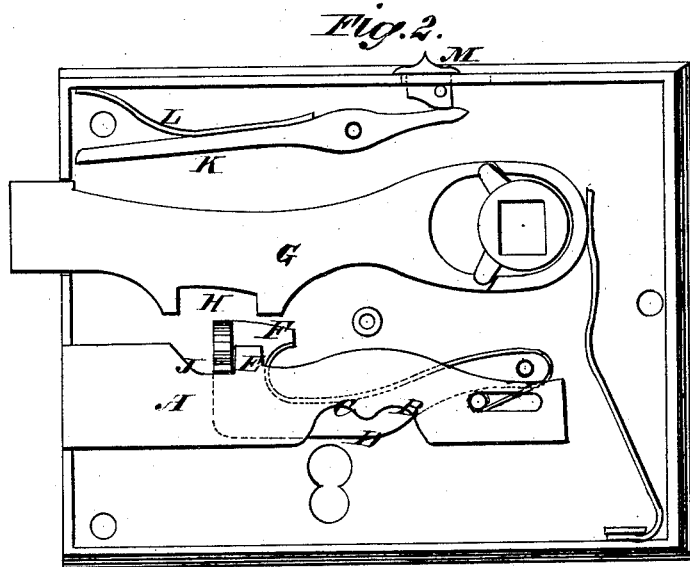
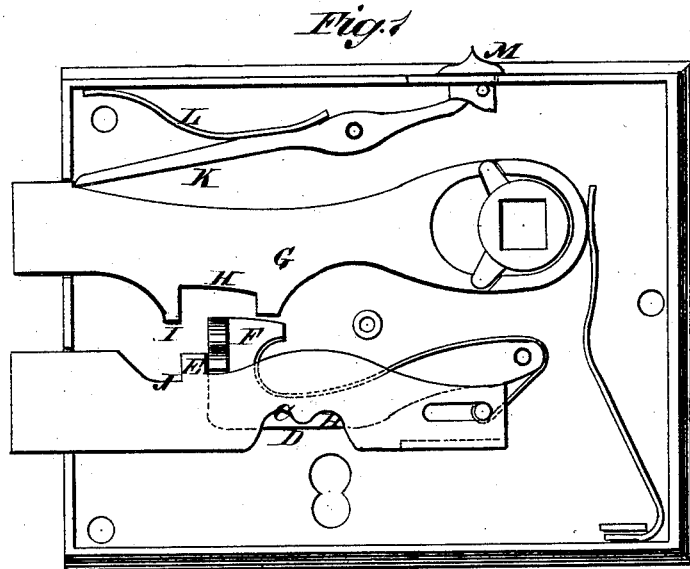


J. F. COOPER.

Combined Knob-Latch and Lock.

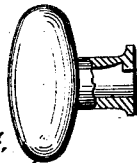
No. 168,377.

Patented Oct. 5, 1875.



WITNESSES:

Francis McCully,
Alex. J. Roberts.



INVENTOR:

J. F. Cooper
BY *Mumford*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES F. COOPER, OF SYRACUSE, OHIO.

IMPROVEMENT IN COMBINED KNOB-LATCHES AND LOCKS.

Specification forming part of Letters Patent No. **168,377**, dated October 5, 1875; application filed August 14, 1875.

To all whom it may concern:

Be it known that I, JAMES F. COOPER, of Syracuse, in the county of Meigs and State of Ohio, have invented a new and Improved Lock, of which the following is a specification:

The invention consists in the combination of a key-bolt, latch-bolt, and tumbler, which are so constructed and relatively arranged that the key-bolt is fastened by the latch-bolt and tumbler, while the entire withdrawal of the latch-bolt is prevented by the said tumbler.

Figure 1 is an elevation of the lock with one side of the case removed, showing both bolts shot. Fig. 2 is an elevation, showing the key-bolt withdrawn.

Similar letters of reference indicate corresponding parts.

A is the key-bolt, having two notches, B and C, for the key, contrived to make the bolt throw half-way by each turn of the key. D is the tumbler, which locks the bolt by falling behind the stud E. It has an extension, F,

under the latch-bolt G, so contrived that the latch-bolt prevents the rising of it unless the notch H permits by being shifted over it by partly throwing the latch-bolt back by the knob. At the same time the projection I of the latch-bolt prevents the latter from being withdrawn until the key-bolt is drawn back, so that the tumbler D falls into the notch J, which lets the tumbler fall lower than said projection. A pawl, K, and spring L locks the latch-bolt, and the slide M in the upper part of the case unlocks it.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of key-bolt A, having stud E and notch J, tumbler D, having projection F, and latch-bolt G, having notch H, all substantially as specified.

JAMES FRANKLIN COOPER.

Witnesses:

DAVID W. CURTIS,
THOMAS L. KINNEY.