

J. E. MOBERG.

PADLOCK.

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1,028,246.

Patented June 4, 1912.

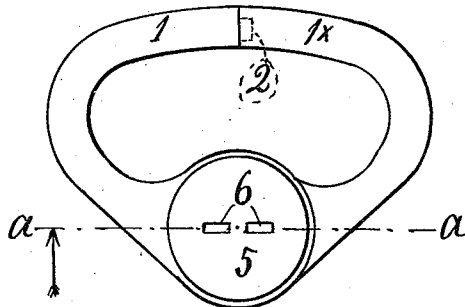


FIG. 1.

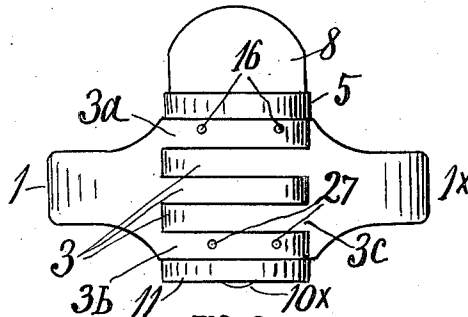


FIG. 2.

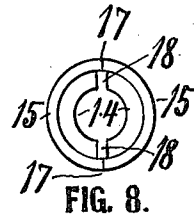


FIG. 8.

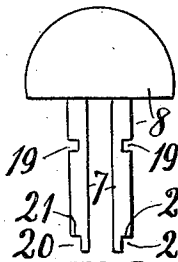


FIG. 5.

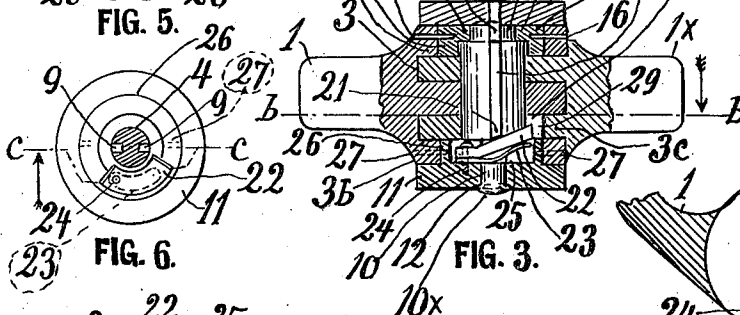


FIG. 3.

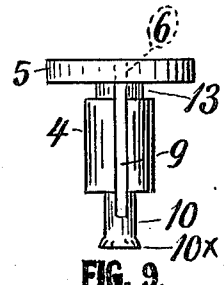


FIG. 9.

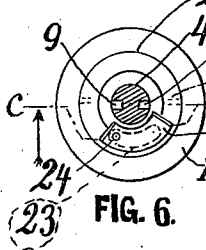


FIG. 6.

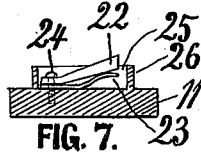


FIG. 7.

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UNITED STATES PATENT OFFICE.

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PADLOCK.

1,028,246.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN EDVARD MOBERG, a citizen of the United States, residing at Stillwater, in the county of Washington and State of Minnesota, have invented a new and useful Padlock, of which the following is a specification.

My invention relates to pad-locks; and the object is to provide a pad-lock which can not easily be picked or opened by false keys or other devices for that purpose.

In the accompanying drawing, Figure 1 is a top view looking upon the key-hole side of the lock. Fig. 2 is the lock shown in Fig. 1 viewed from the lower edge in Fig. 1, and the key in the lock. Fig. 3 is a section substantially on the line *a-a* in Fig. 1 with the key and key-operated spindle given one-fourth of a turn. Fig. 4 is a section on the line *b-b* Fig. 3 of a portion of the lock. Fig. 5 is a detail side view of the key only. Fig. 6 is a top view of the bottom plate in Figs. 2 and 3 and the spring-pressed dog located in a cavity in said plate. Fig. 7 is a section on the line *c-c* Fig. 6. Fig. 8 is a bottom view of the split washers 15 shown in Fig. 3. Fig. 9 is a detail side elevation of what I term the spindle of the lock.

Referring to the drawing by reference numerals, the shackle of the lock is formed of two curved arms 1 and 1*, of which one has at the opening end a tenon 2 fitted into a cavity in the end of the other. The other ends of the arms form a hinge joint 3, which is so large that it serves also as the casing for the mechanism of the lock. The pivot or spindle 4 is the pintle of the joint. In Fig. 9 is best shown that said spindle is formed with a keyhole plate 5 as its head, with key-holes 6 therein for two arms 7 of a key 8 (shown in Fig. 5) to pass through and down one arm in each of two opposite longitudinal grooves 9 in the sides of the spindle. The bottom end 10 of the spindle is cylindrical and journaled in the bottom plate 11 of the lock, in which plate it is retained by being upset at 10 in a cavity or countersinking 12 in the plate.

Near the head-plate 5 the spindle has an annular groove 13 (see Figs. 3 and 9), into which project the inner flanges 14 (see Fig. 8) of two halves of a split washer 15. Said washer serves as key-guards in the lock and is secured by pins 16 in the upper wing 3^a of the joint 3. The washer is di-

vided at 17 and is there formed with notches 18 for the key to pass through when the grooves 9 of the spindle register with said notches, which of course depends on turning of the keyhole-plate.

A key that shall be turned in the lock must have the notches 19 in correct place to clear the flanges 14 of the washer. It must also have the notches 20 to permit it to descend so deep into the bottom plate 11 that one of its shoulders 21 will act on a certain dog 22 which locks and unlocks the jointed arms of the shackle. Said dog 22, together with a spring 23 supporting it, are loosely secured by a rivet or a screw 24, to the bottom of a cavity 25, with which cavity the upward projection 26 of the bottom plate 11 is provided. Said plate 11 is secured by pins 27 to the lowest wing 3^b of the joint 3; and the wing 3^c of the shackle arm 1* is provided with an aperture 28, (see Fig. 4) whose terminal 29 forms a shoulder for the end of the dog 22 to engage and hold the shackle closed after said shackle has been inserted in the usual staple. To open the lock the key is inserted and turned with one of its shoulders 21 (see Figs. 5 and 3) along the normally inclined upper side of the dog 22 until the locking end of the latter is depressed below the shoulder 29, thus setting the shackle arm 1* free to be swung away from its mate 1, and thus permitting the removal of the shackle from the usual staple or loop. It will be understood that when the key and spindle are turned the flange or rib 14 insures the action of the key upon the dog, so that the latter depresses the spring 23, and when the key is turned in position for removal from the lock through the notches 18 it is out of contact with the dog. It will also be understood that a person not made acquainted with the operation of the lock, so he opens the shackle at the proper time, may easily turn the key past the dog without opening the lock. This feature aids in preventing unwarranted opening of the lock.

What I claim is:

1. In a pad-lock, a shackle composed of two curved arms, each formed with overlapping plates or wings to form a hinge joint on which the opposite ends of the arms may swing to and from each other, one of said wings having a concealed shoulder, a spindle constituting the pivot of the joint and having in one end a keyhole, a spring-

pressed dog concealed in a cavity near the other end of the spindle and arranged to engage the concealed shoulder and lock the shackle-arms closed against each other, and
5 a key adapted for insertion through the key-hole and to press the dog out of locking engagement with the shoulder.

2. In a pad-lock, a shackle composed of two curved arms, each formed with overlapping plates or wings to form a hinge
10 joint on which the opposite ends of the arms may swing to and from each other, one of said wings having a concealed shoulder, a spindle constituting the pivot of the joint
15 and having in one end a keyhole, a spring-pressed dog concealed in a cavity near the other end of the spindle and arranged to engage the concealed shoulder and lock the shackle-arms closed against each other, and
20 a key adapted for insertion through the keyhole and to press the dog out of locking engagement with the shoulder, said key rotating with the spindle, and means engaging the key to prevent sliding movement of
25 same while it acts on the dog.

3. In a pad-lock, a shackle composed of two curved arms, each formed with overlapping plates to form a hinge joint on
30 which the opposite ends of the arms may swing to and from each other, one of said plates having a concealed shoulder, a spindle constituting the pivot of the joint and having in one end a keyhole, a spring-pressed
35 dog concealed in a cavity near the other end of the spindle and arranged to engage the concealed shoulder and lock the shackle-arms closed against each other, and a key adapted for insertion through the key hole

and to press the dog out of locking engagement with the shoulder, said spindle having
40 in each side a longitudinal groove and the key being formed with two arms, each arm slidable in one of the grooves and adapted to act on the dog to disengage it.

4. In a pad-lock, an internally cylindrical
45 spindle casing formed of two hinge-members each of which has a shackle member, which members when closed form the shackle of the lock, a spindle forming the pivot of the hinge joint and having at one
50 end an integral cap and near said cap an annular recess, and guards in the casing extending into said recess, another cap fixed to the casing and forming a retaining journal for the other end of the spindle, said
55 journal cap having a concealed cavity, and the adjacent hinge member having a shoulder, a spring-pressed dog in the cavity arranged to engage the shoulder and lock the shackle arm in closed position, the integral cap having two keyholes and the
60 spindle having at two opposite sides a longitudinal groove in line with one of the keyholes, and a key having two parallel arms adapted to enter said keyholes and grooves
65 and act on the dog to disengage it, and guards extending from the casing into the annular groove of the spindle; said key having in its arms notches for the guards.

In testimony whereof I affix my signature,
70 in presence of two witnesses.

JOHN EDVARD MOBERG.

Witnesses:

H. S. HILL,

JAS. A. HUMPHREYS.