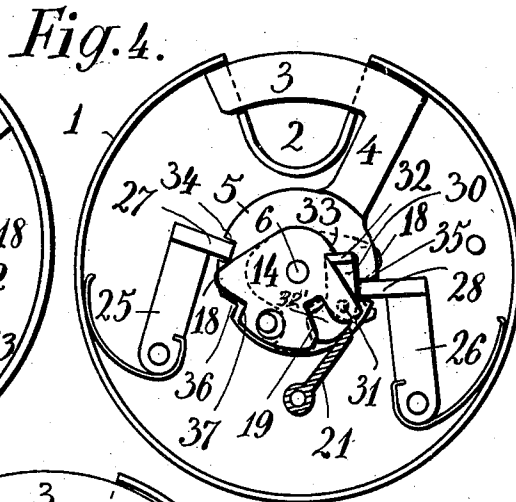
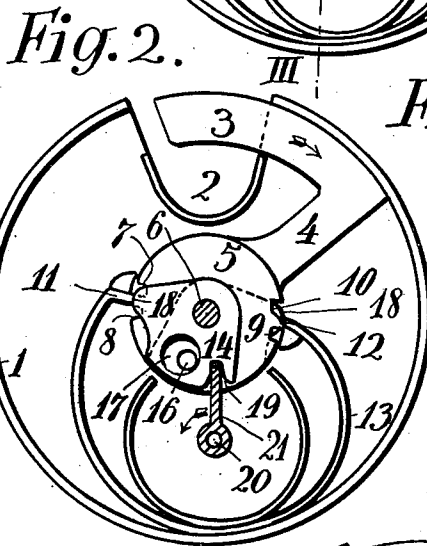
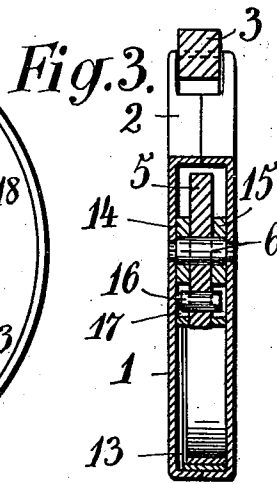
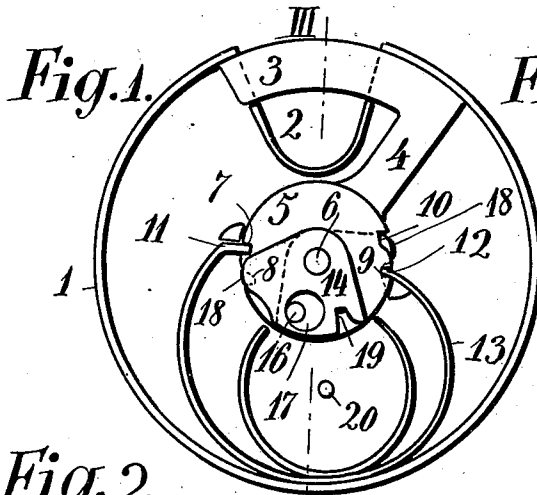


T. O. MOE.
PADLOCK.

APPLICATION FILED OCT. 24, 1910.

988,127.

Patented Mar. 28, 1911.



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PADLOCK.

988,127.

Specification of Letters Patent.

Patented Mar. 28, 1911.

Application filed October 24, 1910. Serial No. 588,750.

To all whom it may concern:

Be it known that I, THORSTEIN OLSEN MOE, a subject of the King of Norway, residing at Christiania, Norway, have invented certain new and useful Improvements in Padlocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The present invention relates to improvements in padlocks of the kind in which the bolt extends in its locked position across a recess in the lock case.

According to the present invention, the arm, at the outer end of which the bolt is mounted, is formed with a disk-like enlargement at its point of rotation, this disk-like portion being provided with notches corresponding with spring actuated pawls so arranged as to retain the bolt arm in its two positions.

The invention also comprises special arrangements by which said pawls can be raised, by means of the key, out of their engaging position.

The invention also comprises the constructional arrangement of the lock.

A few forms of padlocks embodying the invention are illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of the lock with one side plate removed and the bolt in its locked position. Fig. 2 is a sectional elevation similar to Fig. 1, the bolt occupying a position intermediate of its locked and its opened positions. Fig. 3 is a cross-section through the lock on the line III—III of Fig. 1. Figs. 4 and 5 show two modifications.

In the example shown the lock body is cylindrical and has a sector-like recess 2, through which the bolt passes. The bolt is carried by a radially extending arm 4, the inner end of which is formed with a disk-like enlargement 5 pivoted on a pin 6 extending centrally through the lock body. In the circumference of the enlarged portion is arranged at diametrically opposite sides, two adjacent notches 7, 8 and 9, 10 in which the ends 11 and 12 respectively of a bow spring

13 can engage, when the bolt is at the limits 55 of its movement.

On each side of the disk-like enlargement 5 and pivotally mounted relatively to the same on the pin 6, are arranged tumblers 14 and 15 respectively, forming releasing members. The movements of the latter relatively to the disk-like portion 5 is limited by pin 16 secured to said disk-like portion and projecting into openings 17 in the tumblers. These openings have a somewhat larger diameter than the pins 16, so that the tumblers can perform a small movement before engaging the pin. On the upper corners of both tumblers are formed lugs 18 acting as a cam on the ends of the spring. In each of the tumblers is a notch 19 registering with each other in all positions of the disks and serving to receive the key to engage the disks.

In Fig. 1 the bolt is shown in its locked position. If the key 21 is inserted over the pin 20 and is turned anti-clockwise, it will engage the notches 19 of the tumblers, which are thereby turned relatively to the disk-like enlargement 5, until the pin 16 strikes the opposite side of the opening 17. During this operation the lugs 18 of the tumblers force the ends 11 and 12 respectively of the spring out of the notches 7, 9 of the disk-like enlargement 5, in which they were resting (see Fig. 2). The disk 5 is thereby released and, on continuing the turning of the key, can rotate, until the spring ends 11 and 12 will fall into the notches 8 and 10 respectively of the disk 5. The bolt will then have been brought to its opened position and is retained therein by the spring ends 11 and 12, until the key is turned in the opposite direction. One side of each of the notches 8 and 10 is inclined, so that the bolt can be brought in its locked position by hand, the inclined face, on turning the bolt disk, raising the springs out of their engagement.

The simple and strong lock device above described can of course be made perfectly thief-proof by the arrangement of safety-tumblers and the like.

In the modification shown in Fig. 4 there are arranged instead of the spring pawl 13, pivoted arms 25 and 26 actuated by separate springs and the upper, angularly projecting ends 27 and 28 of which engage in corresponding notches 34 and 35 in the circum-

ference of the bolt disk 5. The tumbler 14 is in its locking position locked to the bolt disk 5 by means of an arm 30 disposed between the former and the bolt disk 5, which arm 30 is pivotally mounted on a pin 31 secured to the bolt disk, and catches with its angularly bent end 32 a nose 33 on said disk 14, its other end 32' projecting in front of the recess 19 for the key-bit, so that it can be actuated by the key 21 and on turning the latter, be swung out of engagement with the tumbler 14, the pawl 28, which engages the said pivoted arm 30, being at the same time brought out of its engagement in the notch 35 of the bolt disk 5. The other pawl 27 is released by the cam 18 of the tumbler in the same manner as in Fig. 2 and when the lock is open, the pawl engages the notches 36 and 37 of the disk 5 and tumbler 14. This constructional form may be simplified by using one pawl and one tumbler only.

In the modification shown in Fig. 5 the bolt disk 5 is locked only on one side of its pivot. The locking device consists of a series of pawls 40 superposed upon one another and pivoted on a common pin 41 and being each provided with a spring 42 in engagement with a pin. At their front end these pawls are provided with a tooth 43 engaging a notch 44 in the bolt disk 5. The pawls are moreover provided with a projection 45 riding on a cam surface 18 arranged on corresponding tumblers 14, which are pivoted on the pin 6 and can be turned by the key 21.

What I claim is:

1. A padlock comprising an arm pivotally connected with the lock case, an arc shaped bolt extending from the outer end of said arm, a lock case having a gap across which the said bolt may be moved, when the said arm is swung on its center, a disk-like enlargement of the arm around its center, a notch in the said enlargement, a spring actuated pawl capable of engaging said notch, a tumbler having a limited rotatable movement and being provided with an actuating face capable of engaging said spring actuated pawl and a keyhole so disposed, that upon turning the key, said tumbler will be caught by the key, thereby first disengaging the pawl and then engaging the latch arm and turn it upon its pivot.

2. A padlock comprising an arm pivotally connected with the lock case, an arc shaped bolt extending from the outer end of said arm, a lock case having a gap, across which the said bolt may be moved when the said arm is swung on its center, a disk-like

enlargement of the arm around its center, a notch in the said enlargement, a spring actuated pawl capable of engaging said notch, a tumbler on the enlargement having a limited rotatable movement and being provided with an actuating face capable of engaging said spring actuated pawl, a member pivotally mounted on the said enlargement and having a part capable of engaging the said tumbler, thereby arresting it, and having another part, projecting into the path of the key bit so as to be moved by the key, thereby releasing the tumbler.

3. A padlock comprising an arm pivotally connected with the lock case, an arc shaped bolt extending from the outer end of said arm, a lock case having a gap, across which the said bolt may be moved when the said arm is swung on its center, a disk-like enlargement of the arm around its center, notches in the said enlargement, spring actuated pawls capable of engaging said notches, tumblers on the enlargement having a limited rotatable movement and being provided with actuating faces, capable of engaging said spring actuated pawls and a key hole so disposed, that upon turning the key, said tumblers will be caught by the key, thereby first disengaging the pawls and then engaging the latch arm and turn it upon its center.

4. A padlock comprising an arm pivotally connected with the lock case, an arc shaped bolt extending from the outer end of said arm, a lock case having a gap across which the said bolt may be moved when the said arm is swung on its center, a disk-like enlargement of the arm around its center, notches in the said enlargement, spring actuated pawls capable of engaging said notches, tumblers on the enlargement having a limited rotatable movement and being provided with actuating faces, capable of engaging said spring actuated pawls, a member pivotally mounted on the said enlargement and having a part capable of engaging one of said tumblers thereby arresting it, and having another part projecting into the path of the key bit, so as to be moved by the key, thereby releasing the said tumbler.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

THORSTEIN OLSEN MOE.

Witnesses:

NANA PEDERSON,
MAILIN GUTTORMSEY.