

JACOB OBERNESSER.
Improvement in Permutation-Locks.
No. 115,230. Patented May 23, 1871.

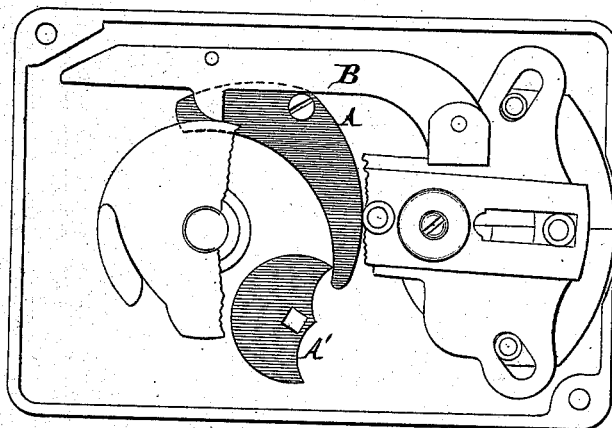


Fig. 1

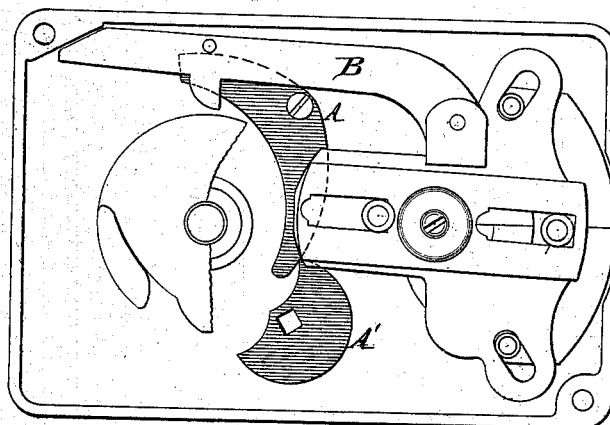


Fig. 2

Attest
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JACOB OBERNESSER, OF CINCINNATI, OHIO.

Letters Patent No. 115,230, dated May 23, 1871.

IMPROVEMENT IN PERMUTATION-LOCKS

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

I, JACOB OBERNESSER, of Cincinnati, Hamilton county, Ohio, have invented certain Improvements in Permutation-Locks, of which the following is a specification.

Nature and Objects of my Invention.

It is known that, in combination locks of the type here shown, it has been necessary to have two marks on the dial-plate—one for the purpose of operating the lock from, and the other to serve as a guide when changing the combination.

This necessity has arisen from the fact that slotted permutation-wheels, into which a dog is intended to fall, must be operated in locking and unlocking from a point where the slots of the wheels may be placed in a line, so that the dog may fall into them, which point is the top of the wheels and immediately under the dog; and the mark on the dial for this purpose has usually, for convenience, been placed at the top thereof.

If it was attempted to change the combination from this point, so soon as the slots of the wheels were in a line the dog would fall into them, and thereby prevent the separate movement of the wheels.

The only alternative, then, in this class of lock, for this difficulty heretofore known, was to have two marks on the dial—one for a guide in locking and unlocking, and by which the slots in the wheels could be brought in a line immediately under the dog, the other at some convenient point, by which the slots might be brought in a line at some point where the dog could not fall into them.

Experience has shown that this arrangement is very inconvenient, in this: persons having charge of articles on which these locks are placed rarely have occasion to change the combination on which the lock may happen to be placed; and when, occasionally, they find it necessary to make such change, get confused as to which of the two marks on the dial they are to be guided by, and not uncommonly attempt to make this change by the mark they are in the habit of operating the lock by. The mistake is not discovered until the wheels are disarranged and the combination lost. The result of this is, in the majority of such cases, either that the lock has to be removed from the safe and returned to the factory, or a workman sent from the factory to put the lock in order, either of which is very inconvenient and expensive.

The purpose of my invention is to obviate this difficulty by dispensing with the second mark on the dial. This is done by means of mechanism for raising and

sustaining the dog out of the slots of the wheels while the combination is being changed.

Description of the Accompanying Drawing.

Figure 1 is a plan of the inside of the lock, the permutation-wheels being removed, and part of the disk which operates the dog-lever B broken away, showing the mechanism above referred to when in position not to affect the dog.

Figure 2 is a similar view, except that the said mechanism is in position to sustain the dog.

General Description.

As there is no part of the mechanism shown in the drawing, except that used for sustaining the dog, that is new, or upon which I desire to make any claim, it is not deemed necessary to describe the construction or operation of other parts of the lock, which, it is believed, is sufficiently described in the specification attached to Letters Patent No. 106,472, granted to Charles Diebold and Jacob Kienzle, dated August 16, 1870.

In the drawing—

A represents a lever, pivoted so that its upper end shall rest under the bar or lever to which the dog is attached, so that by operating this lever A the dog shall be raised out of the gate or notches in the wheels and held up while the combination is changed. For the purpose of operating this lever A I provide a cam or arm, A', which is fitted in a recess on the inner face of the outside case of the lock, immediately opposite the hole on the inner case of the lock, which is intended as the point of entrance for the key, by which the permutation-wheels are made fast and loose. When the wheels are arranged with their slots in line under the dog, which is done by the mark on the dial by which the lock is operated, the key is inserted through the appropriate hole on the inner face of the lock-case, and through the permutation-wheels; the end of it passing into the hole shown in A', it is turned half a circle to the right, sufficient to loosen the wheels, which will, by the operation of lever A, raise the dog out of the slots in the wheels, the key remaining, meantime, in position; the combination of the lock may be changed by the knob, after which the reversal of the key, in tightening the wheels, will bring the lever to a position where it will not interfere with the action of the dog.

In the drawing, to which reference is made here, a turn of half a circle of the cam is required to elevate the dog to the proper position; but this is only be-

cause in the permutation-wheels the key requires to be turned half a circle in order that the wheels may move freely while the change is being made; but it is self-evident that this lever may be so adjusted as to raise the dog by turning the cam any portion of a circle that will be sufficient to loosen the permutation-wheels.

It is also evident that one lever, or three or more levers, could be substituted in place of the one shown, without varying from the invention described, and that their forms might be varied indefinitely.

Claims.

I claim as my invention—

1. The lever A and cam A', arranged to operate

substantially as described, whereby the dog may be raised and held free from the permutation-wheels while the combination is being changed, as set forth.

2. The operating-cam or arm A', located as described, so that the key that is used to loosen the disks on their hubs shall also serve to operate the cam, and through it the lever that raises the dog, substantially as described.

JACOB OBERNESSER.

Witnesses:

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FRANK BREILING.