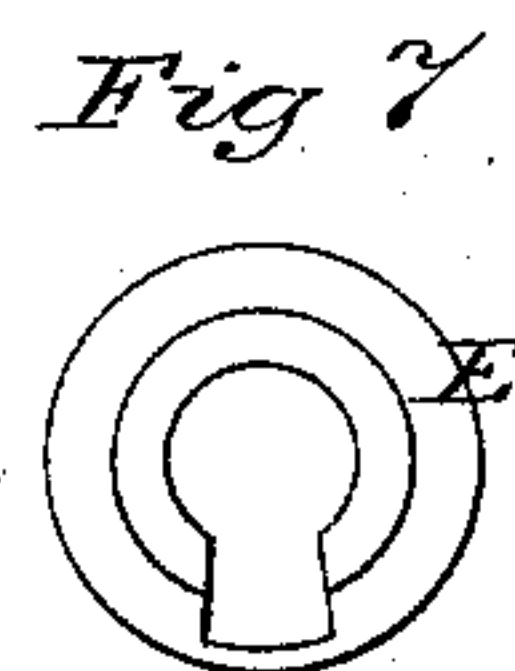
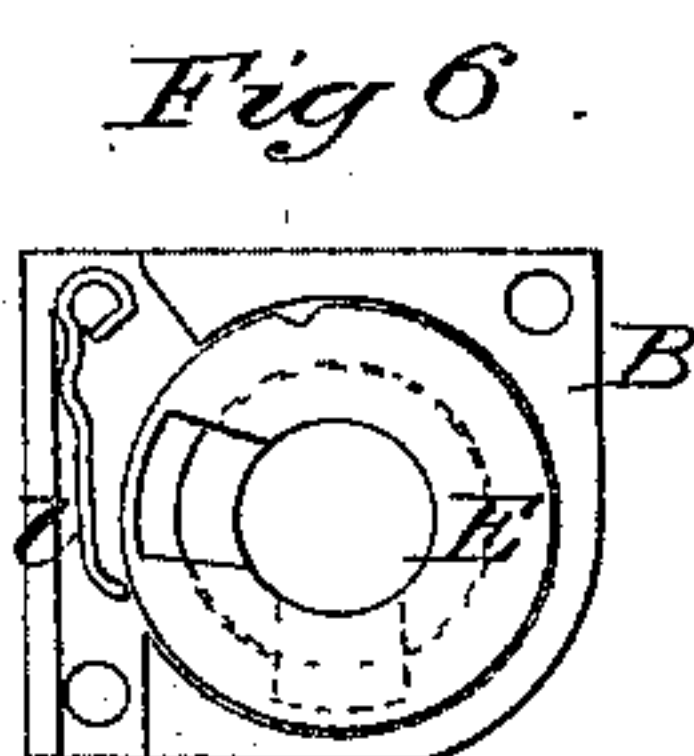
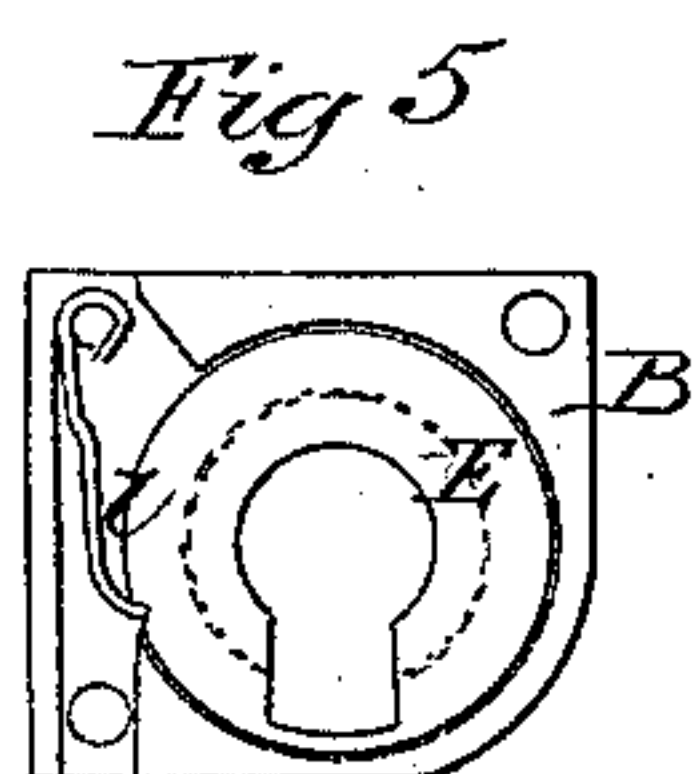
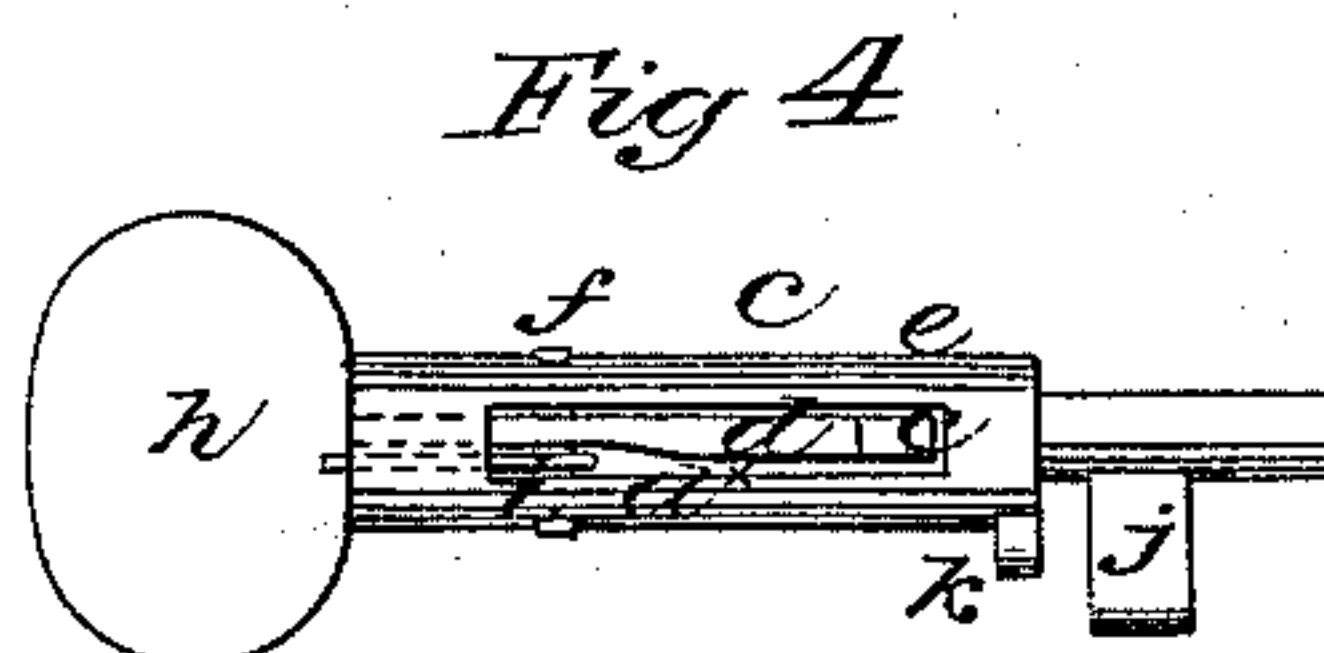
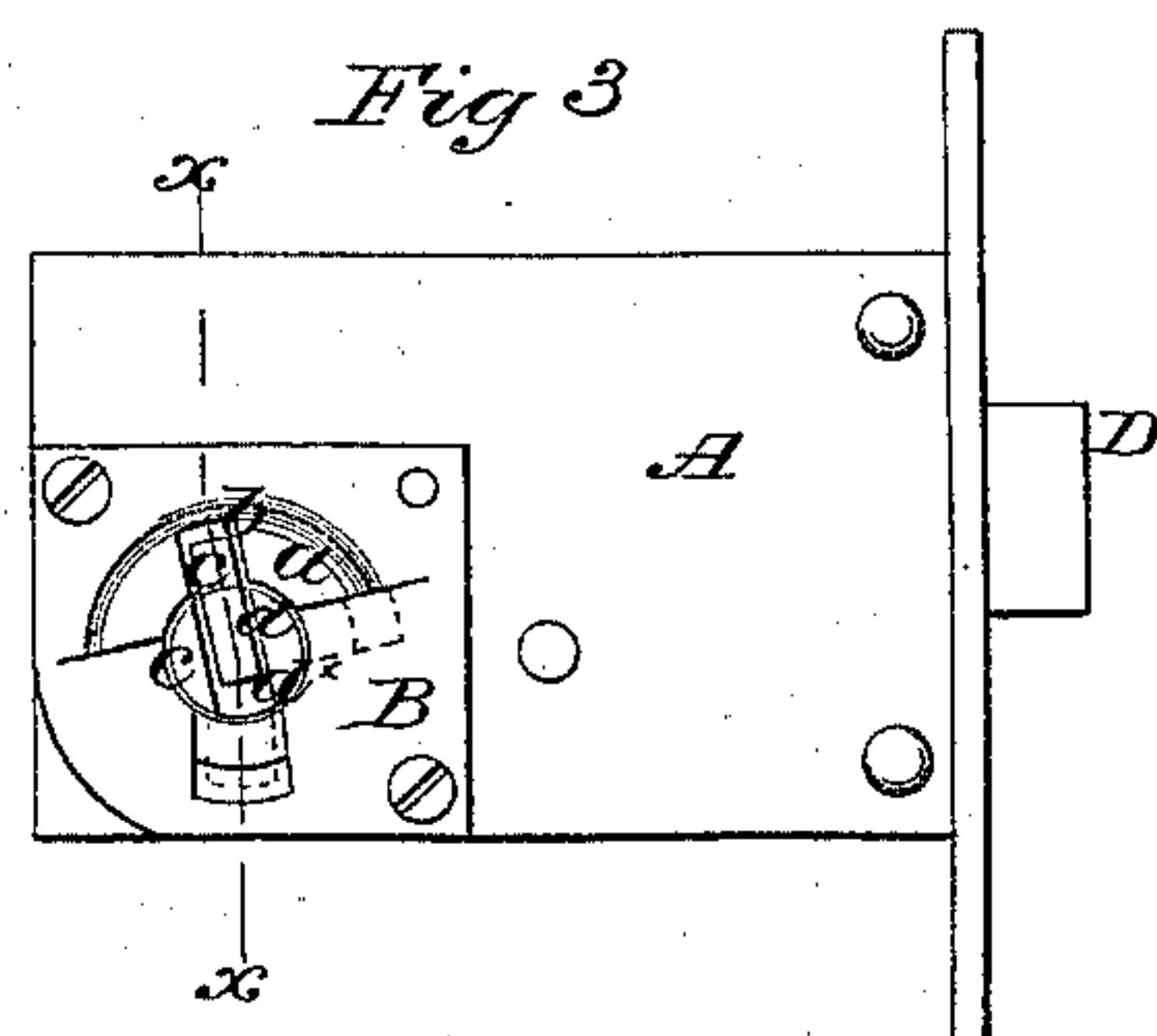
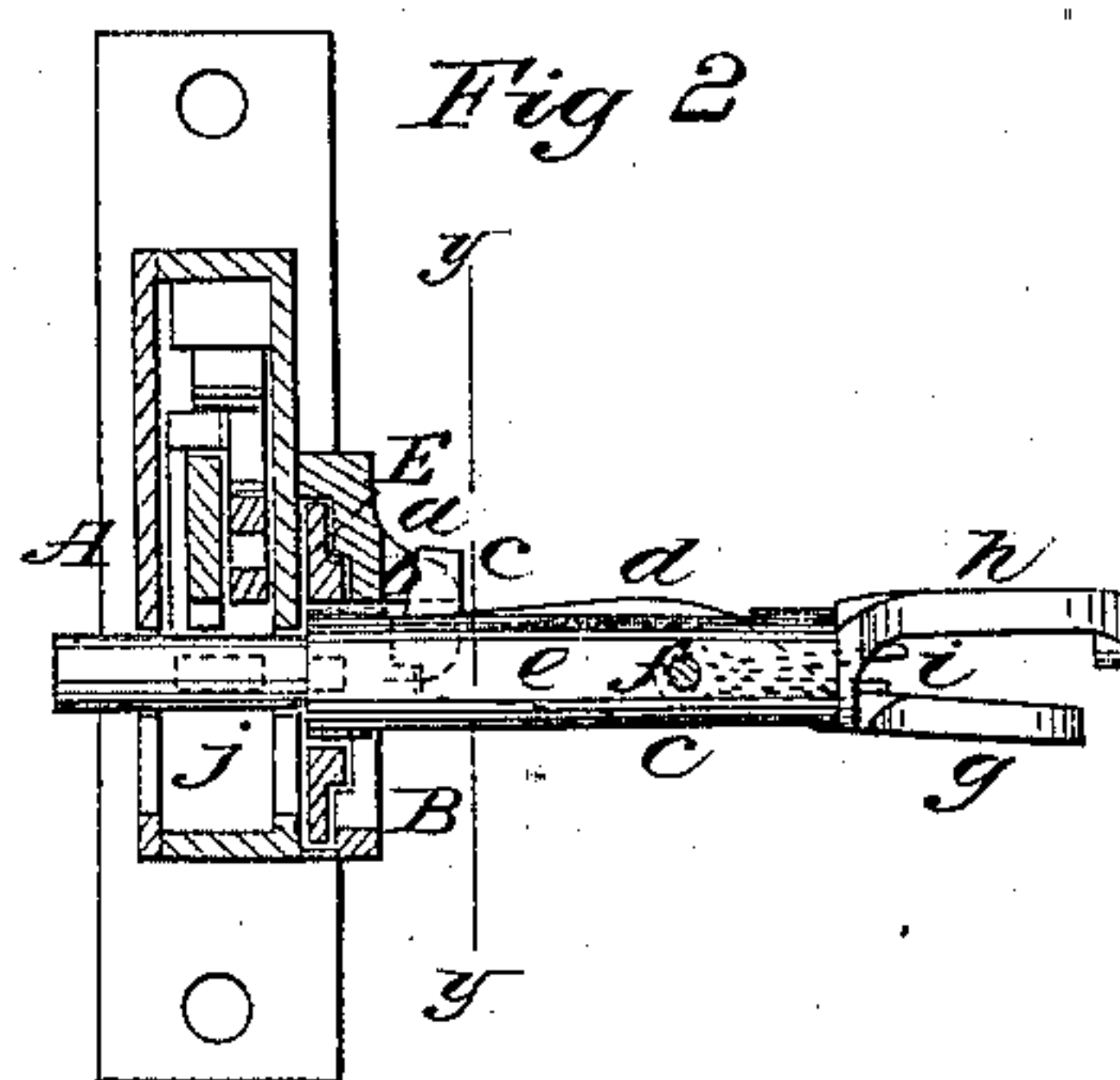
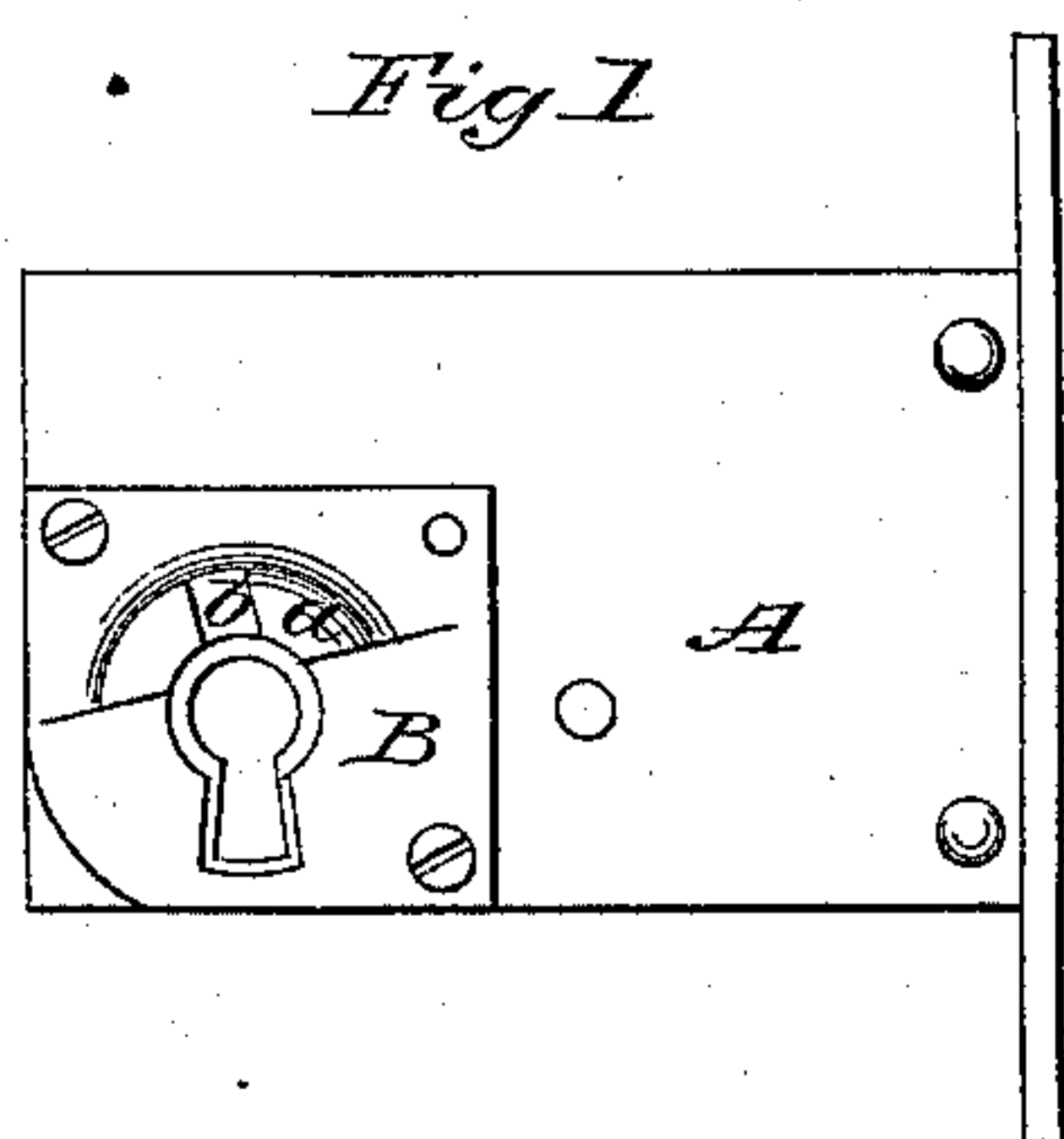


D. A. Pratt,
Lock Trimmings.

N^o 54,952.

Patented May 22, 1866.



Witnesses:

J. W. B. Crington
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Inventor:

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UNITED STATES PATENT OFFICE.

D. A. PRATT, OF NEW YORK, N. Y.

IMPROVEMENT IN LOCKS.

Specification forming part of Letters Patent No. 54,952, dated May 22, 1866.

To all whom it may concern:

Be it known that I, D. A. PRATT, of the city, county, and State of New York, have invented a new and Improved Safety or Burglar-Proof Attachment for Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an external view of a lock with my improvements applied to it; Fig. 2, a transverse vertical section of the same with the key inserted, taken in the line *x x*, Fig. 3; Fig. 3, an external view of the same with the key in section, as indicated by the line *y y*, Fig. 2; Fig. 4, a detached view of the key; Figs. 5 and 6, inner-side views of the portion of my invention which is attached to the lock; Fig. 7, a detached view of a revolving tumbler or plate pertaining to the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to prevent locks being picked or illegitimately opened from the outer side of the door, either by the turning of the key through the medium of forceps or pliers or by shoving the key out of the lock and introducing a pick or skeleton-key. Halls, stores, and bed-rooms are frequently entered when the occupant is asleep by this mode of unlocking the lock, and the within-described invention, it is believed, will effectually prevent this kind of burglary.

A represents a lock, which may be constructed of any of the known forms, and B is a plate secured to the outer side of the lock-case and having a hole in it to admit of the insertion of the key C into the key-hole of the lock, the key-hole and the hole in the plate being directly in line with or coinciding with each other.

On the exterior side of the plate B there is a prominence or projection, *a*, of curved form, corresponding to the curvature of the circular part of the hole in the plate B. This projection *a* has a notch, *b*, made in it at about its center, as shown clearly in Figs. 1 and 3. This notch *b* receives a projecting lip, *c*, connected with the key C, directly after the latter has shoved out the bolt D from the lock. (See Fig. 3.) This lip *c* prevents the key C being turned backward or forward from the outer

side of the door—a result frequently attained by grasping the end of the key with forceps or pliers—and by this means locks are frequently unlocked from the outer side of the door. This lip *c* is arranged or applied in such a manner that it will seek the notch *b* automatically when locking the door and removing the hand from the key, and be removed from the notch *b* in grasping the key to unlock the lock, so that a person will not be annoyed or embarrassed by the invention in the least. This may be effected in various ways—first, by transposing the lip *c* and making it stationary, and having the notch *b* connected with the key and movable, the lip *c* being on the lock-plate; second, by boring out the center of the arbor of the key lengthwise and attaching the lip *c* to a shaft or rod placed therein and operated by a spiral spring; or, third, by halving the arbor of the key longitudinally from the bow to where the lip *c* is shown in Fig. 2, said halves working toward and from each other on a fulcrum-pin near the bow of the key, with the lip *c* on one half and a spring interposed between the halves, as shown in Fig. 2, and by other equivalent means. In this instance the lip *c* is formed at the end of a lever, *d*, fitted in a slot, *d**, in the arbor *e* of the key, and working upon a fulcrum-pin, *f*, the outer end of said lever having a flattened broad surface, *g*, which is opposite to or by the side of the broad surface or bow *h* of the key, and the lip *c* moved out from the notch *b* by the simple grasping of the key in the natural action of turning it in the lock. A spring, *i*, is inserted in the arbor *e* of the key, and this spring bears against the lever *d* near its outer end, and has a tendency to keep the lip *c* out from the arbor *e*. Thus by this simple arrangement the lip *c* is made to pass into the notch *b*, and is withdrawn therefrom without any special manipulation on the part of the operator. Although the key C by this means is prevented from being turned in the lock from the outer side of the door, there is another result to be attained in order to prevent the lock being illegitimately unlocked, and that is to prevent the passing of a rod through the key-hole in order to operate upon the lip *c* and move it out from the notch *b*, thereby preparing the way for the introduction of a skeleton-key. These results are prevented from being attained by means of a plate or tumbler, E, which is fitted in a

recess at the rear side of the plate B, said tumbler E having a hole made in it corresponding to the key-hole, to admit of the bit *j* of the key passing through it.

The arbor *c* of the key has a short arm, *k*, projecting from it on the outside of the lock, and this arm, when the key is inserted in the lock, is in line with the tumbler E, and turns said tumbler when the key is turned, and when the bolt D is shoved out from the lock and the latter is in a locked state the key-hole in the tumbler will be out of line with the key-hole in plate B, and they cannot be shoved out from the lock, nor can a rod or instrument of any kind be passed through the lock from the outer side of the same to operate upon the lip *c*.

The tumbler E is prevented from casually turning by means of a spring, *l*, bearing against it, as shown in Figs. 5 and 6, and said tumbler is turned to unlock the lock, so that the hole in it will be brought in line with the key-hole and admit of the key being withdrawn from the lock.

This invention may be applied to a rim-lock by attaching the plate B, with its tumbler and notch, directly to the lock-case on the outside of the lock, or to a mortise-lock in like manner, or, by a more preferable way, by using the plate B, with its tumbler, &c., as an escutcheon on the wood-work around the key-hole on the inner side of the door.

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

1. The employment or use of the movable lip *c* on the key C, in connection with a notch in the stationary plate B, attached to the lock or to the escutcheon on the door, arranged in such a manner that the one will, as the key is turned in order to lock the door, engage automatically with the other, substantially as set forth.

2. The tumbler E, arranged within the plate B so as to be operated by the turning of the key in the manner shown, or in any equivalent way, so as to serve as a guard to the key-hole to prevent the passing of a rod or instrument through the key-hole to act upon the lip *c*, and thus admit of the key being turned from the outer side of the door.

3. The combination of the lip *c* upon lever *d*, applied to the key C, the arm *k*, the notch *b* in the plate B, and the rotary tumbler E, all arranged and applied to operate in the manner substantially as and for the purpose set forth.

D. A. PRATT.

Witnesses:

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