

United States Patent Office.

JOSEPH CORBETT, OF BROOKLYN, NEW YORK.

Letters Patent No. 109,717, dated November 29, 1870.

IMPROVEMENT IN PADLOCKS.

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

I, JOSEPH CORBETT, of Brooklyn, in the county of Kings and State of New York, have invented a new and improved Padlock, of which the following is a specification.

Nature and Objects of the Invention.

The improvements relate—

First, to a mode of constructing the key-bit and the tumblers and bolt which are operated thereby, so that the coincident adjustment and operation of said tumblers and bolt may be effected by the contact of parts of the key-bit which are not in one and the same radial plane.

Second, to a device to eject the released shackle without the use of a spring, and to hold the spring bolt in its retracted position in readiness for the return and automatic locking of the shackle.

Description of the Accompanying Drawing.

Figure 1 is a front view of a lock illustrating my invention, with the face-plate and the key-bow removed so as to show the interior of the lock and the form of the key-bit. The parts are here represented as unlocked.

Figure 2 is a section at $x x$, fig. 1.

Figure 3 is a front view, with the face-plate and tumblers removed, showing the shackle locked.

Figure 4 is a sectional view looking toward the face-plate, and showing the shackle and bolt locked.

Figure 5 is a top view, showing the shackle and its hinge in section on the line $y y$, fig. 1.

Figure 6 is a side view of the key.

General Description.

The padlock has a case, A, and a cap, B, secured together by means of studs $a a$ on the former, which protrude through holes $b b$ in the latter, and are riveted down upon the cap in the usual manner.

a' is a shoulder or rabbet on the case, into which fits the flanges V of the cap, the object of which arrangement is to prevent the introduction of a chisel into the crack between the cap and case for the purpose of prying them apart. Any such attempt with my arrangement would betray itself by the doubling up of the flange on the cap, and the tampering would be revealed.

It is further designed to more effectually exclude wet.

The shackle C is hinged on a pintle, C', which is attached to the rounded lug on the case A, and the shackle is held on the said pintle by the riveting on of the cap, through which passes one end of the said pintle.

The pintle C' of the shackle is larger within the shackle than where it passes through the case. By

this means it is strengthened for its duty. The pivots at the ends are of smaller size, so as to avoid boring away too much of the face-plate.

$c c$ are annular projections on the hub of the shackle, and occupy corresponding grooves in the plates of the case and cap, respectively.

These annular projections answer three purposes:

First, they increase the strength of the joint, as they give an additional bearing for the hub beyond that which is due to the ends of the pintle, which penetrate the plates of the case and cap.

Second, they make a better and closer joint, tending to prevent lateral play or shake, and also opposing to a greater degree than usual the access of water to the inside of the lock.

Third, in case of drilling away the ends $c' c'$ of the pintle, the shoulders $c c$ will still maintain their hold in the cheeks and oppose the withdrawal of the hub of the shackle from its bearings.

It may also be mentioned that the nose of the shackle has on all sides projections e' , which shut down upon the top of the case and aid in keeping out water. The top of the case slants off on each side from this point of closure so as to shed water therefrom.

In the event of water entering at any point it is immediately discharged through an aperture, a' , at bottom.

The working parts of the lock consist of four:

First, a set of spring tumblers, of such numbers as may be deemed desirable.

Second, a bolt which engages the notch in the shackle and locks it.

Third, a fence attached to and moving with the shank of the bolt, its office being to lock against the tumblers when the lock is closed.

Fourth, a pivoted dog, which is moved by a projection on the bolt-shank, to throw up the shackle, instead of depending upon a spring to perform the movement.

The tumblers D D D D are pivoted upon a stud, d , which rises from the cheek-plate of the case A, and are moved by the key K or by the springs d' , as will be explained when describing the operation.

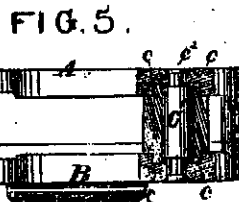
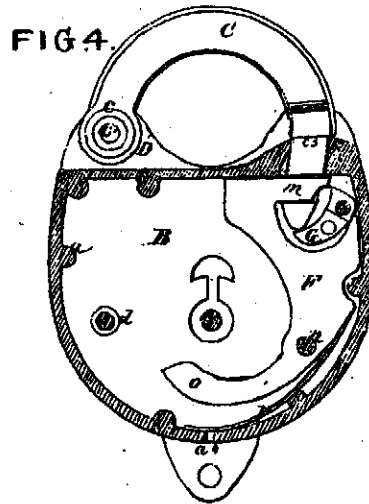
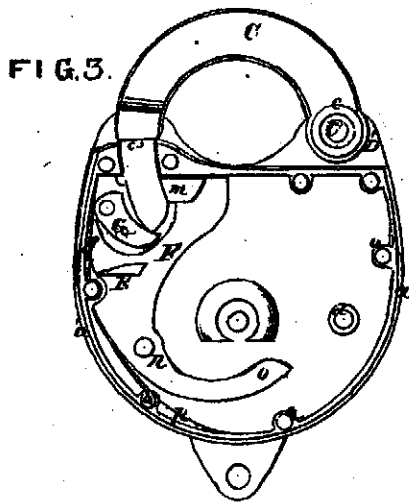
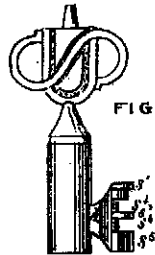
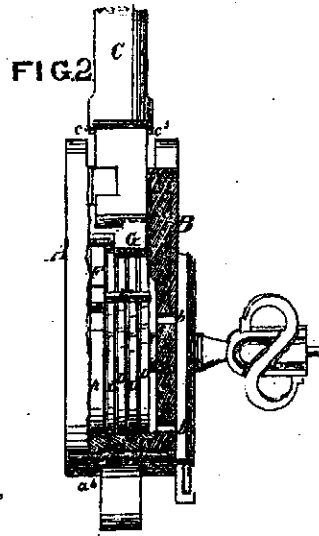
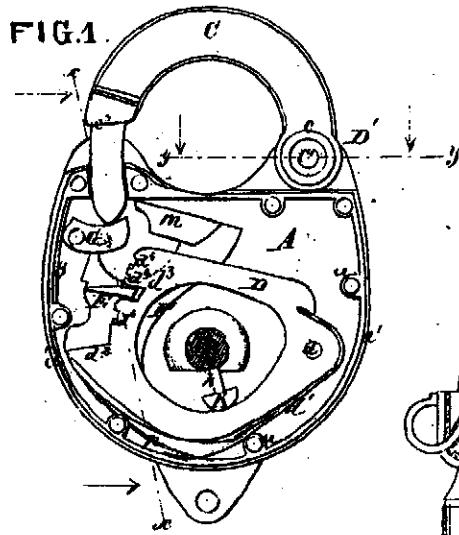
The form of the tumblers may be seen by examining the upper one of the set. A description of one will apply to each one of the set, excepting that the notches on the edges are various, for reasons which are familiar to experts, and will therefore be but cursorily explained in describing the operation.

Each tumbler has an open center, in which the bit of the key operates. Near the hinging portion is attached a spring, d' , which tends downward and engages the inside of the case, its constant tendency being to throw the tumbler upward.

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WITNESSES.

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