

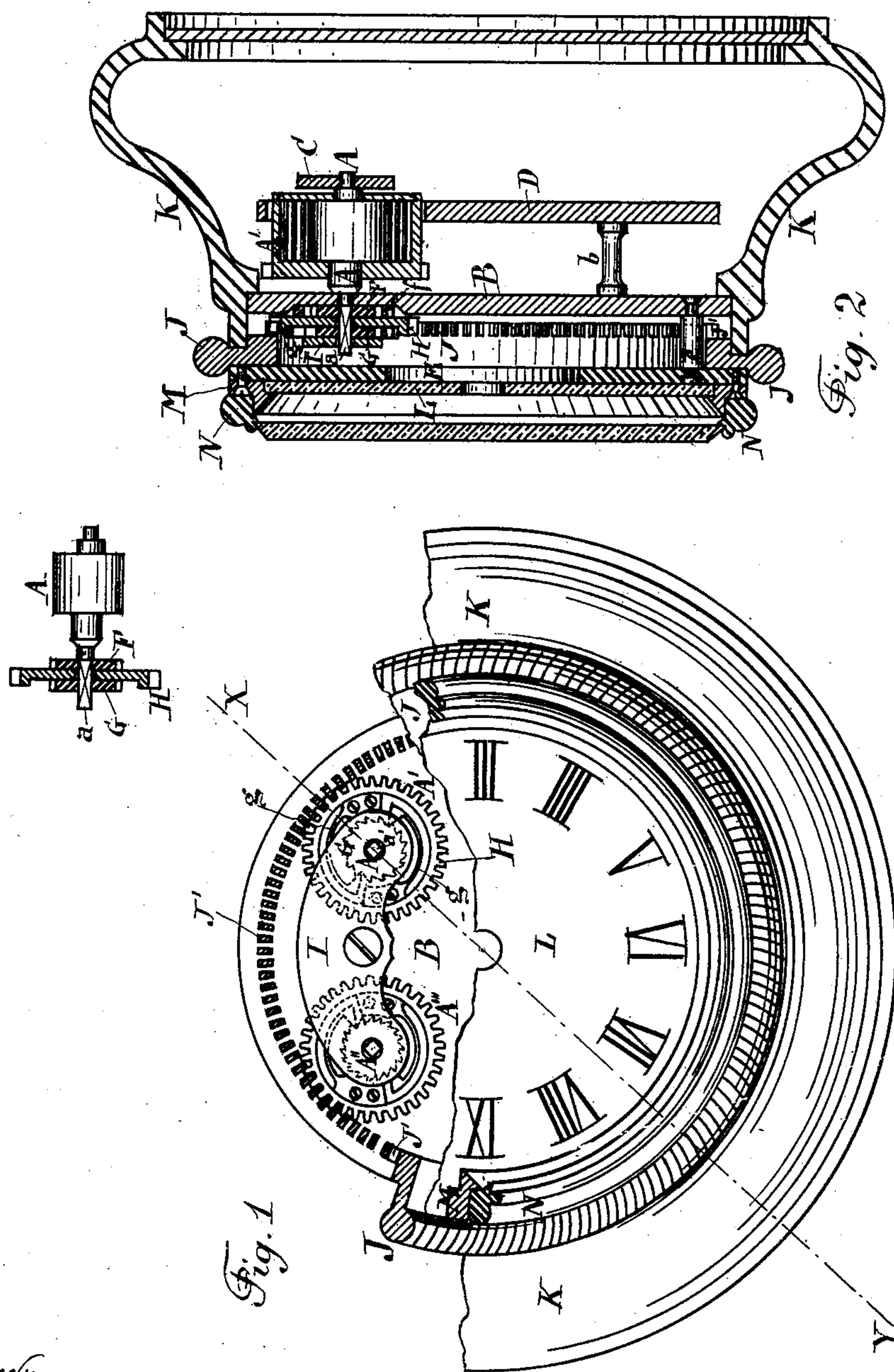
(No Model.)

A. F. VALON.

CLOCK WINDING MECHANISM.

No. 358,997.

Patented Mar. 8, 1887.



Witnesses

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att

UNITED STATES PATENT OFFICE.

AIMÉ FRANÇOIS VALON, OF GENEVA, SWITZERLAND, ASSIGNOR TO
F. VALON & CO., OF SAME PLACE.

CLOCK-WINDING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 358,997, dated March 8, 1887.

Application filed October 6, 1886. Serial No. 215,446. (No model.)

To all whom it may concern:

Be it known that I, AIMÉ FRANÇOIS VALON, watch-manufacturer, at Geneva, in Switzerland, have invented a new and useful Improvement in Clocks, of which the following is a specification.

My invention relates to the winding up of clocks of all kinds and systems by means of a very simple mechanism, allowing to wind up simultaneously and without opening the clock the two or three mainsprings of the clock.

My mechanism needs no holing of the dial, and no key is wanted to act upon it.

The accompanying drawings show a clock with two barrels provided with my mechanism. The latter may also be fitted to a clock with only one barrel, or to one having three barrels, (one for the work, one for striking the hours, and one for alarm.)

Figure 1 is a front view of the mechanism, the dial being supposed to be broken off. Fig. 2 is a section through X Y, showing the disposition of the winding-up mechanism upon the upper plate of the clock-work and the disposition of the plates and of the glass and winding-ring in and upon the clock-case. The other parts of the work, having no relation to the invention, are not shown in the drawings.

In both figures similar letters refer to similar pieces.

The plates B and D are bound by means of four pillars, *b*. The axis A of spring-barrel A' is affixed with one of its pivots to the plate B, and with the other one to a bridge, C, screwed upon the plate D. The latter has an opening, giving passage to the barrel A'. The axis A is provided with a squared end, *a*, which bears two ratchet-wheels, F and G, placed between the plate B and the ring E, the latter bearing the dial. These ratchet-wheels are affixed to the square *a*, while the wheel H, which is placed between F and G, turns freely around the axis A. The two spring-ratchets *f f* are affixed in a recess of plate B and act upon the ratchet-wheel F. The ratchet-wheel G, placed between the wheel H and bridge I, is acted

upon by the two spring-ratchets *g g*, which are affixed to wheel H. The teeth of the ratchet-wheels for the spring-barrels stand in opposite directions, so that one will act in one direction in winding up the mainspring, and the other in the reverse direction in winding up the second spring, and the clock will be wound up by turning the ring J first one way and then the other. A circular tooth-range, J', which is affixed to a ring, J, engages with wheel H, and the ring J is made with a circular rib projecting around the clock-case, so that the said ring may be turned first one way and then the other to wind up the clock. The ring J is held with but little friction between the case K and the ring E. The latter is connected to the plate B by means of three pillars, *e*. L is the dial. M is a ring which retains the dial upon the ring E, and N is the glass bezel, which is affixed upon the ring M.

The winding-up mechanism of the second barrel, A'', is a symmetrical reproduction of the even-described one, so that by turning the bezel J from left to right the spring of barrel A'' is wound up, while the wheel H of barrel A' turns backward without turning the axis A, and by turning the bezel J from right to left the spring of barrel A' is wound up, while wheel H' of barrel A'' turns backward without turning the axis A'.

Having thus described my invention, what I claim is—

The combination, with the mainspring-axis A, having a squared portion, *a*, of the two ratchet-wheels F and G, with reverse click-teeth and squared holes, the wheel H, with a round hole, and provided with spring-ratchets *g*, acting upon the wheel G, and of the spring-ratchets *f*, affixed to the plate B and acting upon F, substantially as and for the purposes specified.

AIMÉ FRANÇOIS VALON.

Witnesses:

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