

UNITED STATES PATENT OFFICE.

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LOCK.

SPECIFICATION forming part of Letters Patent No. 786,195, dated March 28, 1905.

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To all whom it may concern:

Be it known that I, HONORÉ COUDYSER, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a certain new and useful Lock, of which the following is a specification.

The general object of my invention is to produce a lock for all purposes, to be opened with a key, but which requires a certain manipulation of such key known only to the rightful user in order to operate it to withdraw the bolt.

To this end my invention embodies in general a double-chambered lock-case the rear chamber of which contains a false or blind lock, while the front chamber contains the true lock; further, a device whereby a definite series of movements are required to cause the operative part of the key to arrive in said front chamber and, further, a construction whereby other special manipulation is required to operate the bolt by means of the key after the latter has arrived in the front chamber.

My invention will be understood from one embodiment thereof, shown in the accompanying drawings, of which—

Figure 1 is a face view of a form of my improved lock adapted to chests, trunks, and the like. Fig. 2 is a transverse section thereof on the line X of Fig. 1. Fig. 3 is a view of the interior of the lock-case with the cover-plate removed, showing the front chamber and mechanism contained therein. Fig. 4 is a similar view of the rear chamber. Figs. 5 and 6 are respectively a side view and a section on the line *t* of the key. Fig. 7 is a view showing the front chamber of a door-lock operating on the same principle.

The lock-case A is of the usual rectangular pattern, provided with a cover-plate A' on the front side. It is divided, as seen in Fig. 2, into two compartments by a central partition-plate H, which is secured to the back of the case by screws *h*, engaging in threaded socket-posts *h'*, and in like manner the cover-plate A' is secured by screws *a'* to threaded socket-posts *a''*, carried on the plate H. The latter is shown as having its corners beveled off to

leave a passage for the screws or fastenings which pass through openings *b* in the cover and case to secure the lock to the door, chest, or other article on which it is to be used.

Near the lower side of the case is formed, in the cover A' the keyhole E, in the center of which rises the key-post F, secured to the back of the case, and a similar keyhole *e* is formed in the plate H. At the lower end of the keyhole *e* is a guard-post G, mounted on the plate H and extending between it and the cover and provided with flanges *g*, which prevent the key when inserted from turning in the front chamber. The keyhole *e* has also a lateral extension *e'*, adapted to admit the bit of the key from the rear into the front chamber, and this may be provided with wards, as shown, which prevent the passage of a key not properly grooved to correspond.

In the rear chamber I provide any suitable false lock mechanism, such as a tumbler J, mounted on a pivot K and projecting into the path of the key when the latter is turned, giving to one not acquainted with the nature of the lock the impression that the bolt is being shot by the clicking and resistance produced. The tumbler J may have two springs *k''* pressing against it from opposite sides and limited in their movement by a block or lug *k'*, (shown in dotted lines in Fig. 4,) secured to the back of the case under the tumbler J, which is recessed to admit it.

The true locking mechanism is in the front chamber of the lock and consists of the bolt N, guided to reciprocate horizontally by slots *m*, sliding on the posts *m'*, carried by the plate H, a downward extension *l''*, formed on the bolt M and carrying a pin *l'* opposite the key-post F, a leaf-spring *l³*, secured to the side of the lock-case and pressing on the extension *l''*, a tumbler L oscillating on the pin *l'* and having a square end with a projecting lug *l* at the upper corner, a pair of bowed springs *l⁴*, secured in a block N and embracing the keyhole and pressing laterally against the tumbler L, and a block or lug *p*, secured to the plate H under the tumbler L to limit the motion of the springs *l⁴*. It will be observed that the latter keep the tumbler L normally central, while permitting it to be

oscillated in either direction by the key, while the spring l^3 holds the bolt M normally in locked position, the bolt being limited in its motion to the left by the post a'' or otherwise.

5 The key D may be of the usual form provided with a barrel f , fitting on the key-post F, and with a bit d , which may be grooved, notched, or slotted in any approved manner to coöperate with corresponding wards and
10 like formations in the lock-case; but for the sake of simplicity a key with a plain bit is shown, as the particular form of the bit adopted is not concerned with my invention. The bit d should, however, be of proper width
15 to fit in each of the compartments of the case and sufficient length to operate the bolt by means of the tumbler L, as will now be explained.

The key D is first inserted through the key-
20 holes E and e successively, being prevented from turning in the front chamber and being first rotatable on reaching the rear chamber. It is then turned until the bit d registers with the extension e' , (which may make any angle
25 with the keyhole e ,) when it is pulled through the opening into the front chamber. The key must then be turned to the right three-quarters of a revolution, pushing down the tumbler L and snapping past the latter, then
30 reversed in direction and turned very slowly and carefully, raising the tumbler L until just over the lower edge of the latter, when the tumbler L drops until the lug l engages and rests upon the end of the bit d , as shown by
35 the upper dotted-line position, Fig. 3. The key is then again rotated to the right, this time pushing back the bolt M, as shown by the other dotted lines of Fig. 3.

A person unacquainted with the lock will,
40 first of all, be deceived by the false lock device in the rear chamber into supposing he is operating the real lock, and it will never occur to him to turn the key until its bit registers with the hole e' and then draw it out;
45 secondly, even if he should get this far he would be unable to fit his key to the opening e' , as owing to its position the latter cannot be seen nor impressions of it taken, also as the key does not pass through said opening
50 he cannot locate its position; thirdly, even suppose these difficulties removed and he succeeds in getting the bit of his key into the front chamber he still will be unable to operate the tumbler L because the mere turning
55 of the key in either direction merely causes an oscillation of the tumbler L and the slightest turn of the key to the left beyond the position necessary to catch the lug l will release the latter and permit the tumbler to drop
60 back again. It is apparent that these various manipulations provide a combination which cannot within reasonable probability be solved while having the additional security of a key and means for preventing the duplicating of
65 said key even when the combination is known.

The bolt M is of course to be formed according to the style of lock. In Figs. 1 to 4 it is provided with tongues O, which are formed to enter the eyes of catches C on a catch-plate B, suitable for chests and the like. 70
In Fig. 7 the end of the bolt M has an extension O' passing through the case and adapted to engage with a lock-plate or niche in a door-jamb.

While I have shown in the drawings a 75 spring-lock, it will be understood that this feature is not essential to my invention, nor is the shape of the case, nor the special form of key or false locking device, or the use or non-use of any special obstructing devices 80 acting on the key and the like features of other locks; but the essentials of my invention are set forth in the following claims.

I claim—

1. A lock having front and rear chamber 85 separated by a partition-plate having an aperture fitting the key-bit and making an angle with the keyhole proper, means for guiding the key-bit through the keyhole proper into the rear chamber, and locking mechanism con- 90 tained completely in the front chamber.

2. A lock having a front and rear chamber, means for guiding the key into the rear chamber, an aperture in the partition separating the chambers, locking mechanism in the front 95 chamber, and false locking mechanism in the rear chamber.

3. A lock having a front and rear chamber, locking mechanism in one chamber, false locking mechanism in the other, means for admit- 100 ting and guiding the key-bit into the last-named chamber, and means for guiding the key-bit from the last-named chamber into the first-named chamber after it has been rotated through a given angle in the former. 105

4. A lock having a front and rear chamber, means for guiding the key into one of said chambers, false locking mechanism in this chamber, locking mechanism in the other, and means for guiding the key from the first 110 chamber into the second after it has been rotated through a given angle in the first.

5. In a lock, locking mechanism comprising a bolt, a tumbler connected with and operating it and having a substantially blunt end 115 and a slight lug or projection adapted to be engaged by the key when in a certain exact position, the tumbler causing the bolt to be pushed back when the key in this position and so engaging the end and lug of the tum- 120 bler is rotated against said tumbler; in combination with a lock-case having a front and a rear chamber in one of which said locking mechanism is located, and means for guiding the key-bit into the other chamber. 125

6. In a lock, locking mechanism comprising a sliding bolt, a tumbler pivoted thereto and having a blunt end and a slight lug or projection on said end, said end projecting di- 130 rectly in the path of the key-bit and longi-

5 tudinally with the motion of its pivot, and means for holding said tumbler yieldingly in said position permitting it to oscillate out of the path of the key, whereby the key can
10 operate the bolt only when occupying a position in which said lug rests upon the key-bit and the latter against said blunt end; in combination with a lock-case having a front and a rear chamber, means for guiding the key
into one chamber only, false locking mechanism in this chamber, a hidden passage-way

permitting the passage of the key-bit from this into the other chamber, and hidden obstructions to the passage of the key-bit through said passage-way, said obstructions preventing also the location of said passage-way by a false key. 15

In testimony whereof I affix my signature.

HONORÉ COUDYSER.

In presence of—

REINHOLD SCHROEDER,
ART. NEUBAUER.