

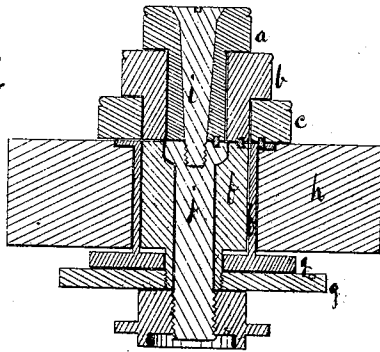
*J. G. Kittredge,*

*Permutation Lock.*

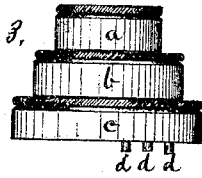
*No. 102,132.*

*Patented Apr. 19, 1870.*

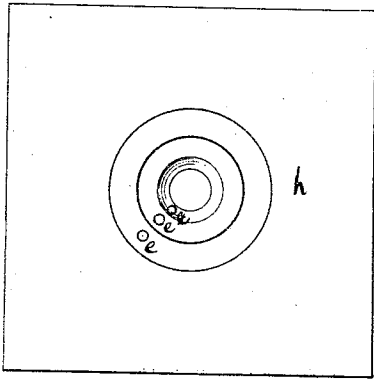
*Fig. 1.*



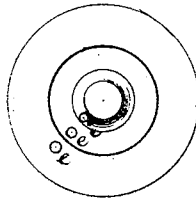
*Fig. 3.*



*Fig. 2.*



*Fig. 4.*



*Witnesses*

*L. E. Jones*  
*Robert Everett*

*Inventor*

*J. G. Kittredge*  
*by Atty. Tho. S. Conitt*

# United States Patent Office.

JOSEPH G. KITTREDGE, OF SAN FRANCISCO, CALIFORNIA.

Letters Patent No. 102,132, dated April 19, 1870.

## IMPROVEMENT IN KNOBS FOR SAFE-DOORS.

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, JOSEPH G. KITTREDGE, of the city of San Francisco, in the State of California, have invented a certain new and useful Improvement on the Arbor or Spindle of Locks and Detachable Knob for Doors; and I do hereby declare that the following is a full, clear and exact description of the same, reference being had to the drawing accompanying and forming part of this specification, and to the letters and marks thereon, which drawing represents my invention applied to the spindle of a lock—

Figure 1 being a view, by section, of the parts composing the invention.

Figure 2, a view of that part of the door to which the knob is attached;

Figure 3, a view of the knob detached; and

Figure 4, a face view of the outer end of the cylinders to which the knob is connected when in use.

In each of these figures like marks and letters are used to indicate like parts.

My invention has reference to that class of locks known as combination locks, more commonly applied to the doors of bank-vaults and safes, the bolt and tumblers of which are operated by a wrench or knob.

A lock patented to Mr. Wm. Bussey is of this character, and thus far my invention has been used in connection with this lock.

The drawing of this specification shows a knob composed of three pieces *a*, *b*, and *c*, the pins *d* of which, respectively, fit into holes *e* on the outer flange of the cylinders *f*, the interior end of each cylinder having a flange, *g*, which, in any suitable way, can be connected

to the tumblers of the lock. The outer ends of the cylinders may be flush with the surface or face of the door *h*, or may be within.

A screw, *i*, will serve to affix the knob to the head *j* of the spindle, which may be within, or which may be flush with the door, as shown in fig. 1, and in line with the outer ends of the cylinders. The ends of the cylinders and spindle, where exposed, will have been sufficiently hardened to resist the force of such tools as are generally employed by the burglar.

Now, it will readily be seen that, when the pieces *a b c*, forming the knob, are properly attached to the cylinders, and to the spindle or arbor of the lock, the bolt can be moved as usual when the knob or wrench is a permanent part of the lock; and that, when the knob is detached, the spindle or arbor cannot be moved or the lock successfully tampered with.

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

The detachable knob constructed of pieces *a b c* surrounding a central screw, *i*, to attach the knob to the spindle of the lock, and the flanges of the pieces having pins *d d d* to fit into holes *e e e* in the flanges of the cylinders, and operated substantially as herein recited.

This specification signed this 28th day of September, 1869.

JOSEPH G. KITTREDGE.

Witnesses:

C. W. KITTREDGE,  
GEO. S. KITTREDGE.