L. L. GRANDPERRET.

TOY WATCHES.

No. 195,434. Patented Sept. 18, 1877.

Fig. 1.

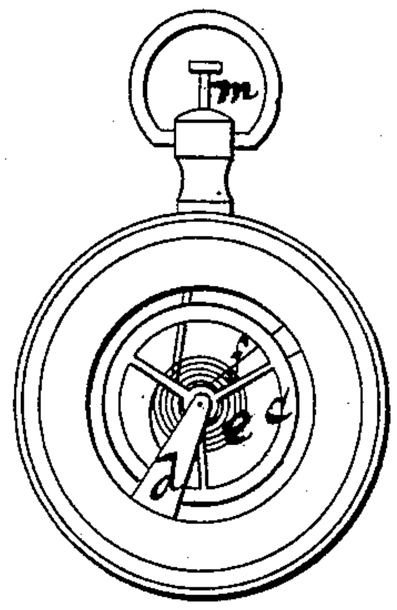
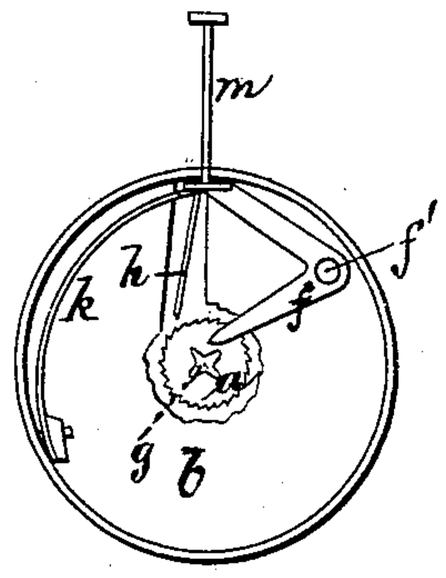


Fig. 2.



WITNESSES

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LOUIS L. GRANDPERRET, OF NEW YORK, N. Y.

IMPROVEMENT IN TOY WATCHES.

Specification forming part of Letters Patent No. **195,434**, dated September 18, 1877; application filed September 6, 1877.

To all whom it may concern:

Be it known that I, LOUIS L. GRANDPERRET, of New York city, county and State of New York, have invented an Improvement in Toy Watches, of which the following is a specification:

The object of my invention is to so construct a toy watch that motion will be imparted to a balance-wheel, so that it will have a reciprocatory motion similar to that of the balance-wheel of a regularly-constructed watch, and showing the action of the hair-spring and balance-wheel through an opening in the back case of the watch, thus making an attractive toy.

In order to show an additional movement—that is, a movement of the hands—I make my watch with a ratchet-wheel, secured to an arbor, on which the hands are attached, said ratchet-wheel playing between the dial-plate and an inner plate, *b*, to which it is attached; but this portion may be dispensed with.

Between the plate *b* and the back casing is pivoted a balance-wheel, *c*, to which and to the bridge *d* a spring, *e*, is attached. *f* is a bent lever, pivoted at *f'*, which lever engages with the spur-wheel *g*. *k* is a spring, acting to raise the upper end of the lever, and also to raise the pawl *h*. A spur-wheel, *g*, is attached to the arbor of the balance-wheel, and a pin, *m*, passes through the stem in the watch, and engages with the bent lever *f*.

When the pin *m* is pushed down, the pawl *k* and ratchet *a* cause the hands to move a certain distance, and the lower end of the lever *f*, engaging with the spur-wheel *g*, causes the balance-wheel to revolve until it winds up the spring *e*. Then, by releasing the pin *m*, the force of the spring *e* will cause the wheel to revolve and reciprocate for some length of time, in the same manner and with the same apparent motion as the balance-wheel in an ordinary watch, the balance-wheel being seen through a glazed opening in the back of the watch.

What is claimed is—

The combination, in a toy watch, of the pin *m*, spring *k*, lever *f*, spur-wheel *g*, balance-wheel *c*, and spring *e*, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS L. GRANDPERRET.

Witnesses:

H. P. MUNSON,

J. M. MASON.