E. LEUSLEY.

LOCK.

APPLICATION FILED AUG. 7, 1915.

1,173,007.

Patented Feb. 22, 1916.

2 SHEETS—SHEET 1.

FIG. 1.

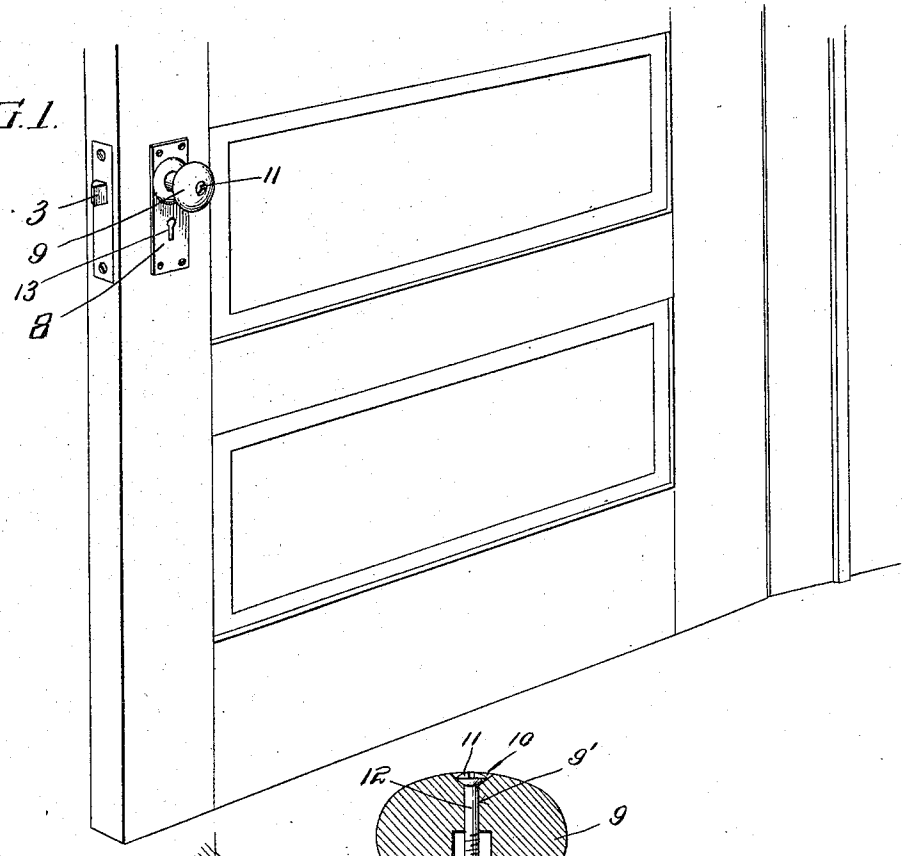
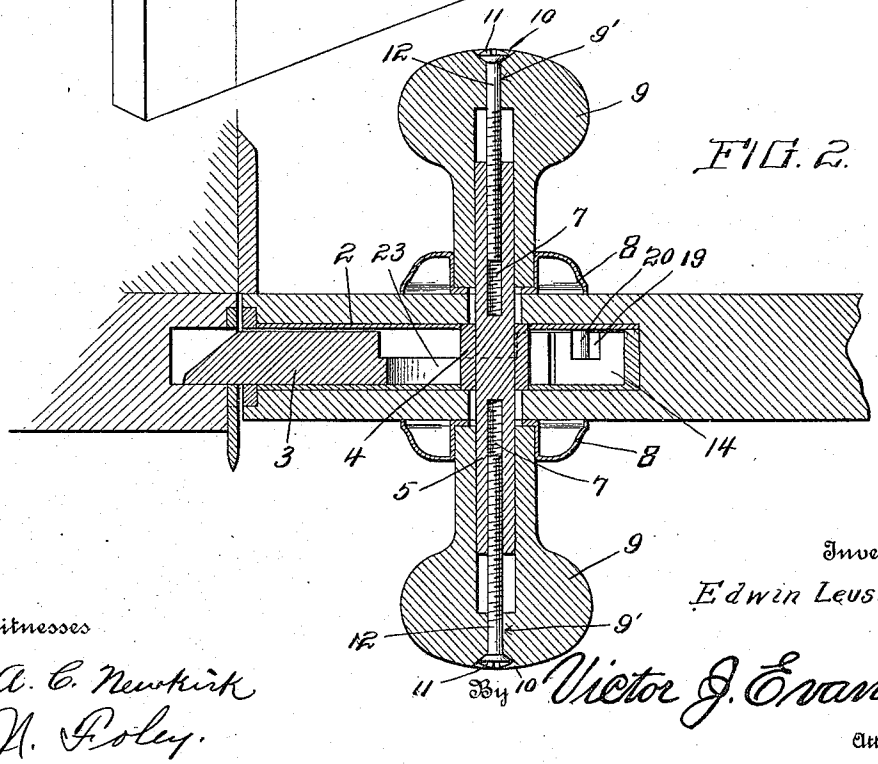


FIG. 2.



Witnesses

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2 SHEETS—SHEET 2.

FIG. 3.

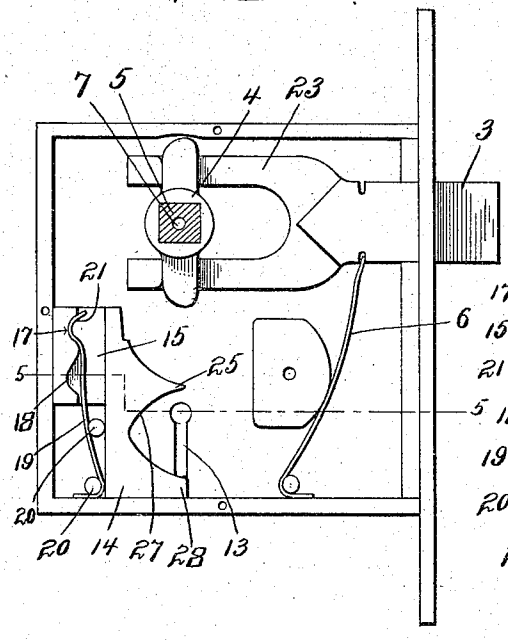


FIG. 4.

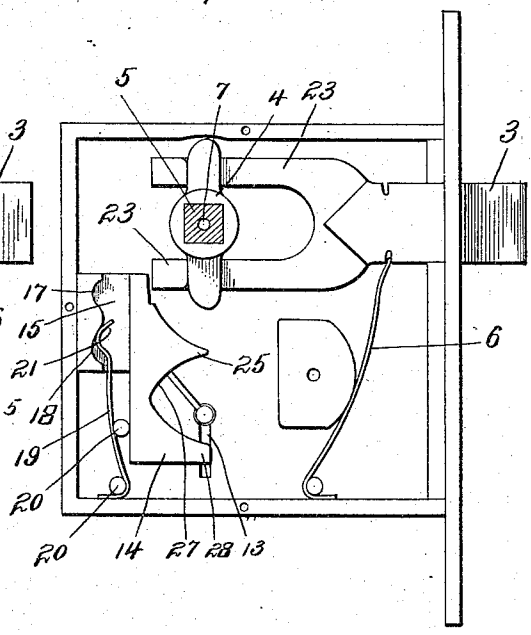


FIG. 5.

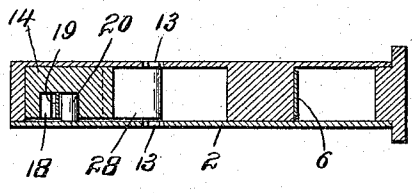
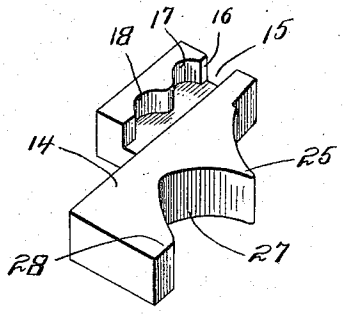


FIG. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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LOCK.

1,173,007. Specification of Letters Patent. Patented Feb. 22, 1916.

Application filed August 7, 1915. Serial No. 44,281.

To all whom it may concern:

Be it known that I, EDWIN LEUSLEY, a citizen of the United States, residing at Huntsville, in the county of Randolph and State of Missouri, have invented new and useful Improvements in Locks, of which the following is a specification.

This invention relates to improvements in locks, and has for one of its objects to provide a simple, inexpensive, durable and efficient rim or mortise lock.

A further object of the invention is to provide a lock which shall embody a comparatively few number of parts that may be readily assembled without danger of derangement.

A further object of the invention is to provide a combination lock and latch that eliminates the necessity of a locking bolt separate from the latch.

A still further object of the invention is to provide a simple and efficient means for securing and adjusting the knobs upon the knob shank or spindle, said means being operative from the exterior of the door to which the lock is attached without necessitating the removal of the knob or key or any of the parts of the lock.

The preferred form of construction is illustrated by the accompanying drawings, wherein:

Figure 1 is a perspective view of a door having my improved lock arranged thereon, Fig. 2 is a horizontal sectional view taken in a line with the center of the knob shank, the door being in its closed position, Fig. 3 is an elevation of the lock, one of the side plates being removed, Fig. 4 is a similar view but showing the locking device as being actuated by the key, for locking the latch bolt, Fig. 5 is a horizontal sectional view approximately on the line 5—5 of Fig. 3, the side plates of the lock being in position, and Fig. 6 is a perspective view of the locking device.

While, in the drawings, the improvement is illustrated as in the nature of a mortise lock, it is to be understood that the same may comprise a rim lock if desired, and in the drawings the numeral 1 designates the lock casing having the usual removable side 2. 3 designates a latch bolt, 4 the latch throw, 5 the knob shank on the spindle which passes laterally through the latch bolt, and 6 the latch bolt actuated spring.

All of the above parts may be of the ordinary construction, and the latch bolt is, of course, reversible. However, the opposite ends of the knob shank 5 are provided with threaded openings 7 and the escutcheon plates 8 are formed with recessed bosses to receive the ends of the said shank 5. The knobs for the shank 5 are indicated by the numerals 9, the same having their sleeves provided with rectangular bores which enter the knobs proper and terminating a slight but suitable distance away from the outer faces of the knobs. Round openings 9 communicate with the rectangular bores, the outer faces of the knobs being reamed, as at 10, to receive the heads 11 of threaded adjusting members 12. The heads of the said members are kerfed for the reception of an ordinary instrument, such as a screw driver and the adjustable elements 12 are of a sufficient length to draw the shank 5 longitudinally and to cause the ends of the sleeves of the knobs to be snugly received in the rings or depressions in the bosses in the escutcheon plates. This arrangement, it will be noted, entirely dispenses with the employment of washers and with the necessity of providing the knob shank with transverse threaded openings, and as the adjusting elements may be regulated from the exterior of the door, the convenience of such an arrangement will, it is thought, be apparent.

Arranged within the casing 1 adjacent the key hole openings 13 is a vertically disposed locking device, indicated by the numeral 14. This device 14 is of a width to be snugly received within the side walls of the casing and is retained in proper position through the medium of a spring presently to be referred to. The member 14 is provided with a central channel 15 upon one of its faces, and the rear wall 16 of the channel is formed with a pair of spaced curved depressions 17 and 18. The numeral 19 designates a flat spring which has its lower end disposed between two spaced studs 20—20 and its upper end provided with a curved portion forming a lip 21. The lip 21 is adapted to be received in the depression 17 when the locking device is in its negative position and to be received within the depression 18 when the same is moved vertically to bring the locking device in the path of contact directly to the rear

of the tail piece 23 of the latch bolt 3. The lower and what may be termed inner corner of the locking member 14 is provided with a substantially rectangular cut-away portion so that the studs 20 are connected to the permanent side of the casing, and the lower stud 20 is positioned a suitable distance above the lower flange of the casing so that the lower end of the spring may be bent between the said flange and the said lower stud, thus insuring the proper retention of the spring within the casing. The spring, it will be noted, forces the rear face of the locking member 14 against the rear wall of the casing and the upper stud 20 contacts with the outer wall provided by the rectangular cut-away portion and serves as a guide for the said member 14 when the same is elevated into locking position.

The outer face of the locking member is provided with a lip 25 disposed above the key hole opening 26 and the said face of the locking member below its lip is rounded inwardly, as indicated by the numeral 27, providing the lower portion thereof with an additional lip 28. The lip 25, when the locking device is in its lowered and what may be termed its inoperative position, is in the path of contact with the bit of the key when the same is inserted through the key hole opening 27 so that the locking device will be moved vertically and arranged directly to the rear of the tail piece 23 of the latch bolt 3, thus locking the latch bolt. The second lip or contact member 28 is thus brought into a position to be engaged by the bit of the key when the key is turned in an opposite or unlocking position, so as to slide the locking device to its initial or idle position. When the locking device is in such last named position, the lip 21 of the spring 19 will engage in the depression 17, but when the locking device is moved to operative position, the said lip 21 will be received within the depression 18, so that the spring at all times engages with the member 14 and effectively sustains the same in proper position in the lock casing.

While I have illustrated and described a satisfactory embodiment of the improvement as it now appears to me, it is to be understood that the same is susceptible to changes in the minor details of construction, all of which fall within the scope of the appended claim.

Having thus described the invention, what I claim is:

The combination with a lock casing having a slidable latch bolt and an actuating spring for the latch bolt, of a vertically movable loosely positioned locking member in the casing disposed normally below the tail pieces of the latch bolt, said locking member having one of its sides provided with a longitudinal channel, the inner wall of which being formed with two spaced depressions and the lower corner of the said member below the said channel having a rectangular cut-away portion, spaced pins connected with the latch casing, and disposed within the said cut-away portion of the locking member, one of said members bearing against the vertical wall provided by the cut-away portion of said locking member, a spring member having one of its ends bent and disposed between the pins and having its free end provided with a lip which is adapted to contact with the rear wall of the channel and to be received in one of the depressions therein, the said latch member having its outer face adjacent its lower corner provided with a lip and being curved inwardly from the said lip, the lip being arranged adjacent the upper wall of the key hole openings of the casing and adapted to be contacted by the bit of the key to move the same to locking position when the said bit is rotated in one direction to arrange the corner of the curved wall into a position to be contacted by the said bit of the key when the said key is rotated in an opposite direction.

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

EDWIN LEUSLEY.

Witnesses:
W. M. EVANS,
W. W. BARNES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."