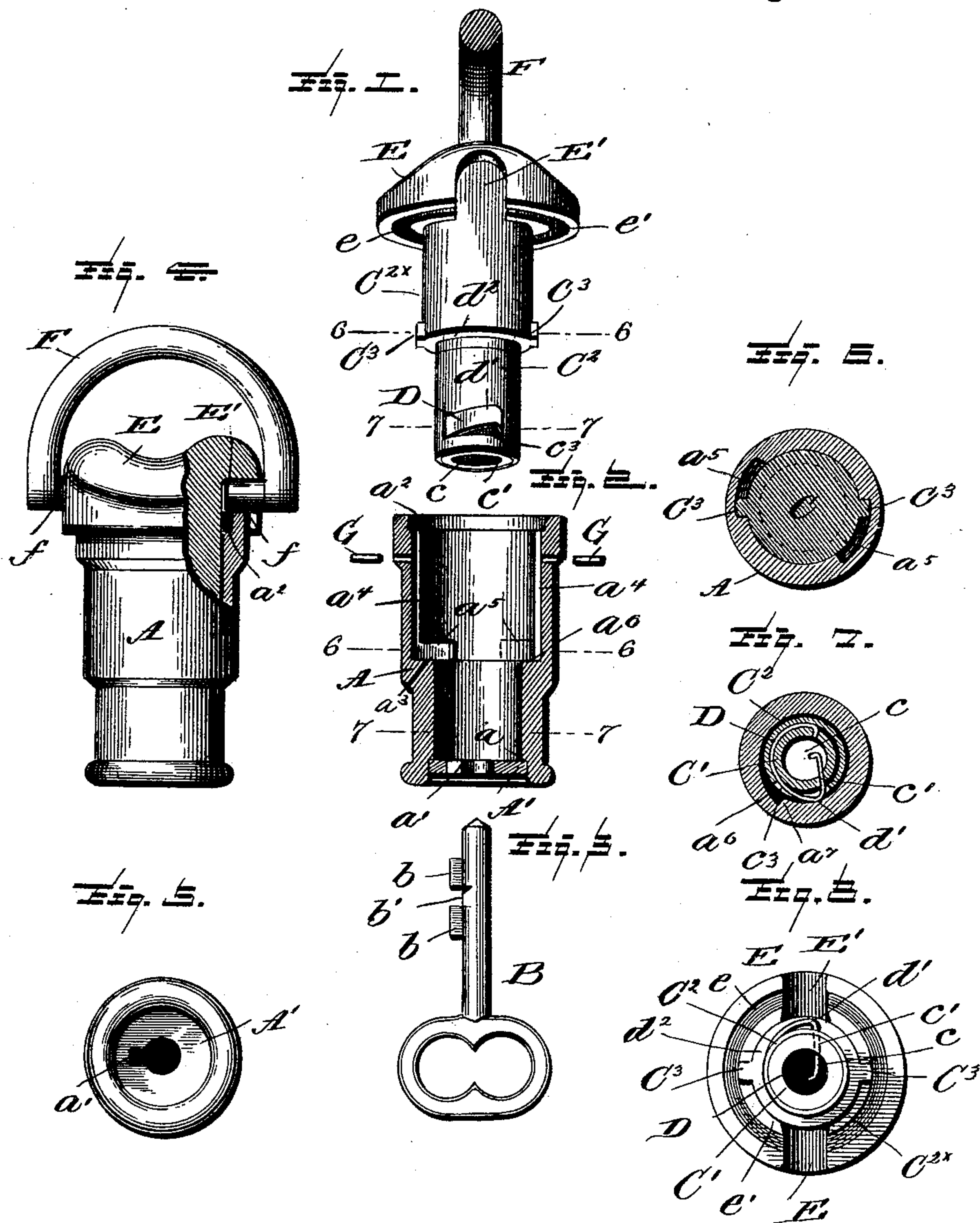


(No Model.)

N. J. ZELL.
PADLOCK.

No. 481,458.

Patented Aug. 23, 1892.



Witnesses
L. C. Mills
E. H. Bond.

Inventor
Nicholas Jacob Zell,
per *Chas. A. Fowler*
Attorney

UNITED STATES PATENT OFFICE.

NICHOLAS JACOB ZELL, OF READING, PENNSYLVANIA.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 481,458, dated August 23, 1892.

Application filed April 27, 1892. Serial No. 430,855. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS JACOB ZELL, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Padlocks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in padlocks; and it has for its objects, among others, to provide a novel lock designed for a hanging lock, and which shall be so constructed as not to be affected by the rain or snow and still of few parts, and those cheap of manufacture, and when assembled so held as to prevent separation thereof.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figures 1, 2, and 3 show the parts constituting my improved lock and the key disassembled, but in their relative positions, Fig. 1 showing the inner part in perspective with the hasp broken off and in section, Fig. 2 showing the outer part or barrel in longitudinal section, and Fig. 3 the key. Fig. 4 is a side elevation of the lock complete, with a portion broken away and parts in section, the view being at right angles to Fig. 1. Fig. 5 is an end view of the bottom cap or keeper. Fig. 6 is a cross-section on the line 6 6 of Figs. 1 and 2, with the parts assembled, but before they have been given the partial rotary movement hereinafter described. Fig. 7 is a cross-section on the line 7 7 of Figs. 1 and 2 with the parts assembled but not turned. Fig. 8 is an end view of Fig. 1, looking upward.

Like letters of reference indicate like parts throughout the several views in which they appear.

Referring now to the details of the drawings by letter, A designates the outer portion

or barrel or casing of the lock. It is formed near one end with an annular internal shoulder a , against which the bottom cap or keeper A' fits, as seen in Fig. 2, which keeper is held in place in any suitable manner. It is formed with a keyhole a' , as seen in Figs. 2 and 5, for the reception of the key B, which, as seen in Fig. 3, has two fins b , separated by a space b' , as is also shown in said Fig. 3. The other end of this barrel is formed with an annular groove a^2 , as seen in Fig. 2, for the reception of an annular flange on the inner portion, soon to be described. The barrel is formed at a point substantially midway of its length with an offset or shoulder a^3 , making one part larger in diameter than the other, as seen best in Fig. 2, and the upper or larger portion is formed with diametrically-opposite longitudinal grooves a^4 , which extend from the upper end to the said shoulder a^3 and then extend horizontally in opposite directions, as shown, forming, practically, bayonet-slots, and the horizontal portions of the slots, as seen in Figs. 2 and 6, are lettered a^5 . This constitutes the barrel, which may be of any suitable material, and the exterior may be made as ornamental as may be desired. The lower or smaller portion of the barrel is provided upon its interior with a curved recess a^6 , as seen in Fig. 7, starting with the inner wall of the barrel and terminating in a shoulder a^7 , as seen in said Fig. 7, and the object of which will soon be made apparent.

C is the inner part of the lock. It is formed with a reduced portion C' , which is bored, as seen at c , and D is a flat spring, which is arranged in an annular groove in the exterior of this reduced portion, and one end is designed to extend through a hole c' therein and into the bore of the said reduced portion, as seen in Figs. 7 and 8. C^2 is a ferrule over this reduced portion, and this ferrule is provided with a slot c^3 , through which the bend d' of the spring extends, as seen in Figs. 1 and 7. The adjacent portion C^{2x} of the inner part is formed with longitudinal ribs C^3 , designed to enter the longitudinal slots a^4 of the barrel and then to enter by a partial turn of the inner portion relatively to the barrel the horizontal portions a^5 , as will be hereinafter explained. A shoulder d^2 is formed at the

junction of the portions C^{2x} and C^3 to fit against the shoulder a^3 of the barrel, as will be readily understood.

The outer portion is formed with a cap-piece E, which has the annular groove e and flange e' , as seen best in Fig. 1, the flange to fit in the annular groove a^2 of the barrel and the groove permitting the cap-piece to come over the upper end of the barrel and form a close joint to prevent ingress of rain or snow. The cap-piece is further provided upon diametrically-opposite sides of its flange portion with the slots E' , as seen in Figs. 1 and 4, for the reception and engagement of the horizontal lugs or pintles f of the ring or hasp F, which are free to turn therein, as will be seen from Fig. 4.

The parts operate as follows: The inner portion C is inserted within the barrel with its lugs in the longitudinal grooves of the barrel and the pintles of the ring in the grooves E' of the cap-piece. The parts are pushed together until the said ribs come to the terminal of the longitudinal slots or grooves, and then one of the parts is given a partial turn when the ribs travel in the horizontal grooves of the barrel, and as this movement takes place the bend of the spring D springs out of the slot in the ferrule and engages the shoulder of the recess a^6 , as will be understood from Fig. 7, in which the parts are shown in the position they assume just as they are about being turned. The parts are thus locked and the pintles f are held in their grooves and against the upper end of the barrel where they are free to turn, but cannot be withdrawn. To unlock the parts, the key is inserted in the key-hole of the bottom piece and engaged with the end of the spring within the bore c , and when the key is turned the bend of the spring is drawn in and away from the shoulder a^7 , when the parts may be turned in the opposite direction until the ribs C^3

come coincident with the longitudinal grooves of the barrel, and the parts may be then drawn outward one from the other and the ring disengaged.

In order to prevent entire withdrawal of the inner part, I provide the stop-pins G, which are held in the barrel and engage some stops on the inner part—as, for instance, the ribs C^3 —the pins being placed in position after the parts are assembled.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim as new is—

1. The combination, with the barrel and the partially-rotatable portion within the same, of the spring carried by the inner part and partially surrounding the same and designed to engage a shoulder on the barrel to prevent withdrawal of the parts, and means for preventing rotation of said parts, as set forth.

2. The combination, with the barrel having interior longitudinal and horizontal grooves and recess with shoulder, of the inner partially-rotatable part with cap-piece and ribs, and the spring partially surrounding the same and having a portion protruding to engage said shoulder, as and for the purpose specified.

3. The combination, with the barrel having grooves and recess with shoulder, of the inner partially-rotatable part having ribs and a ferrule with horizontal slot, and a spring having a bend protruding through the slot to engage said shoulder and one end extended within the bore of the inner part, as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

NICHOLAS JACOB ZELL.

Witnesses:

F. PIERCE HUMMEL,
GARRETT B. STEVENS.