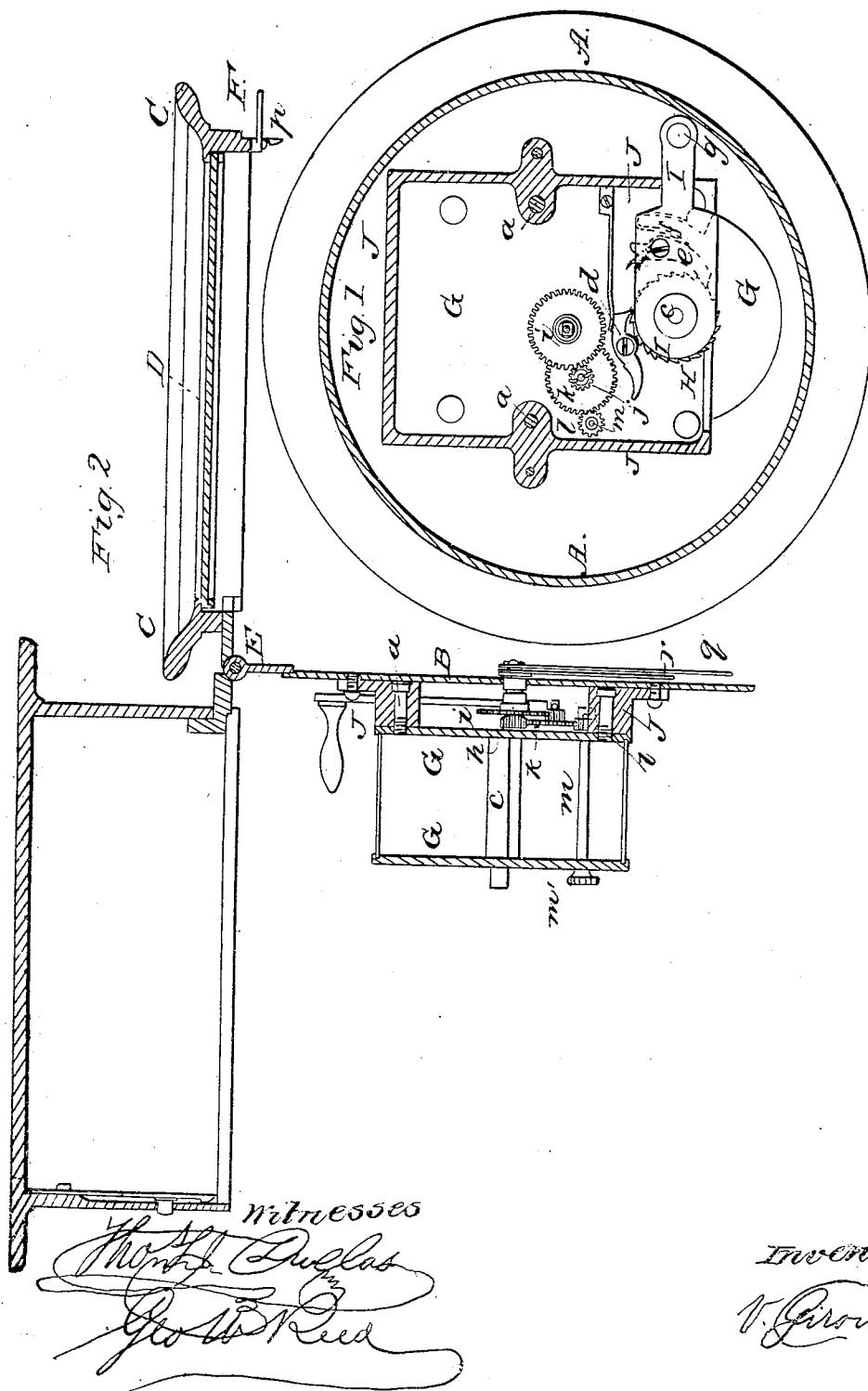


V. GIROUD.
Marine Clock.

No. 40,474.

Patented Nov. 3, 1863.



UNITED STATES PATENT OFFICE.

VICTOR GIROUD, OF NEW YORK, N. Y.

IMPROVEMENT IN MARINE CLOCKS.

Specification forming part of Letters Patent No. **40,474**, dated November 3, 1863.

To all whom it may concern:

Be it known that I, VICTOR GIROUD, of the city, county, and State of New York, have invented certain new and useful Improvements in Marine Clocks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section parallel with the dial of a clock with my improvements. Fig. 2 is a central horizontal section of the same, showing the case open.

Similar letters of reference indicate corresponding parts in both figures.

My invention is more especially designed for clocks to be used in the engineers' rooms of steam vessels.

One object is to provide for the winding and the daily setting of the hands, which is necessary at sea, without the greasing and soiling of the dial and inside of the glass, which is almost unavoidable when the winding and setting are performed in front of the dial in the usual way. Another object is to obviate the difficulty which sometimes arises at sea from the loss of the ordinary winding-key, which is difficult to keep in place; and a third object is to avoid the bending or straining of the hands, which so often occurs in setting the clock by taking hold of the hands themselves.

The invention consists in certain improved means of winding and setting the hands, applied in combination with a hinged dial, whereby the above results are obtained.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the case, having the dial B and the ring C, which holds the glass D, separately hinged to it by a single hinge, E, as shown in Fig. 2.

F is a fastening for securing the dial and glass ring together, so that both may move together on the hinge E.

P is a spring-catch for securing both the ring and the dial when closed up.

G is a box which contains the works of the clock secured firmly by screws *a a* to a frame, J, which is firmly secured by screws *b b* to the back of the dial B.

c is the shaft on which the mainspring is wound, having fast upon it a ratchet-wheel, H, to which is applied a stop-pawl, *d*.

I is a lever, fitted to work loosely on the shaft *c* as a fulcrum, and carrying a pawl, *e*, which is kept in contact with the ratchet-wheel H by means of a spring, *f*, also attached to the lever I. This lever protrudes through an opening in the lower part of the frame, and is furnished at its extremity with a handle, *g*, which can be conveniently taken hold of when the dial is opened, for the purpose of giving the lever an oscillating movement upon the shaft *c*, and thereby making its pawl *e* operate on the ratchet-wheel H in such manner as to turn the said shaft and wind up the spring.

h i j k are the pinions and wheels commonly used in transmitting motion from the sleeve which carries the minute-hand *q* to the sleeve which carries the hour-hand *r* of the clock.

l is a pinion gearing with the wheel *k*, and attached to a spindle, *m*, which extends through the box G, and which works in bearings in the back and front thereof. This spindle has a knob, *m'*, at its rear end, by which to turn it and the pinion by hand for the purpose of turning the wheel *k*, and thereby turning both hands of the clock without opening the glass D, which covers the dial and the hands.

To wind and set the clock it is only necessary to press back the spring-catch *p* and open the glass ring C, which by its movement on the hinge E brings with it both the dial and the works without uncovering the face of the dial, and when the works are thus exposed the winding is effected by moving the lever I back and forth on the shaft *c*, and the setting by turning the knob *m'*.

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

1. The pawl-lever I, pawl *e*, and ratchet-wheel H, applied to the winding-shaft *c*, and in combination with a hinged dial to which the works are attached, substantially as herein described.

2. The spindle *m*, pinion *l*, and knob *m'*, applied in combination with the gearing of the hands and with the hinged dial, substantially as and for the purpose herein specified.

V. GIROUD.

Witnesses:

THOS. S. J. DOUGLAS,
GEO. W. REED.