one spaced with repetitions of a definite value and provided with corresponding ratchets, and the other dial spaced with multiples of the total value of the spaces on the first named dial, of a flash plate rotatable about the dials, a separate pawl member provided with spaced engaging points and adapted to engage the ratchets in the first named dial, a coin chute on the wall of said flash plate, a rotatable coin controlled member pivoted on said flash plate and adapted to engage said pawl member selectively at said spaced engaging points to force it into engagement with the said ratchets in said dial member and turn said dial when said flash is turned, means for rotating said coin controlled member to engage a coin when the flash plate is

turned, and means for rotating the second named dial one space for each total revolution of the cents dial.

5. In a self registering bank adapted to register coins of several denominations, and sizes, in combination, a regularly spaced dial provided with ratchets correspondingly spaced, a flash plate rotatable about said dial, a pawl plate adapted to engage said ratchets and provided with spaced engaging points, a controlling member pivoted in said flash plate and having an arm adapted to engage selectively said engaging points upon the said pawl plate according to the size of the coin deposited in the coin chute, and turn said dial through the space thereon corresponding to the denomination of the coin, a fixed plate, a second drum on said controlling member adapted to engage said fixed plate to rotate said controlling member when the flash plate is moved so that the first arm will engage a coin, and means for restoring the controlling member to its first position.

In testimony whereof, I hereunto set my hand this 20 day of March 1912.

ARTHUR E. JACOBS.

In presence of—

G. A. HOWELLS,

WM. M. MONROE.