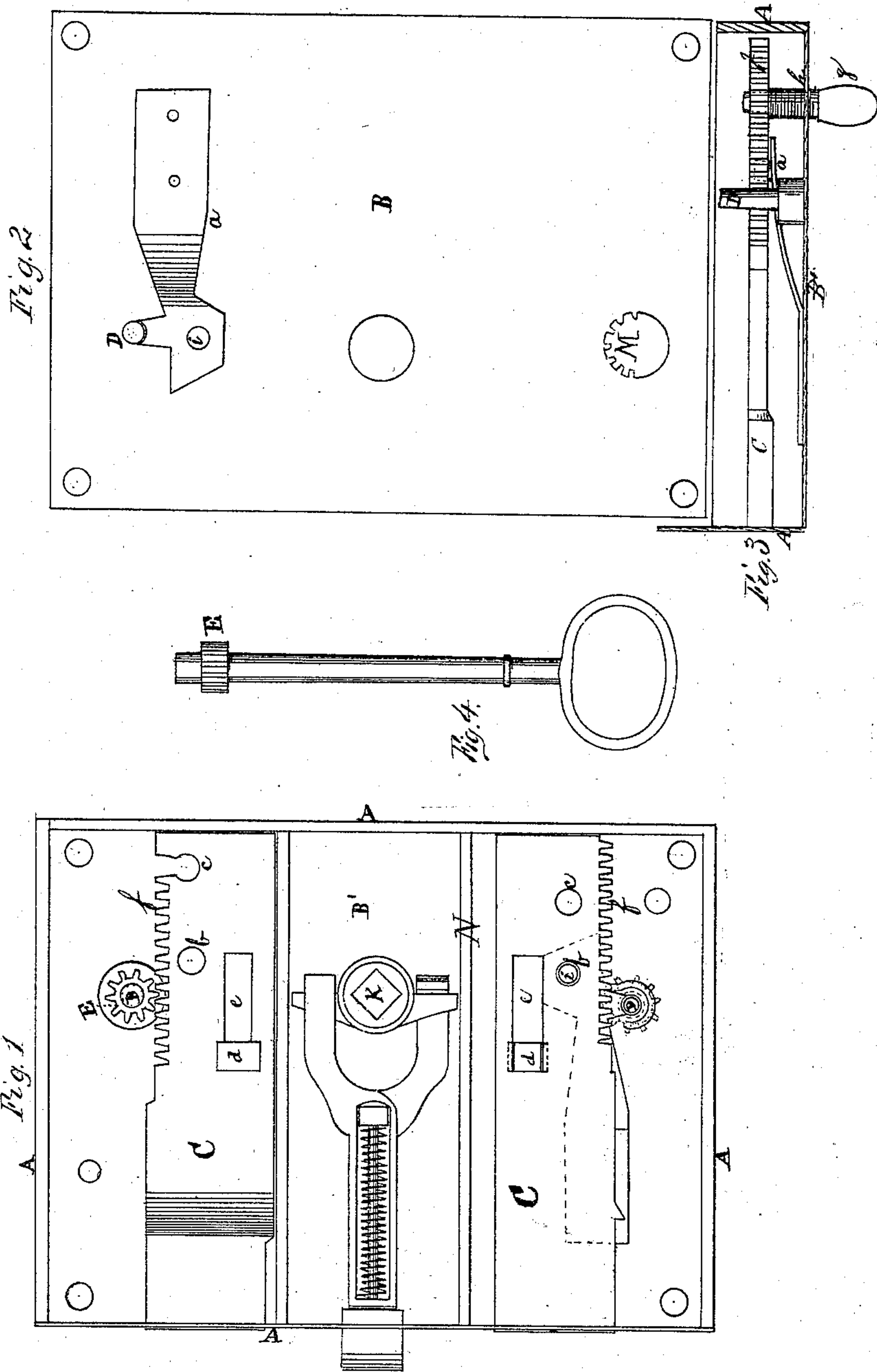


E. Fay,

Lock.

No. 98,577.

Patented Jan. 4, 1878.



Witness

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Letters Patent No. 98,577, dated January 4, 1870.

## IMPROVEMENT IN LOCKS.

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

I, EDWARD FAY, of the city of Washington, and District of Columbia, have invented certain Improvements in Locks, of which the following is the specification.

The nature of my invention is such that it is rendered perfectly burglar-proof, incapable of being picked from the outside, while it can be locked, when placed upon a door, either on the outside or inside of said door, the bolts having no communication with each other, as will be presently described.

The object attained is to give greater security than is now derived from the locks in use.

Figure 1 is an inside view of the lock, showing the actuating-devices in position;

Figure 2 is an inside view of the lock-cover;

Figure 3 is a transverse view of bolt, secured by a pin, and resting upon the spring; and

Figure 4 is the key.

A A are the frame or sides of the lock, constructed in the usual manner;

B B' are the front and back pieces, connected together with screws, also in the manner ordinarily used;

C C are the bolts for locking the door—one at the bottom, and the other at the top of the lock;

D D are the standards, upon which the hollow key works in locking or unlocking; and

E is the key, made hollow a sufficient distance from the end, and surrounded, near its lower end, with a series of cogs, to fit into corresponding serrations in bolts C C.

K is the knob of the door.

a a are springs, made of metal, and fastened to the side pieces, and having on their extremity, near the standard D, for the insertion of the key, a pin, i, to catch in the holes, b and c, in bolts C C, when said bolts are operated by the key, in the manner to be presently described.

d d are buttons, on which the bolts rest; and, as the bolts are moved with the key, these buttons always appear in the slots of the bolts to the distance at which the bolts are thrust out and in.

e e are the slots in bolts C C, that move upon the buttons d d, when the lock is operated.

f f are the serrated edges of the bolts, corresponding to the circular cogs of the key E.

h is the hole, and

g, the pin to be inserted therein, so as to prevent the lock or bolt from being moved from the outside.

The operation of this lock is as follows:

The hollow key, with its rim near the extremity cogged, is entered upon one of the standards D D, and, coming in contact with the spring a, said spring is forced downward, and the pin i, on the spring a, is

also forced downward out of one of the holes in the bolt.

The bolt is thus released, and, by turning the key, the cogs on the rim engage in the serrations in the side of the bolt, and the latter is forced out a sufficient distance, when the pressure upon the key is taken off, and the pin i on the spring enters another hole in the bolt, and thus the bolt is securely held in its place.

To unlock the door, the key is inserted in the same manner, turned reversely, and the bolt is released.

The advantage of having two bolts—one to lock on the outside, and one on the inside—will be seen, as it obviates the necessity of having a key-hole clear through the lock, and it is, therefore, less liable to be tampered with, and could not be "picked," for the reason, that when locked on the inside, and there being no communication between the bolts, it would be impossible for any one on the outside to get at the key-hole, by means of which the door was locked on the inside; and it also obviates the necessity of having a bolt on the inside of the door, also rendering it an impossibility for burglars to insert instruments from the outside, through the key-hole, in order to draw back a bolt on the door, in case any should be there, as they do with ordinary locks.

When in a room, and the door locked by the bolt that locks on the inside, to prevent any one on the outside from turning or locking the outside bolt with even a key suited for the purpose, a pin, g, is inserted in the hole h, which prevents the outside bolt from being turned.

The employment of a cogged key to operate the bolts, and fitting into corresponding serrations in the bolts, when the spring under the bolts is released by the key, renders the use of a key of this kind much easier than those now used, and the security afforded by means of the catch engaging in holes set apart at appropriate distances in the bolts is greater than when the usual tumblers are used.

One of the key-holes, M, of this lock is represented in the drawings with its edge notched, to correspond with the notched rim of the key E. When so formed, the key may be readily inserted, and, when slightly turned, may be retained in the lock, while, when the key is out of the lock, the difficulty of "picking it" is increased.

A partition, N, is also shown in the drawings, between the upper and lower bolts, which prevents either bolt from being picked through the key-hole of the other.

I claim, as my invention—

1. The construction of the lock A, when it has com-

\* Assignor to himself & Louis C. Gury of same place.



bined within its frame the double bolts C C and catch or knob K, and each separated from the other by means of the partitions N N, when said bolts are operated upon by means of the key E, having upon or near its end cogs or teeth, that mesh or fit into corresponding cogs or teeth *ff*, formed upon the bolts C C, and when said bolts are retained or secured in a locked or unlocked position by means of the pin *i*, fitting into the holes *c c*, in the manner and for the purpose herein described.

2. The combination and arrangement of the spring *a*, having upon its free end the pin *i*, with the ward of the lock, the bolt or bolts C C, their holes *c c*, to receive said pin, and the key E, in the manner and for the purpose herein described.

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Witnesses:

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