

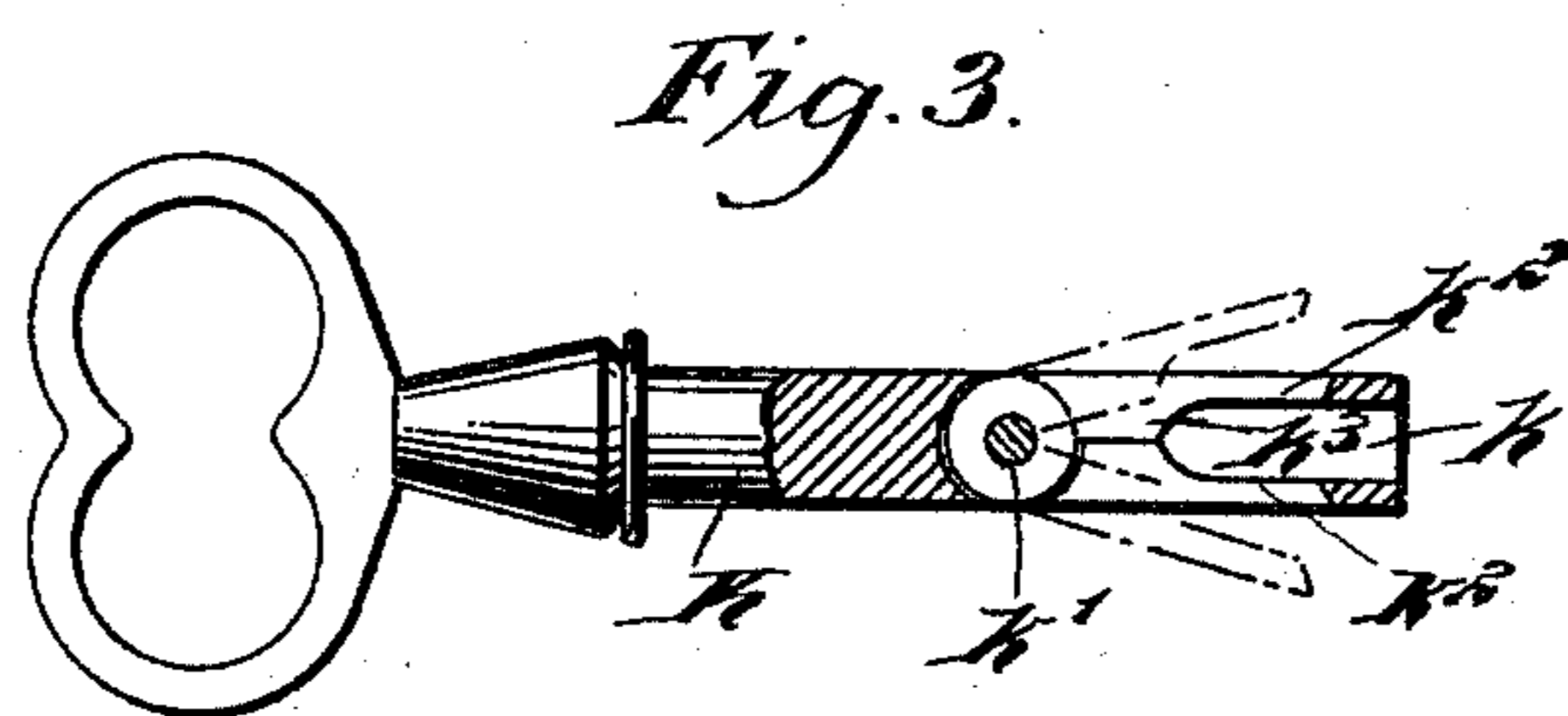
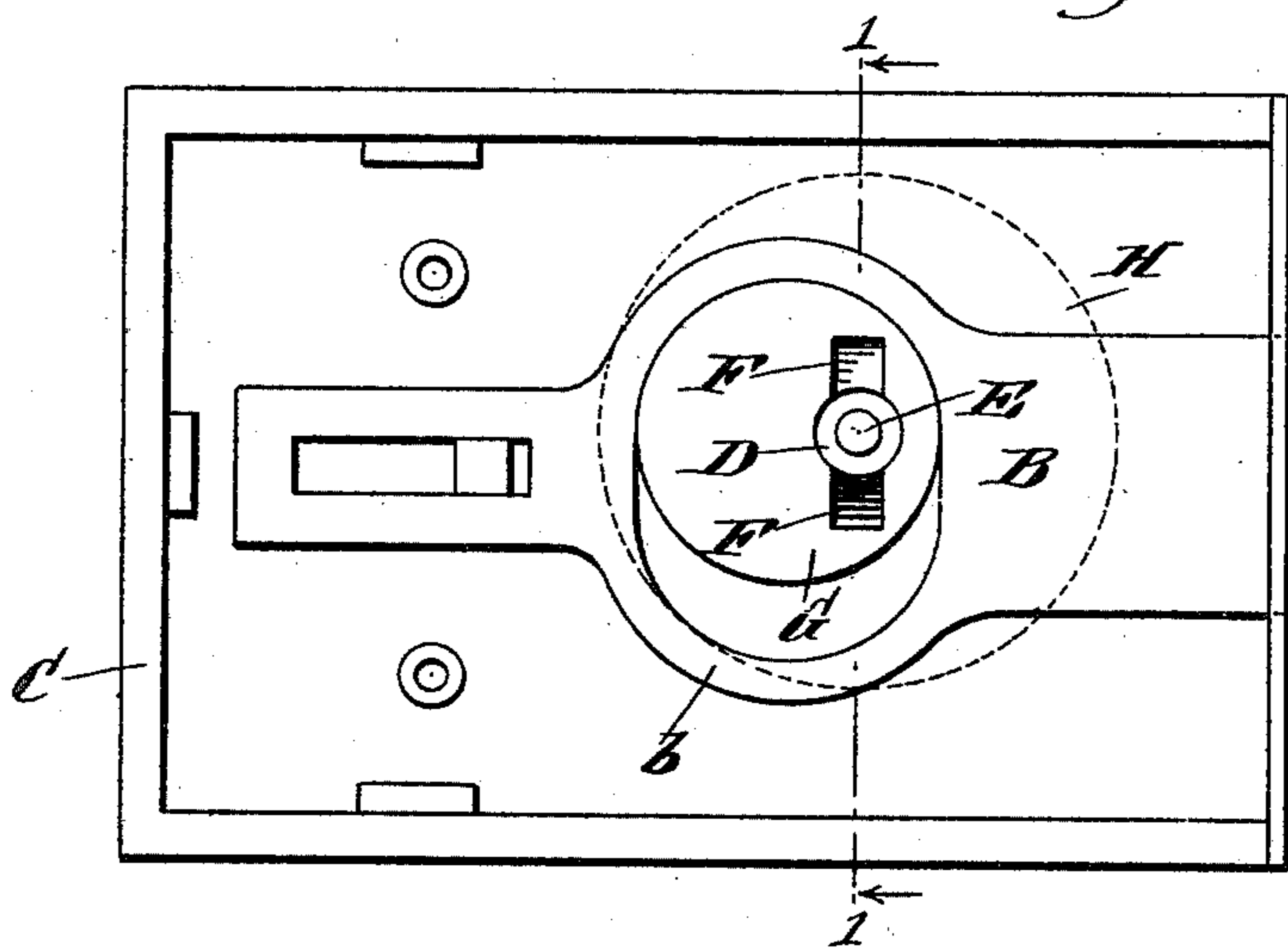
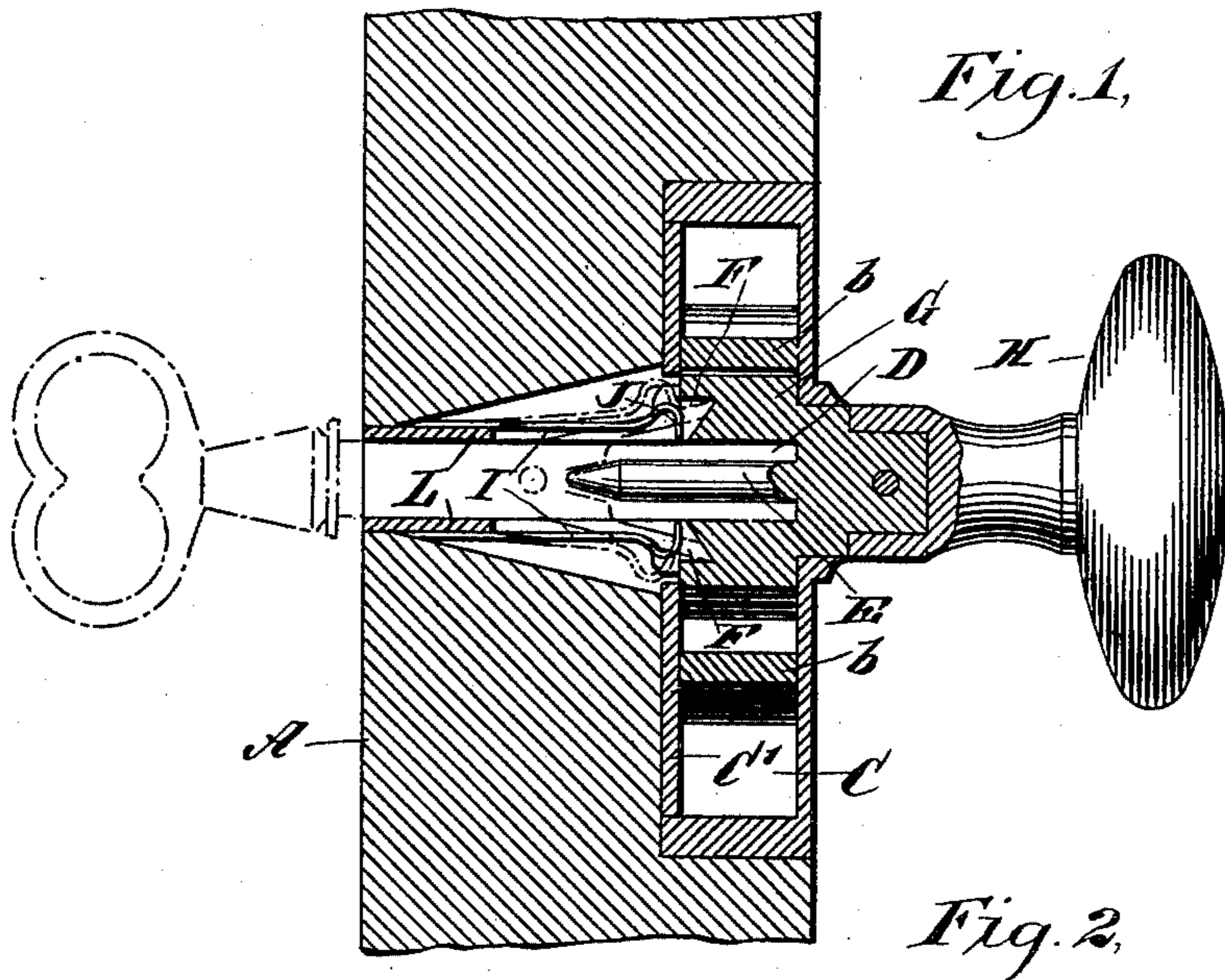
No. 619,202.

Patented Feb. 7, 1899.

A. MIROT.
LOCK.

(Application filed Sept. 3, 1898.)

(No Model.)



WITNESSES:

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LOCK.

SPECIFICATION forming part of Letters Patent No. 619,202, dated February 7, 1899.

Application filed September 3, 1898. Serial No. 690,214. (No model.)

To all whom it may concern:

Be it known that I, ADOLPHE MIROT, of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Lock, of which the following is a full, clear, and exact description.

My invention relates to an improvement in locks for doors, and comprises the novel features hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation on the line 1 1 in Fig. 2 of the lock in place on a door. Fig. 2 is an interior view of the lock, the covering-plate being removed; and Fig. 3 is a plan view of the key, a portion thereof being in section.

The object of my invention is to produce a lock which shall be simple and cheap to manufacture, strong in all its parts, not likely to get out of order, and in which the bolt cannot be forced by inserting a knife or similar instrument between the door and the jamb.

The casing C may be recessed into the door A, as shown in Fig. 1, or secured to the outer surface thereof, as desired. Within the casing C is placed a bolt B, suitably mounted to reciprocate in a straight line. This bolt is provided with a yoke b, having an opening which is herein shown as rounded at its ends and having short straight sides.

This lock is moved by means of a bolt-throwing arm, which is herein shown in the form of an eccentric G, which is journaled in the frame and lies within the yoke b. It is evident that instead of the eccentric, as herein shown, the bolt-throwing arm may consist of a crank or cam, all of them being the equivalents of each other for this purpose, the eccentric, in fact, being one form of crank. The eccentric is shown and described simply as a convenient form of bolt-throwing arm. The eccentric G is journaled upon an axis which is concentric with a pin E, projecting from one surface of the eccentric. This axis coincides with the axis of a knob H, said knob being secured to the side of the eccentric which faces inward. The knob being directly

attached to the eccentric G the bolt B may be thrown by hand from the inside; but as there is no knob extending to the outside it can be opened from the outside only by a key. The pin E is attached to the eccentric at the bottom of a hole D, thus forming an annular space between the walls of the hole and the pin. Upon opposite sides of the hole D are formed recesses or notches F in the face of the eccentric.

Secured to the cover-plate C', which is at the inner side of the casing, is a tube L, which is in line with the pin E. The diameter of this tube corresponds with the diameter of the hole D.

Upon two opposite sides, corresponding in location to the location of the recesses F when the lock is either in its withdrawn or projected position, are two springs I. These springs are flat bars and have their inner ends curved to form hooks J, the ends of said hooks being close alongside the outer surface of the eccentric G and covering the notches F.

The key, which is shown in Fig. 3, has a circular shank K, the inner end of which has a longitudinally-extending hole k. This hole extends inward a short distance and communicates with two laterally-extending slots, said slots being normally filled by two pivoted dogs k². These dogs are pivoted at k' and are adapted to swing outward a short distance, as shown by dotted lines in Fig. 3. The dogs k² have shoulders k³, which are adapted to be engaged by the pointed end of the pin E, so as to force them outward into a position corresponding with that shown in dotted lines in Fig. 3. When the key is inserted from the outside, the dogs k² will lie entirely within the circle of the shank K. The bored inner end of the key passes over the pin E, the point of said pin engaging the dogs k² and spreading them outward. As the key is turned the dogs engage the springs I and force them outward, the points of the dogs dropping into the recesses or notches F in the face of the eccentric or bolt-throwing arm G. The key is thus locked to the eccentric and the bolt may be thrown. The hooked ends of the springs I normally cover the notches F and prevent engagement therewith by any other tool than a key constructed in accordance with that shown in the draw-

ings. When the bolt is thrown by the eccentric, it is given a half-revolution, the eccentric acting as a lock to prevent the bolt from being forced backward by engagement with
 5 a knife or similar instrument forced into the crack between the door and the jamb. It is therefore impossible to throw the bolt by any other means than a key of the character described.

10 The manner in which the crank-arm can be substituted for the eccentric is evident and does not need illustration.

The invention does not consist simply in the use of the eccentric form of bolt-throwing
 15 arm, but in the use of a bolt-throwing arm of any convenient or desirable form in connection with the particular mechanism for operating it.

Having thus fully described my invention,
 20 I claim as new and desire to secure by Letters Patent—

1. In a lock, the combination of a bolt, a cranked throwing-arm engaging therewith, a pin projecting from one side of the arm concentric with its journal, the arm having
 25 notches or recesses cut in its surface alongside the pin, a key having a hole in the end of its shank adapted to receive said pin and slots in its side communicating with said hole, and dogs each pivoted by one end in said slot and spread by engagement with the pin, so as to enter the recesses in the throwing-arm, substantially as shown and described.

2. In a lock, the combination of a bolt, a
 35 cranked throwing-arm engaging therewith, a pin projecting from one side of the arm concentric with its journal, the arm having notches or recesses cut in its surface alongside the pin, springs normally covering said
 40 notches, a key having a hole in the end of its shank adapted to receive said pin, and slots in its side communicating with said hole, and dogs each pivoted by one end in said slot and spread by engagement with the pin, so as to
 45 push aside the springs and enter the recesses in the throwing-arm, substantially as described.

3. In a lock, the combination of a bolt, a cranked throwing-arm engaging therewith, said arm having a round hole in one side in
 50 line with its journal, a pin projecting centrally from said hole, the arm having notches or recesses in its surface alongside the hole, a key having a hole in the end of its shank adapted to receive said pin, and slots in its
 55 side communicating with said hole, and dogs each pivoted by one end in said slot and spread by engagement with the pin, so as to enter the recesses in the throwing-arm, substantially as described.

4. In a lock, the combination of a bolt, a cranked throwing-arm engaged therewith, said arm having a rounded hole in one side in line with its journal, a pin projecting centrally from said hole, the arm also having
 65 notches or recesses in its surface alongside the hole, a tube guiding the key to place, springs secured thereto and having one end normally covering the notches or recesses in the cranked arm, a key having a hole in the
 70 end of its shank adapted to receive said pin, and slots in its side communicating with said hole, and dogs each pivoted by one end in said slot and spread by engagement with the pin, so as to enter the recesses in the throw-
 75 ing-arm, substantially as described.

5. A lock, comprising a bolt having a cross-slot therein, a pivoted bolt-throwing arm within said slot, and a key having a member movable thereon into and out of engagement with
 80 the bolt-throwing arm to turn the same, substantially as described.

6. A lock, comprising a bolt having a cross-slot therein, a pivoted bolt-throwing arm within said slot, a key having a member movable
 85 thereon into and out of engagement with the bolt-throwing arm to turn the same, and a pin upon the bolt-throwing arm engaging and actuating said movable member, substantially as described.

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Witnesses:

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