S. A. Green,

Latch and Lock.

No. 81,625. Patented Sep. 1, 1868.

Fig. 2.

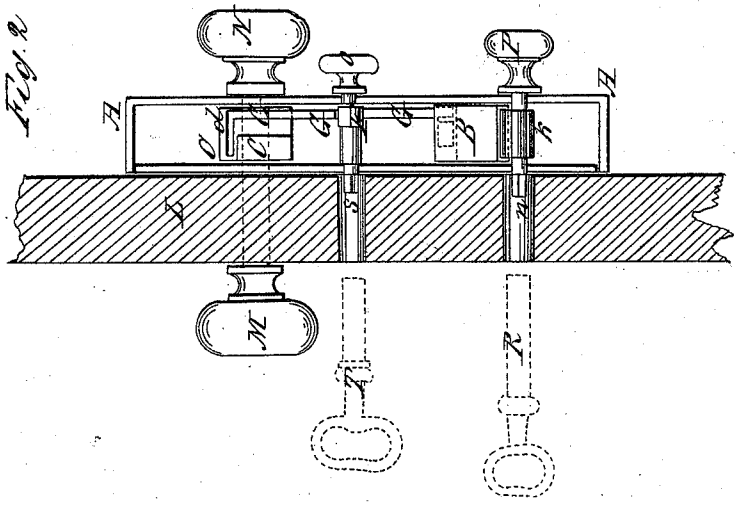
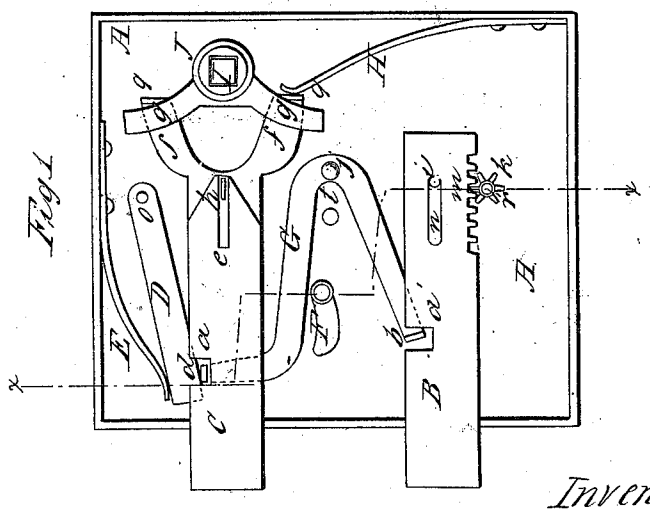


Fig. 1.



Witnesses
W. C. Ashkettez
Wm A Morgan

Inventor.
S. A. Green
per Munn & Co
attorneys

United States Patent Office.

S. A. GREEN, OF LEXINGTON, INDIANA.

Letters Patent No. 81,625, *dated September* 1, 1868.

IMPROVEMENT IN COMBINED LATCH AND LOCK.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, S. A. GREEN, of Lexington, in the county of Scott, and State of Indiana, have invented new and useful Improvements in Door-Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of the mechanism of my improved lock.

Figure 2 is a section of the same through the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

This invention consists in the mechanism of a lock for doors, whereby the key-hole in the lock-case is dispensed with, and the lock rendered difficult to open without the key.

In the accompanying plate of drawings, A is the lock-case containing the two bolts B and C, both of which are formed with notches *a' a*, as shown.

A tumbler-bar, G, bent in a V-shape, is pivoted to the bottom of the case A by a pivot-rivet, *j*, as shown, and oscillates against a pivoted bar, D, which latter is pivoted at *o*, and sustained against the tumbler-bar G by a spring, E, as shown.

The knob-shaft I bears a collar, J, having branches, *g g*, of the usual construction, and these branches impinge against the projections *q q* of the flat branches *f f*, forming part of the latch-bolt C similar to latch-bolts heretofore made.

By turning either of knobs M or N, the latch-bolt C will be retracted against the tension of the spring H, whereby the said bolt can be used as a common latch-bolt, when desired.

The slot *e* and flat stud *h* serve as a guide to the rear end of the latch-bolt.

The bolt B has no spring, but is retracted by means of the pinion *k* and the teeth *m*, the latter forming part of the bolt.

This pinion is on the spindle of the inside knob P, as shown, but on the exterior or out-door side the spindle projects a short distance, as shown at *r*, and this end is fluted, or squared, or formed in any suitable manner to render it difficult to fit with any but the proper key.

The spindle of the knob O projects in a similar manner, as shown at *s*, and is also, in practice, made with an irregular section capable of being turned with the proper key.

On the shaft of the knob O the arm F is affixed, and when the knob is turned or the point *s* is turned by the key, the arm F actuates the tumbler-bar G against the pivot-bar D and its spring E, whereby the projections *b* and *d* are thrown out of the notches *a'* and *a*, respectively, and the bolts C and B left free to be thrown in.

When the bolts are thus free, the bolt B is thrown in by the pinion before described, and the bolt C is thrust in against the spring H by turning either of its knobs.

When the door is locked or unlocked from the inside of the door, the knobs N, O, and P are used, but to open the lock from the outer side, two keys, as shown, are required.

These keys are inserted and the key T turned first, which liberates the bolts, as before described.

The key R is then turned, which throws back the bolt the notch *a'* from under the projection *b*.

The latch-bolt C is then thrown back by the knob M, and the door opened.

To lock the door from either side, no key is needed, for it is only required to turn the pinion *k* by its knob, or with the key, till the projection *b* falls into the notch *a'*.

The bolt C will then be caught by the projection *d* in a similar manner.

Thus both bolts are made to serve as locking-bolts when the door is to be locked, and when it is not required to lock the same, the bolt B is thrown in, and the bolt C then serves as a latch-bolt to be operated by its knobs alone.

By this invention small circular key-holes are admissible in the door L, as shown, and when these key-

holes are bushed with a piece of metal it is quite difficult, if not impossible, to open the lock with picks, pincers, or skeleton-keys.

This lock is simple, and can be afforded at a small cost, and will be found as safe as, and in some instances safer than, the high-priced, complicated locks now in the market.

I claim as new, and desire to secure by Letters Patent—

The two bolts C and D, the V-shaped tumbler-bar, with its projections *b* and *d*, the pivot-bar D, springs E and H, and the arm F, all constructed and operating substantially as shown and described, in combination with the rack *m* and pinion *k*, branches *f f* and *g g*, all as set forth.

S. A. GREEN.

Witnesses:

ABRAHAM H. CAMPBELL,

WM. H. DAVIS.