E. M. Hendrickson,

Lock and Key.

No. 14,958. Patented May 27, 1856.

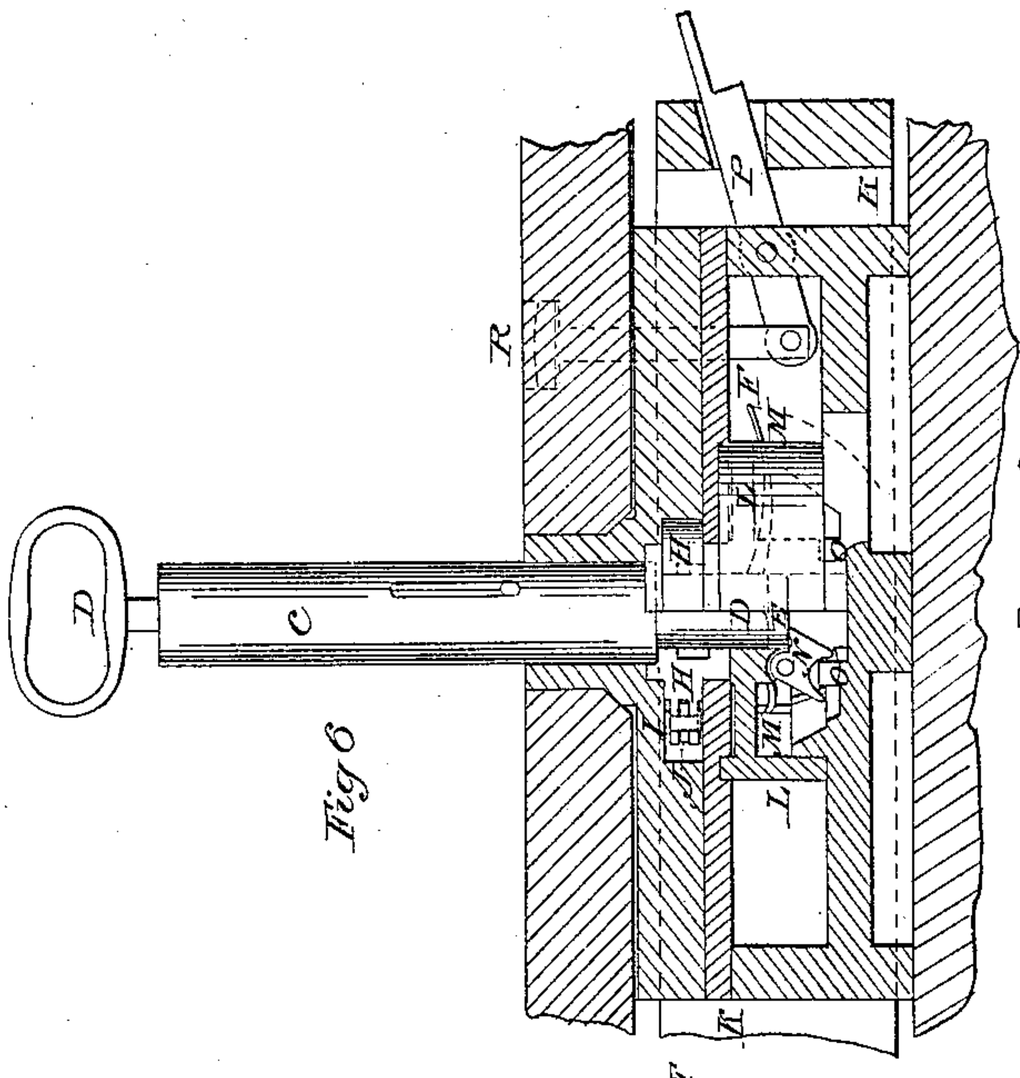

Fig 6

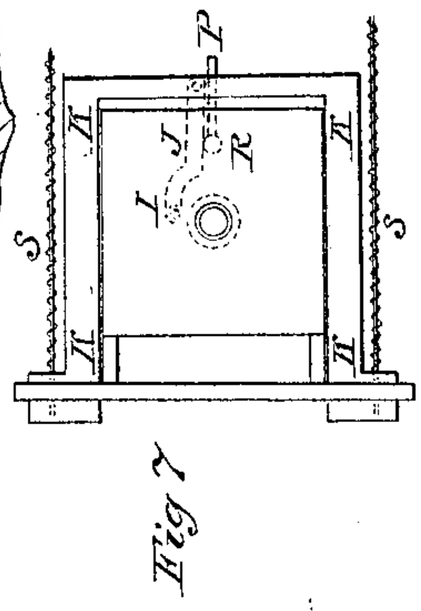

Fig 7

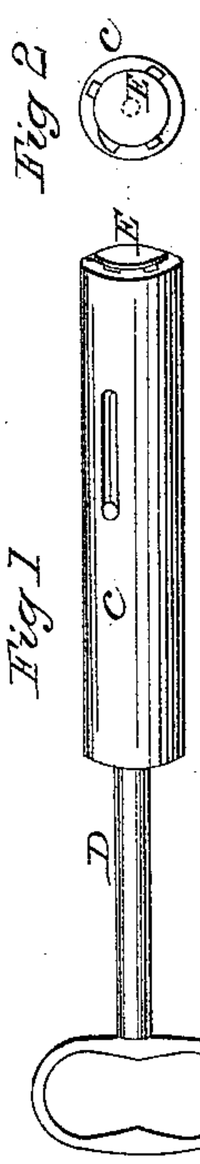

Fig 2

Fig 1

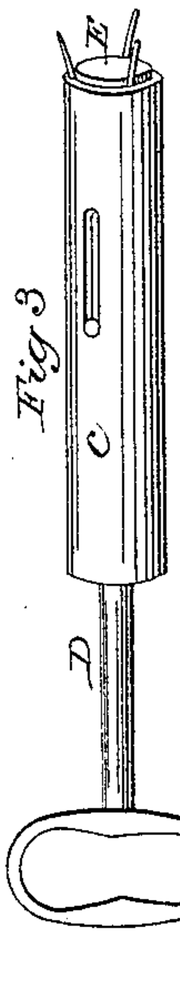

Fig 3

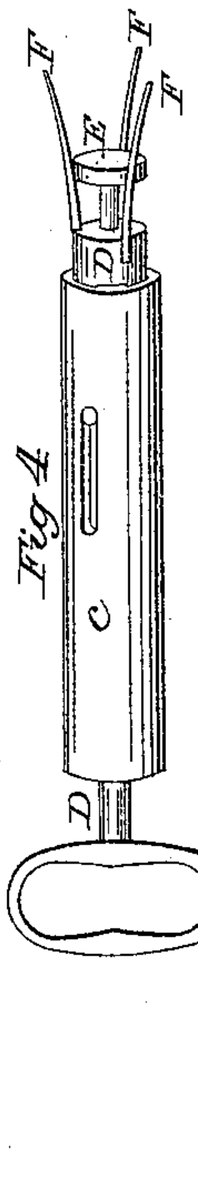

Fig 4

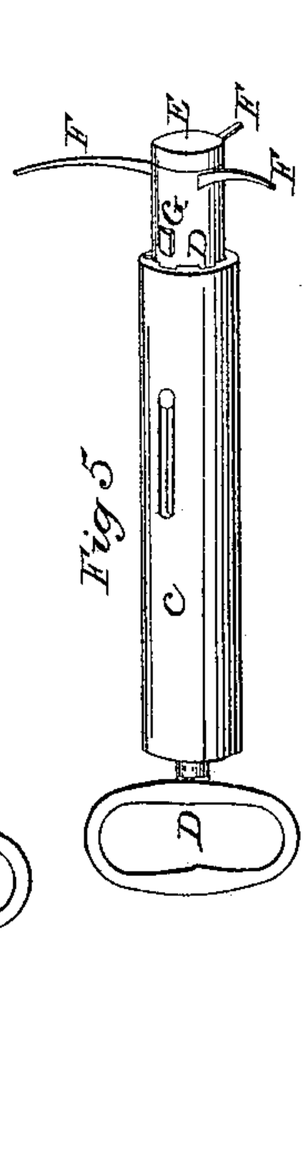

Fig 5

Inventor:
E M Hendrickson

UNITED STATES PATENT OFFICE.

EZEKIEL M. HENDRICKSON, OF BROOKLYN, NEW YORK.

LOCK AND KEY.

Specification of Letters Patent No. 14,958, dated May 27, 1856.

To all whom it may concern:

Be it known that I, EZEKIEL M. HENDRICKSON, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Keys and in Locks Corresponding Thereto, the whole being designed especially for banks and safes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view of the key with the handle extended; Fig. 2, an end view of the same; Fig. 3, the same key with the handle slightly thrust in; Fig. 4, the same key with the handle still farther thrust in, and Fig. 5, the same with the handle thrust in to the greatest possible extent. Fig. 6 represents all the novel parts of the lock,—the tinted portions being a section in a plane at right angles to the bolts, while the portions outlined in red represent a part of a section at right angles to the first. Fig. 7 represents on a smaller scale the relative positions of the central portion and the bolts.

The same letters indicate like parts in all the drawings.

The invention consists in a peculiar construction of the key whereby it spontaneously extends slender arms, and, in unlocking, simultaneously works certain levers all or either of which levers would otherwise detain the bolt. It also includes a peculiar method of locking which is essential to its operation.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

There is a hollow case, C, within which the handle D and the stem E are free to move endwise to certain extents. There are levers or movable arms, F, F, hinged to the end of D which arms are concealed entirely in Fig. 1 and pulley extended in Figs. 5 and 6.

G is a stout projection fixed on D, the office of which is to turn the collar, H, when all the other parts are in their right positions. The collar, H, carries an arm, I, which arm is connected by a link, J, to the cross piece forming part of the bolts, K, K. A groove is cut as represented in the interior of the collar H. In this groove the projection G revolves freely for a portion of a revolution and then meeting the end of the groove commences to move the collar.

The cylinder L is provided with a suitable number of slots or slits, M, properly distributed about its circumference and running parallel to its axis. Into these slits the arms F voluntarily extend themselves so soon as the key is properly thrust into the keyhole, and compel the cylinder to revolve with the key. A number of levers N are suspended in the interior of this cylinder and held in position by slight springs, not represented. These levers are so situated in relation to projections, O, in the fixed back of the lock that unless moved by the pressure of the stem E precisely to a certain extent as represented the revolution of L will be prevented. These levers may all be made in different forms and the corresponding end of the stem E may be varied to suit.

The bolts K K have recesses in their sides, not represented, into which when locked smaller bolts levers or catches are pressed by slight springs. Motion of the bolts K K, is therefore impossible except all these catches are removed at the same moment. The drawings suppose the existence of three such catches (not represented) so situated as to be touched and removed simultaneously by the respective extremities of the arms F.

I provide the keyhole with a longitudinal groove, not represented, and construct the case G with a corresponding projection to guide the key on entering. The arms F may be made to stand at different angles with the axis of the key, or may be of different lengths, or again may be disposed at unequal distances about the circumference with either of which arrangements it follows that the catches are not simultaneously withdrawn until the key has nearly completed a revolution, at which instant the collar H receives motion from the projection G and by means of the link J throws back the bolts. The operation of unlocking therefore consists in inserting the key and turning it around.

The lever P actuated by a slight spring (not represented) stands, ready to hold back the bolts K, K, until released by some force from without. The operation of locking consists simply in pressing gently upon the flush knob R. This pressure, acting

through the stem represented, detaches P and allows the bolts, which are impelled by the constant pressure of the spiral springs S, S, to leap forward into the position represented.

I do not claim the employment of one or more jointed arms on a key, such being the construction of what is known as "the night latch," but

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

1. The construction and use of the key above described which spontaneously projects slender arms F through a revolving cylinder L for the purpose of simultaneously detaching catches from the bolts, and

2. The combination of the key hereinbefore described, or the mechanical equivalent thereof, with the revolving cylinder L, the check-levers N, the locking lever P and the springs S, S, substantially as described and for the purposes set forth.

E. M. HENDRICKSON.

Witnesses:

THOMAS D. STETSON,

DARIUS MEAD.