

(No Model.)

G. L. BAKER.
PERMUTATION PADLOCK.

No. 573,805.

Patented Dec. 22, 1896.

Fig. 1.

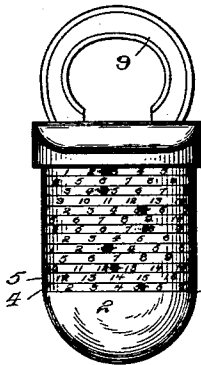


Fig. 2.

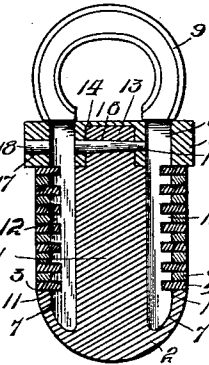


Fig. 3.

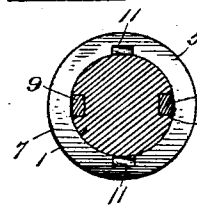


Fig. 4.

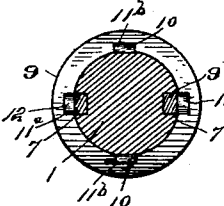


Fig. 5.

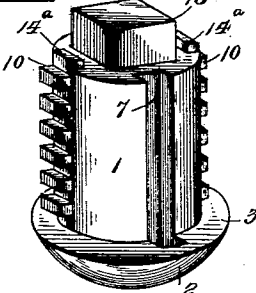


Fig. 6.

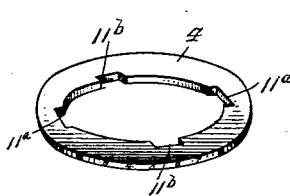


Fig. 7.

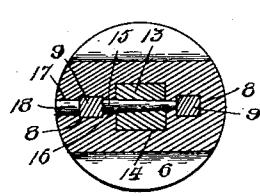


Fig. 8.

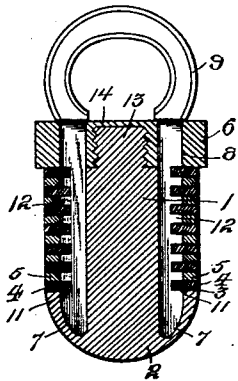
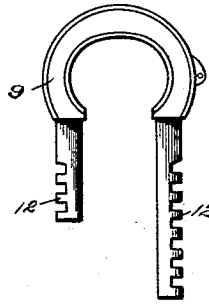


Fig. 9.



Witnesses

H. L. Barker
J. E. Barker

By his Attorneys,

Cash & Co.

Inventor
Gilbert L. Baker.

UNITED STATES PATENT OFFICE.

GILBERT LINCOLN BAKER, OF WATERFORD, CALIFORNIA.

PERMUTATION-PADLOCK.

SPECIFICATION forming part of Letters Patent No. 573,805, dated December 22, 1896.

Application filed May 9, 1896. Serial No. 590,879. (No model.)

To all whom it may concern:

Be it known that I, GILBERT LINCOLN BAKER, a citizen of the United States, residing at Waterford, in the county of Stanislaus and State of California, have invented a new and useful Combination-Lock, of which the following is a specification.

My invention relates to combination-locks, and has for its object to provide a simple and efficient construction and arrangement of parts whereby the members constituting the lock may be readily assembled, and disconnected when the shackle is unlocked, and, furthermore, to provide efficient means for changing the combination.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims. In the drawings, Figure 1 is a view of a lock constructed in accordance with my invention. Fig. 2 is a vertical central section of the same. Fig. 3 is a transverse section contiguous to the plane of one of the movable tumblers. Fig. 4 is a similar view contiguous to the plane of one of the stationary tumblers. Fig. 5 is a detail perspective view of the body portion of the lock and the core. Fig. 6 is a similar view of one of the stationary tumblers. Fig. 7 is a plan view, partly in section, of the lock to show the means for securing the cap to the core. Fig. 8 is a longitudinal central section showing a modified construction of means for securing the cap to the core. Fig. 9 is a view of a modified form of shackle having a short leg, whereby the latter may be disengaged without removing the long leg from the lock.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a core terminating at its lower end in a base or enlargement 2, having a square upper shoulder 3, which supports the lowermost tumbler, alternately-arranged movable and stationary tumblers 4 and 5 being arranged in series around the core, and a removable cap 6 being attached to the upper end of said core. The core is provided at diametrically opposite points with grooves 7, which are arranged in alinement with shackle-openings 8 in the cap, said openings being

adapted to receive the legs of the shackle 9. Also arranged at diametrically opposite sides of the core, preferably in a plane perpendicular to that of the groove 7, are series of lugs 10, which are spaced apart, the intervals between contiguous lugs being equal to the thickness of the body portions of the tumblers. The movable tumblers 5 encircle the core between the planes of contiguous lugs, whereby they are free to rotate and are provided at diametrically opposite points with notches 11, adapted to aline, respectively, with the grooves 7 to allow the insertion and withdrawal of the shackle. The stationary tumblers are also provided with diametrically opposite main notches 11^a for alinement with said grooves 7 and with auxiliary notches 11^b, which are adapted when the notches 11^a are in alinement with the grooves 7 to engage the lugs 10. The stationary tumblers may be removed or arranged in the plane of the spaces between contiguous lugs 10 and turned to bring different notches in engagement with the lugs, and hence different notches in registration with the grooves 7 to change the combination.

It will be understood that when the notches in the movable tumblers are out of registration with the grooves the shackle is locked in place, the inner peripheries of said tumblers engaging the notches 12 in the outer sides of the legs of the shackle.

The upper end of the core is reduced to form a central projection 13, which fits in a socket 14 in the under side of the cap, and upon the shoulder of the core formed by such reduction are arranged studs 14^a, which also engage seats in the under side of the cap to prevent rotation of the latter.

Various means for securing the cap in place when the shackle is not in place may be employed, the means illustrated in the drawings, Figs. 1 to 7, inclusive, consisting of a tapered key 15, fitting in a transverse seat 16, connecting the shackle-openings 8 in the cap and extending through the projection and the contiguous portions of the cap, between its central socket and said shackle-openings. This key is adapted to be introduced through an opening 17, registering with the seat 16 and extending to the periphery of the cap, and said opening is normally closed by means

of a tapered plug 18, which terminates at its outer end flush with the periphery of the cap and is adapted to be displaced, when the shackle is unlocked, by striking the inner end thereof through the contiguous shackle-opening.

In the modified construction shown in Fig. 8 the cap is threaded upon the upper end of the core.

Combination characters of any desired kind are arranged upon the tumblers, movable and stationary, and the combination may be changed either by interchanging the tumblers or by arranging the different notches of the stationary tumblers in engagement with the lateral spaced lugs on the core, as above described.

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

Having described my invention, what I claim is—

1. A combination-lock having a core provided with lateral spaced lugs, alternately-arranged stationary and movable tumblers encircling said core, the movable tumblers being arranged in the intervals between said lugs and the stationary tumblers being provided with notches to receive and engage the lugs, each stationary tumbler being provided

with a plurality of notches whereby it may be arranged with different notches in engagement with said lugs to change the combination, and a shackle having its lugs fitted in grooves in the core for engagement by the tumblers, substantially as specified.

2. A combination-lock having a core, alternately-arranged rotary and stationary tumblers fitted upon the core, means for securing the stationary tumblers in different positions, and a shackle for engagement by the tumblers, substantially as specified.

3. A combination-lock having a core, and locking-tumblers mounted thereon, a removable cap having a socket fitted upon a projection at one end of the core, a shackle having legs fitted in shackle-openings in the cap, a key engaging registering transverse openings in the projection and contiguous portions of the cap, the key-seat communicating with said shackle-openings, and a removable plug fitting in an exterior opening in alignment with the key-seat and extending to the periphery of the cap, 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.

GILBERT LINCOLN BAKER.

Witnesses:

JOHN J. TOWNES,
L. B. WALTHALL.