

(No Model.)

B. F. LOUGHMILLER.
PADLOCK.

No. 517,956.

Patented Apr. 10, 1894.

Fig. 1.

Fig. 2.

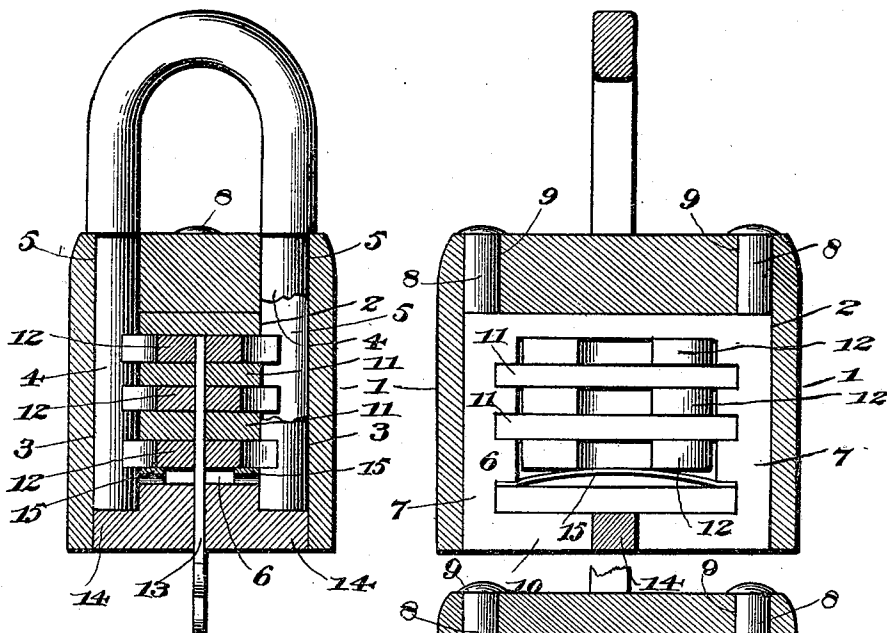


Fig. 3.

Fig. 5.

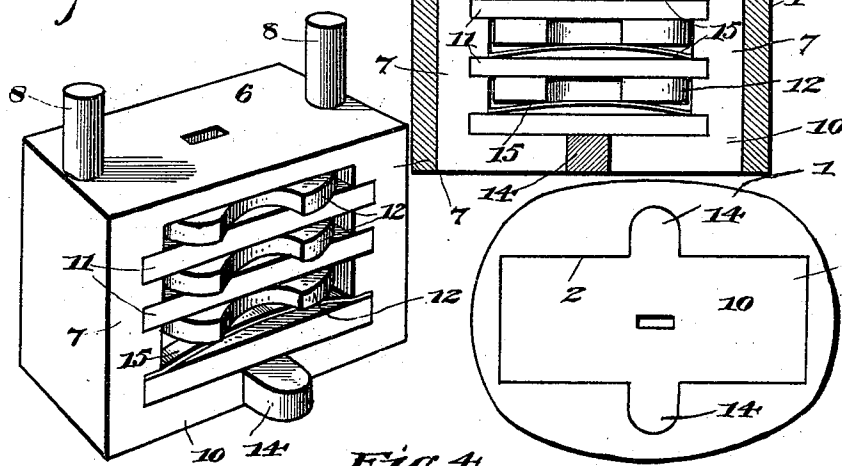


Fig. 4.

Witnesses

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Inventor

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By his Attorneys,

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UNITED STATES PATENT OFFICE.

BENJAMIN F. LOUGHMILLER, OF ASPEN, COLORADO, ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-HALF TO THOMAS LATTA AND J. W. WIST, OF SAME PLACE.

PADLOCK.

SPECIFICATION forming part of Letters Patent No. 517,956, dated April 10, 1894.

Application filed April 22, 1893. Serial No. 471,492. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. LOUGHMILLER, a citizen of the United States, residing at Aspen, in the county of Pitkin and State of Colorado, have invented a new and useful Padlock, of which the following is a specification.

My invention relates to improvements in padlocks, the objects in view being to provide a lock in which the rear plate or plate containing the keyhole is so arranged as to render it impossible of detachment from the casing or shell and thus guard against tampering with the lock.

In carrying out my invention I form the member which performs the function of a rear plate as an integral part of a frame in which the tumblers and operative parts of the lock are mounted, whereby when the shackle of the lock is engaged by the tumblers, said frame carrying this rear plate is firmly locked thereto and cannot be withdrawn except after disengagement of the tumblers from the shackle.

Further objects and advantages of my invention will appear in the following description and the novel features thereof will be particularly pointed out in the claims.

In the drawings: Figure 1 is a sectional view taken axially of a lock embodying my invention said section being taken parallel with the plane of the shackle. Fig. 2 is a similar view taken at right angles to the plane of the shackle. Fig. 3 is a perspective view of the frame and tumblers. Fig. 4 is a bottom plan view of the lock. Fig. 5 is a vertical sectional view at right angles to the plane of the shackle showing each tumbler provided with an independent spring.

Similar numerals of reference indicate corresponding parts in the several views of the drawings.

1 represents the shell or casing of the lock which is provided, in the construction illustrated, with a rectangular elongated recess 2, openings or sockets 3 being formed in the integral top of the shell or casing to receive the legs of the shackle 4, such shackle being of the ordinary or any approved construction. These openings or sockets 3 are substantially outside of the side walls of the recess and

communicate with the upper ends of grooves or channels 5 which are formed in said side walls, whereby when the shackle is arranged in its operative position in the shell or casing its legs are housed upon three sides in the said grooves or channels whereby only their inner notched surfaces are exposed. These grooves or channels extend through to the lower surface of the shell or casing.

Fitting snugly in the rectangular recess 2 is a frame 6 which comprises the side bars 7 terminating at their upper ends in studs 8 which engage perforations 9 in the top of the shell or casing; the end plate 10 which connects and is integral with the lower ends of the side bars; and transverse webs 11 between which are mounted the rotatable tumblers 12. These tumblers and the webs and end plate are provided with registering keyhole openings to receive the key 13 which is shown in Fig. 1. The end plate as will be observed fits snugly in the lower end of the rectangular opening of the shell or casing and is provided with integral lateral ears 14 which fit in the lower terminals of the channels or grooves in the side walls of the recess 2.

The peculiar form and construction of the tumblers and the number of tumblers form no part of my invention and may be varied as in the locks now in use to produce variety, &c.

From the above description in connection with the drawings, it will be understood that when the legs of the shackle are introduced into the openings or sockets in the top of the shell or casing and the key is turned to cause the engagement, with the notches in said legs, of the tumblers, the frame by which said tumblers are carried and of which the bottom plate forms an integral part will be locked securely to the shackle and cannot be detached or removed except by breaking the shackle or the shell. Furthermore, the frame which fits at its lower end snugly in the recess of the shell or casing affords no means for the engagement of a lock-breaking tool such as may be employed in connection with a padlock having the bottom plate secured in place by rivets or other similar devices.

It will be understood furthermore that while I have illustrated a frame of a rectangular shape, such feature forms no essential part of

my invention and may be varied at the will of the manufacturer.

The webs whereby the tumblers are separated are fitted at their ends with transverse grooves in the inner surfaces of the side bars of the frame whereby they are removable. The terminal studs which extend through perforations in the upper end of the shell or casing are designed to be headed or riveted to prevent the members of the lock from becoming separated when the shackle is unlocked.

In Fig. 5 I have shown a construction in which each tumbler is provided with an operating spring 15 to maintain the same in its operative position, but I may employ springs only in connection with the bottom tumbler, as shown in Figs. 1, 2, and 3.

Various changes in the form, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing the advantages of my invention.

Having thus described my invention, what I claim is—

1. In a padlock, the combination with a hollow shell or casing, and a shackle having its legs fitted in openings or sockets in the top thereof, of a frame fitted snugly within said shell or casing and having a bottom plate which closes the lower end or mouth of the opening in the shell or casing, and also having parallel spaced webs, the bottom plate and webs being provided with registering openings, and tumblers fitting loosely between the webs, held in place by the side walls of the shell or casing and provided with openings

registering with those in the webs and bottom plate for the reception of a key, substantially as specified.

2. In a padlock, the combination with a shell or casing provided with an elongated recess, openings or sockets in the upper end and grooves or channels in the side walls of said recess, and a shackle having its legs fitted in said openings or sockets and adapted to lie in the grooves or channels with their inner notched surfaces exposed, of a frame fitted snugly into said recess and provided with lateral ears to close the lower ends of the grooves or channels in the side walls of said recess and tumblers mounted upon and carried by said frame, substantially as specified.

3. In a padlock, the combination with a hollow shell or casing and a shackle having its legs fitted in openings or sockets in the top of said shell or casing, of a frame fitting snugly in the interior of said shell or casing and having side bars, a bottom plate and transverse webs, and tumblers rotatably mounted upon said frame between the webs and adapted to project at their peripheries beyond the side edges of such webs to engage the notches of the shackle, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

BENJAMIN F. LOUGHMILLER.

Witnesses:

H. M. MCKAY,

CHARLES A. MILLER.