

W. M. Inyire,

Padlock.

No. 109,922.

Patented Dec. 6, 1870.

Fig. 1.

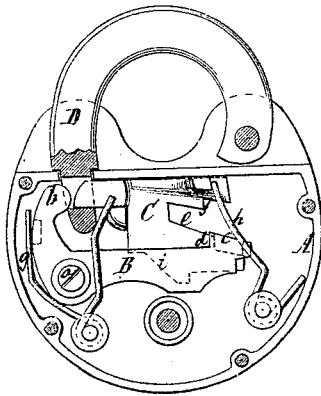


Fig. 2.

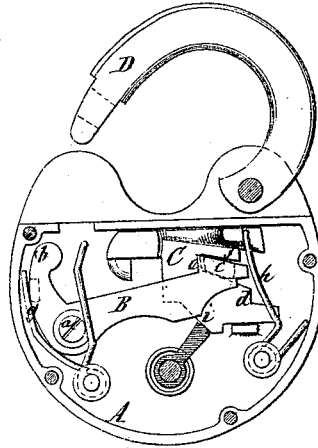
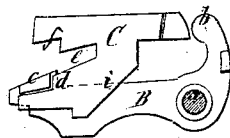


Fig. 3.



Witnesses:
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United States Patent Office.

WILLIAM MCINTYRE, OF NEW YORK, N. Y.

Letters Patent No. 109,922, dated December 6, 1870.

IMPROVEMENT IN PADLOCKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM MCINTYRE, of the city, county, and State of New York, have invented a new and useful Improvement in Padlocks; and I do hereby declare the following to be 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 drawing forming part of this specification, in which drawing—

Figure 1 represents a front view of my invention when the mechanism is in a locking position.

Figure 2 is a similar view of the same when unlocked.

Figure 3 is a detached inverted plan of the tumbler and bolt.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of a rocking tumbler-bolt, in combination with a reciprocating bolt, both bolts catching in the shackle of a lock from opposite sides, said rocking-bolt being provided with a stop, which prevents the reciprocating bolt from moving back until it is raised by the proper key, and the reciprocating bolt being provided with two shoulders, one below and the other above a recess, capable of receiving the stop of the rocking-bolt in such a manner that the shackle is firmly retained in its locking position by the rocking tumbler-bolt, and also by the reciprocating bolt, and that when an attempt is made to open the lock with a key the bit of which is not exactly of the correct height, the stop of the tumbler bears either against the upper or against the lower shoulder of the bolt, and the bolt cannot be moved back.

In the drawing—

The letter A designates the case of a lock, said case forming the bearings for the locking mechanism.

This mechanism consists, principally, of a rocking tumbler-bolt, B, and a reciprocating bolt, C.

The tumbler-bolt is made in the form of a bell-crank having its fulcrum on the pivot *a*, and it is provided at one end with a nose, *b*, which catches in the slot or recess of the shackle D from one side, while the bolt B catches therein from the opposite side, as shown in fig. 1 of the drawing.

The tumbler-bolt is also provided with a stop, *c*, best seen in fig. 3, which, when the mechanism is in its locking position, bears against the shoulder *d* on the reciprocating bolt C.

This shoulder is situated below a recess, *e*, and an-

other shoulder, *f*, is situated above said recess, so that, in order to allow the bolt being thrown back, the stop *c* of the tumbler must be raised just high enough to clear both shoulders and to pass into the recess.

If the stop *c* is lifted a little too high, it bears against the upper shoulder *f*, and the bolt cannot be thrown back; and if the stop *c* is not lifted high enough, it bears against the lower shoulder and prevents the bolt being thrown back.

The tumbler-bolt is subjected to the action of a spring, *g*, which has a tendency to keep said tumbler-bolt in its locking position, and one end of which serves to throw out the shackle, as soon as the same is released by the bolts.

The reciprocating bolt is subjected to the action of a spring, *h*, and the recess *e* is inclined, so that by its action on the stop *c* the tumbler-bolt is retained in its unlocking position (see fig. 2) even after the key ceases to act directly on said tumbler-bolt.

When the proper key is inserted into the lock and turned in the right direction, it first lifts the tumbler-bolt, so as to throw the nose *b* out of the slot of the shackle D, and, at the same time, the stop *c* is raised and brought opposite the recess *e* in the bolt C. Then the key begins to act on the inclined face *i* of the bolt C, and thereby said bolt is thrown back, while the tumbler-bolt is retained in its unlocking position by the action of the inclined recess *e* on the stop *c*.

As soon as the key releases the bolt C, the entire mechanism is returned to its locking position by the action of the springs *g h*.

Both the tumbler-bolt and the reciprocating bolt are rounded off at their heads, so that the shackle can be depressed and locked without using the key.

By these means a lock is obtained which is very simple in its construction, and which cannot be easily picked.

What I claim as new, and desire to secure by Letters Patent, is—

The tumbler-bolt B, with its rounded nose *b* and stop *c*, in combination with the shackle D, and with the reciprocating bolt C, with its inclined recess *e* and shoulders *d* and *f* above and below said recess, substantially as herein shown.

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Witnesses:

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