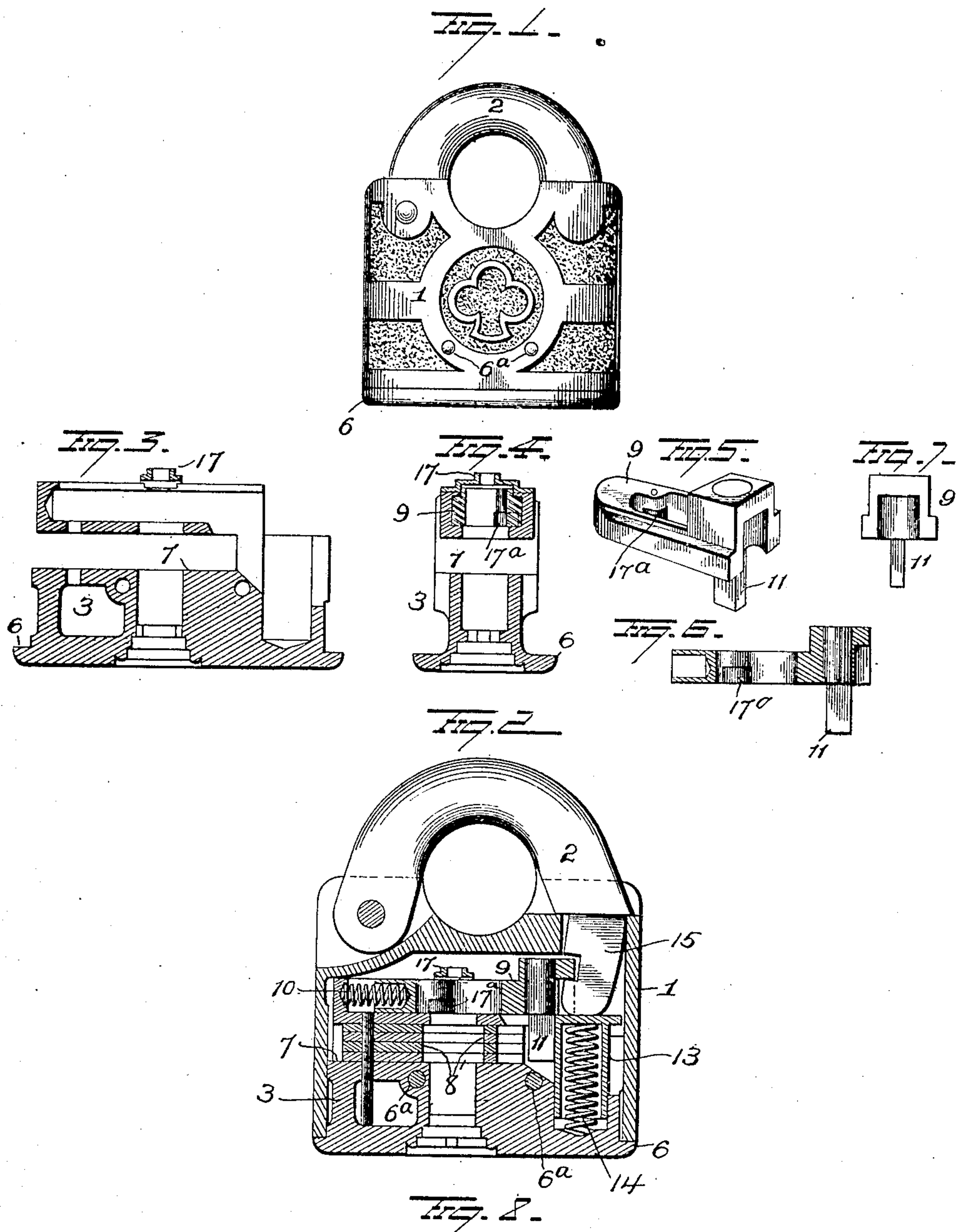


No. 869,475.

PATENTED OCT. 29, 1907.

A. F. BARDWELL.
PADLOCK.

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WITNESSES
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PADLOCK.

No. 869,475.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed April 6, 1907. Serial No. 366,815.

To all whom it may concern:

Be it known that I, ARTHUR F. BARDWELL, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Padlocks; and I do hereby 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.

My invention relates to an improvement in pad locks of the type wherein the operative mechanism, is self contained, that is to say, is assembled on a block or other part separate from the case, and inserted within the case, and is designed particularly as an improvement on the lock shown in Patent No. 192,847 granted to W. H. Taylor, July 10th, 1877.

In the lock disclosed in the patent above referred to, and in others of the same type, the bearing for the inner end of the key is formed in the lock case, consequently accurate fitting and adjustment of the parts carried by the block, is necessary in order that the end of the key will properly register with its bearing in the case.

The object of the present invention is to provide a lock the parts of which may be more accurately adjusted, and more cheaply constructed than those of the same type now in use, and it consists in providing the block carrying the tumbler mechanism with a bearing for the inner end of the key whereby all the operative parts may be assembled and adjusted before the block carrying such operative parts of the lock are inserted and secured within the lock case.

My invention further consists in certain details of construction and combination of parts as will be more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation of a lock embodying my invention. Fig. 2 is a view in section of the same. Fig. 3 is a view in longitudinal section of the block which carries the tumbler mechanism and bolt. Fig. 4 is a view in transverse section of same. Figs. 5, 6 and 7 are views of the bolt and Fig. 8 is a view of the key.

1 represents the case of the lock open at its lower end and 2 the shackle hinged thereto.

3 is the block carrying the tumblers 8 and bolt 9, the said tumblers and bolt being assembled in their proper relative positions, on the block before the latter is inserted in the case. This block is provided with a lower plate 6 which conforms in size and shape to the lower end of lock case, and when in position and secured by rivets 6^a, passing through the sides of the case and block, completely closes the case. This block is shaped to conform to the cavity in the case, and is provided with a slot 7 in which the tumblers 8 are pivoted, and is recessed on its top and is provided with ways in which the bolt 9 slides. The bolt 9 is moved in its locking

position by a spring 10 and carries the fence 11 which engages the ends of the tumblers 8 when in its locking position, and enters the gatings in the ends of the tumblers when the latter are adjusted and the bolt retracted by the key 12.

The tumblers are as shown located within a slot in the block below and parallel with the bolt, the fence on the bolt depending through a slot connecting the bolt and tumbler slots.

13 is the plunger normally forced upwardly by the spring 14, when the bolt 9 is retracted by the key, and operates to throw the hook or free end 15 of the shackle out of the case, and close the shackle opening in the case and thus prevent the entrance of dust or dirt into the case when the shackle is in its unlocked position. The plunger 13 when in the position last described, rests in the path of the bolt thus preventing the latter from moving to its locking position until the plunger has been depressed by the entrance of the free end of the shackle. When the plunger has been depressed to a position below the path of movement of the bolt, the latter engages the hook and locks the shackle in its closed position.

The key hole is formed at about the center of the block, the outer end of the key hole being closed by a slotted disk mounted to rotate in the lower plate of the block. The key passes through the tumbler and through a slot in the bolt, and its end or pintle, in the locks heretofore constructed, enters a seat or socket formed in the upper part of the shell or case. With such construction it will be seen that this seat or socket must be accurately bored with relation to the slotted key disk, tumblers and bolt, consequently the lock is comparatively expensive to make and difficult to assemble.

In the present lock, I dispense with the seat or socket in the case or shell, and provide the top of block 3 with a key stop 17 having a central opening for the pintle 18 at the free end of the key. This stop 17 is secured to the block in any desired manner, but I prefer to recess the sides of the block to receive the ends of the stop and then compress or upset the metal adjacent to the ends of the stop. With this construction all the parts are assembled, adjusted and secured together outside the case, thus doing away with the necessity of forming any bearings in the shell or case.

The flat key 12 is bitted alike on each side, so that, no matter which way it may be inserted, when turned will spread the tumblers until their gatings are in line with the fence on the bolt. A further turning of the key causes its side to engage the roller 17^a journaled on the bolt and retract the bolt. This roller diminishes the friction and wear on the key and bolt and makes the lock work easier.

The tumblers are each provided with a spring of the usual construction (not shown) which bear against the inner walls of the shell, and the tumblers and gatings are so arranged that when the shackle is locked the gatings are out of line with the fence. By introducing and turning the key the gatings are brought into alinement and the bolt is retracted. As soon as the bolt is retracted sufficiently to release the shackle, the plunger 13 is released by the bolt, and flying upward under the impulse of its spring shoots the shackle to an open or unlocked position.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention hence I would have it understood that I do not wish to confine myself to the exact construction of parts shown and described, but,

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. The combination of a shell, a shackle pivoted thereto and a plug carrying a bolt, tumblers and a key stop for engaging and supporting the end of the key. 20

2. The combination of a shell, a shackle pivoted thereto, a plug fitting within said shell and carrying a bolt, tumblers, a key stop for engaging and supporting the end of the key and a plunger for holding the bolt in its retracted position when the shackle is open. 25

3. The combination of a shell, a shackle pivoted thereto and a plug fitting within said shell and carrying the operative mechanism of the lock including a key stop for engaging and supporting the end of a key. 30

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

ARTHUR F. BARDWELL.

Witnesses:

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WILLIAM P. MOSELY.