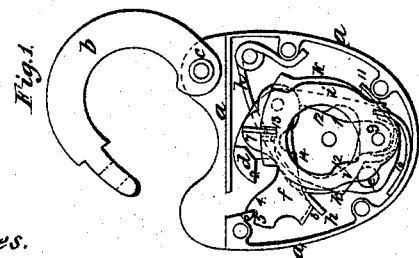
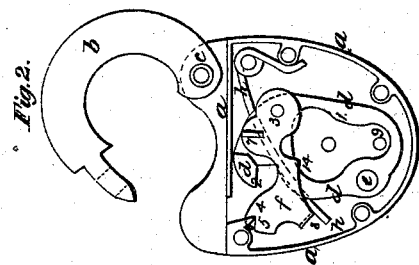
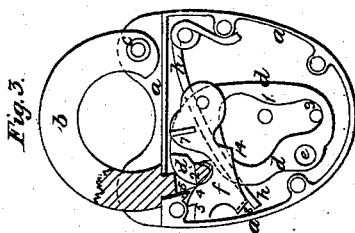
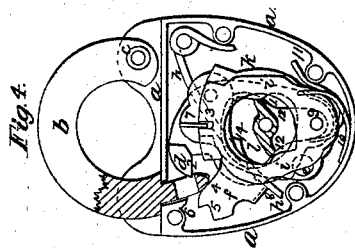


D. T. Brown,
Padlock,
No. 47,352,
Patented Apr. 18, 1865.



Witnesses.
Lemuel W. Serrell
Chas. H. Smith

Inventor.
Daniel T. Brown

UNITED STATES PATENT OFFICE.

DANIEL T. BROWN, OF NEWTOWN, ASSIGNOR TO JAMES H. McWILLIAMS,
OF NEW YORK, N. Y.

IMPROVEMENT IN PADLOCKS.

Specification forming part of Letters Patent No. 47,352, dated April 18, 1865.

To all whom it may concern:

Be it known that I, DANIEL T. BROWN, of Newtown, in the county of Queens and State of New York, have invented, made, and applied to use a certain new and useful improvement in Padlocks; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 represents the padlock open and unlocked. Fig. 2 is a similar view with the tumblers removed. Fig. 3 is a view of the padlock in its locked position, the shackle being shown partly in section and the tumblers removed; and Fig. 4 shows the lock complete and in the act of being unlocked.

Similar marks of reference denote the same parts.

The nature of my said invention consists in the combination of a swinging bolt and compound tumbler that when acted upon by the key and spring causes the ejection of the shackle, holds back the bolt, draws the stud into the tumblers and holds them in the unlocked position, and when the lock is locked by the hasp being forced in, the spring acting against this compound tumbler causes the same to project the bolt, release the tumblers by liberating the holding-stud, and bring the compound tumbler itself into the position assumed when the bolt is locked.

In the drawings, *a* represents the case or box of the lock, the cap-plate being removed. *b* is the shackle, set on the stud *c*, and provided with a mortise at the moving end, as usual.

This invention is especially adapted to padlocks, but when applied to box-locks the shape of the case and hasp will require to be varied, according to the peculiar character of lock.

d is the bolt, moving on the stud *e* and provided with the talon 1, against which the key acts in throwing the bolt back. 2 is the catch that enters the mortise in the shackle, and 3 is a stud on the bolt, forming the center or fulcrum for the compound tumbler *f*. This compound tumbler *f* is formed with an incline at 4, a notch at 5, (taking the toe 6 on the case *a*,) and with the tumbler-stud 7.

h is the spring to the compound tumbler, acting against the projection at 8 that is formed on the back portion of the tumbler *f*.

i is a tumbler on the stud 9 and provided with the spring 11. *k* is a second tumbler on the same stud 9 and acted upon by the spring 10. These tumblers move in opposite directions, as actuated by the key *l* that has double bits, as seen in Fig. 4. These tumblers may be increased in number, if desired, and the length of the talons (at 12) varied according to the shape of the key-bits, and in all the tumblers notches are provided (at 13) to receive the stud 7. When the key has placed these notches all on line with each other and the said stud 7, decoy notches may be made on the edges of the tumblers, not sufficiently deep for receiving the stud 7, and thereby the difficulty of picking the lock will be increased.

When locked, the parts assume the position shown in Fig. 3, the catch being in the mortise of the hasp or shackle, and the incline 4 of the compound tumbler against the side of said hasp. On applying the key, the tumblers are first turned to their place, so that their notches come opposite to the stud 7. The further movement of the key swings the bolt, drawing the catch 2 out of the mortise in *b*, and simultaneously throwing the compound tumbler down by the incline 4, drawing below the end of the shackle as the center of said tumbler on the bolt, moving with the bolt, causes the said tumbler to move bodily sidewise. This same movement causes the stud 7 to take into the notches of the tumblers, and also compresses the spring *h*; hence so soon as the end of 2 draws entirely out from the mortise of the shackle the spring *h* throws the compound tumbler *f* up and ejects the shackle, and the tumbler *f* is caught by its notch 5 taking the toe 6, so that the compound tumbler holds the bolt *d* back and the tumblers in the unlocked position.

When the end of the shackle *b* is pressed in to lock the lock, it first disconnects the notch 5 from the toe 6, then the tumbler *f* is thrown bodily sidewise by the shackle acting against the incline 4, the spring *h* aiding in this movement by allowing the tumbler *f* to descend until the catch comes to the mortise in the shackle *b* and enters the same by the tumbler, giving a sidewise movement to the bolt as the said tumbler itself moves. The stud

7 is disconnected by this movement from the tumblers *i* and *k*, and they assume their normal position.

The compound tumbler *f* has a talon upon it at 14, by which the key is made to aid the spring in throwing out the shackle, or this will act in unlocking, without the spring, in case said spring should break.

The notch 5 may be located on the compound tumbler near the stud 7, and take a toe or projection on the other side of the case from that shown, so that the tumblers and bolt will be held back by them, as before set forth.

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

1. A compound tumbler, *f*, swinging upon the bolt *d* and acting in the manner specified to retain the tumblers when unlocked, substantially as specified.

2. Projecting the bolts by the action of the compound compound tumbler and incline 4, substantially as specified.

In witness whereof I have hereunto set my signature this 22d day of February, 1865.

Witnesses: DANIEL T. BROWN.

LEMUEL W. SERRELL,

CHAS. H. SMITH.