

(Model.)

E. F. BARROWS.
LOCK.

No. 442,087.

Patented Dec. 2, 1890.

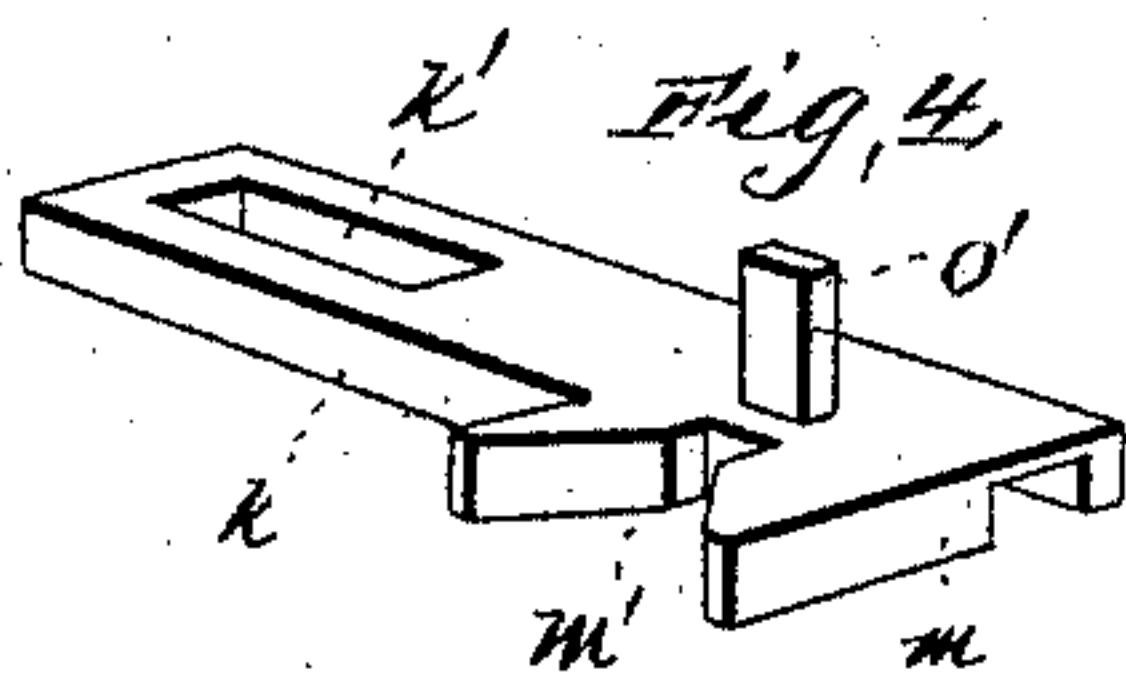


Fig. 1.

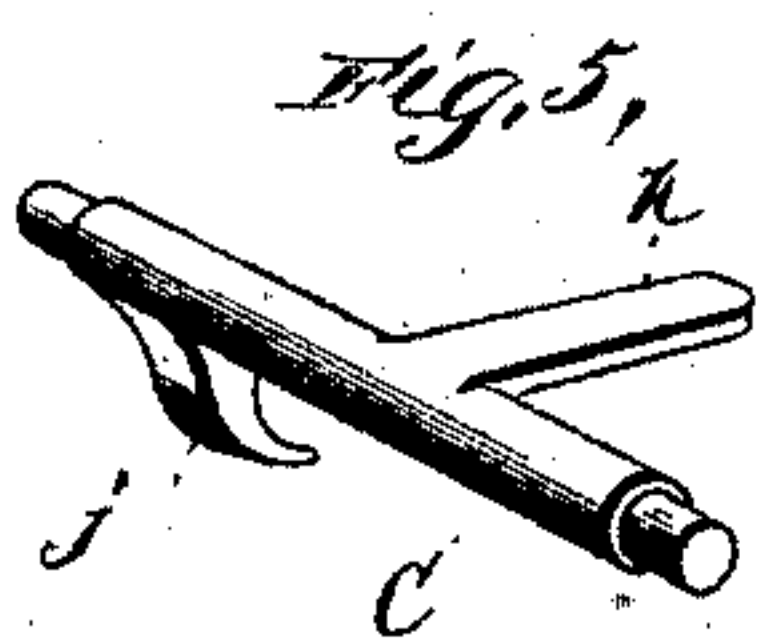
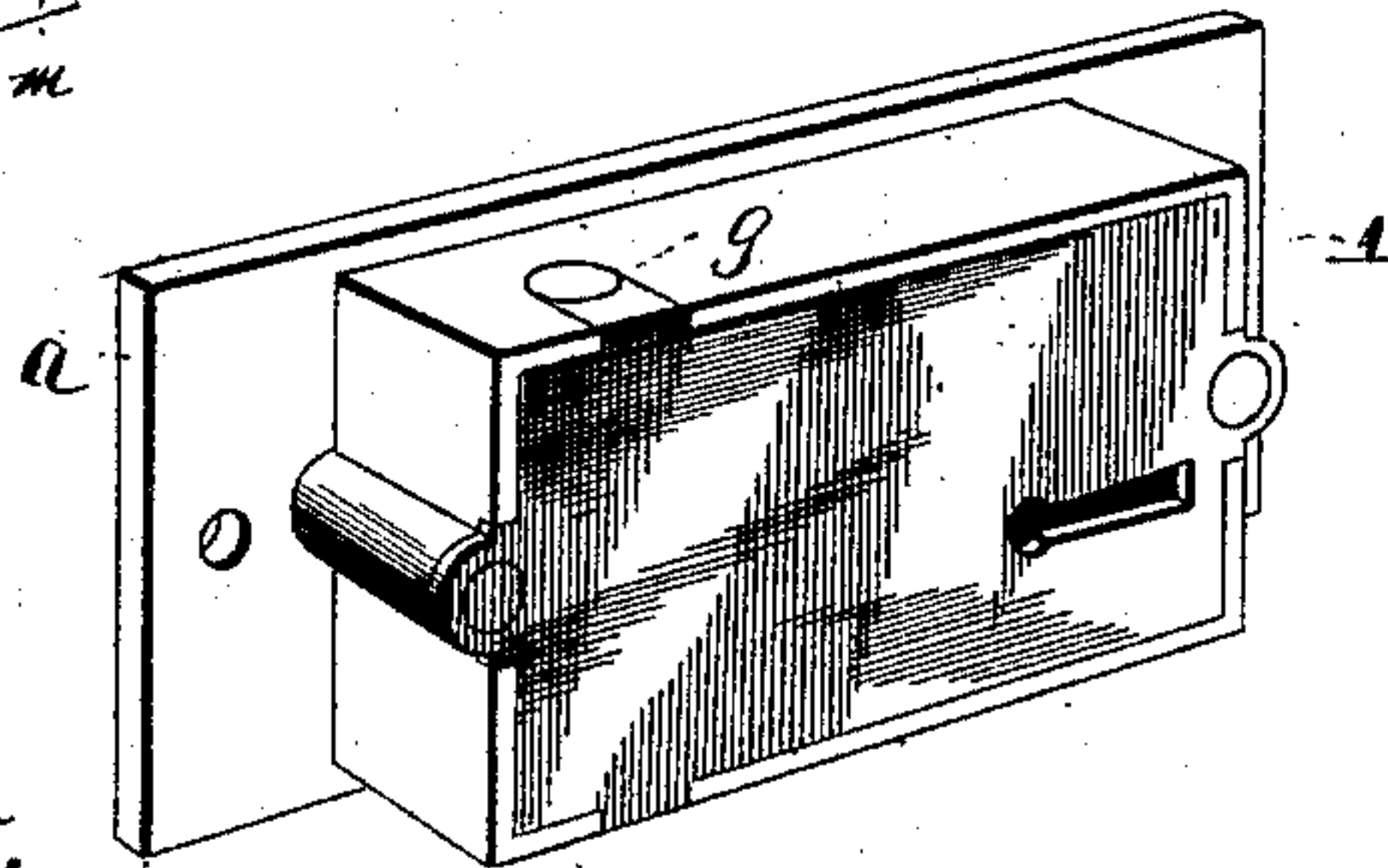


Fig. 5.

Fig. 2.

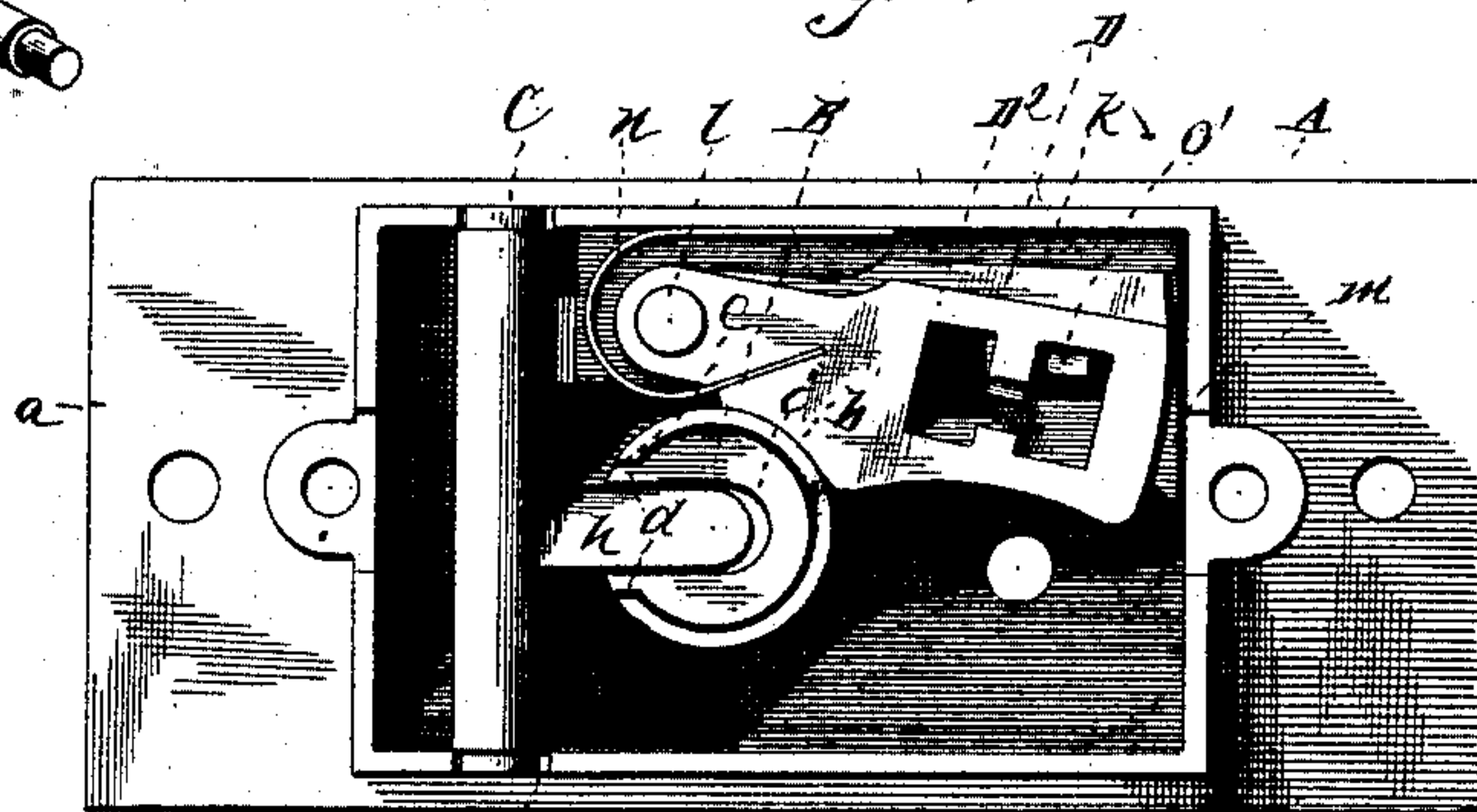


Fig. 3.

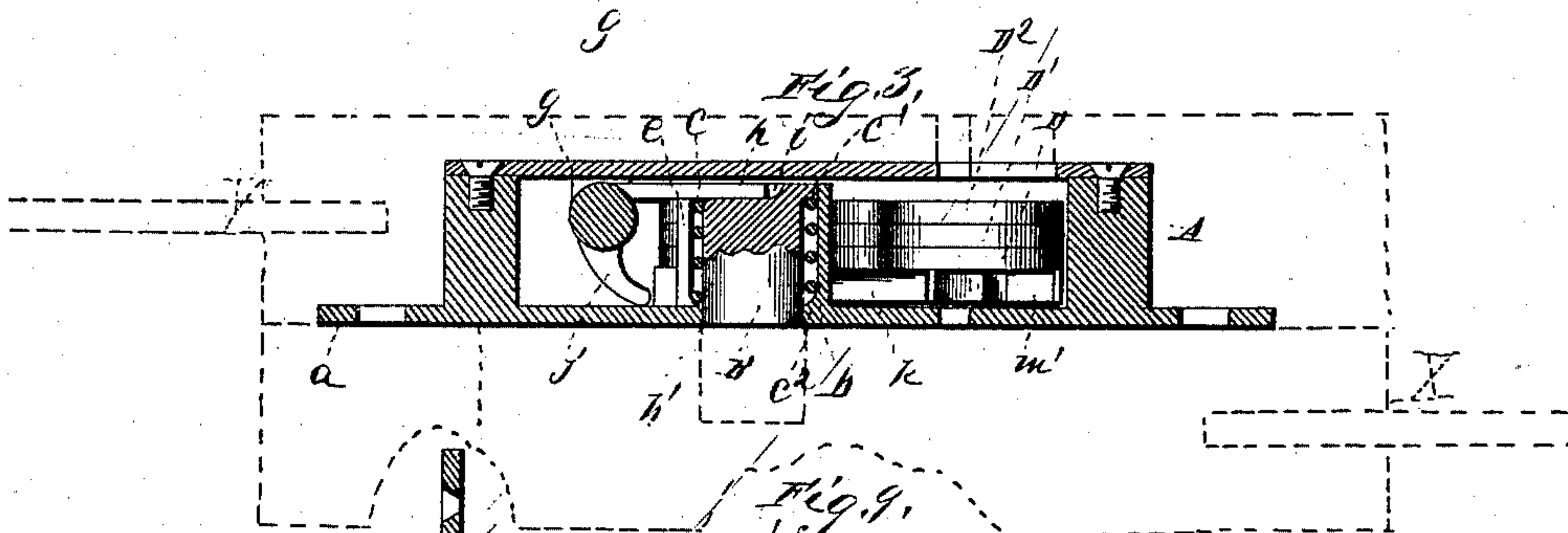
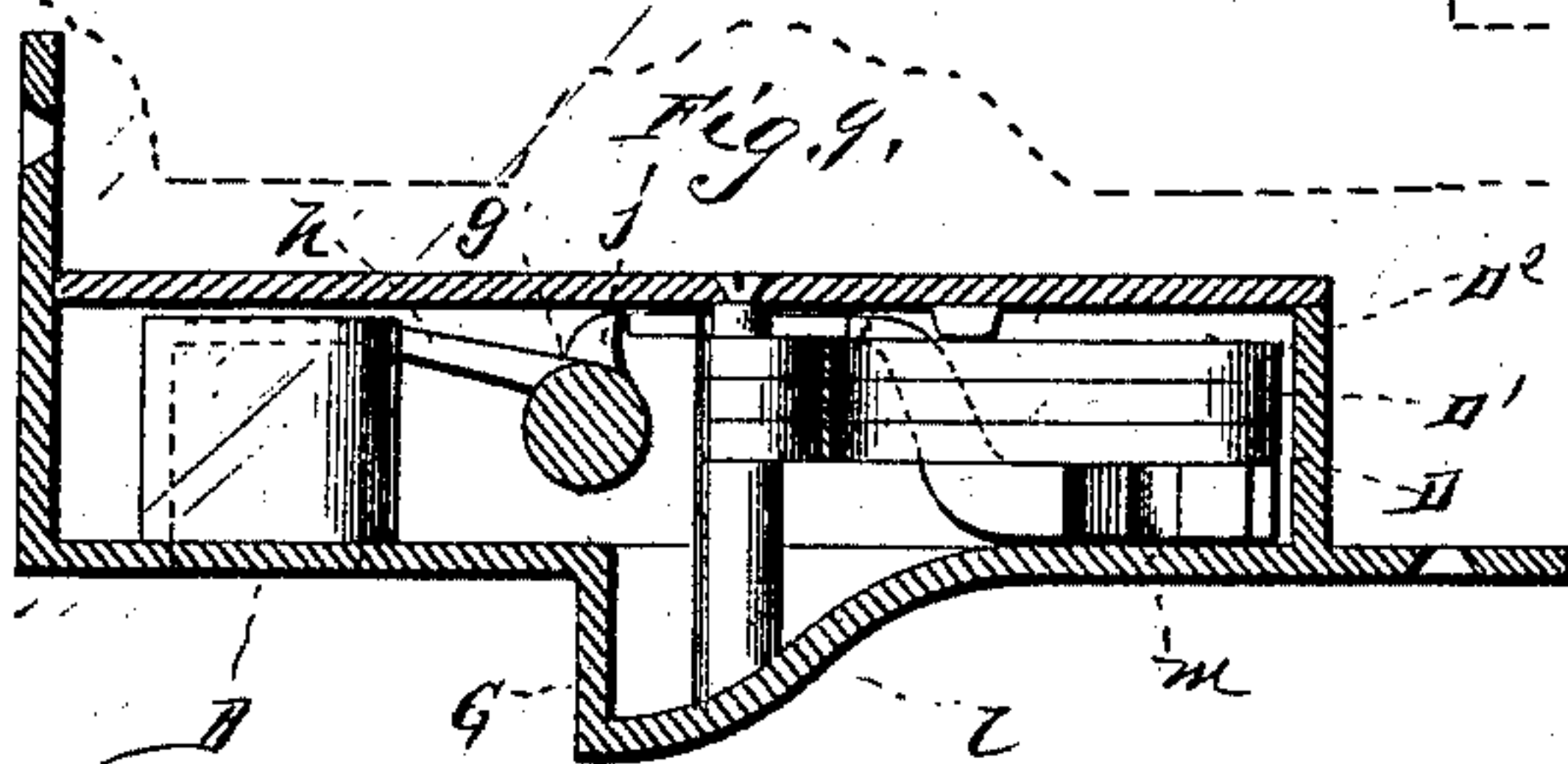


Fig. 4.



Witnesses

Chas. Taylor
Phil. Masi

Inventor
Edward F. Barrows,
by *E. W. Anderson*
his Attorney

UNITED STATES PATENT OFFICE.

EDWARD F. BARROWS, OF LOCKPORT, ILLINOIS, ASSIGNOR TO THE BARROWS MANUFACTURING COMPANY, OF SAME PLACE.

LOCK.

SPECIFICATION forming part of Letters Patent No. 442,087, dated December 2, 1890.

Application filed August 2, 1890. Serial No. 360,823. (Model.)

To all whom it may concern:

Be it known that I, EDWARD F. BARROWS, a citizen of the United States, and a resident of Lockport, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Locks; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a perspective view from the front. Fig. 2 is a plan view exposing the front of the interior mechanism. Fig. 3 is a vertical longitudinal section. Figs. 4, 5, 6, 7, and 8 are detail views, and Fig. 9 is a modification in longitudinal vertical section.

This invention relates to improvements in locks more especially adapted for sliding doors as used in upright show-cases and warehouses, barns, stables, &c.; and it consists in the novel construction and combination of parts hereinafter disclosed.

In the drawings, A refers to the case or closure of the usual construction, having its face-plate *a* adapted to be secured to the inner side of the door-stile, the case itself being let into a mortise in the latter.

B is the bolt, preferably cylindrical in its general outline, adapted to slide and be held in a barrel or bearing *b*, cast upon the inner side of the face-plate around a circular opening *b'* in said plate, through which the bolt projects. Around the bolt B is arranged a spring *c*, interposed between a flange *c'* on the inner end of the bolt and a seat *c''* around the inner bottom edge of the barrel or bearing *b*, the action of which is to automatically retract the bolt as the latter is released. Said flange *c'* is formed at one side with a guide projection or extension *d*, engaging a vertical slot *e* in the side of the barrel or bearing *b*.

C is a T-shaped rock-lever having trunnion-like ends bearing in notches or seats *g* in the side edges of said case near one end, said lever having its principal arm *h* engaging a recess *i* in the bolt B, and passing through the slot *e* of the barrel or bearing *b*,

and extending from said rock-lever at right angles with the arm *h* is a second short arm *j*, engaged by a slide *k*. The slide *k* is provided with a slot *k'*, through which passes a cylindric post or stud *l*, projecting from the inside of the face-plate of the case A, and upon its lower or inner edge near one end said slide is provided with an extension *m*, having a V-shaped notch *m'*, having a rectangular angular termination at its vertex.

D D' D² are tumblers, each having at one end an aperture through which also passes the post or stud *l*, and fixed to each of said tumblers at the same end is a flat or plate spring *n*, pressing against the case A, normally holding the opposite ends of said tumblers thrown inward and automatically returning the same after disengagement from the key.

The tumbler D has a T-shaped slot *o*, the longer arm of which is normally engaged by a lateral lug *o'* on the slide *k*, the tumbler D' having two slots *p p*, communicating by means of a contracted arm *p'*, and the tumbler D² also having two slots *q q*, communicating by a contracted arm *q'*, of slight variation from the slots *p p*, all of said slots being also engaged by said lug *o'* of said slide. It will therefore be seen that by actuating the key the tumblers D' D² will be so moved as to bring the contracted arm *p'* of the slots *p* of tumbler D' and the contracted arm *q'* of the slots *q* of tumbler D² in alignment with the lug *o'* of the slide *k*, the continued movement of the key then bringing its bit in engagement with the said lug, effecting the forward movement of said slide, causing the latter to engage the arms *j* of the rock-lever C, which engagement will cause the longer arm *h* of the latter to project or shoot the bolt B from the face-plate and thus effect the locking operation. From this arrangement it will be seen that the bolt is projected or shot from the face-plate of the case inclosing the lock mechanism in a plane parallel with the key, instead of, as usual, at right angles to such position, especially adapting the lock for use in connection with sliding doors as used in upright show-cases and the like.

The manner of application of this lock to one form of door to which it may be applied

is shown in Fig. 3, the stiles X and Y of the overlapping doors being shown in dotted lines. The stile or door Y is shown as carrying the lock, while the stile or door X receives the bolt. It is evident that this lock is adapted to all forms of sliding overlapping doors or to doors which overlap a jamb.

In the modification as disclosed in Fig. 9 the lock is shown as adapted for use in connection with warehouse, barn, and stable doors. In this modification the face-plate is shown as having a shoulder G to receive the abutting edge of the opposite or other door. In this modification the rock-shaft is also shown as located between the tumblers and the bolt, instead of as shown in the other figures and as heretofore described. The operation, however, is substantially the same.

Having described this invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The lock having the laterally-movable bolt, in combination with the rock-lever having an arm engaging said bolt, and the actuating mechanism comprising a slide acting upon a second arm of said lever, substantially as set forth.

2. The combination, with the bolt and its

inclosing barrel or bearing, of the rock-lever having an arm engaging said bolt, the slide engaging a second arm of said lever and having a slot receiving a post or stud of the face-plate of the case and a second slot, and the tumblers, one having a T-shaped slot and the others each having two slots connected by a contracted slot, all of said slots being engaged by a lug on said slide, and means for actuating said tumblers and slide, substantially as set forth.

3. In a lock, the combination of the case having its face-plate provided upon the inside with the slotted barrel or bearing, the bolt having a flange at its inner end formed with a guide extension or projection engaging the slot of said barrel, the spring placed around said bolt and interposed between said flange and a seat at the outer end of said barrel, and means for actuating said bolt, substantially as specified.

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

EDWARD F. BARROWS.

Witnesses:

JOHN L. NORTON,
WM. M. GOSS.