2 Sheets--Sheet 1.

J. M. ALDEN.

Improvement in Key-Hole Guards for Locks.

No. 124,874. Patented March 26, 1872.

Fig. 2.

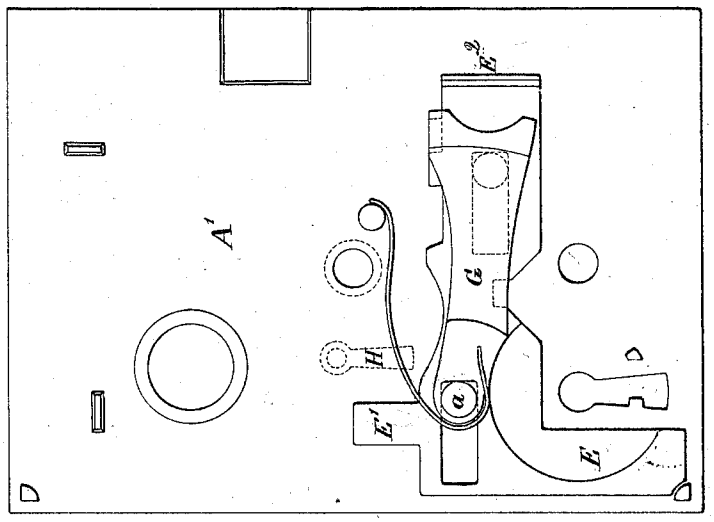
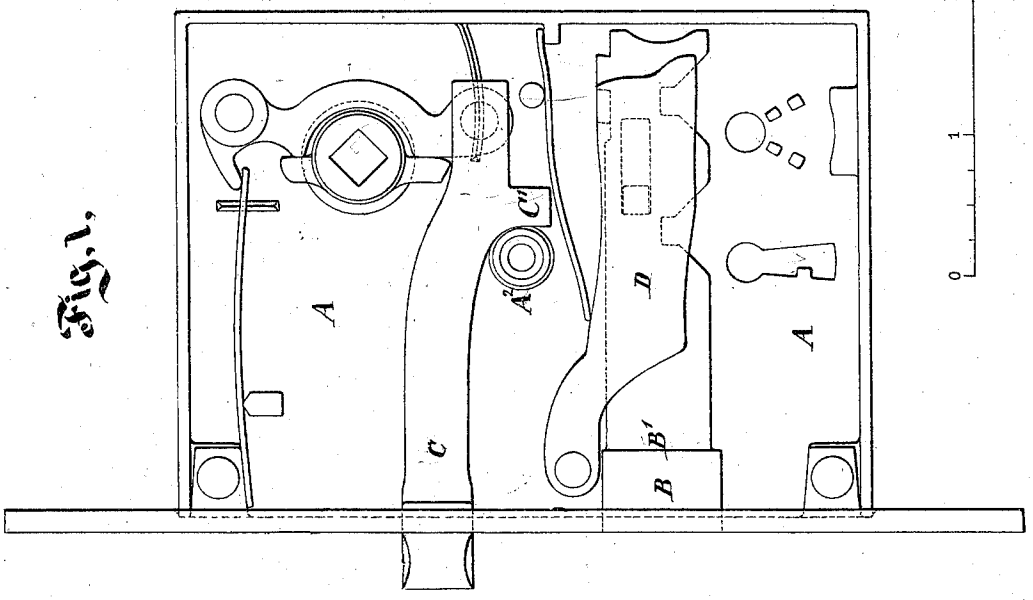


Fig. 1.



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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

2 Sheets—Sheet 2.

J. M. ALDEN.

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Fig. 3.

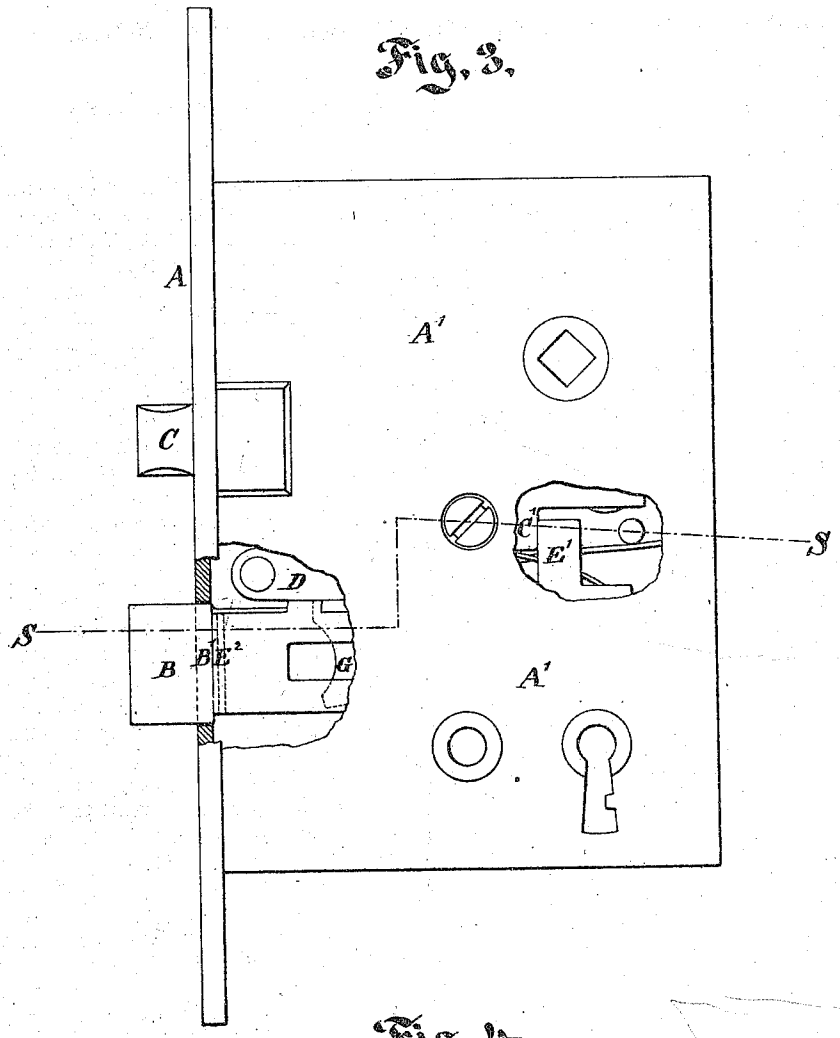
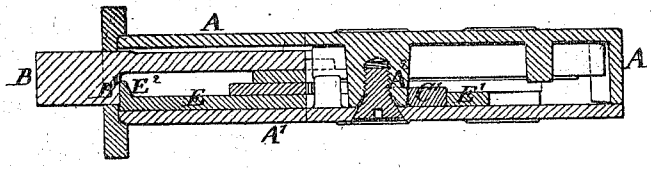


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES M. ALDEN, OF NEW ROCHELLE, NEW YORK.

IMPROVEMENT IN KEY-HOLE GUARDS FOR LOCKS.

Specification forming part of Letters Patent No. 124,874, dated March 26, 1872.

To all whom it may concern:

Be it known that I, JAMES M. ALDEN, of New Rochelle, in the county of Westchester, in the State of New York, have invented certain new and useful Improvements in Door-Locks, of which the following is a specification:

The invention relates to improvements upon the lock described in the patent of John R. Marston, dated June 15, 1858, in which there is a plate which covers the outside key-hole whenever the door is locked from the inside of the apartment or building. The improvements enable the lock to hold the door by both bolts —to wit, the main-lock bolt and the latch-bolt. They also cause the key-hole-cover plate to further increase the security of the lock by abutting against the main bolt, and aiding to resist any force tending to throw it back or withdraw it. I also provide for guarding the hole which admits the latch-key to operate the night-latch in front doors; and also for holding the parts of the lock better in position when the lock is taken apart to inspect or repair any portion.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawing forms a part of this specification.

Figure 1 is a view of the main body of the lock with the cap or back plate and its attachments removed. Fig. 2 is a face view of the back plate and its attachments. Both these figures show the lock in the unlocked condition. Fig. 3 is a view of the entire lock, with certain portions of the back plate broken away to show the interior. This shows the lock in the locked condition, as locked from the inside of the building or apartment. Fig. 4 is a plan view or rather a horizontal section on the line S S in Fig. 3.

Similar letters of reference indicate corresponding parts in all the figures.

The scale is full size.

A is the main casing, and A^1 the cap or back plate fitted thereto and serving therewith in the usual manner. B is the main bolt, and C is the latch-bolt. The several portions of these, which are important to be referred to, are marked A^2 B′ C′.

The latch-bolt C is operated by the knob and a spring in the ordinary manner. The peculiarities in the construction and operation of the latch-bolt lie in these two points—that it is provided with a projection, C′, reaching downward toward the main bolt B; and that it is so proportioned as to bear against the central boss A^2 when in its extreme outward position, so that it will remain in that position without allowing the parts to be disturbed by the action of the spring when the back plate A^1 and its attachments are removed from the lock.

D is the ordinary tumbler, which holds the main bolt B by the ordinary means in its locked or unlocked position. E is the covering-plate, which performs all the functions of the corresponding part in the Marston patent referred to, and is held in place, in the locked or unlocked position, by the tumbler G. I have adapted the covering-plate E to fulfil two additional functions by providing it with the arm E^1, which projects upward and engages with the arm C′ on the latch-bolt, and by elongating and adapting the end, by a flange, E^2, to abut against a shoulder, B′, on the main bolt B, which shoulder is made square to receive it, thereby aiding to maintain, against any violence, the locked position of the bolt.

It may be proper to explain briefly that the covering-plate E in the Marston lock and in this lock moves forward with the main bolt B and covers the outside key-hole whenever the lock is operated from the inside of the apartment; but, whenever the lock is operated from the outside of the apartment, the covering-plate E and its adjuncts remain inoperative. The peculiar effects of my lock are all available only when the lock is locked from the inside of the building or room.

The construction of the covering-plate to perform the additional duties required in my invention involves no peculiar difficulties. I prefer to make the covering-plate somewhat thicker and stronger than has been heretofore usual in the Marston lock, so that its arm E^1, engaging with the arm C′ of the latch-bolt, shall hold the latch-bolt C very strongly in the locked position, giving the door all the security due both to the main bolt B and the latch-bolt C. I elongate and thicken the end E^2 of the covering-plate E where it abuts against the shoulder B′ of the main bolt B, so that it has a broad and firm bearing. It may be proper to remark that the post *a*, usually a boss formed upon the inner face of the back plate

A^1 to carry the tumbler G which holds the covering-plate, should be made strong, and the parts should be well fitted thereto.

The function of the arm C′, by bearing with its front edge against the boss A^2 in the center of the frame-work, will be very readily understood, and the proper conformation and adaptation of the parts will involve little difficulty. Room must be left to allow the spring to throw the latch-bolt out to its full extent and no more. Immediately on reaching its full throw the front of the arm C′ should bear against the boss A^2. This is most easily accomplished by making the arm C′ a little too wide and milling or filing away a little on each lock to bring it just right.

In those locks which are provided with night-latches I make the arm E^1 of the covering-plate E of such width that it will cover the hole for the night-key at the same time that it covers and guards the hole for the main key. The position of the night-latch key-hole, to serve with only the width of the arm E^1, here shown, is indicated in dotted lines in Fig. 2, and marked H.

It will be understood that the flange E^2 on the covering-plate E may be either cast thereon, or soldered, or fastened by rivets, or otherwise secured. Its function is to set up against the shoulder B′ on the bolt B, securely holding it in its place, and necessitating the forcing back of the covering-plate or slide E before the bolt of the lock can be pushed or thrown back. The flange may be the whole width of the bolt or only a portion of the width.

The improvements do not detract at all from the full performance of all the functions of the Marston lock. They add but very little to the expense of the construction. There is not a single new part required. But they impart very important new qualities to the lock.

It will be observed that my lock only engages the bolts together when locked from the inside, and leaves bolt-catch unaffected when locked from the outside. This makes it easy for a servant or other person to ascertain by trying the knob whether the door has been locked from the outside or inside, and thus to determine whether the occupant is within and should not be disturbed, or has gone out leaving the room free to be entered by the master key and set to rights.

The pivot of the tumbler G, which guards the covering-plate E, being on the cap A^1 entirely independent of the ordinary locking parts, enables it, by the abutting of the plate E against the shoulder B′, to contribute its strength most effectually to the security of the main bolt against violence.

I claim as my invention—

1. The arm E^1 on the covering-plate E, arranged to engage with the arm C′ on the latch-bolt C when locked from the inside of the room, as herein specified.

2. I claim the combination and arrangement of the parts E E^1, B B′, C C′, and G, whereby the covering-plate E E^1 is caused to cover both the ordinary key-hole and the latch-key hole H, and also to engage with the latch-bolt C C′ and aid in sustaining the main bolt B B′, as herein specified.

In testimony whereof I have hereunto set my name in the presence of two subscribing witnesses.

JAMES M. ALDEN.

Witnesses:

THOMAS D. STETSON,

C. C. LIVINGS.