

B. F. Roberts,

Latch.

No. 111,005.

Patented Jan. 19, 1871.

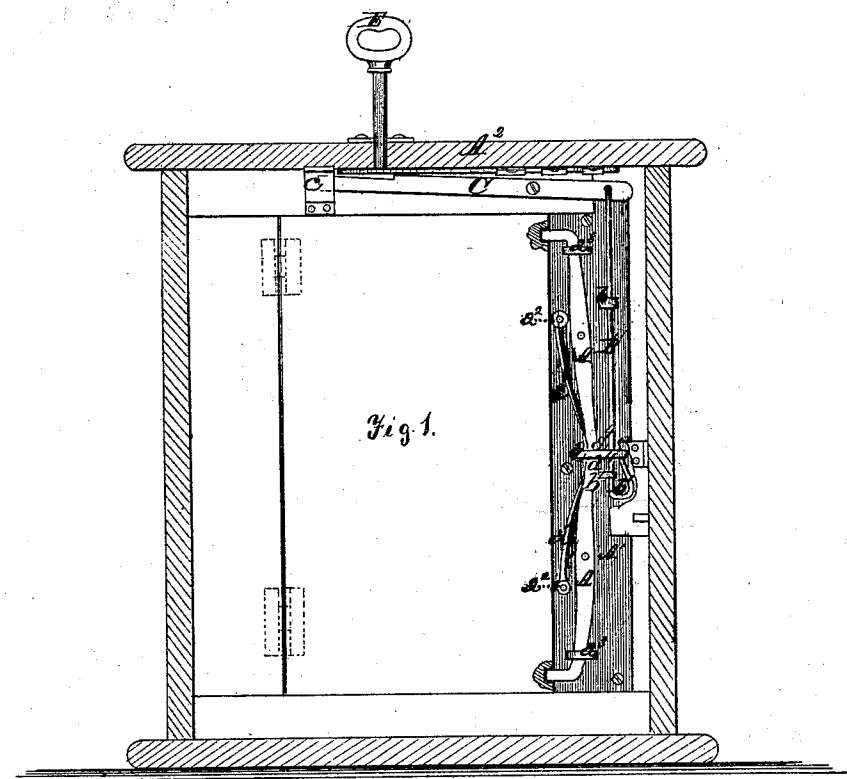
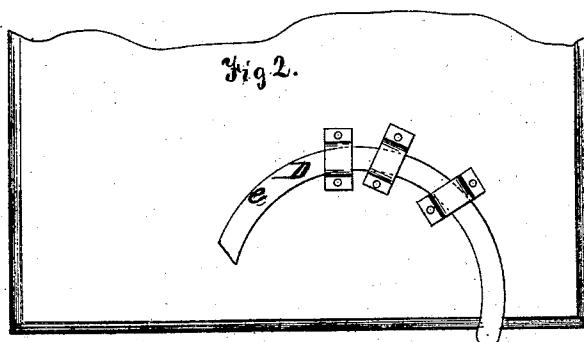


Fig. 2.



Witnesses.

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BENJAMIN F. ROBERTS, OF LA CONA, IOWA.

Letters Patent No. 111,005, dated January 17, 1871.

IMPROVEMENT IN LOCKS FOR DOORS, &c.

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, BENJAMIN F. ROBERTS, of Lacona, in the county of Warren and State of Iowa, have invented certain new and useful Improvements in Locks; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawing forming a part of the same, and in which—

Figure 1 represents a view, taken in a vertical central section through a casing or chest, to the inner side of which my lock is attached, exhibiting the construction and arrangement of the constituent parts of the latter; and

Figure 2 is a view of the under side of a portion of the top of the said casing or safe, exhibiting a device, attached thereto, which is used in connection with the lock for assisting in operating it, a key being applied to said device in operating it.

This invention relates to certain improvements in locks, and consists in the employment of bolts or bars, pivoted at or near their centers, and having their outer ends bent at right angles to their main portions, while their inner ends are made to come in contact with each other, and confined by means of a guide or clip, within which they are allowed to slide back and forth when the outer ends are thrown in or out, locking or unlocking the door, the said bolts having the desired tension or spring imparted to them by means of flat-spring metal bars, and operated by a rod, the lower or looped end of which being properly held in place and entering guide or clip containing the inner ends of the said bars or bolts, against which it presses when operated, and the upper end thereof connected to a right-angular pivoted bar, which is depressed, when it is desired to unlock the door, by means of a semicircular device, arranged and operated as hereinafter described.

Similar letters of reference in the several figures of the accompanying drawing indicate corresponding parts of my invention.

In the said drawing—

A A represent two bars or bolts, pivoted at their centers, or thereabout, to the metal plate A¹, screwed or otherwise secured to the inner side of casing or safe A², and having their outer ends, or that portion of them forming bolts and which enter openings in the door of the said casing for locking it, bent at right angles to their main or slightly-curved portions, the inner ends of said bars being made to come in contact with each other, and confined by means of a clip or guide, a, within which they slide back and forth when the said bars are operated.

a¹ a¹ designate two thin metal springs for the bars

or bolts A A, against the inner ends of which their free ends press, their opposite ends being secured at the point a² a² on plate A¹ of the casing. These springs a¹ a¹ are for the purpose of throwing the bolt-ends of the bars A A out, so as to cause said bolts to enter the receptacles or openings made in the door for their reception.

a³ a³ are clips or staples, embracing or retaining in place the bars A A, at or near the point where they are bent at right angles, and of sufficient size to allow the said bars to have the necessary lateral movement when operated.

B is a vertical rod, held in place on the plate A¹ by means of the elongated staples b b, and formed at its lower end with the triangular-shaped loop b', the inclined portion of which being made to come in contact with the staple or clip a, through which it passes while being operated or raised and lowered.

The upper end of the said rod is loosely attached to one end of a pivoted transverse bar, C.

It will be noticed that, when the rod B is raised, the inclined portion of its loop will come in contact with the staple a, embracing and within which slide the inner ends of bars A, having shoulders a⁴ a⁴, and cause the said rod, as it ascends, to have a side or lateral movement, consequently imparting a similar motion to the bars A, it being so arranged in relation to the said bars as to strike against the shoulders a⁴ a⁴ thereof when operated, as will be seen from the foregoing, thereby causing the inner portions of the said bars to be thrown out or against the staple a, and their outer ends or bolts in, relieving the latter from the door and allowing it to swing open, or be opened without further trouble.

The metal bar C, above alluded to, is reduced at its free end, and enters a staple or clip, c, secured to the casing or safe A².

D is a semicircular-shaped metal plate, sliding in metal clips or staples secured to the under side of the top of the casing A, as seen in fig. 2.

One end of the said plate D is designed to rest on the reduced end of the bar C, so that, when it is depressed by the key or crank E, it will depress the said bar, and it, in turn, elevate the rod B, which will, as above stated, perform the operation of unlocking the door.

The crank or key E is inserted in the opening e, indicated in dotted lines in the top of the casing.

When it is desired to lock the safe, all that is necessary is to merely close the door thereof, withdraw the semicircular plate D, when the safe is locked, and access to the lock will be entirely cut off, the key or crank-hole being located some distance from the point

of contact with the unlocking-bar C of the lock; hence it will be seen that, without the bar or plate D, the lock cannot be operated upon.

Having thus described my invention,

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

1. The pivoted bars or bolts A A, staples $a a^3 a^3$, springs $a^1 a^1$, vertically and laterally-sliding connecting-rod B b', staples b b, and pivoted transverse bar C, constructed and arranged to operate substantially as shown, and for the purpose specified.

2. In combination with the above-enumerated parts, the circular plate D and crank or key E, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of November, 1870, in the presence of two subscribing witnesses.

BENJAMIN F. ROBERTS.

Witnesses:

WILLIAM P. LEE,
E. A. SMITH.