

W. Terwilliger,

Permutation Lock.

No. 113,465.

Patented Apr. 4, 1871.

Fig. 1.

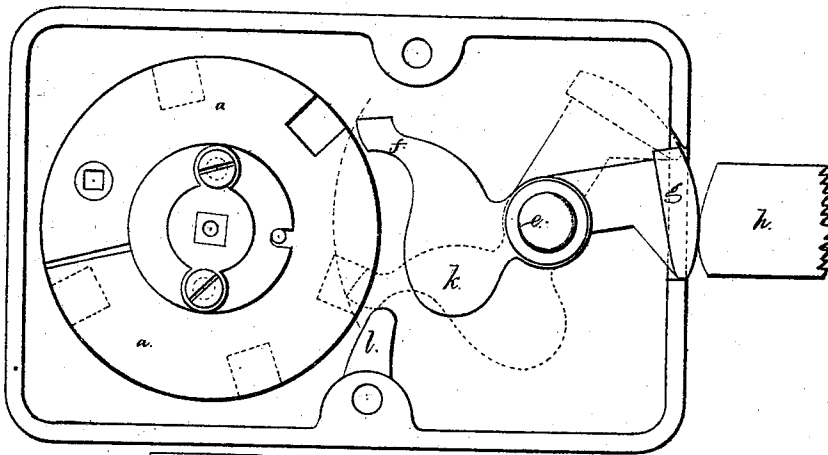
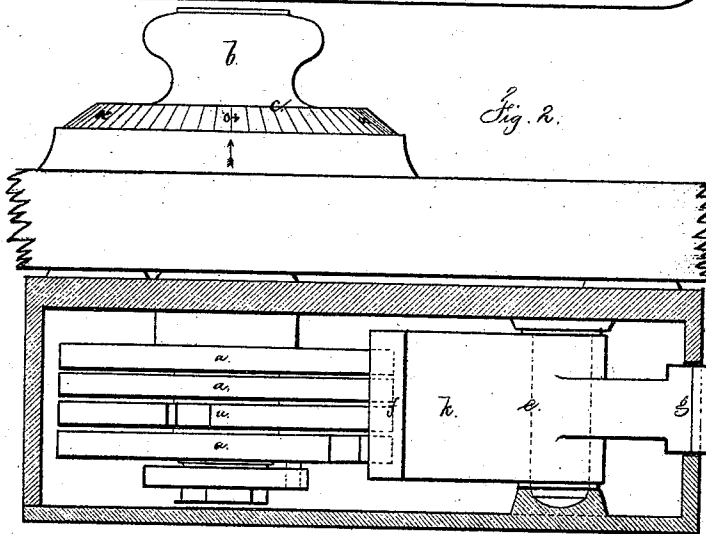


Fig. 2.



Witnesses,

Chas. H. Smith
Geo. W. Walker

William Terwilliger.
Lemuel W. Terrell atty

UNITED STATES PATENT OFFICE.

WILLIAM TERWILLIGER, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND
FREDERIC H. NORTH, OF NEW BRITAIN, CONN.

IMPROVEMENT IN PERMUTATION-LOCKS.

Specification forming part of Letters Patent No. **113,465**, dated April 4, 1871.

To all whom it may concern:

Be it known that I, WILLIAM TERWILLIGER, of the city and State of New York, have invented an Improvement in Locks; and the following is declared to be a correct description thereof.

Locks have been made with circular tumblers having notches, into which a dog or fence drops to allow the bolt to be moved; and in some instances the dog has been upon a connecting-rod that extends to and swings a gate.

My invention consists in an oscillating compound fence and gate, combined with notched circular tumblers, the parts being arranged so that the fence swings in an arc of a circle which intersects the circle of the tumblers, so that the fence swings into the notches of the tumblers when they are in line, and then the tumblers and the fence move in contact, like the cogs of gear-wheels, until the gate is moved to allow the motion of the bolt or bolts.

This improvement is illustrated by the annexed drawing, wherein Figure 1 is an elevation with the lock-plate removed, and Fig. 2 is a plan with the case partly broken open.

The tumblers *a* are circular. They are mounted upon a central spindle or axis that extends to the knob *b* and dial *c*. These tumblers are each provided with a notch adapted to receive the fence of the compound oscillating fence and gate, and said circular tumblers may be constructed in any desired manner so as to be changeable. I prefer, however, those shown in Letters Patent No. 82,030, granted September 8, 1868.

The oscillating compound fence and gate is mounted upon the stud *e*, and the portion *f* acts as a fence, the end *g* as a gate to the bolt

h, or as a part of the bolt itself, and the counter-weight *k* tends to bring the fence *f* into the slots of the tumblers when properly set.

It will now be understood that when the bolt is unlocked the compound fence and gate occupy the position shown by dotted lines in Fig. 1, the fence being within the notches of the tumblers and resting against the stud or stop *l*.

When the handle is turned all the tumblers revolve together and the compound fence and gate oscillates, the fence turning in the arc of a circle, like a tooth-wheel, in match with the notches of the tumblers.

When the gate *g* is closed the fence clears the notches, and the tumblers are free to be turned into any position to scatter the notches.

If pressure is applied to the end of the gate the fence is raised from the tumblers, so that there is no indication of the position of the notches.

I do not claim a swinging gate closing an opening for a projection upon the bolt; neither do I claim a lever swinging into a notch in a circular tumbler, as a lever of this kind has been used to communicate motion from the circular tumblers to a bolt.

I claim as my invention—

The compound fence and gate oscillating upon the stud *e*, when the parts are constructed and arranged substantially as specified, and the gate is moved by the fence and tumbler-notch moving together, in the manner set forth.

Dated this 3d day of January, 1871.

WILLIAM TERWILLIGER.

Witnesses:

CHAS. H. SMITH,
GEO. T. PINCKNEY.