

(No Model)

L. C. BABCOCK.
LOCK.

No. 585,614.

Patented June 29, 1897.

FIG. 1.

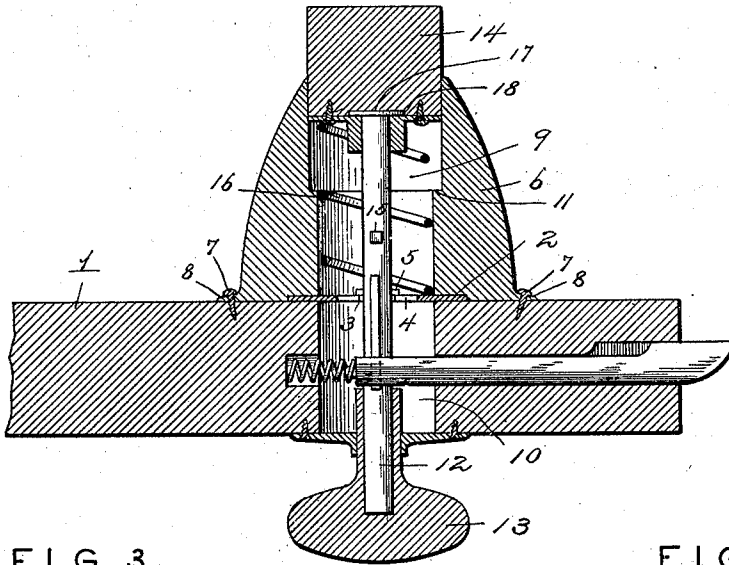


FIG. 3.

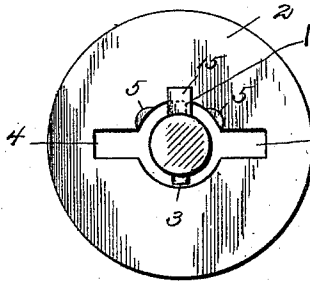


FIG. 2.

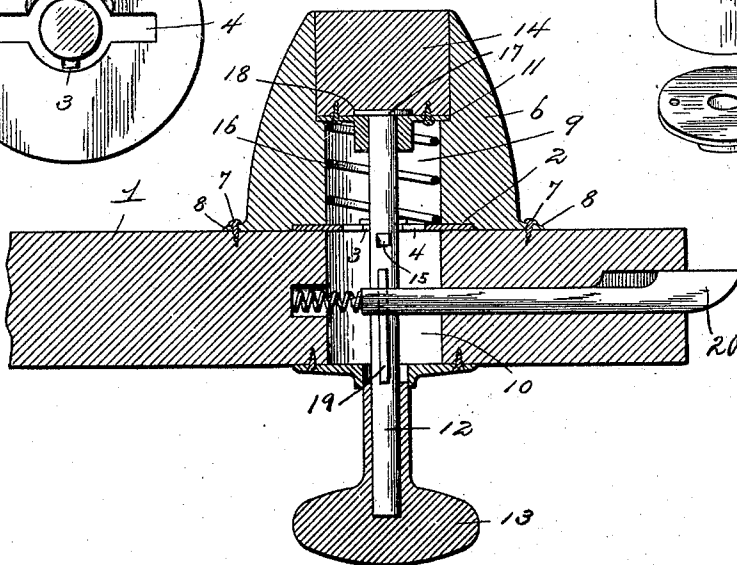
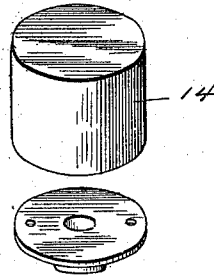


FIG. 4.



Witnesses
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LOCK.

SPECIFICATION forming part of Letters Patent No. 585,614, dated June 29, 1897.

Application filed July 10, 1896. Serial No. 598,707. (No model.)

To all whom it may concern:

Be it known that I, LUCIEN C. BABCOCK, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Door-Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide an improved lock for the doors of bath-rooms, offices, and the like which is adapted to be locked from the inside and to indicate from the outside that the room is occupied.

The invention consists of a knob-shaft projecting through the door-operating locking mechanism of the usual form of construction, means for shifting said shaft in the direction of its length, a plate secured to the door having a double keyhole-slot therein through which said shaft passes, a lug or projection on said shaft adapted to engage the contracted portion of the opening in said plate, a casing upon the outside of the door having a socket therein in which the outer knob is adapted to fit when the shaft is drawn to its inner position, and a spring for normally urging said shaft to its outer position.

The invention also consists in other details of construction and combinations of parts which will be hereinafter more fully described and claimed.

In the drawings forming part of this specification, Figure 1 represents a sectional view through a door containing my device with the parts shown in their open position and the usual door-locking mechanism removed. Fig. 2 is a similar view of the same, showing the parts in their locked position, indicating that the room is occupied. Fig. 3 is a detail view of the plate secured to the front face of the door through which the knob-shaft passes. Fig. 4 is a similar view showing the two parts of the outer knob detached.

Like reference-numerals indicate like parts in the different views.

My improved locking and indicating mechanism is adapted to be attached to any door with any kind of latching mechanism connected therewith. The door 1 has a plate 2 secured to the front face thereof, having a

double keyhole-slot 3 therein, the said slot consisting of a main circular portion with two oppositely-disposed contracted extensions 4 55 4 thereon. The said plate also has upon its inner surface two lugs 5 5, which are located between the side edges of the two extensions 4 4 for a purpose which will appear later. Also secured to the outside of the door 1, covering the plate 2, is a casing 6, which is secured to the outer face of the door by means of screws or bolts 7 7, passing through flanges or lugs 8 8 on said casing. The casing 6 has a longitudinal cylindrical opening 9 therein, 65 which registers with the opening 10 in the door 1 and with the slot 3 in the plate 2. The outer end of the opening 9 is enlarged, as shown, forming a shoulder 11 upon the inside of said casing. Extending through the opening 10 in the door 1, through the slot 3 in the plate 2, and through the opening 9 in the casing 6 is the knob-shaft 12, having the knobs 13 and 14 upon its inner and outer ends, respectively. The said shaft is also 75 provided with a lug 15, which normally lies out of line with the contracted extensions 4 of the slot 3, being held in such position by means of a coil-spring 16, which is attached to the shaft 12 in any suitable way, as by a securing-pin or by being passed laterally through said shaft.

The outer ends of the spring 16 are attached to the plate 2 and to the knob 14, respectively. The extreme outer end of the shaft 12 has secured to or formed upon it a head 17, which fits within a recess 18 in the knob 14, the said knob being made up of two parts, as clearly shown in Fig. 4, which are screwed or otherwise connected together after the 90 head 17 has been inserted into the recess 18. The said knob 14 is adapted to fit within the enlarged portion 11 of the opening 9 and be entirely inclosed by the casing 6, the lower end thereof engaging the internal shoulder 95 in said casing. A feather 19 is formed upon the shaft 12 and is adapted to fit within a slot of the usual form on the bolt 20. This provides the common means of retracting the bolt.

As heretofore stated, the normal position of the parts of my device is as shown in Fig. 1, with the knob 14 projecting out through the end of the casing 6 and the lug 15 lying

out of alinement with the contracted extensions 4 of the slot 3. The latching mechanism of the door is then free to be opened from the outside by turning said knob 14. When the room is occupied, the door 1 is locked and the knob 13 is turned so as to bring the lug 15 opposite one of the contracted extensions 4 of the slot 3, and said shaft is then drawn rearwardly, forcing said lug through one of said contracted extensions. Upon releasing the knob 13 the spring 16 throws the shaft 12 around so that the lug 15 engages the inner surface of the plate 2, lying between the lugs 5 5 thereon, so that said shaft cannot be turned to the right or to the left without drawing the shaft inwardly. At this time the knob 14 will be inclosed by the casing 6, indicating that the room is occupied and also preventing the unlatching of the door from the outside. When it is desired to reopen the door, it is merely necessary to withdraw the knob 13 to throw the lug 15 out of engagement with the lugs 5, turn the knob to the right or to the left, and permit the shaft 12 to be thrown outwardly by the spring 16, forcing the lug 15 through one or the other of the contracted extensions 4 of the slot 3.

By reason of the construction of the knob 14 with the socket 18 therein it is impossible to unlock the door from the outside by forcing the knob 14 inwardly, as the inner edge thereof will be engaged by the internal shoulder between the main opening 9 and the enlarged portion 11 thereof, and, further, by reason of the fact that the lost motion between the inner surface of the recess 18 and the head 17 will not permit it.

The device described is extremely simple in construction, is cheaply made, and may be applied to any door now in use with any form of latching mechanism connected thereto.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a door containing the usual latching mechanism, of an operative shaft for said mechanism, knobs upon the outer ends of said shaft, and means for shifting said outer knob out of reach and out of operative position in the act of locking the door.

2. The combination with a door containing the usual latching mechanism, of a plate having a keyhole-slot therein secured to the face of said door, an operative shaft projecting through said door and through the keyhole-slot in said plate, the said shaft being capable of rotation and of longitudinal reciprocation, knobs upon the outer ends of said shaft, a casing in which the outer knob is adapted to fit when said shaft is in its inner position,

and a lug on said shaft adapted to be passed through the contracted portion of said keyhole-slot and to engage the rear surface of the plate in which said slot is formed, substantially as and for the purpose described.

3. The combination with a door containing the usual latching mechanism, of a plate having a keyhole-slot therein secured to the face of said door, an operative shaft projecting through said door and through the keyhole-slot in said plate, the said shaft being capable of rotation and of longitudinal reciprocation, knobs upon the outer ends of said shaft, a casing in which the outer knob is adapted to fit when said shaft is in its inner position, a lug on said shaft adapted to be passed through the contracted portion of said keyhole-slot and to engage the rear surface of the plate in which said slot is formed, and a spring for normally urging said shaft to its outer position and to a position in which the lug thereon lies out of alinement with the contracted portion of said keyhole-slot, substantially as and for the purpose described.

4. The combination with a door containing the usual latching mechanism, of a plate having a double keyhole-slot therein secured to the face of said door, lugs upon the inner face of said plate between the two contracted extensions of said slot, a casing secured to the outer face of said door inclosing said plate and having an opening therein which is enlarged at its outer end forming an internal shoulder, an operative shaft for the door-latching mechanism extending through the opening in said door, the keyhole-slot in said plate and the opening in said casing, the said shaft being capable of rotation and of longitudinal reciprocation, a head or cross-arm on the outer end of said shaft, knobs upon both ends thereof, the knob upon the outer end being formed with a recess in which said head or cross-arm fits and adapted to fit within and be inclosed by said casing when said shaft is in its inner position, a lug on said shaft adapted to be passed through the contracted portion of said keyhole-slot and to bear against the rear face of said plate between the lugs on said plate when the shaft is in its inner position, and a spring for normally urging said shaft outwardly and into a position in which the lug thereon is out of line with the contracted portions of said slot, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LUCIEN C. BABCOCK.

Witnesses:

THOS. H. WILLIAMS,
MILTON I. WILLIAMS.