

(Model.)

J. KUBLER.  
PERMUTATION PADLOCK.

No. 323,941.

Patented Aug. 11, 1885.

Fig. 1.

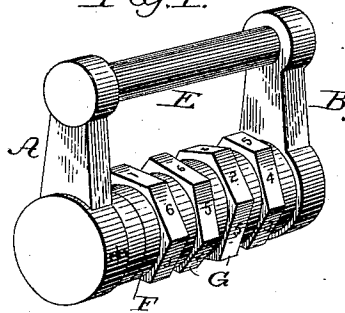


Fig. 2.

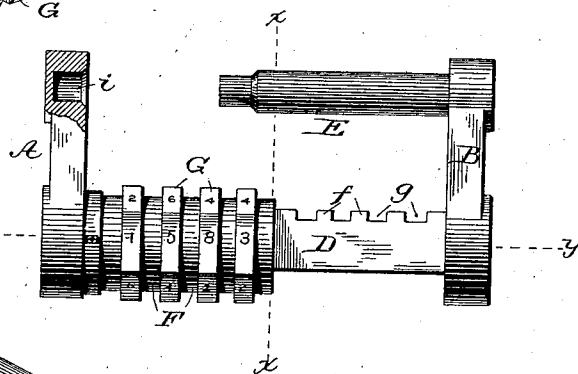


Fig. 3.

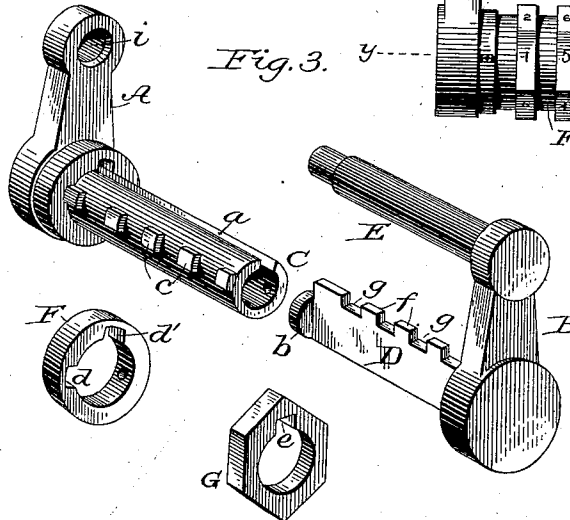


Fig. 4.  
on x-x.

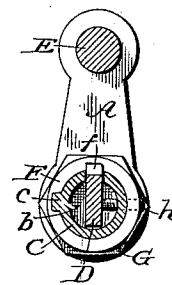


Fig. 5.

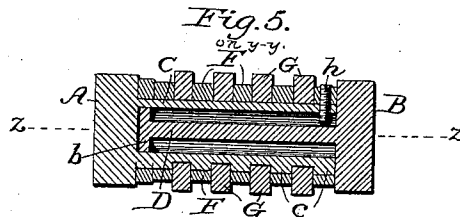
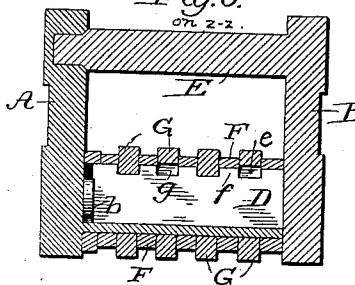


Fig. 6.



Witnesses:

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Walter S. Dodge

Inventor:

JOHN KUBLER,  
by *Dodgerson*,  
his *Attys.*

# UNITED STATES PATENT OFFICE.

JOHN KUBLER, OF HOT SPRINGS, ARKANSAS, ASSIGNOR TO FRANK GROSS,  
OF SAME PLACE.

## PERMUTATION-PADLOCK.

SPECIFICATION forming part of Letters Patent No. 323,941, dated August 11, 1885.

Application filed May 21, 1885. (Model.)

*To all whom it may concern:*

Be it known that I, JOHN KUBLER, of Hot Springs, in the county of Garland and State of Arkansas, have invented certain new and useful Improvements in Permutation-Padlocks, of which the following is a specification.

My invention relates to that class of locks known as "permutation-padlocks;" and it has for its object to simplify and cheapen the construction, while maintaining strength and security.

In the drawings, Figure 1 is a perspective view of my lock closed. Fig. 2 is a side view of the same unlocked. Fig. 3 is a perspective view of the parts separated; Fig. 4, a section on the line *x x*, Fig. 2; Fig. 5, a section on the line *y y*, Fig. 2; Fig. 6, a section on the line *z z*, Fig. 5.

A and B represent two heads, the former being provided with a cylindrical tubular shell, C, and the other provided with a notched bolt, D, and a stem or bar, E, as shown in Figs. 2 and 3. The shell C is provided with a slot, *a*, on its upper side throughout its entire length, said slot being of a width just equal to the width of the slotted bolt D, while within the shell C slides a circular head or disk, *b*, firmly secured to the bolt D. The shell C is also provided with a series of lugs or studs, *c*, (shown in Figs. 2 and 5,) which serve to hold in place and prevent the turning of the stationary spacing-collars F, which encircle shell C.

The collars F, as shown in Fig. 3, are provided with two notches or recesses, *d* and *d'*—the former to engage the lugs or shoulders *c*, and the other to align itself with the slot *a* in the shell C.

Between the collars F are the tumblers G, preferably angular on the exterior, and with the interior turned or bored cylindrical to fit the barrel or shell C. These tumblers G are each provided with a notch or recess, *e*, of the width of the bolt D, and they are furnished on their exterior with fingers or characters, as is usual in this class of locks. The bolt D, as shown in Figs. 2, 3, and 6, is provided with teeth *f* on its upper face or edge, the teeth being of a width equal to the thickness of the collars F, and separated by notches or spaces

*g*, of a width equal to that of the tumblers G. When the lock is closed, as in Fig. 6, the collars F are directly over the teeth *f*, but the tumblers G, which are between the collars F, coincide with the slots *g*, and can be turned upon the shell C.

It will be noticed that the stationary spacing-collars F each have their slots *d'* always in a line with the slot *a*, so that when the tumblers G all have their slots *e* in line with the slot *a* the bolt can be slid out lengthwise.

In order to prevent the bolt D from being withdrawn entirely from shell or case C, and becoming misplaced or lost, I provide a screw or pin, *h*, which, as shown in Figs. 4 and 5, passes through the outer collar, F, and through the shell C, and projects into the latter far enough to prevent the head or disk *b* from being withdrawn.

The screw also serves to hold the tumblers G and the collars F in proper position upon the shell C. The bar or stem E has its end reduced somewhat to fit into a recess or socket, *i*, in the head A, though it may be of the same diameter throughout its length.

The collar F nearest the head A, or the head itself, is provided with a mark, with which certain characters on the tumblers G must be aligned in order that the slots or recesses *e* shall coincide.

In the drawings the number 1583 is the only one that will allow the lock to be opened, and it will be noticed that each of the figures of this number, 1, 5, 8, and 3, must be aligned with the others and with the marking on the collar F or the head A before the lock can be opened. When thus aligned, the recesses *e* of all the tumblers G are directly over the slot *a* of the barrel C, and the bolt can then be withdrawn, the teeth *f* passing through the notches or recesses *e*.

When the bolt is shoved to place it is only necessary to turn the tumblers (one or more) upon the shell C, moving the notches *e* out of line, and the lock is securely fastened.

The rings or collars F always occupy a fixed position on the shell C, the upper notches, *d'*, being in line with the slot *a* and held in that position by the lugs *c* engaging in the notches *d*. By removing the screw *h* in the end collar

the tumblers can be removed and transposed so as to change the combination on which to open the lock.

The head B should be provided with a projecting rim or flange on its inner face, to encircle the end collar and thereby cover and protect the screw *h*, and to prevent tampering with the latter.

Having thus described my invention, what I claim is—

1. In a permutation-padlock, the combination of a head, a slotted cylindrical shell carried thereby, lugs upon the exterior of the shell, stationary collars encircling the shell and provided with an internal notch coincident with the slot of the shell, and also with a notch to engage the lugs on the latter, tumblers mounted upon the shell and likewise provided with a notch, a second head, a toothed bolt carried thereby, adapted to slide within the shell, and a bar or rod carried by the second head and adapted to fit into a recess in the first head, as set forth.

2. The head A, having slotted shell C, provided with lugs *c* and collars F, in combina-

tion with the head B, having toothed bolt D and bar E, and the tumblers G, all arranged as shown.

3. The herein-described lock, consisting of a head carrying a shell, slotted and provided with lugs, tumblers, and stationary collars encircling said shell, and a longitudinally-sliding head provided with a toothed bolt within the shell, and with a connecting-bar adapted to reach from one head to the other when the lock is closed.

4. In a lock such as described, the head B, provided with bolt D, having head or disk *b*, and shell C, provided with a stop-pin, *h*, to limit the movement of said disk.

5. The herein-described lock, consisting of head A, shell C, provided with lugs *c*, slot *a*, and set-screw *h*, head B, provided with bar E, toothed bolt D, and head or disk *b*, collars F, and tumblers G, all arranged as shown.

JOHN KUBLER.

Witnesses:

S. C. LAW,  
H. C. SAGE.