

O. E. Pillard,
Permutation Lock.

No 75.967.

Patented Mar 24. 1868.

Fig. 1.

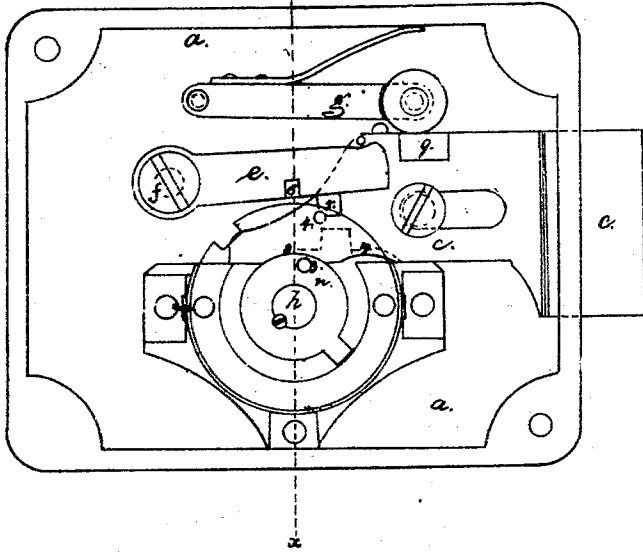
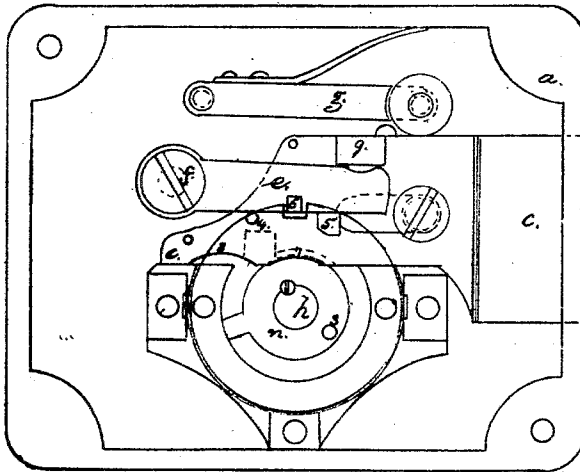


Fig. 2.



Oliver E. Pillard

Chas. H. Smith

Witness

Geo. D. Vasey

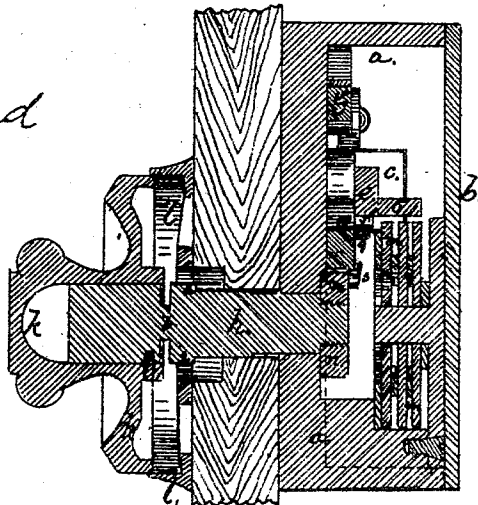


Fig. 3.

United States Patent Office.

OLIVER E. PILLARD, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO
FREDERIC H. NORTH, OF THE SAME PLACE.

Letters Patent No. 75,967, dated March 24, 1868.

IMPROVEMENT IN PERMUTATION-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, OLIVER E. PILLARD, of New Britain, in the county of Hartford, and State of Connecticut, have invented, made, and applied to use 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 said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is an elevation of the lock; the cap-plate being removed and the bolt projected.

Figure 2 is a similar view, with the bolt retracted.

(In both these figures the circular tumblers are removed and their positions indicated by red lines.)

Figure 3 is a vertical section through the spindle and tumblers.

Similar marks of reference denote the same parts.

My invention relates to devices applied to that class of locks in which a series of circular tumblers is employed, and brought successively to place by a knob and spindle that are turned to points indicated by a dial.

My particular feature of invention relates to an improvement in the spindle, whereby the introduction of powder into the lock, or the forcing back of the spindle, is prevented in cases where the knob is wrenched off; also to a peculiarity in the construction of the dog, so that it is held entirely out of contact with the tumblers while they are being adjusted, thereby effectually preventing the position of the notch in the tumbler being discovered by friction or sound when the arm of the tumbler is in contact with the edges of the circular tumblers, as heretofore usual. And I combine therewith a device for preventing the spindle being moved into contact with the tumblers until the bolt is fully projected.

In the drawing, *a* is the lock-case, *b* the cap plate, *c* the bolt, of any desired size or character; *e* is the dog on the centre-stud *f*; *g* is a lever and roller, acted upon by a spring, to give sufficient pressure to the bolt to cause the friction to hold the bolt, and not allow end-play thereto accidentally by the weight of the bolt if exposed to vibration or jar. *h* is the spindle, to which the knob *k* is attached, around the base of which are divisions, forming, with the stationary circular flange *l*, the index or dial by which the positions are indicated for setting the tumblers.

This spindle *h* is formed with a neck or recess at *i*, so that this will be the weakest part of the spindle, and said spindle will break at this part (if the knob is wrenched or hammered in endeavoring to force open the lock) before the other parts of the spindle will be materially injured; thereby the hub *n*, at the end of said spindle, will remain in place, to prevent the spindle being drawn out, and the spindle cannot be grasped with tools to pry it out, because it does not project from the door; and if an effort is made to drive the spindle in, the shoulder *z* comes in contact with the bottom of the large part of hole in the door through which the spindle passes; thereby the spindle cannot be driven in or the lock forced off by burglars, and hence the parts that secure the bolt remain uninjured.

The tumblers *m* are circular, and notched, and are set by the pin *3* on the hub *n*. These tumblers being of any ordinary construction, do not require further description.

The bolt *c* has on it a stud, *4*, that, when the bolt is nearly projected, comes into contact with an incline, *5*, raising the dog *e*, and sustaining it in the position shown in fig. 1, with its arm, *6*, above and entirely clear of the circular tumblers *m*; hence these tumblers must be set by the dial alone, and there is nothing in contact with their periphery that can become an indication of the location of the notches.

I provide an overhanging flange or plate, that is lower than the under side of the bolt, near the talon, as seen at *7*, which passes down in front of the hub *n*, to keep that hub from being pushed back into contact with the tumblers, except when the bolt is wholly projected, a notch at *8* being provided in this flange or plate, to allow said hub to be pressed back to the tumblers when the bolt is fully thrown.

By this construction it is impossible to open the lock by the aid of the friction or the sound, or if an effort is made to bring the arm *6* into contact with the tumblers by an end-motion of the bolt, (between the end of the dog *e* and the stud *9*), the act of moving the bolt would prevent the hub *n* being drawn back if the hub passed

entirely beyond the plate or flange 7, but I prefer that the hub *z* remain within the curved notch 8 while acting upon the tumblers, and in that position entirely prevents motion to the bolt in either direction.

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

The stud 4 on the bolt, in combination with the dog *e*, for raising and holding up said dog and its arm clear of the tumblers when the bolt is projected.

In witness whereof, I have hereunto set my signature, this thirteenth day of July, 1867.

OLIVER E. PILLARD.

Witnesses:

CHAS. H. SMITH,
GEO. D. WALKER.