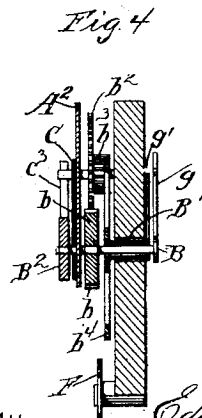
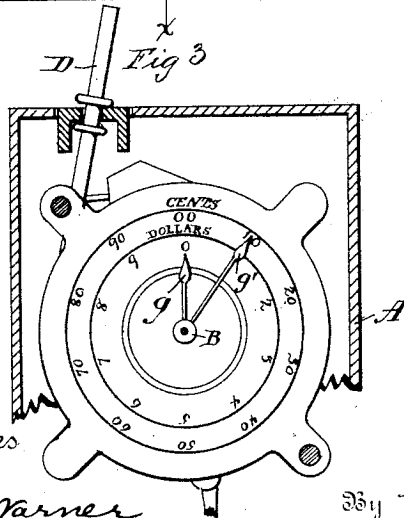
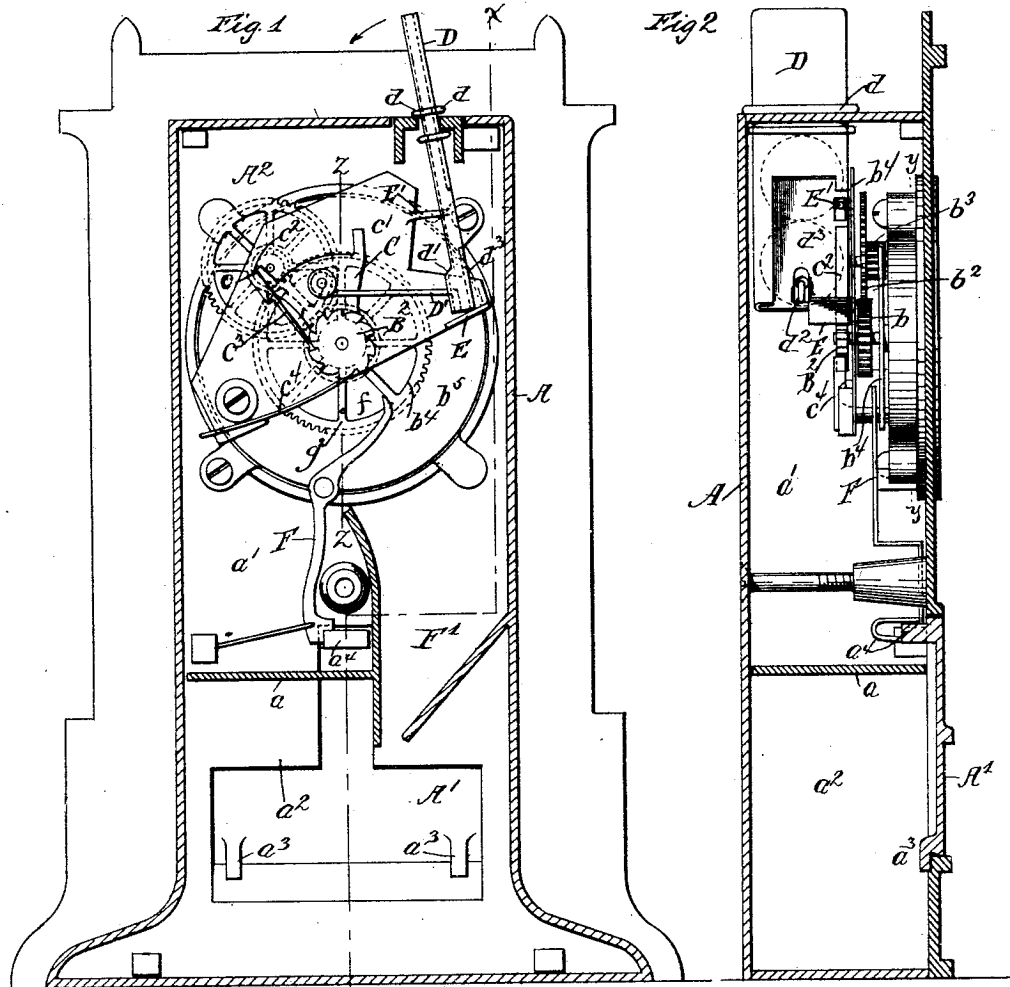


E. S. BOYNTON.  
TOY MONEY BANK.

No. 469,732.

Patented Mar. 1, 1892.



Witnesses

*Jas. E. Warner*  
*H. B. Campbell*

By *his Attorney*

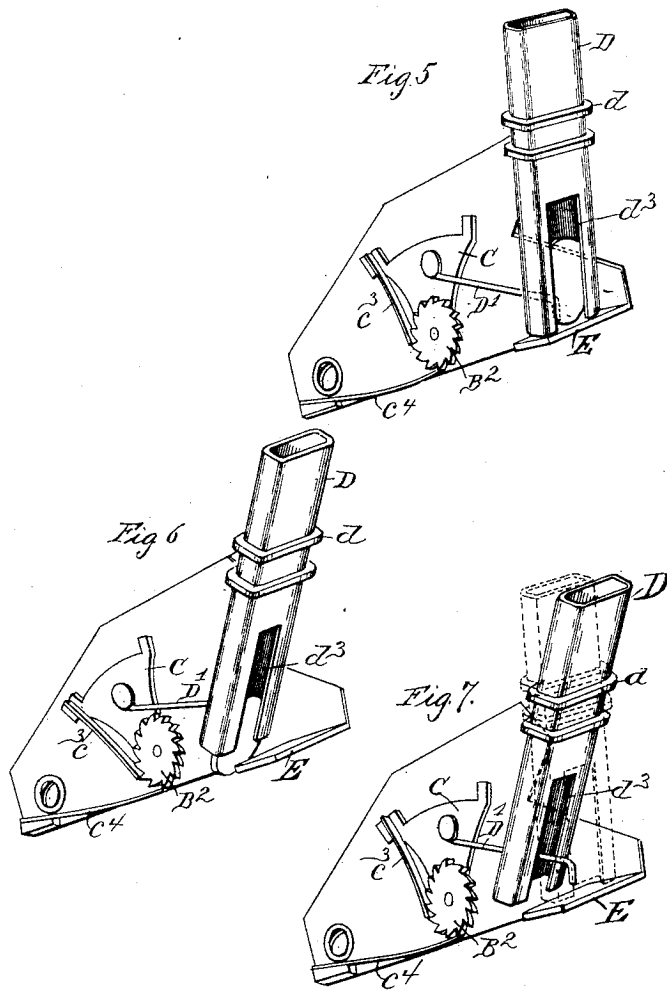
Inventor

*Edward S. Boynton*  
*W. L. Bennett*

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Witnesses  
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*James M. Hicks*

Inventor  
*Edward S. Boynton*  
 By his Attorney  
*W. L. Bennett*

# UNITED STATES PATENT OFFICE.

EDWARD S. BOYNTON, OF BROOKLYN, NEW YORK, ASSIGNOR TO E. T. WILKINSON, OF SAME PLACE.

## TOY MONEY-BANK.

SPECIFICATION forming part of Letters Patent No. 469,732, dated March 1, 1892.

Application filed March 2, 1891. Serial No. 333,469. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD S. BOYNTON, of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Toy Money-Banks, of which the following is a specification.

This invention relates to toy money-banks of that class in which a registering mechanism is operated to indicate the amount of coin of a certain denomination deposited and in which mechanism is automatically operated to release or open a door after a desired number of coins shall have been deposited.

The invention consists, principally, in a movable coin-chute operating in conjunction with a coin to move the indicator, and it further consists in the construction and novel combination of parts hereinafter set forth.

In the drawings forming part of this specification, Figure 1 is a rear elevation of the bank with the back plate removed. Fig. 2 is a vertical section through the line  $xx$  of Fig. 1. Fig. 3 shows a partial front view and a partial section through the line  $yy$  of Fig. 2. Fig. 4 is an enlarged sectional view of the registering mechanism, taken through the line  $zz$  of Fig. 1. Fig. 5 shows a perspective view, enlarged, of the swinging coin-chute with a coin in proper position for operating the registering mechanism. Fig. 6 shows a perspective view, enlarged, of the swinging coin-chute after the coin has been registered by the registering mechanism. Fig. 7 represents a perspective view, enlarged, of the swinging coin-chute, showing the registering mechanism not obstructed with a coin.

Referring by letter to the drawings, A designates the case, preferably of metal and substantially rectangular in form. The case is divided by a horizontal partition  $a$  into two compartments  $a'$   $a^2$ , the upper one of which  $a'$  contains the operating mechanism and the lower one  $a^2$  is designed to receive the coin. The lower compartment  $a^2$  has an opening in its front wall provided with a door  $A'$ , having hooks  $a^3$  at its lower edge, which engage against the inner side of the front wall, and at its upper portion the door has a keeper  $a^4$ , which projects through a hole in the front wall and is engaged by a lever which is automatically operated to release the door at a certain time, as will hereinafter appear.

$A^2$  designates the registering mechanism, comprising a shaft B, carrying the cent-indicating hand  $g$ , traveling around a dial, and a hollow shaft B', carrying the dollar-indicating hand  $g'$  and through which the shaft B extends in like manner to the hand-carrying shafts of a clock. A ratchet-wheel  $B^2$  is mounted on the inner end of the shaft B, and this shaft has also affixed to it a gear-wheel  $b$ , meshing with a gear-wheel  $b^2$ , journaled on a stud extending from the front wall of the casing. The wheel  $b^2$  carries a gear-wheel  $b^3$ , meshing with a larger gear-wheel  $b^4$ , affixed to the hollow shaft B'. The relative sizes and number of teeth of the several wheels are so arranged that the pointer or hand on the shaft B will make one complete revolution of the dial while the pointer or hand on the shaft B' is moving from "0" to "1."

C is an oscillating lever loosely mounted on the shaft B between the ratchet-wheel  $B^2$  and the back plate  $b^5$ . This lever is substantially in the form of a triangular plate and has projections  $c'$  at its upper end, which contact with a stop  $c^2$  on the plate  $b^5$  and limit the movements of the lever. At one edge the lever C has affixed to it a dog  $c^3$ , preferably of resilient metal, which engages with the teeth of the ratchet-wheel  $B^2$  to rotate it when the lever C is moved in one direction; but on account of its resilience the dog  $c^3$  will ride over the teeth of the ratchet-wheel without imparting motion to it when the lever C is moved in the opposite direction. As an additional means, however, to prevent a backward movement of the ratchet-wheel by pressure brought to bear upon the pointers or hands, I provide a catch  $c^4$ , consisting of a strip of spring metal anchored at one end and engaging against the radial shoulder portion of the ratchet-teeth, as shown.

D designates a chute adapted to receive a coin of a certain value—say a ten-cent piece. This chute D projects through an opening in the top wall of the case A and has a swinging or oscillating connection with said wall by means of trunnions or shoulders  $d$ , resting on the upper surface of the top wall. I do not limit myself, however, to the means shown for supporting the chute D.

D' shows a link having a pivotal connection at one end with the lever C and passing

loosely through a hole in an offset  $d'$  in the wall of the chute D adjacent to the lever C, and the free end of the link D' is provided with a head  $d^2$  within the chute, which is sufficiently large to prevent its passage through the hole in the chute provided for the passage of the link. The head  $d^2$ , as here shown, consists of a downwardly-turned portion of the end of the link. The opposite side wall of the chute D is provided with an opening  $d^3$ , so that the head  $d^2$  of the link may pass through it should the chute be oscillated without a coin in the proper position.

E is a stop or platform attached to the plate  $b^5$ , serving as a closure for the lower end of the chute when said chute is in its normal position, as shown in Fig. 1, to prevent the discharge of a coin until the lower end of the chute shall have been oscillated toward the lever C.

E' is an arm extending from the plate  $b^5$  through an opening in the adjacent side wall of the chute, and the opposite side wall of the chute is also provided with an opening, through which the end of this arm may pass. This arm E' serves a double purpose. It prevents the passage of two coins at once through the chute and also by projecting sufficiently into the chute necessitates the oscillation of the chute in the proper direction to insure the engagement of a coin with the head  $d^2$  of the link D'.

I will now describe a means for automatically releasing the door A'.

F designates a curved lever fulcrumed between its ends to a stud projecting from a wall of the case A and normally engaging at its lower end within a notch in the catch  $a^4$ . The free end of the lever F has a hook or cam-surface  $f$ , with which a pin  $g^2$  on the wheel  $b^4$  contacts and oscillates said lever at each complete revolution of the wheel, which, as before stated, occurs when a predetermined amount of coin shall have been passed through the chute. When the lever F is oscillated, its lower end will be freed from the catch  $a^4$ , and the door may then be opened.

The operation of the device is as follows: A coin is inserted into the chute and it falls therein till it reaches the stop E'. The chute is then oscillated by hand in the direction of the arrow shown in Fig. 1 until the cam-stop E' clears the chute. Then the coin falls to the bottom of the chute D between the head  $d^2$  of the link D' and the opposite wall of the chute. Then by oscillating the chute by hand in the reverse direction with the coin bearing against the head of the link the lever C is moved till its projection  $c'$  contacts with the stop  $c^2$ . Through this movement of the lever C the ratchet-wheel is moved one step, and consequently the pointers are moved to indicate one coin deposited. As in the last-described movement of the chute its lower end will have been moved beyond the closure E, and the coin after serving its purpose to

move the pointers will drop through a chute F' into the compartment  $a^2$ .

It will be understood from the above description that an oscillation of the chute D in either direction without a coin in the proper place will have no effect on the registering mechanism, inasmuch as the link D' will pass through the chute when not obstructed by a coin.

I do not limit the use of my invention to toy banks, as the mechanism may be employed in other so-called "coin-operated" machines.

Having described my invention, what I claim is—

1. The combination, with registering mechanism, of a manually-movable coin-chute operating in conjunction with a coin to move the registering mechanism, substantially as specified.

2. The combination, with registering mechanism, of an oscillating chute operating in conjunction with a coin to move the registering mechanism, substantially as specified.

3. In a toy money-bank, the combination, with a case, of a registering mechanism comprising a ratchet-wheel, a reciprocating lever carrying a dog, an oscillating coin-chute, and a connection between the said lever and coin-chute, substantially as specified.

4. In a toy money-bank, the combination, with a case, of registering mechanism, an oscillating coin-chute, a link engaging with the registering mechanism and passing loosely through an opening in a wall of the chute, and a closure for the lower end of the chute and beyond which it may be moved, substantially as specified.

5. In a toy money-bank, the combination, with a casing and registering mechanism, of an oscillating chute, a link engaging with the registering mechanism and passing loosely through an opening in a wall of the chute, and a stop above the link, adapted to project into the chute, substantially as specified.

6. In a toy bank, the combination, with registering mechanism comprising pointers, of a ratchet-wheel, a lever mounted on the shaft of said wheel, a dog on the lever, engaging with the ratchet-wheel, means for limiting the movement of the lever, and an oscillating coin-chute operating in conjunction with a coin to move said lever, substantially as specified.

7. In a toy bank, the combination, with registering mechanism, of a swinging coin-chute and mechanism intermediate of the registering mechanism and coin-chute, whereby after a coin shall have been deposited in the chute a movement of said chute by hand-power will operate the registering mechanism, substantially as specified.

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Witnesses:

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