

(No Model.)

H. A. CHASE.

SIGNAL BOX.

No. 363,948.

Patented May 31, 1887.

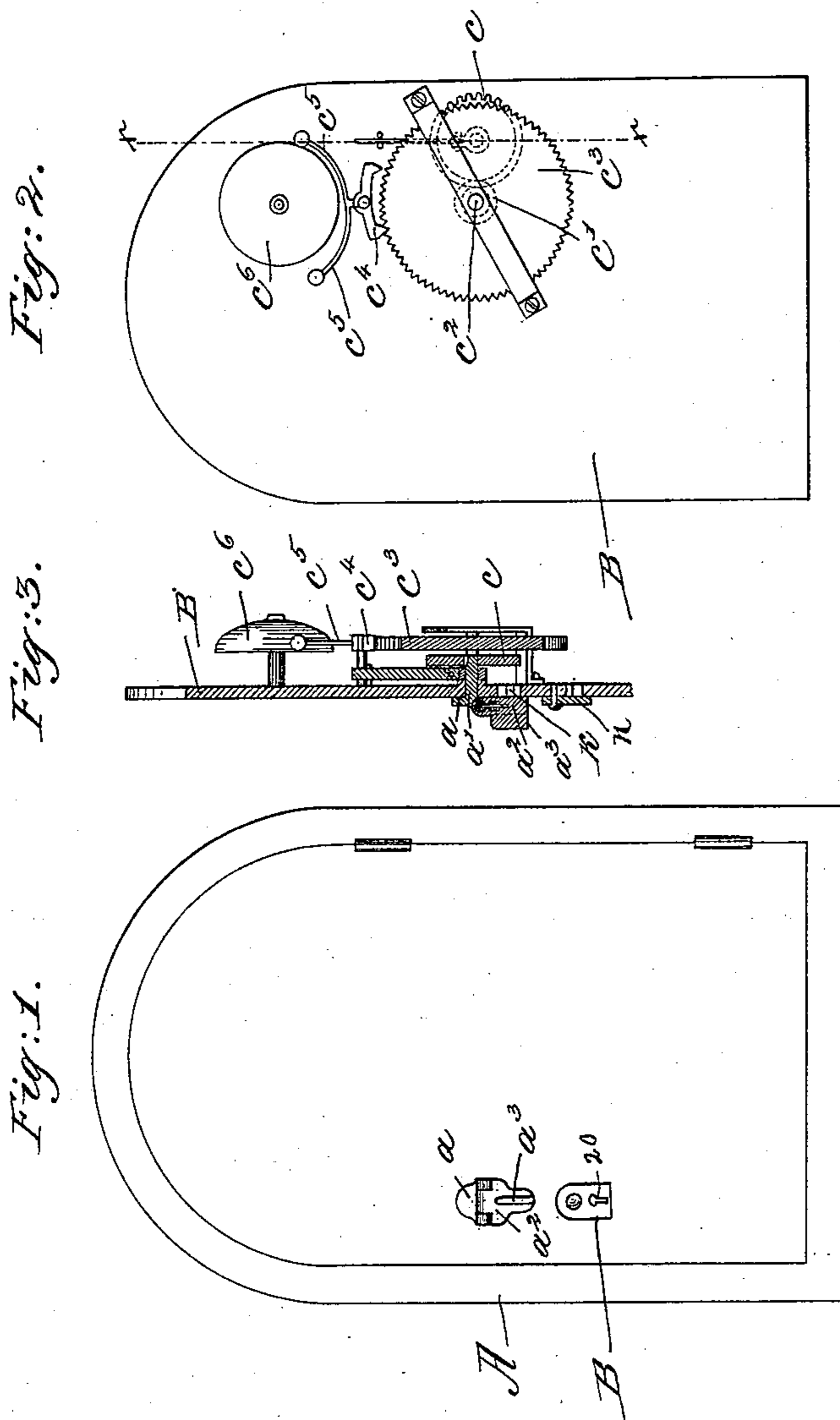


Fig. 2.

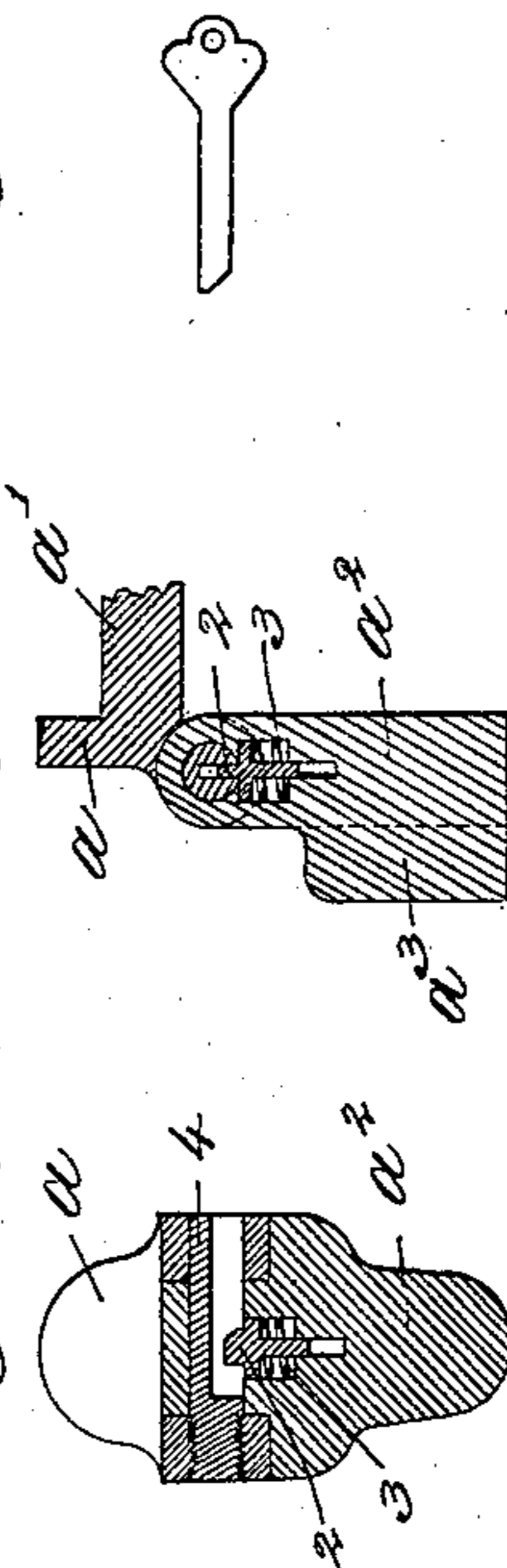
Fig. 3.

Fig. 1.

Fig. 6.

Fig. 5.

Fig. 4.



Witnesses.

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SIGNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 363,948, dated May 31, 1887.

Application filed August 31, 1886. Serial No. 212,316. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. CHASE, of Stoneham, county of Middlesex, and State of Massachusetts, have invented an Improvement in Signal-Boxes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Police and fire-alarm boxes now in common use are provided with a key-hole for the insertion of a key by which to open the box or to turn in a signal.

Police officers and others having keys to such boxes are subjected to annoyance by the plugging of the key-holes by malicious persons, bits of wood and other material being driven into the key-hole, which material has to be removed.

The door of the box herein shown is provided, as usual, with a key-hole for the reception of the key by which to unlock the door, or, if desired, to turn in a signal.

In accordance with this invention the door of the box is provided with an escutcheon guard or plate, which is pivoted to it to conceal the key-hole; but the escutcheon-plate may be turned aside on its pivot to expose the key-hole, such movement of the escutcheon on its pivot serving to actuate an alarm mechanism located within the box or at the rear side of the door.

The key-hole cannot be plugged until after the escutcheon has been turned aside, and, as the movement of the escutcheon actuates the alarm mechanism, the attention of a passer-by is now immediately called to the box, who may see the person at the box.

The escutcheon guard or plate is hinged at its upper end near its pivot, so that the lower portion may be upturned when desired to expose the key-hole, in order that a key may be inserted without the necessity of causing the alarm mechanism to respond.

A suitable locking device is provided, co-operating with a hinge of the escutcheon-guard to lock the same, and thereby prevent the lower portion thereafter being turned instead of when the said locking device is released.

In some instances the hinge of the escutcheon-guard may be omitted, in which case the only movement of the said escutcheon-guard is

on its pivot. By this movement the alarm apparatus will respond, and with such construction, should it be desired to open the door of the box or to turn in a signal without causing the alarm to respond, a second key-hole may be employed, which will preferably be provided with a pivoted escutcheon-guard similar to that last referred to, but having no connection with the alarm mechanism, so that should this second key-hole be plugged at any time the first key-hole, concealed by the escutcheon-guard connected with the alarm mechanism, is always accessible to the operator.

Figure 1 in front elevation shows a signal-box containing an escutcheon-guard embodying this invention; Fig. 2, a rear side view of the door, showing the alarm mechanism; Fig. 3, a vertical section of Fig. 2, taken on the dotted line $x x$; Figs. 4 and 5, enlarged sectional details of the escutcheon-guard, and Fig. 6 a side view of a key such as may be employed for releasing the locking device controlling the movement of the hinge of the escutcheon-guard.

The box or case A and door B are of any usual or suitable construction. The door B is provided with a key-hole, k , through which any suitable key may be inserted, either to unlock the door or to turn in a signal.

An escutcheon guard or plate is herein shown as composed of a head, a , provided with a shaft or hub, a' , having its bearings in the door or face B of the box and of a drop or shield, a^2 , hinged to said head a .

The escutcheon-guard as a whole may be turned on its pivot or hub a' in one or the other direction to expose the key-hole k ; or the drop or shield a^2 may be upturned when desired to expose the key-hole k without the necessity of turning the escutcheon-guard on its pivot a' .

The drop or shield a^2 is provided with a latch or dog, 2, which enters and is normally retained by a spring, 3, in a slot cut in the under side of the pintle and of the hinge connecting the drop or shield a^2 with the head a , the said latch or dog serving as a locking device to prevent the drop or shield a^2 from being upturned; but the drop or shield may be released and upturned by the insertion of a suitable key, such as shown in Fig. 6, in a slot

cut in the pintle, the end of the said key striking the beveled face of the latch or dog and depressing it.

The face of the drop or shield a^2 is provided with a web or rib, a^3 , by which it may be turned or elevated.

The arbor or shaft a' of the head a of the escutcheon-guard controls the operation of an alarm mechanism located either within the box or upon the rear side of the door, such alarm mechanism in this instance being located upon the rear side of the door, and consisting of a toothed wheel, c , secured to the shaft or hub a' , and meshing with a pinion, c' , (see dotted lines, Fig. 2,) secured to an arbor, c^2 , having its bearings in the rear side of the door or face B.

An escapement-wheel, c^3 , is secured to the arbor c^2 , and a suitable pallet, c^4 , carrying either one or two bell-hammers, c^5 , is provided to co-operate with the said escapement-wheel, the said bell-hammers striking the bell or gong c^6 as the escapement-wheel is revolved. By this construction it will be seen that as the wheel c is turned in one or the other direction by the rotation of the shaft a' the gearing described will be operated to cause an alarm to be sounded; but should an authorized person desire to operate the box to transmit a signal and not sound the local alarm in the box the key will be first employed to draw back the latch or dog, so that the drop or shield may be upturned to uncover the key-hole.

The sounding of the alarm whenever the key-hole is exposed by persons not provided with keys for such purpose deters malicious persons from plugging the key-hole, for the sounding of the alarm tends to call the attention of passers-by and also of an officer, should one happen to be in the vicinity of the box.

Instead of the exact mechanism shown and described for moving the bell-hammers, I may employ any other usual motor set in operation by turning the escutcheon guard or plate in one or the other direction, it only being necessary that such motor shall have some positive connection by which it may be released or set in operation by the movement of the escutcheon guard or plate.

I do not desire to limit my invention to the employment of the hinged drop or shield a^2 , for the escutcheon guard or plate may be made without a joint, it operating the alarm mechanism whenever turned to expose the key-hole.

In case the escutcheon-plate should be made in one piece or capable of but one movement—viz., about the pivot a' —to expose the key-hole, a second key-hole, 20, may be employed, (see Fig. 1,) which preferably will be pro-

vided with an escutcheon-guard, n , similar to that described, but having no connection with an alarm mechanism, so that the door of the box may be opened silently at any desired time, or a signal transmitted by the employment of the second key-hole, and should the same at any time be plugged by malicious persons the first key-hole concealed by the escutcheon-plate connected with the alarm mechanism will be at all times accessible.

It is obvious that, instead of employing a hinge constructed as herein described and having a locking device, as shown, any other hinge capable of being locked in fixed position may be employed.

I claim—

1. A signal-box having a key-hole and a pivoted escutcheon guard or plate concealing the said key-hole, combined with a toothed wheel joined with and moved simultaneously with the escutcheon-plate, and the alarm mechanism operated by the said toothed wheel when the latter is moved to expose the key-hole, substantially as described.

2. A signal-box having a key-hole and an escutcheon guard or plate concealing the said key-hole, the said guard or plate being composed of a pivoted head and drop or shield, combined with an alarm mechanism operated by the escutcheon guard or plate when moved on its pivot to expose the key-hole, but the said alarm mechanism remaining silent when only the drop or shield is moved with relation to the said head, substantially as described.

3. A signal-box having a key-hole, and an escutcheon-plate composed of a pivoted head, and a drop or shield pivoted to the said head, and a locking device to lock the said drop or shield to the said head, combined with an alarm mechanism operated by the movement of the said head to uncover the said key-hole, substantially as described.

4. A signal-box having the key-hole and pivoted escutcheon guard or plate concealing the said key-hole, an alarm mechanism operated by the escutcheon-plate when the latter is moved to expose the key-hole, and signaling mechanism set in operation by a key passed through the key-hole, combined with a second key-hole, through which the key may be passed to operate the signaling mechanism contained within the box without operating the alarm, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY A. CHASE.

Witnesses:

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