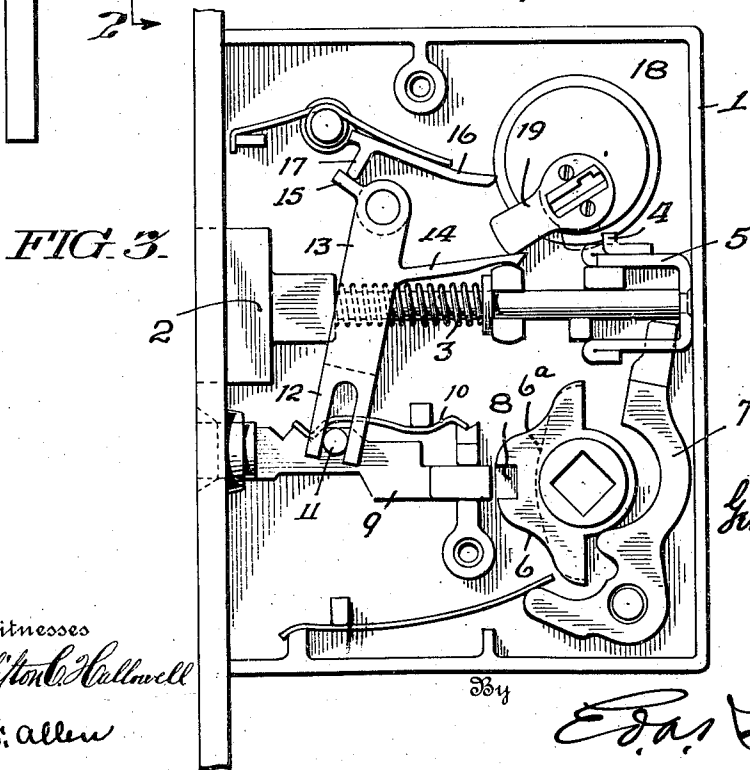
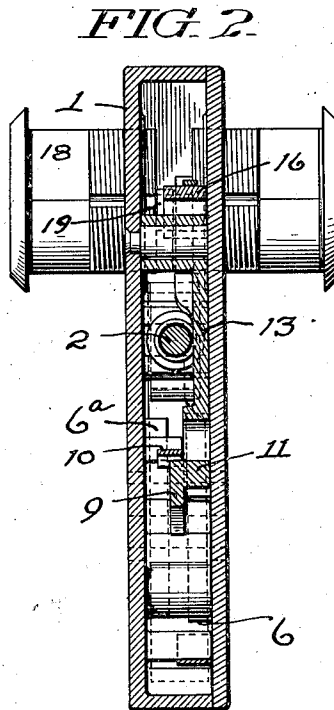
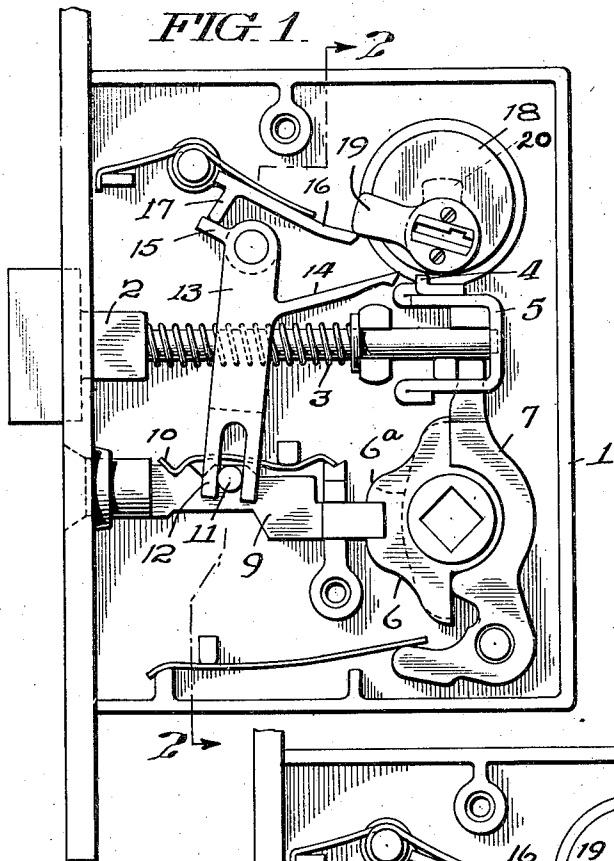


G. N. MASON.
 VESTIBULE LATCH.
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1,062,176.

Patented May 20, 1913.



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VESTIBULE-LATCH.

1,062,176.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed September 5, 1912. Serial No. 718,648.

To all whom it may concern:

Be it known that I, GEORGE N. MASON, citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Vestibule-Latches, of which the following is a specification.

This invention relates to improvements in latches of the character known as vestibule latches and the object in the present invention is to provide a device in which the latch is operable from either side by the knob spindle and only from the outside by means of a key cylinder and in which the outside knob action is locked from the inside through a key cylinder.

The invention consists of a slide adapted to engage the outside operating hub and lock it against turning, which slide is actuated through the medium of a lever which is in turn actuated in either direction by the inside key operating means.

The invention is more fully described in the following specification and clearly illustrated in the accompanying drawing, in which:—

Figure 1 is an elevation of my lock with the back plate of the casing removed and showing the outside knob operating means locked against turning. Fig. 2 is a sectional view through 2—2 of Fig. 1. Fig. 3 is a view similar to Fig. 1, but with the latch retracted and the outside knob operating means free to turn.

The numeral 1 designates the casing and 2 the latch bolt which is provided with a spring 3 to keep it normally in projected position. The bolt has a yoke 5 at its rear end and is formed with a boss 4 at its upper side for engagement by the cam 20 on the outside key cylinder (not shown).

The spindle hub is in two parts, 6 designating the outside and 6* the inside hub member.

7 designates a pivoted lever the free end of which engages the yoke 5 on the latch bolt. Fig. 3 shows this lever holding the latch bolt in retracted position but with the hubs in normal position.

The hub member 6 is formed with a slot 8 on its face in horizontal alinement with and adapted to be engaged by the end of a slide 9. The slide is provided with a spring 10 to keep it in either forward or locked

position. The slide carries a pin 11 on its face which is engaged by the bifurcated end 12 of an actuating lever 13. This lever 13 is pivoted at its upper end to the casing and is formed with a relatively long arm 14 at one side and with a relatively short arm 15 at the opposite side.

The numeral 16 designates a supplemental lever also pivoted in the casing and formed with a leg 17 adapted to engage the short arm 15.

18 designates the inside key cylinder and 19 the cam carried thereby. This cam is adapted to contact with both the lever 16 and the long arm 14 of the lever 13.

The action of the latch is as follows:—The position of the parts as shown in Fig. 1 indicate that the cam 19 has been turned until it has compressed or forced down the end of the lever 16, which, through contact of the leg 17 with the short arm 15 has turned the lever 13 on its pivot and forced the slide 9 into engagement with the slot 8 in the hub 6 thus locking the latch against movement by the outside knob. The continued movement of the cam 19 will cause it to contact with the long arm 14 (after it passes off of the end of the lever 16) and move the lever 13 in the opposite direction, which position is shown in Fig. 3, thus releasing the hub 6 by the withdrawal of the slide 9 from engagement therewith.

It is evident that with the parts in the position shown in Fig. 3, the latch may be retracted by either the inside or outside knob spindle, while in the position shown in Fig. 1 it would be operable by knob action only from the inside, the hub 6* being free to move and operate the lever 7. With the parts as shown in Fig. 1, however, the latch may be operated from the outside through the medium of the outside key cylinder, the cam on which will engage the boss 4 on the yoke 5 and retract the latch bolt. This outside cam is sufficiently shorter than the cam 19 to permit it to pass the ends of the lever 16 and arm 14.

It will be noted that both the locking and unlocking of the outside knob action is accomplished by considerably less than one complete revolution of the cam, and in the same direction.

I claim:—

1. In a latch the combination of a casing, with a latch bolt; inside and outside knob

operated means including a two-part hub for retracting the latch bolt; one part of which is formed with a lock engaging slot; a yoke on the inner end of the bolt; a boss on said yoke; outside key operated means for retracting the bolt by engaging said boss; a slide for locking the outside knob operated means; a lever in engagement with said slide; a long arm on one side and a short arm on the other side of said lever and means, operable from the inside only including a cam adapted to engage said long arm, for moving said slide out of engagement with the outside knob operated means.

2. In a latch the combination of a casing; a latch bolt; a yoke on the inner end of the bolt; a boss on the yoke; inside and outside knob operated means for retracting the latch bolt; outside key operated means including

a cam adapted to engage said boss, for retracting the latch bolt; a locking slide for the outside knob operated means; a pivoted lever in engagement with and adapted to move said slide into and out of engagement with the outside knob operated means; a supplemental lever adapted to move said pivoted lever in one direction, and a key operated cam adapted to move said lever in the opposite direction whereby the outside knob operated means are locked or unlocked by the locking slide.

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

GEORGE N. MASON.

Witnesses:

ED. A. KELLY,
CLARA E. YOUNG.