F. B. KALKBRENNER.

COMBINATION LOCK.

No. 108,360. Patented Oct. 18, 1870.

Fig. 1.

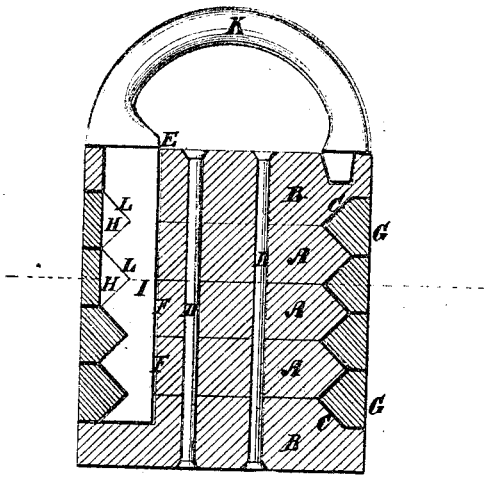
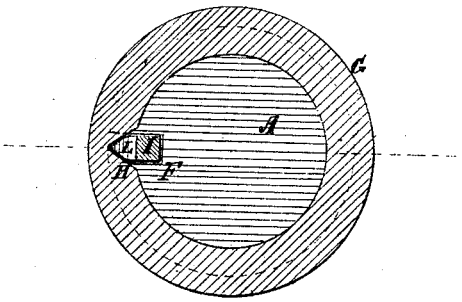


Fig. 2.



Witnesses.

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FRIEDERICH B. KALKBRENNER, OF CLINTON, MISSOURI.

Letters Patent No. 108,360, dated October 18, 1870.

IMPROVEMENT IN COMBINATION LOCKS.

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

To whom it may concern:

Be it known that I, FRIEDERICH B. KALKBRENNER, of Clinton, in the county of Henry and State of Missouri, have invented a new and improved Combination Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The purpose of my invention is to introduce to the public an improvement in the relative construction and adjustment of the parts of a permutation lock.

I will first describe my invention, in connection with all that is necessary to a full understanding thereof, and then clearly point it out in my claim.

Figure 1 is a sectional elevation of my improved lock, and

Figure 2 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts.

A represents three or more disks, of uniform diameter, having V-shaped faces; and

B represents end-disks, of larger diameter than the others, and with one beveled wall, C, formed to correspond in shape and size with the half of the face of the disk next to it.

All these disks are to be connected together by rods, D, or other equivalent devices.

One disk B has a mortise, E, through it, near the periphery, and the disks A have notches, F, across the face, which correspond with the mortise E; the other disk B has a mortise or notch part way through it, on the line of the mortise E.

G represents rings, having V-shaped inner faces, and suitably shaped to fit on the disks A, with the said faces in the grooves formed by the V-faces of the said disks, and to turn freely on them.

These rings have notches, H, across their inner faces, which, being placed to coincide with the notches F and the mortise E, will admit the bar I of the hasp K to be inserted in the socket formed by the said notches.

This bar has V-shaped notches, which will allow the rings to be turned when it is shoved home, and, the rings being turned so that the V-faces cross the bar in the notches thereof, lock the bar so that it cannot be drawn out.

The notches of all the rings must coincide with the notches of the disks before the bar can be drawn out, and this cannot be readily brought about without the aid of a knowledge of the figures on the peripheries of the rings, which indicate when they are so.

The rings G are put on as each disk A is applied, one after the other, the first disk A being applied to one end-disk B, and the other end-disk being applied after the last disk A. The whole are then secured by the rods D, or by other suitable means.

By this arrangement, the lock may be very cheaply constructed.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

In a permutation-lock, the V-shaped plates A, V-shaped rings G, and correspondingly-constructed disks B B, combined, and adjusted together as and for the purpose described.

FRIEDERICH B. KALKBRENNER.

Witnesses:

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