R. LEUCHSENRING.
Illuminated Clock.

No. 197,520. Patented Nov. 27, 1877.

Fig 1.

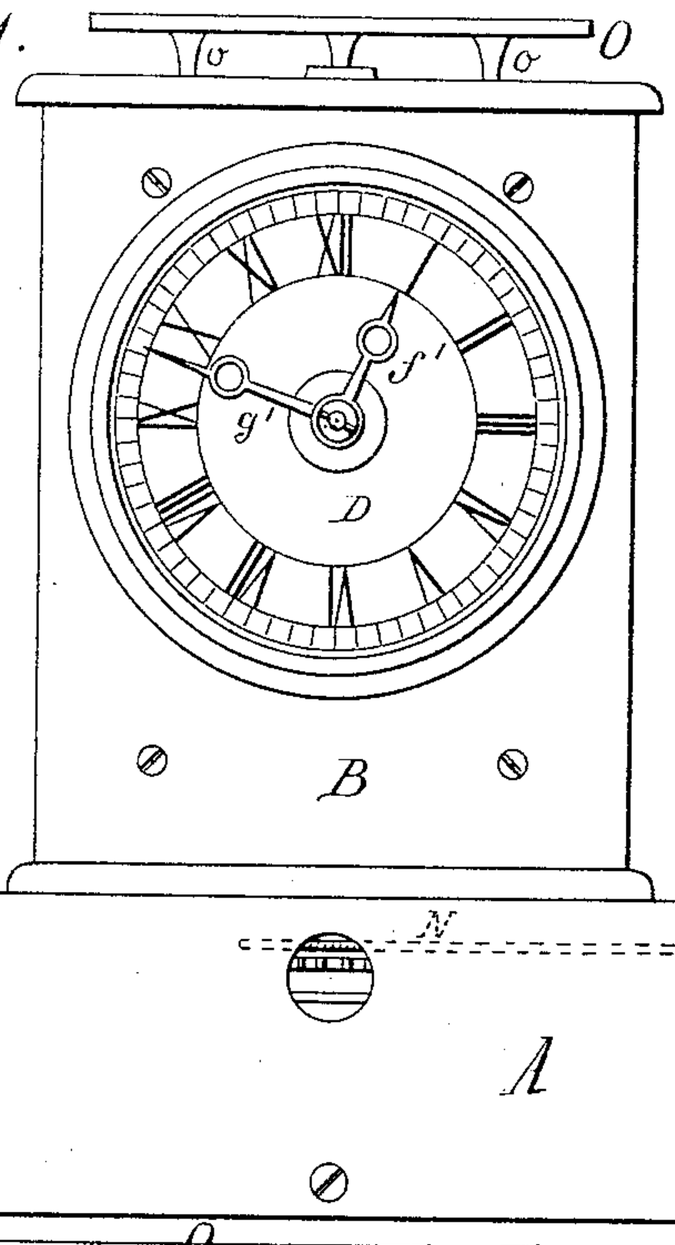


Fig 2.

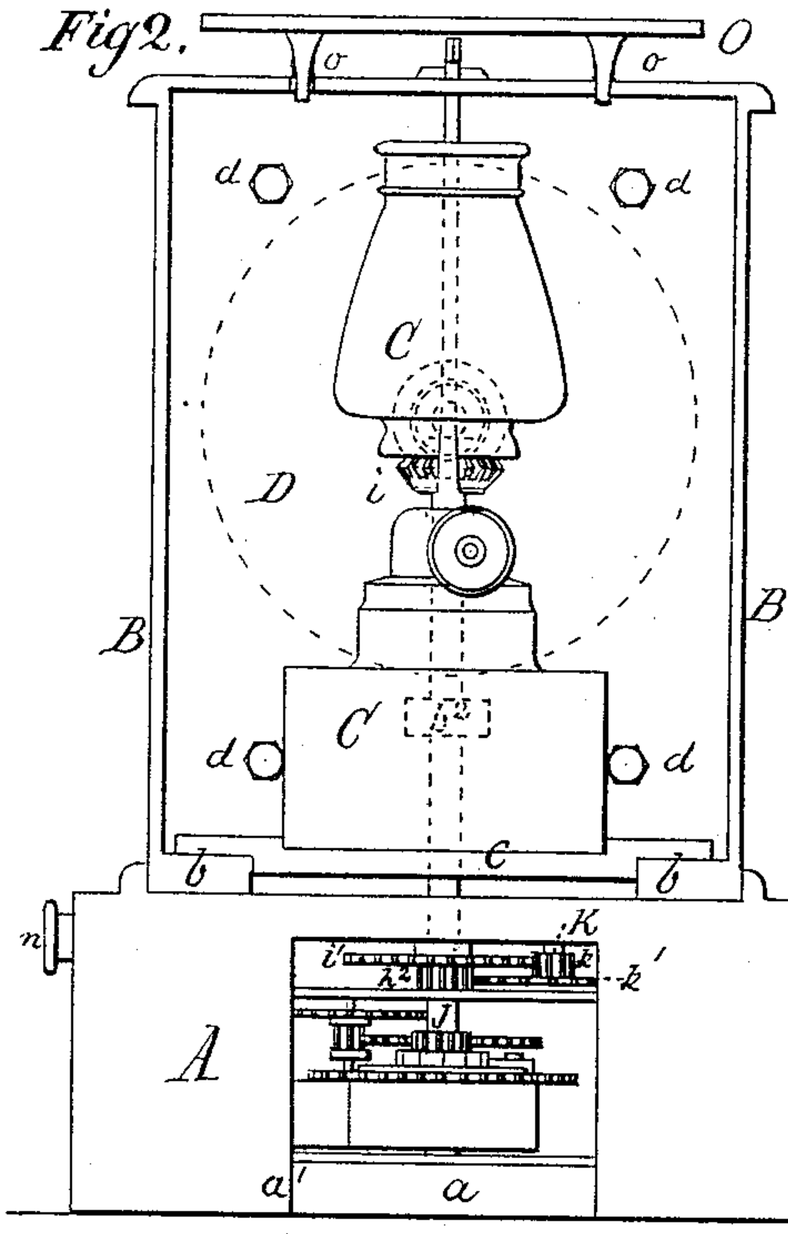


Fig 3.

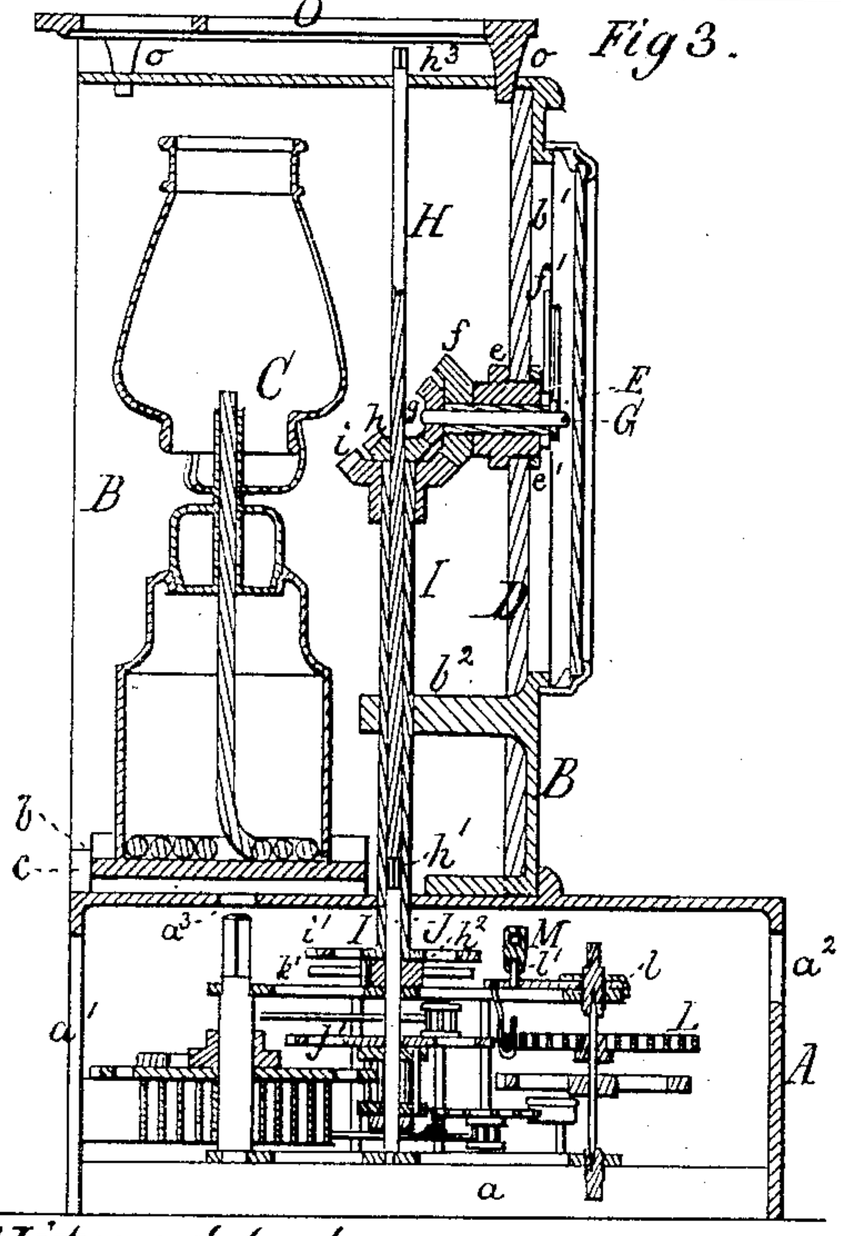


Fig 4.

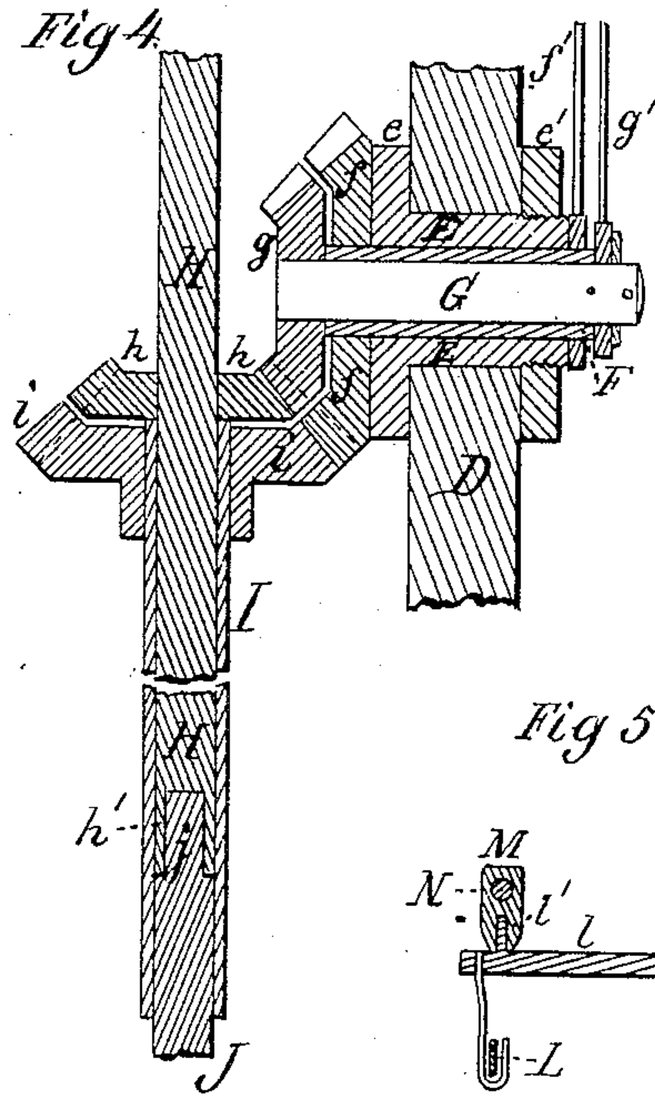
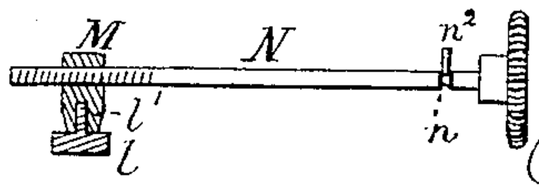


Fig 5.

Fig 6.



Witnesses:
J. T. Theodore Lang.
James Martin Jr.

Inventor:
Robert Leuchsenring.
by
Mason, Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

ROBERT LEUCHSENRING, OF NEW BEDFORD, MASS., ASSIGNOR OF ONE-HALF HIS RIGHT TO MARTIN PHILIP FICHTENMAYER, OF SAME PLACE.

IMPROVEMENT IN ILLUMINATED CLOCKS.

Specification forming part of Letters Patent No. **197,520,** dated November 27, 1877; application filed August 24, 1877.

To all whom it may concern:

Be it known that I, ROBERT LEUCHSENRING, of New Bedford, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Illuminated Clocks, which improvement is fully set forth in the following specification and accompanying drawings, in which latter—

Figure 1 is a front elevation of one of my improved clocks; Fig. 2, a rear elevation of the same; Fig. 3, a vertical central cross-section of the same; Fig. 4, an enlarged sectional detail view of the connections between the clock-motion and the dial; Fig. 5, an enlarged detail view of an improved device for regulating the clock-motion; and Fig. 6, a view of its adjusting hand-screw.

The object of my invention is to furnish an illuminated clock for the sick-room which is illuminated by a lamp placed within the case of the clock, so that its light will not irritate the patient, and in which the heat of its flame is also utilized for keeping warm tea, milk, or other requisites for the patient's diet.

The nature of my invention consists in certain constructions, combinations, and arrangements of parts, hereinafter fully described and specifically claimed, whereby an illuminated clock is produced which shows the time at night very plainly without emitting a disagreeable amount of light into the sick-room, which serves as a heating apparatus, and which may be conveniently carried from one place to another without disarranging the parts within.

In the drawings, A represents the foot or lower part of a clock-frame, which incloses a clock-motion with spring and balance-wheel escapement. The said frame A is, by preference, made of metal, cast in one piece and without bottom, so that the said clock-motion is introduced from below, fastened upon a movable bottom, *a*, which is fastened within and to the frame A.

The dial-frame B (in ordinary clocks the clock-frame proper) is properly fastened upon the frame A, and has two bottom flanges, *b*, between which the foot *c* of a lamp, C, is secured, either by simple fit, as seen in the drawings, or in any other suitable manner. The back of the frame B is open; but it may be provided with a door having perforations to admit fresh air to the flame of the lamp. The front of the frame B has a round opening, b^1, for the exhibition of the dial.

The dial-plate D is placed inside the frame B, and secured to it by bolts *d* or other suitable means, and it has the hours and minutes marked upon its front and within the scope of the opening b^1. The center of the said dial-plate D is perforated, and provided with a metal bearing, which consists of a central tube, E, with a head, *e*, at one end, and a nut, *e'*, at the other end, whereby it is fastened to the dial-plate, as shown in Fig. 4.

A tube, F, with a bevel-wheel, *f*, at its one end, inside the frame B, and with an hour-hand, *f'*, at its other end, in front of the dial D, is inserted into the tube E, which serves as its bearing. A shaft, G, with a bevel-wheel, *g*, at its one end, inside the frame B, and with a minute-hand, *g'*, at its other end, in front of the dial D, is inserted into the tube F. The bevel-wheel *g* is driven by another bevel-wheel, *h*, on an upright shaft, H, and the bevel-wheel *f* is driven by another bevel-wheel, *i*, on a tube, I, into which the shaft H is inserted. The shaft H is at its lower end provided with a socket, h^1, which receives the square head *j* of the minute-shaft J of the clock-motion, and thus transmits the motion of the shaft J to the minute-hand of the clock.

The tube I is at its lower end provided with a wheel, *i'*, which gears into a pinion, *k*, on a stud, K, of the clock-frame. The pinion *k* is coupled with a wheel, *k'*, which gears into a pinion, h^2, fastened to the shaft J. The shaft H is provided with a square head, h^3, at its top end, whereby the adjustment of the dial-hands is effected, the minute-wheel J' being so fitted on the shaft J as to allow it to be turned independently by the person operating it.

The wheels *i'* and *k'* and the pinions *i* and *k* alter the minute-motion of the shaft J into hour-motion of the tube I.

The adjustment of the escape-spring L is effected by a guide-lever, *l*, as usual; but as the said guide-lever *l* is not accessible, I provide it with a pivot, *l'*, upon which a nut, M, is

mounted, through which a hand-screw, N, is passed. The hand-screw N has a knob or milled head, n, outside the clock-frame, for operation by hand, and an annular groove, n^1, which, in connection with a retaining-pin, n^2, in the frame A, serves to keep the said hand-screw from moving longitudinally. The lower frame A has an opening, a^1, at the back, through which the clock-motion may be inspected, and an opening, a^2, in front, through which the lever l and hand-screw N may be watched while the clock is being adjusted. The top of the frame B is partly open to emit the heat of the lamp, and adapted to have a rack or open heating-support, O, fitted upon it by inserting its legs o in suitable slots or perforations. Upon the said rack the nurse may place a vessel containing such liquids or substances as ought to be kept warm and ready for immediate use.

The frame B is also provided with a lug, b^2, through which the tube I is passed, and whereby it is sustained in proper position.

To permit the clock to be wound up a hole, a^3, is provided in the frame A, above the main arbor, for passing the key through, which key is made long enough to project above the clock-frame B, in order to facilitate the winding up.

The two frames A and B may be made of one piece without departing from my invention.

Having described my invention, I claim—

1. The clock-frame A B, constructed with a horizontal support, b b, in rear of its dial-plate and above its clock-motion, for the reception of a lamp, C, for giving illumination to the dial-plate, and with a horizontal open support in rear of and above the dial-plate for the reception of a rack, O, upon which a vessel can be placed for heating food or other articles for use in the sick-room or nursery, substantially as described.

2. The shaft H, extended up through the top of the portion B of the case, and made a means of adjusting the clock-motion from the outside of the top of the frame, whereby the handling of the clock, when set against the wall or in any other position, is rendered unnecessary, substantially as described.

3. The clock-case with an opening, a^3, in the top plate of the portion A, and with an opening for the escape of the heat from the lamp, which opening also serves for the insertion of the winding-key from the top of the clock through the opening a^3, substantially as and for the purpose described.

4. The hand-screw N, extended from the outside of one side of the clock-case into the case, and passed through the nut M of the guide-lever l of the escape-spring L, and prevented from moving longitudinally by a pin, n^2, in combination with a clock-case having the inspection-aperture a^2 in its front and lower portion A, substantially as described.

5. A clock constructed with means on the inside of its case for illuminating its dial at night, and with a support for a vessel or holder on the outside of its case, whereby food and medicines or other articles are warmed above its top with the heat of the flame which is employed for illuminating its dial-plate, substantially as described.

6. The combination of the minute-shaft J of a clock-motion, the wheels h^2 k k' i', the shaft H, tube I, shaft G, tube F, and bevel-wheels f g h i, whereby the motion of the clock is transmitted to the dial-hands f' g', substantially as set forth.

Witness my hand in the matter of my application for a patent for an illuminated clock.

ROBERT LEUCHSENRING.

Witnesses:

PETER FICHTENMAYER,

CHARLES W. CLIFFORD.