I. RAMSEY.

LOCKS FOR TRUNKS, &c.

No. 185,781. Patented Dec. 26, 1876.

Fig. 1

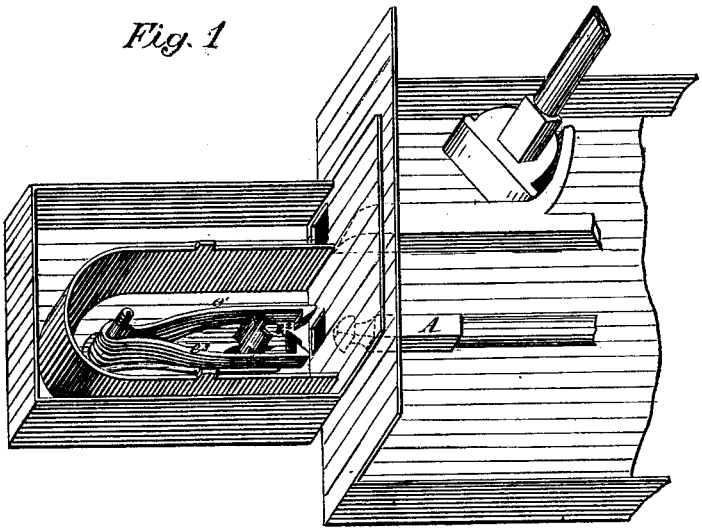


Fig. 2

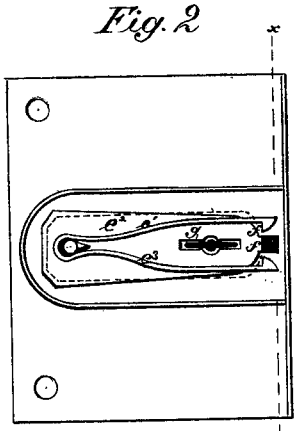


Fig. 3.

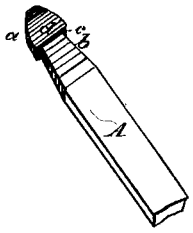


Fig. 4.

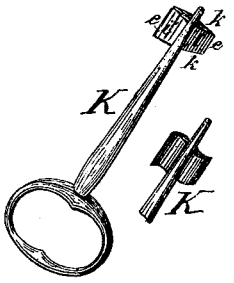
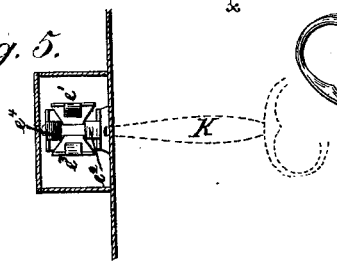


Fig. 5.



Attest:

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THE GRAPHIC CO. N.Y.

UNITED STATES PATENT OFFICE.

ISAAC RAMSEY, OF CAMPBELLSVILLE, KENTUCKY.

IMPROVEMENT IN LOCKS FOR TRUNKS, &c.

Specification forming part of Letters Patent No. **185,781**, dated December 26, 1876; application filed June 24, 1876.

To all whom it may concern:

Be it known that I, ISAAC RAMSEY, of Campbellsville, in the county of Taylor, and State of Kentucky, have invented certain new and useful Improvements in Locks; 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 which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of a door-lock having my improvement, the top or covering plate being removed. Fig. 2 is a plan view of my invention as adapted to a chest-lock. Fig. 3 is the bolt detached. Fig. 4 is the key used in combination with my improved lock, and Fig. 5 is a section after the line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to the improved construction of bolts for door and other locks, and to the correspondingly-improved construction of the lock itself, and the key for operating it, all as hereinafter more fully shown and described.

The nature of my invention consists in having a peculiarly-shaped square bolt, which, when the device is locked, is acted upon and kept in place by four separate springs or catches, the opening or unlocking being effected by a single one-fourth turn of the key constructed for the purpose.

In the drawing, A is the bolt. This is a square rod, filed to a blunt point at one end, as shown at *a*, so as to readily separate the four springs, between which it is to enter. Above the point *a* it has, on each side, a notch or groove, *b*, the abrupt side or shoulder of which, *c*, is at the lower side, nearest the point. A knob, *d*, is thus formed at the end of the bolt.

e^1, e^2, e^3, and e^4 are four curved springs or catches, placed inside the lock at right angles to each other, as shown. The ends of these springs have notches *f*, forming catches, that engage with the bolt A when it is inserted between them. The uppermost of these springs, e^1, has a slot, *g*, through which the key enters when it is desired to unfasten the bolt. The key K, used in combination with my improved lock, is shown in Fig. 4. It has a double bit, $i\,i^1$, forming an irregular square, two sides of which, *e e*, are parallel, while the others, *k k*, are converging.

When the key is inserted into the lock, the broad side of the double bit is turned downward, as shown in the drawing, Fig. 1. It is inserted with a slight pressure, thus forcing the lower (or rear) spring e^3 backward, and enabling the key to be turned. The side springs e^2 e^4 are thus forced sidewise by the double bit, while the broadest side, i^1, of the double bit at the same time forces the upper and lower springs e^1 e^3 backward and forward, respectively, thus enabling the bolt A, which has been previously inserted between the springs, to be released.

In door and other locks where it is necessary that the lock should be so arranged as to be opened from either side, a slightly-different form of key (shown at K, Fig. 5,) is required. Instead of having a straight or flat bit, it is curved or S-shaped, this being necessary in order to prevent it from entering too far into the lock, (through the perforation in the bottom spring,) when it would be impossible to turn it. It is obvious that the bit may be filed down in any suitable shape, to suit the accordingly-constructed springs, as is the case with locks of the ordinary description.

The detailed construction and arrangement of my invention may be greatly varied to suit the various applications to be made of it. Thus, in door-locks, the bolt A may be arranged with a coiled spring, so as to cause it to spring back automatically when released from the springs or catches e^1 e^2 e^3 e^4. It may be applied with equal advantage to locks of all descriptions, it being cheap, easily operated, and easily made burglar-proof.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a lock, the combination of four spring-catches, e^1 e^2 e^3 e^4, placed at right angles to each other, so as to admit of the insertion between them of the bolt A, and arranged to be

operated simultaneously by one key, substantially as and for the purpose herein shown and specified.

2. In combination with a lock constructed substantially as herein described, the key K, constructed as shown, with the double bit $i\ i^1$, the converging si es of which, $k\ k$, form the front and back, while its parallel sides, $e\ e$, form the right and left side, thus adapting it to operate the four springs $e^1\ e^2\ e^3\ e^4$ simultaneously by a one-fourth turn of the key, substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ISAAC RAMSEY.

Witnesses:

ALFRED F. GOWDY,

ISAAC LEET.