

(No Model.)

J. McLANE.
COMBINATION LOCK.

No. 458,404.

Patented Aug. 25, 1891.

Fig. 1.

Fig. 2.

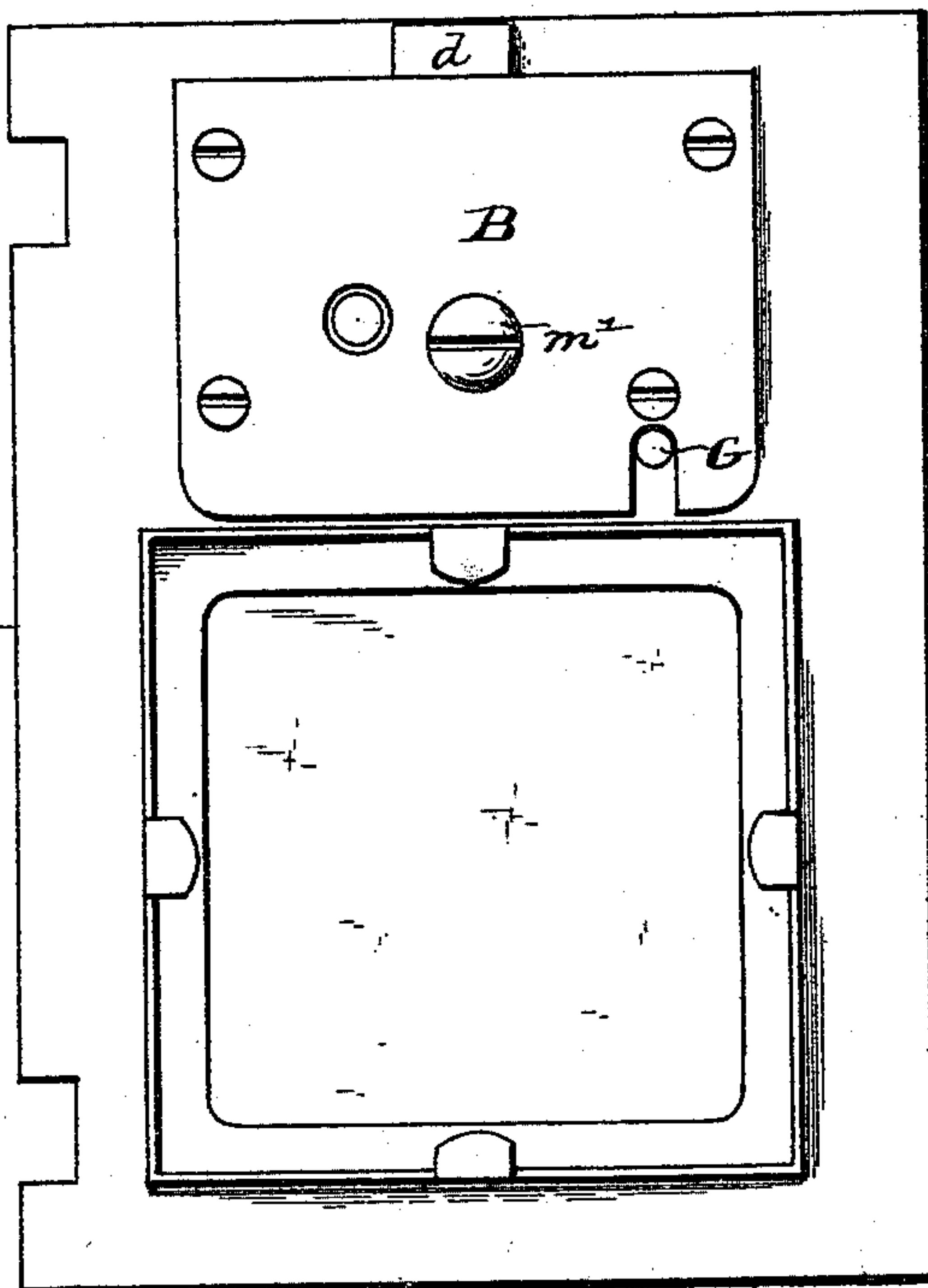
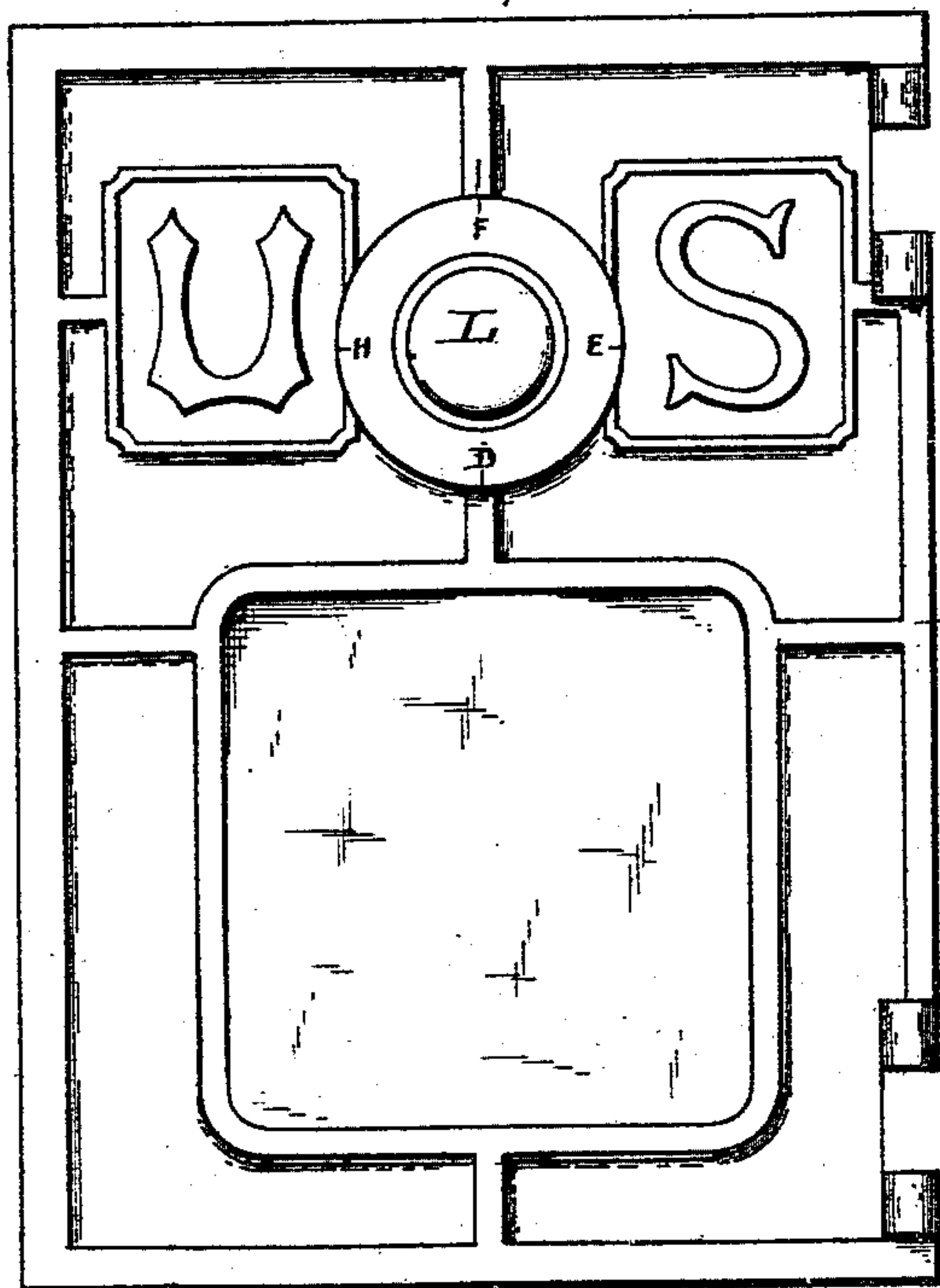
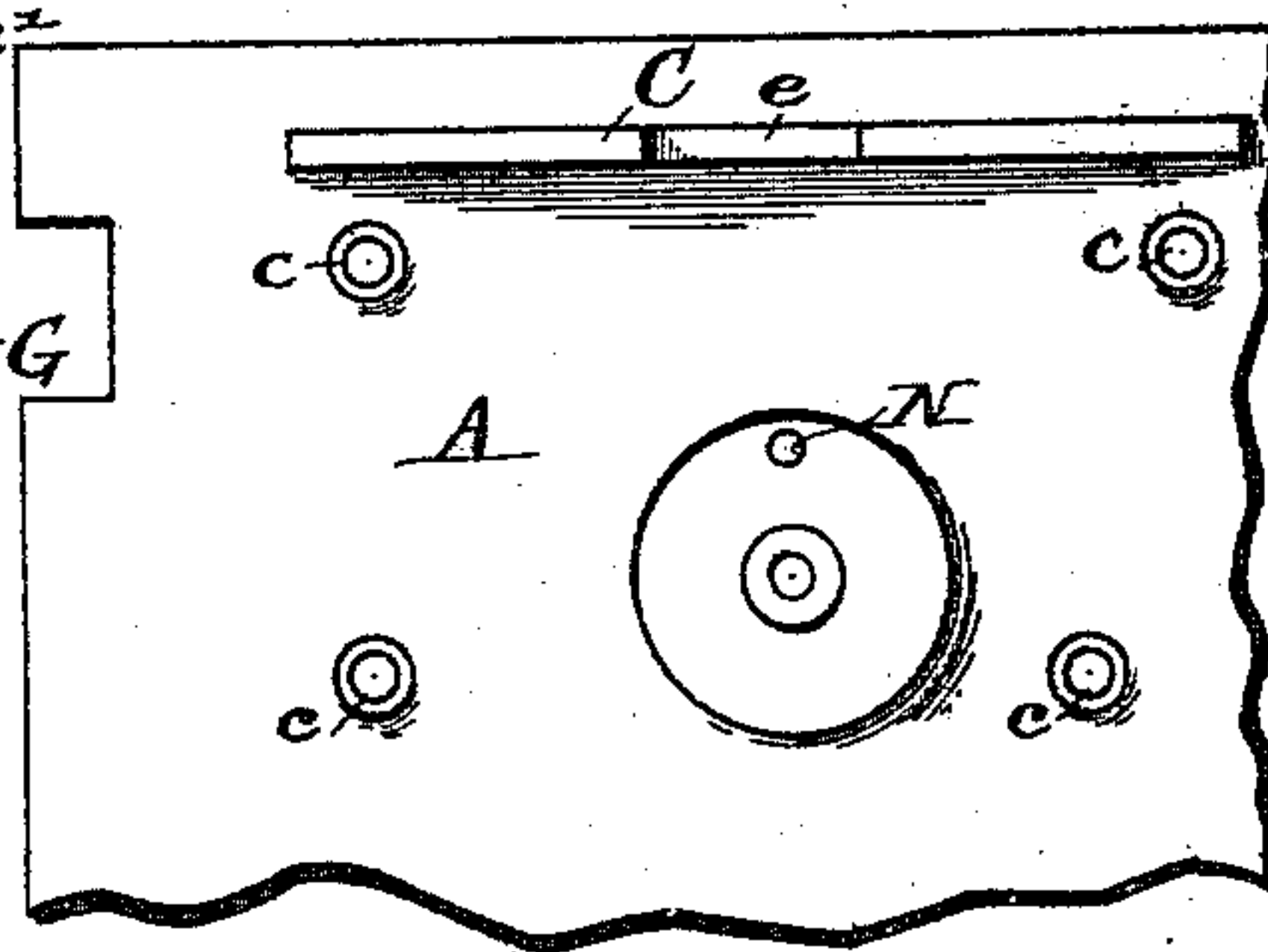
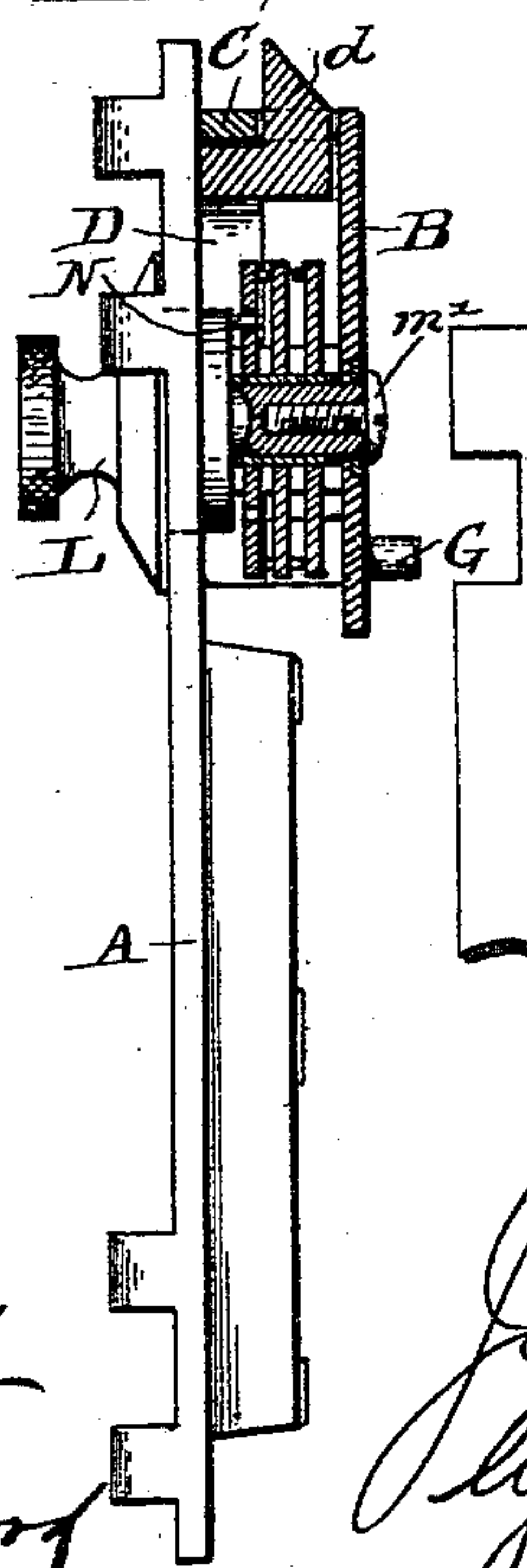
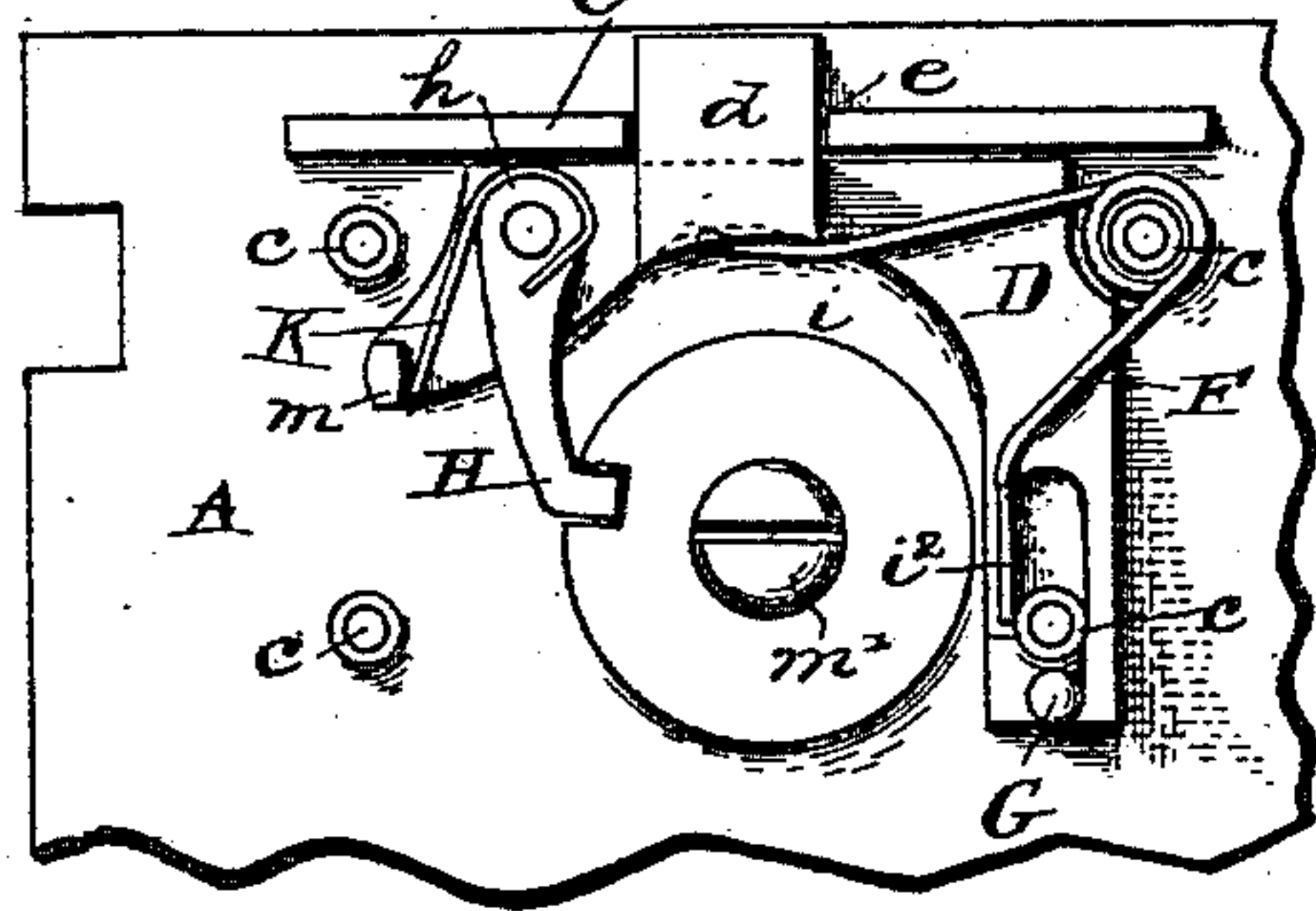


Fig. 3.

Fig. 4.

Fig. 5.



Witnesses
John H. Blackwood
Albert B. Blackwood

John M. Lane Inventor
By Wm. H. Doolittle Attorney

UNITED STATES PATENT OFFICE.

JOHN McLANE, OF MILFORD, NEW HAMPSHIRE.

COMBINATION-LOCK.

SPECIFICATION forming part of Letters Patent No. 458,404, dated August 25, 1891.

Application filed February 27, 1891. Serial No. 383,292. (No model.)

To all whom it may concern:

Be it known that I, JOHN McLANE, a citizen of the United States, residing at Milford, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Post-Office Combination Lock-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a lock for post-office-box doors; and it consists of a combination dial-lock applied to such door in the manner hereinafter described and claimed.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the outside of a post-office lock-box door, showing dial-plate and finger-piece of lock; Fig. 2, a back or inside view of such door, showing inside back plate, which incloses the lock mechanism, and which is secured to posts made integral with front door-plate; Fig. 3, an edge view, partly in section, of the invention; Fig. 4, a back view with top back plate removed; and Fig. 5, a back view of top portion of door-plate, showing certain parts integral with the door-plate.

Referring to the drawings, A is a swinging door-plate of a post-office box.

B is a back plate inclosing a locking mechanism and screwed to four posts *c*, cast on the back of the door-plate A. C is a latch-plate, also cast on the back of the door-plate.

D is a spring-actuated sliding bolt-plate carrying a bolt or catch *d*. The plate D is held normally locked, with the bolt *d* in a notch *e* of the latch-plate C by means of a spring F, coiled on one of the posts *c*. One arm *i* of the spring is pressed against the bolt *d*, provided with a notch *d*² to receive it, and the other arm *i*² of the spring has a bearing against another of the posts *c*. The spring bolt-plate is also provided with a pin G, made part of the bolt-plate and extending at a right angle thereto through a slot in the back-plate B, whereby the door can be unlocked and opened on the inside by the postmaster or attendant without disturbing the combination-locking mechanism. The bolt-plate is

also further provided with a spring-actuated latch H, hung on a stud *h* of the bolt-plate. K is the spring secured to this latch with one end bearing against a stud *m* on the bolt-plate, and by the action of which spring the latch H is forced to engage with the notched tumblers of the lock, as hereinafter described.

To the inside of the back plate B is fixed a hollow stud on which three rotating tumblers are secured, each of which is notched, each provided with a pin, all adapted to engage with each other, and the plate nearest the front provided with perforations.

L is a knob-spindle of a small combination dial-lock, the tumblers for which have just been described, and which knob carries the ordinary dial-plate. The spindle part extends through the door-plate, through the hollow stud carrying the tumblers, and through the back plate B, and is there provided with a screw *m'*, which, although holding the spindle in place, rotates with it.

N is a pin projecting from a boss at the base of the spindle and adapted to engage with the perforations in the nearest tumbler. The tumblers being set so that their notches register, the latch H is forced therein, so that when the knob is turned the spring-bolt is also turned to unlock the door.

The mode of setting such locking mechanism to a desired combination by letters or figures is so well known as to be unnecessary here to describe, and particularly as my invention consists not in a dial and combination-lock, but in adapting such lock in a most convenient and cheapest manner to a post-office lock-box door and in arranging it to be opened on the inside by the postmaster or attendant without disturbing the combination and its operating mechanism, as hereinafter claimed. The first of these objects I accomplish, not by attaching a separate combination-lock mechanism carried in a case to a post-office-box door, but by making the door itself and its bolt necessary parts of such mechanism, and the second object I accomplish, not by duplicate or separate independent means, but by a simple device attached inside of the sliding bolt.

What I claim is—

In combination with the casing and swing-

ing door-plate A, the back plate B, secured to
posts cast on the door-plate A and inclosing
a locking and unlocking mechanism com-
posed of a sliding bolt-plate D, provided with
5 a spring-actuated latch H, the combination-
lock spindle provided with tumblers with
which said latch is adapted to engage, and
the pin G, made part of the bolt-plate D and
extending through the back plate B, the

latch-plate C, having notch *e'*, the bolt *d* of 10
plate D, and the coiled spring F' for holding
the plate D locked, substantially as described.

In testimony whereof I affix my signature in
presence of two witnesses.

JOHN McLANE.

Witnesses:

WILLIAM M. KNOWLTON,
WILLIAM H. W. HINDS.