No. 610,756. Patented Sept. 13, 1898.

I. A. HERMANN.

WATCHMAN'S TIME RECORDER.

(Application filed May 1, 1897.)

(No Model.) 2 Sheets—Sheet 1.

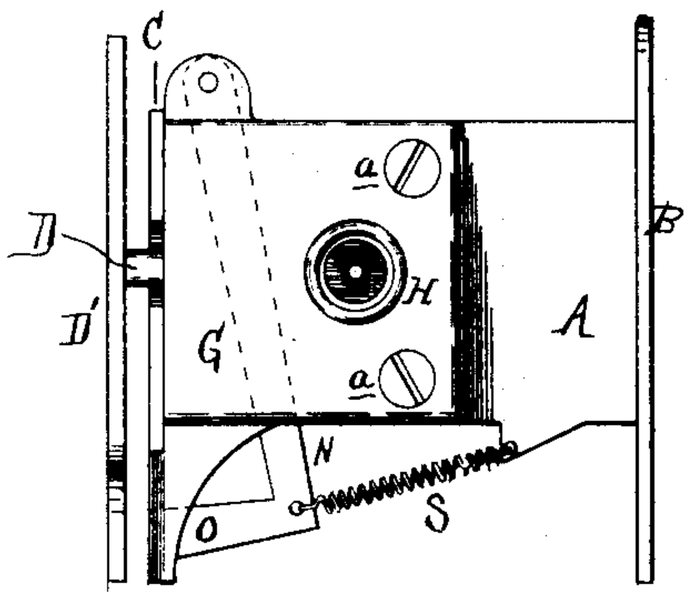

Fig. 1

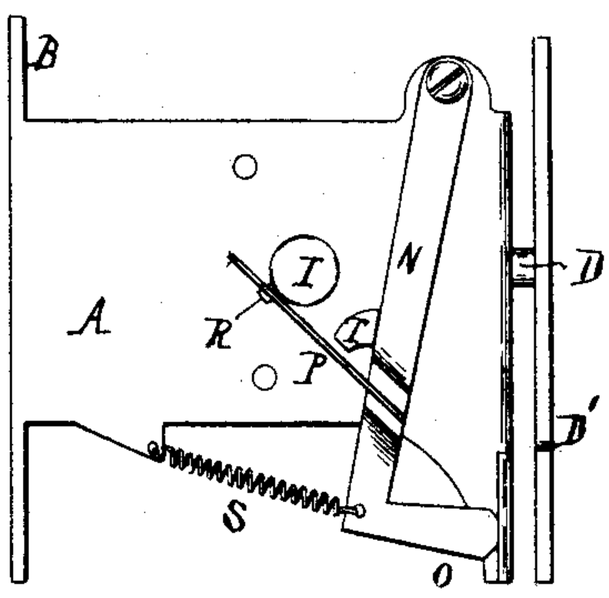

Fig. 2

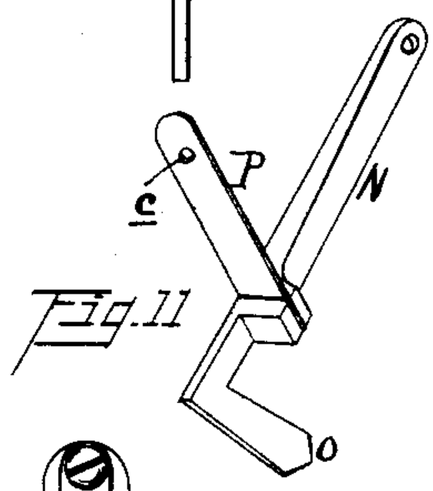

Fig. 11

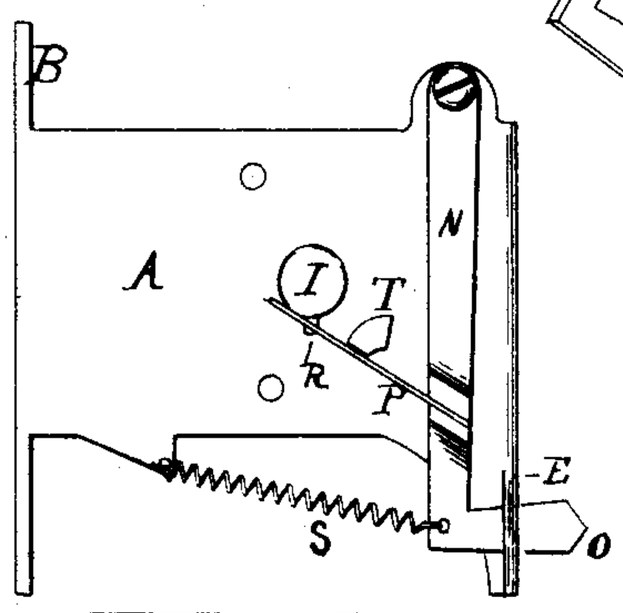

Fig. 3

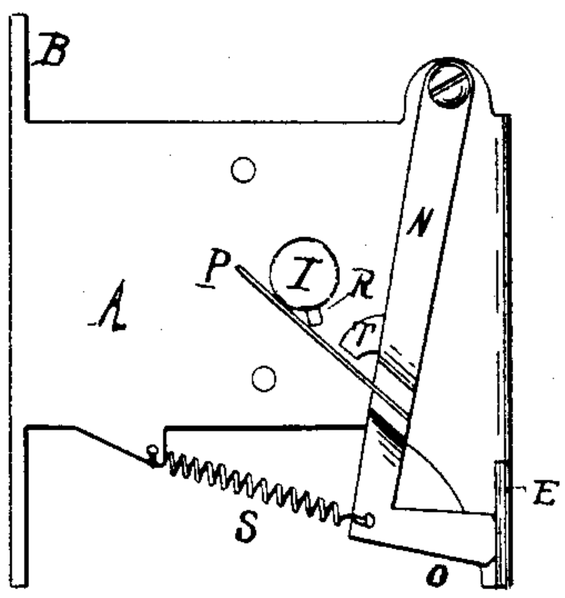

Fig. 4

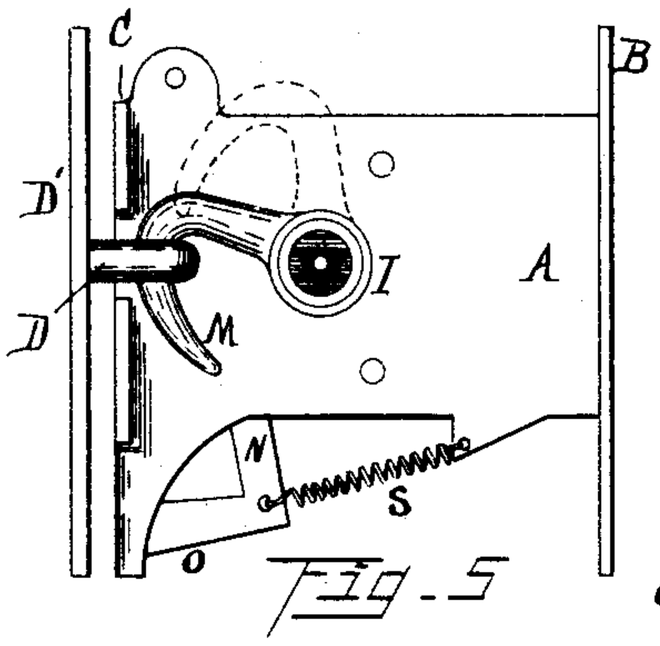

Fig. 5

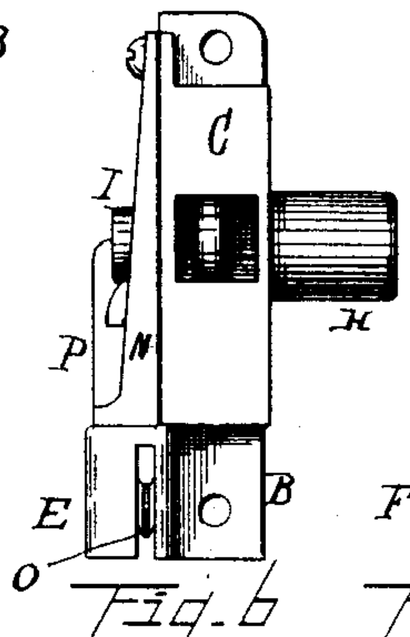

Fig. 6

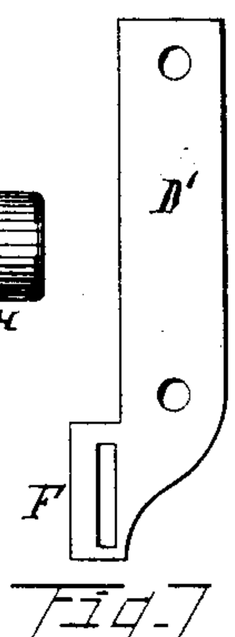

Fig. 7

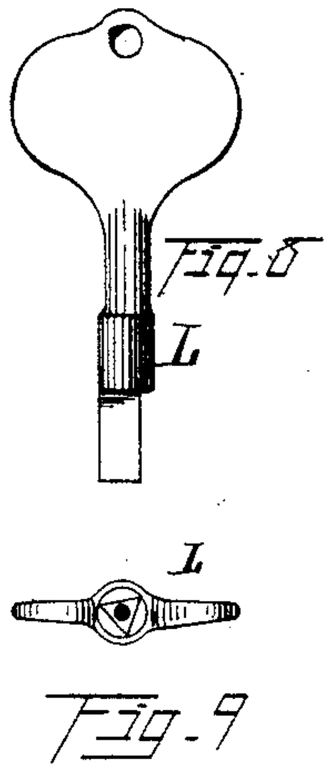

Fig. 8

Fig. 9

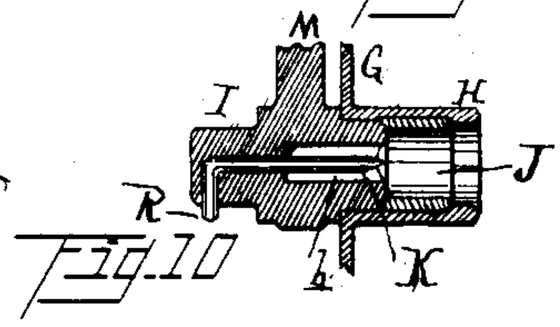

Fig. 10

Witnesses.
L. Griswold
H. P. Bailey

Inventor.
Isaac A. Hermann
By A. S. Sprague
Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C

No. 610,756. Patented Sept. 13, 1898.

I. A. HERMANN.

WATCHMAN'S TIME RECORDER

(Application filed May 1, 1897.)

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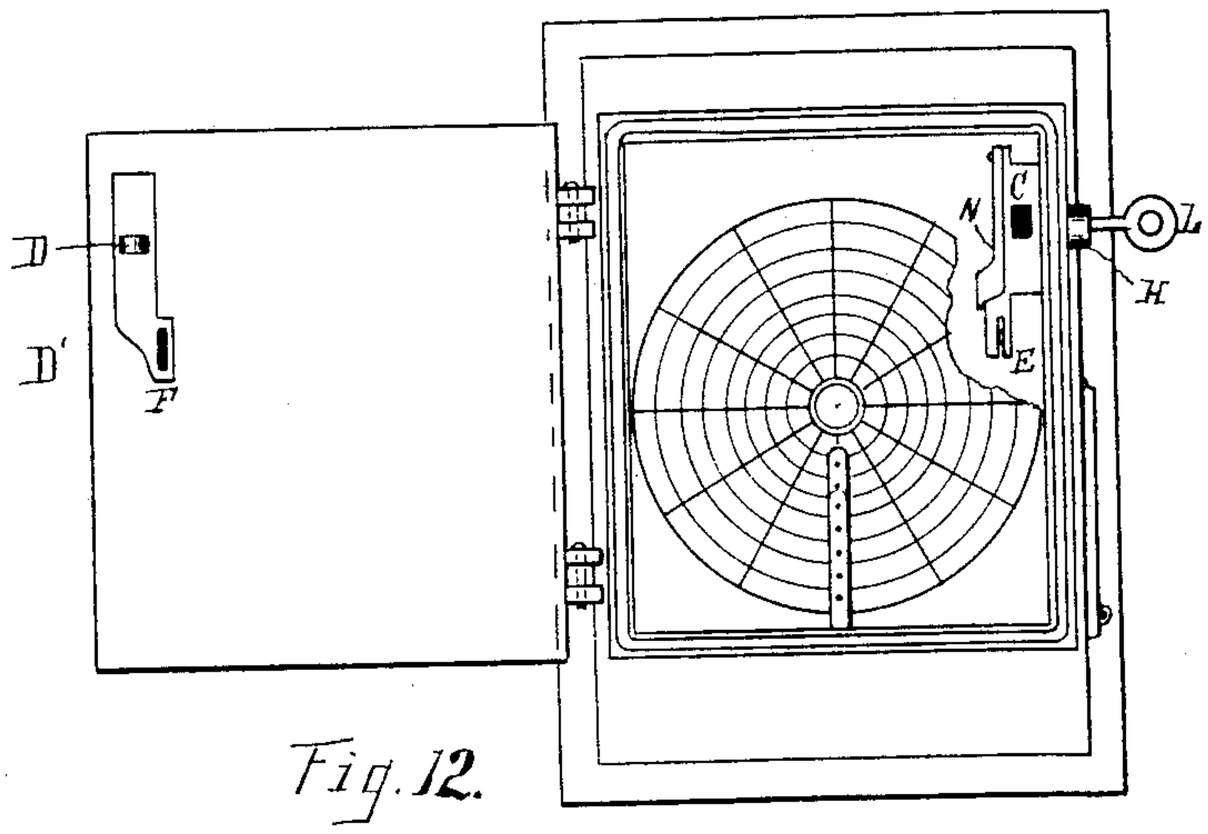

Fig. 12.

Attest:
Geo Glanfield
L A Stratton

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C

UNITED STATES PATENT OFFICE.

ISAAC A. HERMANN, OF CLEVELAND, OHIO.

WATCHMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 610,756, dated September 13, 1898.

Application filed May 1, 1897. Serial No. 634,666. (No model.)

To all whom it may concern:

Be it known that I, ISAAC A. HERMANN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Watchmen's Time-Recorders, of which the following, with the accompanying drawings, is a specification.

This invention relates to certain new and useful improvements in the construction of locks; and it has special relation to that class of locks employed upon so-called "time-detectors."

The invention has for its oject the construction of a simple but effective lock which in its use will project a lance for perforating the dial of the detector every time the lock is unlocked, but which may be locked without actuating the lance.

It is a well-known fact that in the majority of detectors a dishonest watchman can lock the device and puncture and change the dial so as to have it appear that he has regularly made his rounds, as there are no provisions made for detecting as to whether the device has been tampered with or not. This present invention is for the purpose of overcoming this objection; and the invention consists in the novel features of construction and in the combinations of the various parts, all as more fully hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is an elevation of the front or outer face of my improved lock. Fig. 2 is a similar view of the inner face, and in both these figures the parts are shown as in their locked positions. Fig. 3 is a similar view showing the lance projected as in the act of unlocking. Fig. 4 is a like view showing position of tumbler-shaft in its unlocked position and the lance retracted. Fig. 5 is a side elevation with the cap removed, showing the bolt in engagement with the staple. Fig. 6 is an edge elevation of the lock. Fig. 7 is a plan of the hasp or staple-plate. Fig. 8 is an elevation of the key. Fig. 9 is an end elevation of the same. Fig. 10 is a longitudinal section through the tumbler-shaft and key-barrel. Fig. 11 is a perspective of the lance detached. Fig. 12, Sheet 2, is a front elevation of a time-detector with the door open and dial partially broken away, showing my improved lock in position within the case.

Similar letters of reference denote like parts in the several figures.

A represents a lock-plate provided with the flange B, by means of which it may be secured in place and, with the rim-flange C, designed to receive the staple D of the plate D′, which latter is designed to be secured to the door.

E is a slotted flange projecting inwardly from the plate A at one end of the flange C, and the plate D′ is provided with a slotted offset F, which when the door is closed should come coincident with the slotted flange E. This lock should be so placed within the detector-box that the edge of the paper dial would lie between the flange E and the offset F.

G is a cap provided with the key-barrel H and is designed to be secured to the plate A by the screws *a*.

I represents a tumbler-shaft, the inner end of which projects through the plate A, while its opposite end projects into the key-barrel H, there being a loose ring J between such tumbler-shaft and the outer end of the key-barrel, as clearly shown in Fig. 10. The outer end of the tumbler-shaft I is provided with an axial triangular key-socket *b*, in the center of which is rigidly secured a pin K. The key L is constructed so as to engage such socket and pin when it is inserted through the barrel, so as to partially rotate the tumbler-shaft.

M is a hooked tumbler-bolt preferably cast integrally with the shaft.

To the inner face of the plate A is pivotally secured one end of an arm N, the opposite end of which terminates in a lance O.

P is a spring-arm projecting from the arm N, its free end being provided with an opening *c*, adapted to engage with a pin R, projecting from the tumbler-shaft I.

S is a coil-spring, one end of which is attached to the arm N, while its opposite end is secured to the plate A.

T is a stop for the lance-arm N.

The parts being constructed and assembled substantially in the manner shown and presuming the lock is secured in a detector-box with the edge of its dial lying over the

slotted flange E and the door locked the operation is as follows: So long as the door remains locked the lance is inactive; but should the watchman insert a key so as to unlock the door, in the partial rotation of the tumbler-shaft for that purpose the pin R, being in engagement with the spring-arm P, necessarily pushes the lance O from the position shown in Figs. 1 and 2 into the position shown in Fig. 3, thus causing the lance to perforate the edge of the dial. The door cannot be opened, however, until the tumbler-shaft has been still further turned into the position shown in Fig. 4. This movement releases the pin R from its engagement with the spring-arm N, at which time the coil-spring exerts its force, so as to return the lance to its normal and first position. After the door has been closed and again locked the pin R merely pushes the spring-arm N aside until it again engages with the opening in said arm.

It will readily be seen that at no time can the door be unlocked without a perforation being made in the paper dial even when opening for the purpose of putting in a new dial, and hence there is an effective telltale which will inform the one whose duty it is to change the dials as to whether the device has been tampered with. It will also be seen that a plug cannot be driven into the key-barrel for the purpose of turning the tumbler-shaft, as the loose ring would turn without operating the shaft or shooting the bolt.

What I claim as my invention is—

1. The combination, in a time-detector, of a box provided with a door carrying a staple D, and a slotted plate D′, a lock-case secured within the box, and provided with a partially-rotatable shaft I, carrying a locking hook or tumbler M, adapted to engage said staple D, a lance-arm N, pivotally secured to the lock-plate and provided with a spring-arm P, adapted to engage a pin R upon the inner end of the shaft I, and a coil-spring S for returning the lance-arm to its normal position, the parts being constructed, arranged and operating, in the manner and for the purpose, substantially as set forth.

2. In a lock of the character described, a partially-rotatable shaft I, a cap provided with a key-barrel H, and engaging the outer end of said shaft I, and a loose ring J, located within the barrel H, the parts being combined and operating substantially in the manner and for the purpose set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 29th day of April, 1897.

ISAAC A. HERMANN.

Witnesses:
H. S. SPRAGUE,
H. P. BAILEY.