(Model.)

C. WEINEDEL.

WATCHMAN'S CLOCK.

No. 264,382. Patented Sept. 12, 1882.

Fig. 1.

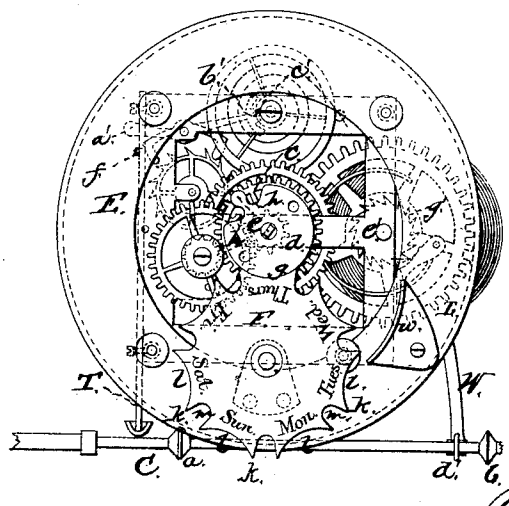


Fig. 2.

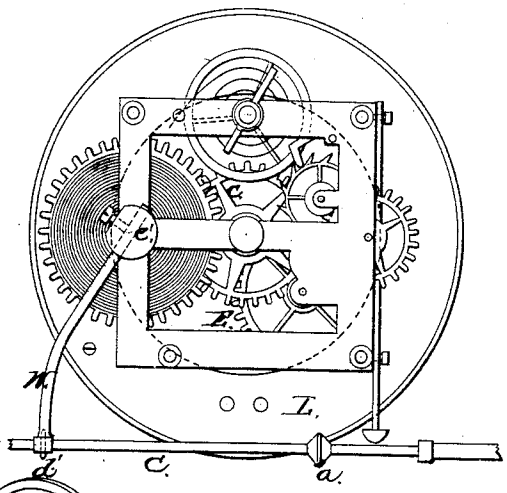


Fig. 3.

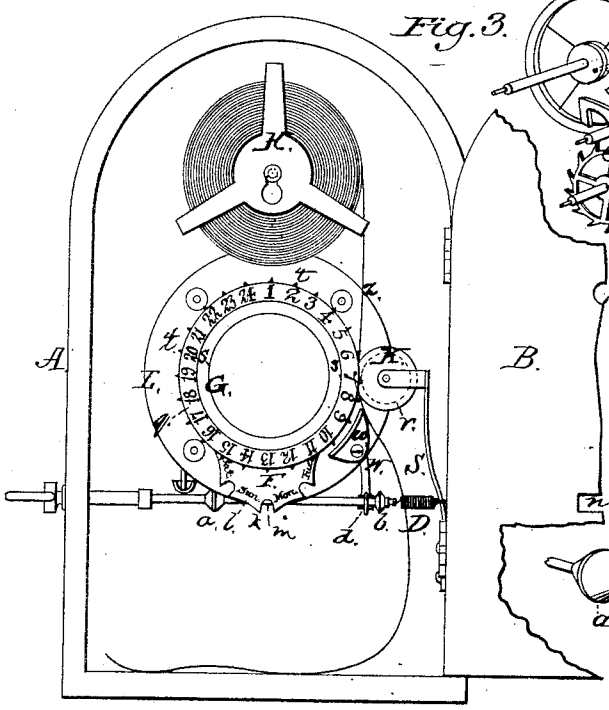


Fig. 4.

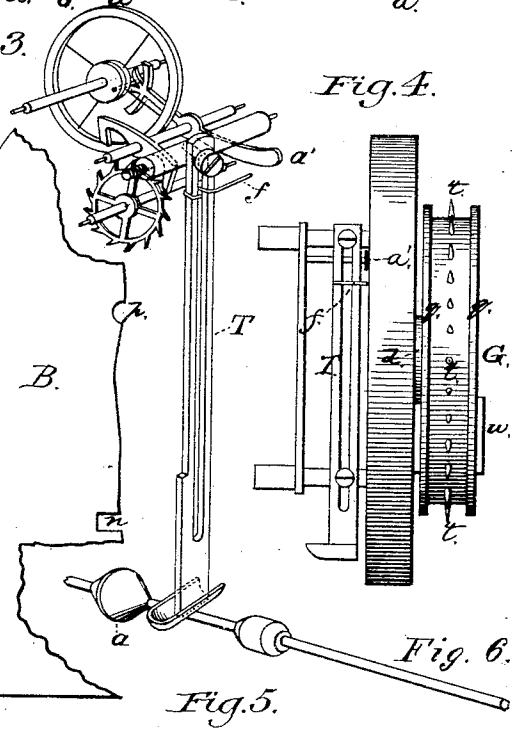
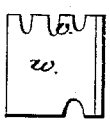


Fig. 6.

Fig. 5.



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WATCHMAN'S CLOCK.

SPECIFICATION forming part of Letters Patent No. 264,382, dated September 12, 1882.

Application filed February 3, 1882. (Model.)

To all whom it may concern:

Be it known that I, CHARLES WEINEDEL, a citizen of the United States, resident at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Watchmen's Clocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a front view of the operating mechanism. Fig. 2 is a rear view of the same. Fig. 3 is a front view of the whole device in a case, the door being thrown open. Fig. 4 is a side view showing the slide. Fig. 5 is a detail of the clearer-plate. Fig. 6 is a detached perspective view of the actuating-lever and starting mechanism.

This invention has relation to watchmen's clocks, designed especially to regulate the rounds of night watchmen and policemen; and it consists in the construction and novel arrangement, in connection with a clock-movement, of the winding and starting device, the half-hour dial or indicator, the notched week-day wheel and its toothed operating-disk, the pricking drum or wheel, and the strip-clearer, all as hereinafter set forth.

The object of this invention is to provide means for securing prompt and regular attention on the part of night watchmen and roundsmen in the performance of their duties.

In the accompanying drawings, the letter A designates a case having a door, B, the key of which is kept by the inspector. An outer case may be provided having a door, which may be unlocked by the roundsman, but he is not to have access to the case A.

Through the wall of the case A extends a slide, C, to which is connected, within the case, a replacing-spring, D, which operates to draw the slide back when it has been pulled by the watchman in making his half-hourly visit. The slide is provided with collars or projections *a* and *b*, which respectively operate the starting and winding devices, as hereinafter described.

E represents the clock-work, which is of ordinary character, having a center-wheel, *c*, revolving once in twelve hours or twenty-four hours, according to requirement; but for purposes connected with night-watching the twelve-hour arrangement will suffice.

To the wheel *c* is secured a disk-wheel, *d*, having a single tooth, *e*, which is separated from the circular portion *g* of the margin by the rounded notches *h*. The disk-wheel engages the week-day wheel F, which is formed with seven marginal projections, *k*, having concave edges *l*, and separated by indentations *m*, which successively engage the tooth *e* of the disk-wheel *d* as it revolves, turning the wheel F once at the close of each day or commencement of the next. The names of the days of the week are printed or stamped on the projections *k* and appear in succession through the opening *n* in the door.

G represents the half-hour drum or index, which is attached to the wheel *d* by means of screws or other common fastenings, so that the drum turns once in twelve hours or twenty-four hours, as the case may be. In the drawings the drum, being shown in connection with a twelve-hour wheel, is marked upon the outer portion of its face with the numbers of the half-hours in succession, as indicated at *s*. Every half-hour one of these numbers appears through the opening *p* in the door of the case. The cylindrical surface of the drum is flanged on each edge at *q*, and between the flanges a strip of paper, *z*, passes downward from the reel H, which is pivoted above the drum. Projecting from the cylindrical surface of the drum radially are a series of needle-points, *t*, one of these being radially in line with and corresponding to each of the half-hour marks *s*. There are therefore twenty-four of these needle-points, which serve to carry the strip *z* downward with a positive and regular movement every half-hour, at the same time making a perforation in the strip to note the passage of the half-hour. Working against the cylindrical surface of the drum is a friction-wheel, K, having a groove, *r*, to receive the points *t*, and operated by a spring, S, to free the strip *z* on said points.

Under the friction-wheel and drum is a clearer-plate, *w*, which is formed with a notch, *v*, in its upper edge for the passage of the needle-

points, and is attached to the frame-plate L of the movement. The upper edge of the clearer extends between the approximating under surfaces of the drum and friction-wheel, and serves to lift the strip from the points, so that it can fall free to the bottom of the case.

T represents a slide connected to bearings on the frame of the clock-movement and designed to have a vertical movement or movement of reciprocation thereon. This slide is provided with a projection or arm, *f*, which is designed when the slide is raised to raise the tail of a lever, *a'*, the head of which is notched or indented at *b'* to engage a tooth or projection, *c'*, on the hub of the balance-wheel, thereby starting the movement.

W indicates the winding-lever, the lower end, *d'*, of which is connected to the pull C by means of a loop in front of the collar or projection *b*. The upper end of the lever is secured to the hub *e'* on the mainspring-shaft, and is arranged to have sufficient vibratory play to wind the clock enough to enable it to run for one-half hour, being the angular distance of one of the teeth of the ratchet-wheel *g'* on mainspring-shaft.

The winding-lever W is moved by the projection *b* on the slide C when the latter is pulled by the watchman at his half-hourly visitation, and at the same time the starting-slide T is raised by the projection *a* on the slide C. In this manner the movement is wound and started by the same handle and by a simple pulling motion thereof. The slide C is replaced after pulling by its spring, and the clock-movement continues to operate, turning the drum and week-day wheel with uniform and regular motion, provided the slide is pulled promptly every half-hour, for the limit of the vibratory motion of the winding-lever W is fixed by the stop-projection *b*, and when the mainspring-wheel has turned for a half-hour the lever is brought in contact with the projection and further movement of the clock mechanism is stopped until the slide C is pulled again, winding and starting the same. The record of the half-hours is kept by the week-day wheel and by the perforated strip, the latter being usually long enough to last for a month or more. In order to keep the clock in proper motion the slide C must be pulled every half-hour promptly, and if the watchman attends to this with certainty the clock will bear testimony, turning the week-day wheel at the proper time.

It will be easily seen that the watchman cannot wind the movement to run more than a half-hour, although during the half-hour he should pull the slide C several times, because the ratchet-wheel on the mainspring-shaft must turn sufficiently to allow the pawl on the main wheel to engage the succeeding tooth of the ratchet-wheel, and the vibratory play of the winding-lever is only sufficient to span one of the ratchet-teeth.

If weekly inspections are made, it can be determined at a glance whether the watchman has made his half-hourly visits or not. For these weekly inspections the clock need not be opened. If, however, a longer interval than a week is allowed to elapse between the inspections, recourse is had to the perforated strip *z* within the clock-case, which will show the exact number of times the clock-movement has run a half-hour.

I am aware that a lever for winding a watchman's detector and stopping it within a limited time previously determined is not broadly new; also, that liquor and gas meters have been provided with trains of wheels requiring a revolution of one to move a successive one a single point; and I claim neither of these constructions broadly.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a watchman's clock, the combination, with the clock-movement, of the slide, its retracting-spring, and devices independent of each other, but operating in connection with said slide to wind, start, and stop the movement, substantially as specified.

2. The drum or wheel having the half-hour dial on its face and the needle-points on its cylindrical surface corresponding in number and radial position to the half-hour marks, substantially as specified.

3. The half-hour drum or wheel G, its disk-wheel *d*, having a single tooth, *e*, between notches *h*, and the week-day wheel F, having the indentations *m*, and the concave edge projections *k*, marked with the names of the days of the week, substantially as specified.

4. The combination, with the drum G, having the half-hour needle-points *t*, of the grooved friction-wheel K and spring S, as specified.

5. The combination, with the drum having the half-hour needle-points *t*, and the grooved friction-wheel K, of the clearer *w*, substantially as specified.

6. The starting-slide T, in combination with the notched lever *a'*, engaging the balance-wheel, and the pulling-slide C, substantially as specified.

7. The winding-lever W, in combination with the mainspring-shaft, ratchet-wheel *g'*, and the operating-slide having the stop *b* and retracting-spring D, substantially as specified.

8. The combination, with the clock-movement, the notched lever *a'*, engaging the balance-wheel, the reel H, pricking-drum G, grooved wheel K, spring S, and clearer *w*, of the starting-slide T, the vibrating winding-lever W, and the pulling-slide C, having the collars or projections *a b*, and the retracting-spring D, substantially as specified.

9. A watchman's clock having an operating-slide, and a winding-lever and starting-slide both actuated by a single movement of said operating-slide, substantially as specified.

10. The combination, with the clock-movement of a watchman's clock and starting de-

vices connected therewith, of mechanism arranged in the path of the slide or pull to be operated thereby for winding the movement to run a limited time, and at the same time moved out of effective connection with said slide or pull until the time has expired, when it is automatically reset for operative connection with said slide or pull, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES WEINEDEL.

Witnesses:
THEO. MUNGEN,
PHILIP C. MASI.