L. HILLEBRAND.
Padlock.

No. 206,327. **Patented July 23, 1878.**

Fig. 1.

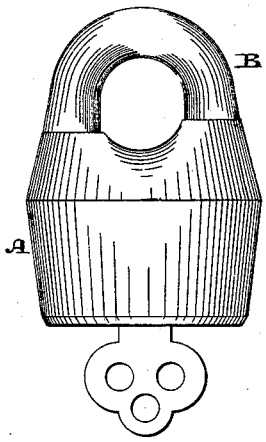


Fig. 2.

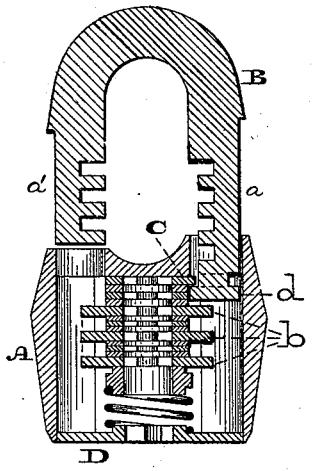


Fig. 3.

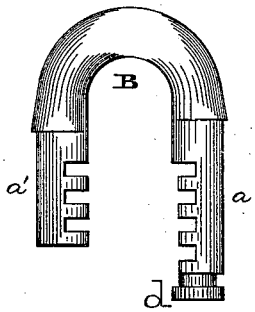


Fig. 4.

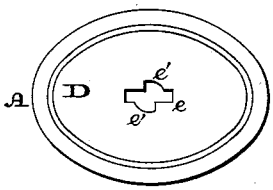


Fig. 5.

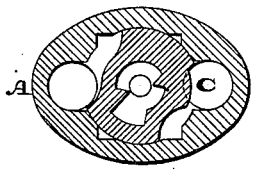


Fig. 6.

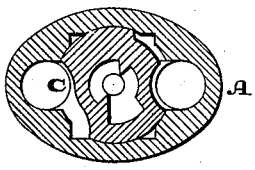


Fig. 7.

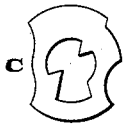


Fig. 8.

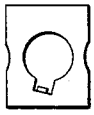


Fig. 9.

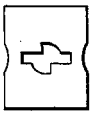


Fig. 10.

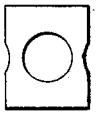


Fig. 11.

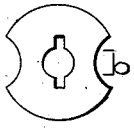


Fig. 12.

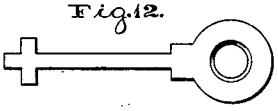
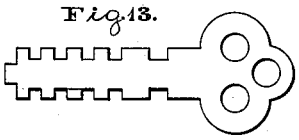


Fig. 13.



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W. F. Kitcher

Inventor:
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by John A. Wedderburn
ATTORNEY.

UNITED STATES PATENT OFFICE.

LOUIS HILLEBRAND, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO DANIEL WOLF, OF SAME PLACE.

IMPROVEMENT IN PADLOCKS.

Specification forming part of Letters Patent No. **206,327**, dated July 23, 1878; application filed June 25, 1878.

To all whom it may concern:

Be it known that I, LOUIS HILLEBRAND, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Padlocks, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of the padlock embodying my invention. Fig. 2 is a central vertical section thereof. Fig. 3 is a side view of the shackle detached. Fig. 4 is a face view of the lock-cover. Figs. 5 and 6 are views of the interior of the lock, showing an independent bolt. Fig. 7 is a view of the independent bolt. Fig. 8 is a face view of a partition guide and stop. Fig. 9 is a face view of a center ward. Fig. 10 is a face view of a partition-plate. Fig. 11 is a face view of the ordinary locking-bolt. Figs. 12 and 13 are views of the two keys employed.

Similar letters of reference indicate corresponding parts in the several figures.

Padlocks with revolving tumblers engaging with the legs of the shackle thereof are commonly called "Scandinavian," in some of which the shackle can be entirely removed, and in others it can be sufficiently drawn out to open the lock, while one leg of the shackle remains secured to the lock-case, to accomplish which various means have been adopted.

My invention consists of a padlock whose shackle, when open, is prevented from dropping from the lock-case by means of a bolt which is independent of the locking bolt or key, and adapted to be operated by an extra key, for permitting the entire withdrawal of the shackle.

Referring to the drawings, A represents the lock-case, and B the sliding and rotary shackle, whose legs *a a'* are adapted to be engaged by the bolts *b*, between which are placed partition-plates, wards, and stops, as usual. The bolts will be of suitable construction, and operated by a proper key, a form of which is shown in Fig. 13. Within the case, at what may be termed the upper part thereof, there is fitted a revolving bolt, C, which is adapted to engage with the lowermost notch or shoulder, *d*, of the long leg *a* of the shackle, and said bolt is operative independently of the other bolts by an extra key, a form of which is shown in Fig. 12, the two keys being different.

The several bolts *b* are constructed with central openings, through which the key, Fig. 13, is introduced, and the key, Fig. 12, in order to reach the bolt B, is passed through said openings, as well as the openings of the wards, guides, &c.

The bolt C is so shaped that when rotated in one direction (see Fig. 5) it will engage with the lowermost notch or shoulder of the leg *a*, when the shackle is withdrawn to the extent necessary for the leg *a'* to clear the top of the lock-case, the lock then being open, as in Fig. 2. In this position of parts the shackle may be rotated on the leg *a*, for disengagement from the staple, hasp, or other place of attachment, and subsequent application thereto.

When the shackle requires removal the key, Fig. 12, is applied, so as to rotate the bolt C, and disengage it from the notch or shoulder *d* of the leg *a*. (See Fig. 6.) The shackle, being no longer controlled by the bolt C, can now be entirely removed from the lock-case. The lock-maker will find this provision of an independent bolt for the shackle to be of vast service.

During the operations of finishing and varnishing the lock-case the shackle may be separated from the lock-case, and when the lock is put together the legs of the shackle are inserted in the lock-case, and the bolt C properly rotated, thus disposing the latter to engage with the shoulder or notch *d*.

When the shackle is in position, Fig. 2, the bolt C immediately engages with the shoulder *d*; but when the shackle is fully introduced into the lock-case, as in Fig. 1, the bolt is in such position that when the shackle is subsequently withdrawn, as in Fig. 2, the bolt projects beyond the path of the shoulder or notch *d*, and thus forms a stop for the further withdrawal of the shackle, without, however, preventing the rotation of the latter on its leg *a*.

When the lock requires repair the shackle may be readily removed in the manner stated, and it is desirable that the extra key remain in the custody of the lock-maker for convenience and safety.

D represents the lock-cover at the bottom of

the case A. The key-hole *e* in said cover is somewhat of the form of a cross, with rounded corners at opposite angles, as at *e'*.

I employ a flat key, say of the form Fig. 13, and, introducing it into the key-hole *e*, it is rotated in proper directions for locking and unlocking the bolts *b*.

It will be noticed that portions of the face of the key ride on the rounded corners *e'* of the key-hole, thus supporting and guiding the key, and dispensing with a revolving guide in the lock-case.

The opening in the center ward, Fig. 9, may be constructed similarly to that of the key-hole of the lock-cover D.

The key may be notched or "bitted" correspondingly on both sides, so as to be inserted and operative either way in the key-hole.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A padlock having a sliding shackle and a locking bolt or bolts, in combination with an independent bolt engaging with the shackle when the lock is open, and adapted to be operated by an extra key for entire disengagement from the shackle, whereby the latter may be removed, substantially as and for the purpose set forth.

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