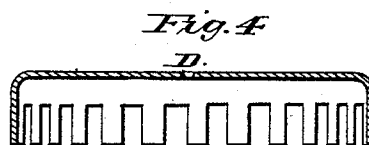
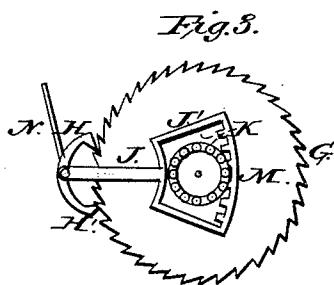
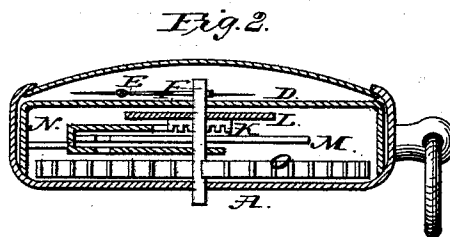
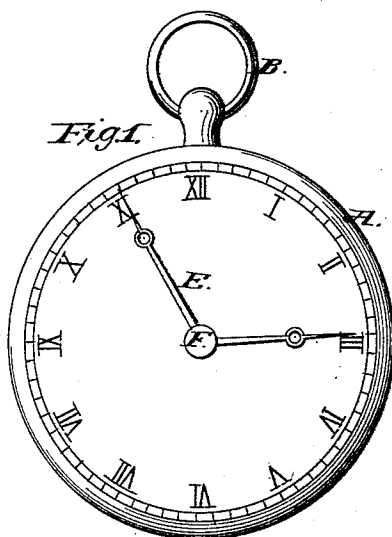


J. G. POWELL.
TOY WATCH.

No. 171,851.

Patented Jan. 4, 1876.



Witnesses:
Frank P. Thompson.
J. Thompson.

Inventor:
John G. Powell.
by his atty
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UNITED STATES PATENT OFFICE.

JOHN G. POWELL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN TOY WATCHES.

Specification forming part of Letters Patent No. **171,851**, dated January 4, 1876; application filed January 9, 1875.

CASE A.

To all whom it may concern:

Be it known that I, JOHN G. POWELL, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Mechanical Toy, imitating a Watch; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings and letters of reference marked thereon.

The nature of my invention consists in a novel form of movement, which, by reason of the simplicity of its parts, can be quickly and cheaply made, and can, with but little care or accuracy in making, be made to imitate the ticking sound of a real watch; also, in a novel arrangement of parts by which the winding operation can be performed with the sound incident to winding a real watch, as will hereinafter more fully appear.

Figure 1 is a front view of my toy watch; Fig. 2, a cross-section; Fig. 3, a plan view of the escapement; and Fig. 4, a cross-section of the dial-plate combined with the winding-ratchet.

The same letters indicate like parts in the several figures.

The several figures are drawn of double size lineally in order that the details may be visible.

A represents the outer shell or case provided with a pendant, B. The case A has a series of lugs projecting inside of it, on which rests the rim of a cup, D, the bottom of which forms the dial. The cup D and case A are perforated concentrically, and a spindle, F, passes through, bearing the hands E on the dial end, and having the opposite end adapted to a key for winding. A toothed wheel, G, fits on the spindle F. In the teeth of the wheel G two pallets, H and H', engage and vibrate a lever, J, having a segment, J', of an internal wheel formed on the end of it, the teeth of which segment J' engage in those of a pinion, K, fastened on the balance-wheel L, which turns freely on the spindle F. The pallets and lever J are mounted in bearings upon a plate, M, turning freely on the spindle F, and having a pawl or spring, N, which engages in notches in the sides of the cup D, thus acting a ratchet in winding. The spring O furnishes the driving-power, and is at-

tached at one end to the case A, and by the other attached to the shaft of the toothed wheel G. During the winding operation the pawl N trails over the notches in the sides of the cup D and produces the usual sound of winding a watch and holds the spring from unwinding, and upon reacting propels the wheel G, which operates the escapement with the usual ticking sound.

The advantages of the mode of making a toy watch in the way that I have described are as follows: First, the shell may be made of very thin metal, as the cup D, forming at once the dial and winding-ratchet, takes nearly all the strain, and the cup D may be made very cheaply and strongly of iron, zinc, or other cheap metal, and the working of the watch is not easily impaired by bending the case. Second, the employment of internal gearing J' to convey motion from the lever J to the balance-wheel L enables me to use a greater length of lever than is practicable with spur-gearing. A single notch in the segment, combined with a single pin in the balance-wheel, may be substituted for the internal segment and pinion, but is not so effective. Third, the winding arrangement, turning the hands during the winding operation, forms a gratifying feature to juveniles, for whom the toy is intended, by apparently setting the hands; and, fourth, the sounds incident to winding and ticking, on winding, are so exaggerated, and can be so often repeated, as to please children with the frequent and loud performance of these functions.

What I claim as my invention is—

1. The combination of the revolving plate M, pallets H and H', lever J, provided with an internal-gear segment, J', and the balance-wheel L, substantially as and for the purpose set forth.

2. The cup D, provided with notches, in combination with the pawl or spring N, as and for the purpose described.

3. The combination of the case A with the cup D, as and for the purpose described.

JOHN G. POWELL.

Witnesses:

JAMES P. PETIT,
W. P. BOWMAN.