

Jan. 9, 1923.

S. C. VINCENT.
TOY WATCH.
FILED MAR. 21, 1922.

1,441,389.

Fig. 1.

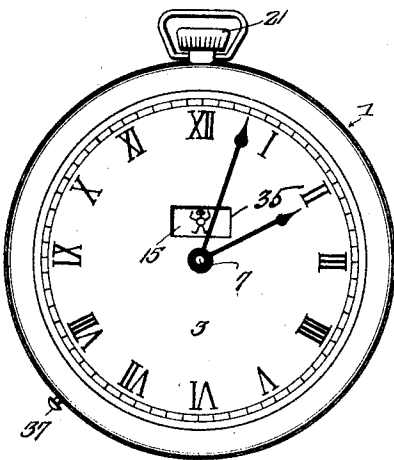


Fig. 2.

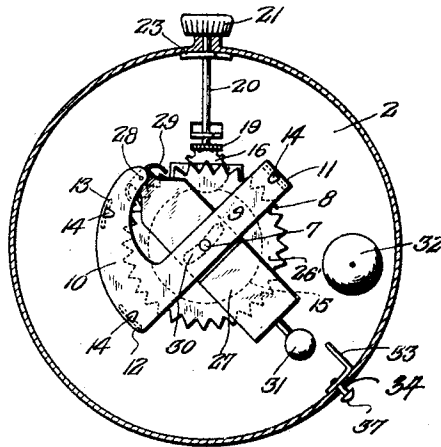


Fig. 3.

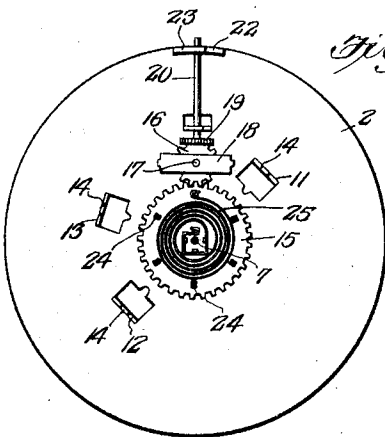
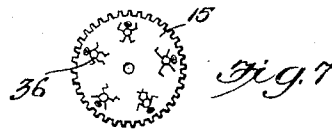


Fig. 6.

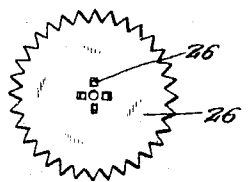


Fig. 4.

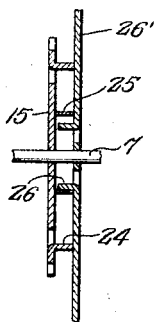
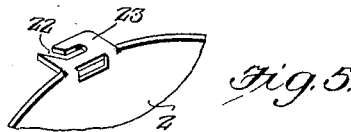


Fig. 5.

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UNITED STATES PATENT OFFICE.

SIDNEY C. VINCENT, OF BALTIMORE, MARYLAND.

TOY WATCH.

Application filed March 21, 1922. Serial No. 545,513.

To all whom it may concern:

Be it known that SIDNEY C. VINCENT, citizen of the United States, residing at Baltimore city, in the State of Maryland, has invented certain new and useful Improvements in Toy Watches, of which the following is a specification.

This invention relates to improvements in toy watches.

10 The object of the invention is to provide a very cheap construction embodying a mechanism which may, by a winding stem, be set in motion, and which will run for a short time, the mechanism being combined
15 with a dial, and hands which traverse the dial for a number of revolutions, the whole structure simulating as nearly as possible a real watch so as to more effectually furnish amusement for children.

20 As a further object of the invention, which has to do with affording additional amusement and making the whole device more attractive as a toy, I provide without materially increasing the cost of the structure, a sounding device in the way of a
25 gong or bell, which device may be sounded when the watch is being wound, or when it is running down, either or both.

A still further object of the invention is
30 to provide, so as to increase the amusing possibilities of the toy, means for successively and quickly exhibiting pictures or designations through the dial of the watch as it is either being wound or when it is
35 run down.

In the drawing illustrating the invention:

Fig. 1 is a front elevation of the watch.

Fig. 2 is a vertical section through the case looking toward the rear side of the
40 front plate.

Fig. 3 is a rear view of the front plate with the vibrator, frame and escapement wheel being removed showing the arrangement of the winding train, and also the
45 formation of the central portion of the spring, which cooperates with parts carried by the front of the escapement wheel, whereby the spring and escapement wheel are connected.

50 Fig. 4 is a detail broken sectional view of the central portion of the watch showing the manner of connecting the main driving gear, spring and escapement wheel.

Fig. 5 is a perspective view of the upper
55 part of the front plate.

Fig. 6 is a front view of the escapement wheel.

Fig. 7 is a view of the front side of the main winding gear showing thereon a series of pictures.

Referring to the drawing, the numeral 1 designates the watch as a whole, which is provided with a front plate 2, which has suitably attached thereto a watch dial 3.

The numeral 7 designates the central
65 shaft or arbor, to the front end of which is attached the hands. The rear end of this shaft is supported in a bracket 8, which comprises in the main a straight arm 9, and a curved arm 10. This bracket is supported upon posts or standards 11, 12 and
70 13, which in the stamping operation of the front plate are struck up, and each standard is provided with a short tongue 14, which in assembling the parts are extended
75 through slots in the bracket and bent over upon the bracket, whereby the bracket is securely attached to the front plate (best shown in Fig. 2).

The numeral 15 designates the main driving
80 gear wheel, which is secured to the shaft 7. This gear is in mesh with a pinion 16 mounted upon a shaft 17, which has a bearing in a bracket 18 at one end, and in the plate 2 at the other. The numeral 19 designates the winding wheel mounted on the
85 lower end of the winding stem 20 which is provided outside the casing with the winding head 21. This stem 20 is, when the parts are assembled, supported in a slot 22
90 in a small rearwardly extending plate 23 struck up upon the front plate 2, and is held in place when the parts are assembled by the front edge of the slot, and the rear part of the casing. The driving gear 15
95 has struck up thereon a number of lugs 24, which form a boundary for the coil spring 25. The outer end of the spring, as shown in Fig. 3, is bent over one of the lugs 24, and thereby attached to said lug, and the
100 other or inner end of this spring, embraces a number of lugs 26, struck up on the front side of the escapement wheel 26'.

The numeral 27 designates a balance arm or vibrator, which is suitably weighted.
105 One end of this arm is pivoted at 28 in the arm 10 of the bracket 8, and at this point the arm is provided with an anchor or pallets 29, whose ends are adapted to engage successively the teeth of the escapement
110

wheel 26' in the running down or unwinding movement of the mechanism.

In order to permit the free vibration of the balance arm, a slot 30 is provided for the passage of the arbor shaft 7, and the vibrator is further provided with a striker or bell clapper 31 adapted to contact in the vibration of the arm with a bell 32 secured in proper position on the front plate 2.

The numeral 33 designates a stop having a pin 34 adapted to extend through a slot in the casing. This stop is adapted to be pushed inwardly so that its inner end is brought within the path of movement of the bell clapper, and thus arrest the movement of the vibrator, and for that matter the whole mechanism, when the watch is being wound may be held against movement, and after the watch is wound, the stop may be withdrawn to permit the mechanism to run down, and in doing so, sound the gong and exhibit the pictures.

It will be understood that all of the mechanism is covered by a back piece, which together with the front plate forms the casing for the mechanism, and this back piece may be of any suitable construction or configuration, and attached to the front plate in any suitable manner.

The numeral 35 designates an opening through the dial and front plate of the watch, and in the movement of the mechanism, the pictures 36 on the winding gear wheel pass rapidly and successively past this opening, so that a number of amusing possibilities are incident to the construction. For instance—the pictures may be such that in passing the opening rapidly a moving picture effect may be produced as where the pictures are of the same subject in slightly varying attitudes, and this may be arranged as fancy may dictate.

I desire it understood that I do not limit myself to the precise construction of the means for attaching and assembling the various parts of the mechanism, and in a construction of this sort, it is to be understood that the use of threaded posts and complicated supports are to be done away with, and the whole structure so far as fastening and securing devices are concerned, are struck up from the various parts, and the struck up portions are to cooperate with slots made in other parts, which construction simplifies and cheapens the construction as a whole.

Claims:

1. A toy watch, a plate, a bracket mounted on standards on said plate, a main winding

gear wheel, an escapement wheel, a coil spring interposed between the winding gear and the escapement wheel, one end of said spring being connected with the escapement wheel, and the other with the gear wheel, an oscillating balance arm pivoted to the bracket, said arm having adjacent to its pivot an anchor whose ends successively engage the teeth of the escapement wheel, said balance arm extending beyond the bracket and being provided with a slot to limit the oscillating movement of the balance arm, and a suitable winding means.

2. A toy watch comprising in combination, a front plate having a dial on the front face thereof, an arbor shaft having hands traversing the face, a bracket mounted on suitable standards on the plate, and forming a bearing for the rear end of the arbor shaft, an escapement wheel, a main winding gear, an oscillating balance arm pivoted at one end in the bracket, and provided adjacent its pivot with an anchor whose ends successively engage the teeth of the escapement wheel, said balance arm extending at its free end beyond the escapement wheel, and provided with striking means, a sounding device in the path of movement of said arm, whereby a bell sound may be produced incident to the running of the mechanism.

3. In a toy watch, in combination, a front plate, a bracket mounted on suitable standards on said plate, an arbor shaft mounted in the plate and in the bracket, a main winding gear, and an escapement wheel on the shaft, a coil spring interposed between the two wheels, and having connection with each, an oscillating balance arm pivoted to the bracket at one end and having adjacent its pivot an anchor, whose ends successively engage the teeth of the escapement wheel, said arm being provided with a slot for the reception of the arbor shaft, whereby the oscillating movement of the arm is limited, said arm extending beyond the escapement wheel and provided with a striker, a sounding device in the path of movement of the striker, suitable winding means, a dial on the front of the plate having suitable designations thereon, and hands secured to the arbor shaft and adapted to traverse the dial.

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

SIDNEY C. VINCENT.

Witnesses:

CHAS. MARSH,
T. W. JOHNSON.