(No Model.)

E. R. IVES & C. A. HOTCHKISS.

REGISTERING TOY MONEY BANK.

No. 445,754. Patented Feb. 3, 1891.

Fig. 1.

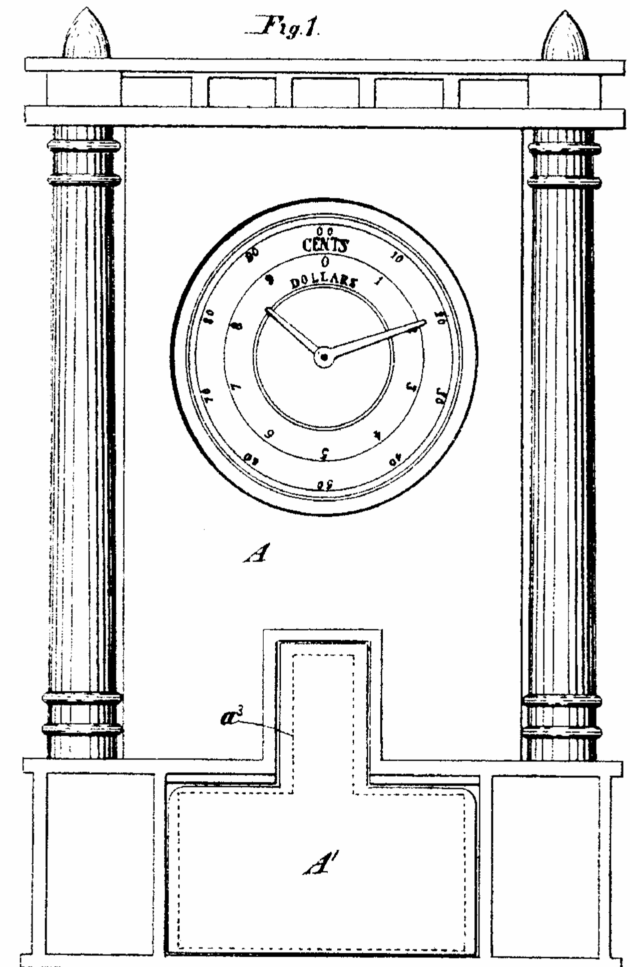


Fig. 2.

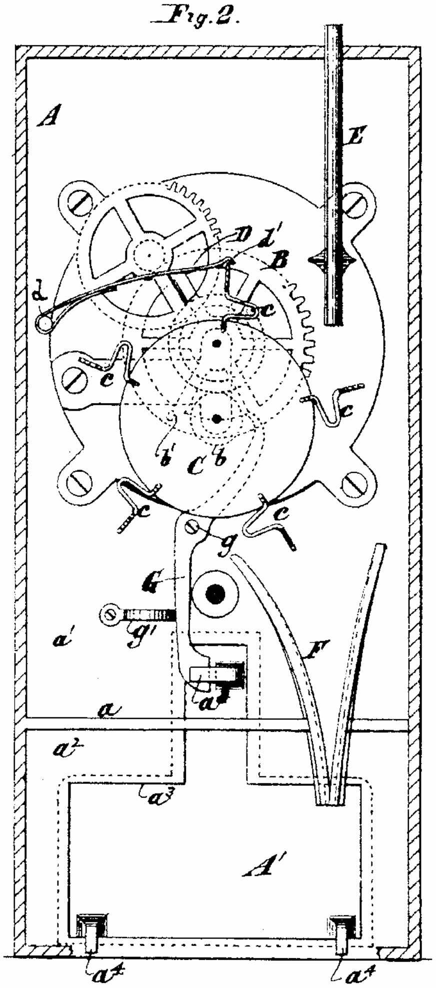
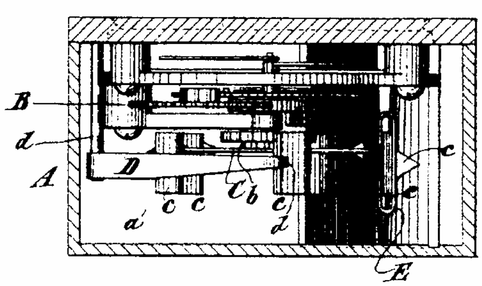


Fig. 3.



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REGISTERING TOY MONEY-BANK.

SPECIFICATION forming part of Letters Patent No. 445,754, dated February 3, 1891.

Application filed June 28, 1890. Serial No. 357,091. (No model.)

To all whom it may concern:

Be it known that we, EDWARD R. IVES and CHARLES A. HOTCHKISS, both of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Toy Money-Banks, of which the following is a specification.

Our improvement relates to toy money-banks wherein the act of depositing coins automatically produces a register of the number of coins contained within the banks, and upon the accumulation of a predetermined number of coins the doors of the banks will be automatically unfastened to permit of the removal of the coins.

We will describe a bank embodying our improvement, and then point out the novel features in the claims.

In the accompanying drawings, Figure 1 is a front view of a bank embodying our improvement. Fig. 2 is a rear view of the interior thereof; but parts of the case are omitted in this figure. Fig. 3 is a top view. In this view the case is only partially represented.

Similar letters of reference designate corresponding parts in all the figures.

The case A of the bank may be of any desired form and design. It may, in the main, be of rectangular form; but it is intended to have two compartments a' a^2, one above and one below a partition a, which extends horizontally across it. The front of the case in the present instance is made to represent a clock, and is provided with a dial resembling in general appearance that of a clock, two hands corresponding with the hands of a clock being employed to indicate upon the dial the number of coins deposited in the bank. The dial will preferably be covered with a glass or crystal to protect it and the hands.

In the upper compartment a' of the case is a train of gear-wheels B, operated by a bucket-wheel C, and comprising wheels which correspond generally with what is generally termed the "dial-work" of a clock, in that one of them is fastened to one of two concentric shafts carrying one hand, and transmits motion to the other of these two shafts, which carries the other hand. The bucket-wheel has attached to it a pinion b, which transmits motion to the train of gear-wheels.

The bucket-wheel consists of a disk of sheet metal having radially-extending buckets c extending at intervals from it. These buckets may be formed with or attached to the disk. They consist of strips bent radially outward, then transversely approximately in the direction of tangents of a disk, thence back again, and thence radially outward. Their outer extremities are free to engage one at a time with a detent D, consisting of a strip of resilient sheet metal fastened to a fixed rod d, and having its free extremity bent to form a hook or notch d', into which the outer extremity of any one of the buckets may enter.

E designates a chute extending at the upper end through the top of the case and at the lower end into such position within the compartment a' of the case that a coin dropped into it will pass into one of the buckets of the bucket-wheel. The detent D always stops the bucket-wheel in such position that one of its buckets will be beneath this chute.

F designates a chute having a widely-flaring mouth or upper end, and which is arranged in the lower compartment a' of the case. Its lower extremity extends through the partition a of the case.

When a coin drops into one of the buckets of the bucket-wheel, it will rotate this wheel so as to disengage from the detent that bucket which is previously engaged with it and rotate the wheel far enough to cause the next bucket to engage with the detent. This will cause that bucket which receives the coin to rotate far enough to discharge this coin into the chute F. The coin will then pass through this chute into the lower compartment a^2 of the case. As the lower end of the chute extends below the partition a^2, it will be next to impossible for a coin after leaving the chute to re-enter it.

In the front of the case opposite the lower portion of the compartment a' and opposite the compartment a^2 of the case, is an opening a^3, which, as here shown, is in the main of rectangular form, but has a slot-like portion extending upwardly from the main portion.

A′ designates a cover made of the same shape as the opening a^3. The front of the case around the opening a^3 is provided with a rabbet, into which the edges of the cover A′ may fit. The cover A′ is on the inner side of its lower portion provided with hooks a^4, which may lap over the edge of the opening to fasten the lower part of the cover thereto. The rear side of the upper part of the cover is provided with a hook a^5, with which one end of a lever G may engage. This lever is fulcrumed between its ends within the compartment a' of the case by a pin g. A spring g' normally holds the lever in engagement with the hook a^5. A pin b', extending from one of the wheels of the train of wheels B, contacts with the upper end of the lever once in every revolution of the wheel, and thereby disengages the lever from the hook a^5. This wheel makes one revolution for the number of coins that the bank is intended to contain. When this pin disengages the lever from the hook a^5, the cover A′ may be removed and the coins may be taken out of the compartment a^2. As the edges of the cover fit in a rabbet, nothing can be introduced between the edges of the cover and the edges of the opening to oscillate the lever for the purpose of releasing the hook a^5 of the cover.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a toy bank, the combination of a train of wheels B and the bucket-wheel C, having buckets consisting of strips of metal bent radially outward, then tangentially, and then in the reverse direction, the said wheel being moved by the weight of a coin dropped in a bucket, substantially as specified.

2. In a toy bank, the combination of a train of wheels B and the bucket-wheel C, having buckets consisting of strips of metal bent radially outward, then tangentially, then in the reverse direction, and finally outward in a radial direction, the said wheel being moved by the weight of a coin dropped in a bucket, substantially as specified.

3. In a toy bank, the combination of a train of wheels B, bucket-wheel C, having buckets consisting of strips of metal bent radially outward, then tangentially, then in the reverse direction, and finally outward in a radial direction, and a detent for engaging with the outer radial extremities of the buckets, the said bucket-wheel being moved by the weight of a coin dropped in a bucket, substantially as specified.

4. In a toy money-bank, the combination of a train of wheels B, a wheel rotated by said train of wheels and having buckets constructed to receive and carry a coin, a chute having its inner end terminating in a line with the rotation of the buckets above the bucket-wheel, and a chute arranged below the bucket-wheel and having a flaring mouth adapted to receive a coin from a bucket, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

EDWARD R. IVES.
CHARLES A. HOTCHKISS.

Witnesses:
EBENEZER BURR, Jr.,
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