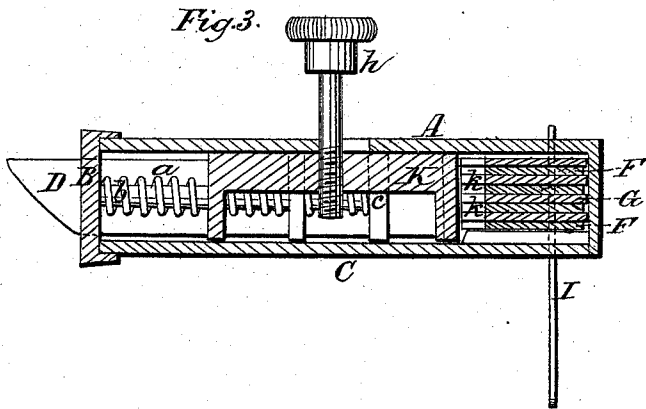
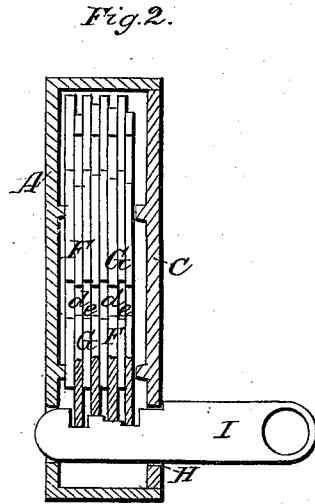
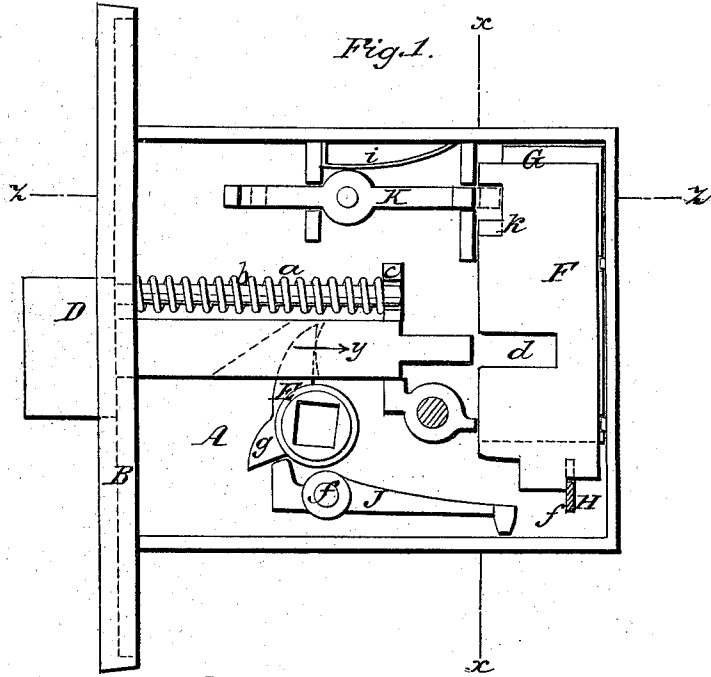


G. W. Cilleys,

Watch.

No. 89,852.

Patented May 11, 1869.



Witnesses.

McCombe
Attorney

Inventor

G. W. Cilley.
per Brown & Coombs &
Attys.

United States Patent Office.

GEORGE W. CILLEY, OF NORWICH, CONNECTICUT.

Letters Patent No. 89,852, dated May 11, 1869.

IMPROVEMENT IN COMBINED LOCK AND LATCH.

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, GEORGE W. CILLEY, of Norwich, in the county of New London, and State of Connecticut, have invented a new and useful Improvement in Locks applicable to doors and other objects or purposes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a face view of my improved lock, with the detachable plate to the shell or case removed;

Figure 2, a transverse section of the same through the line *x x* in fig. 1; and

Figure 3, a longitudinal section, taken as denoted by the line *z z* in said fig. 1.

Similar letters of reference indicate corresponding parts.

This, my improvement, though applicable in certain of its features to other descriptions of locks, is more especially adapted to latch-locks, as applied to doors, and in which the latch or bolt of the lock is operated by a spindle, through knobs from either side of the door, and is made capable of being "caught" or locked against operation by the knobs, excepting through the interposition of a key, or its equivalent; and

My invention consists, first, in a combination of locking-bolt, or catch, operated by a separate sliding knob, or its equivalent, with tumblers, arranged to cover the key-hole.

Referring to the accompanying drawing, which shows my invention as applied to a mortise door-lock,

A represents the lock-case;

B, its outer edge; and

C, the detachable face-plate thereto.

D is the sliding latch, or bevel-nosed bolt, forced outward by a spring, *a*, wound around a rod, *b*, which is fast to the bolt, and has a sliding action along with it, the spring bearing, for its fulcrum or stop, against a fixed guide, *c*, to the rod.

E represents the follower, through which the main knob-spindle is fitted, and that, accordingly as it is turned in the direction of the arrow *y*, by the knobs secured to said spindle, serves to draw in or back the bolt.

Arranged in rear of the bolt D, and preferably so as to operate at right angles to its line of motion, are the tumblers F.

These tumblers, of which there may be any desired number, are or may be formed of steel plates, with wards *d* at irregular distances in their length, for, when brought in line, the rear end of the bolt D to enter in being shot back, said tumblers being arranged, say between fixed plates G, having openings *e* in them, corresponding to the wards *d*.

Furthermore, these tumblers, hung loose or free for independent action, are arranged to drop, by their gravity, so as to cover the key-hole H, and invariably assume such position when not locked or worked upward, as hereinafter described; thus, in addition to their reg-

ular function as tumblers, operating independently of springs, they form shields to the key-hole, to prevent tampering with or picking of the lock, while, by the special arrangement of the tumblers at right angles to and in rear of the bolt, not only is compactness insured, but the whole thickness, as it were, of the lock-case, made available to be occupied by tumblers with their intervening plates, if the latter be used, whereby great strength and security are insured.

I is the key, or, as it might more properly be termed, "former," as it simply serves to adjust the tumblers into position for the bolt to be worked back by the action of the follower, or rather to support or hold them in such position after they have been lifted up by a dog, J, pivoted as at *f*, said dog being operated through a toe, *g*, on the follower E, by turning the latter in a reverse direction to that required to draw back the bolt.

K is a sliding dog, operated by a secondary knob, *h*, from the inside of the door, and steadied in its action or held to its set, it may be, by a spring, *i*, said dog serving, by entering notches *k* in the tumblers after the latter have been raised, and corresponding notches in their dividing-plates, to hold the tumblers with their wards *d* in line for the rear end of the bolt to work back into.

When the sliding dog or bolt K is thus adjusted, the main bolt D then simply becomes a latch, that may be operated from either side of the door by turning the knob or knobs to actuate the follower, as indicated by the arrow *y*.

To convert such latch, however, into a bolt that may be locked, it is only necessary to slide the catch, or bolt K, out of gear with the tumblers, when the latter, dropping as the bolt D is shot forward, serve as back-stops to the latch-bolt to lock it, said tumblers at the same time, as hereinbefore observed, acting as a shield to or over the key-hole, in which latter position they may be held or locked from the inside of the door, so that even the dog J cannot be operated to lift them, or key inserted to support them, by simply sliding the bolt K sufficiently forward to lap on or over the tumblers when down, the tumblers being so regulated, as regards length, and the catch, or bolt K, having such action provided it as to admit of this.

Thus, it will be seen that the catch, or bolt K, answers the double purpose of holding the tumblers in unlocking line or position when raised, and of locking them when down, which latter position, taken, too, in connection with the tumblers acting as shields to the key-hole, will be found very serviceable at night in securing the door from the inside.

It will also be perceived that, in the ordinary operation of the lock, a double movement of the main knob-spindle is necessary to effect the opening of the lock. Thus the follower E must first be turned in a reverse direction to that indicated by the arrow *y*, in order to operate the dog J, so as to lift the tumblers to admit of the insertion of the key I, or shooting into gear of

the catch-bolt K, after which, the tumblers then being held in unlocking line or position, the follower must be turned in direction of the arrow y, to draw back the bolt D.

This necessary and peculiar double movement of the follower, to effect the back movement of the latch-bolt, affords great protection against improper opening of the lock.

What is here claimed, and desired to be secured by Letters Patent, is—

The combination, with the tumblers, arranged to operate also as a shield or shields to the key-hole, of a locking-bolt, or catch, so constructed and applied as to hold the tumblers in unlocking line or position when raised, and to secure them when down, substantially as described.

GEO. W. CILLEY.

Witnesses:

DAN. YOUNG,

WM. P. ADAMS.