

F. W. BECHMANN.

KEY-HOLE GUARD.

No. 170,701.

Patented Dec. 7, 1875.

FIG. 1.

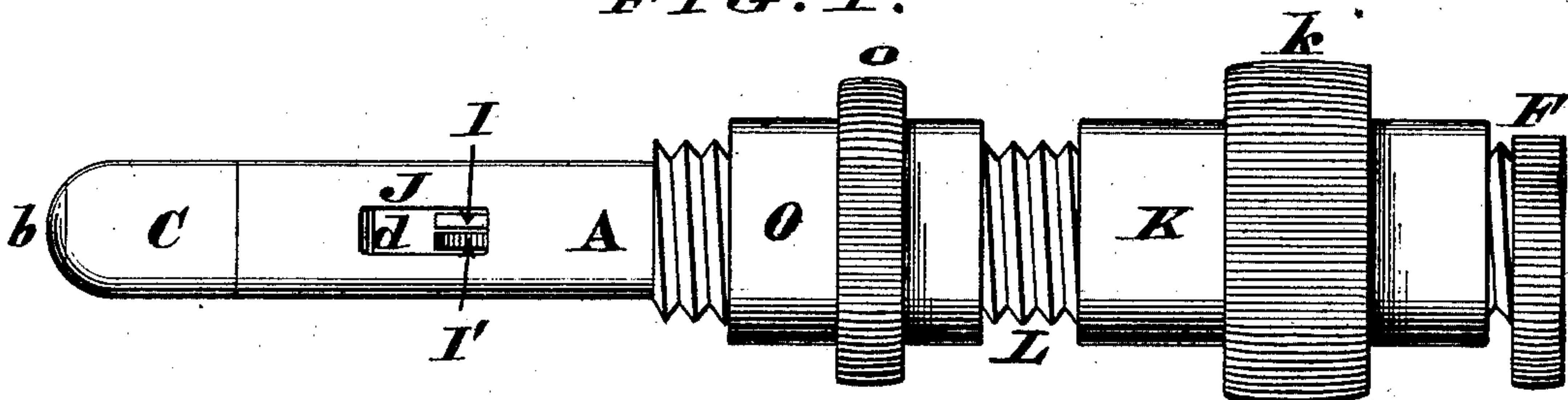


FIG. 2.

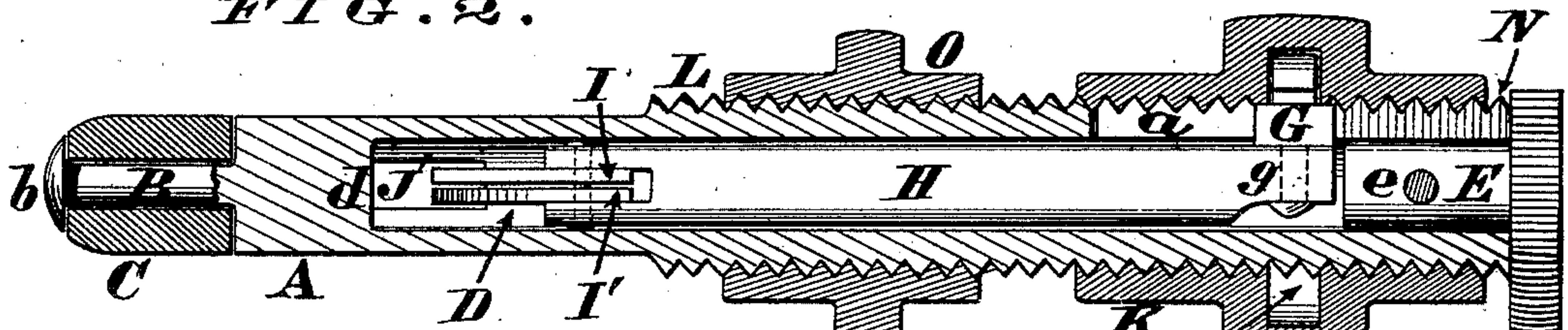


FIG. 3.

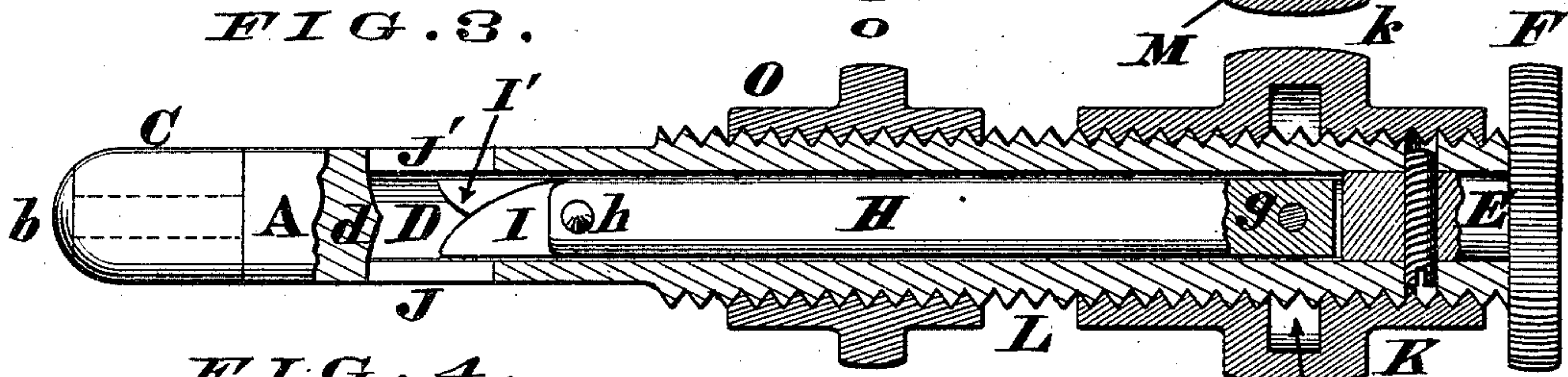


FIG. 4.

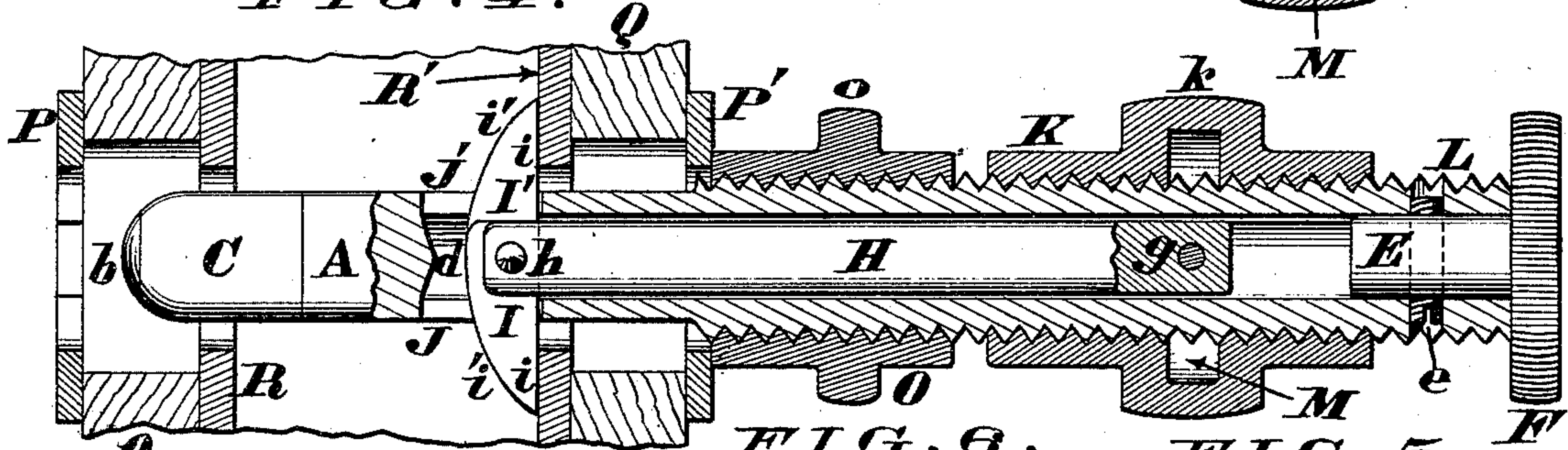


FIG. 5.

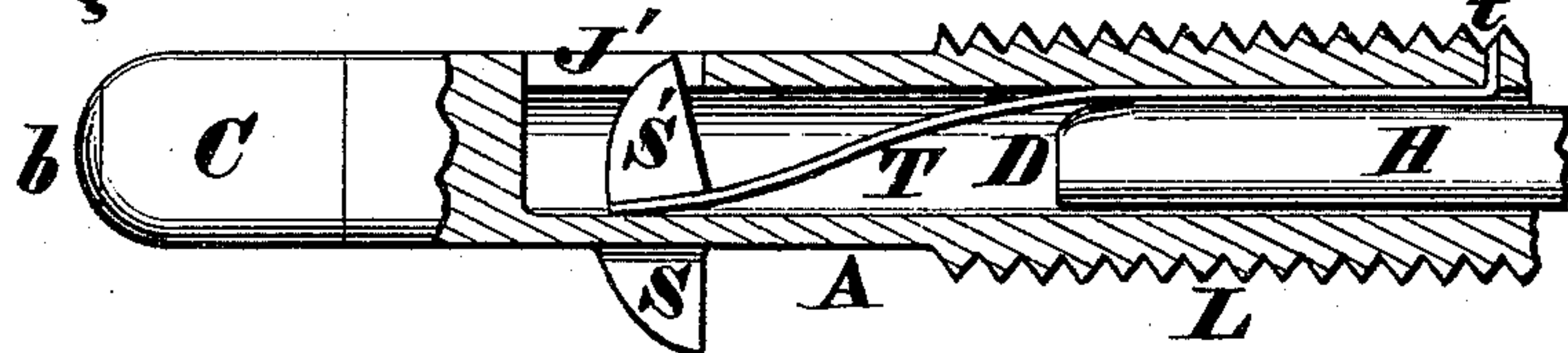
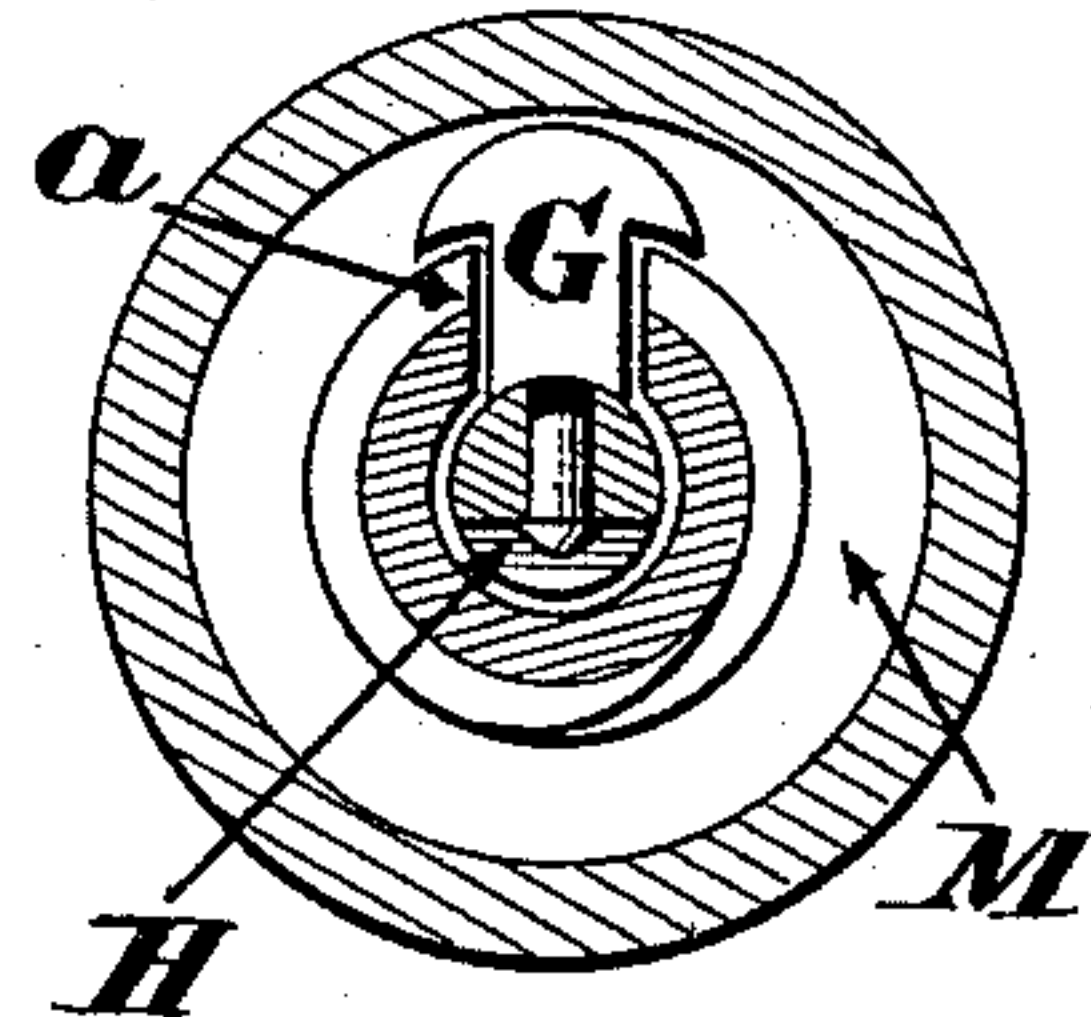
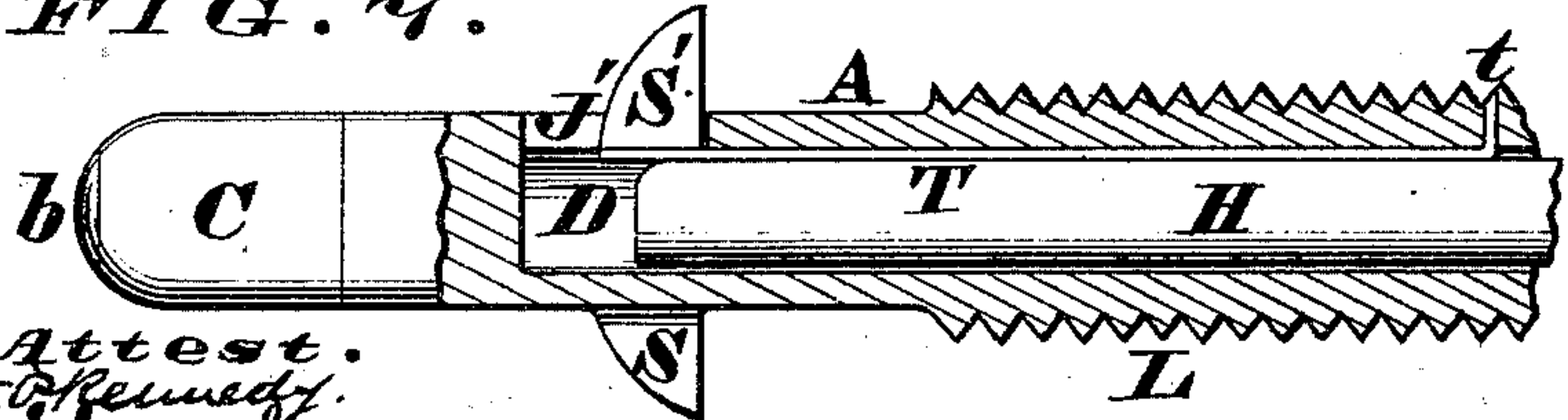


FIG. 6.



Attest.
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UNITED STATES PATENT OFFICE.

FRIEDRICH W. BECHMANN, OF CINCINNATI, OHIO.

IMPROVEMENT IN KEY-HOLE GUARDS.

Specification forming part of Letters Patent No. **170,701**, dated December 7, 1875; application filed November 8, 1875.

To all whom it may concern:

Be it known that I, FRIEDRICH WILLIAM BECHMANN, a resident of the city of Cincinnati and State of Ohio, have invented certain new and useful Improvements in Protectors for Key-Holes, of which the following is a specification:

My invention relates to a device which is to be fitted in the key-hole of a lock in such a manner as to prevent the bolt being thrown either by means of a false key or by any other instrumentality applied to the outside of the door. The protector is applied after the door has been locked with the proper key, and the latter withdrawn, as hereinafter more fully explained.

In the accompanying drawing, forming part of this specification, Figure 1 is a side elevation of my protector, the spurs or detents of the instrument being shown in their retracted and closed condition. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a horizontal section of the implement. Fig. 4 is another horizontal section of the instrument, but showing the detents protruded and engaged within a lock. Fig. 5 is a transverse section of the nut that operates the shaft of the detents, and Figs. 6 and 7 represent a modification of the protector.

A represents a barrel or cylinder, having at one end a longitudinally-projecting stud, B, which serves as a journal-bearing for a short sleeve, C, which is capable of rotating freely upon said bearing. This stud is headed up at *b*, so as to prevent the sleeve becoming detached from the implement. The cylinder is provided with an axial bore or chamber, D, which terminates at one end with a wedge-shaped projection, *d*, while the other end of said chamber has fitted in it the plug E of a removable cap or head, F. *e* is a bolt, that retains the plug securely in position. The upper side of cylinder A is slotted longitudinally at *a*, which slot is traversed by the tongue G of a shaft, H, to whose front end is pivoted, at *h*, two spurs or detents, I I', having straight faces *i* and curved ones *i'*. *g* is a rivet or screw that secures the tongue G to the rear end of shaft H. The sides of cylinder A are pierced with two diametrically-opposite slots, J J', through which the detents I I' are capable of protruding, as will

presently appear. K is a propelling-nut, which engages with the external screw-thread L of cylinder A, and said nut is furnished with a milled portion, *k*, to facilitate its manipulation. This nut is provided with an internal and annular groove, M, that receives the tongue G of shaft H. The plug E has an upwardly-projecting rib or flange, N, that enters the slot *a*, and this flange is screw-threaded the same as the cylinder A, in order that the nut K may be retracted as far as the head F will allow. O is a lock-nut, having a milled portion, *o*. P P' represent, respectively, the outside and inside key-hole plates of a door, Q, and R R' the outside and inside plates of a mortise-lock fitted within said door.

The manner of applying my protector is as follows: In the normal position of the instrument the propelling-nut K is retracted as far as the head F will allow, and the shaft H occupies a corresponding position within the chamber D. This retraction of the shaft closes the pivoted detents I I', as shown in Fig. 3. Whenever it is desired to apply the instrument to a door, the latter is first locked with the proper key, which is then withdrawn. The front end of the protector is then inserted in the key-hole, and as soon as it has passed in far enough the occupant of the room advances the shaft H by simply rotating the propelling-nut K. During this rotation of the nut K the shaft is maintained in its proper axial position within the chamber D by means of the tongue G, which prevents any turning of the shaft, either to the right or left, while at the same time said tongue compels the shaft H to advance simultaneously with its propelling-nut. As soon as the shaft has advanced far enough to bring the curved faces *i'* in contact with the wedge *d* at the end of chamber D, the detents I I' are deflected laterally and caused to protrude through the slots J J'. These spurs or detents having been brought to a position at right angles to the barrel A, the operator ceases to turn the nut K, and then retracts the instrument far enough to cause the flat faces *i* of said detents to bear against the inner side of plate R' of the lock. The nut O is then advanced until it bears against the key-hole plate P', which act attaches the instrument immovably to the door.

When thus secured it is evident the lock-bolt cannot be thrown by any person outside of the room, as the barrel A closes the key-hole so effectively as to prevent the insertion of a false key. Neither can the protector be turned either to the right or left by means of "outsiders," as the application of such devices would simply rotate the sleeve G upon its bearing without in the least affecting the security of the instrument. The stud B *b* and sleeve C, being made of hardened steel, will resist the action of drills, and, therefore, said sleeve cannot be detached from the barrel. Furthermore, the instrument cannot be dislodged from its position by the application of any degree of force from the outside, as the nut K must be retracted before the detents can be closed, so as to pass back through the key-hole. The simple retraction of this nut is all that is necessary to liberate the protector from the lock.

In the modification shown in Figs. 6 and 7 the barrel is represented with but one slot, J', while a fixed spur, S, projects from the opposite side of the barrel. The other spur, S', is secured to the free end of a spring, T, whose other end is attached to the barrel at *t*. The tendency of this spring is to retract said spur S'; but as soon as the shaft H is advanced, the spring is straightened and the spur protruded.

The instrument may be arranged to carry three or more spurs, if desired.

The drawings have been made on an enlarged

scale, so as to show the details as clearly as possible; but for general use the device need not be over three inches long and about half an inch in its greatest diameter. A protector of such dimensions will readily enter a vest-pocket, and, being light and portable, it will be especially useful for travelers.

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

1. A key-hole guard or protector, consisting essentially of a barrel, A, containing a reciprocating shaft, H, to which is pivoted one or more detents, I or I', that are capable of being protruded or closed by the advance or retraction of said shaft H, substantially as herein described.

2. The combination of slotted screw-threaded barrel A *a* J J' L, shaft H *h*, detents I·I', tongue G, and interiorly-grooved propelling-nut K M, as and for the purpose stated.

3. In combination with the barrel A L, having one or more opening and closing detents, the nut O, for locking the protector to the door, in the manner described.

4. A shaft provided with a detent or detents, in combination with barrel A, revolving tube C, and closing-nut O, substantially as and for the purposes set forth.

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Witnesses:

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