

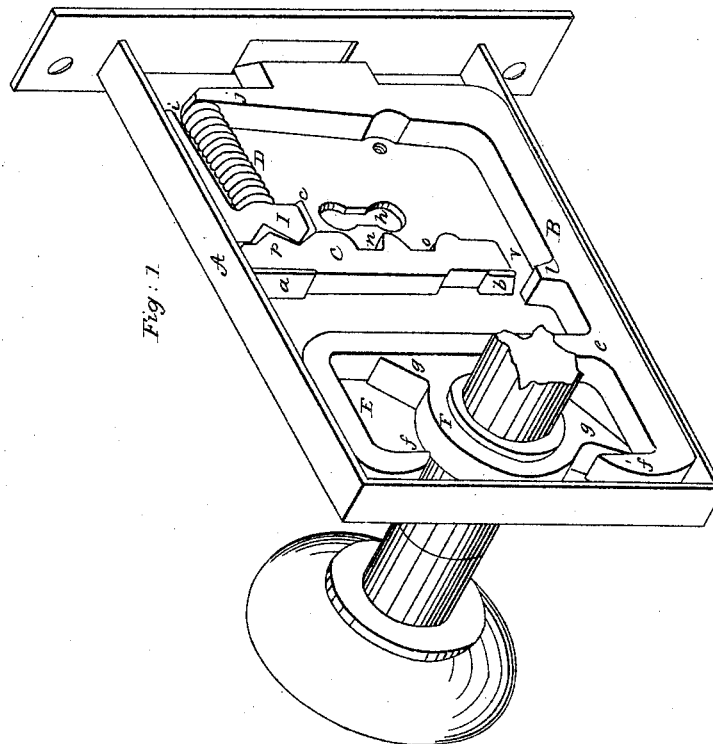
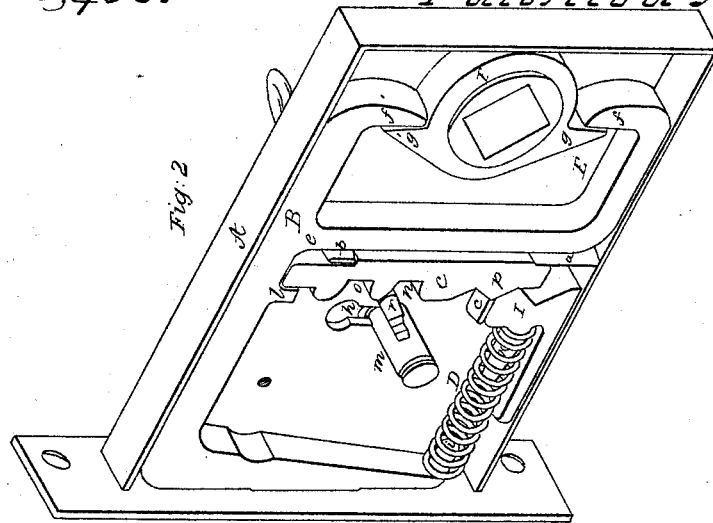
2 Sheets. Sheet 1.

Livingston, Roggen & Adams,

Latch.

N^o 6,409.

Patented May 1, 1849.



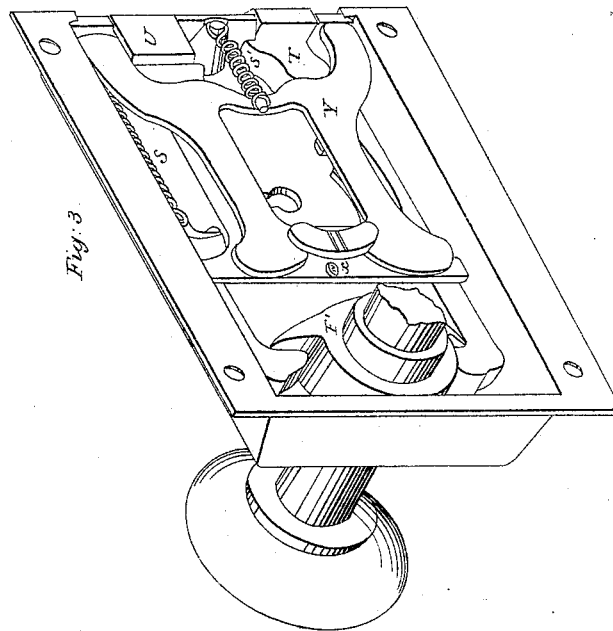
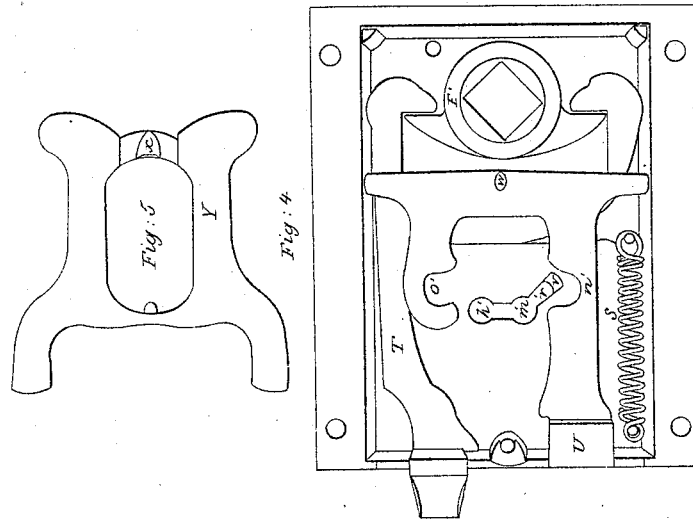
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UNITED STATES PATENT OFFICE.

LAURESTON R. LIVINGSTON, JOHN JAY ROGGEN, AND CALVIN ADAMS, OF PITTSBURGH, PENNSYLVANIA.

RIGHT OR LEFT HAND LOCK.

Specification of Letters Patent No. 6,409, dated May 1, 1849.

To all whom it may concern:

Be it known that we, LAURESTON R. LIVINGSTON, JOHN JAY ROGGEN, and CALVIN ADAMS, of the city of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Door-Locks; and we do hereby declare that the following is a full, clear, and exact description of our said invention, reference being had to the accompanying drawings, which form a part of this specification.

The principle of our invention is that of constructing a lock in such a manner as to allow of its being used equally well on a door opening either to the right or the left hand, and of being in both cases locked and unlocked by the key inserted in the keyhole with its wing downward.

Our modes of accomplishing this object vary according to the number and arrangement of the bolts or latches which we desire to insert in our locks.

In Figures 1 and 2 is represented a mortise lock with the catch or latch serving also as a locking bolt; and in Figs. 3, 4 and 5 is represented an outside lock, having the bolt for locking the door, a separate piece from the latch. In both cases the principle above stated is carried out in the following ways.

In Figs. 1 and 2 are seen perspective views of the interior of the mortise lock in which A is the frame containing the movable parts of the works. This frame is a plain rectangular box which we usually form of a single casting except the lid. It has three small flanges *a b* and *c*, projecting outward from the inner side, to the extent of the thickness of the lock, and against these work the several parts constituting the movable machinery of the lock.

B is the bolt having an arm E bent twice at right angles, and two projections *f* and *f'* adapted to receive the pressure of the two wings *g* and *g'* on the tumbler F. Through this tumbler passes the square shank of the knob H.

At the forward part of the bolt B, is a point *i* extending backward from the arm *j*, and entering the coiled spring D, which, when the latch is drawn back, by turning in either direction the tumbler F, by its recoil tends again to push forward and close the latch. The opposite end of the same coiled spring is entered by another point *k*, formed

on a notched sliding piece I. This sliding piece is held in position by the sides of the box A and the small flanch *c*.

C is a sliding bolt in Fig. 1 intended to obstruct the movements of the latch bolt B. When the bolt C, is drawn into the position seen in that figure, the projection *l* on the bolt B is allowed to pass and repass freely by the lower end of C, in obedience to the movements of F.

In Fig. 2 the bolt C sliding against *a* and *b* has dropped into the notch between *l* and *e* and prevents the drawing back of B, by the revolving of F. In this position the door is locked.

The keyhole *h* has a similar portion of a circle at each end, and a straight part between them, so that the stem of the key may be inserted into either end of the keyhole.

If the stem be inserted in the upper end of the keyhole Fig. 1, the wing applies its pressure to the sides of the notch *n* in order to move the bolt C; if it be inserted in the lower end of the hole the wing passes into the notch *o*. As in Fig. 2 the lock is seen in a reversed position, the stem of the key *m* when inserted in the lower end of the keyhole *h*, will allow the wing *r* to pass into the notch *n*, and when into the upper end, to apply to the notch *o*.

In the lock adapted to be fastened on the outside of a door, our principle is exemplified by reference to Figs. 3, 4 and 5.

The bolt T is moved by the tumbler F without reference to the position of the locking bolt U. The latch-bolt is in this case drawn forward and kept projecting beyond the edge of the door by the spring *s'* acting by tension and not, as in the other case, by compression.

The bolt U alone is acted on by the key-*m'* Fig. 4, inserted into either end of the keyhole *h'*, so as in turning around to carry the wing *v* either into the notch *n'* or into *o'*. On the rear cross-piece of the bolt U is a projecting pin *w* serving as a stop to prevent the bolt being pushed backward when thrust out by the key. This stopping is effected by means of a corresponding projection *x* on the swinging stop Y Figs. 3 and 5, which projection is wedge-shaped posteriorly and has a concavity on its anterior side to receive the edge of the pin *w*, when brought and held against it by the spring *s'*. A projection *r* on the wing of the key *m'* is

intended to move the swinging stop Y upward or downward, prior to moving the bolt U. This movement allows the pin *w* to pass by the projection *x* which had previously
5 confined it, and kept the door locked.

An important advantage which we obtain by the above described improvement is that of being able to place the same lock on a door opening either to the right or the left
10 hand, and in either case being able to lock and unlock the door by inserting the key into the keyhole with the wing downward.

What we claim as our invention and desire to secure by Letters Patent is—

15 The constructing a door lock in such a

manner as to allow of its being used equally well on a door opening either to the right or to the left hand by means of a key-hole that will admit a key within the lock in reversed positions, in combination with such
20 an arrangement of the movements of the lock as will enable the key to operate the same tumbler and bolt in which ever position it may be inserted within the key-hole.

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Witnesses:

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