

J. G. POWELL.
TOY-WATCH.

No. 176,679.

Patented April 25, 1876.

Fig. 1.

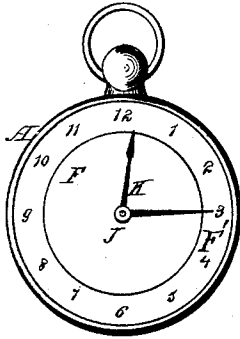


Fig. 2.

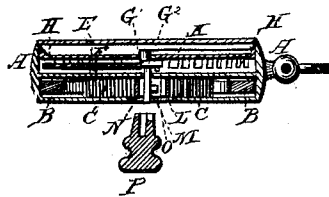


Fig. 3.

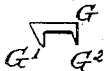


Fig. 4.



Fig. 5.

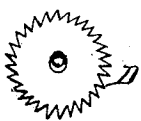
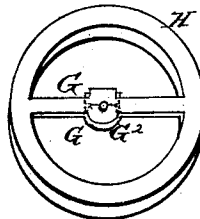


Fig. 6.



Witnesses

F. C. Dietrich

Wm. Supperman

John S. Powell Inventor

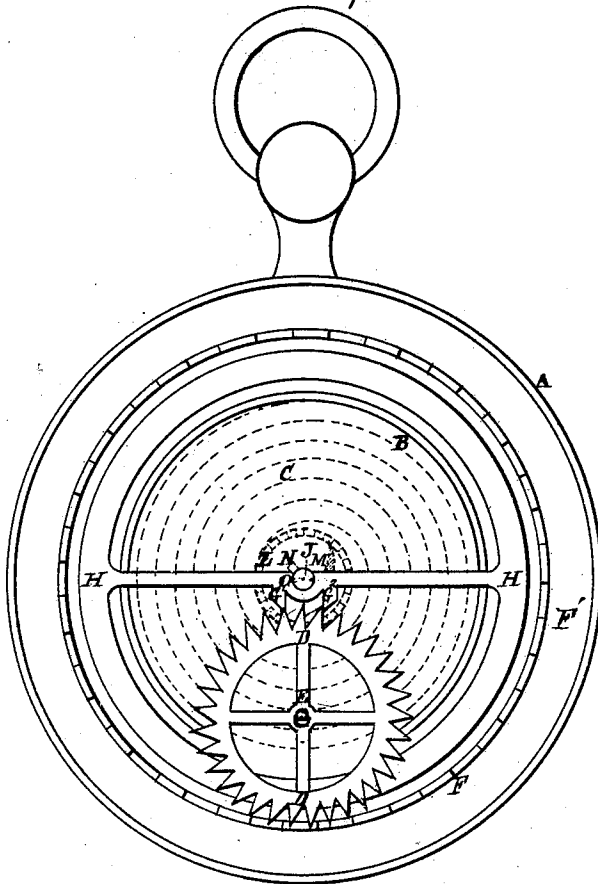
Per *Wm. D. Wiggins* Attorney

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FIG. 7.



WITNESSES

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Wm. F. Johnson

INVENTOR

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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. **176,679**, dated April 25, 1876; application filed November 10, 1875.

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 certain new and useful Improvements in Toy Watches; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable a person skilled in the art to make and use the said invention, reference being had to the accompanying drawing, forming a part of this specification.

Figure 1 shows a plan; Fig. 2, a vertical section, and Figs. 3, 4, 5, and 6 internal working parts. Fig. 7 shows a plan, drawn on an enlarged scale, with the dial removed, so as to show the arrangement and construction of the working parts.

My invention consists of forming a winding-ratchet, winding key, and hub for the inner coil of the mainspring; in a mode of adjusting the escapement-wheel to secure easily and quickly a proper depth of action in the pallets of the balance-wheel; in the construction and operation of the winding mechanism; and in the construction of the balance-wheel, as will hereinafter be described and claimed.

A represents the case; B, the barrel containing the mainspring C. D is an escapement-wheel, mounted upon a journal formed on the stud E, which is secured to the barrel B. This journal is made eccentric to the stud E, for a purpose which will hereafter appear. The wheel D is provided with teeth engaging in the internal gear F, and also in the pallets G¹ and G² of the balance-wheel H. J is a spindle, fastened tightly to the hands K and to the barrel B. The inner end of the mainspring C is secured to a cup, L, having notches which serve as a ratchet-wheel. A spring, M, serving as a pawl, engages the notches in L. The cup L fits over a projection or hub, N, in the case A. A projection, O, in the cup L serves to engage the winding-key P, which is a simple tube, having a slit or opening on the side to fit projection O, and a

suitable upper end or handle, by which to turn it. The dial is formed on the plate F' of the internal wheel F. The stud E, having a journal eccentric to its axis, is rotated until the teeth of the wheel D engage a sufficient depth in the pallets G¹ and G² of the balance-wheel H, and is then securely fastened in the barrel B by riveting or soldering. The balance-wheel H is formed of a plate of metal, and is bent around the pallet-piece G, so as to firmly embrace and hold it.

The arrangement of the winding-ratchet may be modified by making the teeth on the hub N instead of on the cup L, and forming a spring or pawl, either on the cup L of its own material or of the mainspring C.

I do not broadly claim the revolving escapement-wheel, nor the stationary propelling-wheel, nor the balance-wheel, nor the mainspring, as they form the subject of patents already granted to me; but

What I claim is—

1. The combination of the revolving escapement-wheel D with the stationary wheel F, balance-wheel H, and mainspring C, the latter working in one direction only, as set forth.

2. The mainspring C in combination with the winding-post J, ratchet wheel L, the spring-pawl M, the revolving plate B, and escapement-wheel D, as set forth and described.

3. The projection O in combination with the shaft J and cup L, adapted to be turned by the key P, as set forth and described.

4. The stud E, having a journal eccentric to the body thereof, in combination with the wheel D and pallets G¹ and G², as set forth and shown.

5. The balance-wheel H, having the pallets G¹ and G², formed on the piece G, which is inserted in the fold of the plate, forming the arms of the wheel, as set forth.

JOHN G. POWELL.

Witnesses:

ANDW. J. BOSWELL,
S. LLOYD WIEGAND.