

Fig. 1.

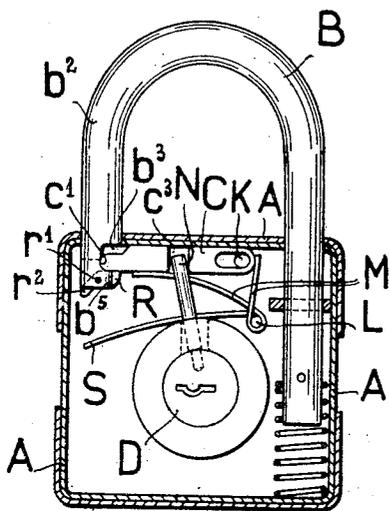


Fig. 2.

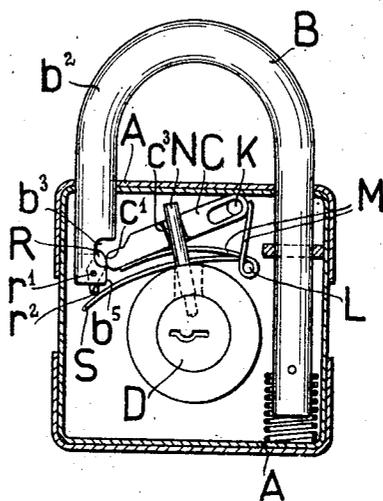


Fig. 3.

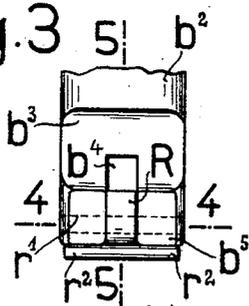


Fig. 5.

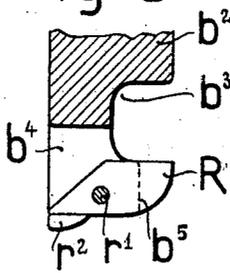
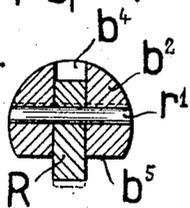


Fig. 4.



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PADLOCK.

1,410,148.

Specification of Letters Patent. Patented Mar. 21, 1922.

Application filed February 14, 1921. Serial No. 444,861.

To all whom it may concern:

Be it known that I, KARL WIESER, residing at Werden, Ruhr, Germany, a citizen of the German Republic, have invented a certain new and useful Improvement in Padlocks, of which the following is a specification.

This invention relates to a padlock having a bolt adapted to shift aside when the shackle is moved into the locking position and subsequently to automatically shoot into its own locking position, the shackle being secured in this position by the bolt. The object of this invention is to provide in locks of the described type means for increasing the security against the liability of being opened by secret practices.

One embodiment of the subject matter of the invention is illustrated in the annexed drawing in which

Fig. 1 shows a sectional view of the padlock with the parts in the locking position,

Fig. 2 shows a view corresponding to Fig. 1 with some parts in different position,

Fig. 3 shows on an enlarged scale a detail of Fig. 1, looking from the right,

Fig. 4 shows a section on line 4—4 in Fig. 3, looking from the top, and

Fig. 5 shows a section on line 5—5 in Fig. 3, looking from the left.

Referring to the drawing, A denotes the casing, B the shackle, C the bolt and D the plug of the padlock, said plug being rotatably lodged within a bushing attached to the casing A. The shackle B is shiftably disposed relatively to the casing A in the manner shown in the drawing (Figs. 1 and 2). The shorter shank, b^2 , of the shackle B is adapted to co-operate with the bolt C in the manner hereinafter described.

The bolt C is arranged within the casing A so as to be both displaceable and capable of being rocked. To this end the bolt C engages, by means of a slot, a stud K fixed on the casing A. A spring M secured to the casing by means of a pin L acts upon the bolt C, said spring bearing up with one extremity against the end of the bolt remote from its locking extremity whereas the other extremity of the spring M bears up against the underside of the bolt and tends to shift it into the locking position. The plug D is connected to the bolt C by means of a post N screwed to the plug and engaging a recess c^3 of the bolt C.

The shank b^2 of the shackle B has a notch

b^3 which the bolt C is adapted to engage by means of a projection c^1 . At its lower end the shank b^2 is provided, at the side facing the bolt C, with a flattened face b^5 and carries a special barring member R which, when the lock is in the locking position, forms the outer portion of the lower wall of the notch b^3 . Said barring member R is adapted to rock about a pin r^1 within a slot b^4 (see Figs. 3 to 5) of the shank b^2 and is provided with lateral abutments r^2 adapted to bear up against the front end surface of the shank b^2 when the lock is in the locking position. The centre of gravity of the barring member R is disposed in suchwise that this latter, when the padlock hangs in the vertical position will swing, by its own weight out of the position shown in Fig. 2 into the position in which it will be enabled to bear up underneath the nose c^1 of the bolt C (Fig. 1). However, in order to cause this motion of the barring member R to be unfailingly brought about in any position which the lock may happen to assume, there is provided a spring S fixed to the pin L carrying the spring M of the bolt C.

When the lock is opened, the bolt C is shifted backwards to such an extent that its nose c^1 will disengage the notch b^3 and thus release the barring member R, so that the shackle B may now spring open. The pressure on the key being released, the bolt C returns into the locking position, in which it is secured by the locking device N, c^3 , under the action of the spring M. As now the padlock is closed by depressing the shackle B, this latter strikes with its front end surface against the nose c^1 of the bolt C and thus forces the latter to oscillate about the axis of the pin K. The bolt C will rock out to such an extent that it will come to glide off from the flattened face b^5 of the shackle B and to turn the barring member R into the position shown in Fig. 2. Then the bolt C will release, however, said member again as soon as its nose c^1 has attained the upper wall of the notch b^3 . Hereupon, the barring member R acting under the impulse either of its own weight or of the spring S swings back into the barring position so that, when the shackle B is released, the parts will assume the locking position disclosed in Fig. 1. If the arm N which serves to transmit the opening motion of the plug D upon the bolt C, be accorded only so much

play within the groove c^3 formed in the bolt C as to enable said bolt to merely attain the particular position in which it comes to glide off from the flattened face b^5 (Fig. 2), then it will prove impossible to open the padlock even if, while at the same time depressing the shackle B, it be attempted to forcibly press the bolt C down by means of a pin or wire inserted close to the shank b^2 of the shackle into the casing A; and this for the reason that the barring member R will continue to bear up against the underside of the nose c^1 of the bolt even if this latter has been depressed into the lowermost position which the locking device c^3 N will allow of being assumed.

Claims.

1. A padlock having a bolt adapted to shift aside when the shackle is moved into the locking position and subsequently to shoot automatically into its own locking position, said bolt being secured in this position by a locking device, characterized by the fact that the shackle (B) of the padlock carries a barring member (R) which when the padlock is closed, gives room and, when the padlock is in the locked position, bears up underneath the bolt (C).

2. A padlock according to claim 1, characterized by the fact that the barring member (R) is pivoted to rock in such a manner that when the padlock is hanging in the vertical position, said barring member will shift into the barring position under the action of its own weight.

3. A padlock of the class described comprising a casing, a shackle, a bolt, locking means for said bolt, a pivoted barring member carried by one end of said shackle and

adapted to be engaged by said bolt to secure said shackle in its closed position, a double ended spring carried by said casing and having its ends bearing against one end and the underside of said bolt respectively and a second spring also carried by said casing and adapted to be engaged by said barring member, substantially as and for the purpose set forth.

4. A padlock of the class described comprising a casing, a shackle, a bolt for securing said shackle in closed position, operating means embodying a lock for said bolt and a pivotally supported barring member carried by said shackle for engagement with said bolt, substantially as and for the purpose set forth.

5. A padlock of the class described comprising a casing, a shackle, a bolt, means embodying a lock for operating said bolt and for securing it in its operative position, said bolt cooperating with one end of said shackle to secure it in closed position, a pivotally mounted barring member supported in the end of the shackle and cooperating with said bolt whereby when said shackle is moved past said bolt the barring member will be swung to clear the bolt and will thereafter swing back into position to be engaged by said bolt, substantially as and for the purpose set forth.

The foregoing specification signed at Essen, Germany, this 19th day of October, 1920.

KARL WIESER.

In presence of—
HANS GOTTSMANN,
JOHANN DECKERS.