

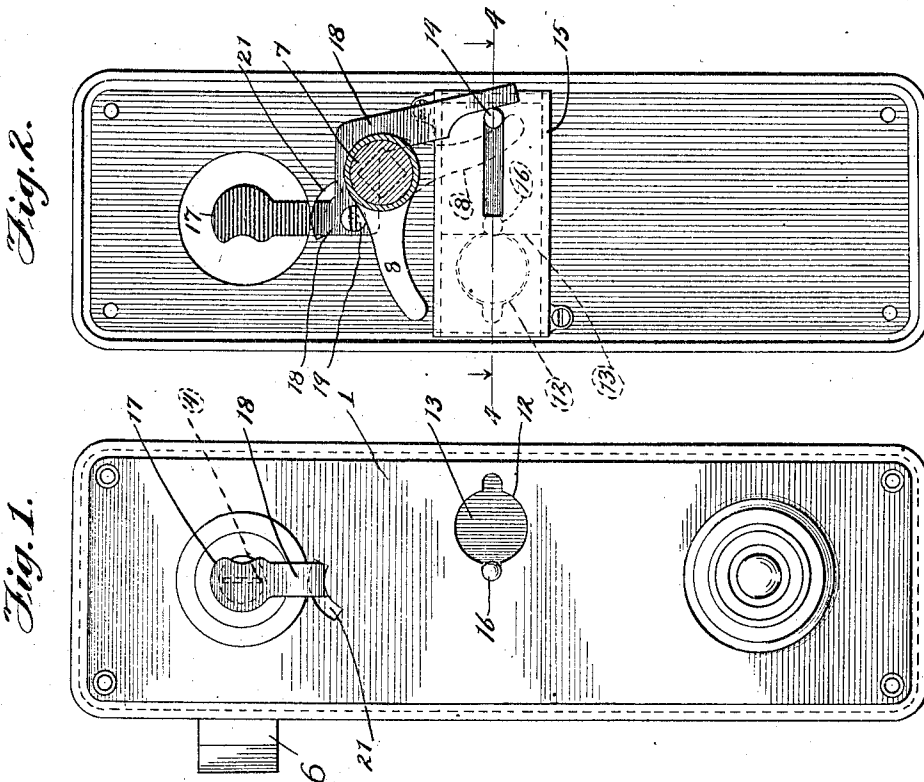
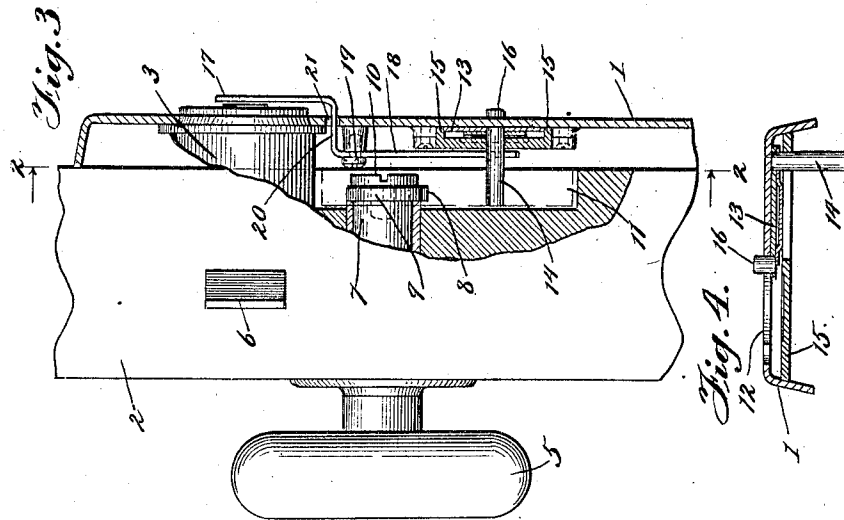
No. 871,126.

PATENTED NOV. 19, 1907.

O. LOCKETT.
INDICATOR LOCK.

APPLICATION FILED DEC. 22, 1902.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2

Fig. 5.

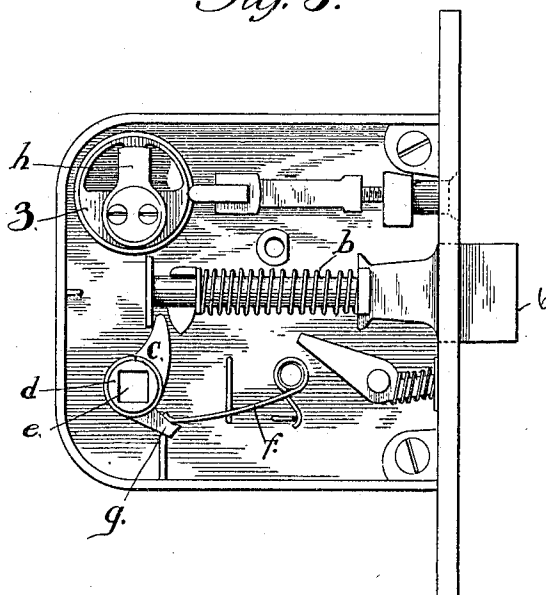
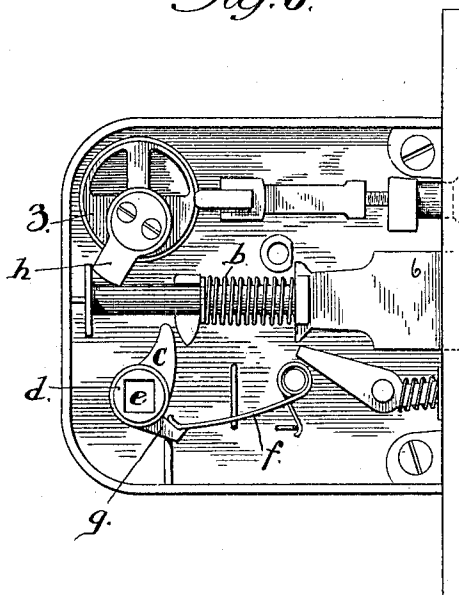


Fig. 6.



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OSWALD LOCKETT, OF CHICAGO, ILLINOIS.

INDICATOR-LOCK.

No. 871,126.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OSWALD LOCKETT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Indicator-Locks, of which the following is a full, clear, and exact specification.

My invention relates to means for locking doors and more especially to means for locking the doors of coupon rooms of safety deposit vaults and other like places, and it has for its primary object to provide improved means whereby the evacuation of the room by the occupant will automatically lock the door and set the indicator denoting to the attendant that the room, though locked, is vacant, a further object being to provide means whereby the subsequent opening of the door by the attendant will again set the indicator in readiness to be thrown or shifted to the "vacant" position by the next occupant when leaving the room; thus preventing a second depositor from entering the room until it has first been examined by an authorized attendant, and at the same time affording means whereby the attendant is enabled at all times to determine which rooms are occupied and which are vacant and thus avoid the possibility of disturbing any occupant, or of mistaking a room to be in use while other persons are waiting.

With these ends in view my invention consists in certain features of novelty in the construction, combination and arrangement of parts by which the said objects and certain other objects hereinafter appearing, are attained, all as fully described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings: Figure 1 is a face view of my improved lock with the escutcheon partly broken away. Fig. 2 is a back view or section on the line 2—2, Fig. 3 with the lock-barrel removed. Fig. 3 is an edge view of the door, partly broken away, showing the lock partly in section, and Fig. 4 is a plan section on the line 4—4, Fig. 2. Fig. 5 is a plan view of a lock employed in connection with my invention with the knob structure in position to retract the latch bolt, and Fig. 6 a similar view showing the latch bolt retracted through the medium of a Yale lock.

(1) is an escutcheon of the usual or any suitable form secured to the door (2) and having an opening through which protrudes

the barrel (3) of the lock, or that part of the lock in which is formed the key-hole (4). The form of lock illustrated in the drawing is of the Yale type in which the part carrying the key-hole rotates with the key, but any other form of lock may be employed in connection with my invention, though it is preferable to employ that form in which the turning of a knob upon one side and a key projected through a key-hole on the opposite side of a lock actuates the bolt in one direction against the resistance of a spring automatically actuating said bolt in the opposite direction when released from the force of the knob or the key as may be and normally maintaining the bolt at the limit of its stroke in said direction, as for example, (see Figs. 5 and 6) in which a latch bolt (6) is normally projected from its casing by a spring (b) and retracted by means of a lug (c) on the knob structure (d) through the bore (e) in which the stem 7 of the knob 5 is passed, the lug (c) being normally maintained in the position shown in said figures by a spring (f) bearing against a lug (g) on the structure (d). Instead of actuating the latch bolt (6) through the medium of the lug (c), it may also be retracted by the lug (h) on the barrel 3 of a Yale lock by turning the key therein and revolving the lug until it engages with the latch bolt and retracts it as shown in Fig. 6 in which instance also the latch bolt when released from the lug (h) is projected from the case by the spring (b). In this connection it should be observed that the latch bolt shown in Figs. 5 and 6 is of the ordinary construction wherein a key is used upon one side and a knob structure upon the other side of a door for retracting a latch bolt.

The stem (7) of the knob (5) is carried through the door (2) to a point inward from and behind the escutcheon (1), and is provided with a finger or arm (8) rigidly secured thereto in any suitable manner as by means of a squared end (9) on the stem (7) which fits into the finger (8) and receives a screw (10) or other suitable device for holding the finger in place thereon. The door immediately behind the escutcheon is formed with a recess (11) in which the finger (8) is situated, and oscillates when the knob (5) is turned, and the knob being preferably turned in one direction by a spring in the usual manner the finger will automatically return to its starting position when the knob is released. Formed in the escutcheon is an aperture (12),

and immediately behind the escutcheon opposite this aperture is arranged a sliding indicator (13), or an indicator of any other suitable form which is provided with a pin or lug (14) arranged in the line of movement of the finger (8), so that when the knob (5) is turned in the act of unlocking the door, the lug (14) will be engaged by the finger (8) and the indicator (13) moved in one direction preferably away from the aperture (12), as shown in dotted lines in Fig. 2. When the hold on the knob is released the finger (8) will return to its normal position, as indicated in full lines in Fig. 2, leaving the indicator (13) in the position indicated in dotted lines in said figure, or withdrawn from the aperture (12). The direction of movement of the indicator (13) by the finger (8), however, is immaterial, and it is quite obvious that it might be moved towards or across the aperture (12) instead of away from it, the important feature being the ability of the indicator to remain in the position where it is placed by the finger (8), and of the finger to return to its normal position when the hold on the knob is released, without disturbing the indicator.

The form of indicator illustrated in the drawings is a rectangular plate mounted in suitable guides (15) which are secured to the back of the escutcheon. Devices of this character are usually employed on doors provided with springs, or otherwise caused to automatically close, so that when the occupant of the room opens the door, the act of opening it will set the indicator (13), and as he passes out the door will automatically close and lock, leaving the indicator set in that position, which denotes to the attendant that the room, though locked, is unoccupied. In safety deposit vaults, it is desirable that each coupon room be thus locked after it has been vacated by one depositor until it has been examined by the attendant for the purpose of ascertaining whether the depositor has neglected to remove therefrom all of his valuables, but at the same time it is highly desirable that before the occupant vacates, the outside of the door or lock bear some indication of the fact that the room is occupied so that the attendant may not by any possibility disturb the occupant. Hence the withdrawal of the slide or indicator (13) denotes to the attendant that the occupant has departed, and he then unlocks the door and after making his examination, re-sets the indicator in readiness to be shifted to the "vacant" position by the departure of the next occupant. The door is then set ajar by means of a suitable stop, forming no part of this invention, to denote that the room is vacant and ready for the next depositor or occupant. The attendant may thus re-set the indicator by hand by means of a small knob or pin (16) secured to the outer side of the slide or indicator (13) so as to protrude through the aperture (12) and

at the same time serve as a stop for limiting the throw of the indicator; but in order that the device may be entirely automatic, it is preferable to provide it with means whereby the act of unlocking the door from the outside will re-set the indicator to that position which it occupied before the occupant opened the door from the inside. As a simple means for accomplishing this, the key-hole (4) may be covered by a shield (17) which is formed on or secured to the upper end of a lever (18), which latter is pivoted at (19) to the back of the escutcheon and has an off-set (20) near the shield (17) projecting through a slot (21) in the escutcheon so as to permit the lever to oscillate while passing through the escutcheon. The lower end of the lever is arranged in the path of and adapted to strike the pin or lug (14) on the opposite side thereof to that which is impinged by the finger (8). Thus it will be seen that when the indicator (13) is thrown towards the left, for example, by the finger (8) in the act of turning the knob (5), the pin or lug (14) will be brought against the lower end of lever (18), holding the upper end or shield (17) over the key-hole (4). The door being now locked, the room cannot be entered until the lock (3) is operated, and it will be seen that in order to insert the key, the shield (17) must be pushed to one side or to the left, and in doing so, the indicator (13) will be shifted towards the right into a position across aperture (12).

Usually doors which are employed in connection with my improved lock are provided with a stop which automatically engages and holds the door open or ajar so that when the attendant enters to examine the room, he leaves the door ajar, or in any event sets it ajar after he leaves it, ready for the next occupant, the slide or indicator being left across the aperture (12) in readiness to be shifted to the "vacant" position by the next party in the act of opening the door from the inside. Any suitable stop may be utilized for this purpose, the same constituting no part of my present invention. At this point it should be observed that before the occupant enters a room, the attendant has uncovered the key-hole by taking hold of the shield and moving it to the right in Fig. 2, the result being that the lower end of the lever 18 pushes the pin 14 to the left, and to a position at the end of the slot opposite that it is shown to have in Fig. 2; that is to the limit of its left hand stroke in that figure, and that the closing of the door by the occupant does not change the position of said pin or lever, and that therefore when the door is closed the uncovered key-hole indicates that the room is occupied. Before the occupant can leave the room however, he must take hold of the knob and turn it to withdraw the bolt 6 from its keeper and in so doing, the finger 8 is swung to contact with the pin 14 and

forces the pin and the lever 18 of the shield to the position shown in Fig. 2 by the time that the bolt 6 is released from its keeper, so that when the occupant opens the door the key-hole is covered by the shield and therefore the covered key-hole indicates to the attendant that the last occupant has left the room and this whether he leaves the door open or pushes it closed, for the reason that when he releases the knob in either instance, the finger 8 moves away from the pin 14 and the shield-lever 18 without their being any possible shifting of their position until the attendant again takes hold of the shield and moves it to a position uncovering the key-hole.

Inasmuch as the shield is moved in but one direction through the operation of turning the knob and must be moved in the opposite direction by hand, it may be independently of the indicator employed to perform the functions of the latter and therefore be properly designated as a shield-indicator, and be used as such to the exclusion of the indicator 13, then performing only the function of a sliding plate supporting the pin 14.

Having thus described my invention, that I claim as new therein and desire to secure by Letters Patent is;

1. In an indicator lock, the combination with a lock having a key-hole, an indicator and a shield covering said key-hole and operatively related to said indicator for moving the latter when the key-hole is uncovered, substantially as described.

2. An indicator lock comprising in combination an indicator, a knob structure directly engaging and actuating the indicator in one direction, and means directly engaging and actuating the indicator in the opposite direction, and projecting externally of the lock, substantially as described.

3. An indicator lock comprising in combination an indicator, a knob structure directly and intermittently engaging said indicator and moving it in one direction, and means directly engaging and moving the indicator in the opposite direction, and projected and actuated externally of the lock, substantially as described.

4. An indicator lock comprising in combination an indicator, a knob structure provided with a projection directly engaging and actuating the indicator in one direction, and means manipulated externally of the lock actuating the indicator in the opposite direction, substantially as described.

5. An indicator lock comprising in combination an indicator, a knob structure, a lug projecting therefrom, directly engaging and actuating the indicator in one direction, means retracting said lug from contact with the indicator, and means actuating said indicator in the opposite direction and intermit-

tently covering and uncovering the key-hole of the lock, substantially as and for the purpose described.

6. An indicator lock comprising in combination an indicator, a knob structure provided with a lug directly engaging and actuating the indicator in one direction and alternately disengaged from the indicator and a lever directly engaging and actuating the indicator in the other direction and alternately covering and uncovering the key-hole of the lock, substantially as described.

7. An indicator lock comprising in combination a lock bolt automatically actuated in one direction into locking engagement with its keeper, and actuated in the opposite direction by a knob structure on one side of said lock and a key structure on the opposite side thereof, an indicator, means directly engaging the knob structure with the indicator and moving the indicator in one direction, and means operated externally of the lock directly engaging the indicator and moving the indicator in the other direction, substantially as described.

8. An indicator lock comprising in combination a lock bolt, means automatically actuating said bolt in one direction in locking engagement with its keeper, knob and key structures respectively located on opposite sides of said lock and actuating said bolt in the opposite direction, an indicator, a lug on the knob structure directly engaging and actuating the indicator in one direction and a lever directly engaging and moving the indicator in the opposite direction, said lever being adapted to cover and uncover the key-hole of the lock and accessible externally thereof for manipulation, substantially as described.

9. In an indicator lock, a lock bolt, provided with means whereby said lock bolt is automatically retracted during the swinging of a door to its closed position and means for thrusting said lock bolt to its locking position, in combination with an indicator, and means intermittently connecting said indicator with the lock bolt and automatically moving the indicator concurrently therewith in one direction of movement and with reference to the position of the lock bolt, substantially as described.

10. In an indicator lock, a lock bolt, provided with means whereby said lock bolt is retracted when swinging a door to a closed position, means for forcing the bolt to a locking position when the door is closed, in combination with an indicator, and a lever disconnected from said indicator and connected with said bolt whereby movement of the lock bolt intermittently shifts the indicator in one direction, substantially as described.

11. An indicator lock provided with a key-hole, a pivoted knob, and a shifting shield adapted to alternately cover and uncover

said key-hole, in combination with means connecting said shield and knob whereby the turning of the knob shifts the shield in one direction with reference to the key-hole, 5 substantially as described.

12. An indicator lock provided with a key-hole, a pivoted knob, an oscillating shield adapted to alternatively cover and uncover said key-hole, in combination with means 10 connecting said shield and knob whereby the turning of the knob in one direction oscillates the shield, substantially as described.

13. An indicator lock provided with a key-hole, a pivoted knob, and a shifting shield 15 adapted to alternatively cover and uncover said key-hole, in combination with a finger and pin connecting said shield and knob whereby the turning of the knob in one direction will shift the shield with reference to the 20 key-hole, substantially as described.

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