

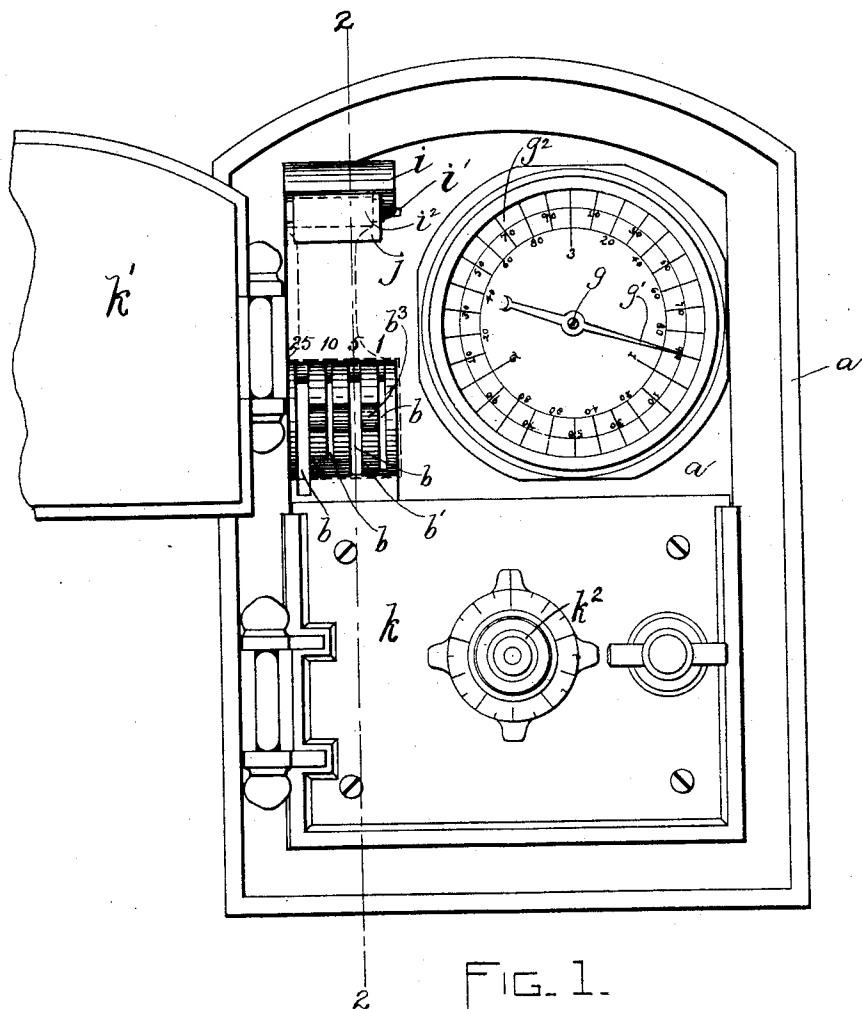
(No Model.)

3 Sheets—Sheet 1.

W. B. WHITNEY.
REGISTERING TOY BANK.

No. 465,226.

Patented Dec. 15, 1891.



WITNESSES.

A. D. Hammon

B. A. McShane

INVENTOR.

W. B. Whitney
by M. B. Brown & Co.
Atty.

(No Model.)

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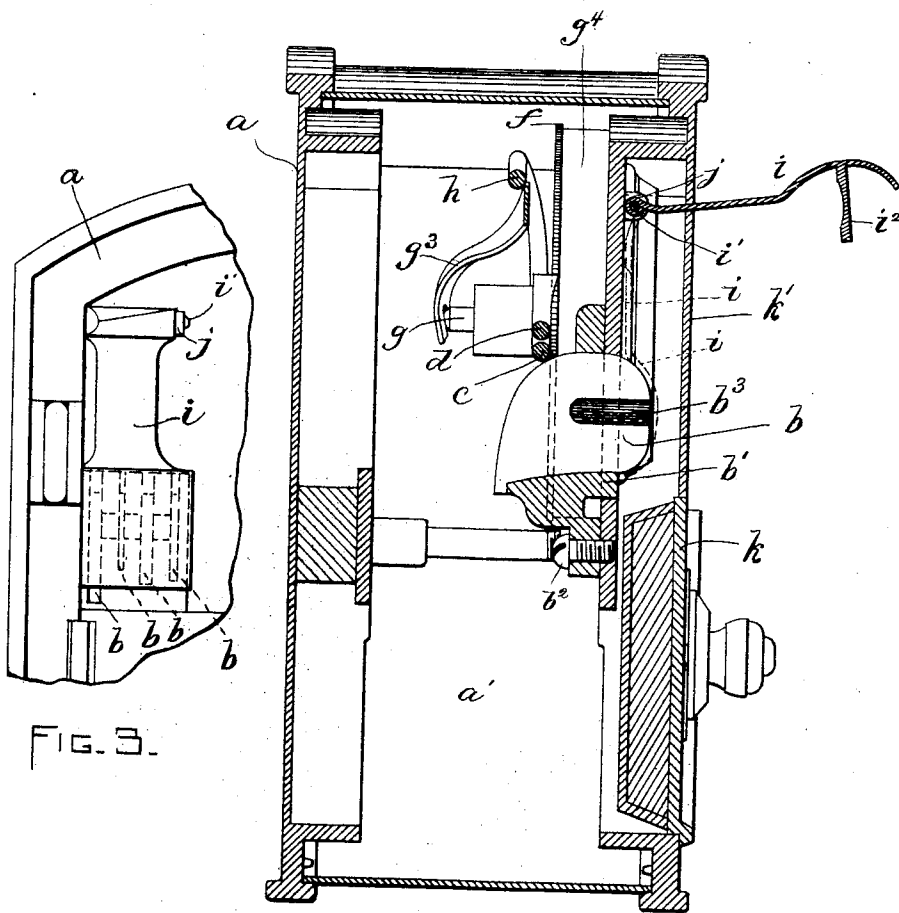


FIG. 3.

FIG. 2.

WITNESSES.

A. D. Harrison.

B. A. McShane.

INVENTOR.

W. B. Whitney
by Myself Broomfield
Atty

(No Model.)

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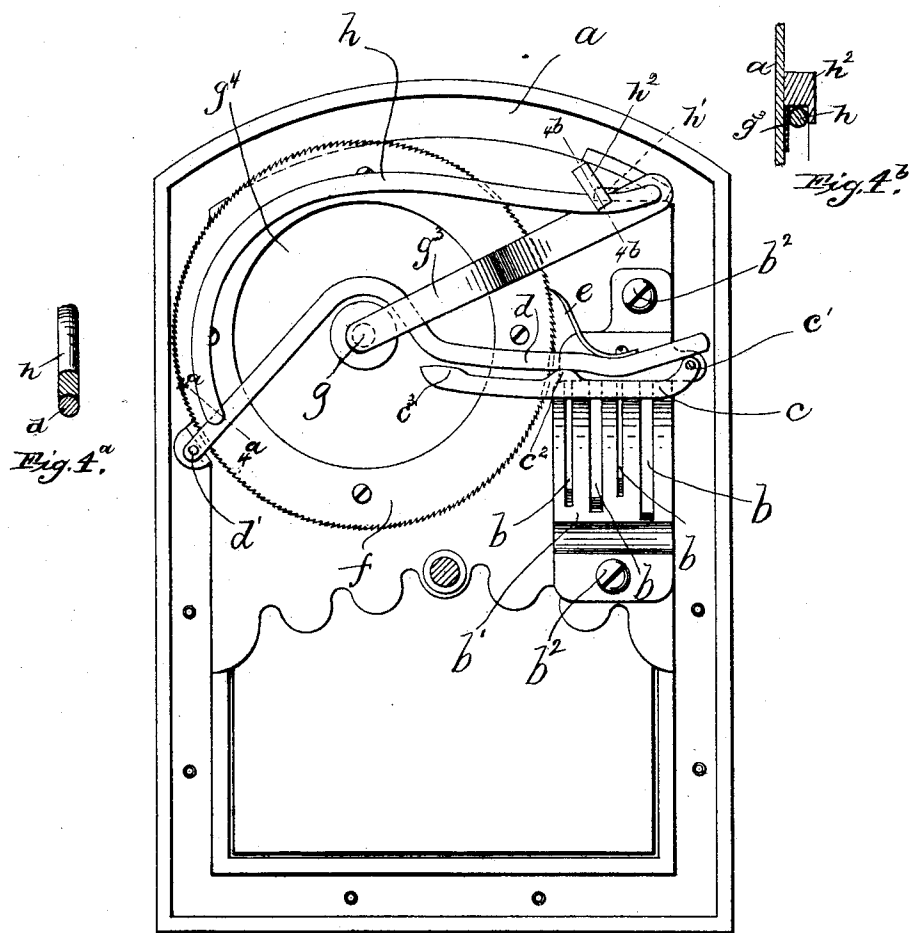


FIG. 4.

WITNESSES.

A. D. Hanson

B. A. McShane.

INVENTOR.

W. B. Whitney
by *Night Brown Crossley*
Atty

UNITED STATES PATENT OFFICE.

WILLIAM B. WHITNEY, OF LEOMINSTER, MASSACHUSETTS, ASSIGNOR TO
THE W. S. REED TOY COMPANY, OF SAME PLACE.

REGISTERING TOY BANK.

SPECIFICATION forming part of Letters Patent No. 465,226, dated December 15, 1891.

Application filed May 29, 1891. Serial No. 394,492. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. WHITNEY, of Leominster, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Toy Banks, of which the following is a specification.

This invention relates to coin-receptacles known as "toy banks," and particularly to that class of toy banks which are provided with indicating devices operated by the insertion of coins to indicate the number of coins that have been inserted.

The invention has for its object, first, to provide a simple and effective means for operating the indicator by the insertion of a coin through a receiving slot or mouth into a coin-receptacle, and secondly, to provide means whereby the total sum represented by coins of different denominations, inserted in the same receptacle, may be indicated.

To these ends the invention consists in the improvements which I will now proceed to describe and claim.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a front elevation of a toy bank provided with my improvements. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 represents an elevation of a portion of a toy bank, showing the plunger which forces the coins into the receptacle in a different position from that shown in Fig. 1. Fig. 4 represents a rear elevation of the front plate of the bank or receptacle removed, the view shown in Fig. 4 being the back side of the portion of the bank shown in Fig. 1. Fig. 4^a is a detail section on line 4^a 4^a of Fig. 4, and Fig. 4^b is a detail section on line 4^b 4^b of Fig. 4.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a box or casing of suitable construction, which may be of any desired or appropriate external form, and is provided internally with a coin chamber or receptacle *a'*. In the front of the receptacle, and located at a suitable distance above the bottom of the same, is a series of coin-receiving slots or mouths *b b b*, there being, preferably, four of said slots or mouths, although the number is not limited, and may

be greater or less than four. The mouths *b* are of different sizes, so that one may receive a cent, another a nickel, another a ten-cent piece, and another a twenty-five-cent piece. I prefer to make the slots *b* in a block or bushing *b'*, which is inserted in a slot or opening in the front plate of the casing *a*, and is secured thereto by means of screws *b²* or otherwise, this construction being adopted for convenience; but I do not limit myself thereto, and may cut the slots in the material of the front plate itself, if preferred.

c represents a stop-bar, which is pivotally connected with a fixed ear or boss at *c'*, and is arranged so that it normally extends across the inner ends of the slots or mouths *b*, as shown in Figs. 2 and 4, and when in its normal position it acts as a stop to arrest a coin inserted in either slot or mouth, thus preventing a coin from reaching the receptacle unless sufficient force is exerted on the coin to enable it to throw upwardly or displace the said stop-bar.

d represents a lever, which is pivotally connected at *d'* to the casing and has its swinging end bearing on the stop-bar *c*.

e represents a pawl secured to the swinging end of the lever *d* and engaged with a ratchet *f*. Said ratchet is secured to a shaft *g*, extending through the front plate of the casing and provided at the outer side of said front plate with an indicator or pointer *g'*.

It will be seen that when a coin is inserted in one of the slots or mouths *b b* and pressed through said slot with sufficient force to displace the stop-bar *c* said bar will swing upwardly, and thus raise the lever *d* and pawl *e*, the pawl being thus caused by its engagement with the ratchet *f* to partially rotate said ratchet and the shaft *g*, and thus move the indicator *g'*.

It will be here noted that the lower edges of the slots *b* are arranged at different heights, as shown in Figs. 1 and 4, the height of the bottom or lower edge of each mouth being proportioned to the size of the coin which the mouth is intended to receive and the distance of said mouth from the pivotal connection *c'* on which the stop-bar *c* swings, so that each coin inserted in the proper slot or mouth will give the stop-bar an upward movement

differing from that given said bar by the coins inserted in the other slots or mouths. For example, a twenty-five-cent piece inserted in the slot which is nearest the pivot c' will give the stop-bar a greater upward movement than a coin inserted in either of the other slots, thus causing a movement of the indicator sufficient to add twenty-five to the number previously indicated by it, said indicator being arranged over a graduated plate or dial g^2 , which is suitably marked. The second slot from the pivot c' has its bottom arranged at a higher point than the first, so that a ten-cent piece inserted in said slot will give the stop-bar a greater upward movement than a coin inserted in the slot next higher, and so on, the bottom of each slot being at such height that it will support the upper edge of a coin inserted in it in the proper position to enable said coin to displace the stop-bar to the extent required to move the indicator a distance corresponding to the denomination of the coin. It will be seen, therefore, that the bank is adapted to receive different denominations of coin and that the indicator will give the aggregate sum represented by all the coin inserted in it.

The lever d may be pressed downwardly against the stop-bar c by means of a spring h , affixed at one end to the casing, the other end bearing on the lever d . This spring h , which, as shown in Figs. 2, 4, and 4^b, is of round wire, is represented as fixed to the casing at one end by being bent and passed through the casing, the extreme end being indicated by the dotted lines h' in Fig. 4. To prevent the spring from moving upward, a lug h^2 is secured to the wall of the casing and overlies said spring, as shown in Figs. 4 and 4^b. The free end of spring h is made concave and rests on lever d , near the fulcrum of the latter, as shown in Figs. 4 and 4^a.

I do not limit myself to the use of a series of slots or mouths, as the described indicator-operating devices may be used in connection with a single slot or mouth b , as will be readily seen. In case a single slot is used it is obvious that a coin of a greater size would operate the lever d to a greater extent than a coin of a lesser size. Neither do I limit myself to the mechanical devices described constituting the connection between the movable stop c at the inner end of the slots or mouths b and the indicator, it being obvious that the indicator may be moved by any suitable organization of devices constituting a connection between it and the movable stop.

i represents a swinging arm pivoted at i' to ears j, j on the front of the casing a . On the swinging portion of said arm is formed a flange or plunger i^2 , which is arranged to enter a transverse slot or recess b^3 , formed in the block or bushing b' , in which the coin-slots b are formed, said recess b^3 being formed in the front edge of the walls between the slots. The object of said swinging arm and its flange or plunger is to enable the operator

to conveniently force a coin through either of the slots b into the receptacle, the slots being preferably of such length that the pressure of the finger on the outer edge of the coin cannot force it entirely through the slot and displace the movable stop c . When the coin is being inserted, the arm i is raised, as shown in Figs. 1 and 2, and when it is desired to force the inserted coin through the slot the arm i is depressed, as shown in Fig. 3 and in dotted lines in Fig. 2, thus causing the plunger i^2 to eject the coin through the slot into the receptacle.

The lower portion of the coin-receptacle has an opening for the removal of the accumulated coins, which opening is protected by a door k , hinged to the casing, and provided with a suitable lock, as at k^2 , which is preferably a combination-lock, whereby the bank may be locked, so that children and others unauthorized cannot remove the contents. Said door is located below the coin-slots and indicator, as shown in Figs. 1 and 2. I prefer to provide a second door k' , arranged so that when closed it will cover the coin-slots and indicator.

It will be seen that the stop-bar c has two protuberances or bosses c^2, c^3 . The boss c^2 is directly over the slot b , which receives the coins of the smallest denomination, as one cent, while the boss c^3 is considerably farther from the pivoted end of the stop-bar c than the boss c^2 . The lever d bears continually on the boss c^2 ; but the boss c^3 is so formed that it does not touch the lever d when the parts are at rest and will not be caused to touch said lever by the upward movement given to the stop-bar by the passage of a coin through the slot under the boss c^2 . It will be seen, therefore, that when a coin is passed through the last-mentioned slot the lever d and pawl e will be given the minimum upward movement; but when a coin is passed through any other slot the said lever and pawl are given a more extended upward movement by the contact of the boss c^3 with the lever, the extent of the movement depending on the size of the coin, the height of the bottom of the slot through which it passes, and the distance of the slot from the pivoted end of the stop-bar.

The indicator-shaft g is provided with a disk g^1 , to which the ratchet f is affixed. Said disk is preferably of wood, and its front side is held against the inner side of the front piece of the casing with a yielding pressure by means of a spring g^3 , which bears on the outer end of the shaft g . The object of said spring and disk is to prevent the indicator-shaft from rotating too freely, the disk pressed against the casing acting as a brake, as will be readily seen.

In the form of indicator here shown each notch of the ratchet f represents a unit of the sum indicated, the unit being in this case one cent. Hence the capacity of the indicator is determined by the number of notches in the ratchet, so that if the indicator is to be capa-

ble of indicating five dollars the ratchet must have five hundred notches. This construction is very simple and inexpensive, and is therefore preferred by me, although I do not
 5 limit myself thereto and may use any other suitable indicating mechanism.

I claim—

1. In a toy bank, the combination, with a coin-receptacle having a coin-receiving slot or
 10 mouth, of a movable indicator, a yielding stop which normally stands in position to arrest a coin inserted in said slot and is adapted to be displaced by the forcible movement of the coin through the slot, connections between
 15 the stop and indicator whereby the indicator is operated by the displacement of the stop, and a swinging arm or plunger pivoted to the outside of the casing and swinging away from the slot, whereby it may be pressed into said
 20 slot and force a coin therein by the yielding stop, as set forth.

2. In a toy bank, the combination, with a coin-receptacle having a coin-receiving slot or mouth, of a movable indicator, a swinging
 25 stop-bar which normally stands in position to arrest a coin inserted in said slot, a swinging lever disconnected from said stop-bar and bearing yieldingly on it and carrying a pawl, and a ratchet connected with the indicator
 30 and engaged by said pawl, the said stop-bar having two points adapted for contact with the swinging lever, and the said stop-bar, lever, and pawl being adapted to be moved by a coin forced through the slot and thereby
 35 partially rotate the ratchet, as set forth.

3. In a toy bank, the combination of a coin-receptacle having a series of coin-receiving slots or mouths, the bottoms of the slots being
 40 arranged at different heights, a movable indicator, a swinging stop-bar which normally extends across said slots in position to arrest a coin inserted in either slot, and connections

between said stop-bar and indicator, whereby the indicator is operated by the displacement of the stop, as set forth.

4. In a toy bank, the combination of a coin-
 45 receptacle having a series of coin-receiving mouths, the bottoms of which are located at different heights, and a transverse slot or recess formed in the partition between said
 50 mouths, a movable indicator or pointer, a yielding stop extending across the inner ends of said mouths in position to arrest a coin inserted in either, a connection between said
 55 stop and the indicator, whereby when the stop is displaced by a coin the indicator is operated, and a swinging arm pivoted to the exterior of the receptacle and provided at its
 swinging end with a flange or plunger arranged to enter said transverse recess and
 60 force a coin through either mouth, as set forth.

5. In a toy bank, the combination, with a coin-receptacle having a series of coin-receiving slot or mouths, of a movable indicator, a
 65 swinging stop-bar which normally stands in position to arrest a coin inserted in either slot and is provided with two bosses or projections c^2 c^3 , located at different distances from the pivoted end of said bar, a swinging lever
 70 bearing yieldingly on said stop-bar and carrying a pawl, said lever bearing continuously on one of said bosses and being separated from the other when the parts are in their normal position, and a ratchet connected with
 75 the indicator and engaged by said pawl, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 26th day of May, A. D. 1891.

WILLIAM B. WHITNEY.

Witnesses:

C. F. BROWN,

A. D. HARRISON.