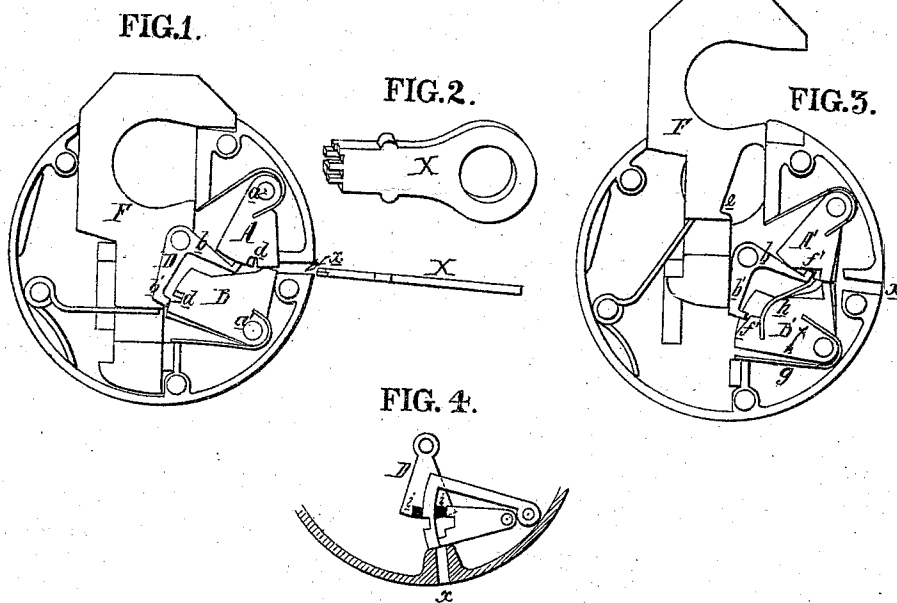


D. K. MILLER.
Pad-Locks, &c.

No. 143,990.

Patented Oct. 28, 1873.



WITNESSES. *Thomas McSwain*
Harry Smith

D. K. Miller
by his Attor
Horizon and Son

UNITED STATES PATENT OFFICE.

DANIEL K. MILLER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PADLOCKS, &c.

Specification forming part of Letters Patent No. **143,990**, dated October 23, 1873; application filed September 18, 1872.

CASE A.

To all whom it may concern:

Be it known that I, DANIEL K. MILLER, of the city and county of Philadelphia, State of Pennsylvania, have invented certain Improvements in Locks, of which the following is a specification:

My invention consists in the combination, in a lock, of two or more sets of vibrating tumblers arranged to be simultaneously operated by a single sliding key, a notched bolt, and a dog adapted to notches in the tumblers and to the bolt, as fully described hereafter, the whole operating together to render the lock difficult to pick. My invention further consist in providing the tumblers with certain cam-like inclines for moving the dog.

The two sets of tumblers A B may be hung to separate posts *a* and *a'*, so as to be operated simultaneously by one key, X, which is inserted through a key-hole, *x*, so arranged that the edges of both sets of tumblers shall cover and close the same. The lever or dog D has two arms, *b b'*, each of which, when the tumblers are properly adjusted, enters notches *d* in the same, thus permitting the dog to turn from opposite a shoulder on the bolt or hasp F, which may then be drawn out or "opened" by hand or by the action of a spring. When the bolt or hasp is returned to its place, the dog, operated by a spring, turns and releases the tumblers, and at the same time enters a recess, *e*, and secures the bolt. One of the tumblers B' of the set B has a cam-like incline, *f'*, Fig. 3, which, when said tumbler is turned in the direction of its arrow by its spring *g*, acts upon the arm *b'* of the dog, and forces the

latter into the recess *e* of the bolt, at the same time disengaging the tumblers. The tumbler B' has also a spring, *h*, which bears against the arm *b* of the dog, and vibrates the latter in the opposite direction, causing it to enter the notches of the tumblers, and to disengage the bolt when the notches are brought into line by the operation of the key. One of the tumblers A' of the set A may also have a cam-like projection, *f'*, to act on the arm *b* of the dog.

The tumblers may be arranged as in Fig. 4, or otherwise, and the dog may slide instead of vibrating, and may be altered in shape, as required.

I do not claim, broadly, two sets of tumblers in combination with a bolt; but

I claim—

1. The combination, in a lock, of two or more sets of vibrating tumblers, A B, operating independently, and arranged to be adjusted by a single sliding key, and a dog, D, adapted to notches in all the tumblers and to the bolt, as set forth.

2. The combination, with the dog D, of one or more tumblers having springs and cam-like inclines for moving the said dog in opposite directions, substantially as described.

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

DANIEL K. MILLER.

Witnesses:

WM. A. STEEL,
HARRY W. DOUTY.