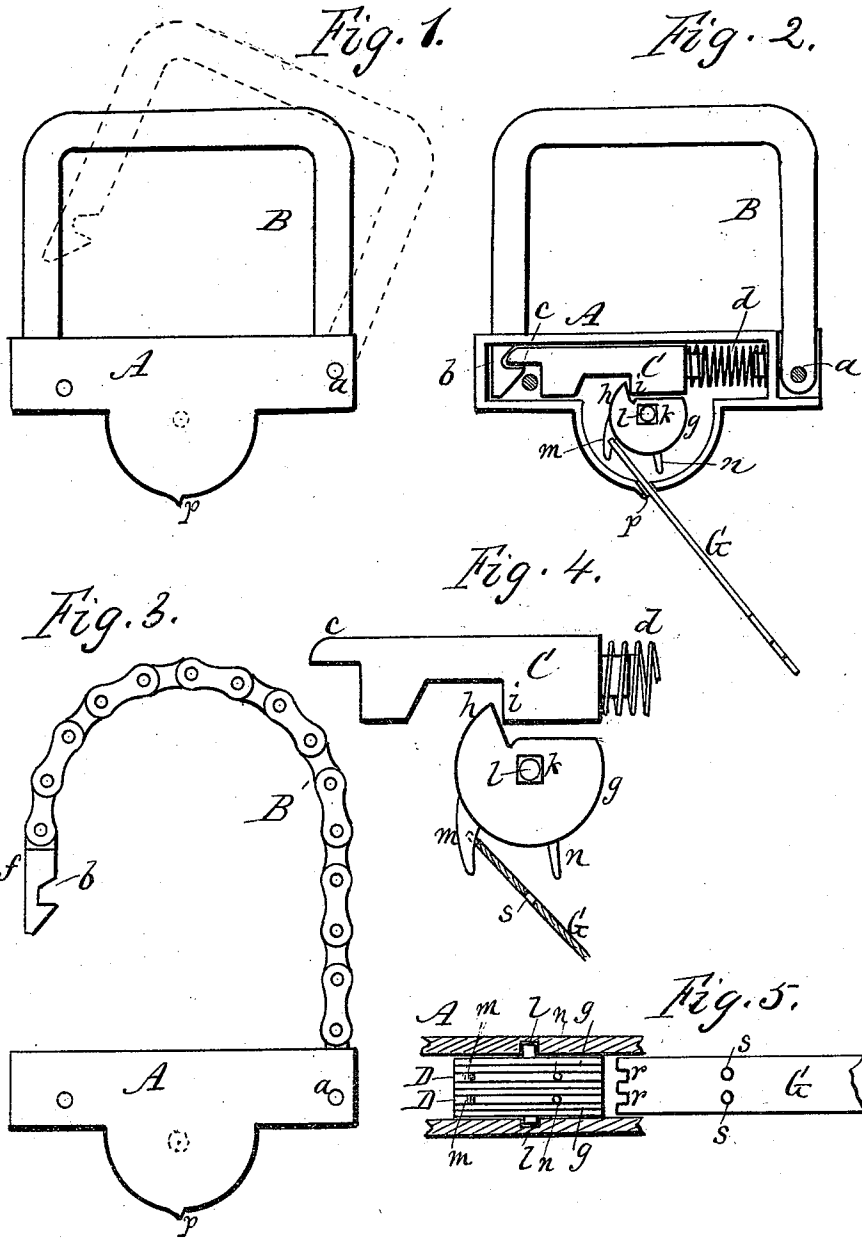


(No Model.)

B. S. BLAKE.
PADLOCK.

No. 557,522.

Patented Mar. 31, 1896.



Witnesses:

Chas. A. Wickes.
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UNITED STATES PATENT OFFICE.

BYRON S. BLAKE, OF ROCHESTER, NEW YORK.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 557,522, dated March 31, 1896.

Application filed April 19, 1895. Serial No. 546,293. (No model.)

To all whom it may concern:

Be it known that I, BYRON S. BLAKE, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Locks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

My improvement is in the nature of a padlock, and is designed more especially for use on bicycles, being light and small, but is applicable also to other uses.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

In the drawings, Figure 1 is a face view of the lock. Fig. 2 is a similar view with the outer plate removed, showing also the key in position for unlocking the lock. Fig. 3 is a view similar to Fig. 1, but showing a chain in place of the ordinary stiff hasp. Fig. 4 is a diagram showing an enlarged view of the bolt, the locking-tumblers, and the key. Fig. 5 is an enlarged edge view of the tumblers and key.

A indicates the case, which may be made of any suitable form.

B is the hasp, and C the locking-bolt. The hasp is preferably of square form, as shown, but may be curved. It is pivoted at one end in the case, as shown at *a*, and is provided at the other end with a notch *b* to receive the end *c* of the locking-bolt. The locking-bolt is forced forward by a spiral spring *d* and is retracted by the means hereinafter described. Instead of a rigid hasp, such as described, a chain B' may be used, such as shown in Fig. 3, said chain having at its free end a pin *f*, provided with a notch for receiving the end of the locking-bolt.

D D are tumblers, and *g g g* a set of washers used in connection therewith for unlocking the bolt. These tumblers and washers are in the form of mutilated disks, a part being cut away and forming on one side a projecting bit *h*, which rests against a shoulder *i* of the locking-bolt. When the tumblers and washers are turned, the bit forces the locking-bolt back and releases the hasp. The tumblers and washers have a square center

hole which fits over a square shaft *k*, provided with cylindrical end bearings *ll*, which rest and turn in sockets of the case. By this means the disks can be changed in position readily for a purpose presently to be described.

Each of the tumblers D D has a projecting stud *m*, against which the key acts to turn the tumblers, said studs standing in alignment. Each of said tumblers has also a projecting pin *n*, the two pins standing in alignment with each other and also with the studs on the tumblers. The studs and pins are at definite distances apart.

G is the key, the same being of ordinary flat form and entering a slot *p* in the bottom of the case. The end of the key has notches *r r*, which fit the studs *m m* of the tumblers, and two holes *s s*, which receive the pins *n n*. The distance between the notches and holes is the same as that between the studs and pins. Hence when the key is pushed forward to turn the tumblers the pins strike into the holes and allow the movement to be made; but in case a false key is used the pins strike the closed surface of the key and prevent the movement. The tumblers can be changed in position by slipping them, together with the washers, off from the shaft and placing the washers on the other side, in which case, of course, the holes in the key have to be correspondingly changed to correspond. By this means many changes or combinations can be made in the locks, so that the key of one lock will not fit another lock.

It is obvious that a single tumbler can be used, or a greater number than two can be used, with a similar result, the number of holes in the key being made to correspond with the number of tumblers used. When the tumblers are at rest, the pins *n n* stand back from the slot in which the key enters, so that they cannot be reached to turn the tumblers.

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

In a lock, the combination, with the sliding bolt, of a rotating tumbler provided with a shoulder and projecting pin, one or more washers on the same axis whereby the posi-

tion of the tumbler can be changed laterally,
and a key having a hole, the end of the key
acting against the shoulder to rotate the tum-
bler, and the hole receiving the pin to allow
5 such rotation to take place, as herein shown
and described.

In witness whereof I have hereunto signed

my name in the presence of two subscribing
witnesses.

BYRON S. BLAKE.

Witnesses:

R. F. OSGOOD,
C. N. SMITH.