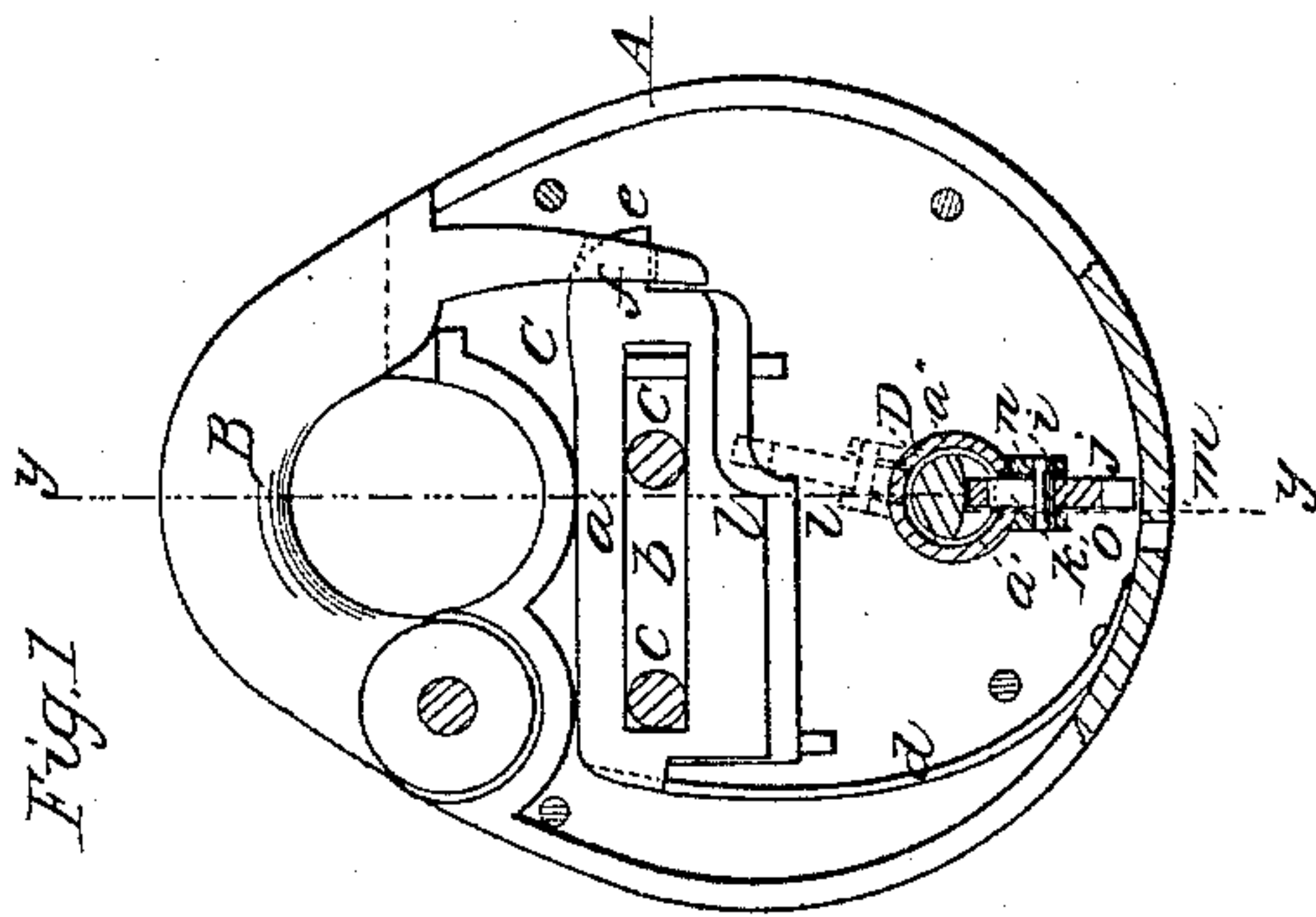
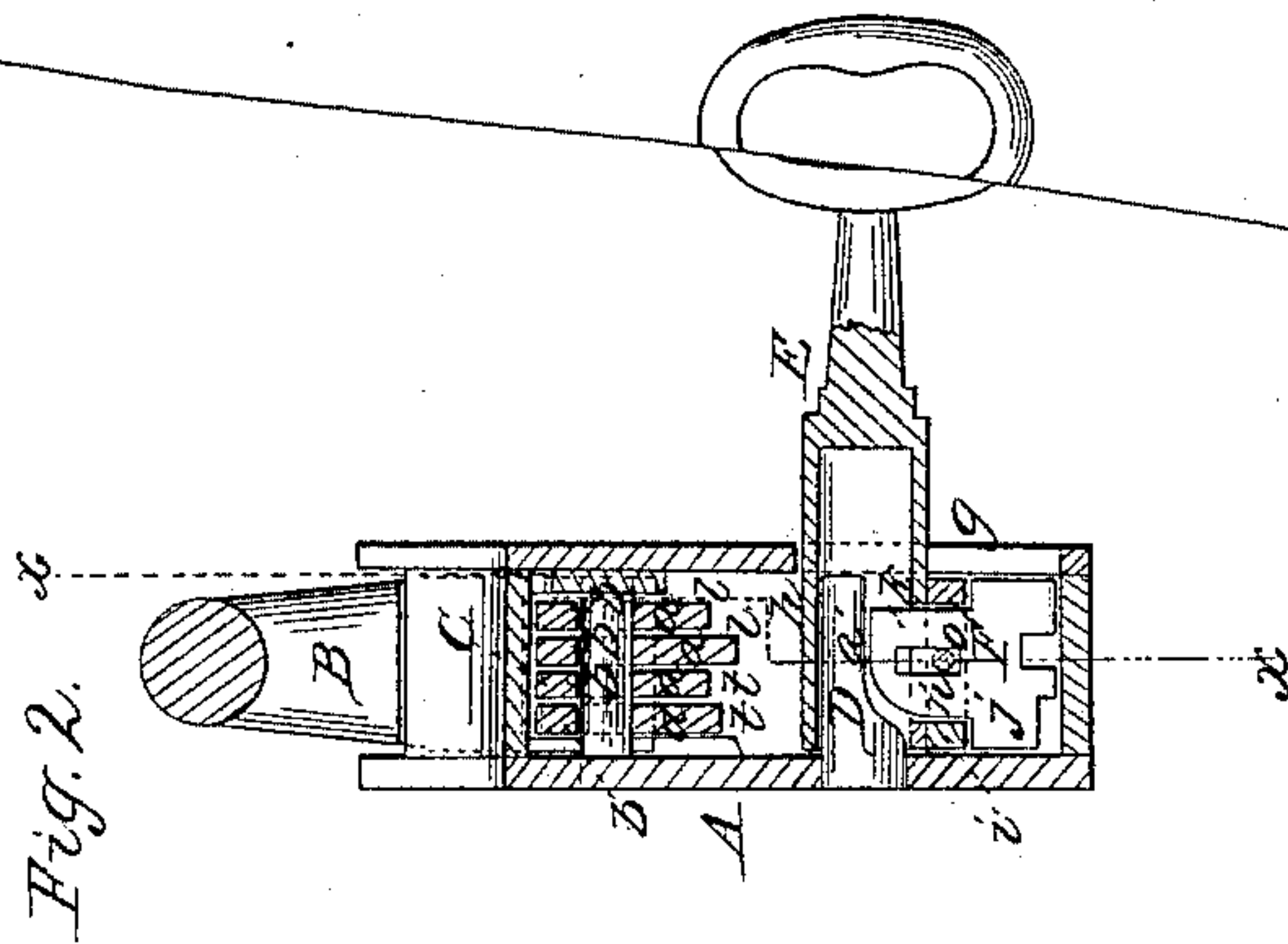


*S. N. Long,*

*Padlock,*

*N<sup>o</sup> 37,135,*

*Patented Dec. 9, 1862.*



*Witnesses.*  
*H. Coombs*  
*G. W. Reed*

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# UNITED STATES PATENT OFFICE.

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THE CHATHAM LOCK COMPANY, OF SAME PLACE.

## IMPROVEMENT IN LOCKS.

Specification forming part of Letters Patent No. 37,135, dated December 9, 1862.

*To all whom it may concern:*

Be it known that I, SAMUEL N. LONG, of South Chatham, in the county of Barnstable and State of Massachusetts, have invented a new and Improved Lock; and I do hereby declare 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 is an internal view of a padlock constructed according to my invention, the case of the lock and the key being in section, as indicated by the line *x x*, Fig. 2. Fig. 2 is a section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in constructing the key of the lock with a sliding bit, and having the pin or pintle, on which the key turns in locking and unlocking the lock, of such a shape as to form a cam, which, as the key is turned, will throw out the bit and cause the latter to act upon the bolt, which is constructed of a series of tumblers. The key-hole of the lock is of such a length as only to admit the bit of the key when it is shoved inward, and consequently the lock cannot be opened by a key having a rigid or fixed bit which can enter the key-hole, as said bit would be too short to reach the bolt.

The object of the invention is to obtain a lock of very simple construction, which will be difficult to pick, and capable of being constructed at a small cost.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the case of a padlock, which may be of the usual form, and provided with the ordinary bow or shackle B.

C represents the bolt of the lock, which is composed of a series of sliding tumblers, *a*, which are slotted longitudinally, as shown at *b*, and fitted on two stirrups or guide-pins, *c c*. The tumblers *a* have springs *d* bearing against their back ends, and these springs have a tendency to keep the front ends *e* of the tumblers in the eye *f* of the bolt or shackle,

so that the latter will be retained within the case and the lock kept in a locked state, as will be fully understood by referring to Fig. 1.

D represents a pin or pintle, which is secured within the case A, and in such a relative position with the key-hole *g* of the lock as to receive the tube *h* of the key E when the latter is inserted in the case. This pin or pintle D is not of cylindrical form throughout its entire length. It is hollowed out at one side, as shown clearly at *a'* in Fig. 2, so as to approximate to an elliptical form, as shown in Fig. 1. The key E is provided with an extension-bit, F. This bit is formed of two parts, *i j*, the part *i* being permanently attached to or cast with the tube *h* of the key, and the other part, *j*, being provided with a shank, *k*, which is fitted in the part *i* and allowed to slide freely therein. The key-hole *g* is made of such a length that it will admit of the bit F passing through it only when the part *j* is in contact with the part *i*, and when the tube *h* of the key passes on the pin or pintle D the side *a'* of the latter, which is the side that is cut or hollowed out, will receive the inner end of the shank *k* of the sliding part *j* of the bit F. When, however, the key is turned to act upon or throw back the tumblers *a*, the part *j* of the bit will be forced out, owing to the inner end of the shank *k* being acted upon by the prominent part *a''* of the pin or pintle D, (see Fig. 1,) and the part *j* is thereby thrown out sufficiently far to act upon the tumblers and throw them back out of the eye *f* of the bolt or shackle. This result could not be obtained if the part *j* were not forced out. A key, therefore, provided with a rigid or fixed bit that will enter the key-hole *g*, cannot act upon the tumblers *a*. The sliding part *j* of the bit *f* is notched or serrated, so as to correspond with shoulders *l* on the bits *a*, said shoulders being at different heights. This arrangement increases the difficulty of picking.

This invention is applicable to different kinds of locks as well as to padlocks, and when applied to the latter I design to have a small hole, *m*, drilled into the lower part of the case A to let out water which will beat into



the case during storms. The part *j* of the bit may be slotted, as shown at *n*, and have a pin, *o*, pass through it to serve as a guide-bar, *j*.

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

The bolt *C*, formed of a series of tumblers, *a*, in combination with a key provided with

an extension-bit, *F*, and a cam-shaped pin or pintle, *D*, or its equivalent, all arranged as and for the purpose herein set forth.

SAMUEL N. LONG.

Witnesses:

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