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H. G. VOIGHT & C. J. CALEY.

INDICATOR LOCK.

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Fig. 1.

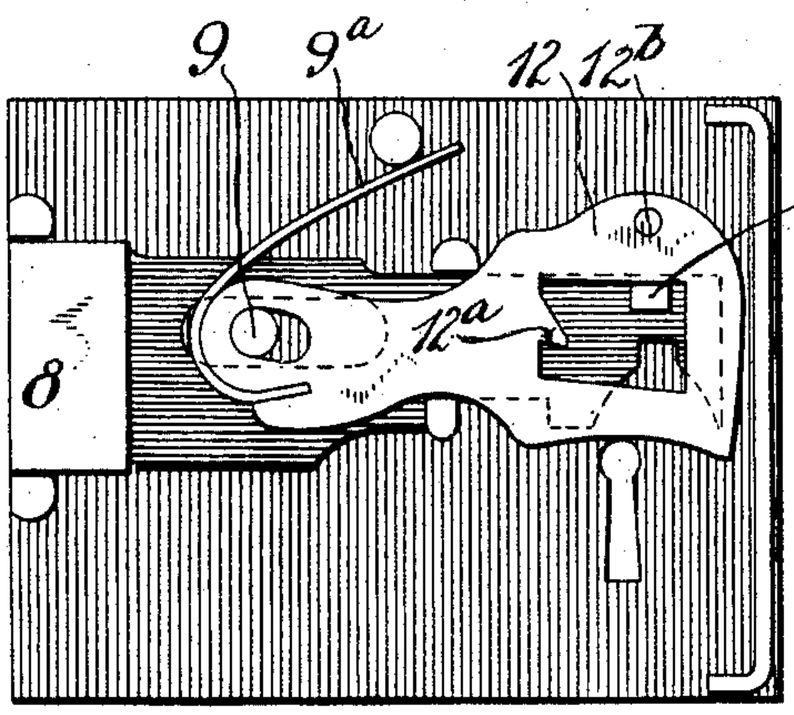


Fig. 2.

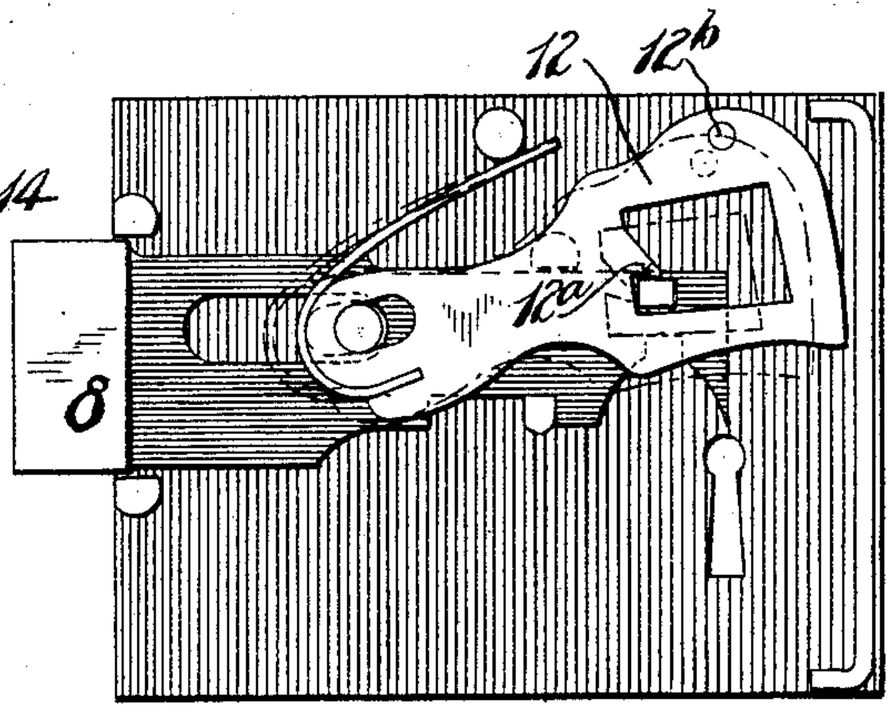


Fig. 4.

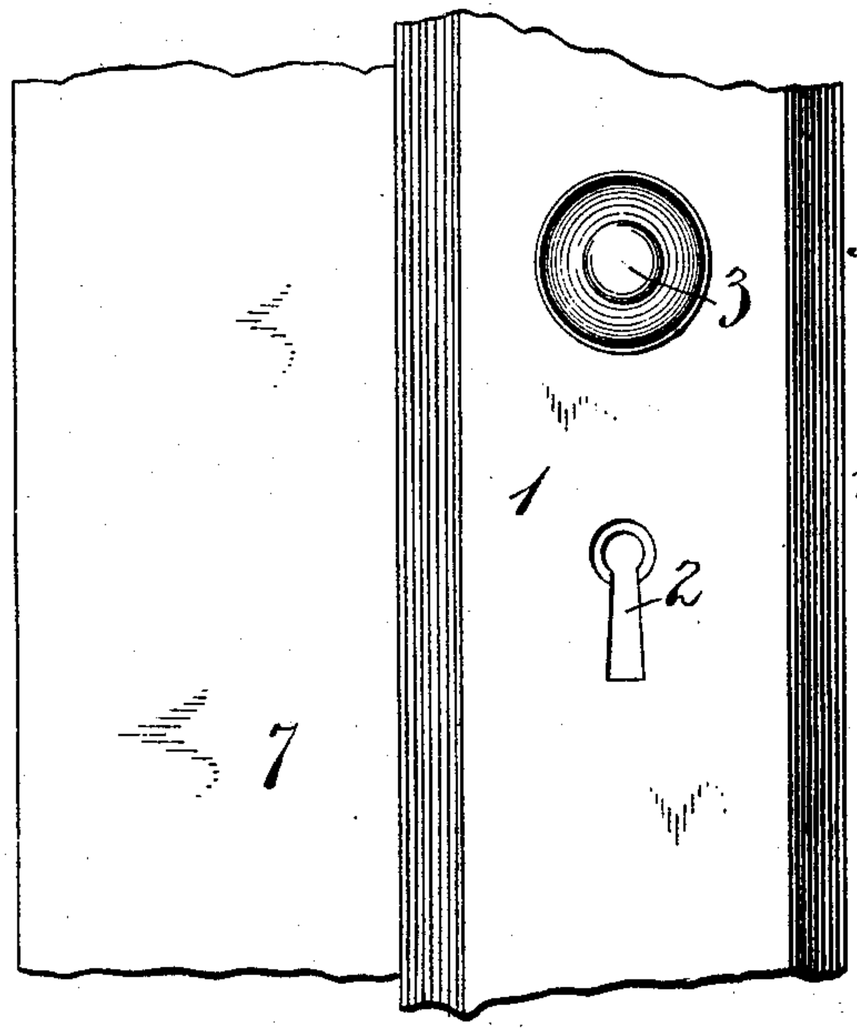
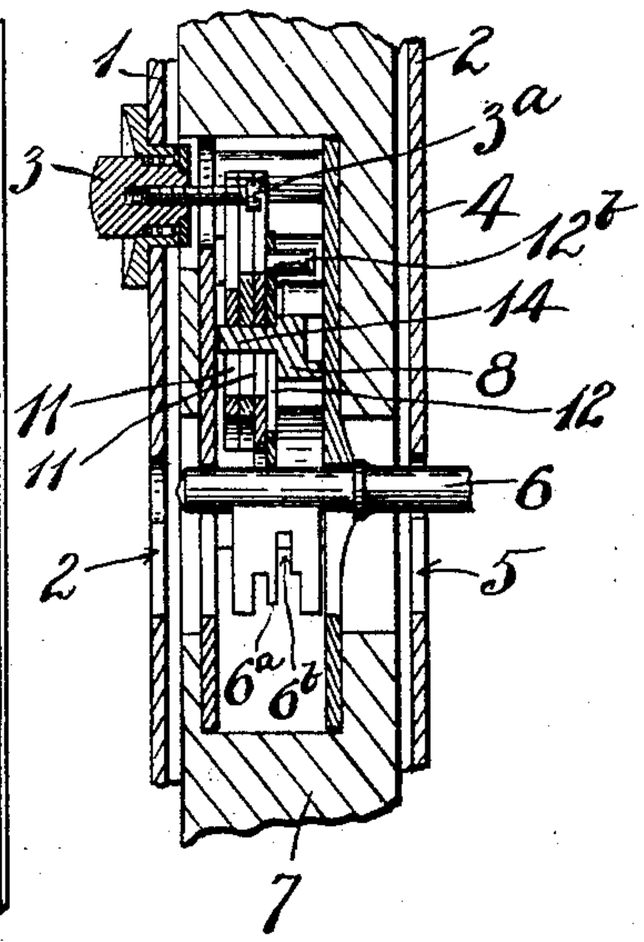


Fig. 3.



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UNITED STATES PATENT OFFICE.

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INDICATOR-LOCK.

No. 866,831. Specification of Letters Patent. Patented Sept. 24, 1907.

Application filed February 25, 1907. Serial No. 359,282.

To all whom it may concern:

Be it known that we, HENRY G. VOIGHT and CHARLES J. CALEY, citizens of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Indicator-Locks, of which the following is a full, clear, and exact description.

Our invention relates to improvement in lock mechanism and has particular reference to hotel door locks.

The object of the invention is to provide an indicating mechanism by which any one on the outside of the door can, without disturbing the occupant of the room, ascertain whether the door has been locked from the inside.

In the accompanying drawings: Figure 1 is a side elevation of certain parts of a lock mechanism. Fig. 2 is a similar view showing parts in a different position. Fig. 3 is a vertical cross-section intersecting the key-holes, all of the parts being assembled. Fig. 4 is a front elevation of a portion of an escutcheon-plate as applied to the face of a door, and showing the indicator.

1 represents the usual outside escutcheon plate having a key-hole 2 therein.

3 is a push-button indicator carried by said plate 1.

4 is the usual inside escutcheon plate having the key-hole 5 therein in alinement with key-hole 2.

6 is a key. This key may be entered into the lock-case, which stands between the escutcheon plates, by inserting the same from either side of the door. When inserted and turned from the outside it moves certain parts of the lock mechanism in such a manner as to actuate the bolt only. When inserted from the inside of the door and turned to project the bolt, it operates and sets the indicator mechanism. The presence of the key itself has nothing to do with the blocking of the indicator.

In Fig. 3 we have shown the escutcheon plates and lock mechanism as applied to a door 7.

8 is the lock-bolt. The usual latch bolt (not shown) may, of course, be provided.

9 is a stationary stud.

The lock may be provided with the usual gated tumblers 11—11, the construction and operation of which, by the ordinary bitted key, is too well known to require description.

Mounted at one end upon the stud or stump 9 is an indicator blocking-out device 12, operated upon when the key is inserted and turned from the inside by one of the bittings on said key. This particular bitting is indicated at 6^a, Fig. 3, and its position is such that when the key is inserted from the outside and turned it will not engage said device 12, but the latter will remain inactive by reason of a deep clearance notch 6^b in the bitted portion of said key.

The push-button 3 is normally projected outwardly in any well known manner, for example, by the means of a coiled spring, seen in Fig. 3 but not lettered. This feature is, of course, immaterial. The inner end of the push-button may comprise an adjustable screw 3^a. When the lock is in place and the escutcheons assembled, the inner end of the indicator will project through an opening in the side of the lock-case and will stand in such a position that when the free end of the blocking member 12 is lifted by the act of turning the key from the inside of the door, it will block the push-button 3 against being moved inwardly, consequently by trying said push-button any one may ascertain whether the room is locked from the inside. The member 12 is slotted at its end bearing on pivot 9 so that it can partake of a slight sliding movement, as well as oscillating movement.

9^a is a spring arranged to normally press the free end of the member 12 in a downward direction, or toward the key.

14 is the usual fence on bolt 8. This fence always projects into an opeinng in the member 12, best seen in Figs. 1 and 2, and serves to support the free end of the member 12 in either of two positions, to wit; the position wherein it is out of the way of the push-button 3, as shown in Fig. 1, and where it is in the path of movement of said push-button 3, as shown in Fig. 2.

12^a is a nose projecting into the opening above referred to in the member 12. The lower side of this nose forms a shoulder which rests upon the fence 14 when the bolt is projected from the inside, in which position said member 12 is held elevated, or in the path of movement of the push-button 3. The upper side of the nose 12^a is beveled for the purpose hereinafter described. The key 6, as shown in Fig. 3, is in a position so that the bit 6^a will engage with the member 12, and will lift it into the elevated position while projecting the bolt. When the bolt is projected, the fence 14 will stand under shoulder 12^a setting the indicator. Should key 6 be inserted from the outside and the door locked from that side, the deep slot 6^b in the key would afford clearance for the member 12, and hence would not lift the same, although the bolt 8, as before, would be operated. When thus projected the fence 14 would, of course, stand in the space directly above the projection 12^a. Should it now be desirable to unlock the door from the inside in the event a person had a key designed and adapted thereto, the function of the inclined upper side of the nose 12^a would be apparent, for upon inserting the key the first tendency would be to lift the member 12. This could

not be done were it not for the capacity of the member 12 to slide forward on pivot 9. This sliding forward of the member 12 is provided so that as the beveled side of the nose 12^a encounters the fence 14 (which is then advanced owing to the position of the bolt) the member 12^a will be forced temporarily ahead as the key continues to turn until the bolt is shot back by the further movement of the key. Were it not for this means or an equivalent, any person on the inside of the room might be locked in, which is, of course, a thing to be avoided. The projected or forward position of the member 12 is shown in dotted lines, Fig. 2. If an attendant, upon finding the door locked, wishes to ascertain whether it has been locked from the outside or the inside, such attendant has merely to press upon button 3. If it may be pushed in it indicates clearly that the room must have been locked from the outside, if it cannot be pushed in, it indicates with equal clearness that the room has been locked from the inside whether the key is in place or not.

12^b is a stud on the rear or inner side of the member 12, which stud projects close up to the inner wall of the lock-case, best seen in Fig. 3. This stud simply reinforces and takes any excessive strains that may be applied to member 12 by push button 3. The presence of this stud or its equivalent is preferred.

What we claim is:

1. In combination, a lock, a bolt, a push-button indicator therefor a portion of the same projecting into the lock-casing, and means controlled by a key insertible from the inner side only to block the movement of said push-button while the bolt is projected.

2. In combination, a mortise lock including a case having alined key-holes on opposite sides, indicator mechanism comprising an inwardly and outwardly movable member, means to set said indicator mechanism when a suitable key is introduced and turned from the inside to project the bolt, and leaving said indicator uninfluenced when the same or a similar key is introduced and turned from the outside to project the bolt.

3. In combination, a case, a bolt, an indicator of the push-button type accessible from the outerside of the door, key-controlled indicator blocking mechanism within said case and including a movable member operated by a suitable key adapted to the bolt when inserted from the inner side only, and means carried by the bolt for holding said blocking-out member in its blocking-out position when the bolt has been projected by a key inserted from the inner side only.

4. In a lock in combination, an indicator of the push-button type adapted to the outerside of a door, a portion of the same extending into the lock-case, a key-controlled blocking-out device within said case, and a key bitted to operate said blocking-out device when inserted from the inner side of the lock only.

5. In a lock in combination, an indicator of the push-button type having a portion projected into the lock-case, said lock-case having inner and outer oppositely arranged key-holes, a blocking-out device in said case and a key bitted to engage said blocking-out device when said key is entered from the inner side of the lock-case only.

6. In combination, a lock, a push-button indicator a portion of the same projecting into the lock-case, an indicator blocking-out device within the case, a bolt, tumblers therefor and a key adapted to operate both the tumblers and said blocking-out device simultaneously to set the latter when said key is inserted from the inner side of the door only.

7. In a door lock, in combination, a bolt operable from both sides of the door, an indicating device for one side of the door to which the lock is applied, said device comprising a movable finger piece and means to hold said finger piece in the indicating position when said bolt has been moved from the opposite side of the door into one position and freeing said finger piece when said bolt has been moved from said opposite side of the door into another position.

8. In a door lock, in combination, a lock, a bolt, an indicator for one side of the door comprising a movable finger piece, said bolt being operable from both sides of the door, and an indicator controlling device operable only when the bolt is controlled and moved from the side of the door opposite the indicator.

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