

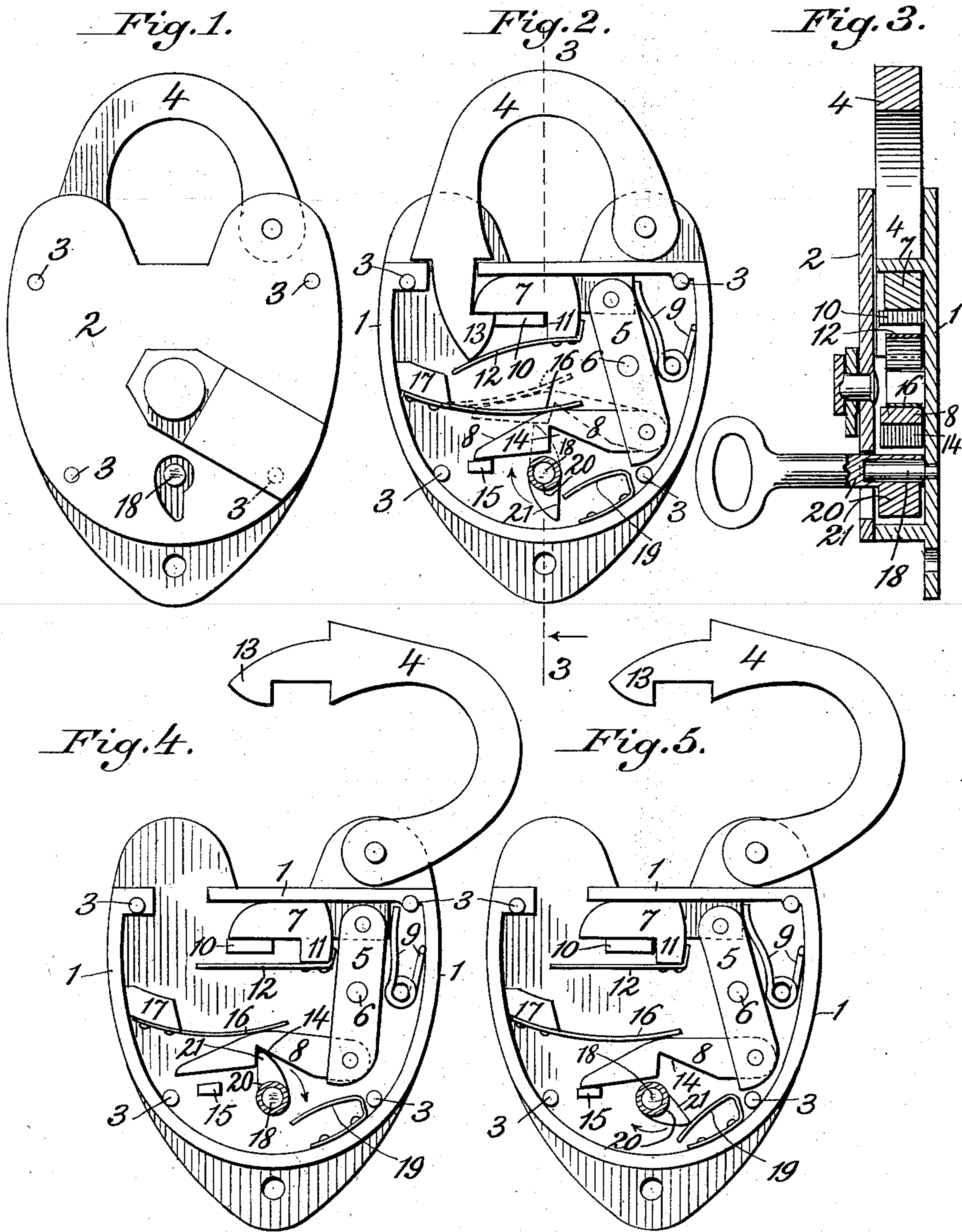
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B. HANDSCHUH.
PADLOCK.

(Application filed Jan. 22, 1900.)

(No Model.)



Witnesses

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PADLOCK.

SPECIFICATION forming part of Letters Patent No. 654,627, dated July 31, 1900.

Application filed January 22, 1900. Serial No. 2,371. (No model.)

To all whom it may concern:

Be it known that I, BOYD HANDSCHUH, a citizen of the United States, residing at Wrightsville, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Padlocks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to locks, more particularly to padlocks; and it has for its objects to construct a padlock in which the key must be first turned in one direction and then in the opposite direction in order to withdraw the bolt, so as to unlock the shackle, also to provide a construction in which the locking-bolt will be connected with a lever, with which will be connected a key-catch, so that when the key is brought into engagement with said catch and caused to exert pressure thereon said lever will be moved, so as to retract the bolt, and thus release the shackle.

It has also for its object to provide a construction in which when the shackle is locked by the bolt a spring will tend to draw the shackle and bolt together, so as to hold the same firmly, which spring when the bolt is retracted will throw the shackle past the bolt and into its unlocked position.

It has also for its object to provide a construction in which the key-catch will be under the influence of a spring, so that when the key is pressed against said catch in the operation of bringing the key into its operative position the catch will be moved against the influence of said spring, and when the key has reached its operative position said spring will restore said catch to its normal position with a click, thus indicating that the key is in position so as to actuate the bolt by turning the key in an opposite direction; and it has, further, for its object to provide a simple and efficient arrangement of parts adapted to operate substantially as hereinafter set forth.

To the accomplishment of the foregoing and such other objects as may be made hereinafter to appear, the invention consists in the construction and in the arrangement of parts

hereinafter particularly described, and then sought to be clearly defined by the claims, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a front view of the padlock; Fig. 2, a similar view with the face-plate removed; Fig. 3, a cross-section on line 3 3 of Fig. 2. Fig. 4 is a front view with face-plate removed and showing the position of the parts immediately upon releasing the shackle, and Fig. 5 a similar view showing the position of the parts to receive the shackle and lock the same.

In the drawings the numeral 1 designates the shell or case provided with the face-plate 2, which is secured thereto by the pins or rivets 3, the case or shell being provided with the hinged shackle 4.

The numeral 5 designates a lever, which preferably is mounted upon a fulcrum-pin 6, upon which it is free to turn, said lever having a locking-bolt 7, pivotally connected to one end, and a key-catch 8, pivotally connected to the other end, the lever, locking-bolt and key-catch being held in their normal position by the influence of a suitable spring 9 and restored by said spring to their normal position when moved therefrom. The locking-bolt 7 is guided in its movement by a lug 10 and is formed with a shoulder or abutment 11, which will bear against the lug 10 when the bolt is in its projected position, so that the lug will limit its forward movement. The bolt has secured to it a spring 12, which preferably is a flat spring and which will lie in the path of movement of the nose 13 of the shackle, so that when the shackle is depressed into its locked position said spring will be in contact with the shackle's nose, and thus exert an outward pressure thereon. This spring by reason of being attached to the locking-bolt and bearing against the nose of the shackle will bind or draw the shackle and bolt together, so that the shackle will be held firmly and against movement when locked, and when the bolt is retracted said spring serves to expel the shackle from the case or shell by reason of its contractile strength when the bolt is retracted from engagement with the nose of the shackle. The key-catch 8 is formed with a recess 14 on its under face and in its normal position rests at its free end upon a lug or stud 15, and a suitable spring

16 is so positioned in relation to the catch 8 that it will exert a downward pressure thereon when the key-catch is moved by the key, said spring being illustrated as a flat spring 5 attached at one end to a lug 17. Beneath the key-catch and to one side of the key-post 18 is a spring member, which in the form illustrated in the drawings is a flat spring 19, turned upon itself and so positioned in relation to the key-catch and key-post that when 10 the key 20 is inserted in the case its web or bit 21 will be next to the spring member, so that if the key be turned to the left it will contact with said member, which member 15 will prevent the key from being turned to the left into operative position and compel it to be turned to the right, which movement to the right will bring the bit or web of the key against the under side of the key-catch, which 20 movement will lift the catch until the bit of the key enters the recess in the under face of the catch, and as soon as that occurs the spring 16 will throw the catch down, which contacting with the lug 15 will give a click, 25 and thus indicate that the key is in operative position. The key is then turned to the left, which causes its bit or web to bear against the wall of the recess in the catch and to draw the catch forward, which movement turns the lever 5 and draws back or retracts the locking-bolt 7 from engagement with the nose of the shackle, whereupon the 30 spring 12, exerting its pressure against the shackle's nose, throws the shackle out of the case or out of locking relation to the bolt. Pressure upon the key now being released, the spring 9 exerts its pressure, so as to restore the locking-bolt, the lever, and the key-catch to their normal position, and by turning 40 the key to the right its bit or web depresses the spring member 19 and passes the same, so that it may be withdrawn from the lock case or shell.

It will be observed from the construction 45 and arrangement of the parts as described that the key must first be turned in one direction to bring it into operative position and then in the opposite direction in order to actuate the bolt and throw it into its unlocked position. It will also be observed that 50 the spring member prevents the key from being turned first into any other than its operative position, and yet after it has actuated the bolt the key is pressed past the spring member and brought into position to be withdrawn. It will also be observed that the 55 spring attached to the locking-bolt will draw the bolt and shackle together when the shackle is locked, and thus hold the two in connection with each other, so that the shackle will not be loose, but will be held firmly, and it will be further observed that the spring bearing against the key-catch will cause the latter to make a click when the key

is in operative position, so as to indicate that 65 the key shall be reversed in its movement for the purpose of retracting the locking-bolt.

I have illustrated and described what I consider to be the preferred details of construction and arrangement of the several parts; 70 but it is obvious that changes can be made therein and essential features of my invention still be retained.

Having described my invention and set forth its merits, what I claim is— 75

1. In a lock, the combination of the locking-bolt, the centrally-fulcrumed lever pivotally connected at one end to the bolt, and the key-catch, pivoted to said lever at its lower end below its fulcrum and formed with a shoulder 80 for the bit of the key to engage with to move the catch and lower end of the lever forward to retract the bolt, substantially as described.

2. In a lock, the combination of the locking-bolt 85 having a forwardly-extending spring for the nose of the shackle to engage with, a centrally-fulcrumed lever pivotally connected at one end to the bolt, the key-catch pivoted to said lever at its lower end below its fulcrum 90 and formed with a shoulder for the bit of the key to engage with to move the catch and lower end of the lever forward to retract the bolt, and a spring acting on the key-catch to snap it upon the key-bit as the latter passes 95 the shoulder, substantially as described.

3. In a lock, the combination with the shackle, the locking-bolt, the lever having the locking-bolt connected therewith, the key-catch connected with said lever and having 100 an abutment for a part of the key to engage with, and a spring member located with relation to said key-catch to require the key to be moved in one direction and then in the opposite direction to actuate the key-catch 105 in the operation of the locking-bolt, substantially as described.

4. In a padlock, the combination of the shackle, the locking-bolt having a spring connected thereto to engage the shackle, a lever 110 with which said bolt is connected, a key-catch formed with a recess and pivotally connected with said lever, a spring acting on said key-catch, and a spring member located in relation to said key-catch to require the key to 115 be moved in one direction to bring it into operative position and in the opposite direction to actuate the key-catch and permitting the key to pass the spring member after it has actuated the key-catch, substantially as described. 120

In testimony whereof I affix my signature in presence of two witnesses.

BOYD HANDSCHUH.

Witnesses:

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