W. F. H. AMWAKE.

Padlock.

No. 201,084. **Patented March 12, 1878.**

Fig. 2.

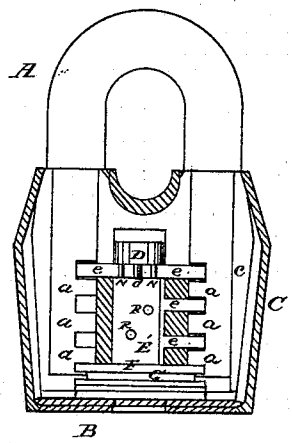
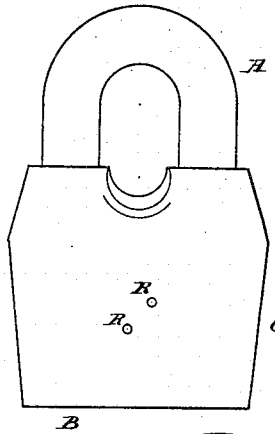


Fig. 1.



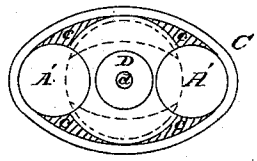
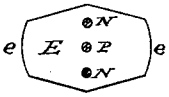


Fig. 3.

Fig. 4



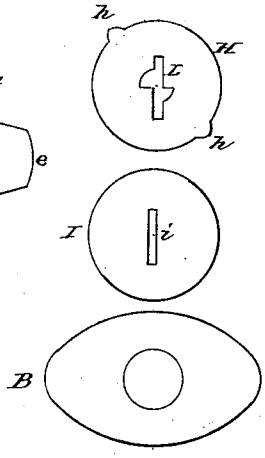
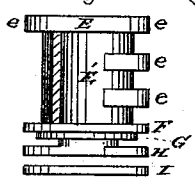


Fig. 6



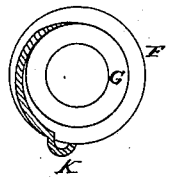


Fig. 5.

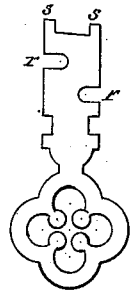


Fig. 7

W. B. Wiley
Jacob Stauffer

WITNESSES:

Wm. F. H. Amwake

INVENTOR

UNITED STATES PATENT OFFICE.

WILLIAM F. H. AMWAKE, OF LANCASTER, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM B. WILEY, OF SAME PLACE.

IMPROVEMENT IN PADLOCKS.

Specification forming part of Letters Patent No. **201,084**, dated March 12, 1878; application filed January 31, 1878.

To all whom it may concern:

Be it known that I, WILLIAM F. H. AMWAKE, of the city of Lancaster, in the county of Lancaster, and State of Pennsylvania, have invented certain Improvements in a Combination-Padlock, of which the following is a specification:

This invention relates to a class of padlocks in which the shackle or hasp becomes wholly disengaged from the shell or case of the lock, being provided with a rotary open cylinder, having wards or flanges, a distinct fixed plate, and movable covering-plate, in which numerous changes in the notches of a flat key can be effected on the slightest change of the position of two pins that penetrate into the open side of said cylinder, and to which the respective keys must be especially adapted.

The accompanying drawings illustrate the lock and its construction, with letters of reference marked thereon. A brief description will enable those skilled in the art to make and use the same, in which—

Figure 1 shows the shackle and ordinary cast shell, and where two pins enter. Fig. 2 shows the internal arrangement of the cylinder and disks. Fig. 3 shows the interior of the top of the open shell where the shackle ends enter. Fig. 4 shows the upper surface of the cylinder, with its openings for the key ends and central pivot on which it has its motion. Fig. 5 shows the lower shouldered portion of the cylinder, with its curved spring. Fig. 6 is a side view of the said cylinder, with its wards. Other figures show the several disks and covering bottom of the case detached.

The two limbs of the bent shackle A, with its notches, and the case C, cast of malleable iron or brass, of an oval form, with nipple-like openings for the entrance of the shackle, are not new.

The novelty consists in the internal arrangement and construction of the lock by the introduction of a cylinder, the top of which projects on opposite sides, forming wards *e*. This top has a central opening, P, for the pivot *d* on a raised disk, D, affixed to the case between the shackle-openings A′, Fig. 3. The openings N receive the two points *s* on the key, Fig. 7. This key is made of flat steel, and by the means stated the cylinder is moved to the right and left, limited to the necessary motion for locking and unlocking by the side openings to the slot L in the fixed disk or tumbler H, covering the bottom of the cylinder. The cylinder E has two other projecting wards, *e*, on one side. The annular bottom F has a raised center, G. The outer flange supports a curved spring, K, which, resting against the case, steadies and keeps the cylinder in position. H shows the disk or tumbler, with its points *h* made to fit into notches in side ribs in the case, which hold it in place. This disk or tumbler H has an annular raised shoulder to enter the opening in the cylinder, to thicken the wall and prevent access to the cylinder in order to turn it without the proper key. This is still further protected by the loose or covering disk I, provided only with the narrow oblong slot *i* in its center. The whole is covered by the oval bottom plate B, which has an opening the diameter of the width of the key, and is firmly secured by resting on inner side ledges, and having the external edge of the case C beaten down upon the bottom, or otherwise brazing or soldering together, to confine the interior arrangement of the lock.

One of the sides of the cylinder is open, as shown at E′. Two pins, R, are firmly secured to the case, flush on the outside, or riveted and countersunk. These pins project through into the open space in the cylinder.

The key, as in other cases, is provided with special notches *r*, adapted in each case to the exact position of the pins as to their relative distance apart, in order to pass them; otherwise, the key will not operate. Hence, by a slight change in the position of said pins R, a great diversity of locks can be made, so that each must have its own key, especially made to fit; altogether combining desirable features for strength, utility, and security against picking the same.

What I claim as my invention in a padlock is—

1. The combination of cylinder E, provided with lugs *e*, shoulders F G, and holes in the bottom for contact with the key, the lock-case,

having pivot *d*, the shackle, and spring K, substantially as and for the purpose specified.

2. In combination with the cylinder E, the stationary plate or tumbler H, having lugs *h*, and a central compound slot, L, as shown, for the purpose mentioned.

3. The combination of the cylinder E, stationary slotted disk H, the movable covering-disk I, all within the case C, and the pins R, which penetrate only to the center of said cylinder, the whole arranged and operating as and for the purpose set forth.

WM. F. H. AMWAKE.

Witnesses:
W. B. WILEY,
JACOB STAUFFER.