W. BOHANNAN.
Padlock.

No. 205,171. Patented June 25, 1878.

Fig 1.

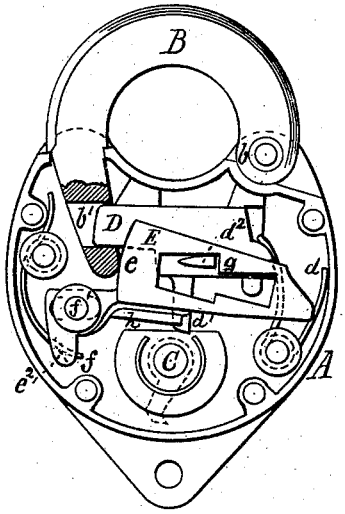


Fig 2.

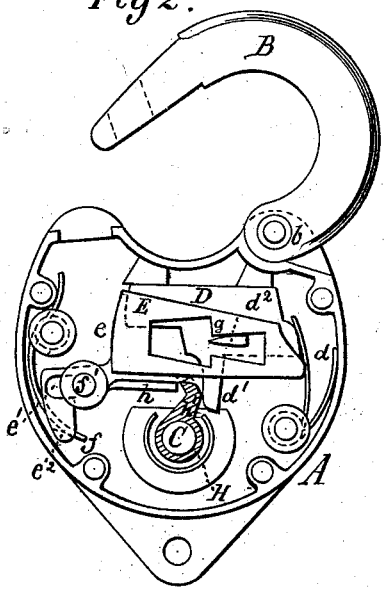


Fig 3.

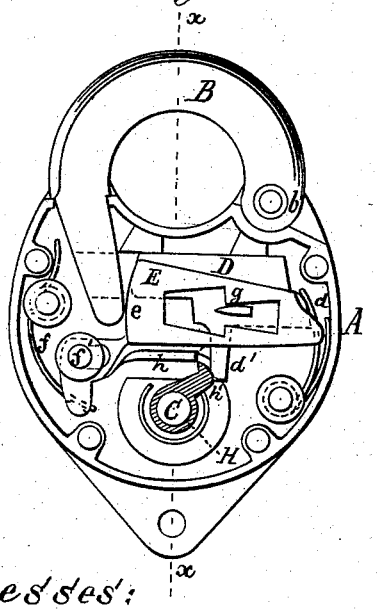


Fig 4.

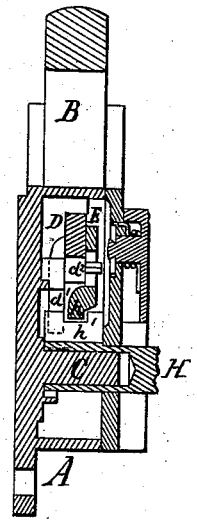


Fig 5.

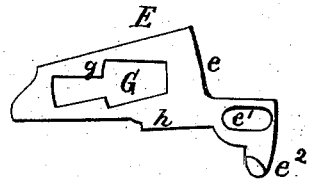
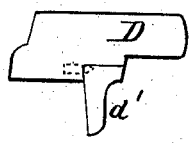


Fig 6.



Witnesses:
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J. P. Theodore Lang.

Inventor:
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by
Mason, Fenwick & Lawrence
his Attys.

UNITED STATES PATENT OFFICE.

WILSON BOHANNAN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN PADLOCKS.

Specification forming part of Letters Patent No. **205,171**, dated June 25, 1878; application filed March 23, 1878.

To all whom it may concern:

Be it known that I, WILSON BOHANNAN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Padlocks, which improvement is fully set forth in the following specification and accompanying drawings, in which latter—

Figure 1 is a plan view of my improved padlock, having its front plate removed to exhibit the interior mechanism in locked condition. Fig. 2 is a similar view, showing the lock open. Fig. 3 is a similar view, showing the lock in the act of closing. Fig. 4 is a central transverse section in the line *x x* of Fig. 3, showing the lock closed by its front plate. Fig. 5 is a rear detail view of the tumbler used in my padlock, and Fig. 6 is a rear detail view of the bolt used in my padlock.

The nature of my invention consists in certain constructions, combinations, and arrangements of parts hereinafter fully described and specifically claimed, whereby a padlock is produced which retains the key when unlocked and releases the key when locked.

In the drawings, A represents the outer body or case of my padlock; B, the shackle, pivoted at *b*, and C the center-pin of the key. A bolt, D, suitably embedded in the case A and operated by a spring, *d*, serves to lock the shackle B by entering a notch, *b'*, in its lower part. The bolt D is provided with a lug, d^1, which is operated by the key of the lock, and a check, d^2, which moves in the slot of a tumbler, E. The tumbler E is a metal plate with a curved back, *e*, a rear guide-slot, e^1, moving on a rigid guide-pin, *f'*, of the case A, and a hook, e^2, which is operated by a spring, *f*. The tumbler E is also provided with a slot, G, having a step, *g*, and a lower ledge, *h*. In the slot G the check d^2 of the bolt moves, and the ledge *h* is operated by the bit *h'* of the key H. The bolt D has a straight linear motion, and is pressed forward by the spring *d*. The tumbler E has a partly sliding and partly swinging motion on and around the pin *f'*, and is pressed forward and downward by the spring *d*.

Operation: When the lock is to be opened the key is inserted, as indicated by dotted lines in Fig. 1. By turning the key around, its bit *h'* comes in contact with the ledge *h* of the tumbler E, which is thereby lifted. The bit *h'* comes next in contact with the lug d^1 of the bolt D, which is thereby pushed back, so that the check d^2 passes the lifted step *g* and moves into the rear part of the slot G. The bit *h'* now leaves the ledge *h*, whereupon the tumbler drops down upon the bit. Finally, the bit *h'* moves the bolt D out of the notch *b'* of the shackle B. The spring *f* now causes the curved back *e* to throw the shackle up, as shown in Fig. 2, by bearing against its lower rounded end and moving forward, thus pushing it out of the way. The bit *h'* of the key is now between the rear end of the ledge *h* and the lug d^1 of the bolt D, and cannot be turned sufficiently around to withdraw it from the lock, as the end of the ledge arrests the bit *h'* on one side and the lug d^1 does the same on the other side after the bolt has been moved back to the end of its stroke. If the key is now left to itself, the lug d^1 will press its bit *h'* against the end of the ledge *h*, as seen in Fig. 2.

When the lock is to be closed the shackle is turned down and forced into the padlock. This act causes the rounded end of the shackle to come in contact with the curved back *e*, and thereby forces the tumbler E backward. This motion causes the ledge *h* to push against the bit *h'* of the key H, and thereby the bolt D is driven back until the bit is no longer in contact with the end of the ledge *h*, whereupon the spring *d* suddenly forces the bolt D forward until it enters the notch *b'* of the shackle. At the same time the check d^2 passes the step *g* of the slot G, and the tumbler E drops down, placing the step *g* directly behind the check d^2, as shown in Fig. 1, so that the lock cannot be forced open with a key of wrong construction. The key H may now be removed from the lock without difficulty.

In Fig. 3 the lock is shown as it appears just before the bolt is starting forward, and just as the bit of the key is beginning to leave the ledge *h*.

I am aware that a padlock has heretofore been contrived in such a manner that in the act of unlocking the shackle the key is caught

in the lock and cannot be extracted therefrom until the shackle has been again locked by the bolt or bolts, and therefore I do not claim as my invention, broadly, the accomplishment of this result in a lock; but,

Having described my invention, what I claim is—

1. In a padlock, the tumbler E, having a ledge, *h*, a slot, e^1, and a hook, e^2, and the spring *f*, whereby the key of the lock is prevented from turning back after it has opened the lock, substantially as set forth.

2. The combination of the tumbler E^2, having a slot, e^1, hook e^2, and curved back *e*, and the spring *f*, whereby the unlocked shackle B is thrown out of the lock, substantially as set forth.

Witness my hand in the matter of my application for a patent for an improved padlock this 21st day of March, A. D. 1878.

WILSON BOHANNAN.

Witnesses:

WILSON T. BOHANNAN,

GEORGE GOODALE.