Voigt & Mathes,

Latch.

No. 101,684. Patented Apr. 5. 1870.

FIG. 1.

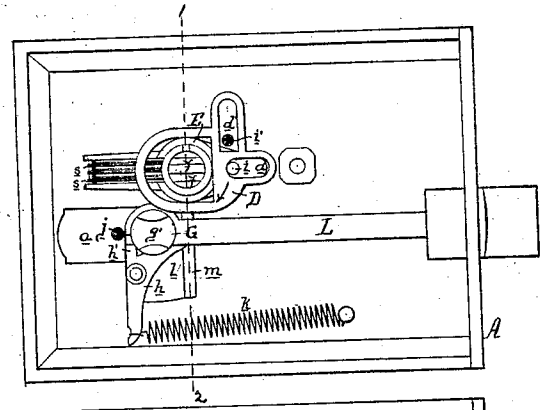


FIG. 2.

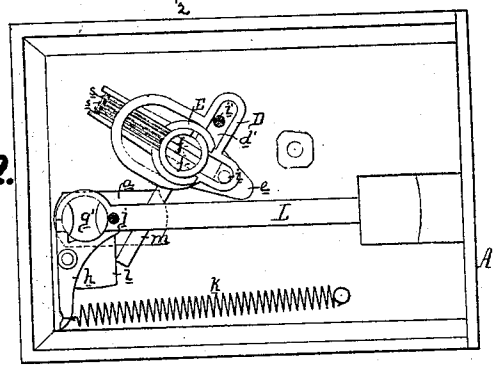


FIG. 4.

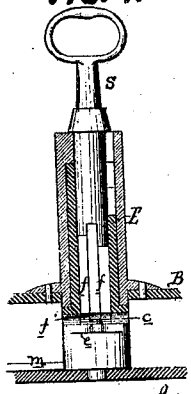


FIG. 3.

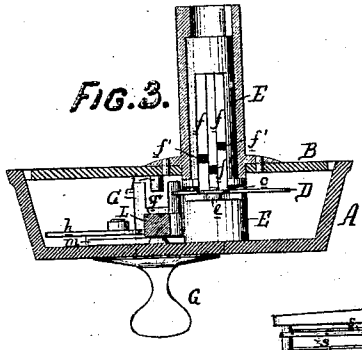


FIG. 9.

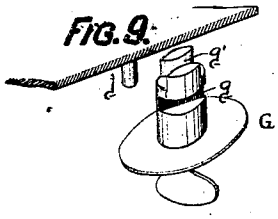


FIG. 5.

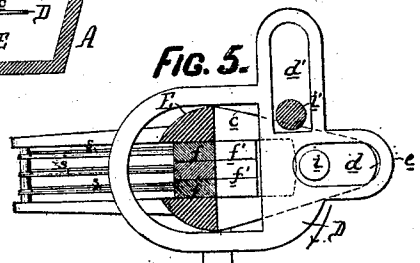


FIG. 7.

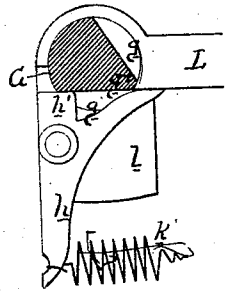


FIG. 8.

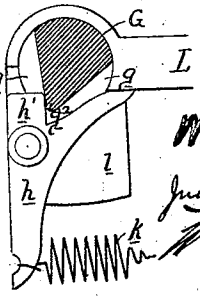
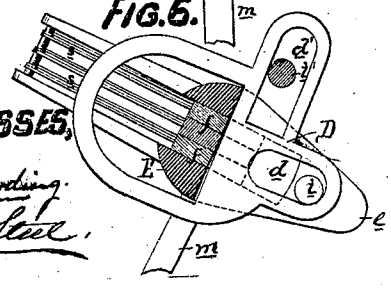


FIG. 6.



E. Voigt and P. P. Mathes
by their Attys.
Howson and Son

WITNESSES,
Jno. B. Harding.
Wm. A. Steel.

United States Patent Office.

EDWARD VOIGT AND PHILIP P. MATHES, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 101,684, *dated April* 5, 1870.

IMPROVEMENT IN LOCKS.

The Schedule referred to in these Letters Patent and making part of the same.

We, EDWARD VOIGT and PHILIP P. MATHES, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an improved Lock, of which the following is a specification.

Our invention consists in the combination of a thumb-stud arranged to rotate in the spring latch with a stationary pin on the lock-case, said stud being so slotted or grooved that it can be turned to such a position as to either pass or be arrested by the said stationary pin, and thus retain the spring-bolt in either a locked or unlocked position.

Our invention further consists of certain devices for controlling the said rotating thumb-stud.

Description of the Accompanying Drawing.

Figure 1 is a side view of our improved lock, with the cover-plate removed;

Figure 2, the same with parts of the lock in different positions;

Figure 3, a transverse section of the lock on the line 1 2, fig. 1.

Figure 4, a part of fig. 3, showing the key;

Figures 5 and 6, detached sectional views drawn to an enlarged scale, and illustrating the operation of the bridge-plate.

Figures 7 and 8, detached views of the retaining-device, and

Figure 9 a perspective view of the same.

General Description.

A is the case of the lock containing the operating mechanism, and

B is the cover-plate to which is secured a tubular case containing a tube, E, the latter bearing against the inside of the case A.

Over the tube E, and resting on an arm, *e*, projecting from the same, is placed the slotted bridge-plate D, which is controlled by pins *i i'* and operates in connection with tumblers within the tube E, to prevent the rotation of the latter except on the application of the proper key.

Through one end of twe case A projects the spring-bolt L, which is operated by an arm on the tube E, and through an eye in the inner end of which, and through a slot, *a*, in the case A, passes the stem of a thumb-stud, G.

In the said stem are cut two grooves, *g g*, to one of which is adapted the heel *h'*, of the catch-lever *h*, which is hung to the projection *l* on the spring-bolt L.

Another groove, g^1 is cut in the end of the stem of the thumb-stud, a pin, *j*, on the cover-plate operating in connection with this groove in the manner described hereafter.

To the outer end of the catch-lever *h*, and to a pin on the case A, is attached a spring, *k*, which serves the ordinary purpose of forcing the bolt outward.

Operation.

The retention of the spring-bolt L in a locked or unlocked position is accomplished in the following manner:

While the spring-bolt is being drawn within the lock in the manner described, or by the thumb-stud, the groove in the latter is kept in such a position as to allow the stem of the said stud to pass beyond the pin *j*, after which it is immediately turned to the position seen in fig. 2, when the stem of the stud bearing against the said pin *j* will maintain the spring-bolt in an unlocked position.

During the turning of the catch, the portion g^2 of the same, fig. 7, formed by the grooves *g g* comes in contact with the catch *h*, and slightly moves the same until its heel *h'* arrests the further movement of the said catch, and maintains the same in its proper position.

On turning the thumb-catch back to its former position, fig. 7, the spring-bolt will be released, and return to a locked position, where it may be secured as before by turning the catch to the position seen in fig. 8.

It will be observed that the spring-bolt may be operated from without by means of a key in the manner described, or from within by the thumb-stud G. It will also be seen that by means of the latter the bolt can be so secured as to prevent it being operated from without.

Claims.

1. The rotating thumb-stud G having a transverse slot, *g'*, in combination with a stationary pin, *j*, for the purpose specified.

2. The spring catch lever *h* constructed substantially as described, hung to the latch-bolt, and operating in conjunction with the grooved and slotted stem of the thumb-stud and stationary pin *j* substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

EDWARD VOIGT.
PHILIP P. MATHES.

Witnesses:
JOHN WHITE,
HARRY SMITH.