

(No Model.)

LE ROY W. BALDWIN.
TIME LOCK FOR TOY BANKS.

No. 477,321.

Patented June 21, 1892.

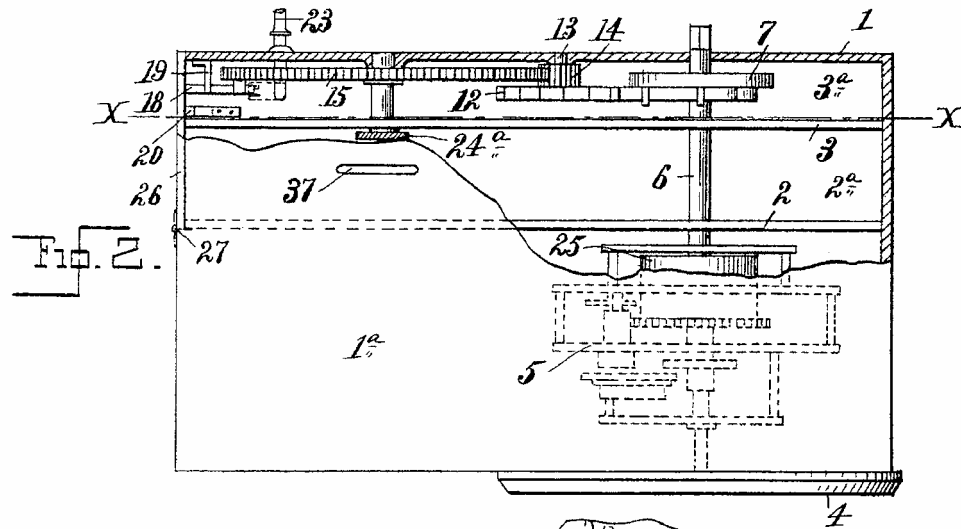
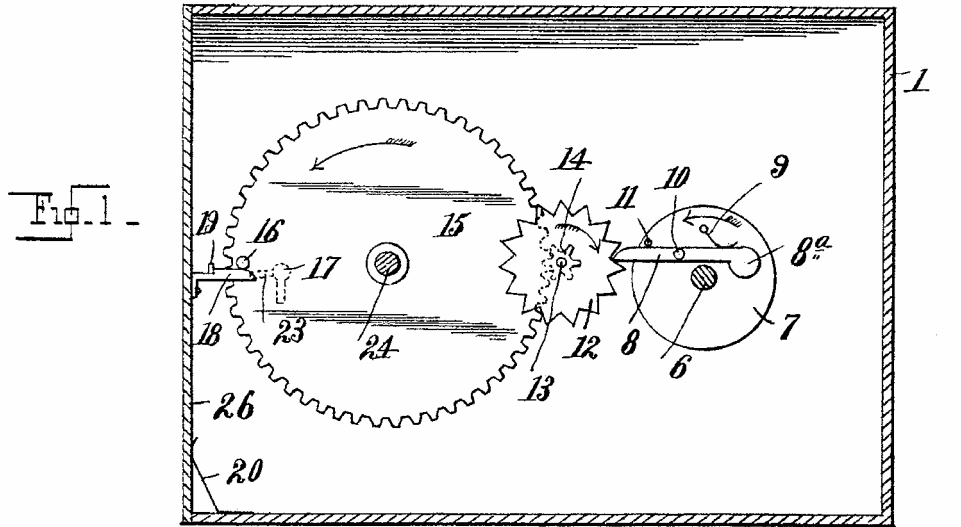
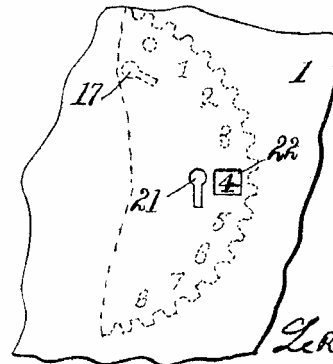


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

LE ROY W. BALDWIN, OF NEW YORK, N. Y.

TIME-LOCK FOR TOY BANKS.

SPECIFICATION forming part of Letters Patent No. 477,321, dated June 21, 1892.

Application filed March 15, 1892. Serial No. 424,941. (No model.)

To all whom it may concern:

Be it known that I, LE ROY W. BALDWIN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Toy Banks; and I do hereby 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.

My invention relates to that class of mechanism by which a receptacle for coin or other things may be locked and remain locked until the expiration of a certain time before it can be opened.

In the drawings, Figure 1 is a vertical section on line *x x* of Fig. 2, showing a portion of a clock-case with a coin-receptacle and opening mechanism. Fig. 2 is a plan view of the same, a part of casing being broken away. Fig. 3 is a detail of a portion of the back of the casings.

The invention is designed, essentially, as an improvement on that disclosed in the application of William G. Spiegel, filed June 16, 1891, Serial No. 396,420.

Referring to the mechanism shown in the drawings, 1 is a casing which is divided by the partitions 2 and 3 into a chamber 1^a, in which the usual train of clock mechanism is contained, a second chamber 2^a, which serves as a receptacle for money of various kinds, and a third chamber 3^a, which contains the opening mechanism. The mainspring-shaft 6 goes through the three chambers and the casing 1.

In the clock-case proper is the clock-train 5, which operates the hands before the clock-face over which the glass 4 is placed in the manner common and well understood.

6 is the shaft to which one end of the clock mainspring 25 is attached, from which shaft the clock-train is driven and by which the spring is wound up. On this mainspring-shaft is the flange or disk 7, upon which is mounted the pawl 8 by the pivot 10. This pawl is normally held against the stop 11 by the weighted end 8^a on the light spring 9.

The pawl 8 engages with the teeth of the star-wheel 12 when the shaft 6 is turned in the direction indicated by the arrow, turning the star-wheel one tooth for every revolution of

the shaft in the direction of the arrow, but slipping by when turned in the opposite direction.

On the same shaft 13 as the star-wheel 12 and rigid therewith is the pinion 14, which meshes with the teeth in the circumference of the dial-wheel 15. On this wheel is mounted the pin or stop 16, and the numbers "1," "2," "3," "4," &c., are marked one for every two teeth on the circumference. The door 26, opening into the chamber 2^a, has hinges 27 and a spring-catch 18, which snaps over a peg or projection 19 and locks the door when it is closed. When the catch 18 is forced down, as by pressure of the stop 16, the lock is released, and the spring 20 forces the door open. 37 is a slot, through which money may be deposited in the receptacle 2^a. The dial 15 revolves stiffly on the arbor 24. A milled head 24^a enables the operator to set the dial.

In a modified form of my invention a key-hole 17 (shown in dotted lines, Fig. 1) is cut in the dial 15, and another keyhole 21 is cut in the casing 1. When these two keyholes are in line, the key 23 may be introduced, and either alone or in conjunction with the pin 16 acts to open the lock in a manner easily understood. This gives a positive means of operating the locks.

The window 22 is formed in the back of the casing 1. The row of figures shown on the dial in Fig. 3 pass successively behind this window, and the operator can adjust the dial so that the figure representing the number of days for which the bank is to be set will appear behind the window. Then as the mechanism acts from day to day the remaining term of days can be read at any time, and no other record of dates is necessary. If the modification involving the key is used, the numbers read through the window will tell the operator when to insert the key.

The method of operating my invention is as follows: The bank being open, the dial 15 is turned around until the figure indicating the number of days for which it is to be set comes opposite the window 22, the shaft 6 having first been turned, so that the pawl 8 will not interfere with the revolution of the star-wheel. The door then being closed, locks itself and cannot be unlocked from the outside. Suppose the bank is set for ten days,

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then every night when the clock is wound up the shaft 6 is given five revolutions, as is customary in cheap clocks, and the star-wheel 12 is turned one tooth at each revolution of the disk 7, or five in all. This gives the pinion 14 a third revolution and causes it to pass two teeth of the dial-wheel 15. After the clock has run twenty-four hours and been wound up again ten times, during which time ten days must have elapsed, a further winding up of the clock will force the pin or stop 16 against the catch 18 and release the lock, so that the door will fly open and the contents of the bank may be removed; or, as before stated, the key 23 may be inserted and the lock thus opened.

Either the dial 15 or the star-wheel 12 are so mounted that while moved by pressure of the hand they will stay where placed and not turn from external causes, such as simply moving the clock about. It is evident that the motion might be transmitted from any member of the clock-train other than the mainspring without departing from the spirit of my invention in its broadest scope, and that any adjustable train of mechanism and any other lock might be used, and that the coin-receptacle might be placed at the back or top instead of the middle of the clock-casing. Moreover, when the modification involving the key 23 is used, the window 22 might be dispensed with if the keyholes were large enough so that the operator could tell by looking in them when they were in line. This he could easily do, as they would so come into line while he was winding the clock.

Having therefore described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. The combination of a coin-receptacle, a

door for said receptacle, a lock on said door, an adjustable dial-plate inclosed in the same casing with said receptacle, a keyhole in said plate, a keyhole in said casing, a key which may be inserted to open the lock when the two keyholes are in line, a clock-train and gearing conveying motion from the mainspring-shaft of said clock-train to said dial, two members of said gearing having a pawl-and-ratchet connection whereby the dial is moved when the main shaft is turned backward to wind up the clock, but not when the shaft is turned forward to drive the clock-train, substantially as described.

2. The combination of a coin-receptacle, a door for said receptacle, a lock on said door, an adjustable dial-plate inclosed in the same casing with said receptacle, a keyhole in said dial-plate, a keyhole in said casing, a key which may be inserted to open the lock when the two keyholes are in line, a clock-train and gearing conveying motion from the mainspring-shaft of said clock-train to said dial, two members of said gearing having a pawl-and-ratchet connection whereby the dial is moved when the main shaft is turned backward to wind up the clock, but not when the shaft is turned forward to drive the clock-train, together with a window in the casing through which the figures on the dial may be read successively as the dial turns and its position thereby determined, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

LE ROY W. BALDWIN.

Witnesses:

A. P. SMITH,

J. M. LATTO.

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1. The combination of a coin-receptacle, a