

N. Petre.

Lock.

N^o 95,500.

Patented Oct. 5, 1869.

Fig. 1.

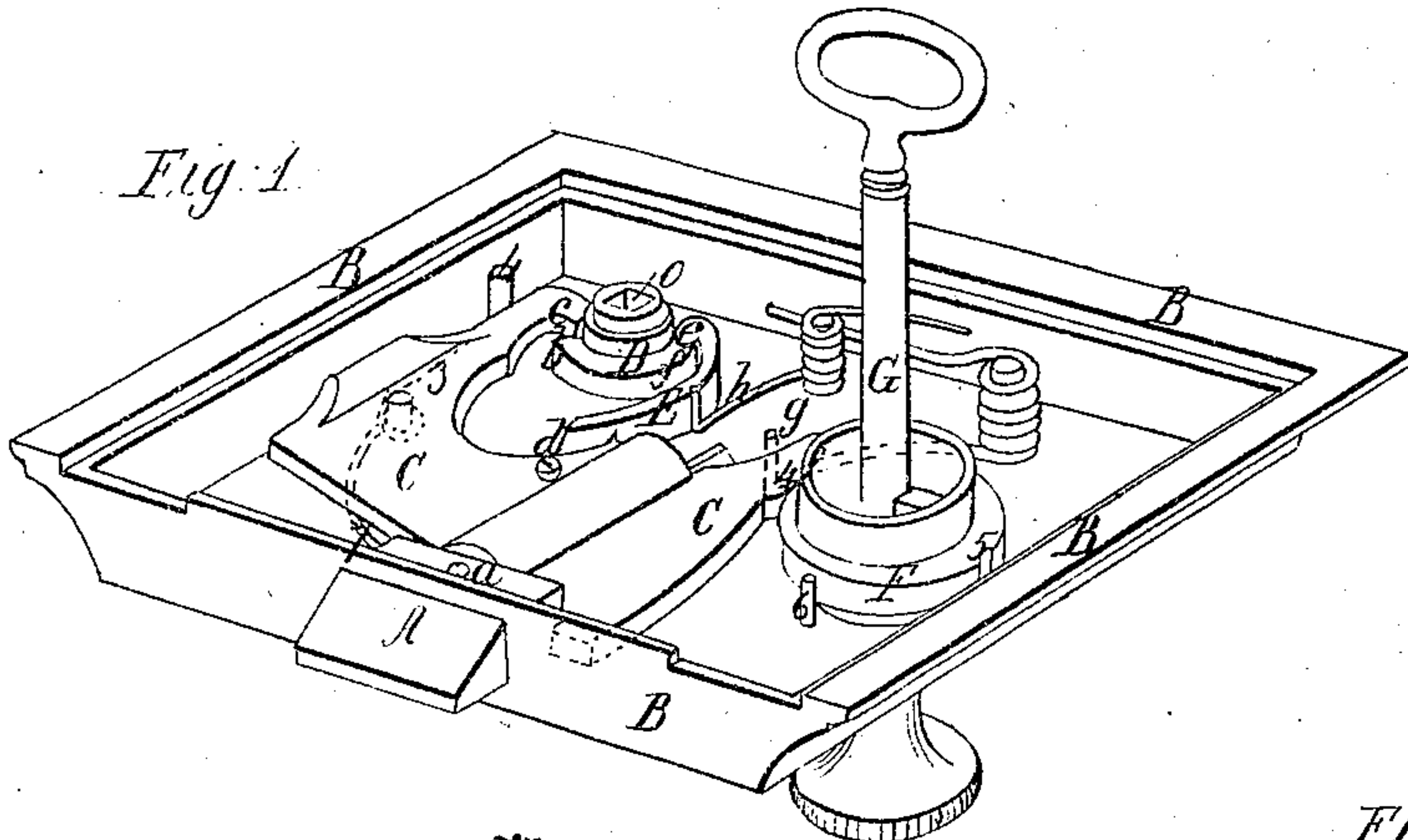


Fig. 2.

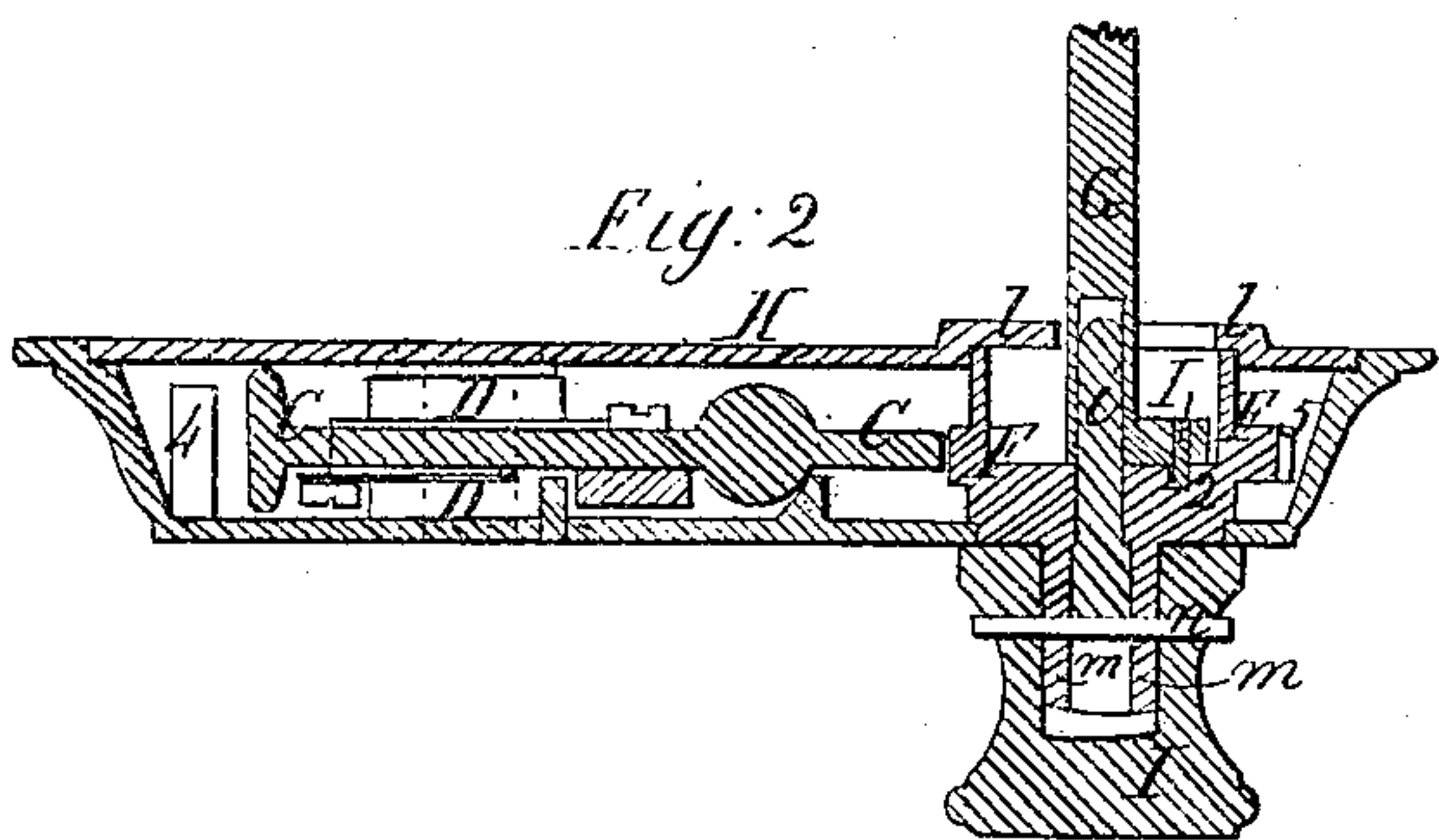


Fig. 3.

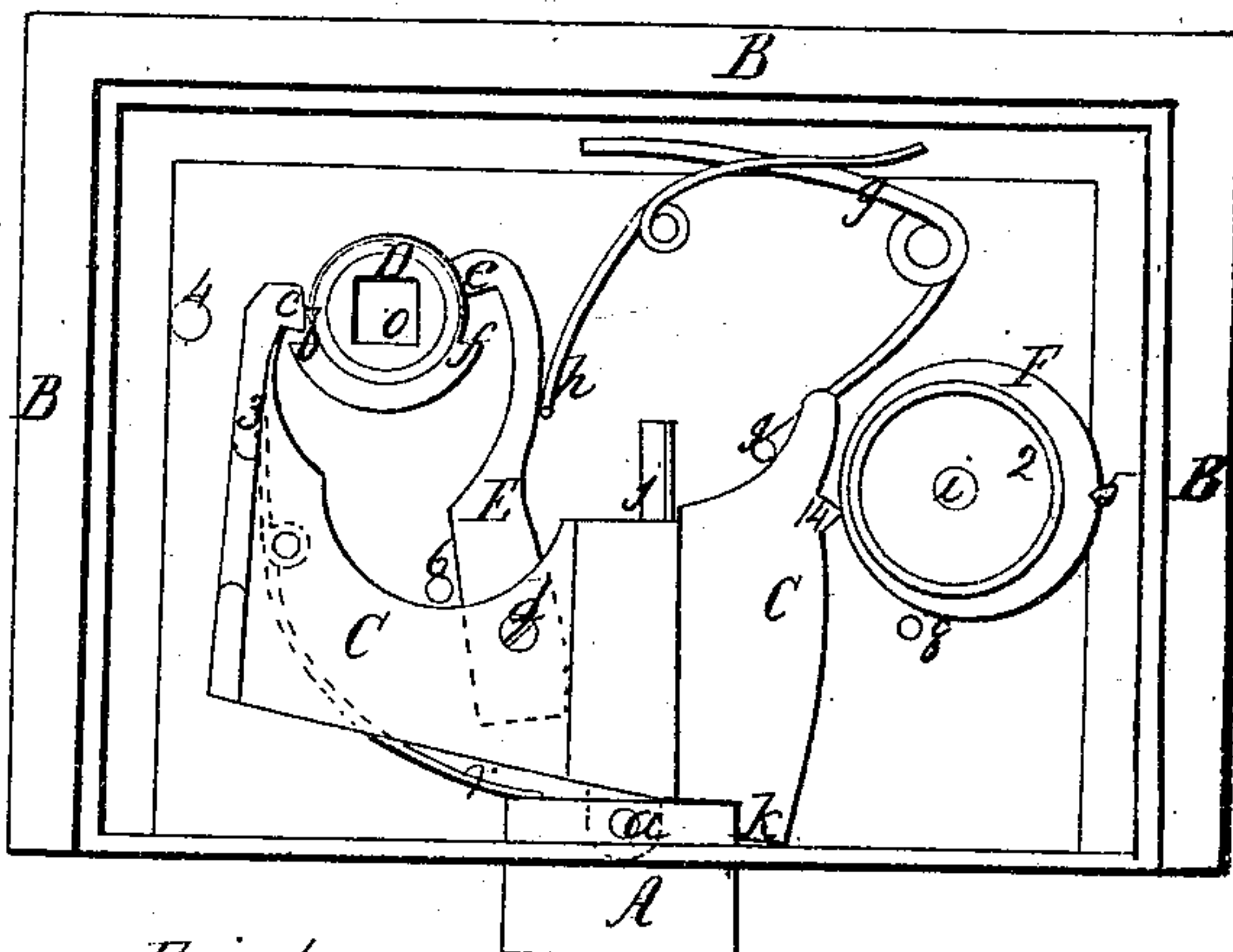


Fig. 4.

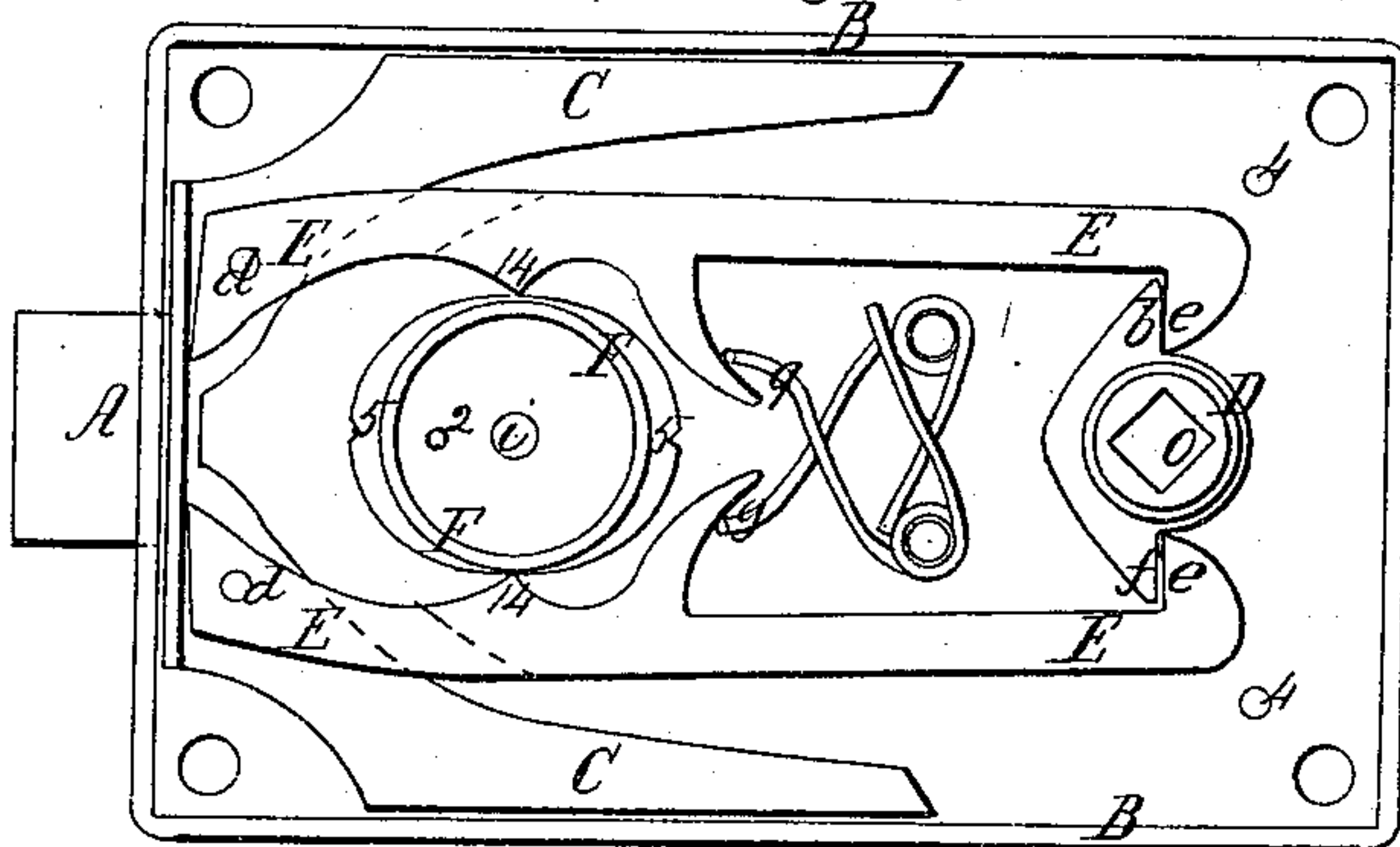
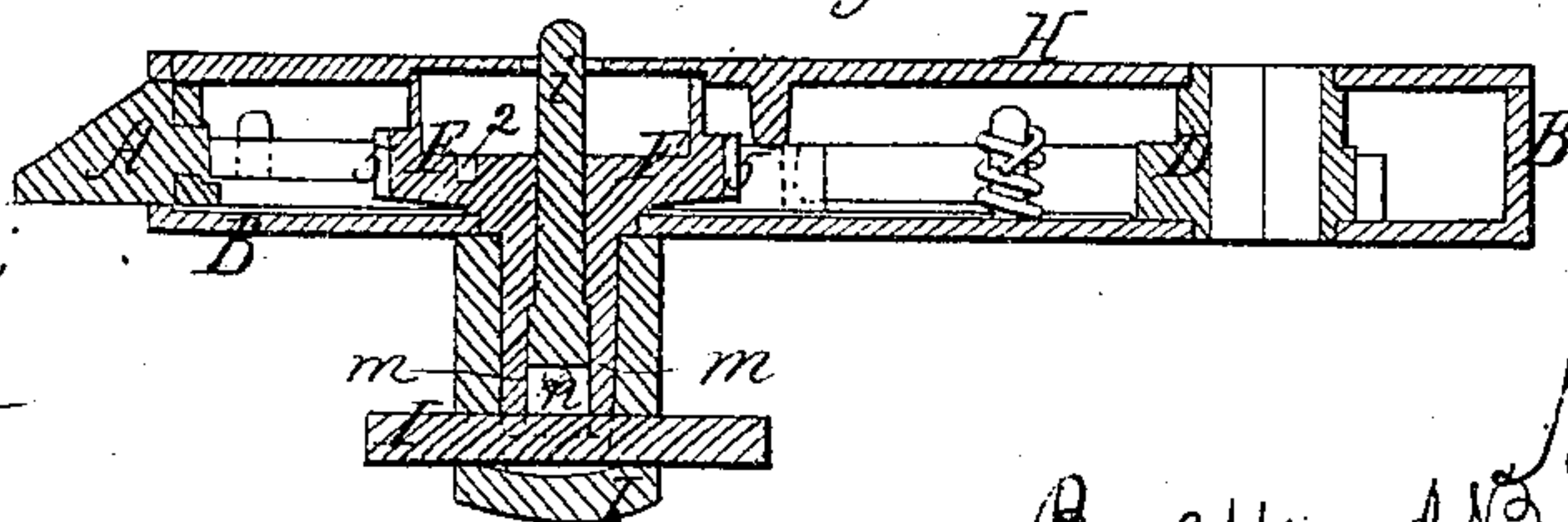


Fig. 5.



Witnesses;

E. M. Law
Edmund Masson.

Inventor;

N. Petre
By atty, A. B. Slaughter

United States Patent Office.

N. PETRÉ, OF NEW YORK, N. Y.

Letters Patent No. 95,506, dated October 5, 1869.

IMPROVEMENT IN COMBINED LATCH AND LOCK.

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, N. PETRÉ, of the city, county, and State of New York, have invented certain new and useful Improvements in Locks; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents, in perspective, a view of the interior of the lock, the cover being removed.

Figure 2 represents a section through the lock.

Figure 3 represents a plan of the interior thereof.

Figures 4 and 5 represent modifications of the same general plan of construction and of operation, as that shown in figs. 1, 2, and 3.

The locks herein described and claimed may be termed latch-locks; as they all have a latch or bolt that is operated by knobs on each side of the door, when said bolt or latch is not otherwise controlled, by a key, or its equivalent, turning a lever or eccentric hub in the lock, and thus disconnecting the bolt or latch from the action of the knobs.

The locks herein shown and described involve the general characteristics of construction and operation, as shown and described in the patent granted to me on the 30th of July, 1867, but vary from that lock in their detail of construction, which adapts them for more general purposes, and makes them more secure as locks against being picked.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

In figs. 1 and 3, A represents the end of a bevelled bolt, projecting through the edge of the box or case B.

This bolt A within the case is pivoted at *a* to what may be termed the tumbler or interior portion, C, of the bolt.

This portion C, in addition to its sliding with the bolt, has a motion at right angles to the line of the bolt; and that the bolt proper shall snugly fit the opening through which it shoots, there is a hinged or pivoted connection at *a*, that admits of the interior portion rising and falling without carrying the exterior portion with it.

On the interior portion C, there is one fixed arm or hook, *c*, which works in connection with the shoulder *b* on the hub D, through which the ordinary door-knob shank passes; and there is hinged to said piece *c*, at *d*, an arm, E, whose hook *e* works in connection with the shoulder *f* on said hub D.

The object of the two arms, hooks, and shoulders, is that the bolt A may be drawn into the lock by turning the knobs either way, and when released, the reaction of the spring *g* shoots it out again.

F is an eccentric hub, in which the key-pin *i* is loosely placed, so that they will not necessarily move

together. If they did, a pair of nippers applied to said pin could be used for turning the eccentric.

In the key G, which is guided by and turns on this pin *i*, there is a stud, 1, which enters a hole, 2, in said hub F, by which the hub is turned, and unless this stud be accurately set in the key, or the hole be accurately bored for the stud, the key will not turn the hub.

When this hub F is turned by the key, the eccentric rim thereof takes against the interior piece C, and moves it upward against the action of the spring 3, and so far upward that the shoulder *b*, on the hub D, fails to catch against the hook *c*, and consequently the turning of the hub by the knob or handle will not operate on the bolt A, or its tumbler C, and thus the lock is inoperative without the key, and serves as a dead-latch lock.

A pin or stud, 4, is arranged to prevent the tumbler C from rising too high.

On what I term the tumbler C, and which, but for the fact that it is pivoted to the bolt A, might be called a portion of the bolt itself, there is a projection, 14, which, when the eccentric F is turned far enough to raise said tumbler, takes into a recess, 5, in the eccentric, and there holds until the key is again used to turn said eccentric.

A spring, *h*, bears against the hinged portion E of the tumbler, to keep it within the range of the shoulder *f* on the hub, but when the tumbler is raised up, said hinged portion E is prevented from rising with it by a stud or pin, 6, and, further, it swings the said portion back, so as to be out of the reach of the shoulder on the hub, so that in the raised position of the tumbler the hub cannot act upon either of the arms, and the bolt cannot be operated.

A guide or way, *j*, on the lock-case, directs the tumbler in its backward and forward motions, and a projection, *k*, on the tumbler, coming against the lock-case, defines the forward or shooting-motion of the bolt.

That the bolt may not partake of or be cramped by the upward movement of the tumbler, a spring, 7, bears against it, so that said movement will merely operate the hinge at *a*, and not bind the bolt.

A pin, 8, prevents the eccentric from being turned in the wrong direction, or from going clear around, as the swell on the eccentric will not pass said pin, and when the eccentric arrives at that part of its "throw" or "beat," where it raises the tumbler, and receives the projection 14 in its recess 5, the pin *s* stops any further motion in that direction.

The hub D has short journals on its ends, which fit and turn in suitable openings in the lock-case and its cover H, as seen in the section, fig. 2.

The barrel of the eccentric F has a bearing in a recess, 7, cast or formed in the cover H, through

which raised bearing the key-hole is also made. This protects the eccentric from being tampered with from the outside of the lock, or that side of it.

The opposite end of the eccentric has a bearing in the lock-case, by shoulders forming a short journal thereon, and a boss, *m*, on that end of the eccentric extends through and beyond the lock-case, on which a knob, *I*, is fastened, by a through-and-through pin, *n*, or otherwise, so that the eccentric may be worked by the knob on the inside, as well as by the key from the outside, and serve all the purposes of a night-latch or lock.

The hub *D* is provided with the ordinary square hole *o*, for receiving the shank of the common door or latch-knobs, so that when serving as a latch, it may be operated from either side of the door, but when it is a lock or a night-latch, as above explained, these knobs will not operate the bolt.

Figs. 4 and 5 represent another modification of the lock, in which the bolt *A* and the portion *C* are really united together rigidly, but occupying the same relations to the outside and inside of the case, as in the first-named and described lock.

Instead of one arm, *E*, only, hinged to the portion *C*, there are two arms, *E E*, both acting in connection with the hub *D* and its shoulders, so that by turning the knob and hub in either direction a quarter turn, or thereabout, the bolt *A* will be drawn into the case, and when released, the reaction of the springs *g g* shoots the bolt out again.

The eccentric *F*, in this modification, has two "beats" or "throws," and two notches 5 5, one for each of the projections 14, on the two arms *E*, so as to throw and hold both hinged arms out of action with the hub *D*.

The key-pin *i* is loose in this case; also, in the eccentric.

When the eccentric is turned, so as to allow the hinged arms to come within the action of the shoulders on the hub, the springs *g*, by their reaction, draw said arms toward the hub, and there hold them with sufficient force to make their action with the hub certain.

In this lock, there is one key-hole, viz, on the outside of the door, while on the inside it is operated by a knob or handle, *I*.

Having thus fully described my invention, and shown the several ways in which I construct and operate my locks,

What I claim therein as new, and desire to secure by Letters Patent, is—

The combination of the bolt *A*, its attachment *C*, and arm or arms *E*, with the hub *D* and eccentric *F*, when so arranged as that the bolt may have motion longitudinally, independent of the part *C* or arm *E*, one or both, to prevent the cramping of said bolt in the frame, substantially as herein described and represented.

N. PETRÉ.

Witnesses:

JOHN WALKER,

W. S. LIVINGSTON, Jr.