

G. B. Allen,

Combined Lock and Latch,

No 100,708.

Patented Mar. 15, 1870.

Fig. 2.

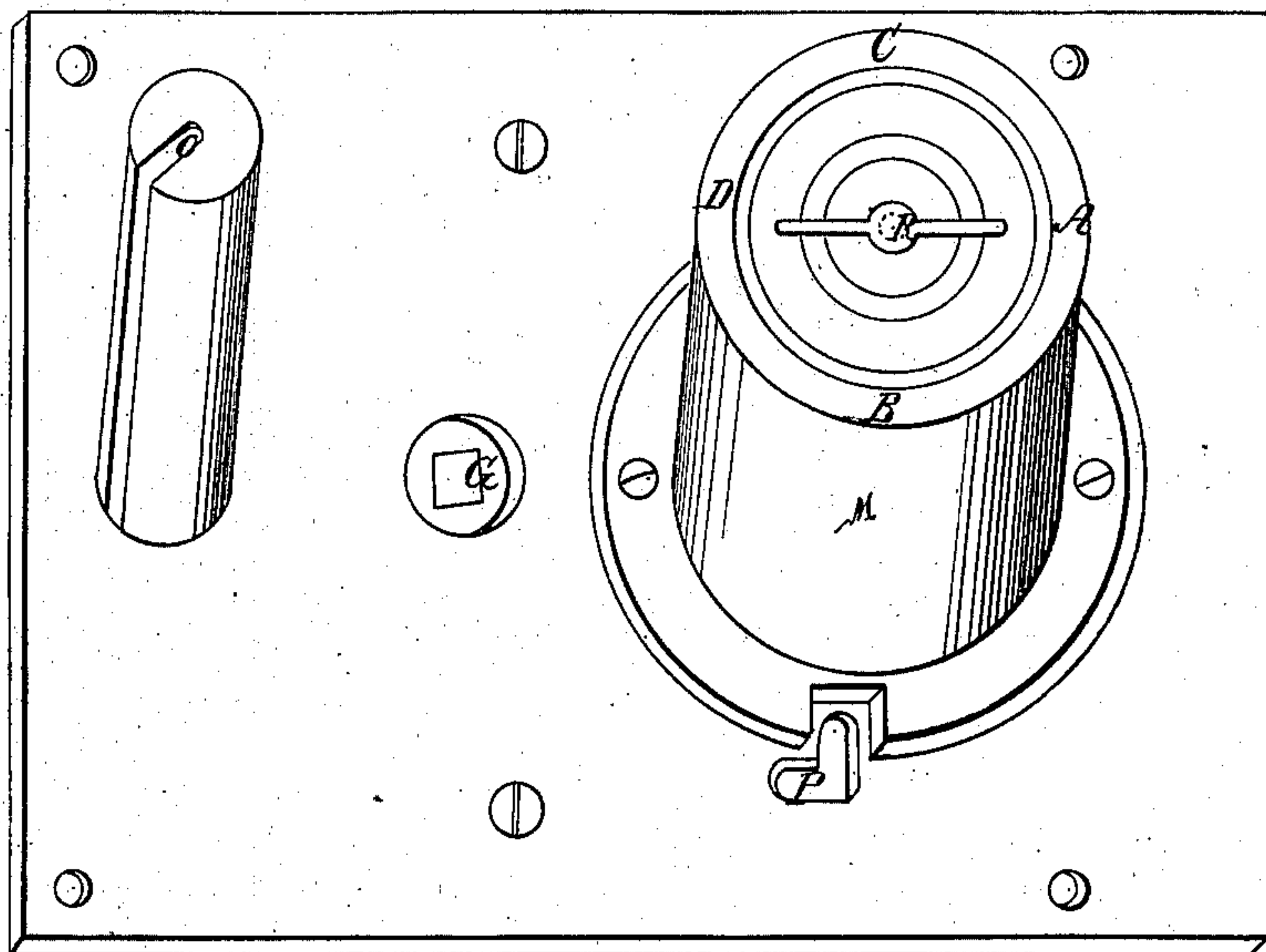
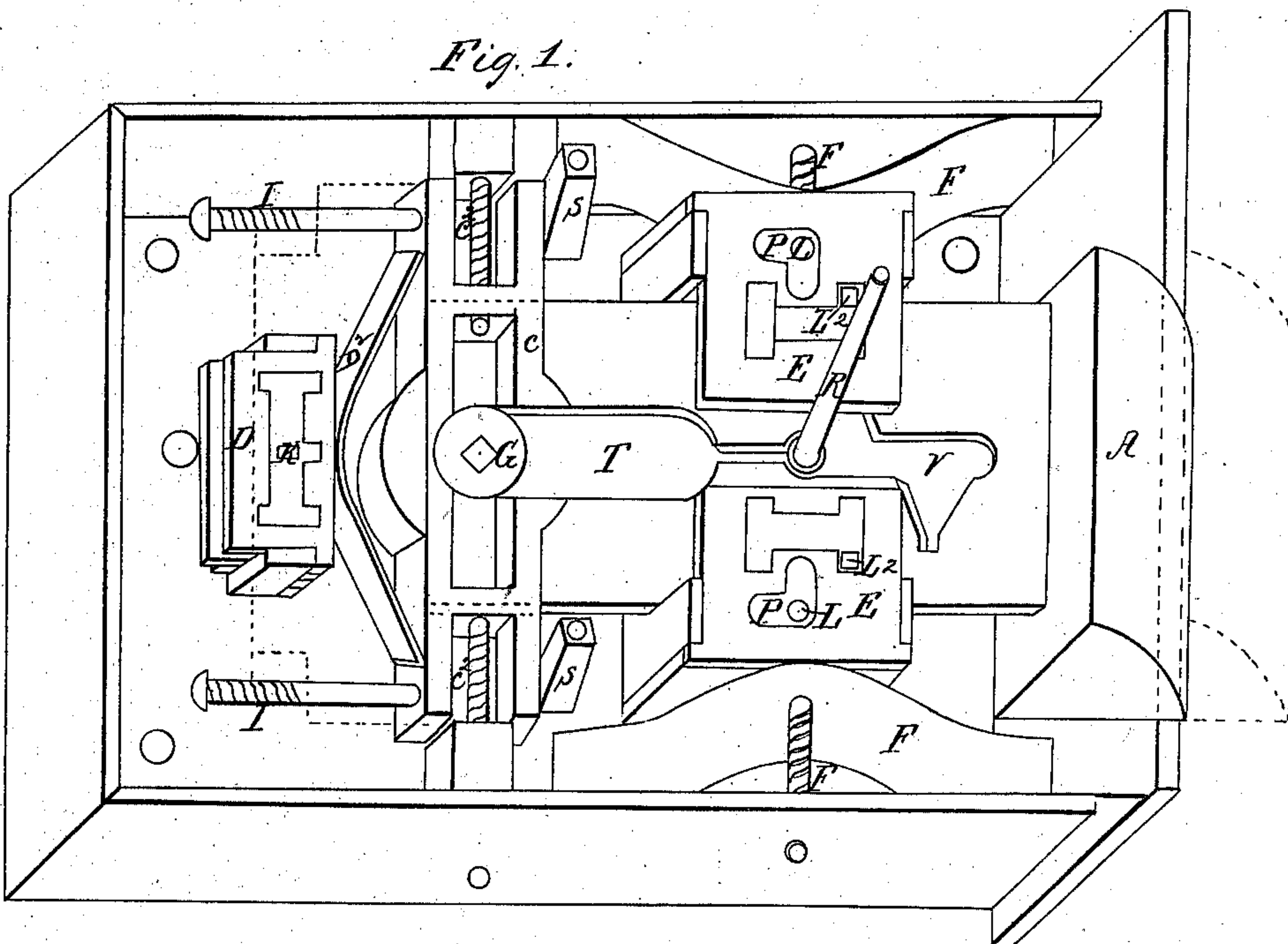


Fig. 2.

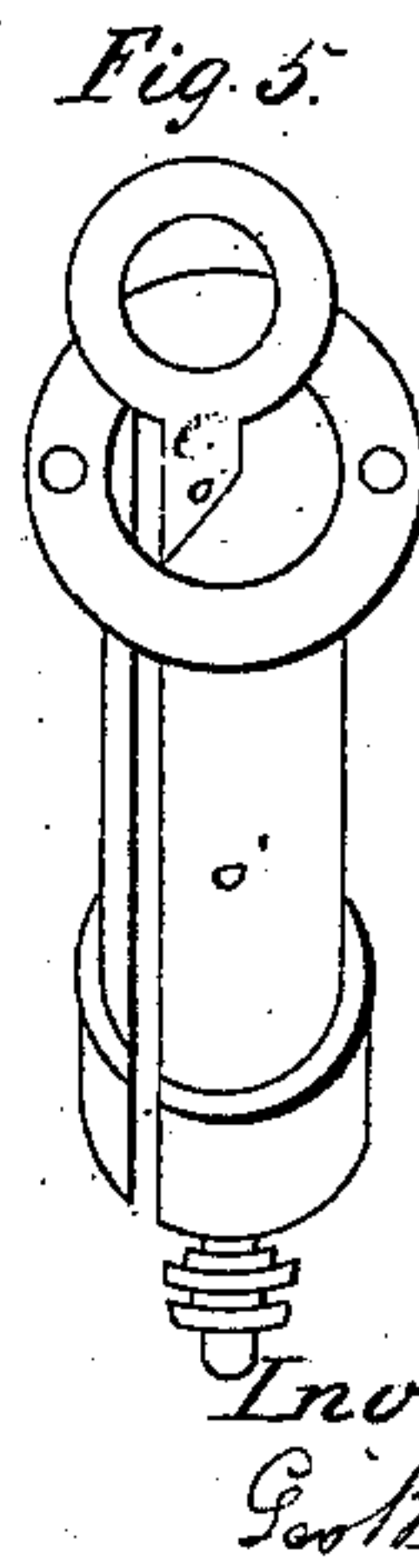
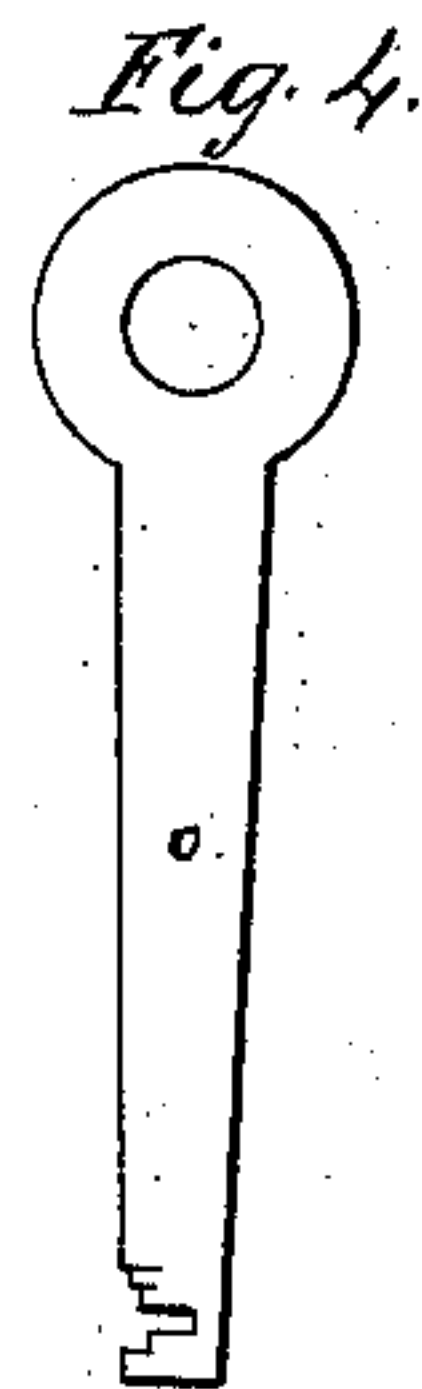
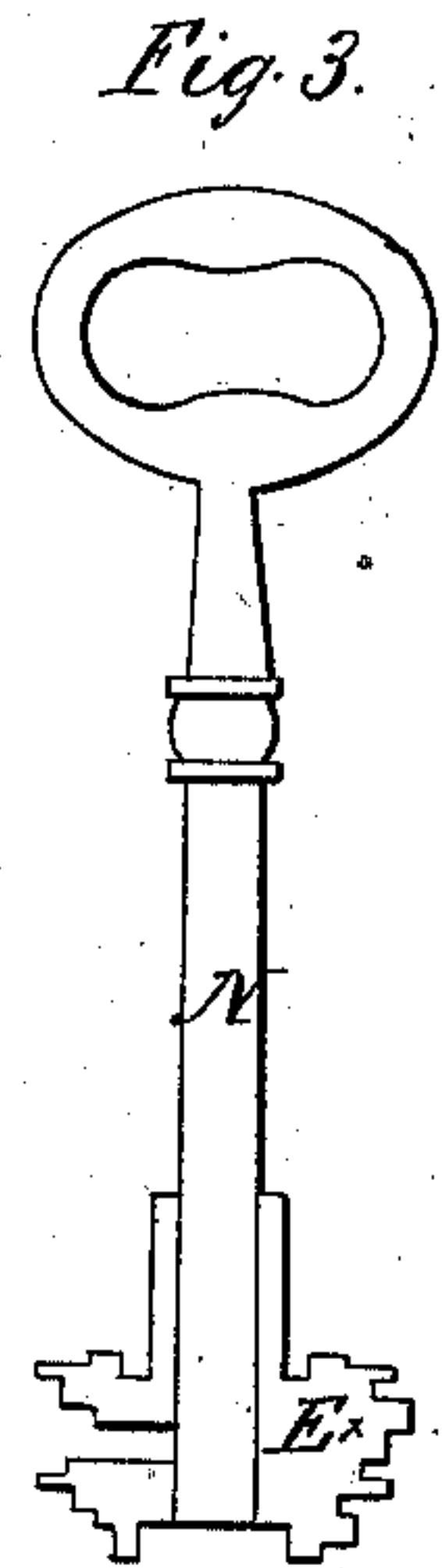
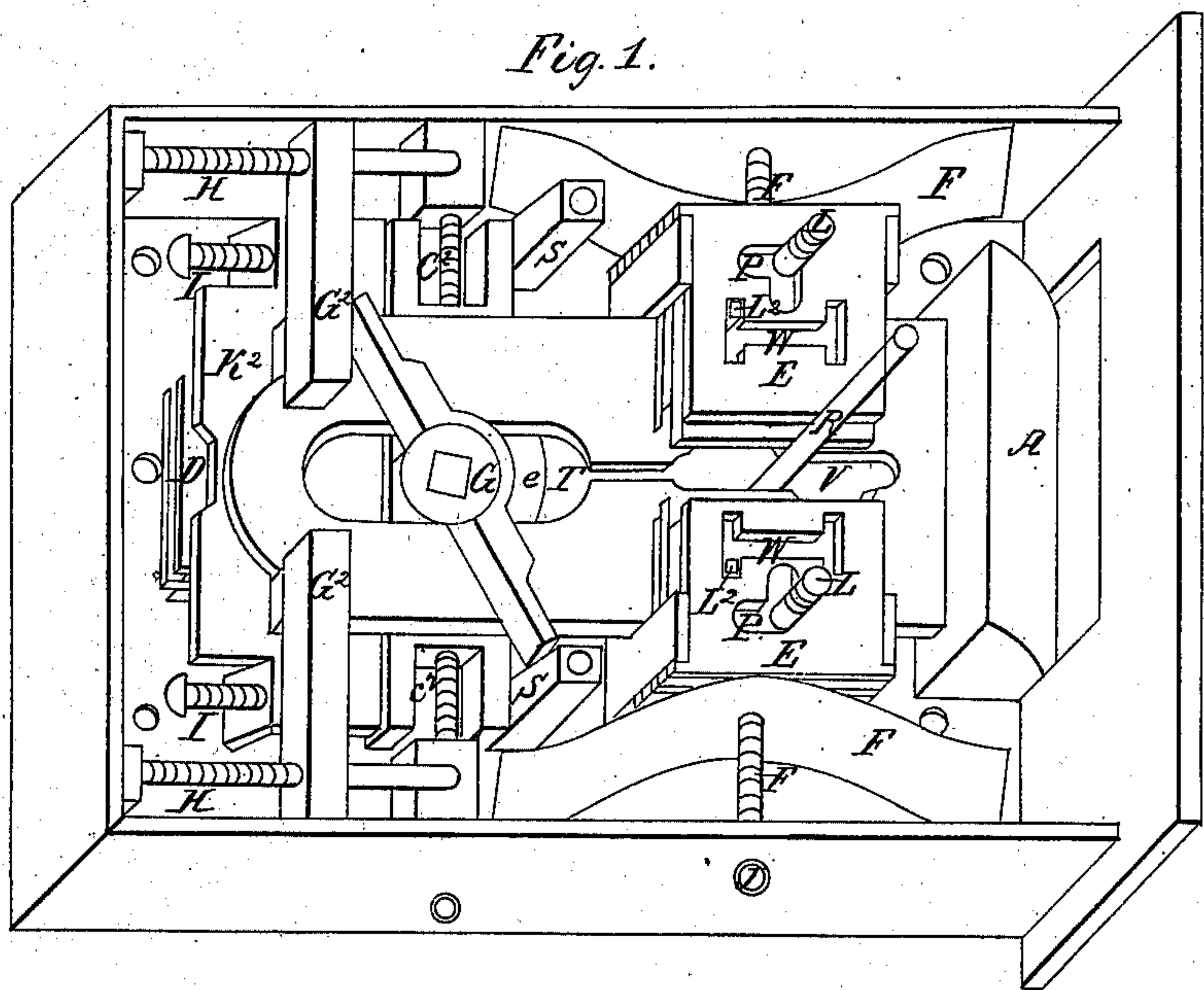
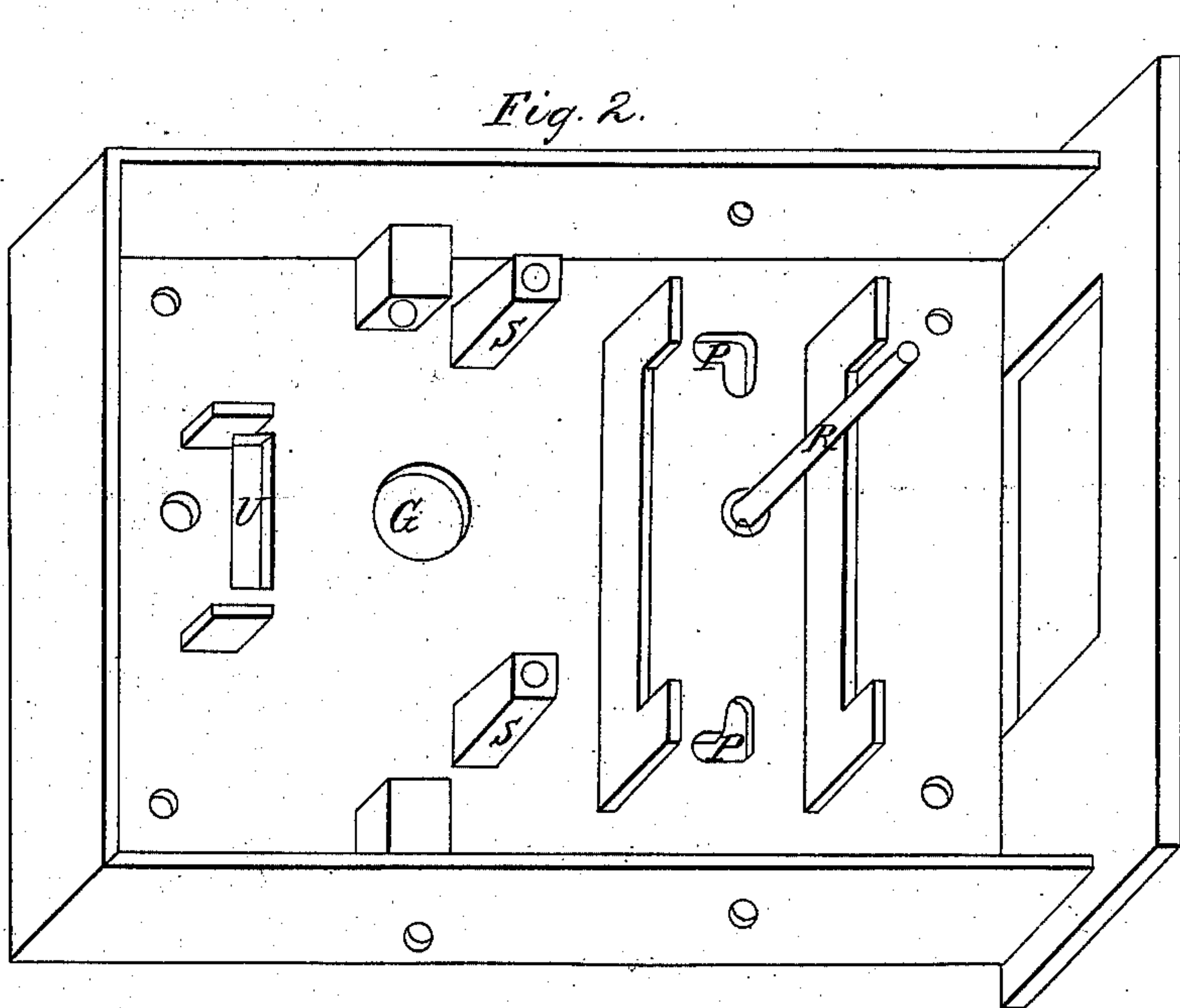
Fig. 1.



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Witnesses;
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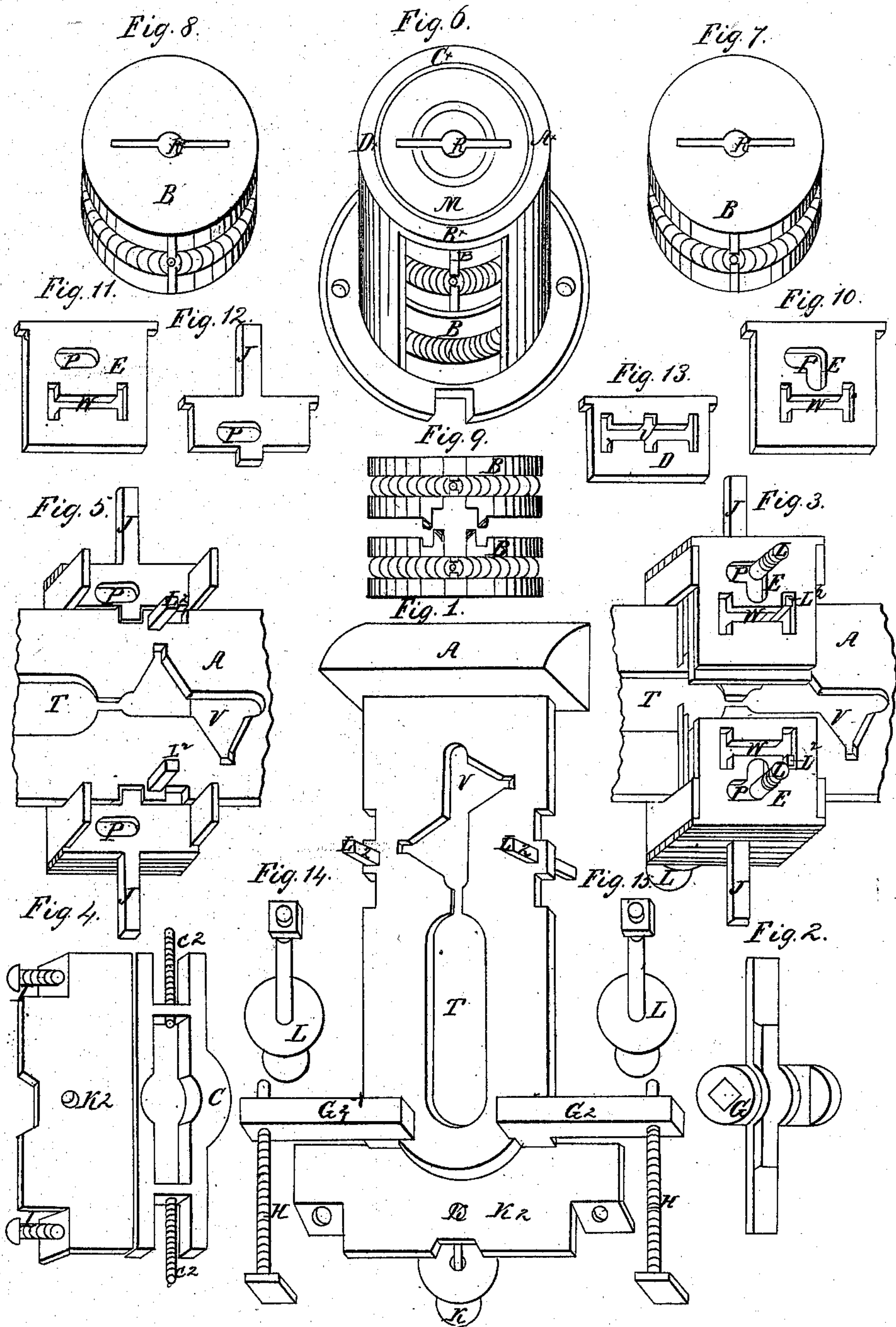
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Wm. Vine
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Inventor;
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United States Patent Office.

GEORGE B. ALLEN, OF NORWALK, CONNECTICUT.

Letters Patent No. 100,708, dated March 15, 1870.

IMPROVEMENT IN COMBINED LOCK AND LATCH.

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, GEORGE B. ALLEN, of the town of Norwalk, county of Fairfield, and State of Connecticut, have invented a new and useful Improvement in the Construction of Door-Locks; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the construction and arrangement of a door-lock and latch and night-latch in one, combining one spring latch or locking-bolt, which may be changed to either, to perform their functions.

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

In sheet 1 of drawings—

Figure 1 shows the tumblers of the night-latch and spring D².

Figure 2 shows the two turrets in position upon the face of the lock.

In sheet of drawings No. 2—

Figure 1 is a perspective view, with face-plate off, showing the inner works, with bolt or latch thrown back.

Figure 2, a perspective view of shell or case without the moving parts.

Figure 3, main key.

Figure 4, night-key.

Figure 5, night-key and turret.

In Sheet No. 3—

Figure 1 is bolt or latch A, cap K², knob and spindle K.

Figure 2, hub and arms G.

Figure 3, section of bolt or latch A, tumblers E, stops J, knobs and spindles L.

Figure 4, stop C and cap K².

Figure 5, section of bolt or latch A, stops J, and a part of tumblers E.

Figure 6, turret M, showing key-slot R and revolving spring-disk B.

Figures 7 and 8, revolving tumblers B.

Figure 9, tumblers B, showing corresponding wards, with bits of key N.

Figures 10 and 11, tumblers E.

Figure 12, stop J.

Figure 13, night-latch tumbler D.

Figures 14 and 15, knobs and spindles L.

Reference.

A, latch or bolt.

B, revolving tumblers.

C, stop.

C², spiral springs.

D, tumblers.

D², spring.

E, tumblers.

F, springs.

G, hub and arms.

G², arms.

H, spiral springs.

I, springs.

J, stops.

K, knob and spindle.

K², cap.

L, knobs and spindles.

L², studs.

M, turret.

N, main key.

O, latch-key.

P, slots in tumblers E.

R, key-slots and key-standard.

S, lid-studs.

T, hub-slot.

U, slots in tumblers D.

V, key-slot.

W, slots in tumblers E.

A^x, B^x, C^x, D^x, and E^x, letters for operating the lock with key N.

Description.

I construct my lock-case in any of the known forms, and apply thereto a spring latch or locking-bolt, A, with a flat plate extending to the movable works, which embraces strength, security, and utility, in connection with a double set of spring tumblers, E, (their numbers, thickness, or thinness to be generally used is unlimited,) and with two stops, J, all being actuated by a double-bitted key, either flat, or its equivalent, to operate the bolt A.

The bit of the key, in turning, forces back the tumblers E, so that the studs L² on the bolt move out of the vertical and into the horizontal slots of the tumblers, allowing the latch-bolt to withdraw.

The last one of the series of tumblers E is provided with such a shaped slot (see P' in fig. 11, sheet 3,) that, when it is pushed back by the key, it carries along with it the stop J.

To change the lock to a latch is by means of knobs and spindles L, working vertically and transversely in angular slots P in tumblers E, and slots in stops J lifting them out of gear, at the same time holding them in such position as to free stops J from the notches in the edges of the bolt-plate, and allow studs E² to slide freely in slots W in tumblers E, so that the bolt may be forced back by an ordinary knob and spindle, operating hub and arms G, which slide in slot

T in bolt-plate, the bolt being thrown forward by spiral springs H, operating on two pins, sliding in the two transverse arms G².

To change latch to a night-latch is by means of a spring-stop, C, slotted on both sides of the centre, performing its office with hub G, carried into its fastening position by knob and spindle K, attached to cap K². This fastening position is, when it is moved either up or down, so that the straight slotted portion grasps the recess in the hub, seen in in sheet 3, fig. 2. Two springs, C², force it into its free position whenever the tumblers D are adjusted properly by the night-key. These tumblers, after the knob K is set in position, prevent the stop C from being forced back into position.

The night-key O, in rotating, adjusts the tumblers, so that, after the stop C returns to position, the ordinary knob and hub operate the latch.

Turrets M and O, going through the door, form key-plates on the door-face, for the insertion of the keys N and O, turret M containing two revolving spring tumblers, B, slotted, for the insertion of key N, having wards to correspond with the bits of the key N, the thickness or thinness to be used being according to width of key-bits or thickness of lock-case, the number being limited according to thickness of door.

To lock or unlock from the door-face on turret M, there are four letters, viz, A^x B^x C^x D^x, and on one

key-bit the letter, E^x. To lock, insert the key-bit E^x on the plate-facing D^x; turn to the right to C^x; insert and turn to the left to D^x; insert and turn to the right to A^x. To unlock, insert the key-bit E^x on the plate-facing A^x; turn to left to C^x; insert and turn to the right to A^x; insert and turn to left to D^x.

Claims.

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

1. In combination with the lugs L² on the latch-bolt, the series of tumblers E, with the vertical and horizontal slots W, one of the series having a slot of the shape shown, so that, when this tumbler is moved by the key, it carries along with it the stop J, all as and for the purpose set forth.

2. The revolving disks B, outside of the lock proper, containing a coil-spring in the groove upon their periphery, and furnished with slots for the key-bits, all as and for the purpose set forth.

3. The spring stop C, which holds the hub from turning when it is pushed up or down, and is released when the night-key adjusts the tumblers D, all as described.

GEO. B. ALLEN.

Witnesses:

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