J. JENKS.

DOOR LOCK.

APPLICATION FILED OCT. 13, 1909.

945,276. Patented Jan. 4, 1910.

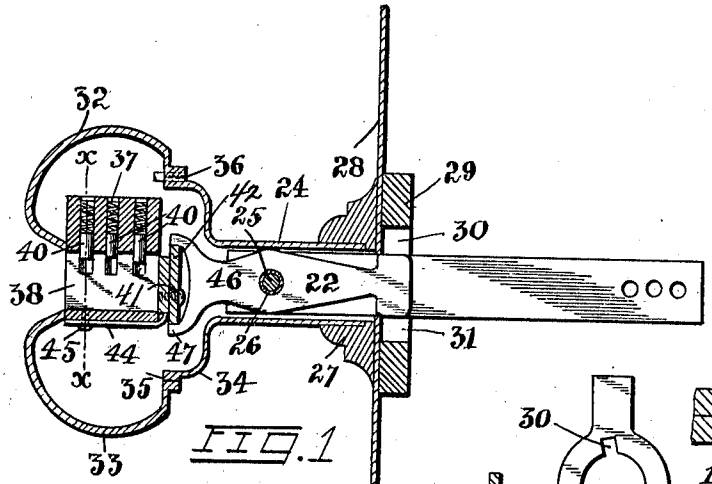

FIG. 1

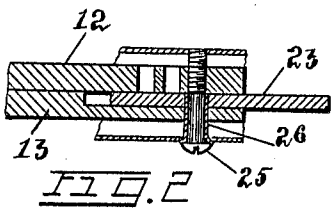

FIG. 2

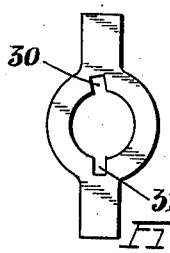

FIG. 3

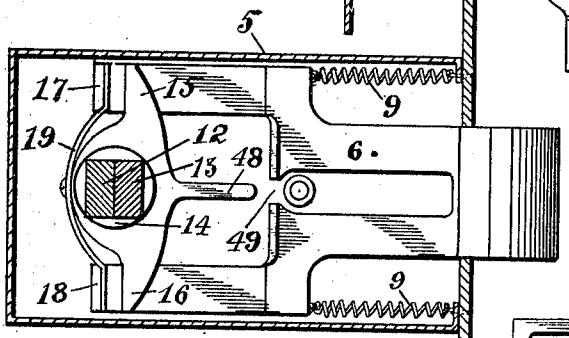

FIG. 4

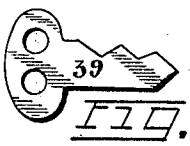

FIG. 5

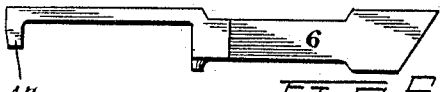

FIG. 6

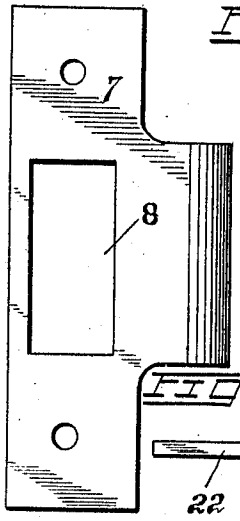

FIG. 7

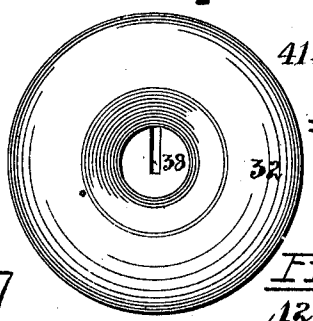

FIG. 8

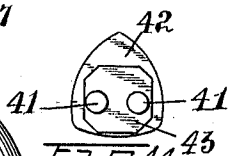

FIG. 11

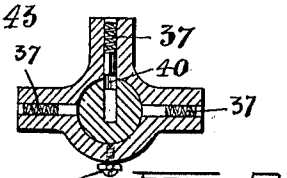

FIG. 9

FIG. 10

Witnesses

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UNITED STATES PATENT OFFICE.

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DOOR-LOCK.

945,276. Specification of Letters Patent. Patented Jan. 4, 1910.

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To all whom it may concern:

Be it known that I, JOHN JENKS, a citizen of the United States of America, residing at San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Door-Locks, of which the following is a specification.

This invention relates to locks for doors and has for its object the provision of a device of this character adapted to provide for a number of conditions in one and the same lock. That is, to provide a lock which may be put in such condition that the door will be positively dead locked, or put in such condition that the lock will serve as a night latch, or put in such condition that the door will be entirely unlocked, the controlling means for determining the condition of the lock being located in one or both of the knobs and being key controlled.

Further objects and advantages of the invention will be set forth in the detailed description which now follows:

In the accompanying drawing, Figure 1 is a sectional view through the door knob and illustrating the controlling mechanism of the lock, Fig. 2 is a detail sectional view through the knob shank, Fig. 3 is a detail view of a locking extension hereinafter described, Fig. 4 is a detail view of the latch mechanism of the lock, one of the side plates of the lock casing being removed, Fig. 5 is a detail view of a key employed in connection with the controlling mechanism, Fig. 6 is a plan view of the latch shown in Fig. 4, Fig. 7 is a view of the keeper plate with which the latch shown in Fig. 6 coacts, Fig. 8 is an end elevation of the knob, Fig. 9 is a detail sectional view upon the line *x*—*x* of Fig. 1, Fig. 10 is a detail view of the knob shank, and Fig. 11 is a detail view of a cam hereinafter described.

Like numerals designate corresponding parts in all of the figures of the drawing.

Referring to the drawing, the numeral 5 designates a lock casing in which is slidably disposed a combined latch and bolt 6. The lock casing is secured to the door in the usual manner and a keeper plate 7 is secured to the door jamb in the usual manner, the latch or bolt entering a recess 8 in said keeper plate, as will be readily understood, when the door is closed. The springs 9 are secured to the latch or bolt and to the wall of the lock casing and normally tend to project the latch or bolt through the front wall of the casing. A knob shank comprising two parts 12 and 13 projects at right angles to the casing and carries the usual hub 14 which is provided with the arms 15 and 16. The latch or bolt is provided with the out-turned ends 17 and 18, and a flat spring 19 is secured to the hub 14 and the ends of this spring engage the out-turned ends 17 and 18 of the latch or bolt, the purpose of this being to space these out-turned ends a slight distance from the arms 15 and 16 to thereby permit a slight turning movement of the hub 14 before the latch or bolt is retracted, this lost motion serving a purpose which will be hereinafter set forth. The portion 12 of the knob shank is cut out at 20 and the portion 13 is cut out at 21, these cut out portions receiving locking levers 22 and 23. The sleeve extensions 24 of the knobs encircle the knob shank and a screw 25 is passed through the sleeve extension and through a hollow rivet 26 and the end of the screw is threaded into the opposite portion of the knob shank and sleeve extension as is clearly illustrated in Fig. 2, it being understood that the hollow rivet 26 pivotally mounts the locking lever shown in said figure within the knob shank. This structure is duplicated at the opposite end of the knob shank and serves to pivotally mount the locking lever 22 therein. The inner ends of the sleeve extensions of the knob enter rosettes 27 carried by the door plates 28, only one of these rosettes and door plates being shown. Upon the inner sides of the door plates, extensions 29 are formed and these extensions are provided with locking recesses 30 and 31, these recesses being entered by the inner ends of the locking levers 22 and 23 as will be hereinafter set forth.

The knobs 32, only one of which is shown, are made in two parts, the outer part 33 being threaded upon the inner portion 34 thereof, at 35, after which a locking pin 36 is placed in position to prevent the rotation of the part 33 upon the part 34 and consequently to prevent the unscrewing of the part 33 from the part 34. Located within the knobs 33 are locks 37, these locks being of the type ordinarily know as Yale locks. These locks comprise a rotative barrel 38 which is held against movement until a key 39 (see Fig. 5) moves the tumblers 40 to the proper position. Secured upon the inner end of the barrel by screws 41 is a cam

member 42 of substantially heart-shape. This cam member is provided with an octagonal extension 43 against which one end of a strap spring 44 bears, the opposite end of this strap spring being secured to the underside of the lock by a screw 45. The cam 42 works between the jaws 46 and 47 of the locking lever 22, it being understood that this structure is duplicated within the other knob.

The operation of the device is as follows: As is clearly illustrated in Fig. 9, the lock 37 is a three-way lock, that is, the barrel 38 may be locked in three separate and distinct positions. If the barrel be given a quarter turn to the right in Fig. 1, and if the knob be slightly turned at the same time, the inner end of the locking lever 22 will enter the recess 30 and will remain therein as long as the barrel is left in the position to which it has been turned. A slight turning of the knob necessary to bring the inner end of the locking lever into alinement with the recess 30 results in a corresponding movement of the arms 15 and 16, but without moving the latch or bolt 6. This slight movement of the arms throws a tail 48 out of alinement with an opening 49 of the lock or latch plate and thereby deadlocks this latch or bolt 6 so that there will be no possibility of the latch or bolt being retracted by a knife or other tool being inserted between the end of the lock casing and the keeper plate 7. If the barrel 38 be given a quarter turn to the left, the end of the locking plate is caused to enter the locking recess 31 and the device then serves as a night latch, permitting the free closing of the door but preventing its opening until the key 39 is used. If the barrel 38 be given a half turn instead of a quarter turn, the door is left in its unlocked condition.

Having described my invention what I claim is:

1. In a device of the character described, the combination with a knob, of a pivoted locking lever mounted therein, a member having locking recesses formed therein, a rotative key controlled member located in said knob, a cam carried by said member and acting against said locking lever to move said locking lever, a knob shank by which said lever is carried, and a latch and bolt member movable independently of said knob shank and arms carried by said knob shank and adapted to actuate said latch and bolt member.

2. In a device of the character described, the combination with a knob, of a pivoted locking lever mounted therein, a member having locking recesses formed therein, a rotative key controlled member located in said knob, a cam carried by said member and acting against said locking lever to move said locking lever, a knob shank by which said lever is carried, and an extension movable with said knob shank and adapted to lie in the path of movement of the latch and bolt member when the locking lever is moved to one of its locking positions.

3. In a device of the character described, the combination with a lock casing, of a said latch and bolt member for the passage therein, a knob shank extending transversely therethrough, oppositely extending arms mounted upon said knob shank, and a forwardly projecting extension movable with said arms, there being an opening formed in said latch and bolt member for the passage of said extension, means for holding the latch and bolt member in such position as to permit a limited movement of the knob shank without actuating the latch and bolt member, a locking lever extending longitudinally of the knob shank, a fixed member having locking notches formed therein, a cam engaging the outer end of said locking lever, and a rotative three-way lock by which said cam is carried.

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

JOHN JENKS.

Witnesses:
M. SCHAFFNET,
H. M. VOLLMER.