G. W. REED.

Winding-Watches.

No. 83,729. Patented Nov. 3, 1868.

Fig. 1.

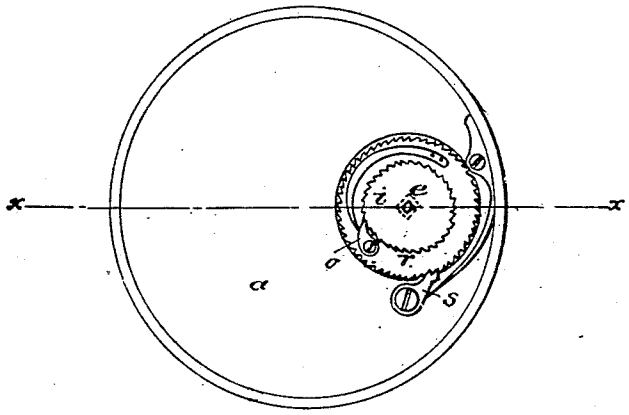


Fig 2.

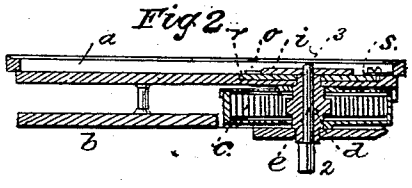
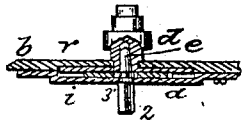


Fig. 3.



Witnesses.

Geo. D. Walker

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G. W. REED, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF, REUBEN S. MIDDLETON, AND HENRY ROTHFELDER.

Letters Patent No. 83,729, *dated November* 3, 1868.

IMPROVEMENT IN WATCHES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, G. W. REED, of Brooklyn, in the county of Kings, and State of New York, have invented, made, and applied to use, a certain new and useful Improvement in Winding Watches; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a view of the plate of the watch, with the ratchet-work of the improved winding-apparatus, and

Figure 2 is a section of the spring-barrel and plates at the line *x x*.

Similar marks of reference denote the same parts.

In winding watches with an ordinary key, there is a risk that the same may be turned in the wrong way, and thereby injure the parts, or the key may slip off the square, when the key is released, and then grasped again in turning said key continuously in one direction.

The nature of my said invention consists in a compound ratchet applied to the arbor of the spring-barrel, the said ratchets acting in opposite directions, so that the arbor or key-stud may be oscillated to wind up the watch, instead of requiring to be rotated, as heretofore; thereby the key can be held in the fingers firmly during the whole winding-operation, and there is no risk of injury to the watch, because the movement is made in both directions, in one case taking up the ratchet-teeth without moving the spring, and in the other instance winding up said spring.

In the drawing, *a* and *b* are the usual plates of the watch, and *c* the spring-barrel.

d is the arbor of the spring-barrel, which is made hollow, so that the winding-pin *e* may pass entirely through the same.

2 is the square or socket for the key, and 3 is a square for the winding-ratchet wheel *i*, that acts upon a spring-pawl, *o*, that has its fulcrum on the ratchet-wheel *r*.

This ratchet-wheel *r* sets upon the squared end of the hollow arbor *d*, of the spring-barrel, and *s* is a spring-pawl upon the plate *a*.

When the winding-pin *e* is moved in one direction, the teeth of the ratchet-wheel *i* pass beneath the end of the pawl *o*, and the wheel *r* remains stationary; but when the arbor or winding-pin *e* is moved the other way, the wheel *i* and pawl *o* turn the ratchet-wheel *r*, and wind up the spring.

It will be understood that the winding-pin *e* may not pass entirely through the arbor *d*, and the key be applied at the same side as the ratchet-wheels *i* and *r*.

In Figure 3, I have represented the ratchet-wheels as placed in this manner, and kept in place by the bridge *u*.

The ratchet-wheel *r* might have a rim upon it, with ratchet-teeth standing inwards, and the pawl be moved by the winding-pin *e*, the action being the same as before described.

What I claim, and desire to secure by Letters Patent, is—

A winding-pin, applied at the arbor of the spring-barrel, in combination with the double ratchets, acting in opposite directions, as and for the purposes set forth.

Dated, March 7, A. D. 1868.

G. W. REED.

Witnesses:

CHAS. H. SMITH,
GEO. D. WALKER.