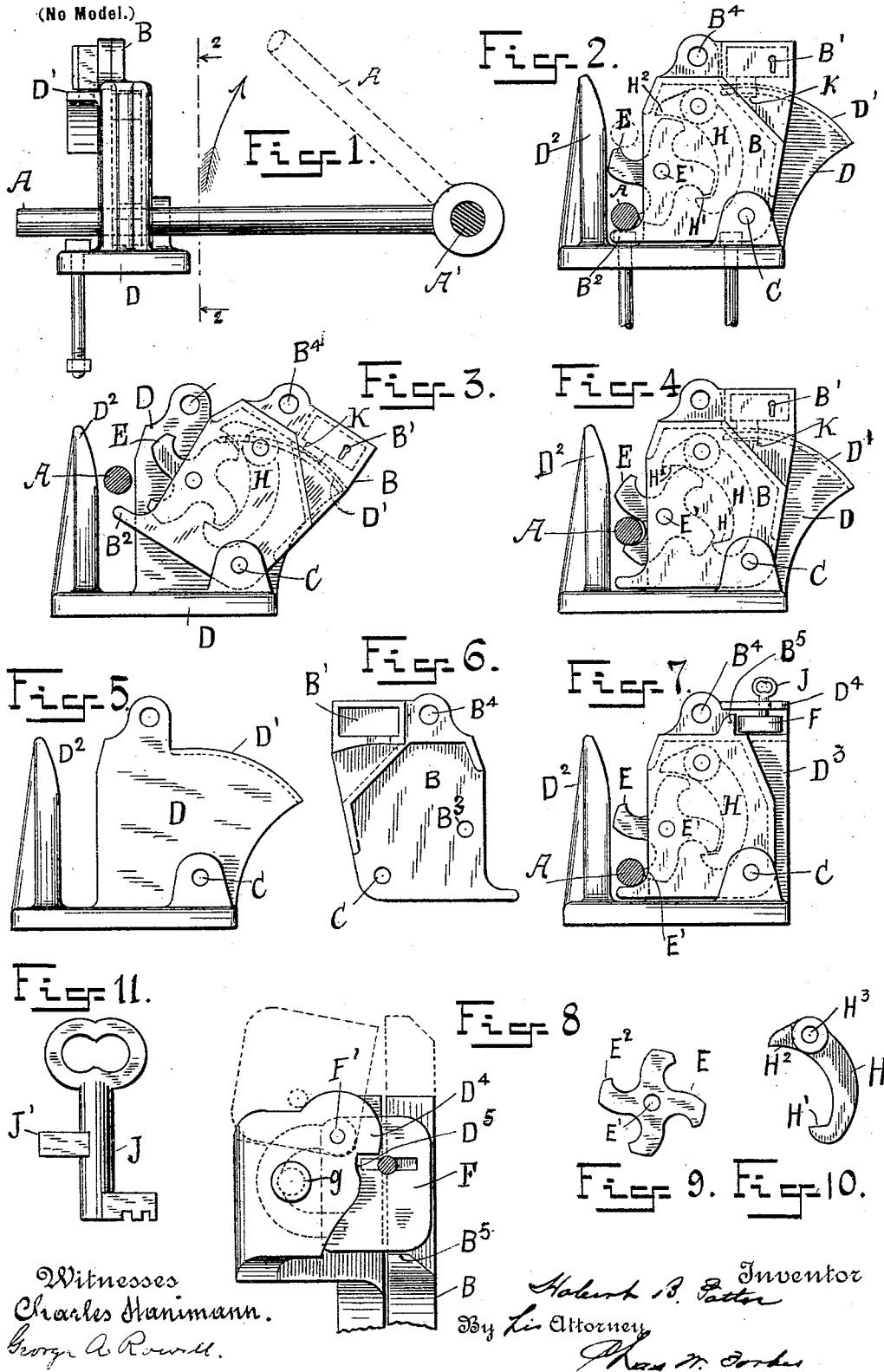


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LOCKING MECHANISM FOR SWITCH AND SIGNAL MECHANISM.

(Application filed Apr. 24, 1899.)



UNITED STATES PATENT OFFICE.

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LOCKING MECHANISM FOR SWITCH AND SIGNAL MECHANISM.

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Application filed April 24, 1899. Serial No. 714,292. (No model.)

To all whom it may concern:

Be it known that I, HOBERT B. POTTER, a citizen of the United States, residing at East Orange, in the county of Essex and State of

5 New Jersey, have invented certain new and useful Improvements in Locking Mechanism for Switch and Signal Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to means for securing the actuating-lever of a switch or signal device by a locking mechanism which may be in either an open or locked position to receive the actuating-lever and whereby the

15 lever may be quickly closed and automatically secured.

In order that others may understand and use my invention, I will first proceed to describe the means embodying the same, and subsequently will point out in the claims its novel characteristics, reference being had to the accompanying drawings, forming part of this specification, in which the several figures represent different views showing the parts

20 in their various relative positions in operation and also in detached construction, all as hereinafter particularly described.

A represents the actuating-lever, applicable to any switch or signal device, pivoted at

30 A and engaging with a fixed housing D D², its movement and position being indicated by the arrow and full dotted lines, Figure 1. Fig. 2 is a sectional side view on the line 2 2, Fig. 1, showing, as in the latter figure, the

35 actuating-lever A in its closed or locked position. Fig. 3 is a side view showing the lever and locking mechanism released; Fig. 4, the position of the parts when automatically operated. Figs. 5 and 6 are opposite side views

40 of the casing of the locking mechanism; Fig. 7, a side view similar to Fig. 2, showing the adaptation of an ordinary padlock to secure the parts; Fig. 8, a top or plan view of Fig. 7; Figs. 9 and 10, detached views of the rotating latch and locking-pawl, and Fig. 11 the

45 operator's key.

As shown in Figs. 1 and 2 the parts are in locked position, and in order to change the switch or signal the casing B is unlocked by

50 the key J and swung backward on its pin C to

the position shown in Fig. 3, which carries the latch E clear of the line of movement of the lever A. If the lever A is returned to its normal position with the casing thrown backward, as shown, its downward stroke or

55 movement contacts with the projecting toe B² of the casing, which forces the latter and its mechanism into position to be secured, as shown in Fig. 7.

The stationary lock B' or padlock F may be of any approved design. When the former is used, the bar K of the lock is not allowed to enter the flange D' until the casing and its contents are in closed position. The lock is so constructed that its bolt may be

65 released from the flange by a partial turn of the key, so that when the casing is thrown back the key must remain therein until it is returned to its normal position.

When it is desirable to close and lock the lever A with the least possible delay, the casing and its mechanism may first be closed and locked and the key removed. In this instance the downward stroke of the lever will operate the latch E automatically. As shown

75 in Fig. 4, the engagement of the lever with the latch causes the latter to rotate and its adjacent arm strikes the point H' of the pawl H, and by a continued movement after the latch has passed the point H' its preceding

80 arm encounters the head H² of the pawl, which swings the point H' of the pawl forward, so that it engages and holds the latch in locking position, as shown in Figs. 2 and 7, and resists any reverse movement of the latch

85 or lifting movement of the lever A.

In Figs. 7 and 8 a modified construction is shown to adapt an ordinary padlock to the casing, the casing being open at the side and permitting the lock to swing laterally on its

90 bail-pin F', the lock-bail when secured being in engagement with a pin or rivet g, as shown in Fig. 8. In this position any backward movement of the casing is prevented by the contact of the lug B⁵ thereon and the padlock,

95 and when the lock is opened by its key J it is swung out of the path of the movement of the casing. This lock should also be designed to allow only a partial turn of the key to release it and the relative position of its lug J'

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and the flange D⁴ so adjusted as to retain the key inserted and capable of removal only when the lock is in the closed position, (shown in Figs. 7 and 8,) so that there is no possibility of leaving the device unlocked when the operator removes the key.

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

1. The combination with the actuating-lever of a switch or signal device of a locking mechanism consisting of a swinging casing and a rotating latch, whereby the actuating-lever may be quickly closed and secured in either an open or locked position of the locking mechanism.

2. In combination with the actuating-lever of a switch or signal, a locking mechanism composed of a swinging pivoted casing, containing a rotating latch engaging with the actuating-lever, and a pivoted pawl engaging with the rotating latch, whereby the actuating-lever is released by the backward movement of the swinging casing and secured with the return movement of the casing, or automatically when the casing is locked, substantially as described.

3. In combination with the actuating-lever of a switch or signal, a locking mechanism composed of a swinging casing containing a rotating projecting latch engaging with the actuating-lever, and free to rotate only in the direction of the closing movement of the lever, whereby the lever may be automatically secured when the swinging casing is locked, substantially as described.

4. In combination with the actuating-lever of a switch or signal, a housing composed of a swinging casing and a standard forming a recess to receive the lever, a rotating latch having a series of arms pivoted to the casing and rotating within the path of the closing movement of the lever, and a pawl pivoted within the casing and engaging with said latch to prevent its backward movement, the swinging casing having a lock attachment for securing it in a closed position, as set forth.

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

HOBERT B. POTTER.

Witnesses:

CHAS. W. FORBES,
BENJAMIN C. VAN COTT.