

M. P. Thatcher.

Padlock.

No. 97,568.

Patented Dec. 7, 1869.

Fig. 1.

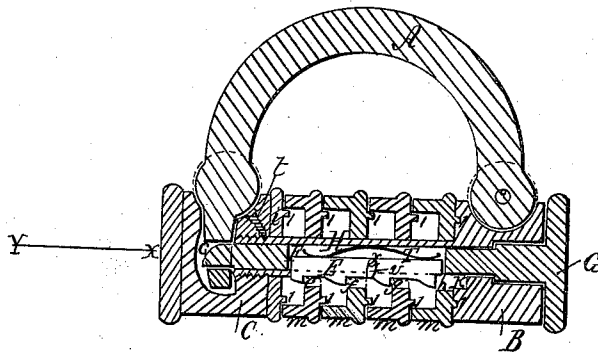


Fig. 2.

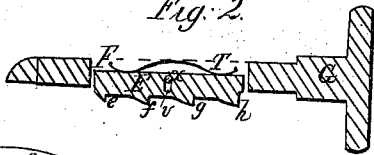


Fig. 3.

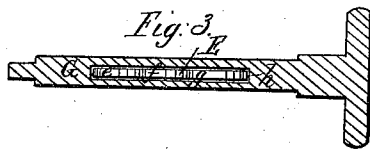


Fig. 4.

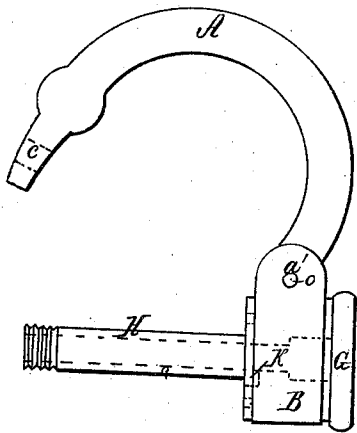


Fig. 5.

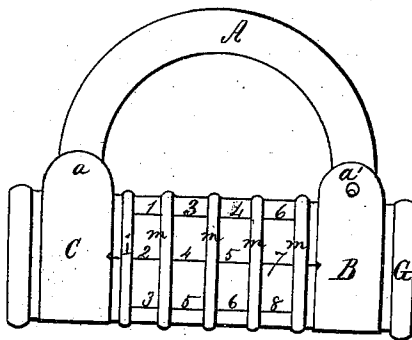


Fig. 6.

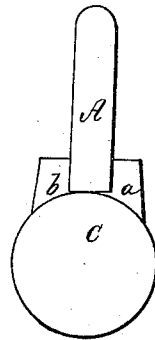


Fig. 7.

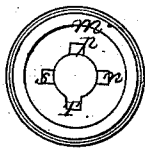


Fig. 8.

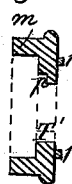
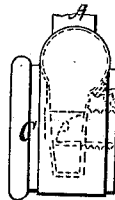


Fig. 9.



Witnesses;

Geo. H. Clon
No. N. Halsey

Inventor;

M. P. Thatcher
By A. B. Fassett Atty.

United States Patent Office.

M. P. THATCHER, OF PONTIAC, ASSIGNOR TO JULIUS A. FOSTER, OF
ADRIAN, MICHIGAN.

Letters Patent No. 97,568, dated December 7, 1869.

IMPROVEMENT IN COMBINATION-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, M. P. THATCHER, of Pontiac, in the county of Oakland, and State of Michigan, have invented a new and useful Improvement in Padlocks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, and to the letters of reference marked thereon, making a part of this specification, like letters referring to similar parts.

The nature of my invention relates, chiefly, to the employment of a spring-catch or dog in a combination-padlock, whereby the lock may be at any time locked; without regard to the relative position of the combination-tumblers, but which cannot be unlocked until the tumblers are all placed or turned to their proper position, according to the line of numbers on which the lock is set.

To enable others skilled in the art to which my invention relates, to make and use my invention, I will proceed to describe its construction and mode of operation.

In the drawings—

Figure 1 is a sectional view of my improved combination-padlock, in complete working order.

Figure 2 is a sectional view of the locking-bolt, with the spring-catch or dog above mentioned, both being detached from the body of the lock.

Figure 3 is a transverse section of the parts represented in the last figure.

Figure 4 is a side view of the staple, its hinge, together with the head B and slotted tube H, all separated from the rest of the lock.

Figure 5 is a side elevation of my improved padlock, in complete working order, and locked.

Figure 6 is an end view of the same, when viewed in the direction of the line Y-X, fig. 1.

Figure 7 is a side view of one of the tumblers, *m*, with its slot *l*.

Figure 8 is a vertical section of the same.

Figure 9 is a side view of the head C.

A represents the loop or staple of the lock, and is hinged in the usual manner, at one end, to the head B, and at the other end is provided with a tongue, having a mortise, *c*, which, when the loop A is locked down into the head C, is entered by one end of the bolt G.

The bolt G has a head on one end, by which to draw it back to unlock the loop, the bolt being made to fit into and pass through the head B and slotted tube H, and enter the head C, and when locking the loop A, passing through the said mortise *c*.

m m, &c., represent any desirable number of combination-tumblers. In this case four in number are used. These tumblers are all similar in form and operation, each containing, on its periphery, eight figures or letters, more or less, at equal distances apart.

Each has, also, on its back side, a slight projecting ring, *1*, fig. 8, which projects into the dish of the contiguous tumbler, to prevent the introduction of a thin tool between them, against the spring-catch or dog E, to push it down against the spring T, and thus unlock the lock, without having first set the tumblers on the combination.

Of these tumblers, a side view is shown in fig. 7, a transverse section in fig. 8, and an exterior view of them, and their numbers and relative position, on the tube H, and their figures or letters in fig. 5.

These tumblers having been slipped on to the tube H, the washer I is next put on, to make both ends of the lock appear alike, and then the head C is screwed on, as represented.

In fig. 9, the head C is shown separated from the tube H, to which it is to be attached by a screw, as represented. In this way, the heads B and C are brought into relative position to receive the two ends of the loop A.

The bolt G has a long slot or mortise, F, through it, to receive a spring, T, behind the dog E, the latter being provided with four or more catches, *e f g h*, equal in number to the number of tumblers, so that they may catch on to them when they (the tumblers) are turned so as to carry their slot T (see fig. 7) past the dog E.

The spring T is laid into the slot F, behind the dog E, so as to spring between it and the interior surface of the tube H, thereby causing a constant pressure of the dog E outward against the side of the holes, through the centre of the tumblers.

In the dog E is a transverse slot, *v*, through which passes a pin, *x*, to prevent the dog from ever coming entirely out of its seat in the bolt.

The tube H has a long slot, *q*, on the bottom side, through which the spring-catch or dog E projects, so as to engage with the tumblers *m m*, &c., as before described.

t, figs. 1 and 9, is a small set-screw, set into the head C, in the manner shown, and strikes against the tube H, its object being to prevent the head C from being or becoming turned on its thread when the loop A is unlocked and raised out of its seat, but which, when desirable, may be loosened, and the head C removed altogether from the tube H, for the purposes of changing the arrangement of the tumblers on the tube.

K, in figs. 1 and 4, is a small recess in the head B, into which the dog E enters when the bolt G is drawn back to unlock the loop.

Having now described the construction of my improved padlock, its operation is as follows:

Operation.

The process of unlocking this lock is very similar to that of unlocking other combination-padlocks, its chief merit and advantage over all other combination-

padlocks being in the process and convenience of locking, which can be done in the dark as well as in the light, by simply shutting down the loop A, when, by means of the inclinations on the back of each catch, *e, f, g,* and *h*, on the dog E, the bolt G may be pressed in by the thumb or finger, and the loop A locked, and this without regard to the combination.

To unlock my lock, I have to turn the tumblers *m m, &c.*, so as to bring the proper figures or letters to a line, when the bolt G may be drawn out by the head, which releases the loop A.

Should circumstances ever require it, the set combination may be changed as often as it is desirable, by simply unscrewing the head C and taking it off, and reversing or changing the order in which the tumblers are placed upon the tube H, which will, of course, require the figures to be placed in a different relation to unlock the lock.

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

1. The dog E, as constructed, with inclined catches, in combination with spring T and slotted bolt G, as and for the purpose specified.

2. The tumblers *m m, &c.*, constructed with dished surfaces on one side and projecting rings 1 on the other, as and for the purpose specified.

3. The combination of slotted bolt G, dog E, with inclined catches, spring T, barrel H, tumblers *m m, &c.*, heads B and C, screw *t*, and staple A, constructed and operating substantially as and for the purpose specified.

M. P. THATCHER.

Witnesses:

GEO. W. BROCK,
W. W. GRAY.