

C. C. Dickerman.

Lock.

N^o 101,355.

Patented Mar. 29, 1870.

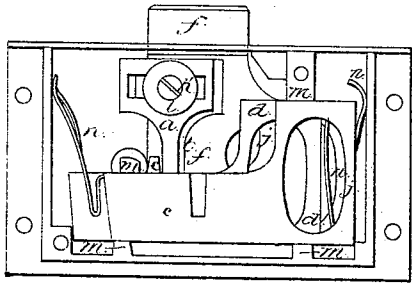


Fig. 1.

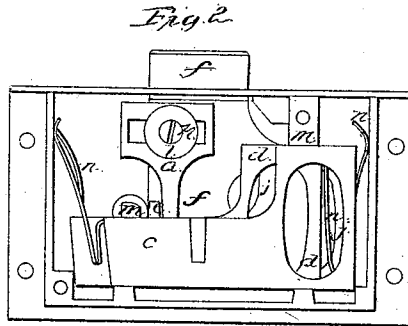


Fig. 2.

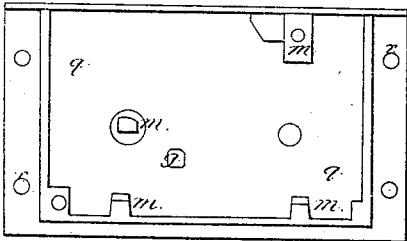


Fig. 3.

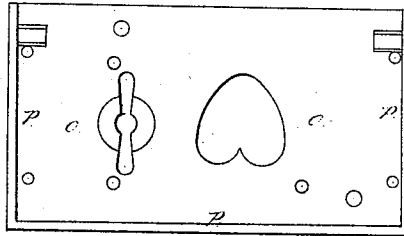


Fig. 4.

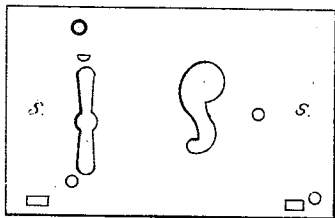


Fig. 5.

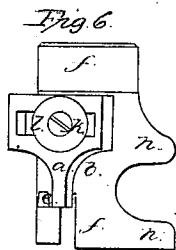


Fig. 6.

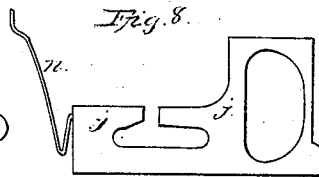


Fig. 7.

Fig. 8.

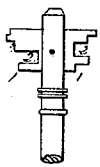


Fig. 9.

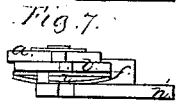
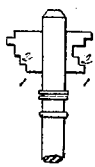


Fig. 10.

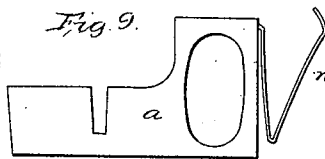


Fig. 11.

Witnesses.

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Crosby, Halsted & Coles.

United States Patent Office.

CHARLES C. DICKERMAN, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 101,355, dated March 29, 1870.

IMPROVEMENT IN LOCKS.

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, CHARLES C. DICKERMAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented Improvements in Locks; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

One part of this invention consists in converting a mortise or rim lock into a drawer or cabinet lock, by simply changing the covers, so as to adapt the lock either for use upon the outside of a door as a "rim" lock, or so that it can be inserted in the manner of a drawer-lock in the material of the drawer or door to which the lock is applied.

In the drawings—

Figures 1 and 2 are plans showing the same lock in the conditions produced by having the bolt thrown outward by different keys, this resulting simply in changing the position of the stops *a* and *b*, which operate in combination with the tumblers *c* and *d*;

Figure 3 is a plan of the lock-case, with the mechanism removed;

Figure 4 is a reversed plan of the box-cover;

Figure 5 is a reversed plan of the plate-cover;

Figure 6 is a plan, and

Figure 7 an end view of the bolt, with the adjustable stops *a* and *b*;

Figure 8 is a plan of the lower tumbler, which operates in conjunction with a stop, *e*, on the bolt;

Figures 9 and 10 are, respectively, plans of the tumblers *d* and *c*;

Figure 11 shows the key used in throwing the bolt in fig. 1; and

Figure 12 shows the key used in throwing the bolt in fig. 2.

The bolt *f* has a slot, which, working on the pin *g* of the case, guides it under the action of the key working between the jaws *h h'* of the bolt.

The stops *a b* are elevated on springs, *i*, so as to pass over the lower tumbler *j*, and are confined in position by the screw *k*, which passes through a washer, *l*, and enters nut-threads in the bolt, so as to clamp the stops to the bolt and prevent accidental movement of them, permitting them, however, to move laterally by force exerted on them by the key through the tumblers, the stops being slotted where the screw passes through them.

I am aware a friction spring has been used, when rigidly attached to the inside of the cap or cover, so as to press upon the stops, and hence I do not claim, broadly, the use of the friction spring for holding in place the stops. My spring is placed on the bolt *f*, and necessarily moves with the bolt, and therefore

occupies at all times the same relative position to the stops, and produces an equal friction upon the stops, whatever may be the position of the bolt.

The tumblers are all guided between the projections *m*, and have in the end of each a loop or spring, on both sides of which the bits or wards of the key touch and act, the width of the openings being equal to the length of the key-bits.

The tumblers *c* and *d* have slots in them, which, when brought opposite the ends of the stops *a b*, allow the key to force back the bolt, said stops entering said slots, so that, if the key also moves the tumbler *j* so that the stop *e* on the bolt can enter the opening in said tumbler, the bolt will be withdrawn or unlocked by the action of the key on the jaw *h'* of the bolt.

Suppose, now, when the bolt is withdrawn or unlocked, another key, other than the one which last previously operated the lock, is introduced and turned in a direction to lock or throw out the bolt, it follows, the stops *a* and *b* being engaged in the slots in the tumblers *c* and *d*, that the first effect of turning the key will be to move said tumblers, and rearrange the stops by sliding them under the frictional gripe by which they are held.

The continued rotative movement brings the tumbler *j* into proper relation to the stop *e*, and then the key, acting on the jaw *h* of the bolt, locks the bolt or throws it outward, and a reverse turning movement given to the key brings all the tumblers back to their proper relation to all the stops, and lets them enter the slots in the tumblers when the key operates on the jaw *h'* of the bolt in unlocking or withdrawing it.

The springs *n* on the tumblers serve simply to throw them from the position in which the key sets them in locking and unlocking the bolt.

It will now be seen that, if the bolt and tumblers have been operated by key, fig. 11, to produce the condition shown in fig. 1, key fig. 12, or any other key in which the bits 1 2 are arranged differently in relation to each other from what they are in fig. 11, will not place the tumblers *c d* in such relation to the stops *a b* as will permit the said stops to enter the slots in said tumblers.

The box-cover *o* is made with flanges, *p*, which shut down over the flanges of the lock-case *g*, making a rim-lock suited to be bolted upon the surface of a door at its edge, by screws passing through the holes *r*, or, if a drawer-lock is needed, the simple plate-cover *s* is screwed to the lock-case.

By thus making the covers *o* and *s* interchangeable, I can easily adapt the lock to either of two main uses, and thus produce two locks with but one set of tools and machinery.

The keys shown and described I term double-bitted,

because each bit 1, 2, &c., projects on both sides of the shank. I also term the keys-stationary bitted, in contradistinction to double-bitted keys, in which the bits are changeable or movable.

What I claim as my invention, and desire to secure by Letters Patent, is—

The friction spring *i*, when secured on the bolt *f* by the adjusting-screw *k*, in combination with a lock having one or more double-barred tumblers, movable

friction-stops, and double stationary-bitted keys, substantially as and for the purpose described.

Also, converting a rim or mortise-lock into a drawer or cabinet-lock, or *vice versa*, by changing the covers.

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Witnesses:

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FRANCIS GOULD.