

WILLIAM LINDON'S IMPROVEMENT IN CLOCKS.

PATENTED

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Fig. 1.

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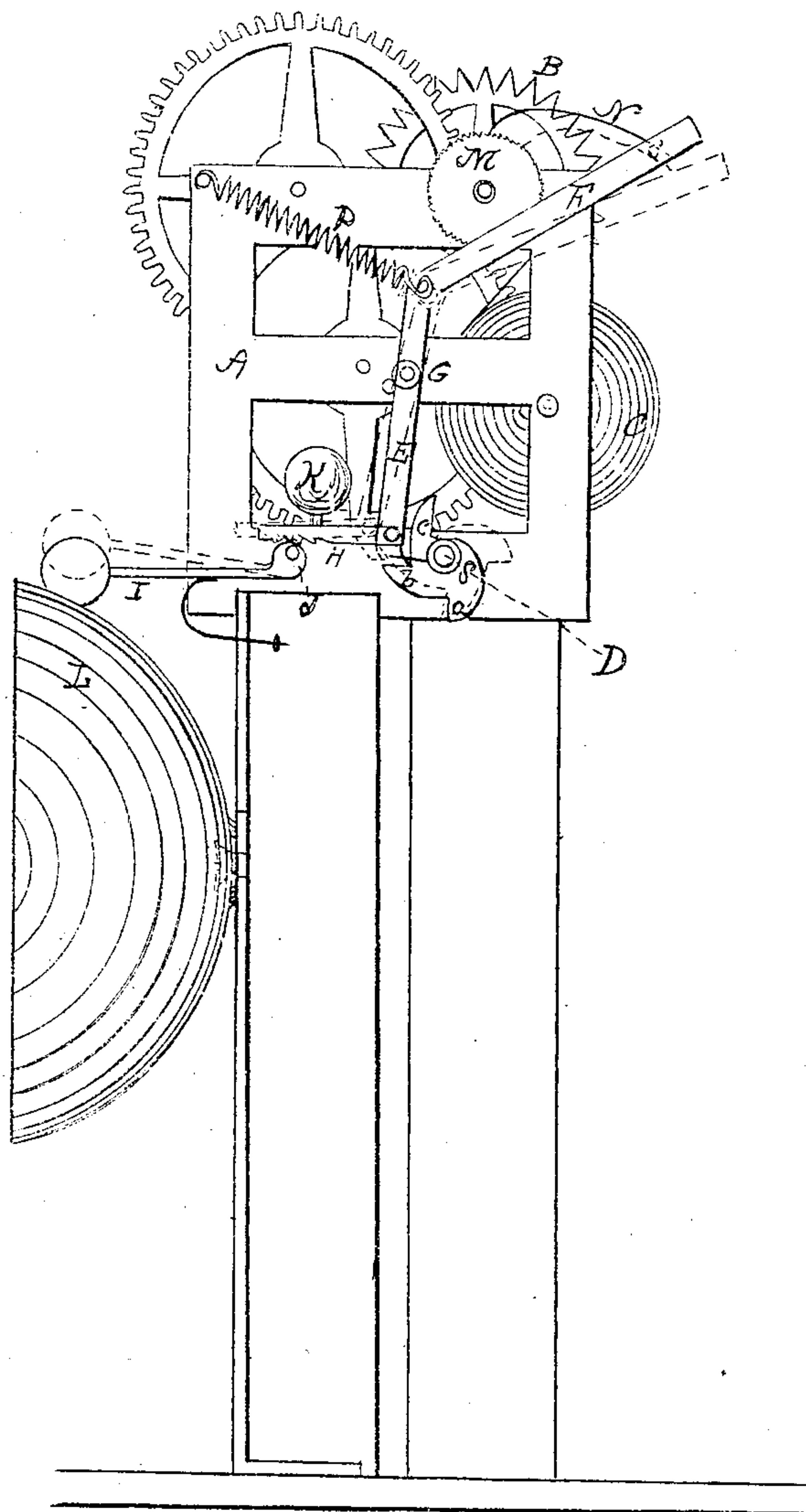


Fig. 2.



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Inventor

By his Attorney.

John E. Earle

Witnesses

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WILLIAM LINDON, OF NEW HAVEN, CONNECTICUT.

Letters Patent No. 71,519, dated November 26, 1867.

IMPROVEMENT IN CLOCKS.

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, WILLIAM LINDON, of New Haven, in the county of New Haven, and State of Connecticut, have invented a new Improvement in Clocks; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a rear view of a clock-movement with my improvement attached.

This invention relates to an improvement or attachment to the time-movement, whereby the quarter hours are struck, and the power to cause the striking is wound up or induced by the operation of the clock-movement.

In order to the clear understanding of my improvement, I will proceed to describe the same as illustrated in the accompanying drawings.

A is the rear plate of the movement, of common construction; B, the escapement-wheel; C, the driving-spring, and D the shaft to which the pointers are attached, making one revolution each hour. E is one arm and F the other arm of a lever having its fulcrum at G. To the arm E is pivoted a bar, H, having several teeth cut upon its under edge, as denoted in the drawing. I, the hammer pivoted at J, and provided with a tooth to correspond to the teeth on the bar H, and the bar H is held down upon the tooth of the hammer by a weight, K, or otherwise, the hammer arranged so as to strike upon a bell, L. On the shaft of the escapement-wheel is fixed a finely-cut ratchet, M, into which a pawl, N, on the arm F of the lever sets. P is a spring attached to the arm F of the lever, so as to draw it forward to the pointer denoted in black. On the shaft D is arranged a cam, S, having three projections *a*, *b*, and *c*, seen detached in fig. 2; the said projections of the cam arranged so as to operate the lever to move the bar H forward, as denoted in red. The first projection *a* is sufficient to move the bar H one tooth forward; this will draw the pawl N back upon the wheel M, and when the projection on the cam has released the bar H, the spring P will tend to draw the bar back and raise the hammer, but will raise it only so fast as the movement of the wheel M will permit, and when raised to its full height the tooth on the hammer escapes from the bar H, and falls upon the bell, striking one for the first quarter. The cam S continuing its revolution, the projection *b*, which is double that of *a*, forces the bar H forward two teeth, and operating as before, strikes two for the second quarter. Continuing its revolution, the projection *c*, which is three times that of *a*, in like manner causes three strokes of the hammer for the third quarter; a fourth may be added for the last quarter if desired. Thus it will be seen that the cam S, operated by the clock-movement, applies the necessary power, or, as it were, acts as a self-winder to strike the quarters. The cam may be arranged operating in similar manner to strike the hours also, and may be attached to the shaft D, or to a shaft independent, yet driven from the clock-movement, thus by a single spring performing the work usually accomplished by two; and, if desired, different bells may be employed, each bell being provided with its own hammer, and each operating at the proper time, in like manner, as described. It will be readily seen that the lever may be acted upon by the cam by various constructions and forms.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is—

The arrangement of the cam S, combined with the bar H and the hammer I, so as to operate in the manner substantially as set forth.

Witnesses:

A. J. TIBBITS,
JOHN H. SHUMWAY.

WILLIAM LINDON.