(Model.)

J. KUBLER.

PERMUTATION TRUNK LOCK.

No. 250,368. Patented Dec. 6, 1881.

Fig. 1.

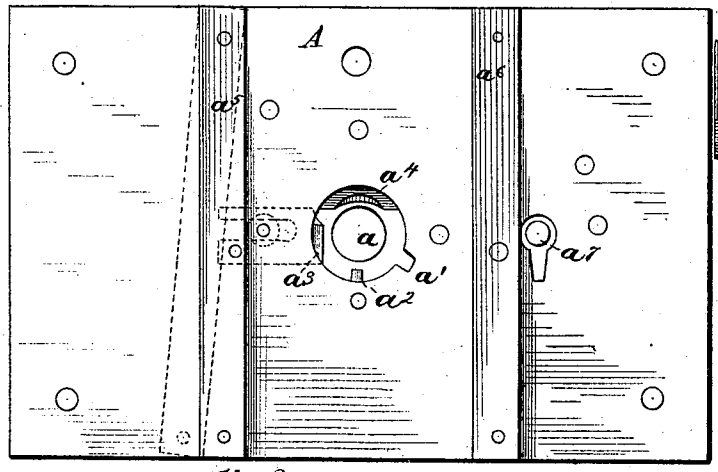


Fig. 2.

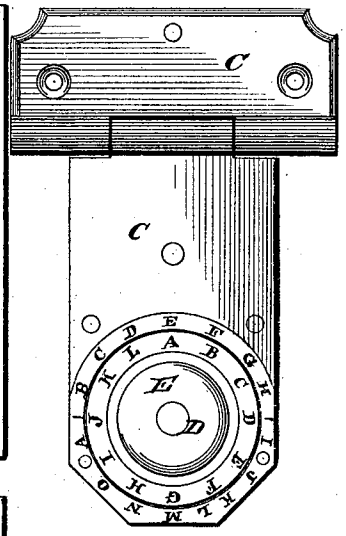


Fig. 3.

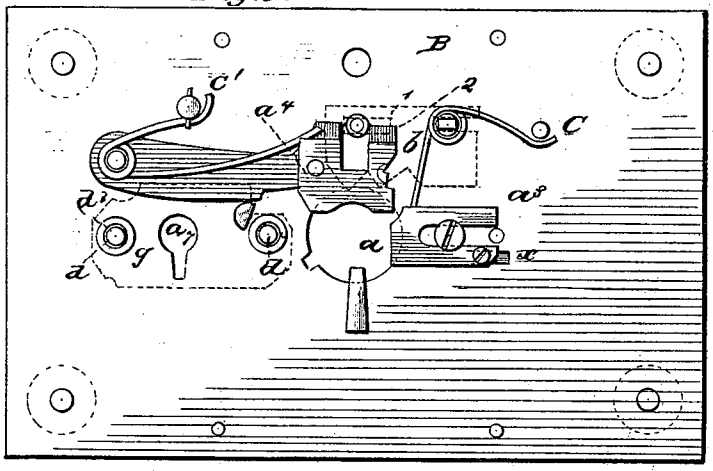


Fig. 4.

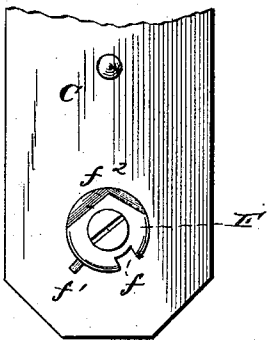


Fig. 5.

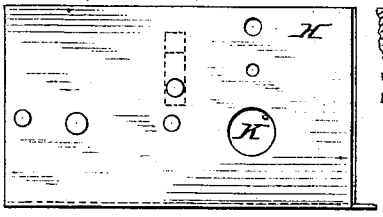


Fig. 6.

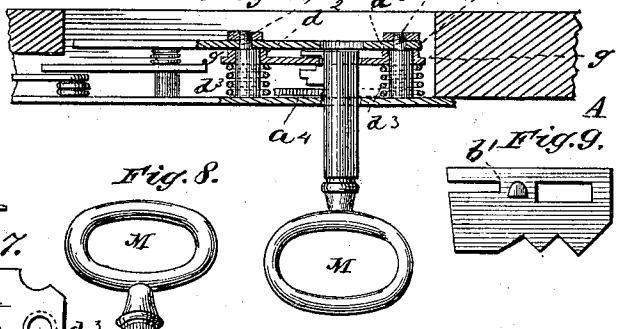
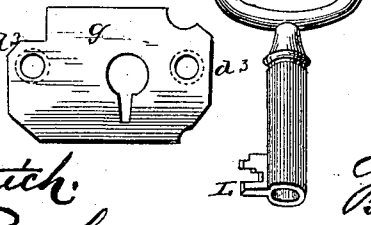


Fig. 9.

Fig. 8.

Fig. 7.



WITNESSES

Fred. L. Dieterich.

P. C. Dieterich.

INVENTOR

John Kubler

By F. S. Duffie

Attorney

UNITED STATES PATENT OFFICE.

JOHN KUBLER, OF HOT SPRINGS, ARKANSAS.

PERMUTATION TRUNK-LOCK.

SPECIFICATION forming part of Letters Patent No. 250,368, dated December 6, 1881.

Application filed October 10, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOHN KUBLER, a citizen of the United States, residing at Hot Springs, in the county of Garland and State of Arkansas, have invented certain new and useful Improvements in Combination Trunk-Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in combination-locks which are especially adapted to locks for trunks, though applicable to desks, safes, and the like; and it consists in the construction and novel arrangement of parts hereinafter fully shown and described.

The object of my improvement is to secure in a cheap and simple form a lock adapted to convenient and extensive use, and difficult, if not impossible, to pick, to those unacquainted with its mechanism, and at the same time easily and quickly opened by those who know its combinations.

Figures 1 and 2 are plan views of the front part of the lock and hasp. Figs. 3 and 4 are plan views of the reverse side of the lock and hasp. Fig. 5 is a face view of the covering-plate used to cover and protect the mechanism of the lock. Fig. 6 is a transverse section of the lock. Figs. 7, 8, and 9 are details of the same.

In the accompanying drawings, the letter A represents the front plate, to which the mechanism of the lock is attached. B represents the reverse side of the same, showing the mechanism in detail.

C represents the hasp, with a lettered face and disk having corresponding letters.

D represents a shaft journaled in lower end of hasp C, and having knob E rigidly secured on its outer end, and knob F rigidly secured on its inner end, but leaving a space between the inner knob and the face of the hasp. Knob F is provided with a recess, f, finger f', and beveled segments f^2.

a represents an opening in plate A, having slot a' and lug a^2.

a^3 and a^4 represent the beveled ends of bolts a^3 and a^4. (Shown in Fig. 3.)

a^5 and a^6 represent two braces, ostensibly to strengthen plate A, but in fact to conceal the secret use to which brace a^5 is put. Brace a^5 is pivoted at its upper end to plate A, and at its center to bolt a^3 by means of a rivet or screw, which passes through slot x, cut in plate A, and when pressed to the left, as shown by the dotted lines, withdraws the bolt from opening a.

a^7 is the key-hole in plate A.

In Fig. 3 the dotted lines represent plate b, (shown by Fig. 9,) having lug b' on its under side, and is used to lock bolt a^4. a^3 represents the bolt that is secured to brace a^5 by rivet x, and is kept in place by a spring, c. a^4 represents the bolt which is operated by the key M, Fig. 8, and is kept down to its place by spring c'.

The dotted lines g, Fig. 3, represent a plate mounted on two pins, d d, (more fully shown in Fig. 6,) which is held up about one-eighth of an inch from the covering-plate H by feet d^2 d^2, and down about one-fourth of an inch from plate A by means of spiral springs d^3 d^3. When the key M is inserted into key-hole a^7 it passes through this plate g until the lower end of the key rests on covering-plate H, which has a key-stud k, on which the key works. When the plate is in this position the key may be turned freely without moving any of the mechanism of the lock, the plate g working in slot L of the bit of the key.

To lock the hasp, knob F is turned by means of knob E on shaft D until slot f and finger f' coincide with slot a' and lug a^2 on plate A; and as the knob F is pressed through opening a, plate A, the two beveled segments f^2 engage the beveled ends of bolts a^3 and a^4, pushing them back, allowing the knob to pass into the lock, when the bolts are immediately returned to their places and into the space between the face of hasp C and knob F by means of springs c and c', and thus prevent the knob from being withdrawn until the bolts are first withdrawn. As an additional security knob F is turned until its finger f' engages the notches in plate b, pushing the same to the right until lug b' is brought over the upper end of bolt a^4 at point 1, locking it in place.

To open the lock, knob G is turned to the left until lug b', plate b, reaches space 2 and the bolt is unlocked. Now insert the key, turn it one-fourth round to the right; now plate g is embraced in slot L; now give it a sharp pull until the upper edge of the lever of the key comes up flat against plate A; now turn the key another one-fourth round to the right. By this last movement the key engages bolt a^4 and withdraws it from opening a. Let the key stand in this position to hold the bolt back; now push brace a^5 to the left, which withdraws bolt a^3. Knob E may now be turned to a certain point (indicated by the letters on the dial and face of the hasp) and withdrawn.

The letters on the face of the hasp and dial are to indicate to the operator at what points bolt a^4 is locked and unlocked, and at what point the knob may be withdrawn from opening a. By changing the lettering on the hasp or the position of the dial new and different starting-points may be made for each different lock.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with plate A, of brace a^5, pivoted to said plate at its upper end, bolt a^3, spring c, inner knob, F, rigidly secured on and operated by shaft D, substantially as shown and described.

2. The combination of knob F, having finger f', and operated by knob E and shaft D, with plate b, having lug b' and bolt a^4, held in position by spring c', substantially as shown and described.

3. The combination, with plates A and H, of key M, plate g, working on posts d d, springs d^3 d^3, bolt a^4, and spring c', substantially as shown and described.

4. The combination of hasp C, having lettered face and dial, and shaft D, journaled in its lower end, having rigidly secured on its outer end knob E and on its inner end knob F, having slot f and finger f', with plate A, having on its face braces a^5 and a^6, and in its center opening, a, slot a' and lug a^2, and on its reverse side plate, g, mounted on post d d, bolts a^3 and a^4, and springs c and c', all substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN KUBLER.

Witnesses:
GEO. TOWNSEND,
D. E. HIRSHFIELD.