

(No Model.)

J. C. WILSON.

SIGNAL BOX FOR FIRE TELEGRAPH AND OTHER CIRCUITS.

No. 344,430.

Patented June 29, 1886.

Fig. 1.

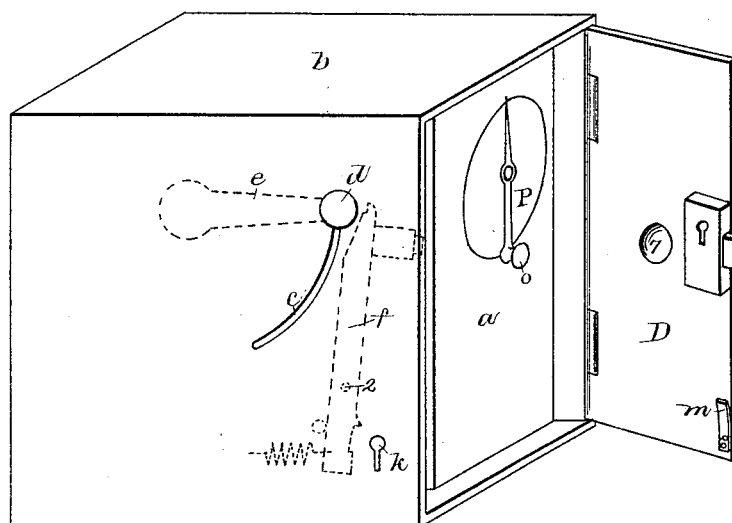
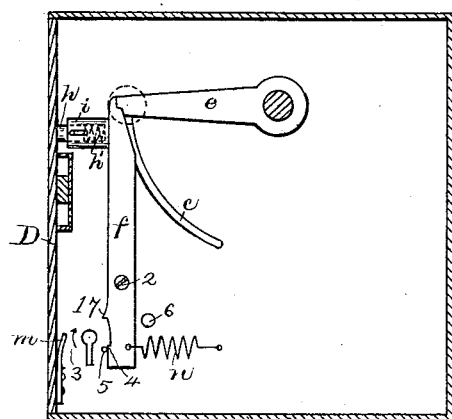


Fig. 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## SIGNAL-BOX FOR FIRE-TELEGRAPH AND OTHER CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 344,430, dated June 29, 1886.

Application filed April 23, 1883. Serial No. 92,633. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN CORNELIUS WILSON, of Boston, county of Suffolk, 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.

My invention relating to a signal-box, such as employed for fire-alarm and police-district systems, has for its object to prevent tampering with the boxes by unauthorized persons; and it consists, mainly, in the combination, with the starting-lever of the motor adapted to be operated from the outside of an inclosing-case for the said motor, of a locking device for the said lever, adapted to be disengaged therefrom by a suitable key, and means to retain the said key when inserted for the purpose of releasing the lever, so that it cannot subsequently be removed without opening the inclosing-case or outer box for the motor, which is itself provided with a lock of any usual construction. The door of the box co-operates with the locking device for the starting-lever, holding it in operative position while the said door is closed, and when the said door is opened the said locking device is disengaged from the starting-lever, so that it may operate freely. The inclosing case or box is shown in this instance as used in connection with a multiple-signal apparatus invented by me and forming the subject of another application for Letters Patent, the said apparatus having a dial and pointer by which a signal-controlling device may be placed in proper position to give any desired signal, it being normally held in one particular position when the outer box forming the subject of the present invention is closed, so that a person provided with a key for unlocking the starting-lever may send the signal for which the pointer is thus set, but cannot send the other signals, which can only be sent when the door of the box is opened by a person having a key that will operate to unlock the said door. Thus in a police system the citizens will be provided with keys for releasing the starting-lever, and thus sending the normal signal and number of the box or station, and the said key will be retained in the box, so as to indicate who operated it,

and can be released only when a policeman or other authorized person having a key to the door of the box arrives and opens the box, the said person then being able to move the pointer, and thus send any of the signals that the box is capable of producing.

Figure 1 is a perspective view of a signal-box embodying this invention, the door being shown as open; and Fig. 2, a vertical section thereof showing the locking device for the starting-lever in position to lock the said lever, the door of the box being closed.

The signaling mechanism *a*, or motor for operating a break-wheel and connected parts, is inclosed in a strong metal case or outer box, *b*, having in one side a curved slot, *c*, through which is extended the knob or handle *d* for the operating-lever, by which the mechanism *d* is set in motion to send its signal, the said lever *e* releasing or winding the mainspring of the mechanical motor, carrying the break-wheel in any usual manner. In order to start the motor, the said lever, with its knob, is to be pulled downward to the end of the slot *c* and then released, when it will return under the action of the mainspring of the motor to the position with the knob at top of the slot *c*, as shown in the drawings. This downward movement of the knob *d* is normally resisted by a locking device, shown as a lever, *f*, pivoted at 2 upon the inside of the box *b*, it being shown as provided at its upper end with a yielding projection, *h*, longitudinally movable in a short tube, *i*, attached to the said locking-lever, the said projection or bolt *h* being pressed outward by a spring, *h'*, inclosed in the said tube *i*, and being engaged by the door *D* of the box when closed, as shown in Fig. 2, and thus holding the end of the locking-lever *f* in engagement with the starting-lever *e*, and thus preventing the latter from being moved. When, however, it is desired to start the motor so as to send a signal, the locking device *f* may be disengaged from the lever *e* by means of a key inserted through the key-hole *k*, the said key being rotated in the direction of the arrow 3, Fig. 2, and the end of the said key striking the lower end of the lever *f* and turning it on its pivot 2, so as to disengage its upper end from the end of the starting-lever *e*, the spring *h'* then yielding, and the projection

5 *h* entering the tube *i* as the said lever *f* is thus turned. A suitable shoulder, 4, on the lever *f*, and preferably also a stop-pin, 5, on the side of the case, prevents the further movement of the key in the direction of the arrow, and a yielding projection or spring-pawl, *m*, attached to the door *D*, prevents the key from being turned back sufficiently to enable it to be removed from the key-hole, so that when the key has once been inserted and turned to release the starting-lever *e* the said key cannot be removed so long as the door *D* of the box remains closed, and is thus retained to indicate the party who operated the signal. When, however, the door *D* is opened, the stop *m* or locking device for the key is removed from the path of the key, so that the latter can be turned back and removed from the key-hole, and at the same time the projection *h* at the upper end of the lever *f* is disengaged, permitting the said lever to turn freely in the direction to release the starting-lever *e*, it being moved by a light spring, *n*, not sufficient to overcome the spring *h'* when the door is closed. A stop, 6, limits the movement of the lever *f* under the action of the spring *n*, while the stop 5 for the key also serves to limit the movement of the lever *f* toward the lever *e* when not in engagement therewith.

The inner box, *a*, containing the signaling mechanism, is shown as provided with a pointer, *P*, operated by a knob, *o*, the movement of the said pointer controlling a series of different signaling-surfaces, as described in another application filed by me for a multiple signal-box, so that when the door *D* is opened the said pointer may be turned in order to send in any desired one of a large number of different signals in addition to the signal indicating the number of the box when the lever *e* is operated by the knob *d*, the said lever being free to move when the door *D* is open.

It is not intended that the persons operating the lever *e* when the door *D* is closed shall be permitted to send in the different signals controlled by the pointer *P*, and in order to prevent the wrong signal from being sent when the door is closed the knob *o* of the said pointer is shown as projecting so far as to prevent the door *D* from being closed, except when the said knob and pointer are in one normal position, the door *D* being provided with a recess, 7, to receive the knob when in the said normal position.

The lever *f* may be provided with one or more teeth or projections, 17, to prevent the key from being turned back and withdrawn after it has been turned to unlock the lever *e*. The knob *d* may have a curved guard to cover the slot *c*.

I claim—

1. In a signal apparatus, the combination of the outer box and starting-lever adapted to be operated from the outside of the box with a locking device for the said starting-lever adapted to be operated to unlock the lever by a key inserted from the outside of the box, substantially as described.

2. The box and starting-lever adapted to be operated from the outside of the box, combined with the locking device for the said lever, adapted to be operated by a key inserted from the outside of the box, and the stops preventing the withdrawal of the key, substantially as and for the purpose described.

3. The box and its movable door, combined with the starting-lever and locking device therefor, adapted to be operated by a key from the outside of the box, the said door co-operating with the locking device and key, substantially as described.

4. The box having a movable door and the starting-lever, combined with the locking-lever *f* and yielding projection *h* thereon, substantially as described.

5. The box and its movable door provided with the yielding key engaging projection *m*, combined with the starting-lever and its locking device, said locking device being disengaged by a key from the outside of the box, substantially as described.

6. A signal-box having a movable door and transmitting mechanism, the operation of which is controlled by a key inserted from the outside of the box while the door is closed, and a locking device for the said key operated by the movement of the door preventing the withdrawal of the key when the door is closed and releasing or unlocking said key when the door is open, substantially as described.

7. A signal-box, a door to close the same, and a multiple signal-transmitter having a movable pointer and a co-operating dial normally concealed by the door, the pointer being normally set to cause the transmitter to send a predetermined signal, but accessible when the door is opened to be turned to enable other besides the predetermined signal to be sent, combined with a motor mechanism to operate the said signal-transmitter and send the signal normally set by the pointer while the said signal-transmitter remains unexposed, and to send other signals when the signal-transmitter is exposed and its condition changed, substantially as described.

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

JOHN CORNELIUS WILSON.

Witnesses:

JOS. P. LIVERMORE,

W. H. SIGSTON.