F. P. HUYCK & J. D. R. LAMSON.

TOY SAVINGS BANK.

APPLICATION FILED JAN. 27, 1908.

944,038.

Patented Dec. 21, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

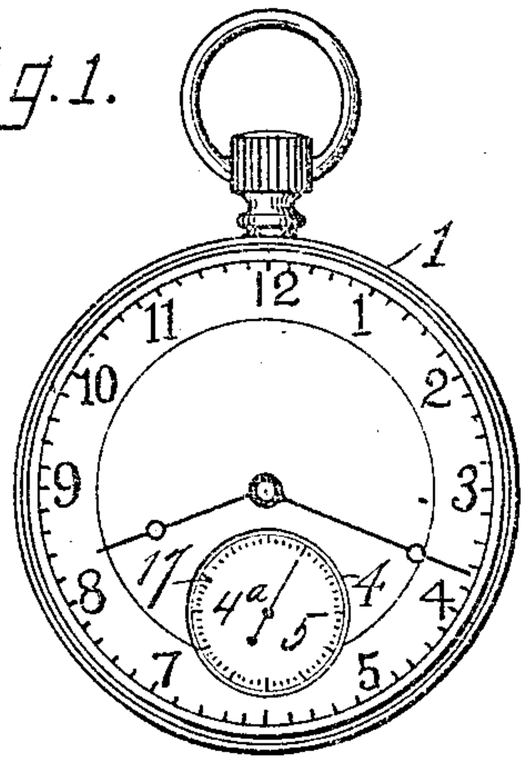


Fig. 2.

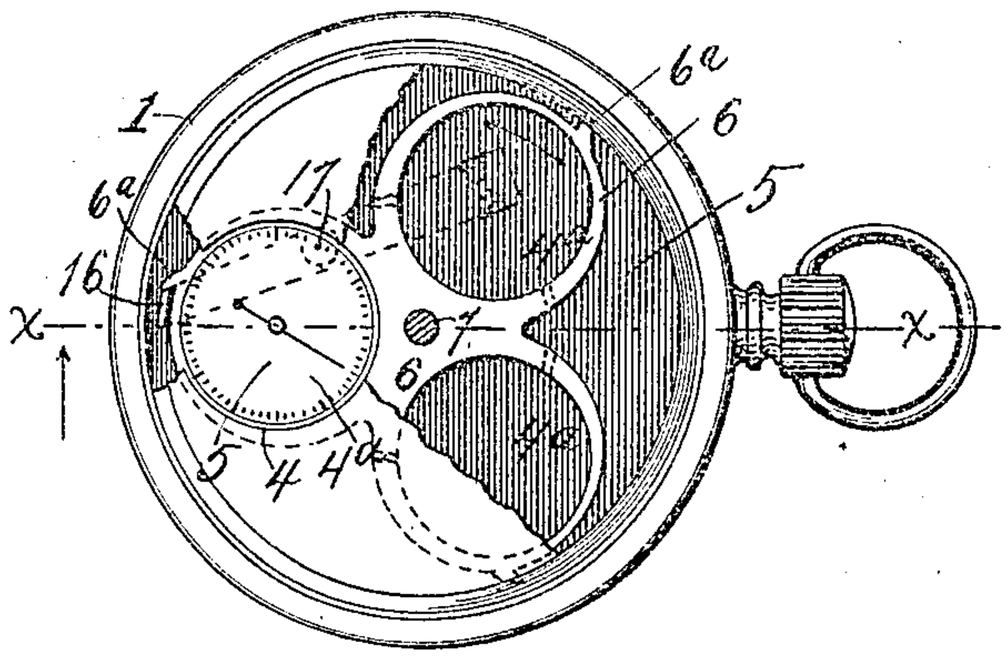


Fig. 5.

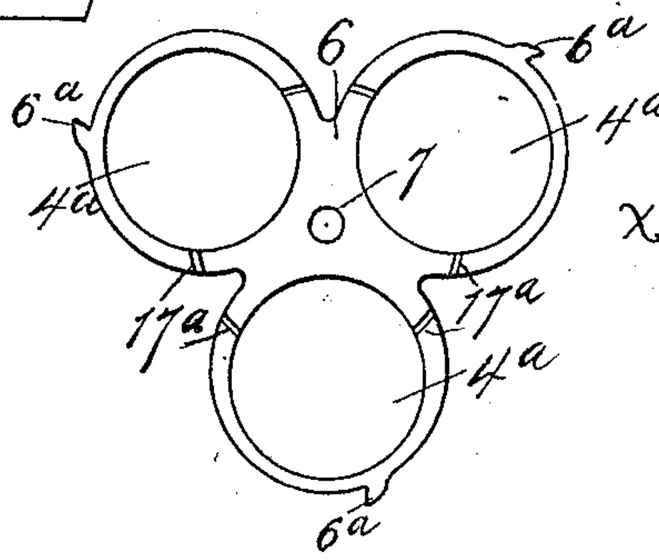


Fig. 3.

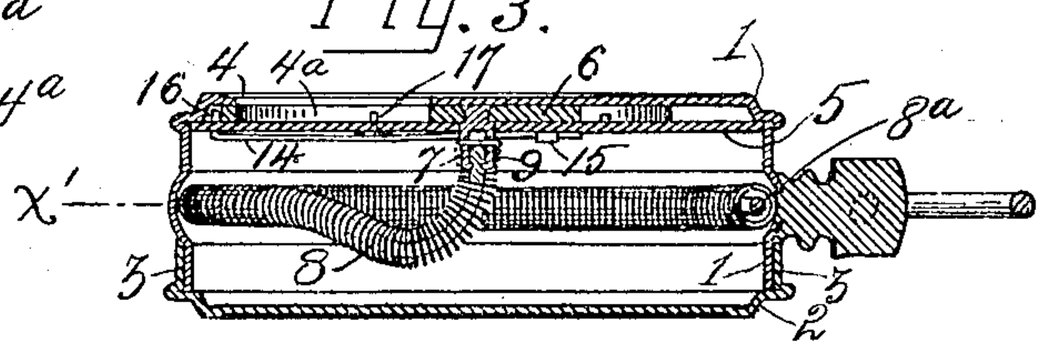


Fig. 4.

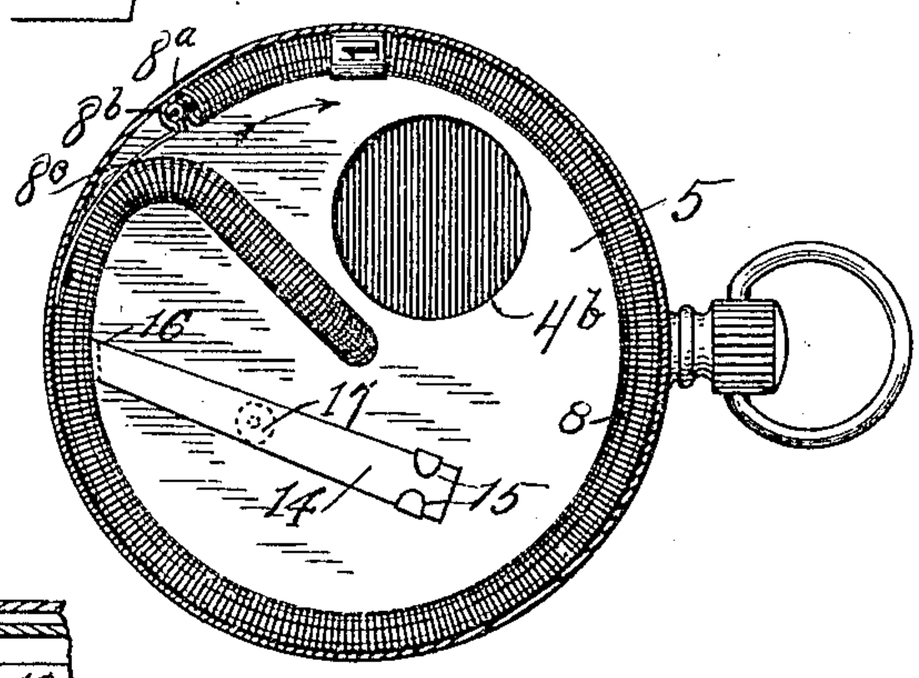


Fig. 6.

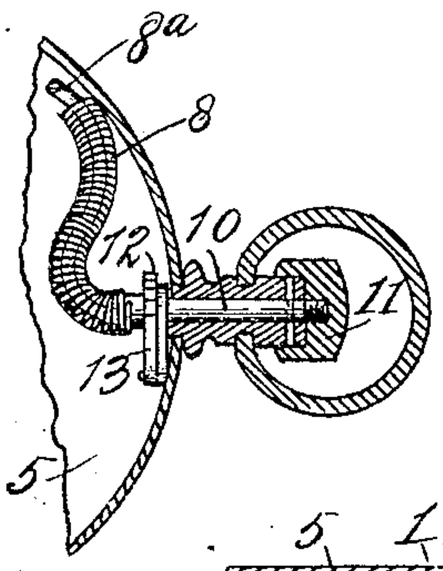
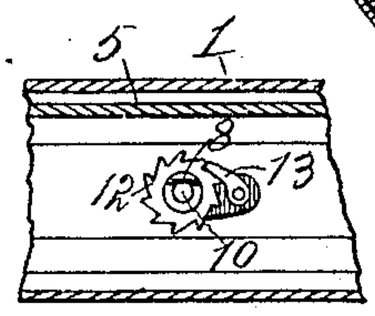


Fig. 8.

Fig. 7.



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2 SHEETS—SHEET 2.

Fig. 9.

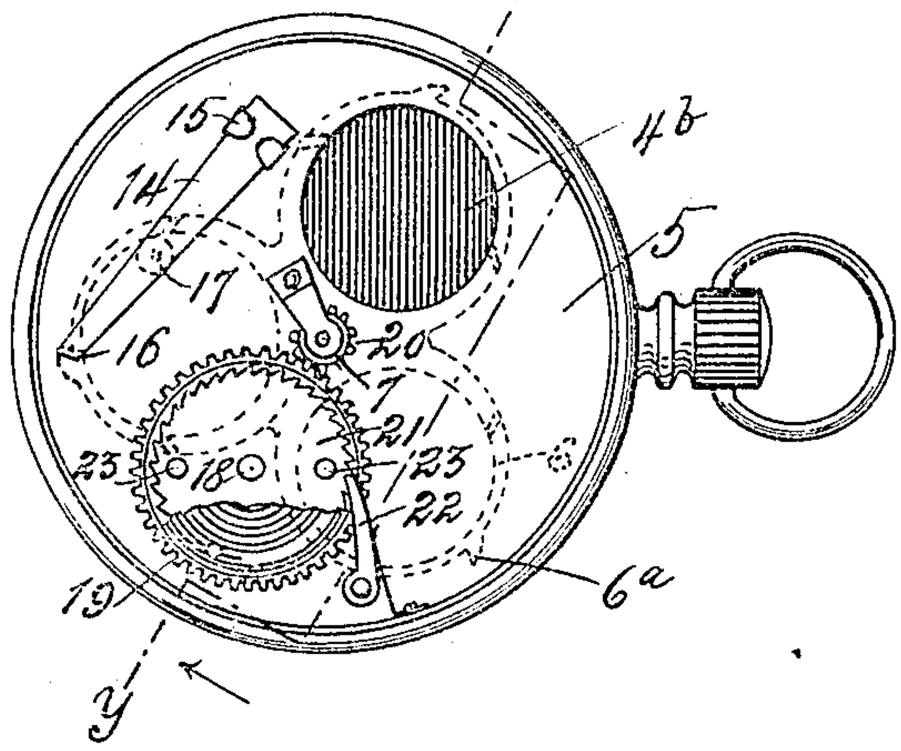


Fig. 10.

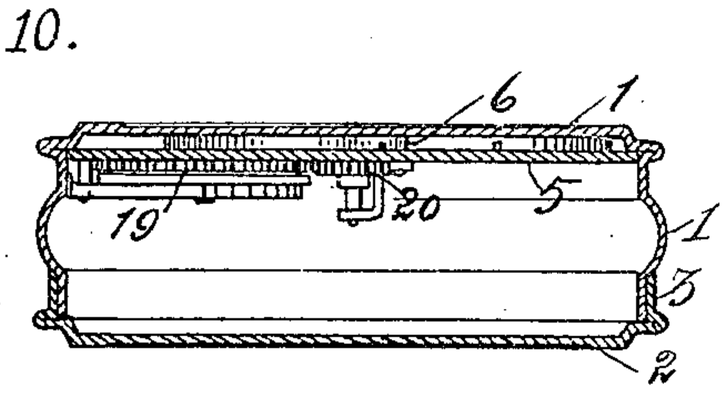


Fig. 11.

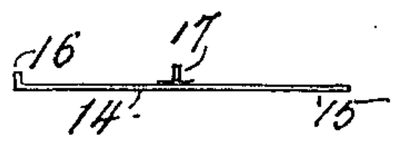
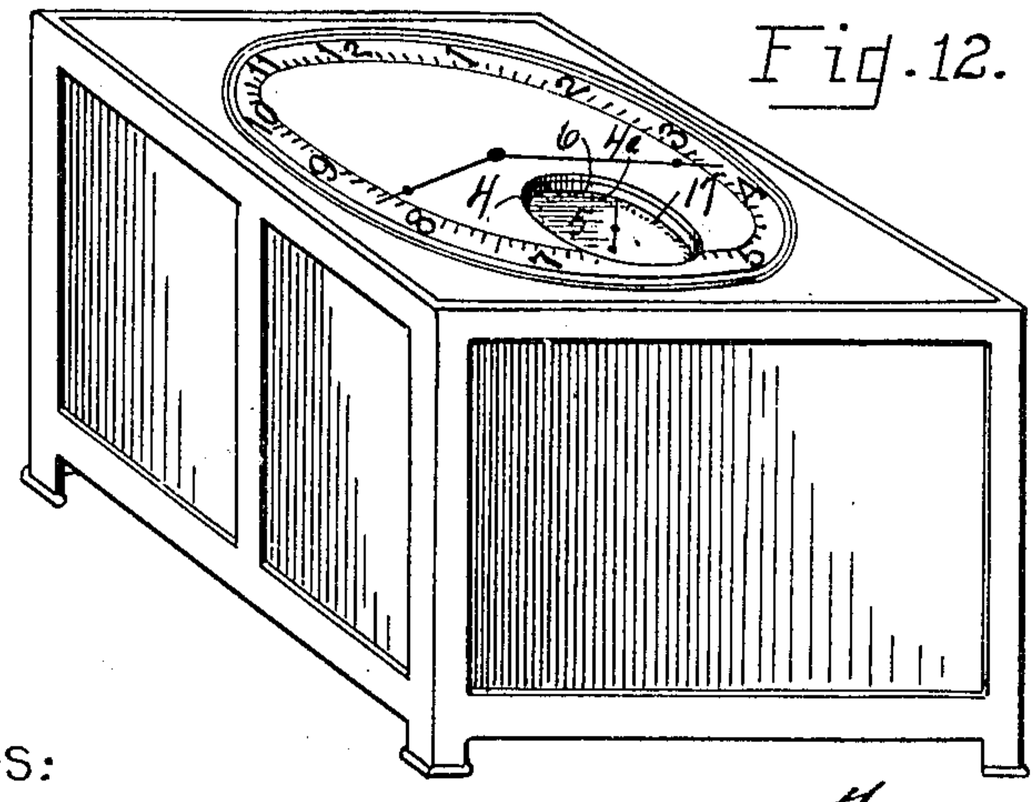


Fig. 12.



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UNITED STATES PATENT OFFICE.

FRANCIS P. HUYCK AND JOHN D. R. LAMSON, OF TOLEDO, OHIO.

TOY SAVINGS-BANK.

944,038. Specification of Letters Patent. **Patented Dec. 21, 1909.**

Application filed January 27, 1908. Serial No. 412,706.

To all whom it may concern:

Be it known that we, FRANCIS P. HUYCK and JOHN D. R. LAMSON, citizens of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Toy Savings-Banks; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to a box for containing coins, and, more particularly, to that class of such boxes known as toy savings banks, such as are furnished by saving institutions to customers for receiving coins, which receptacles are opened by the employees of such institutions from time to time to permit the contents of the box to be deposited to the credit of the holders of the box.

Our invention is designed to simulate in form a common watch, the resemblance being sustained by providing an aperture, corresponding with the seconds-dial of the watch-face, for the reception of the coin, such aperture being provided with a closure which is opened and closed by the introduction of the coin, and which is arranged to permit the introduction of the coin and to prevent the removal of the coin except by special means adapted for that purpose.

Our invention also relates to certain details of construction hereinafter described and pointed out in the claims.

We attain these objects by means of the devices and arrangement of parts hereinafter described and shown, and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of our device; Fig. 2, a like view on an enlarged scale with a portion of the dial-plate or face-plate, hereinafter referred to, broken away to show the part immediately underlying such face-plate; Fig. 3, a transverse sectional elevation taken on line *x*—*x*, Fig. 2; Fig. 4, a diametrical sectional plan-view taken on line *x'*, Fig. 3; Fig. 5, a bottom-plan view of the rotary coin-plate hereinafter referred to, detached; Fig. 6, a sectional plan-view of an alternative construction for winding the spring of our device, as hereinafter described; Fig. 7, an end-elevation of the arbor of such winding-device with its pawl and ratchet, seen from the left in Fig. 6; Fig. 8, a perspective view of the trigger or releasing mechanism hereinafter referred to, detached; Fig. 9, a plan-view of a modified form of our device with the back-plate of the case removed; Fig. 10, a transverse sectional elevation of the same taken on line *y*—*y*, Fig. 9; Fig. 11, an edge-elevation of the trigger-spring or detent hereinafter referred to, detached, and Fig. 12, a perspective view of our device mounted in a rectangular case in simulation of a clock instead of a watch.

Like numerals of reference represent like parts throughout the drawings.

The outer case of our device consists of two sheet metal members 1 and 2, stamped or pressed into cup-shape, the flange of the part 1 fitting or telescoping closely into the flange of the part 2, as at 3. (See Figs. 3 and 10.) The outer surface of the disk-like portion of the part 1 is printed or otherwise made in imitation of a watch-face and the two parts 1 and 2, when assembled, are of the size and conformation of a common watch. The flange of the outer member is provided with a stem and ring forming a "pendant" in further simulation of the watch form. Through the plate 1 is a circular hole 4 of the size of and occupying the position of the seconds-dial of a watch-face. This circular hole is just large enough to receive loosely and flatwise a coin,—in the present instance a dime.

5 is a circular plate which fits closely the interior of the rim of the part 1 and lies parallel to the face or dial plate of the part 1, as clearly shown in Figs. 3 and 10. The plate 5 is rigid when in place and is separated from the dial plate by a thin space in which is mounted the coin-plate 6 illustrated in Fig. 5. This coin-plate has a central hub 7 which projects through a corresponding hole in the center of the plate 5 and which forms a journal upon which the coin-plate 6 may be revolved. The coin-plate 6 is of slightly greater thickness than the thickness of the coin to be received. It will be observed that in the coin-plate 6 are a series of apertures,—in the present instance three,—spaced at equi-distant intervals and of such dimensions as to receive freely and flat-wise the coin to be deposited. When a coin is deposited flatwise through

the opening 4 into one of the corresponding openings 4^a in the coin-plate the coin rests upon the plate 5. The plate 6 upon being given a part turn forward,—that is, one step or one-third of a revolution,—carries the coin with it and now has its opening 4^a, containing the coin, in coincidence with a corresponding hole 4^b formed in the plate 5. The coin being thus caused to register with the opening 4^b drops into the cavity between the plate 5 and the back-plate 2.

8 is a helically coiled spring one end of which is rigidly secured to the hub 7 of the coin-plate, as at 9, the other end being connected with means for winding or twisting the coiled spring and placing the same under tension. In order that the coiled spring may not become kinked or distorted a stiff guide-wire 8^a bent to the desired form is passed through the axial opening of the coil 8. The guide-wire 8^a is loose or swiveled at both ends so that it is not twisted axially with the coil but remains axially stationary during the winding and the unwinding of the coiled springs. In the drawings we have shown two alternative methods of thus winding the spring 8.

In Fig. 6, is illustrated a "stem winder" in which an arbor 10 carries at its outer end a milled winding crown 11 the inner end of which is rigidly connected with the end of the coiled spring. The inner end of the arbor carries a ratchet 12 engaged with a pawl 13 to prevent the reverse motion of the winding crown. When the winding crown is turned in the right direction, the opposite end of the spring being stationary, the spring is wound up or placed under tension and tends to cause the coin-plate 6 to rotate on its central bearings.

In the modification of the means for winding the coiled spring 8 shown in Figs. 3 and 4, the guide-wire 8^a terminates in a finger 8^b (see Fig. 4.) The finger 8^b is turned at a right-angle to the guide-wire and forms a convenient means for the manipulation of the coiled spring while the case is open. By causing the guide-wire and its surrounding coil to describe a circle as indicated by the arrow, the coiled spring at each complete revolution of the guide-wire is given an additional turn or wind and in this way the coiled spring 8 may be wound up instead of by the stem winder above described. To prevent the reverse motion of the spring and its guide-wire when the spring is thus wound up, we provide a spring detent or stop 8^c which lies in the backward path of the spring and its guide-wire. The coin-plate to which one end of the coiled spring 8 is secured is normally held against rotation by means of a spring detent 14 one end of which is secured, as at 15, to the inner side of the plate 5, the other end being formed as a finger 16 which projects at a right angle through an aperture in the plate 5 in the path of teeth 6^a projecting radially from the edge of coin-plate 6. The teeth 6^a and the finger 16 are in such relation that the openings 4, 4^a, are in coincidence when the coin-plate is at rest. 17 is a trigger or detent releasing mechanism, (see Fig. 8), consisting of a small thin flat disk having a central stem which projects through a small aperture in the plate 5 in line with the scale of seconds at the margin of the seconds-dial imprinted upon the outer face of the plate 5. The projecting point of the trigger 17 is so small that it cannot readily be distinguished from one of the seconds-marks on the dial, and does not interfere with the resemblance of the device to a watch. The flat disk-like part of the trigger 17 rests upon the flat spring 14. When a coin is pressed flatwise through the opening 4 its margin rests upon the projecting stem of the trigger 17 and depresses the free end of the flat spring 14, disengaging it from tooth 6^a on the plate 6. The coin-plate 6 being now released is instantly caused to swing on its pivot 7, swiftly carrying the coin to and dropping it through the opening 4^b. At this point the spring 14 catches the next succeeding tooth 6^a and stops the plate 6 with its opening 4^a in alinement with the opening 4 and ready to receive the next coin. In the underside of the coin-plate 6 are grooves 17^a which permit the rotation of the plate 6 without coming in contact with the outwardly projecting stem of the trigger 17. (See Fig. 5.)

In Figs. 9 and 10 we have shown a modified form of the device above described and in which the coin-plate is actuated by a coiled spring like the main spring of a watch, this spring being secured at one end to a stud 18 the other end being engaged with a gear 19 in mesh with a pinion 20 on the hub 7 of the coin-plate 6. The gear 19 carries a ratchet-wheel 21 engaged by a pawl 22. The spring is wound in the usual or any preferred manner, in the present instance, by means of a spanner engaging the holes 23 in the side of the ratchet-wheel secured to the gear 19.

In both modifications of the spring actuated mechanism the tendency of the coin-plate 6 is constantly forward and each time a coin is pressed into the recess 4—4^a the detent 14 is released as above described and the coin-plate makes one-third of a revolution, so that for each rotation of the coin-plate three coins are received and deposited in the case. Thus a spring of small range of action will serve for receiving and depositing in succession a comparatively large number of coins.

The operation of our device above described will now be understood without further explanation. Each time a coin is pressed flatwise into the circular opening

corresponding with the seconds dial of a watch the coin is, so quickly that the eye cannot follow it, moved edgewise between the plates 1 and 5 and discharged into the interior of the box through the opening 4^b. It would be impossible to now recover the coin through the passage by which it entered the box, and to get at the coin the case must be opened. The two parts of the case may be secured together in any preferred manner and by any desired fastening but in practice we prefer that the part 2 shall fit so closely upon the part 1 that they can be separated only by the use of a special instrument prepared for that purpose. When these money-boxes are used by the depositors in savings banks, as is now quite common, the attendants at the savings bank will of course have the special tool or instrument above referred to and will be the only persons who can, under ordinary circumstances, have access to the contents of the box.

If desired the semblance of a time-piece may be preserved in our device in the form of a clock instead of a watch, in the manner illustrated in Fig. 12, by substituting the rectangular form of case for the circular form. The rectangular form may be of wood or any other desired material. The watch form of case is, however, to be preferred.

It will be seen that our device is attractive in appearance and in its mode of operation; that it is cheap, simple, and durable, and that by the use of the coiled spring first described,—and which form we prefer in practice,—we are enabled to secure a large number of rotations of the coin-plate with a single winding and without the use of intervening gearing of any sort.

Having described our invention, what we claim and desire to secure by Letters Patent is,—

1. In a device of the described character, a box formed in similitude of a watch-case and having an aperture corresponding to the seconds-dial of the watch, and spring-actuated means for conveying a coin from said aperture to the chamber of the box.

2. In a device of the described character, a box having upon one side an imitation of a watch-face and having therethrough an opening corresponding to the seconds-dial of the watch, such opening leading indirectly to the cavity of the box.

3. In a device of the described character, a box having upon one side an imitation of a watch-face, such face having therethrough an aperture corresponding to the seconds-dial thereof, said box having a coin-passage lading from said aperture to the chamber of the box, a closure for such coin-passage, and means for actuating said closure.

4. In a device of the described character, a box having upon one side an imitation of a watch-face, such face having an aperture therethrough corresponding to the seconds-dial thereof, an inner plate parallel to such face and having thereon an imitation of a seconds-dial, said dial being exposed through said aperture, having also an opening leading directly into the cavity of the box, and means for conveying a coin between said face and said plate from said aperture to said opening.

5. In a device of the described character, a box having an aperture in one of its sides adapted to receive a coin flatwise, in the box a plate spaced from said side to permit the edgewise movement of such coin therebetween, there being an opening leading from the outer to the inner side of said plate and out of alinement with said aperture, and a member movable between said side and said plate and having coin recesses adapted respectively to receive such coin, combined with a spring which controls said movable member, and a detent for said movable member, which detent is released by the introduction of a coin into the coin-aperture.

6. In a device of the described character, a box having in one of its sides a coin aperture, a fixed plate in the box spaced from said side to permit the edgewise movement of a coin therebetween and arranged to permit the passage of such coin from its outer side to the cavity of the box, a member movable between said side and said plate and having coin-recesses adapted respectively to receive such coin, and a spring connected with and adapted to move said member.

7. In a device of the described character, a box having in one of its sides a coin aperture, a fixed plate in the box spaced from said side to form a passage to receive and permit the movement of the coin edgewise, there being an opening for the passage of the coin from the outer to the inner side of the plate, a member movable between said side and said plate and having coin recesses adapted to receive such coin and to register successively with said aperture and with said opening, a spring which actuates said movable member, and for the movable member a detent which is released by the introduction of a coin into said aperture.

8. In a device of the described character, a box having upon one side an imitation of a watch-face and having an aperture corresponding to the seconds-dial of such face, a spring actuated member for receiving and conveying a coin from said aperture to the chamber of the box, and a detent for said member having a releasing mechanism which protrudes into said aperture.

9. In a device of the described character, a box having upon one side an imitation of a watch-face and having an aperture corresponding to the seconds-dial of such face, an inner plate parallel to and spaced from said

side and having thereon an imitation of a seconds-dial which registers with said aperture, and also having an opening for the passage of a coin therethrough into the chamber of the box, a spring actuated member for receiving and conveying a coin from said aperture to the chamber of the box, a detent for said member, and for the detent a releasing device having a reduced portion which projects into said aperture in line with the graduated scale of said seconds-dial.

10. In a device of the described character, a box having in one of its sides an aperture adapted to receive flatwise a coin, an inner plate fixed and parallel with said side and having an opening for the passage of a coin therethrough into the chamber of the box, a rotary member journaled between said side and said plate and having therein a series of equi-distant holes corresponding to and adapted to register successively with said aperture and said opening, and spring-actuated means for imparting to said member a step by step rotary motion.

11. In a device of the described character, a box having a coin-passage leading to its chamber, a closure for said pressure, a helically coiled spring having one end secured against axial rotation the other end being connected with the closure, means for winding the spring, a detent, and means for releasing the detent.

12. In a device of the described character, a box having a coin-passage leading to its chamber, a closure for said pressure, a helically coiled spring having one end secured against axial rotation the other end being connected with the closure, a guide-wire disposed axially of said spring, means for winding the spring, a detent, and means for releasing the detent.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANCIS P. HUYCK.
JOHN D. R. LAMSON.

Witnesses:
CLEM V. WAGNER,
ADA E. CAMERON.

Corrections in Letters Patent No. 944,038.

It is hereby certified that in Letters Patent No. 944,038, granted December 21, 1909, upon the application of Francis P. Huyck and John D. R. Lamson, of Toledo, Ohio, for an improvement in "Toy Savings-Banks," errors appear in the printed specification requiring correction as follows: Page 3, line 61, for the word "lading" read *leading;* page 4, lines 28 and 36, for the word "pressure" read *passage;* and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 10th day of February, A. D., 1914.

[SEAL.]

J. T. NEWTON,

Acting Commissioner of Patents.