

(No Model.)

F. & M. CLEVER.
LOCK.

No. 555,209.

Patented Feb. 25, 1896.

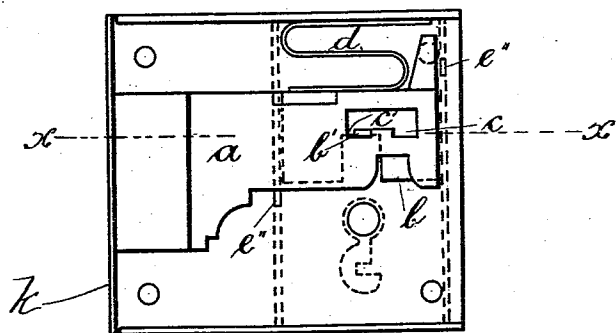


Fig. 1.

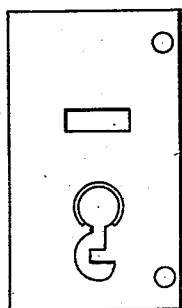


Fig. 2.

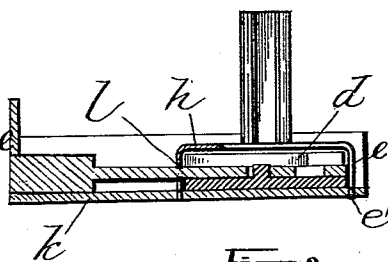


Fig. 3.



Fig. 4.

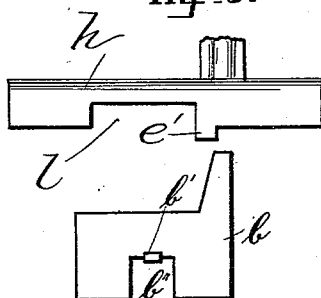


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

FRIEDRICH CLEVER AND MAX CLEVER, OF HAGEN, GERMANY.

LOCK.

SPECIFICATION forming part of Letters Patent No. 555,209, dated February 25, 1896.

Application filed July 10, 1895. Serial No. 555,454. (No model.)

To all whom it may concern:

Be it known that we, FRIEDRICH CLEVER and MAX CLEVER, subjects of the King of Prussia, German Emperor, residing at Hagen, in the Kingdom of Prussia and German Empire, have invented certain new and useful Improvements in Locks, of which the following is a specification.

The invention consists in the novel combination of elements and the features and arrangements thereof hereinafter particularly described and pointed out in the claim.

The invention is illustrated in the accompanying drawings as applied to a one-revolution box-lock.

Figure 1 shows the inside of the lock, a part of the casing being removed, as shown in dotted lines. Figs. 2 and 3 show a top and a profile view of the covering part of the casing removed in Fig. 1, the latter view representing also a section through the tumbler-bolt and the lock-casing on line *xx* of Fig. 1. Fig. 4 is a side view of the covering part. Fig. 5 is a view of the S-shaped tumbler-spring. Fig. 6 is a view of the tumbler-plate.

Except as to the tumbler, which constitutes the subject-matter of the invention, the lock is arranged precisely as the ordinary box or mortise locks. It contains a bolt *a* provided at its rear with a notch *c*, in whose indent *c'* the tumbler-toe *b'* of the tumbler-plate *b* engages, whereby the bolt is locked.

The S-shaped tumbler-spring *d* is placed loose upon the tumbler. It consists preferably of a narrow strip of steel, bent in the shape of an S. The U-shaped piece of sheet covering metal *h* (shown in Figs. 2 and 3) is put over the whole in such a manner that it assumes the position shown by dotted lines in Fig. 1. It is held in this position by the pieces *e'* which engage in corresponding holes *e* of the casing *K*.

The sheet-metal covering serves as a guide for the bolt, the latter slipping in a suitable

notch *l* of the left side flange of the same. Said sheet-metal casing *e* serves also as a guide for the tumbler-plate *b*. As the same lies loose in the casing formed by the sheet metal it can move vertically. The play is limited by the height of the notch *c*. The tumbler-spring *d* is merely held in position by the sheet-metal covering. It presses upon the tumbler-plate and keeps the tumbler-toe *b'* engaged with the indent *c'* of the bolt-bar.

The lock works as follows: The key is introduced in the keyhole through the guide-iron arranged upon the sheet-metal covering *e*. When the key is turned the bit will first strike the tumbler-plate *b* and press the same upward, whereby the tumbler-spring will be compressed vertically. The locking of the bolt will thereby be released as the tumbler-toe *b'* will go out of the indent *c'* and by a further turning of the key the bolt can freely be moved forward and backward.

We claim—

In combination, the outer casing, the channel-covering *e*, having flanges with a notch in one of them, a sliding bolt passing through said notch and out of the main casing, said bolt having an opening *C* with an indent or spur *c* therein, a tumbler-plate arranged in the channel-covering and guided by the flanges thereof to move at right angles to the bolt, said tumbler having the toe *b'* fitting in the opening *c* to engage the indent *c'*, and having also a bearing for the key to work against, and the spring held between the tumbler and the outer casing and between the flanges of the channel-covering, substantially as described.

In witness whereof we hereunto set our hands in presence of two witnesses.

FRIEDRICH CLEVER.
MAX CLEVER.

Witnesses:

WILLIAM ESSENWEIN,
A. STRAUSS.