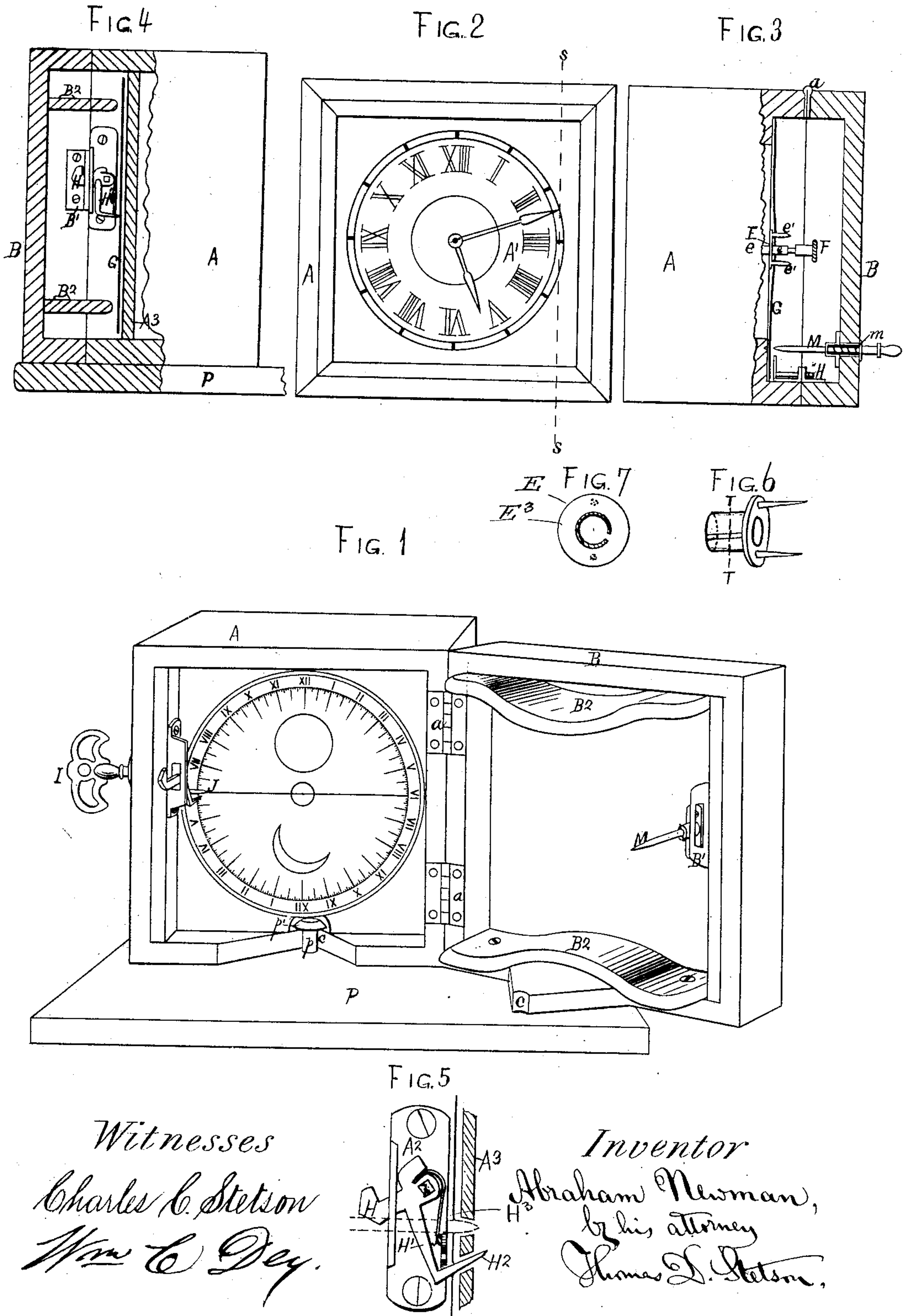


A. NEWMAN.
Watchmen's Time-Detector.

No. 227,641.

Patented May 18, 1880.



Witnesses
Charles C. Stetson
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Inventor
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UNITED STATES PATENT OFFICE.

ABRAHAM NEWMAN, OF NEW YORK, N. Y.

WATCHMAN'S TIME-DETECTOR.

SPECIFICATION forming part of Letters Patent No. 227,641, dated May 18, 1880.

Application filed October 2, 1879.

To all whom it may concern:

Be it known that I, ABRAHAM NEWMAN, of New York city, in the State of New York, have invented certain new and useful Improvements relating to Watchmen's Time-Detectors; and I do hereby declare that the following is a full and exact description thereof.

I employ the same clock which works the detector as a clock for ordinary use by presenting a dial and hands on the opposite side, working the hands by the same mechanism as turns the removable paper sheet or dial, which serves by the punctures thereon to indicate the faithfulness of the watchman. I have devised a peculiar fastening, which allows the clock to be instantly and conveniently turned around, so as to present either face at the front, as may be required. The fastening may be readily engaged and disengaged from a shelf or other fixture on which it is swiveled. The simple operation of opening the door or cover which secures the watchman's dial liberates the instrument from the swiveling-pin.

I have discovered and applied simple means of preventing deception by a collusion between day and night watchmen.

I secure the door by a very simple catch operated by a simple key; but I provide that the operating of the fastening shall puncture the paper, and thus afford an indelible indication of the fraud. This is simpler and cheaper than the use of elaborate keys, and the mode of marking by the fastening-piece itself is less liable to be circumvented by fraud than the means previously known. The same key which winds the clock may be used.

The punch or point which effects the ordinary punctures and the point on the fastening which effects the punctures to indicate that the device has been tampered with act at points near each other. I provide a fixed piece, which stands between them, so that it serves to prevent the paper from following either, and insures that either point shall be instantly cleared from the paper after each operation.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a perspective view of the instru-

ment in an open condition. Fig. 2 is a view of the opposite face, the instrument being closed. Fig. 3 is a horizontal central section, and Fig. 4 is a vertical section on line S S in Fig. 2. Fig. 5 represents certain details on a larger scale. Figs. 6 and 7 represent, also, a detail upon a larger scale. Fig. 7 is a cross-section taken on the line T T in Fig. 6.

Similar letters of reference indicate like parts in all the figures.

Referring to the drawings, P is a shelf, which may be permanently attached to the building, (not represented,) and $p p'$ is a headed pin firmly set therein to serve as a fixed pivot with which the device is readily engaged and on which it is free to rotate.

A is the casing, and B the door, of the removable part. The door opens by turning on hinges a . The door and the casing are formed, as shown, to present in the joint an aperture, c , just the size of the shank or body p of the pivot. There is room above this for the head p' . The device is engaged with the pivot $p p'$ by simply opening the door, thrusting the device in the right position, and closing the door, so that the door and case will engage with the pin, as indicated in Fig. 1. When thus locked the device B may be revolved freely in the horizontal plane to present either the clock-face A' or the door side B toward the spectator.

When used as a clock in the day-time or night the face A' should be presented.

When the watchman operates the punch the door B should be presented.

The works of the clock may be of any ordinary or suitable construction so long as there is a shaft, e , which extends out nearly to the door and carries a disk, E, having points e' . Outside of the disk E the shaft e is formed with a screw-thread and receives a thumb-nut, F.

G is a disk, of paper, previously printed to indicate the hours of an entire day, and divided centrally by a line drawn on the figures six, (6.) One side is marked with a figure of the sun, to indicate the day; the other with a figure of the moon, to indicate the night. Care being taken to affix the disk G in the proper position, the marks made by the point M not only indicate beyond mistake the hour when

the mark was made, but also whether it was at that hour of the day or of the night.

M is a pointed punch having liberty to move endwise in the socket provided in the door B. It is held outward by a spring, *m*, except when it is forced inward by the action of the watchman, who strikes the projecting end. The inner end is pointed and punches the paper, making a mark indicating the period of his attention to that duty.

H is a fastening-catch working in a housing, A^2 , on the interior of the case A, and adapted to engage with a striking-plate, B' , fixed on the door B. It turns on a shaft, *h*, which is squared at its outer end, and arranged to be operated by an ordinary clock-key, I, which is introduced through the hole provided. A rigid arm, H' , extends at right angles, and carries a point, H^2 , which is presented close to the paper. A spring, H^3 , turns the device in the direction to engage the catch H and disengage the point H^2 .

J is a fixed arm extending inward in the position shown. The edge of the paper disk G is inserted under it previous to fixing the disk upon the pins. It may be done afterward, but not as well. As the paper G revolves it moves through the narrow space between this projection J and a partition, A^3 .

The arm J performs three functions. When the pin M is thrust inward by the watchman on his several rounds it pricks the paper, causing the paper to adhere somewhat. As this pin M is withdrawn it tends to carry the paper with it. This is arrested by the arm J, which thus serves as a clearer for the pin M. When the shaft *h* is turned by the key I, so as to liberate the catch H and allow the door to be opened, the movement sinks the point H^2 into the paper. The paper sticks to this point H^2 , and would move with it as it is withdrawn except for the arm J, which interferes. The arm J thus serves as a clearer for the point H^2 . The spring H^3 , which operates the shaft *h* and its attachments, rests on the arm J, which is at a suitable distance to serve that end. The arm J therefore serves as an abutment for the spring H^3 .

On the inner side of the door B, I attach two deep pieces, B^2 , extending quite across, and smooth at their lower edges. The depth of these pieces is carefully determined, so that when the door B is closed the pieces B^2 stand near, but not touching, the partition A^3 . The disk G moves freely through the narrow space a sixteenth of an inch, more or less, between the inner edges of these pieces B^2 and the partition A^3 . These parts keep the disk G in a proper plane condition.

The partition A^3 is formed with small holes to receive the points M and H^2 as they are forced through the paper G.

The operation of the several parts will be understood from the above without special description. As with other instruments for this purpose, the watchman has simply to strike the outer end of the pin M each time he visits that

portion of the works. The proprietor, or some properly-authorized person, goes to the several detectors some time during the next day, applies the key, and, turning the shaft *h*, liberates the door, which is then opened. There should be but two prick-marks in the paper made by the point H^2 —one when the device was closed the day before and the other when it is opened now. If there are more, he detects the fact that the device has been opened at some other period. If the watchman has been vigilant, there will be the proper number of marks or indentations made by the point M at the proper hours.

Previous to opening the door the device is turned on the pivot *p p'*. While it stands open the button F is taken off. Then the paper disk G can be readily removed and a new one applied, taking care to properly engage the point H^2 and insert the edge of the disk G under the arm J.

When the door B is opened the detector may be readily disengaged; but when the door is shut it can only swivel around. On screwing down the nut F and closing the door the disk is properly secured, with the required freedom of operation, and the device is by the same operation again reliably but loosely secured on the pin *p p'*.

Although I have described the device as used in connection with night and day watchmen, it will be understood that it may be used to register the time of any other event. I do not wish to be confined to that particular purpose.

The disk E is fitted to a shaft, *e*, by the aid of a friction-spring, E' , which serves as a hub, and also as a spring. It takes hold of the shaft *e* with a gentle force, which allows the disk to be turned and set. This construction holds the disk E to be turned around and adjusted with great accuracy on the shaft *e*, after the disk G has been set thereon, by receiving the pins *e'*. To affix a disk, G, it is turned upon the pins *e'* at random, and then the whole turned around to attain a position just corresponding to the correct time. The spring-hold E' allows this adjustment to be effected with unusual facility.

Modifications may be made in some of the details without departing from the principle of my invention. For example, what I have called the "thumb-nut," F, may be simply a close-fitting knob thrust on and off with a direct movement, so long as it has sufficient friction to effectually hold the disk in place.

I claim as my invention—

1. The combined clock and watchman's time-detector described, provided with the recess *c* in the joint between the door B and the main case A, in combination with the shelf P and with the pivot *p p'*, adapted to serve as herein specified.

2. In a watchman's time-detector, the paper disk G, divided for day and night, as shown, in combination with the twenty-four (24) hour dial E, fastening means *e'*, back

tition, A³, and face-guides B², arranged to serve as herein specified.

5 3. In a watchman's time-detector, the arm J, in combination with the paper dial G, turning-piece H H' H², controlling the opening of the door, the pin M, operated by the watchman, and the spring H³, as herein specified.

In testimony whereof I have hereunto set my hand this 25th day of September, 1879, in the presence of two subscribing witnesses. 10
ABRAHAM NEWMAN.

Witnesses:

W. A. BIDDLE,
S. W. BALDWIN.