

Oct. 6, 1931.

R. B. HAYDEN

1,826,398

## MONEY BANK

Filed March 28, 1931

2 Sheets-Sheet 1

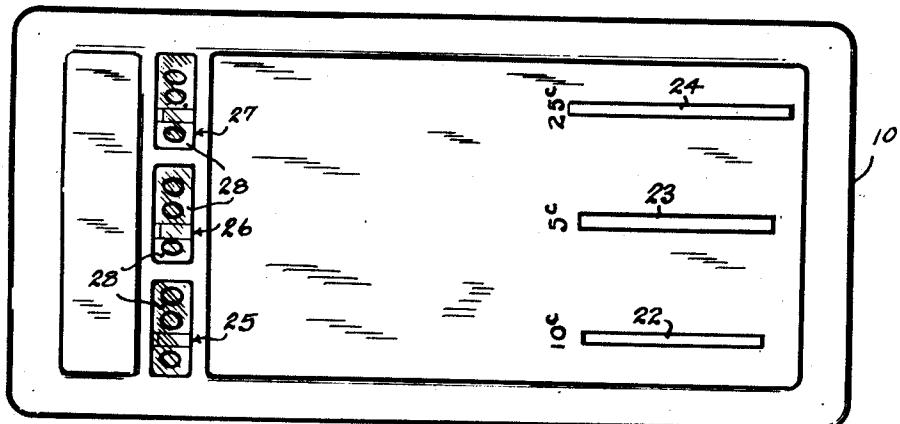


Fig. 1

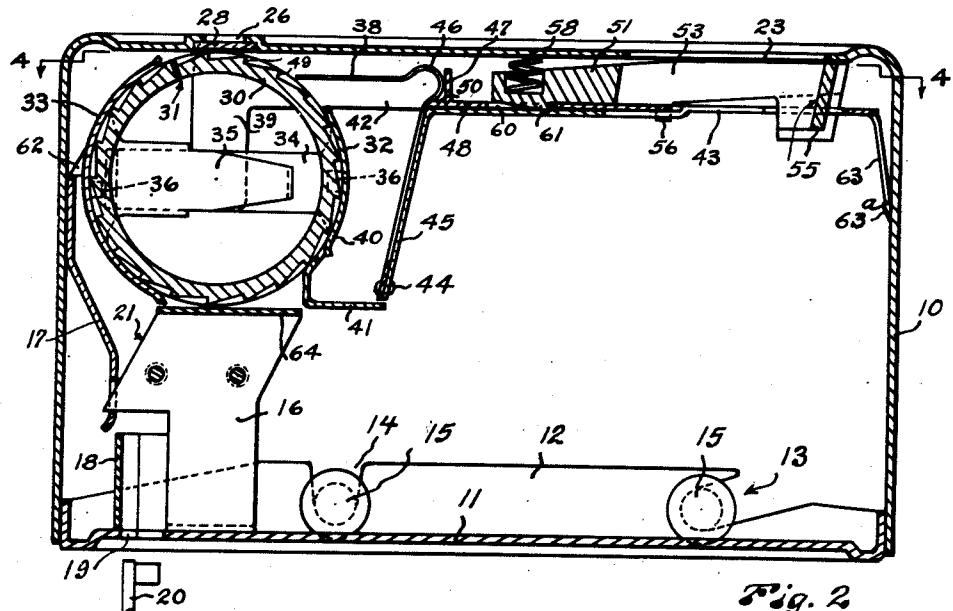
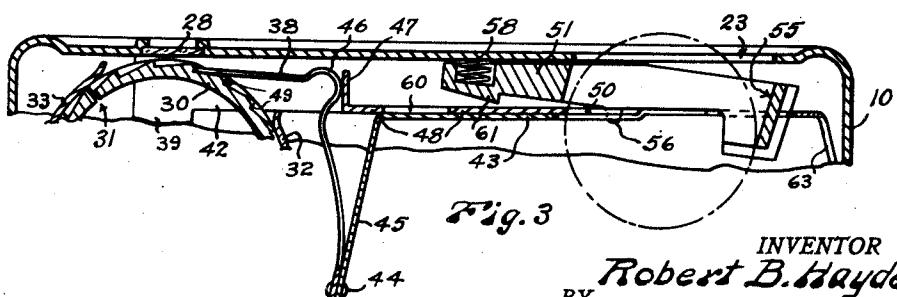


Fig. 2



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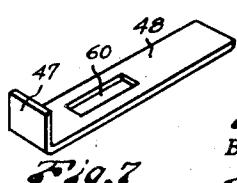
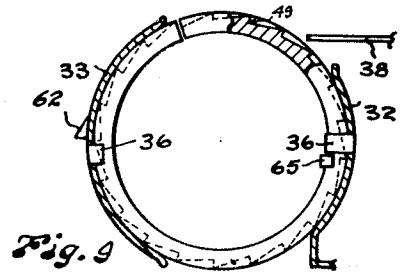
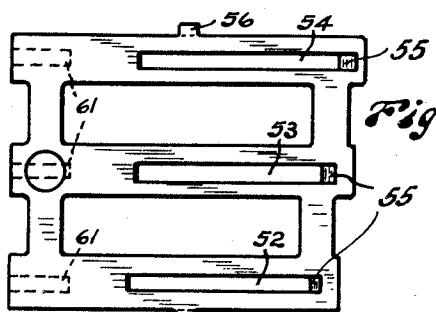
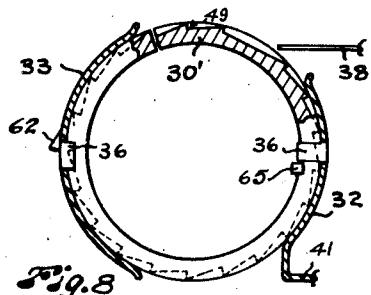
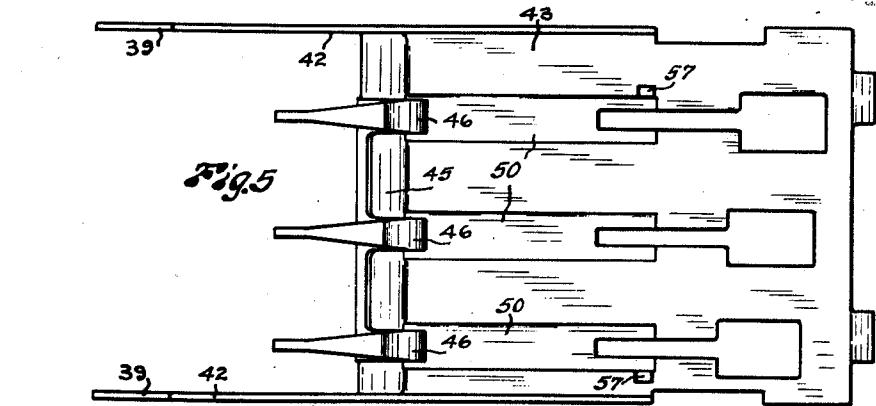
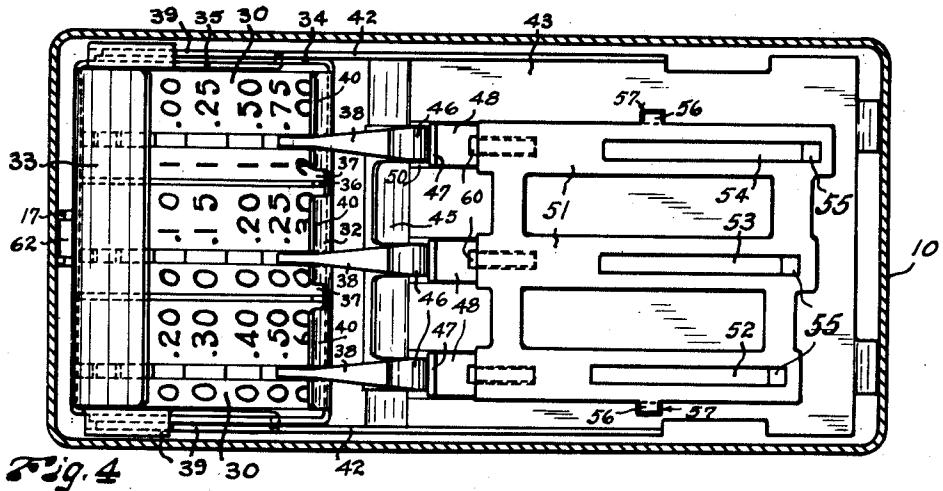
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2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

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## MONEY BANK

Application filed March 28, 1931. Serial No. 526,019.

My invention relates to improvements in money banks for the reception of coins and the general object of my invention is to provide a small savings bank for individual use which will register and indicate visibly to the user the amount of coins deposited in said bank.

Another general object of the invention is to provide a small savings bank of this nature which may be given out to depositors by banking institutions, which will stimulate saving among the depositors and which can only be unlocked by the banking institution which retains a key for the same.

Further objects of the invention are to provide a small savings bank of this nature which has separate coin slots for the reception of coins of different size; which has efficient registering mechanism for registering and totaling, and visibly indicating within certain limits, the coins which have been inserted through each coin slot; which has devices for precluding the operation of the registering mechanism except by insertion of a proper coin, said devices also precluding extraction of the coins from the bank after they have been inserted thereinto.

A more specific object is to provide a bank of this nature having registering cylinders of ring like construction which are frictionally and rotatably supported within holding and guiding means which engages with and extends partially around said cylinders, said cylinders being externally marked to designate amounts of money and having ratchet teeth provided therein whereby they may be moved by coin actuated mechanism each time a coin is inserted into the bank.

Other and more specific objects will be apparent from the following description taken in connection with the accompanying drawings.

In the drawings Figure 1 is a plan view of a small money bank constructed in accordance with my invention.

Fig. 2 is a vertical longitudinal sectional view of the same.

Fig. 3 is a fragmentary sectional view similar to Fig. 2, but showing parts in a different

position as they might appear while a coin is being inserted.

Fig. 4 is a view partly in section and partly in plan substantially on broken line 4—4 of Fig. 2.

Fig. 5 is a detached plan view of the main supporting frame with spring pawls attached.

Fig. 6 is a detached plan view of a coin operated locking member.

Fig. 7 is a detached perspective view of one of the slides which operates a spring pawl upon insertion of a coin.

Fig. 8 is a somewhat diagrammatic view in side elevation illustrating a modified form of registering ring mechanism.

Fig. 9 is a similar view illustrating another modified form of registering ring mechanism.

Like reference numerals designate like parts throughout the several views.

This bank embodies a receptacle 10, preferably formed of metal and preferably of rectangular shape and ornamental appearance. One side of this receptacle is left open whereby it may be closed by a removable door, 11. The edges of this door 11 are bent inwardly as at 12 and are slotted as at 13 and 14 to fit over rivet studs 15 in the housing. The slots 13 toward one end of the door are inclined, as shown, whereby they may be slipped over the rivet studs as the door is applied to the receptacle and will serve as a holding means for one end of the door. The slots 14 toward the other end of the door are substantially crosswise of the portions 12 whereby they will fit over the correspondingly positioned rivets 15 as the door is snapped into place. The rivets 15 form stops to limit the inward movement of the door and also, by reason of their heads, connect the sides of the receptacle 10 to the door in such a manner as to strengthen and reinforce said sides.

A latch member 16 is secured to the door near one end and projects inwardly therefrom and is adapted to engage with a locking spring

17 which is secured to the end wall of the receptacle 10. An inwardly projecting key guide 18 is also secured to the door 11 near the latch member and in registration with a

key hole 19 in the door whereby a key 20 may be inserted and turned in such a manner as to engage with and release the locking spring 17, thereby permitting removal of the door. An inclined edge 21 is provided on the latch member 16 for engaging with the locking spring 17 when the door is applied, whereby the locking spring will first be pressed back and will then snap into locked position.

10 The front side of the receptacle 10 is provided near one end with one or more coin slots. In the embodiment herein disclosed I have shown three of these coin slots 22, 23 and 24 for reception respectively of ten, five 15 and twenty-five cent pieces. The front side of the receptacle 10 near the end opposite the coin slots is provided with three sight openings 25, 26, and 27 having inserts 28 of transparent material through which figures 20 on registering mechanism may be read.

The registering mechanism comprises a separate ring 30 for each sight opening each ring having a plurality of sets of figures on the periphery thereof indicating different 25 amounts of money. These registering rings 30 are preferably split as at 31 to render them resilient and capable of expanding and are frictionally and rotatably held within suitable arcuate clamping means which may also 30 be of resilient construction. This clamping means consists of two arcuate members 32 and 33, having relatively telescopic end pieces 34 and 35 by which they are connected together and to a frame piece 39 in such a manner 35 as to form a cage for the recording rings 30. Spacer elements 36 are punched out of the sides of the members 32 and 33 and extend between the rings 30 when the several parts are assembled. This prevents frictional 40 contact between the several rings. The top edge of the member 32 is low enough to afford clearance for spring pawls 38 and is notched at 37 to leave resilient fingers 40 between said notches 37. Said member 32 may 45 also be slotted near the lower edge to leave resilient fingers 40 arranged to frictionally engage the recording rings 30. The lower edge of the member 32 is bent outwardly to form a shelf like portion 41 which serves as 50 a guard to prevent coins in the receptacle 10 from getting into the registering mechanism.

The frame members 39 are suitably bent to telescopically fit into and securely hold the arms 34 and 35 and said frame members are 55 at right angles to and rigidly connected with side frame members 42 which are connected with each other by a transverse frame portion 43. The parts 43, 42 and 39 may all be of integral construction made from a single 60 piece of sheet metal, and these parts form a skeleton frame upon which all of the coin operated mechanism is mounted. The spring pawls 38 are of angular shape and are secured, as by rivets 44, to an inwardly bent 65 piece 45 on the end of the frame member 43.

A roll portion 46 is preferably provided in each spring pawl at the location of the bend therein to afford better spring action, lessen the danger of breaking and afford convenient means with which the upwardly bent end 47 of a pawl operating slide 48 may engage to move the pawl forwardly and turn the indicator ring 30 with which said pawl engages. Suitable ratchet teeth 49 are provided in the indicator rings with which teeth the pawls 38 are adapted to engage. These teeth 49 may be just wide enough to receive the pawls 38, as shown in the drawings, or they may extend entirely across the periphery of the rings and the numbers may be placed on the flats 70 formed by these surfaces. Upon each forward movement of a spring pawl 38 a tooth on the corresponding indicator ring 30 will be engaged and the ring advanced a distance sufficient to bring into view the next succeeding 75 number on the periphery of said ring.

One pawl operating slide 48 is provided for each pawl and each of said slides is slidably disposed in a suitable guideway 50 in the frame plate 43 whereby said slides may be 80 moved longitudinally. A coin operated locking member, designated generally by numeral 51, is supported on the frame plate 43 on top of the pawl operating slides 48 and is provided with three coin slots 52, 53 and 54 85 which register with the respective slots 22, 23 and 24 in the bank receptacle 10. The locking member 51 has inclined walls 55 at the rear ends of the slots 52, 53 and 54 for engagement by the rear edges of the coins as 90 they are inserted, said inclined walls 55 extending below the plane of the frame plate 43 and being of different lengths and differently positioned to properly coat with coins of different size. The front edges of the coins 95 are adapted to engage with the rear ends of the pawl operating slides 48 and move said slides forwardly to operate the pawls 38 as the coins are inserted through the slots. The coin operated locking member 51 is arranged 100 to rock slightly on the frame plate 43 and has lugs 56 which engage within notches 57 at the sides of said frame plate 43 and thereby prevent longitudinal movement of said locking member. The fulcrum on which the locking member 51 rocks is substantially in 105 alignment with the lugs 56. A compression spring 58 yieldingly holds the forward end of the locking member 51 down but permits said forward end to be raised by pressure exerted 110 on a coin each time a coin is inserted. Each of the pawl operating slides 48 is provided with a slot 60 within which a catch member 61 on the forward end of the locking member 51 is arranged to engage to lock the slide 115 against forward movement except when the forward end of the locking member is raised by the insertion of a coin, it being apparent 120 that the coin will, at the same time, exert a forward pressure on the slide 48 which will 125 130

move said slide forwardly and cause the spring pawl 38 which is in line therewith to advance one of the registering rings 30.

The coin operated mechanism is preferably assembled before it is placed within the receptacle 10. This assembled mechanism is held within the receptacle 10 by engagement of a catch member 62 at one end with the upper end of the locking spring 17 and by engagement of downturned lip member or members 63 on end of the frame 43 with one or more lugs or shoulders 63a which are pressed inwardly from the end of the housing 10 preferably without breaking the metal.

A cross plate 64 on the upper end of the latch member 16 prevents the coins from coming in contact with the lower portions of the indicating rings 30. When the cover is removed this portion of the indicating rings will be exposed and may be readily engaged by the fingers to re-set said indicating rings which will ordinarily be moved back to zero each time the bank is emptied.

The slide locking member 51 will lock the pawl operating slides 48 and prevent forward movement thereof except for the brief period while a coin is being pressed through one of the coin slots, at which time the several parts may assume the positions shown in Fig. 3. This prevents operation of the indicating devices in any way except by the insertion of a proper coin. When a coin is inserted in one of the coin slots it will engage the rear edge of the pawl operating slide 48 and the rear wall 55 of the slide locking member. The first effect of inward pressure against the coin will be to tilt the rear end of the slide locking member 51 downwardly and the forward end thereof upwardly thus releasing the slide 48 and permitting said slide to be moved forwardly by further movement of the coin and to advance the indicating ring through the action of spring pawl 38, see Fig. 3. After the maximum width of the coin, which is, of course its diameter, has passed between the end of the slide 48 and inclined wall 55 the pressure of the spring pawl 38 tending to force the slide 48 rearwardly will snap the coin into the bank thus releasing the slide locking member 51 and permitting it to again lock the slide members against forward movement.

In Fig. 8 I have shown a modified form of registering ring 30' having a stop 65 thereon for engagement with a spacer 36 on the friction member 32. In this form of the invention the spacers 36 on the friction member 33 will preferably be omitted or made short enough to be clear of the stop member 65. This stop member will limit the rotation of the registering ring to slightly less than three hundred and sixty degrees. One tooth is preferably omitted from this ring 30' so that the spring pawl 38 associated therewith

may be moved by the insertion of a coin without moving the registering ring 30'. This allows the ring 30' to register correctly for one complete revolution and then allows more coins to be inserted in the slot without any further registration. If all of the teeth are left on the registering ring as shown in Fig. 9 then when the ring is brought to a stop one of the teeth will be in line with the pawl 38 and the insertion of more coins in the slot 75 will be blocked.

The coin slots are necessarily made of just large enough size to pass the coin for which they are intended and the distance between the rear end of each slide 48 and the corresponding rear wall 55 of the slot 53 in the slide locking member is made sufficiently less than the diameter of the coin for which it is intended to insure enough movement to operate the spring pawls 38 and advance the indicator rings 30. The rings 30 have no axial bearings but are frictionally held by the members 32 and 33. There is no operative connection between the several indicator rings but each ring registers independently of the other rings and totals, within certain limits, the value of coins inserted through the slot with which it is aligned.

The foregoing description and accompanying drawings clearly disclose a preferred embodiment of my invention but it will be understood that this disclosure is merely illustrative and that such changes in the invention may be made as are fairly within the scope and spirit of the following claims.

I claim:

1. In a money bank, coin operated registering mechanism embodying registering members and holding devices frictionally engaging the exterior of said registering members whereby said registering members are supported for rotary movement.

2. In a money bank, coin operated registering mechanism embodying registering members of generally circular external shape, and holding devices extending partially around the exterior of said registering members and frictionally engaging the same whereby said registering members are supported for rotary movement.

3. In a money bank, coin operated registering mechanism, embodying resilient split registering rings, holding devices partially encircling said registering rings and supporting the same for rotary movement, said rings exerting an expanding pressure against said holding devices and binding frictionally thereon and means for moving said rings.

4. In a money bank, coin operated registering mechanism, embodying resilient split registering rings, holding devices partially encircling said registering rings and supporting the same for rotary movement, said rings exerting an expanding pressure against said holding devices and binding frictionally

thereon, pawls for engaging and moving said rings and coin operated means engaging said pawls whereby said pawls are moved.

5. In a coin operated registering money bank, a receptacle having coin inlet openings; arcuate holding means supported within said receptacle, registering cylinders frictionally and rotatively held by said holding means with their peripheries visible through said 10 sight openings, ratchet means operatively connected with said registering cylinders whereby said cylinders may be advanced, devices operable by the insertion of a coin for actuating said ratchet means, and means releasable by the insertion of a coin for locking said coin operable devices.

6. In a coin operated registering money bank, a receptacle having coin inlet openings; a supporting frame within said receptacle, arcuate holding means carried by said supporting frame, registering rings frictionally and rotatively held by said holding means with their peripheries visible through sight openings, ratchet teeth on said registering 25 rings, spring pawls engageable with said ratchet teeth and slide members mounted on said frame and engaging said pawls, one end of each of said slide members extending beyond an end of a coin slot whereby insertion 30 of a coin through said coin slot will move said slide and actuate said pawls.

7. In a coin operated registering money bank, a receptacle having a coin inlet opening; a supporting frame within said receptacle, arcuate holding means carried by said supporting frame, registering rings frictionally and rotatively held by said holding means with their peripheries visible through sight openings, ratchet teeth on said registering 35 rings, spring pawls engageable with said ratchet teeth, slide members mounted on said frame and engaging said pawls one end of each of said slide members extending beyond an end of a coin slot whereby insertion 40 of a coin through said coin slot will move said slide and actuate said pawls and a locking member operatively disposed relative to said slides and movable into unlocked position relative to said slides by the insertion of 45 a coin.

8. In a coin operated registering money bank, a receptacle having a coin inlet opening; a supporting frame within said receptacle, arcuate holding means carried by said supporting frame, registering rings frictionally and rotatively held by said holding means with their peripheries visible through sight openings, ratchet teeth on said registering rings, spring pawls engageable with said ratchet teeth, teeth slide members mounted on said frame and engaging said pawls one end of each of said slide members extending beyond an end of a coin slot whereby insertion of a coin through said coin 50 slot will move said slide and actuate said

pawls, and a locking member disposed on said slide and yieldingly held in locked engagement with said slide and tiltable by the insertion of a coin to release said slide whereby movement of said slide except by insertion of a coin of predetermined dimensions is prevented. 70

9. In a coin operated registering money bank, a receptacle having a coin inlet opening; a supporting frame within said receptacle, arcuate holding means carried by said supporting frame, registering rings frictionally and rotatively held by said holding means with their peripheries visible through said sight openings, spring pawl 80 means operatively engaging said registering rings, guide means in said supporting frame, slide members in said guide means overhanging the ends of said coin slots and engaging said spring pawl means, and locking members fulcrumed for tilting movement on said supporting frame and yieldingly held in locked engagement with said slide members, said locking member having coin slots provided with inclined rear walls whereby insertion of a proper coin will tilt said locking member into released position relative to said slide members. 85

10. In a coin operated money bank, a receptacle having a coin inlet opening, a cylindrical registering member frictionally and rotatably mounted in said receptacle, a pawl operatively connected with said registering member for moving the same, a slide engaging said pawl and overlapping one end of said coin slot whereby it may be moved by insertion of a selected coin through said slot and means for locking said slide releasable by the insertion of the coin. 95

11. In a coin operated registering money bank, a receptacle having a coin inlet opening, a supporting frame within said receptacle, registering means within the receptacle, a slide member for operating said registering means and a locking member fulcrumed for tilting movement on said frame and adapted for locking engagement with said slide member, said locking member having means engageable by a coin of predetermined size, whereby said locking member will be tilted to release said slide member. 105

12. In a registering money bank of the class described, a resilient split registering ring and external holding means frictionally and rotatably supporting said ring. 110

13. In a money bank of the class described, cylindrical registering members having peripheral markings, arcuate holding means frictionally and rotatably supporting said registering members, and spacer means supported by said holding means and disposed between said registering members. 115

14. In a recording money bank of the class described, a cylindrical registering member having peripheral markings and two arcuate 120

holding members disposed on opposite sides of said registering member and frictionally and rotatably supporting the same, two opposite portions of the periphery of said registering member being exposed between the ends of said holding members one said portion being visible from the exterior of said bank and the other portion being manually accessible for setting said registering member.

10 15. In a money bank of the class described, a cylindrical registering member, arcuate holding members frictionally and rotatably embracing said registering member, means for rotatively moving said registering member, and stop means for limiting the amount of rotary movement of said registering member.

15 The foregoing specification signed at Seattle, Wash., this 17th day of March, 1931.

20 ROBERT B. HAYDEN.

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