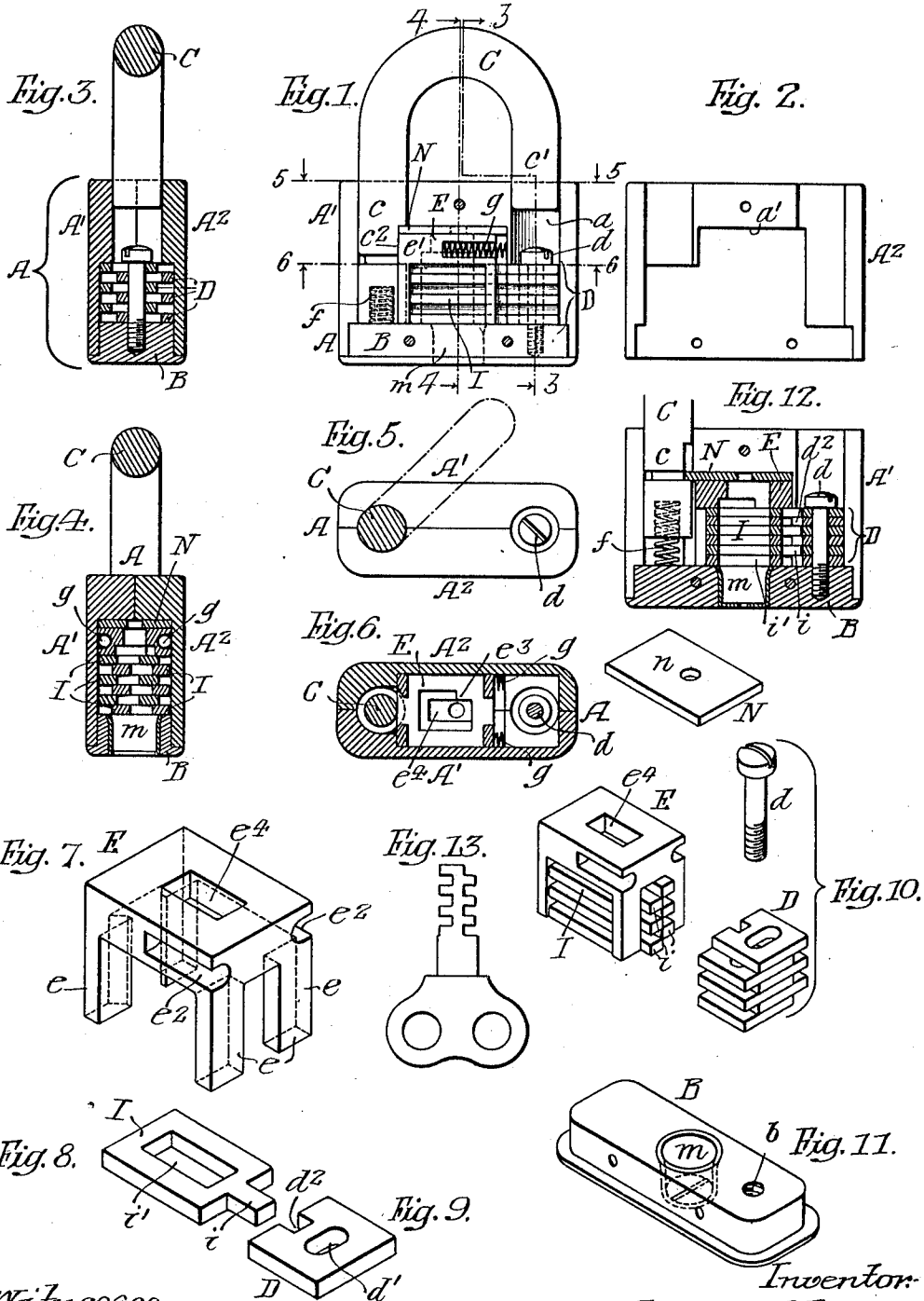


1,020,891.

Patented Mar. 19, 1912.



Witnesses—
 Wills & Burrows
 William A. Burrows.

Inventor—
 Arthur W. Dowe.
 by his Attorneys—
 Howson & Howson

UNITED STATES PATENT OFFICE.

ARTHUR W. DOWE, OF CAMDEN, NEW JERSEY, ASSIGNOR TO MILLER LOCK CO., OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

PADLOCK.

1,020,891.

Specification of Letters Patent.

Patented Mar. 19, 1912.

Application filed June 27, 1911. Serial No. 635,538.

To all whom it may concern:

Be it known that I, ARTHUR W. DOWE, a citizen of the United States, and a resident of Camden, Camden county, New Jersey, have invented certain Improvements in Padlocks, of which the following is a specification.

My invention relates to certain improvements in locks particularly of the type known as padlocks in which a shackle is used and a bolt engages the shackle when in the closed position.

The object of the invention is to construct a lock so that the combination or the arrangement of the tumblers and stumps can be modified to fit the keys of different contour without dismantling the lock so that the owner of the lock can readily change the combination without the necessity of sending the lock to a locksmith to have it set to accommodate a given key.

By this invention a number of keys may be provided for each lock and the purchaser can adjust the lock to fit any one of the said keys and if a key should be lost or duplicated the combination can be readily changed.

In the accompanying drawings:—Figure 1, is a side view of the lock; with one-half of the casing removed; Fig. 2, is a side view of that portion of the casing removed from Fig. 1; Fig. 3, is a vertical sectional view on the line 3—3, Fig. 1; Fig. 4, is a vertical sectional view on the line 4—4, Fig. 1; Fig. 5, is a sectional plan view on the line 5—5, Fig. 1; Fig. 6, is an inverted sectional plan view on the line 6—6, Fig. 1; Fig. 7, is a detached perspective view of the bolt; Fig. 8, is a detached perspective view of one of the tumblers; Fig. 9, is a detached perspective view of one of the stumps; Fig. 10, is a detached perspective view of the bolt with the tumblers in position and the stumps with the screw for retaining the stumps in position; Fig. 11, is a detached perspective view of the base of the lock; Fig. 12, is a view similar to Fig. 1, showing the bolt withdrawn and the shackle raised; and Fig. 13, is a view of a key.

A is the casing made in two sections A'—A² and mounted in the bottom of the lock is a base B secured to the casing in any suitable manner.

C is the shackle having a long leg *c* and

a short leg *c'*. The long leg is recessed at its lower end for the reception of a coiled spring *f* which tends to force the shackle out of the casing when released by the bolt. The socket *a* for the short leg of the shackle extends beyond the end of the other leg, when the shackle is in the locked position, and mounted within the casing is a series of stumps D, made as shown in Figs. 9 and 10, and held in position by a screw *d*, which extends into a threaded opening *b* in the base B. Each stump is slotted at *d'* for the reception of the screw *d* so that the stumps can be adjusted laterally and in one edge of each stump is a notch *d²* and by adjusting these stumps laterally the notches can be brought in line with each other or out of alinement, as desired; according to the key which is to be used in opening the lock. Access may be had to the screw *d* through the opening for the short leg of the shackle when the lock is opened, as the position of the stumps can be altered without dismantling the lock.

E is the bolt made, as clearly shown in Fig. 7, and this bolt has four projections *e*, one at each corner, forming a cage for the reception of a series of tumblers I. These tumblers are of the same thickness as the stumps D and there are as many tumblers as there are stumps in the lock. On each tumbler is a projection which is arranged to enter the notch *d²* in the stump with which it alines and the space between the projections *e—e* is sufficient to allow the key to move the tumblers laterally so that their projections will aline with the notches in the stumps. The end *e'* of the bolt is shaped so as to enter the notch *c²* in the long leg *c* of the shackle so as to hold the shackle in the locked position. This bolt is held in engagement by two coiled springs *g* adapted to a recess *e²* in each side of the bolt, as illustrated in Fig. 7.

The bolt, as shown in Fig. 6, is recessed to receive one of the wards of the key and has a shoulder against which the key contacts when it is turned so as to withdraw the bolt from engagement with the shackle. As soon as the bolt is released from the control of the key, the springs *g* return the bolt to its normal position. The opening *e⁴* in the bolt allows for its longitudinal movement.

N is a key plate located between the bolt

and the shoulder a' of the casing and this plate extends into the notch c^2 so that when the bolt is withdrawn, as in Fig. 12, this plate limits the outward movement of the shackle. In the plate is an opening n for the reception of the end of the key and the plate, therefore, acts with the key plug m to properly guide the key.

Each of the tumblers I has a key slot i so shaped that when the key is inserted and turned, it will move the tumblers laterally so as to bring their projections i into alinement with the notches in the stumps. The tumblers are held against lateral movement by the projections e of the bolt, but when the projections are in alinement with the notches then the bolt and the tumblers move longitudinally so as to clear the long leg of the shackle.

When it is wished to set a lock to fit a given key the lock is left open by the key previously used and a screw driver is inserted in the cavity a and the screw b is turned so as to release the stumps D . The key that is to be used is then inserted in the lock and turned so as to shift the tumblers; in turn shifting the stumps, which are free to move laterally on the screw. After the adjustment of the stumps by the tumblers the screw is turned so as to clamp the stumps in the position to which they are adjusted and when the key is withdrawn, only that particular key will open the lock. Thus a person having a number of keys of the same type having different wards can select any one of these keys to open the lock. When it is desired to use another form of key, all that is necessary is to open the lock, release the stumps and insert the other key in the lock so as to shift the stumps, which are then secured in the position to which they are adjusted.

I claim:

1. The combination in a lock, of a casing; a shackle; an opening in the casing for the reception of the short leg of the shackle; a bolt; a tumbler carried thereby; said bolt being arranged to engage the long leg of the shackle; a stump arranged in line with the tumbler; and a screw for confining said stump to the casing; said screw being on a

line with the opening in the casing for the short leg of the shackle.

2. The combination in a padlock, of a casing; a shackle; a bolt; tumblers carried thereby and having projections at one end; laterally adjustable stumps notched at one end and arranged to be moved out of line with one another; means for holding the stumps in position to which they are adjusted; said tumblers being capable of being shifted by a key to aline with the stumps.

3. The combination in a padlock, of a casing; a shackle swiveled therein and having a long and a short leg; a bolt; a key plug and a key plate; the long leg of the shackle being arranged to receive the key plate and the bolt; tumblers carried by the bolt; stumps adjustably secured to the casing and having notches; the tumblers having projections adapted to the notches; said stumps being laterally adjustable; with means for securing the stumps in the positions to which they are adjusted; the key plate acting as a guide for the key and also as a means to limit the outward movement of the shackle.

4. The combination in a padlock, of a casing; a shackle; having a long and a short leg and adapted to the casing; a spring under the long leg of the shackle for lifting the shackle; a bolt; a key plate mounted between the bolt and a shoulder on the casing; said shackle being notched to receive the bolt and key plate; said plate having an extension; a series of tumblers mounted in the bolt and confined so that they will only have a lateral movement therein independently of the bolt; a projection on each tumbler; a series of stumps having recesses alining with the projections on the tumblers; each of said stumps being slotted laterally; and a screw confining the stumps to the casing; said screw being accessible through the opening in the casing for the short leg of the shackle.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ARTHUR W. DOWE.

Witnesses:

ARTHUR J. PURSELL,
WM. A. BARR.