

PADLOCK.

932,343.

Patented Aug. 24, 1909.

Fig. 1.

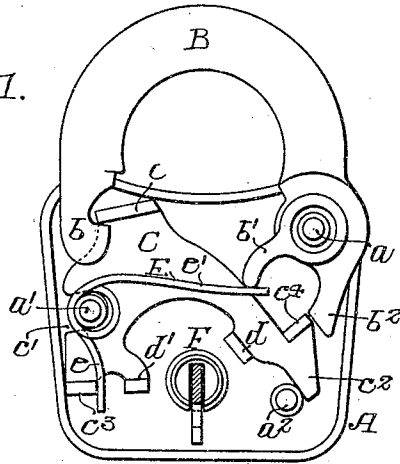


Fig. 2.

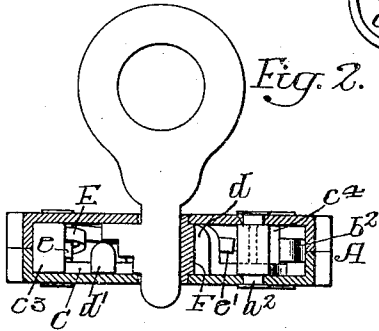


Fig. 4.

Fig. 3.

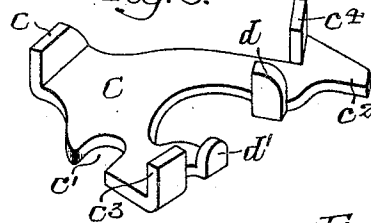


Fig. 5.

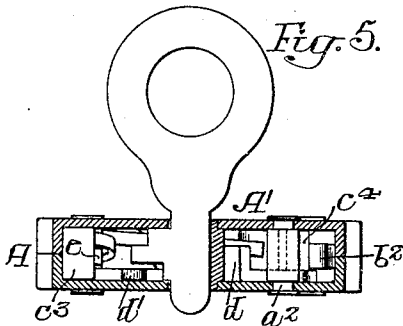


Fig. 6.

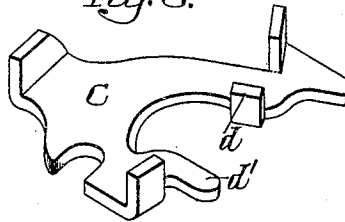


Fig. 7.

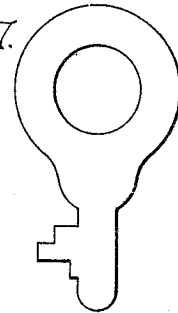


Fig. 9.

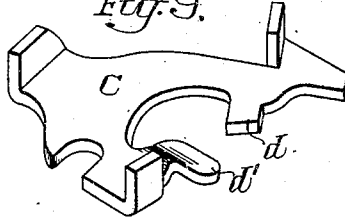


Fig. 10.

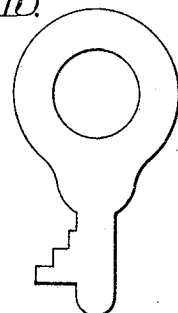


Fig. 8.

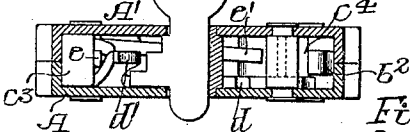


Fig. 11.

Fig. 12.

WITNESSES.

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PADLOCK.

932,343.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK SOLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Padlocks, of which the following is a specification.

My invention relates to certain improvements in padlocks in which the bolt is acted upon directly by the key to release the shackle.

The object of my invention is to so construct the lock that a single bolt can be shaped so as to adapt the lock to keys having bits of different contour. This object I attain in the following manner, reference being had to the accompanying drawing, in which:—

Figure 1, is a face view of the lock with the front plate removed, illustrating my invention; Fig. 2, is a sectional view of Fig. 1; Fig. 3, is a perspective view of the bolt; Fig. 4, is a side view of the key adapted to operate the bolt illustrated in Figs. 1 and 2; Fig. 5, is a sectional view similar to Fig. 2, showing the bolt bent to accommodate a different form of key from that illustrated in Fig. 4; Fig. 6, is a perspective view of the bolt shown in Fig. 5; Fig. 7, is a view of the key which operates the lock illustrated in Fig. 5; Fig. 8, is a sectional view similar to Fig. 2, of another lock showing the bolt bent in a different manner from either Figs. 2 or 5; Fig. 9, is a perspective view of the bolt illustrated in Fig. 8; Fig. 10, is a side view of the key for operating the lock illustrated in Fig. 8; and Figs. 11 and 12, are views showing the different form of keyways which can be used in the lock so as to increase the number of changes.

My invention is particularly adapted for use in connection with a comparatively cheap lock, in which the tumblers are dispensed with, the key acting directly upon the bolt and the bolt having means for blocking keys that are not adapted for the particular lock.

In the drawing, A is the back casing of the lock, A' is the front casing, both made in the present instance of struck-up sheet metal, and the two sections of the casing are held together by rivets a , a' and a^2 . B is the shackle adapted to swing on the rivet a as a pivot and having a hooked end b which is engaged by the nose c of the bolt C, this bolt is slotted at c' and the rivet a' passes through

this slot, holding the bolt in position but allowing it to slide to and from the hooked end b of the shackle heel c^2 , and the bolt rests against the rivet a^2 . A spring E is mounted on the rivet a' and one end e of the spring bears against a projection c^3 on the bolt, tending to hold the bolt in its normal position, as illustrated in Fig. 1; the other end e' of the spring rests against an arm b' projecting from the heel end of the shackle. The extreme heel portion of the shackle b^2 contacts with a projection c^4 on the bolt when the parts are in the locked position, as illustrated in Fig. 1.

I lay no claim to the above described arrangement of parts, my invention relates particularly to the means on the bolt with which the key comes in contact, either to prevent the opening of the lock by a key other than the one fitted to the lock, or to throw the bolt by the proper key.

On the bolt near the heel c^2 is a lug d which is acted upon by the key to throw the bolt, this lug can be either in the flat position shown in Fig. 9, or bent up as shown in Fig. 3, or bent up and partly cut off, as shown in Fig. 6, so that it will be acted upon by keys having certain forms of bits.

On the bolt B is a ward d' which can be bent so as to assume different positions to prevent any but the particular key actuating the bolt. In Fig. 3, the ward d' is bent up so that it will interfere with the turning of the keys, as shown in Figs. 7 and 10, but will allow the key shown in Fig. 4 to freely pass so as to come in contact with the lug d . In Fig. 6, the ward is flat so as to prevent the passage of the key illustrated in Fig. 10, but the lug d being cut off the key illustrated in Fig. 4 will simply turn in the lock without actuating the bolt. In Fig. 9, the ward is bent so as to allow the bit of the key shown in Fig. 10 to pass under it and come in contact with the lug d on the bolt, but will stop the rotation of the key illustrated in Fig. 7, and will allow the key illustrated in Fig. 4 to freely turn without actuating the bolt. Thus it will be seen that by the use of one standard bolt, preferably made of sheet metal, the ward and the key contacting lug can be bent into different shapes so as to adapt them to keys having different forms of bits. The changes can also be combined with the keyways illustrated in Figs. 11 and 12; the bits

of the keys being bent out of line with the body. These keys can be bent more or less so that the changes can be made in one form of lock having parts substantially alike, with the exception that the ward and key contacting lug of the bolt are bent so as to assume different positions.

In the drawing I have shown a flat key adapted to a key bearing F mounted in the front and back casings A, A', the slot in the front casing is shaped to receive a particular form of key, and as the proper key is turned it will pass the ward *d'* and come in contact with the lug *d*, moving the bolt back against the pressure of the spring E, so that the nose *c* will clear the notched end of the shackle, at the same time the portion *c'* of the bolt will clear the heel extension *b'* of the shackle, and when in this position the spring E will immediately turn the shackle on its pivot. As soon as the key passes the lug *d* the spring E will return the bolt to its normal position, so that when the shackle is forced into the closed position it will ride upon the bolt, which will engage the shackle and lock it.

I claim:—

1. The combination in a padlock, of a casing, a shackle pivoted to the casing, a bolt adapted to engage the shackle, and a projection on the bolt capable of being bent to assume different positions so as to register with the bits of different keys.

2. The combination in a padlock, of a case, a shackle, a bolt arranged to engage the shackle, a key engaging lug, and a ward

capable of being bent so as to assume different positions.

3. The combination in a padlock, of a casing, a shackle pivoted to the casing, a sliding bolt mounted in the casing and adapted to engage the shackle, a spring tending to retain the bolt in its normal position in engagement with the shackle, said bolt having a lug adapted to be engaged by a key, and a ward situated in advance of the said lug, both the ward and the lug being capable of being bent to different positions to accommodate keys having different widths.

4. The combination in a padlock, of a casing, a shackle pivoted to the casing, a sliding bolt mounted in the casing and having two portions, one engaging the nose of the shackle and the other the heel of the shackle, a spring, one end of the spring engaging the sliding bolt, the other the shackle, a key hub, a key engaging lug on the bolt, and a ward made integral with the bolt, the ward being situated in advance of the key lug, both capable of being bent into different positions so that the bolt will be actuated by a key which will clear the ward and engage the lug.

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

FRANK SOLEY.

Witnesses:

WM. E. SHUPE,
WM. A. BARR.