(No Model.)

G. E. MERRIMAN.

LOCK.

No. 362,303. Patented May 3, 1887.

Fig. 1.

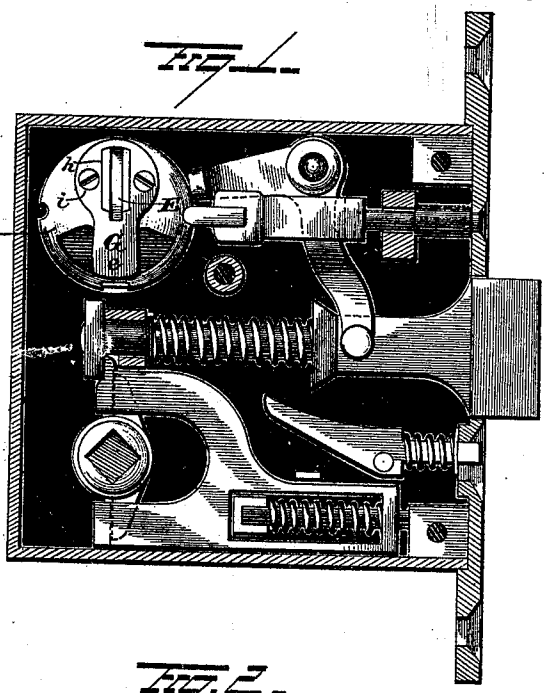


Fig. 4.

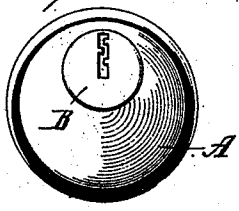
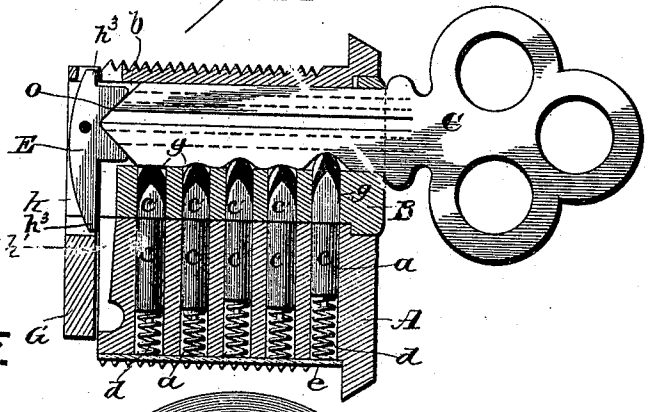


Fig. 2.



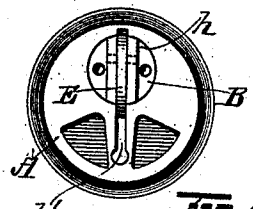


Fig. 5.

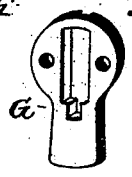
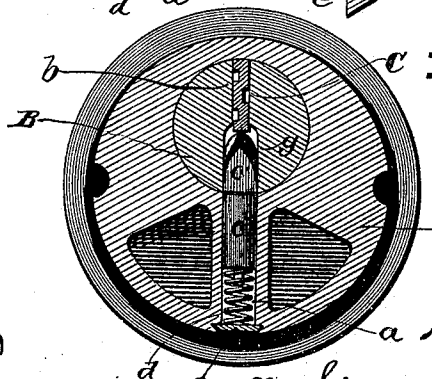


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE E. MERRIMAN, OF TERRYVILLE, ASSIGNOR, BY MESNE ASSIGNMENTS, TO P. & F. CORBIN, OF NEW BRITAIN, CONNECTICUT.

LOCK.

SPECIFICATION forming part of Letters Patent No. 362,303, dated May 3, 1887.

Application filed February 23, 1887. Serial No. 228,583. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. MERRIMAN, of Terryville, in the county of Litchfield and State of Connecticut, have invented a certain new and useful Improvement in Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in locks, and more particularly to pin or dowel tumbler-locks.

The object of my invention is to add additional security to locks of this type, to prevent picking or opening of the lock without the use of a proper shaped key, and to accomplish the same by simple means that will not greatly increase the cost of production of the lock.

With these objects in view my invention consists in certain features of construction and combinations of parts, that will be hereinafter described, and pointed out in the claims.

Referring to the drawings, making a part of this specification, Figure 1 represents a vertical section through the center of a lock, showing my improvement. Fig. 2 is a longitudinal sectional view of the lock. Fig. 3 is a cross-section of my improved lock. Figs. 4 and 5 are views of the face and back of my lock.

A is the shell of the lock, having a series of spaced parallel perforations, *a*, at a right angle to the key-slot. The body of the shell A is provided with a hole of proper size to receive the plug B, which is neatly fitted to revolve in this cylindrical hole. The body of the plug B has a longitudinal slot, *b*, made through it of a size to admit the insertion of a flat key, C.

Several short cylinders or dowel-pins, *c*, are inserted in the holes *a*, made in the body or shell A of the lock. The pins *c* are seated upon the spiral springs *d*, which are inserted in the holes *a* beneath the pins *c*. The holes *a* are drilled from the peripheral surface of the shell inwardly, and a dovetail recess is provided to allow the closure of the holes by a sliding plate, *e*, which is inserted to lock with the overhanging edges of the recess, and thus be held in secured position. The plug B is also provided with holes *g*, that will receive the spring-supported dowel-pins *c*, when the pins and holes are made to register with each other.

The holes *g* in the plug B are placed in line with the edge of the slot *b*, so that upon the insertion of a flat plate-key, C, its edge will abut upon the ends of short pins *c'*, which are cut of a proper length to rest in the wave-like depressions of the opposed edge of the key and have their opposite ends flush with the cylindrical surface of the plug B, in which they are located.

When the spring-actuated pins *c* are allowed to push the pins *c'* into the holes in the plug B and follow them a short distance, a lock of this plug with the shell A will be produced.

Upon the rear end of the plug B two parallel flanges, *h*, are formed integrally, and a latching-pawl, E, is pivoted to vibrate between these flanges *h*. In the end of the shell A, in a line with the bodies of the pins *c*, located in this shell, a shallow groove, *h'*, is cut to receive the toes of the pawl E, and it will be noticed that from its form the locking-pawl E, when in its normal position with the key removed, will rest in an inclined position, with one toe, h^3, in the groove *h'*, and prevent the plug from turning.

Upon the end of the plug B a locking-dog, G, is rigidly secured, a slot being formed in its body to allow it to embrace the projecting flanges *h*, which act as a lug to give stability to the connection of the dog G with the end of the plug B, the screws *i*, inserted through the dog into the end of the plug, as shown in the figures, holding these parts intact.

This lock is designed for doors, but can be utilized in other places. The surface of the shell A is cut with a fine screw-thread, to permit it to be inserted into a proper-sized hole made in the frame of the lock proper, where it can be adjusted to suit different thicknesses of wood.

When properly adjusted, the lock can be locked by the insertion of the key, and then making a partial revolution of the plug B, which will cause the locking-dog G to engage a proper bolt affixed to the lock-frame into which the shell has been screwed.

The key C has its end that enters the lock made V-shaped or cut to form inclines, which

engage a similar formation cut on the opposed inner edge of the latching-pawl E, as shown at *o* in Fig. 2 of the drawings. By the insertion of the key C the contact of its angular cut end with the V-shaped notch formed upon the latching-pawl E will hold its toes to prevent an engagement with the groove *h'*, and thus permit a revolution of the plug B to unlock or lock the device.

Without the use of the V-shaped key-point it will be impossible to unlock the lock, and the picking-instrument that will depress the pins will not be available to hold in disengaged position the latching-dog while used as a skeleton to depress the tumblers, so that it is apparent that nothing but a correctly-made key will accomplish the release of the locking mechanism of this improved pin-tumbler and latching-pawl lock.

I do not broadly claim the construction of a pin-tumbler lock, as such devices have been in use heretofore; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a lock, the combination, with a shell having a groove in end thereof, a movable plug mounted in the shell, and spring-actuated pins for locking the plug against movement, of a latching-pawl pivoted to the plug and adapted to engage the groove in the shell.

2. In a lock, the combination, with a shell having a groove formed in one end thereof, a plug mounted in said shell, and spring-actuated pins for locking the plug against movement, of a latching-pawl pivoted to the plug and adapted to engage the groove in the shell, the said pawl being provided on its inner face on a line with the key-slot in the plug with inclined faces adapted to be engaged by the key, substantially as and for the purpose set forth.

3. In a lock, the combination, with a shell having a groove therein and a rotating plug mounted in the shell, of a latching-pawl pivoted to the plug and normally engaging the groove in the shell, and adapted to be moved out of said groove by a proper-shaped key, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE E. MERRIMAN.

Witnesses:
S. N. CHAFFEE,
E. L. PRIOR.