E. WILT.

KEY-HOLE GUARD.

No. 176,210. Patented April 18, 1876.

FIG. 1

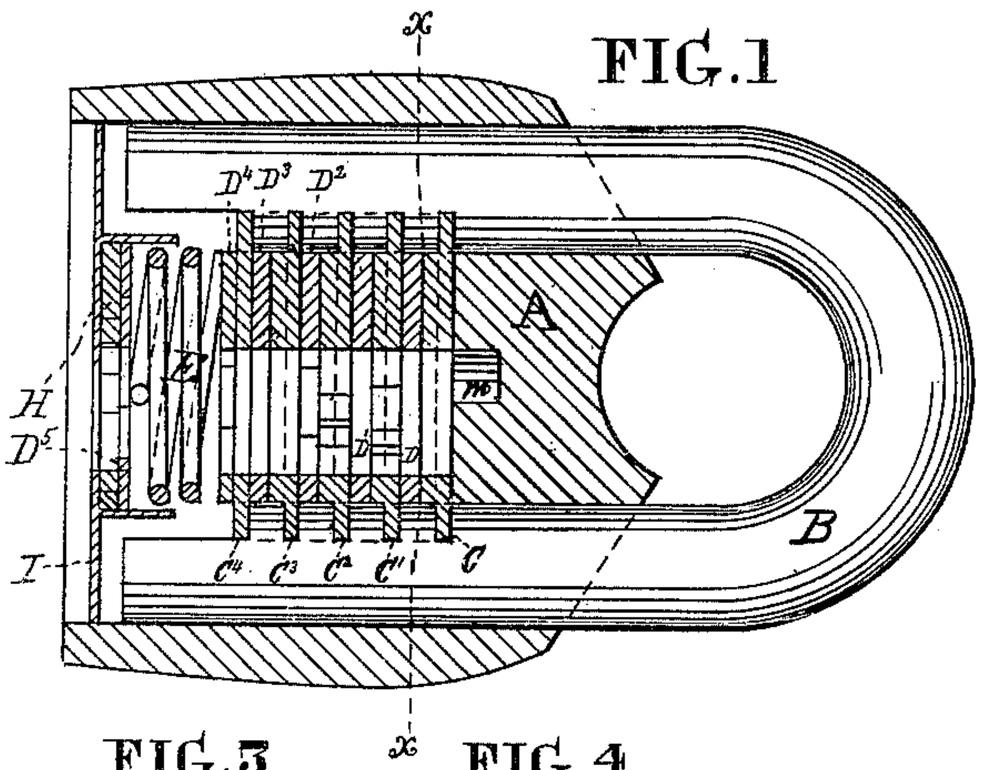


FIG. 2

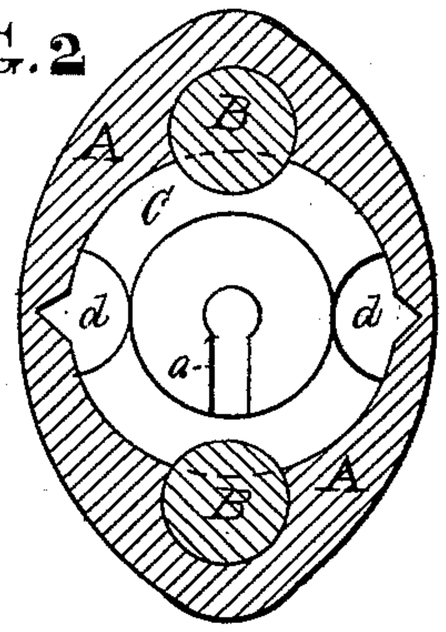


FIG. 3

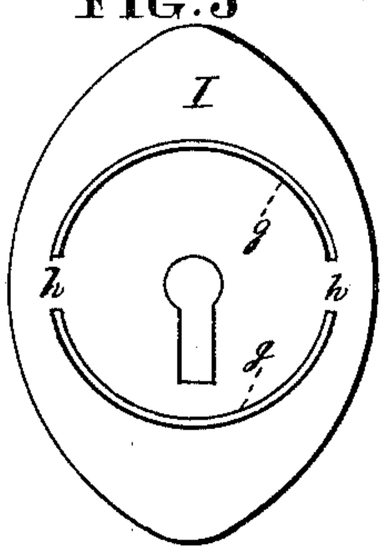


FIG. 4

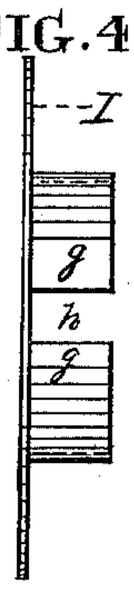


FIG. 5

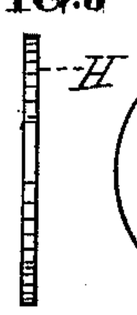


FIG. 6

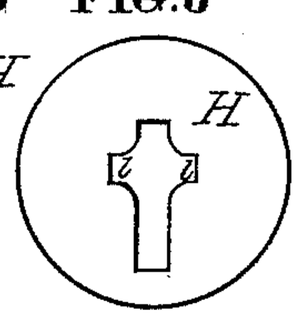


FIG. 7

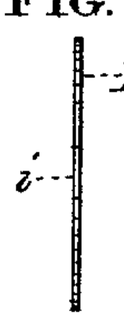


FIG. 8

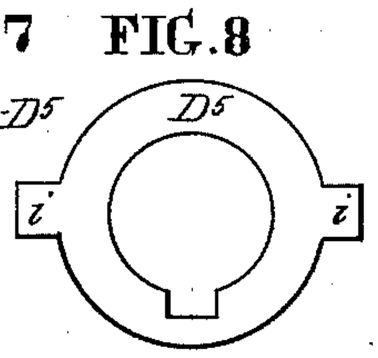


FIG. 9

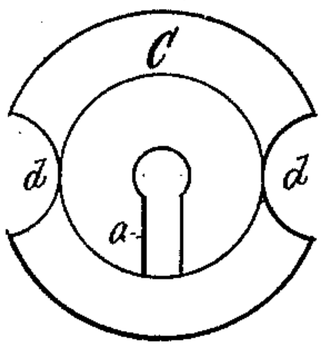


FIG. 10

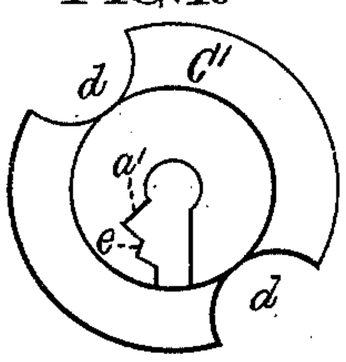


FIG. 11

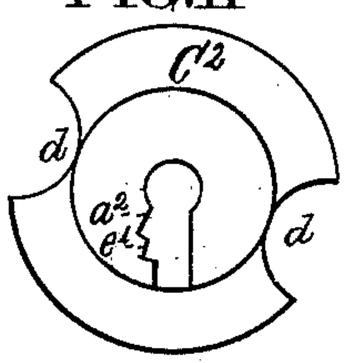


FIG. 12

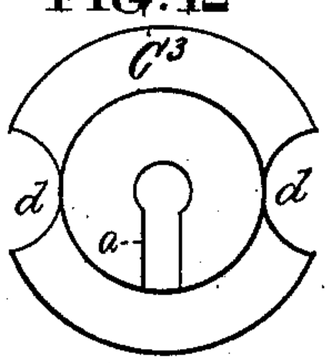


FIG. 13

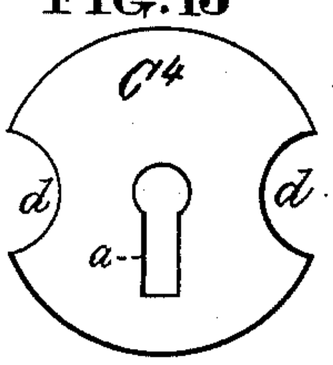


FIG. 14

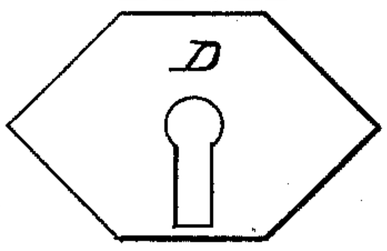


FIG. 15

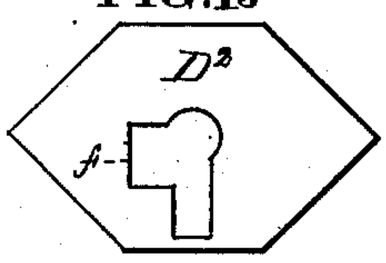


FIG. 16

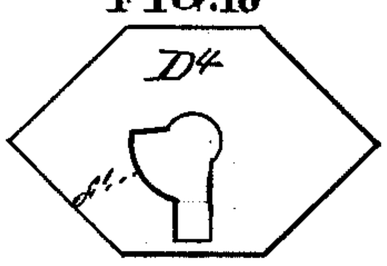


FIG. 17

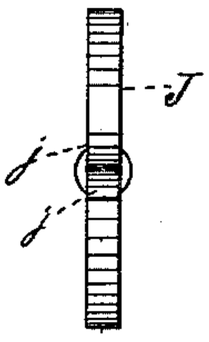
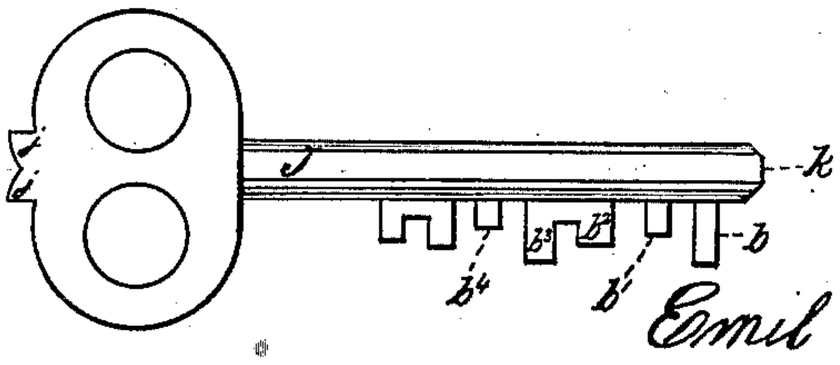


FIG. 18



Witnesses

Thomas B. Dewey.

George C. Hazel

Inventor

Emil Wilt

Stephen Ustick Attorney.

UNITED STATES PATENT OFFICE.

EMIL WILT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO ANDREW J. LOECHER, OF SAME PLACE.

IMPROVEMENT IN KEY-HOLE GUARDS.

Specification forming part of Letters Patent No. **176,210**, dated April 18, 1876; application filed August 4, 1875.

To all whom it may concern:

Be it known that I, EMIL WILT, of the city and county of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Padlocks, of which the following is a specification:

My invention consists of certain improvements on what is called the Scandinavian or Yale padlock, and it relates to the following particulars:

The cap plate is provided with a rim for inclosing the spring which confines the tumblers and washers together. Outside of the spring is placed the follower-washer, having lugs, which are held in slots of the rim of the plate, and between the follower-washer and the cap-plate is placed a revolving disk, which constitutes a cover for the key-hole in the cap-plate. Said disk is provided with an opening for the passage of the key. The opening has recesses at its sides to receive a projection on the end of the bow of the key, for turning the cover partly around to obstruct the passage of the key, and for reversing the cover for an unobstructed passage of the same, as hereinafter described.

In the accompanying drawings, Figure 1 is a longitudinal section of my improved padlock. Fig. 2 is a cross-section of the same at the line *x x* of Fig. 1. Fig. 3 is a face view of the cap-plate I. Fig. 4 is an edge view of the same. Figs. 5 and 6 are an edge and face views, respectively, of the key-hole cover H. Figs. 7 and 8 are like views of the washer D^5. Figs. 9, 10, 11, 12, and 13 are face views of the tumblers C, C^1, C^2, C^3, and C^4. Figs. 14, 15, and 16 are like views of the stationary washers D, D^2, and D^4. Figs. 17 and 18 are an end and side views of the key J.

Like letters of reference in all the figures indicate the same parts.

A is the case, and B the shackle. C, C^1, C^2, C^3, and C^4 are the tumblers, the face views of which are seen in detail in Figs. 9, 10, 11, 12, and 13. D, D^1, D^2, D^3, and D^4 are stationary washers. The washers D, D^1, and D^3 have the key-hole of the same form, and are represented in Fig. 14. The washers D^3 and D^4 have different forms of key-holes, and are shown, respectively, in Figs. 15 and 16. E is a spring for holding the tumblers and stationary washers securely together. D^5 is a follower-washer outside of the spring E. H is a revolving disk for covering the key-hole in cap-plate I. J is the key, (shown in detail in Figs. 17 and 18.) It has bits on only one side, to simplify its construction and prevent the lock being opened with a key having bits, as usual, on both sides. The tumblers C, C^3, and C^4 have plain key-holes, in which the edges *a* are bearings for the bits *b*, b^3, and b^4 of the key, and hence said key-holes are at right angles to a line through the middle of the recesses *d d*, through which the shackle passes when unlocked. The tumbler C^1 (shown in detail in Fig. 10) has a true notch, a^1, for the bit b^1, which notch is at right angles to the shackle-recesses *d*. It has also a false notch, *e*, which is to deceive a burglar in aligning the tumblers, or to prevent the proper adjustment of the tumblers by a key with a bit a trifle longer than is required to fit in the true notch a^1. The tumbler C^2 has a true notch, a^2, at right angles to the line of shackle-recesses *d*. The key-hole in tumbler C^2 is turned farther around than in the tumbler C^1. It also has a false or deceptive notch, e'.

In the manufacture of the locks I make the true notch in the tumblers different in each lock and in different tumblers, thereby making a large number of combinations, and render it impossible for any of the locks to be opened by any key but its own.

The stationary washer D^2 has a stop-notch, *f*, at right angles to the key-hole, to arrest the motion of the key as the bit presses upon it. The opening is just large enough for the bit to turn in it, so that if a burglar should have a key with a longer bit, it would not open it. The stationary washer D^4 has a stop-notch, f', for the same purpose as the notch *f*.

The cap plate I has a rim, *g*, in which is placed the spring E, for confining all the stationary washers and tumblers together. It has slots *h h*, for holding the lugs *i i* of the follower-washer D^5. Between the washer D^5 and the plate I is the revolving disk H, which has a key-hole in the form of a cross for the passage of the key. It is shown in detail in Fig. 6. This disk is for covering the key-hole when

the hasp is locked. This is effected by the use of projection *j* on the bow of the key. The said projection is placed in the cross recesses *l l* of the key-hole, and the key turned partly around to make the disk cover the key-hole of the cap-plate. The object of providing said plate with the rim *g* for encircling the spring is to prevent its spreading when pressed down, and thus prevent the losing of its power.

For opening the lock the key is placed with its first bit resting on the disk or cover H and pressed forward, the spring E yielding to the pressure until there is space enough between the cap-plate and the disk for the passage of the bit; then the key is turned partly around until the bit passes into the key-hole of the cover. The spring then forces the cover back against the cap-plate. Then the key is turned around far enough to bring the key-hole of the cover in line with the key-hole of the cap-plate. The key then is pushed in until the point *k* of its stem has entered the central hole *m* of the case A, and the series of bits are in line with their respective tumblers. Then, by turning the key one fourth around, the tumblers are turned around far enough to bring the recesses *d d* in line with the shackle for its withdrawal.

I claim as my invention—

1. The cap-plate I, having a rim, *g*, provided with slots *h h*, in combination with the revolving key-hole cover H and washer D^5, having guide-lugs *i i*, substantially as set forth.

2. The cap-plate I, having the rim *g*, in combination with the revolving key-hole cover H, having a key-hole, with side openings *l*, for the insertion of the projection of the key, whereby the said cover may be revolved, substantially as and for the purpose set forth.

EMIL WILT.

Witnesses:

THOMAS J. BEWLEY,

STEPHEN USTICK.