May 21, 1929. J. HEIDEN 1,713,602

KEYHOLE LOCK

Filed Oct. 17, 1927

Fig. 1.

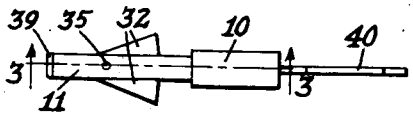


Fig. 2.

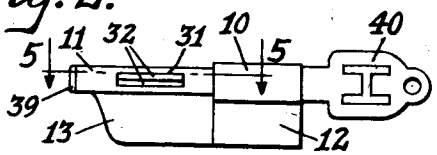


Fig. 4.

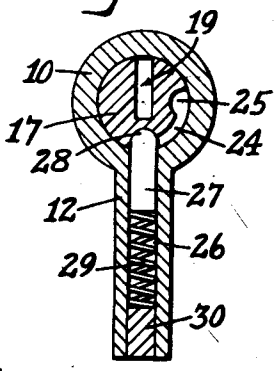


Fig. 3.

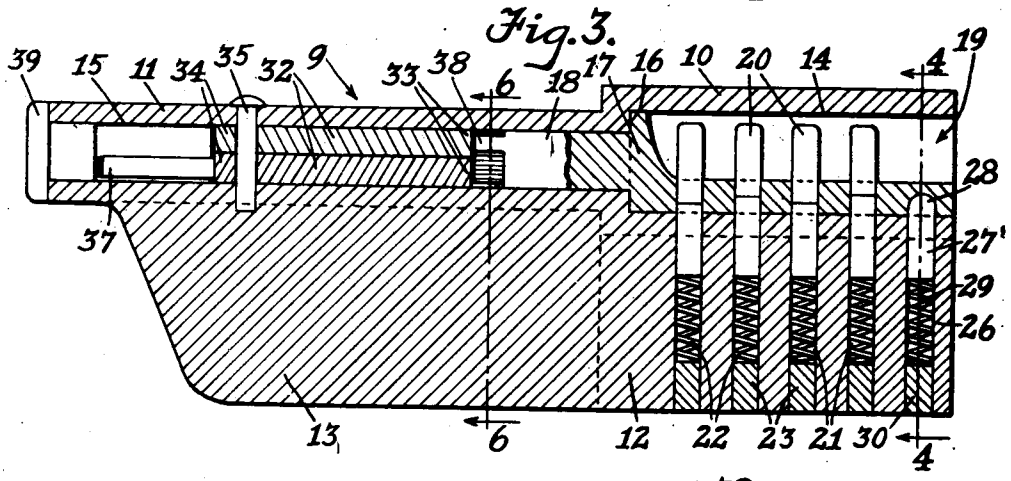
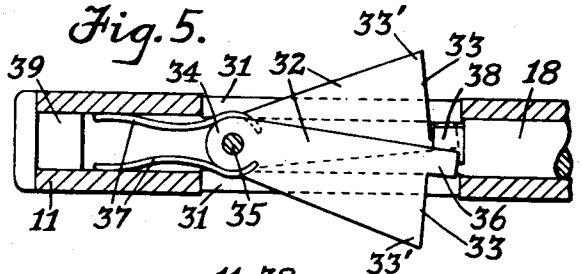


Fig. 5.



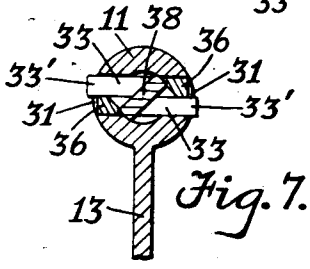
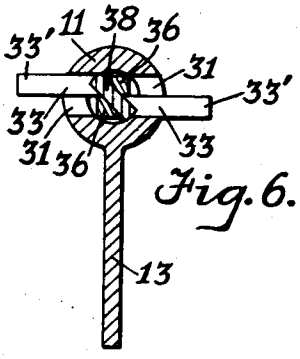


Fig. 7.

Fig. 6.



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UNITED STATES PATENT OFFICE.

JULIUS HEIDEN, OF LOS ANGELES, CALIFORNIA.

KEYHOLE LOCK.

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My invention relates to locks and more particularly to a keyhole lock for obstructing keyholes.

The primary object of my invention is to provide an improved keyhole lock which may be locked in the keyhole of an ordinary lock so as to prevent the insertion therein of a key capable of operating the ordinary lock and which may be removed from the keyhole with a special key.

A further object is to provide a keyhole lock of the character described which cannot be picked or removed from the keyhole by any other means than that of the key which belonds to it.

A further object is to provide a keyhole lock having the well known Yale type of mechanism in which the turning movement of the cylinder is limited to less than half a turn and is positively stopped in both the locking and the unlocking positions.

Other objects and advantages will appear hereinafter and while I show herewith and will describe a preferred form of construction, I desire it to be understood that I do not limit myself to such preferred form but that various changes and adaptations may be made therein without departing from the spirit of my invention as hereinafter claimed.

Referring to the drawings which accompany this specification and form a part thereof,

Fig. 1, is an upper edge view of my improved keyhole lock, with its key inserted therein, and turned to the locking position.

Fig. 2, is a side view of the lock and key shown in Fig. 1.

Fig. 3, is an enlarged sectional view of the keyhole lock, shown in Figs. 1 and 2, without the key, the section being taken on line 3—3 of Fig. 1.

Fig. 4, is a transverse sectional view of same, taken on line 4—4 of Fig. 3.

Fig. 5, is an enlarged fragmentary view of same, taken on line 5—5 of Fig. 2.

Fig. 6, is transverse sectional view taken on line 6—6 of Fig. 3 and showing the catch plates in their expanded or locked position.

Fig. 7, is a similar view, taken on the same line and showing the catch plates in their folded or unlocked position.

As shown in the various figures, my keyhole lock includes a solid casing 9 having a length somewhat less than two inches and a cross section corresponding in size and shape to the keyhole of an ordinary door lock. The barrel part 10 of the casing has a reduced inner end 11 and the bit part 12 has an approximately co-extensive reduced inner end 13, the latter, however, being reduced in thickness only. The bores 14 and 15 of the outer and inner ends, respectively, of the casing barrel, differ in accordance with their external diameters, so that there is an annular shoulder 16 between them.

A cylinder 17, with a reduced end 18 fitting bores 14 and 15, respectively, adapted to turn in the casing, is inserted therein, said cylinder having the usual key-slot 19 and being associated with the usual plungers or locking pins 20, common to Yale locks. The plungers extend into holes 21 in the bit portion 12 of the casing and are actuated by the usual springs 22 held therein by retaining plugs 23. A peripheral groove 24, somewhat more than a quadrant in length, is cut in cylinder 17, adjacent its outer end, the ends of said groove being cut somewhat deeper to form rounded sockets 25. The angular position of said groove 24 is such that one of said sockets 25 is in line with key-slot 19 as shown in Fig. 4, when the cylinder is in its locked position.

An extra hole 26, similar to and parallel to holes 21 in which locking pins 20 operate, is drilled adjacent the outer end of bit part 12 of the casing, in line with groove 24, and a plunger 27 with a rounded end 28, adapted to seat in sockets 25, is placed therein, together with a spring 29 adapted to press it into groove 24 and sockets 25. A retaining plug 30, similar to plugs 22, serves to hold spring 29 in place.

Longitudinal slots 31 are cut diametrically through the walls of the middle part of reduced inner end 11 of the barrel, at right angles to bit 13, and two catch-plates 32, one superposed upon the other, are inserted therein, each of said catch-plates having a wider, square-cut end 33, adjacent the reduced end 18 of the cylinder, and a narrower rounded end 34 through which a common pivot pin 35, extends at right angles to the plates, as shown in Figs. 3 and 5, said pivot pin being located within the slotted portion of the barrel. Square-cut ends 33 of the catch-plates are cut so that a beveled corner-lug 36 is left on corresponding corners of each and springs 37 are fixed in the rounded ends 34 thereof so as to press against the barrel walls, when the catch-plates are in place as shown in Fig. 5, and to cause the free ends 33 to swing

outwardly from each side of the barrel through slots 31. It will be seen that the two catch-plates are made exactly alike and are placed in the slot in reversed positions so that lug 36 of one is in opposite relation to that of the other.

The reduced end 18 of the cylinder is cut so as to leave a diametrical terminal bar 38, integral therewith, which projects between lugs 36 of the catch-plates, as shown in Fig. 6, and engages them, when the cylinder is turned, so as to pull square-cut ends 33 of catch-plates 31 inwardly against the action of springs 37. The open end of barrel 11 is closed by a tight-fitting plug 39.

The operation of my keyhole lock will be understood readily from the foregoing description. The key can be withdrawn only when the cylinder is in its locking position as is common with all Yale locks. When the catch-plates 32 are in the extended position their outer edges extend beyond and are inclined with relation to the exterior surface of the reduced portion 11 of the casing. Therefore the keyhole lock may be wedged into locking position within the keyhole, the springs 37 permitting the catch-plates to retract during the insertion of the device, but extending them to the position shown in Figs. 1 and 5 as soon as the device is fully inserted. After placing the keyhole lock in a keyhole, when it is desired to withdraw the lock a key 40 is inserted therein and the cylinder 17 is turned to an unlocking position, the rounded end 28 of plunger 27 being forced out of socket 25, against the action of spring 29, following groove 23 to socket 25 at the other end thereof and seating itself therein so as to stop the turning movement in that direction. When the cylinder is so turned bar 38 engages lugs 36 of catch-plates 32 so as to pull them inwardly to the folded position shown in Fig. 7. When the device is within the keyhole corners 33′ of the catch-plates will engage the side plate of the lock in which it is inserted so that the keyhole lock can not be withdrawn therefrom without the use of the particular key which is made for it, in which case it is pulled out by means of its key.

Having thus illustrated and described my invention, I claim:

1. A keyhole lock comprising a casing made to fit loosely in a keyhole; a pair of spring-ejected catch-plates pivotally mounted in said casing so as to project from opposite sides thereof, and means, comprising a pin lock within said casing, for turning said catch-plates into a retracted position, said catch-plates when ejected being adapted to prevent the withdrawal of said casing from the keyhole and to permit such withdrawal, when folded, said catch-plates being adapted for wedging into a keyhole against the opposition of their springs.

2. A keyhole lock comprising a cylindrical casing adapted for insertion into a keyhole, said casing having diametrically opposite slots; a transverse pivot pin within the slotted portion of said casing, a pair of catch plates mounted in said casing on said pin, said plates being movable from a folded position within said casing to an extended position wherein their outer edges extend beyond the slotted portion of said casing and are reversely inclined to simulate a wedge, springs tending to maintain said catch plates in the extended position, said plates being foldable against the opposition of said springs when the device is wedged into a keyhole, and a pin lock within said casing, adapted to retract said catch-plates against the opposition of said springs, said pin lock being operable by a special key whereby said casing may be withdrawn from the keyhole.

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