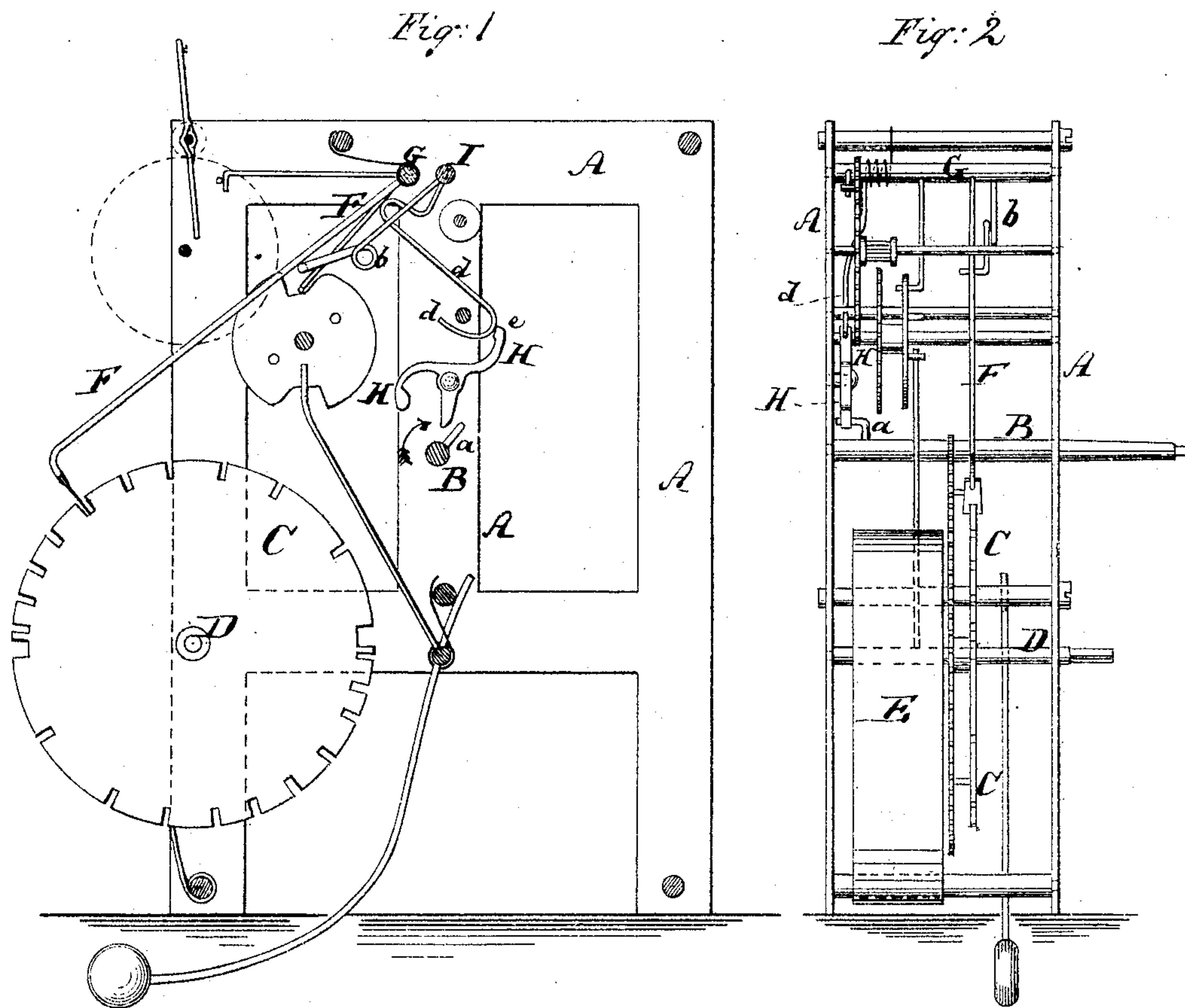


F. KROEBER.
 Lockwork Attachments for Clocks.
 No. 152,292. Patented June 23, 1874.



Witnesses:

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UNITED STATES PATENT OFFICE.

FLORENCE KROEBER, OF HOBOKEN, NEW JERSEY.

IMPROVEMENT IN LOCK-WORK ATTACHMENTS FOR CLOCKS.

Specification forming part of Letters Patent No. **152,292**, dated June 23, 1874; application filed June 10, 1874.

To all whom it may concern:

Be it known that I, FLORENCE KROEBER, of Hoboken, Hudson county, New Jersey, have invented a new and Improved Lock-Work Attachment for Clocks, of which the following is a specification:

Figure 1 is a face view of my improved lock-work attachment, and Fig. 2 a side view of the same.

Similar letters of reference indicate corresponding parts in both figures.

The object of this invention is to so arrange American striking-clocks that the hands on the dial can be turned backward, and so that the lock-work of the clock will not be injured when the hands are turned back. The invention consists in interposing a self-balancing lever between the actuating hook or crank on the main spindle and the bent wire of the lock-work.

In the drawing those parts of a striking-clock only are represented which have direct reference to my invention.

The letter A represents the frame of the clock. B is the spindle, carrying the minute-hand, and rotated by connection with a main-spring in the usual manner. This spindle B carries a projecting hook or crank, *a*, for actuating the lock-work—*i. e.*, the striking mechanism—once every hour. C is the notched wheel or disk, mounted on a spindle, D, and actuated, when released, by the spring E of the striking mechanism. F is the ordinary hook-shaped catch, engaging into the notches of the disk C, and mounted on a rock-shaft, G. Another rock-shaft, I, carries the two wires or arms *b* and *d*, of which one, *b*, extends under the catch F, while the other, *d*, reaches toward the hook or crank *a*.

In ordinary clocks, as now made, the hook or crank *a* affects the wire *d* by direct contact, swinging it aside when turning in the direction of the arrow—*i. e.*, forward—and thereby causing the wire *b* to lift the catch F out of the wheel C, allowing the latter to turn until the catch F drops into its next notch. The

inconvenience of this arrangement is, that when persons, not fully acquainted with the mechanism, attempt to turn the hands of the clock backwardly, the hook *a* will come against the wire *d* from the wrong side, and the minute-hand or the wire *d* or the hook *a* will be bent out of shape or broken in the attempt. I interpose a lever, H, between the hook or crank *a* and the wire *d*, and pivot said lever to the frame A, and weight or balance it so that it will always have the tendency to assume and maintain the neutral position in which it is shown in Fig. 1. The lower end of the lever H is suspended in the way of the hook or crank *a*, and the end *c* of said lever is in the neutral position, in contact with the wire *d*, or nearly so, as shown. Now, when the clock is in operation, the spindle B, being turned in the direction of the arrow, the hook *a* will at the end of every hour reach the lower end of the lever H, and swing it in the same direction, thereby also swinging the wire *d* and with it *b*, and causing the clock to strike. When a person attempts to set the hands of the clock by turning them backward, this can be readily done, as the hook *a* will, when it reaches the lever H during such backward motion, swing the lever aside, away from *d*, until it has passed the lever, whereupon the latter, by virtue of its self-balancing property, will swing back into the neutral position. Clocks will thus, by this simple attachment, be freed from their present chief cause of injury, and preserved in good striking order for a long time, besides acquiring the liberty of having their hands turned either way.

I claim as my invention—

The self-balancing lever H, interposed between the hook or crank *a*, and the wire or arm *d* of the lock-work of a clock, substantially as and for the purpose specified.

F. KROEBER.

Witnesses:

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