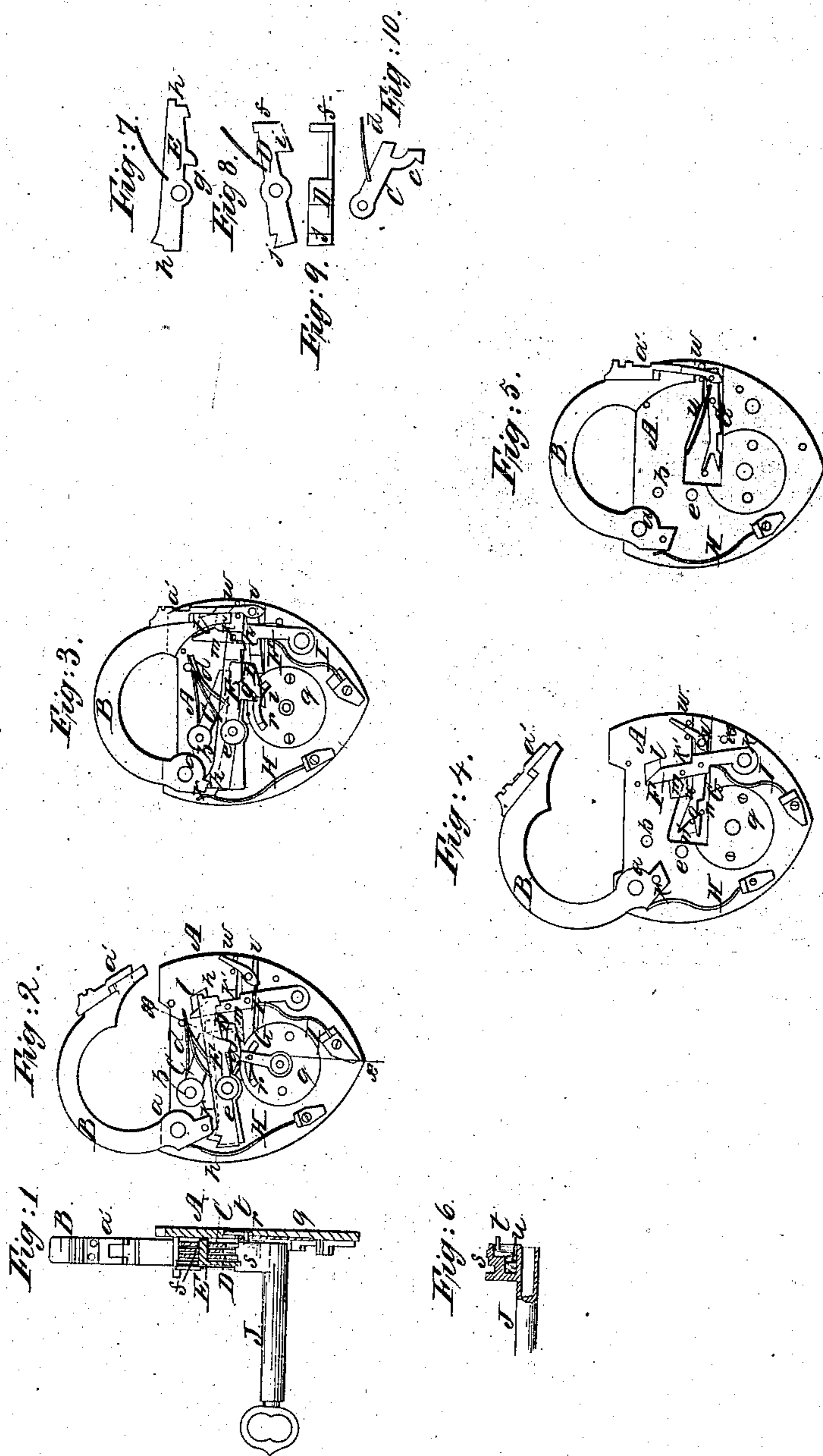


J. J. Hirschbuhl,
Padlock.

N^o 32563.

Patented June 18, 1861.



Witnesses:
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UNITED STATES PATENT OFFICE.

J. J. HIRSCHBÜHL, OF LOUISVILLE, KENTUCKY.

PADLOCK.

Specification of Letters Patent No. 32,563, dated June 18, 1861.

To all whom it may concern:

Be it known that I, J. J. HIRSCHBÜHL, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Padlock; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a section of my invention, taken in the line *x, x*, Fig. 2. Fig. 2, an internal view of the same, showing the lock in an unlocked state. Fig. 3, an internal view of the same, showing the lock in a locked state. Figs. 4 and 5, internal views of the same, with portions of the parts detached. Fig. 6, a detached sectional view of the key. Figs. 7, 8, 9, and 10, views of detached parts of the invention.

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

The object of this invention is to obtain a padlock that will be unpickable and still comparatively simple in construction, and one that may be constructed at a moderate 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 the lock which may be of the usual padlock form, and B, is the bow or shackle which is secured at one end in the upper part of the lock by a pivot *a*. The free or disengaged end of the bow or shackle has an eye or opening made through it as usual.

Within the case A, of the lock there is placed a series of tumblers C. These tumblers are all placed on a common axis *b*, and each tumbler is provided with a pendant *c*, see Fig. 10, and has a spring *d*, bearing on its upper surface. The springs *d*, keep the front ends of the tumblers C, down on a dog D, which is fitted on a pivot or bolt *e*. This dog at its front end has a lateral projection *f*, on which the tumblers bear. The projection *f*, is shown clearly in Fig. 9.

E, is a dog which is placed on the same pivot or bolt *e*, as the dog D. This dog E, is provided with a pendant *g*, and has a notch *h*, at each end. The dog D, also has a pendant *i*, at its front end and a notch *j*, at its back part, see Fig. 8.

The back part of the bow or shackle B, extends down a short distance below its

pivot *a*, and has a pin *k*, projecting laterally from it, said pin fitting in the notch *h*, at the back part of the dog E, when the lock is in a locked state, see Fig. 3, a pin *k'*, on a dog F, fitting in the front notch.

F, is a dog the lower end of which is fitted loosely on a pin or pivot *k'*. This dog F, has a projection *l*, at its front side which projection serves as a bolt and fits into the eye of the bow or shackle when the latter is locked, see Fig. 3. A projection *m* also extends from the back side of the dog F, and is directly in front of the projection *f*, of dog D, when the lock is in a locked state.

To the dog F, there is attached a slide G, which is fitted in a recess in the back plate of the case. This slide is provided with two notches *n, n'*, at its back end in one of which *n'*, a guide pin *o*, of the back plate of the case fits. In the back plate of the lock case there is fitted a circular plate *q*, said plate having a curved slot *r*, made in it which slot is directly over the notch *n*, of the slide G.

H, is a spring which bears against the back end of the bow or shackle B, and I, is a spring which bears against the dog F.

J, is the key of the lock. This key is provided with bits *s*, of varying lengths to suit the different tumblers C, or rather their pendants *c*, and in the outer end of the bit-plate there is fitted a pin *t*, which may be described as being of the form of a crank, a spiral spring *u*, being on its inner part within the bit-plate, said spring having a tendency to keep the outer end of the bit forced out from the end of the bit-plate, as shown clearly in Fig. 6.

The slide G, has a spring *v*, bearing upon it and to the outer end of the slide there is attached by a joint *v*, an upright arm *w*. To the bow or shackle B, there is attached a slide *a'*, the use of which will be presently shown.

The operation is as follows. Suppose the lock to be in a locked state, as shown in Fig. 3. The key J, when inserted in the lock is turned from right to left and the bits *s*, of the key first act against the tumblers C, and raise them from the projection *f*, of the dog D. The dogs D, E, are then acted upon by the key, the dog D, having its projection *f*, moved above the projection *m*, at the back of the dog F, and its back end moved down so that the notch *j*, will be free from the back end of the bow or shackle B.

The dog E, also has its end thrown free from the pins *k*, *k'*. The pin *t*, of the key J, at this point enters the slot *r*, of plate *q*, and catches into the notch *n*, of slide G, and
5 throws back the slide, and the dog F, will consequently be thrown back, its projection *l*, being drawn from the bow or shackle and the latter having its disengaged end thrown out of the lock case A, by the spring H.

10 When the lock is locked the slide *a'*, is shoved down by hand so as to depress the arm *w*, and the outer end of slide G, the inner end of the latter being thereby thrown up above slot *r*, so that a person unacquaint-
15 ed with the lock would be unable to act upon slide G, and throw back the dog F.

From the above description it will be seen that the bow or shackle B, is secured at both ends and a very secure lock obtained
20 and also a very simple and economical one compared with ordinary burglar proof locks, the majority of which are very complicated and expensive.

Having thus described my invention, what I claim as new and desire to secure by Let- 25
ters Patent; is,

1. The employment or use of the dogs D, E, F, and slide G, when combined and arranged with the bow or shackle B, substantially as shown so as to secure both ends of 30
the same.

2. The employment or use of the pin *t*, placed in the bit-plate of key J, and used in connection with the slotted plate *q* for the purpose of actuating the slide G, as set 35
forth.

3. The arm *w*, attached to the outer end of the slide G, in combination with the slide *a'*, on the bow or shackle for the purpose of throwing the notch *n*, of slide G, out of the 40
reach of the pin *t*, of the key J, as set forth.

J. J. HIRSCHBÜHL.

Witnesses:

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