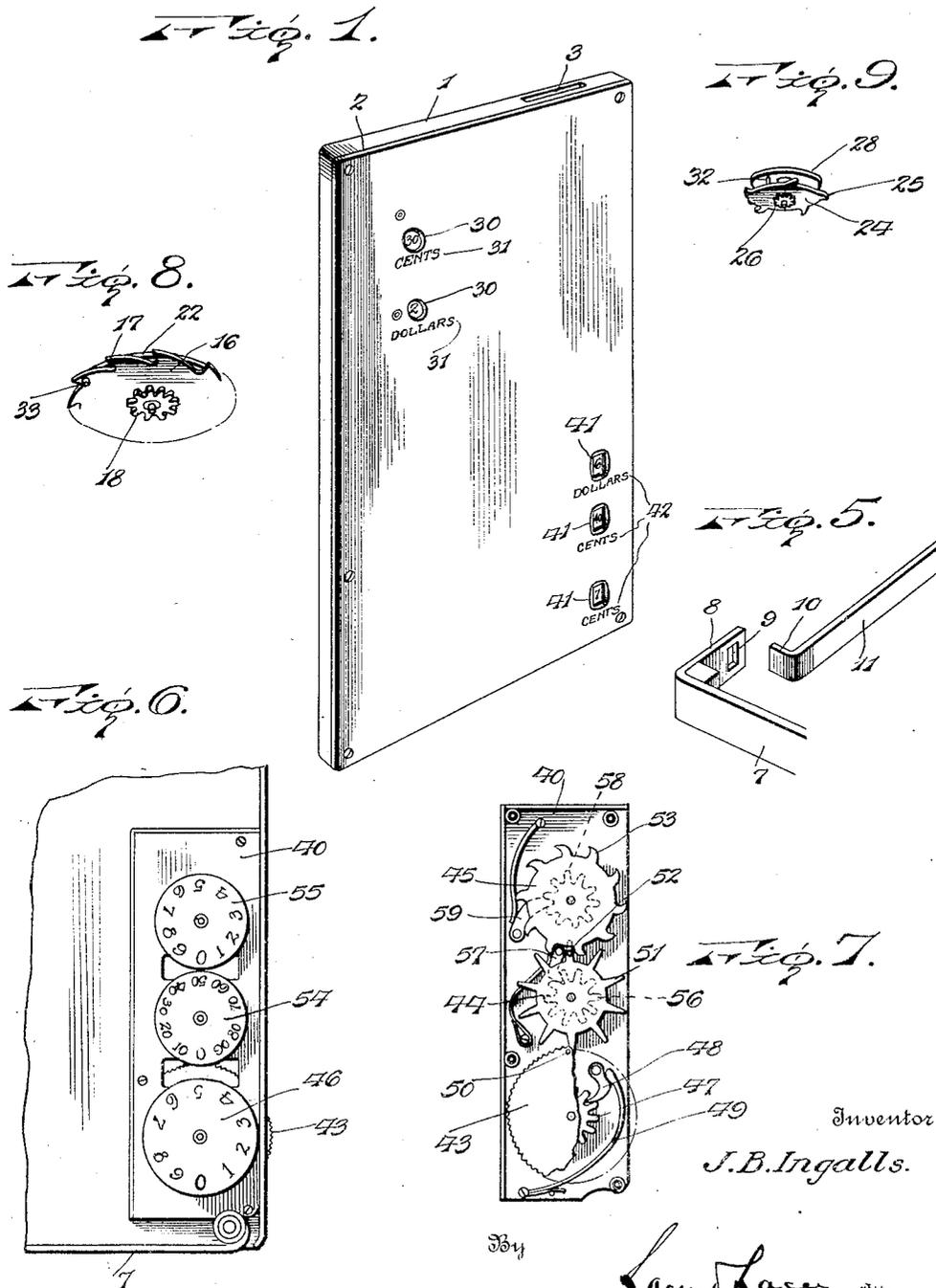


July 3, 1923.

1,460,908

J. B. INGALLS
COIN BANK REGISTER
Filed Dec. 19, 1921

2 Sheets-Sheet 1



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July 3, 1923.

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2 Sheets-Sheet 2

Fig. 1.

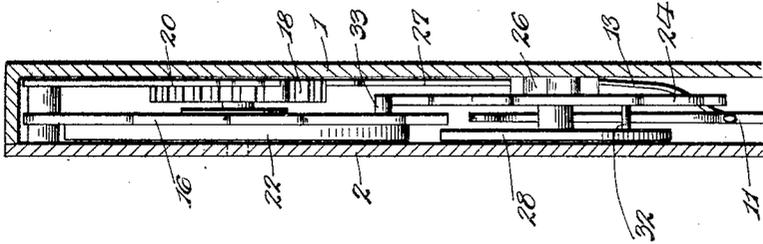


Fig. 2.

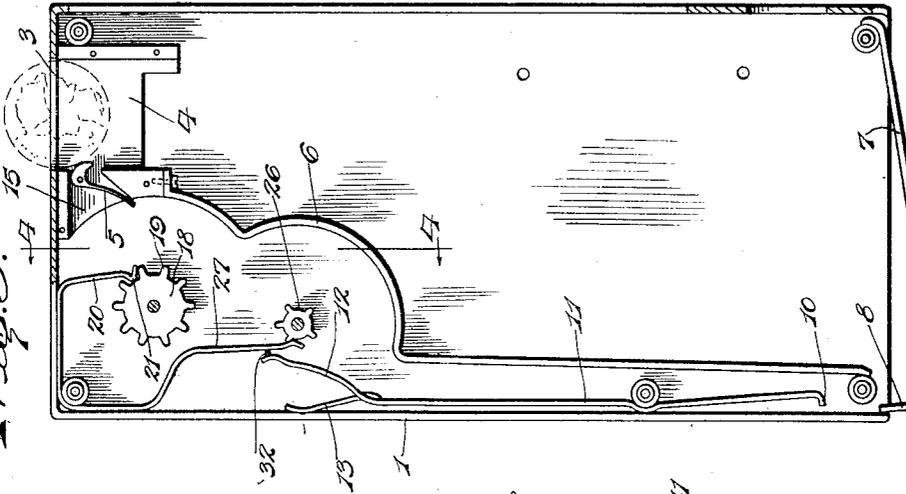
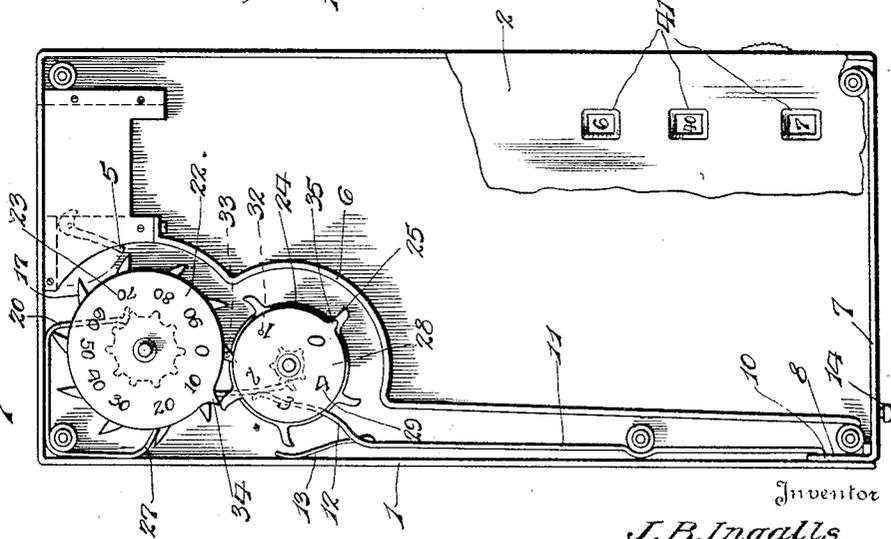


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH BAKER INGALLS, OF CHICAGO, ILLINOIS.

COIN-BANK REGISTER.

Application filed December 19, 1921. Serial No. 523,434.

To all whom it may concern:

Be it known that I, JOSEPH B. INGALLS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Coin-Bank Registers, of which the following is a specification.

This invention seeks to provide a receptacle for coins which may be carried in the pocket and which will accurately register the coins inserted and automatically discharge them when a predetermined number have been inserted. The device is intended more particularly for collecting dimes, although the invention is applicable to coins of other denominations, and the invention seeks to provide a savings bank or pocket receptacle for coins having novel means for counting the coins, and means controlled by said counting means for preventing removal of the coins from the casing until a predetermined number of coins having been deposited. The invention also seeks to provide novel means whereby, after a collection of coins has been removed, the insertion of another coin will lock the case and properly set the counting mechanism. The invention is illustrated in the accompanying drawings and will be hereinafter fully described, the novel features being particularly pointed out in the claims following the detailed description.

In the drawings—

Figure 1 is a perspective view of a device embodying my present invention;

Fig. 2 is a front elevation with the face plate partly broken away;

Fig. 3 is a section taken through the coin chute and just below the plane of the counting wheels;

Fig. 4 is a transverse section on the line 4—4 of Fig. 3;

Fig. 5 is a detail view of the latch;

Fig. 6 is an enlarged elevation of a counting mechanism which may be provided in one corner of the casing;

Fig. 7 is a view of said mechanism with the cover thereof removed;

Figs. 8 and 9 are detail views of the coin-counting discs.

In carrying out my invention, I employ a flat casing 1 which is preferably rectangular and provided with a removable face plate 2. In one end of the casing is a slot 3 through which the coins may be inserted and which registers with the upper end of

a coin chute or tube 4 which is provided within the casing and leads the coins past a dog 5. A partition 6 within the casing extends from the lower end of the tube or chute 4 at one side thereof to the opposite end of the casing and this partition has arcuate portions disposed concentric with and serving as guards for the counting members and is also provided with a straight portion disposed close to one side edge of the casing and extending from the lower of said arcuate portions to the lower end of the casing. The lower end of the casing is closed by a gate or pivoted closure 7 which is of a form and size to fit closely within the end of the casing and is pivoted at its end more remote from the lower end of the partition 6. The free end of the closure extends under and beyond the end of the partition 6, as clearly shown in Fig. 2, and is then turned upwardly to provide a lip or tongue 8 fitting within the end of the casing and having a slot 9 at its extremity to be engaged by the hooked end 10 of the latch 11. The said latch 11 is preferably in the form of a lever fulcrumed between its ends within the casing at a point located between the partition 6 and the adjacent side edge of the casing, as shown in Figs. 2 and 3, the upper end of the latch being turned inwardly, as shown at 12, and being equipped with a leaf spring 13 which bears against the adjacent side edge of the casing and tends to hold the hooked end 10 of the latch within the slot 9 of the closure. As will presently appear, the counting mechanism acts upon the upper free end of the latch in such manner as to rock the latch upon its fulcrum so as to release its hooked end from the closure and permit the closure to be opened. To facilitate the opening or closing of the closure 7, a knob 14 may be provided on the outer side of the same if so desired.

The dog 5 is essentially an angle lever fulcrumed adjacent the coin chute 4 and having its shorter arm projecting into said chute, as clearly shown in Fig. 3, a recess or slot 15 being provided in the wall of the chute to house the dog and permit play of the same. Mounted between the face plate 2 and the back of the casing is a counting wheel 16 which is constructed with teeth or spurs 17 adapted to be engaged by the end of the longer arm of the dog 5, and fast to the counting wheel is a stop wheel or pinion 18 having peripheral teeth 19 which

are adapted to be engaged by a pawl 20 so that the counting wheel will be normally held at rest. This pawl 20 is preferably a spring fitted in the corner of the casing and having one end bent, as shown at 21, to present a beveled tooth or lug adapted to fit in the space between adjacent teeth 19 of the stop wheel 18. The resiliency of the spring will hold it to the stop wheel with sufficient strength to normally hold the wheel at rest, but when pressure is exerted by the insertion of a coin and the consequent actuation of the dog 5 and the counting wheel 16, the pressure of the spring will be overcome and the stop wheel will be rotated so that the tooth 19 engaged by the pawl 20 will ride under the same, but as soon as the tooth has cleared the lug 21, said lug will return to its position in the path of the succeeding tooth so that the stop wheel and the counting wheel can move only one step as each coin is inserted. The counting wheel 16 also carries a dial 22 upon which are printed, painted or otherwise displayed numerals indicative of the amount deposited, said numerals being shown at 23 in Fig. 2.

Disposed below the counting wheel 16 and mounted in a similar manner is a second counting wheel 24 which is smaller than the wheel 16 but is of similar form, having peripherally spaced teeth 25 and being fast with a stop wheel 26. The stop wheel 26 is engaged by a pawl 27 which is similar in construction to the pawl 20 and may be formed integral therewith, as clearly shown in Fig. 3. A dial 28 is carried by the counting wheel 24 and this dial has upon its face numerals 29 which indicate an aggregate of sums counted by the first wheel 16. The face plate 2 is provided with openings 30 therein and upon the outer surface of said plate are legends, indicated at 31, to be read in conjunction with the numerals upon the dials visible through the openings 30.

In the illustrated embodiment of the invention, the dial 22 has displayed thereon numbers running from 0 to 90 by tens, while the dial 28 has displayed thereon numerals spaced equi-distantly about the dial and running from 0 to 4. A pin 32 projects from the counting wheel 24 and is adapted to ride upon the free end 12 of the latch 11, the parts being so proportioned that, while the said pin will impinge against the end of the latch, it will not strike the pawl 27. A similar pin 33 is carried by the counting wheel 16 and is adapted at the end of each complete revolution of said counting wheel to engage one of the teeth 25 of the counting wheel 24 and thereby rotate the latter one step. The dials 22 and 28 are provided each with a single tooth 34 and 35, respectively, which are arranged so that, when the first dime or coin is inserted, the counting wheel

24 will be rotated one step and the 0 carried by the dial 28 thereby brought into alinement with the lower opening 30 in the face plate 2.

Originally, the apparatus will be, of course, so set that the 0 upon each dial will be visible through the respective openings 30 in the face plate of the casing and the closure 7 will be held in closed position by the latch 11. When the first dime is inserted, the shorter arm of the dog 5 will be swung downwardly and the longer arm of said dog, consequently, swung upwardly so that the free end thereof will impinge upon a tooth 17 of the upper counting wheel 16 and said wheel will be thereby rotated one step, whereupon the zero mark will be moved out of alinement with the upper opening 30 and the number 10 will appear at said opening, thereby indicating that the bank contains ten cents. The operation is repeated with the insertion of each successive dime so that eventually the number 90 will appear at the upper opening 30. When the tenth dime is inserted, the action of the dog 5 will again rotate the counting wheel 16 one step so that the zero mark will appear at the opening 30, but the pin 33 is disposed in radial alinement with the said zero mark and, consequently, will engage the first tooth of the counting wheel 24 and will rotate the said wheel so that the zero mark upon this dial will be moved away from the lower opening 30 and the numeral 1 will appear at said opening, thus indicating that the bank contains one dollar even. The capacity of the illustrated bank is four dollars but it may, of course, be of any desired capacity. To permit it to register up to five dollars, it is necessary merely to substitute a six-point wheel for the five-point wheel 24, and make a corresponding change in the accompanying dial so that the figures thereon will run from 0 to 5. When the fortieth dime, or the fiftieth as the case may be, is inserted, the pin 32 carried by the counting wheel 24 will be brought to the position indicated in Fig. 3 and will bear upon the upper free end of the latch 11 so that the said end will be pushed aside against the force of the spring 13 and the hooked end 10 of the latch will be withdrawn from the slot 9 in the tongue 8 of the closure, whereupon the closure may be swung to open position, as indicated in Fig. 3. If the bank be held in a vertical position, the weight of the coins resting upon said closure will, of course, move the same downwardly. The tooth 34 on the dial 22 is in radial alinement with the number 10 on said dial, while the tooth 35 on the dial 28 is in radial alinement with the zero thereon. When the fortieth dime has been inserted, the tooth 35 will be immediately in advance of the tooth 34 and the zero of the upper dial will be displayed at

the opening 30, while the number 4 on the lower dial will be displayed at the lower opening 30. After the coins have all been removed, the closure 7 is swung upwardly into closed position, and when another dime is inserted the previously described operation will ensue with the addition that the tooth 34 moving with the dial 22 will push the tooth 35 ahead so that the dial 28 and the lower counting wheel will be rotated one step and the pin 32, consequently, carried beyond the end of the latch so that the latch will spring into engagement with the slot 9 and lock the closure. This movement will also bring the zero mark of the lower dial into view through the lower opening in the face plate, as will be readily understood. It will, of course, be noted that, if the teeth 34 and 35 or some equivalent thereof were not provided, the pin 32 would not be carried beyond the latch and the latch permitted to operate until the upper counting wheel had been given one complete revolution so that the pin 33 thereon would be brought into engagement with a tooth 25 of the counting wheel 24. This action, however, would obviously be objectionable inasmuch as the closure would not be secured until after one dollar had been deposited and accuracy in the counting would not be accomplished.

In connection with the device and to further develop the thrift which is encouraged by its use, I provide a tally mechanism whereby the owner of the bank may be advised of his total daily expenditures for small items. This tally mechanism comprises a supplemental case 40 secured in one lower corner of the casing 1 and preferably immediately above the pivot of the closure 7. The face plate is provided with openings 41 and suitable legends 42 indicative of dollars and cents and, within the said casing 40, I provide a train of counting wheels 43, 44 and 45. The counting wheel 43 is of such diameter that it will project through the side edge of the casing 1, as shown clearly in Fig. 6, and its edge is preferably milled so that it may be easily manipulated by the finger of the user. Fixed to the counting wheel 43 is a dial 46 having numerals thereon which are readable through the lowest opening 41 and which indicate the expenditures in one cent amounts. A stop wheel 47 is fast to the counting wheel 43 and is yieldably held at rest by a pawl 48 pressed to the stop wheel by a spring 49 in an obvious manner. The counting wheel 43 carries a pin 50 which is adapted to successively engage the teeth 51 on the counting wheel 44 and the counting wheel 44 likewise carries a pin 52 which is adapted to successively engage the teeth 53 of the counting wheel 45. A dial 54 is carried by the counting wheel 44 and the numerals thereon are readable through the middle opening 41 and indicate

ten cent totals, the wheel 44 being actuated at each complete revolution of the lowest counting wheel 43. Likewise, the counting wheel 45 is actuated at each complete revolution of the counting wheel 44 so that each time ten dimes have been registered by the intermediate counting wheel, the wheel 45 will be moved one degree and the dial 55 carried thereby will be moved to bring into view through the uppermost opening 41 a numeral indicative of the total number of dollars which have been expended. The counting wheel 44 has fast thereto a stop wheel 56 yieldably engaged by a spring-pressed pawl 57 and the counting wheel 45 likewise has fast thereto a stop wheel 58 yieldably engaged by a spring-pressed pawl 59.

My device may be made of any preferred material and may be obviously carried in the pocket without inconvenience. The entire outer surface of the device may be covered with celluloid or some similar material so that interference with the interior mechanism will be prevented. The device may be employed by banks to encourage the use of savings accounts and, when distributed by banks, the upper portion of the latch may be omitted so that the device cannot be opened unless it is destroyed or is brought to the bank distributing it. A key or similar means may be provided at the bank to release the latch from the closure so that the collection of coins may be removed and left with the bank to the customer's credit.

Having thus described the invention, what is claimed as new is:

1. In a device for the purpose set forth, the combination of a coin receptacle, a pivoted closure fitting in one end of the receptacle, a lip at the free end of the closure projecting within the receptacle and provided with a slot, a latch having one end arranged to engage the slot in said lip, said latch extending longitudinally of the casing immediately adjacent one wall thereof, a spring acting upon the opposite end of the latch to hold the latch in engagement with the lip, a counting mechanism in the receptacle at the end remote from the closure to be actuated by coins inserted into the receptacle, and an element included in the counting mechanism to act upon the free end of the latch in opposition to said spring and release the closure.

2. The combination of a receptacle, a coin tube in one end of the receptacle, a dog mounted in the receptacle and having one end projecting into the coin tube to be actuated by an inserted coin, a counting wheel arranged to be actuated by the opposite end of said dog, a dial on said counting wheel, a second counting wheel arranged to be actuated by the first counting wheel, a dial on the second counting wheel, a tooth projecting

from the last-mentioned dial in radial alignment with the zero notation thereon, and a tooth projecting from the first-mentioned dial in radial alignment with the notation
5 succeeding the zero notation thereon to engage the tooth on the first-mentioned dial.

3. A coin bank comprising a thin flat receptacle to be carried in a garment pocket, a closure at one end of the receptacle, a latch
10 within the receptacle extending along one

side edge thereof for securing said closure, a coin tube at the opposite end of the receptacle in a corner thereof, a counting mechanism at the latter end of the receptacle
controlling the latch, and a dog at the side
15 of and projecting into the coin tube to be actuated by an inserted coin, said dog controlling the counting mechanism.

In testimony whereof I affix my signature.
JOSEPH BAKER INGALLS. [L. s.]