

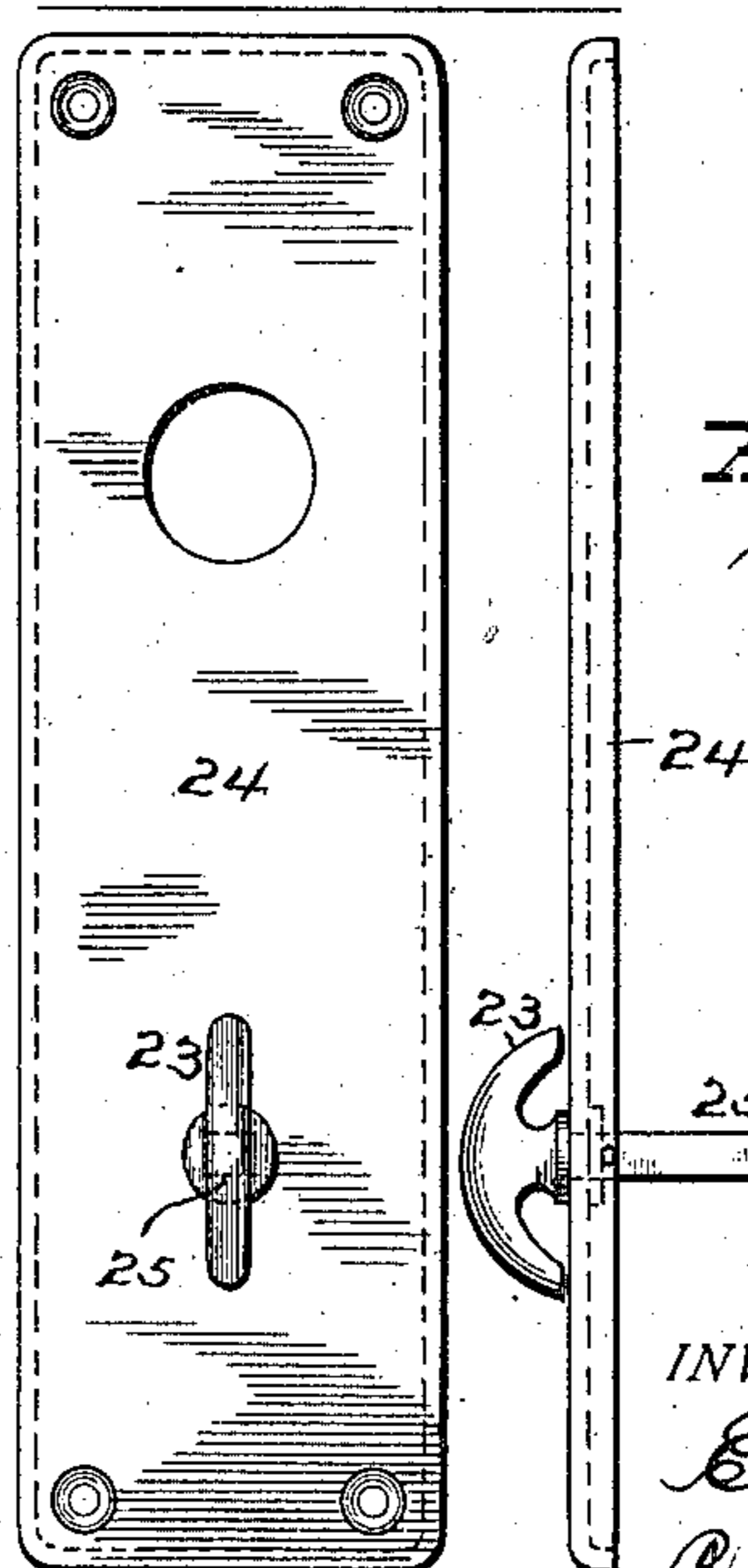
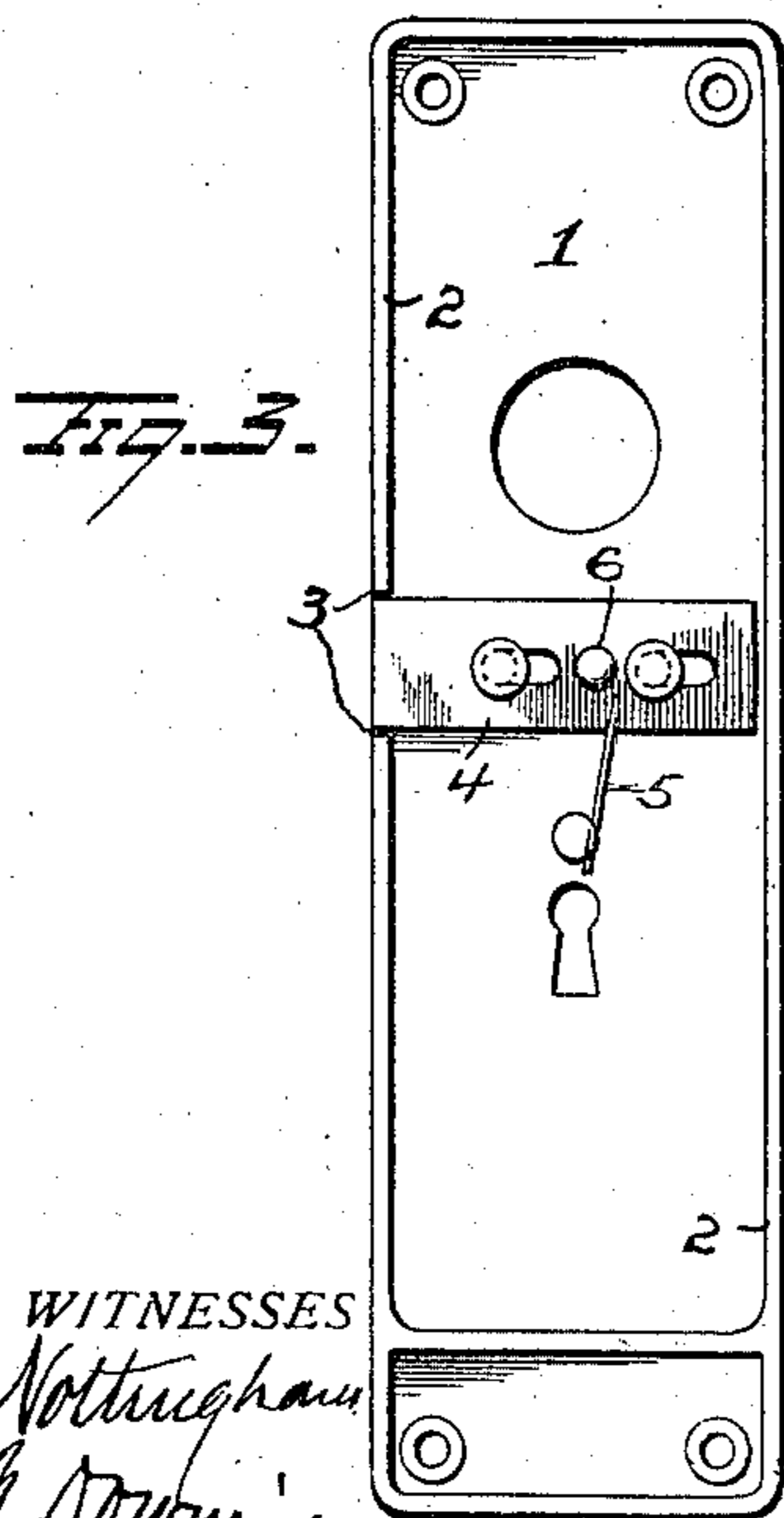
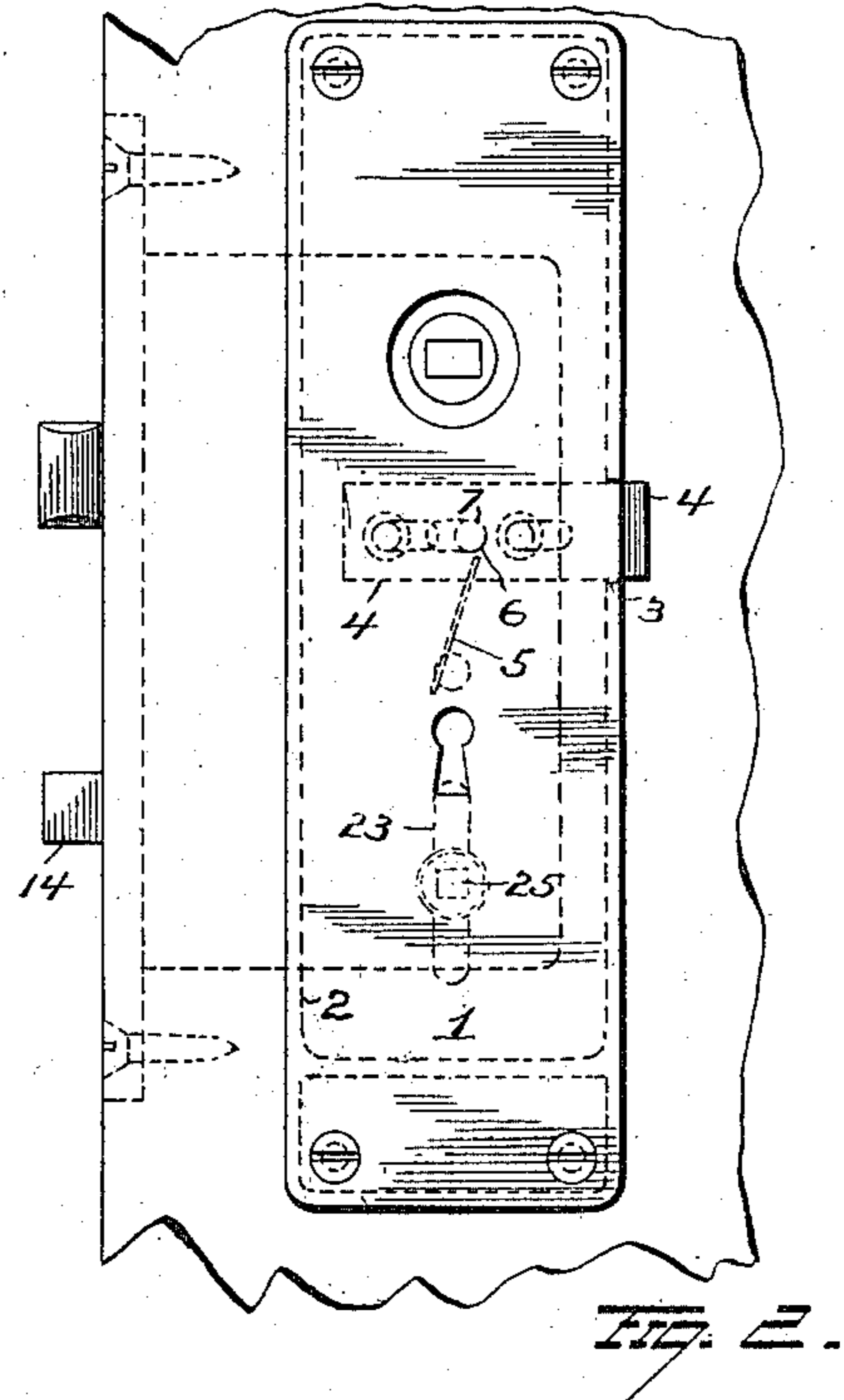
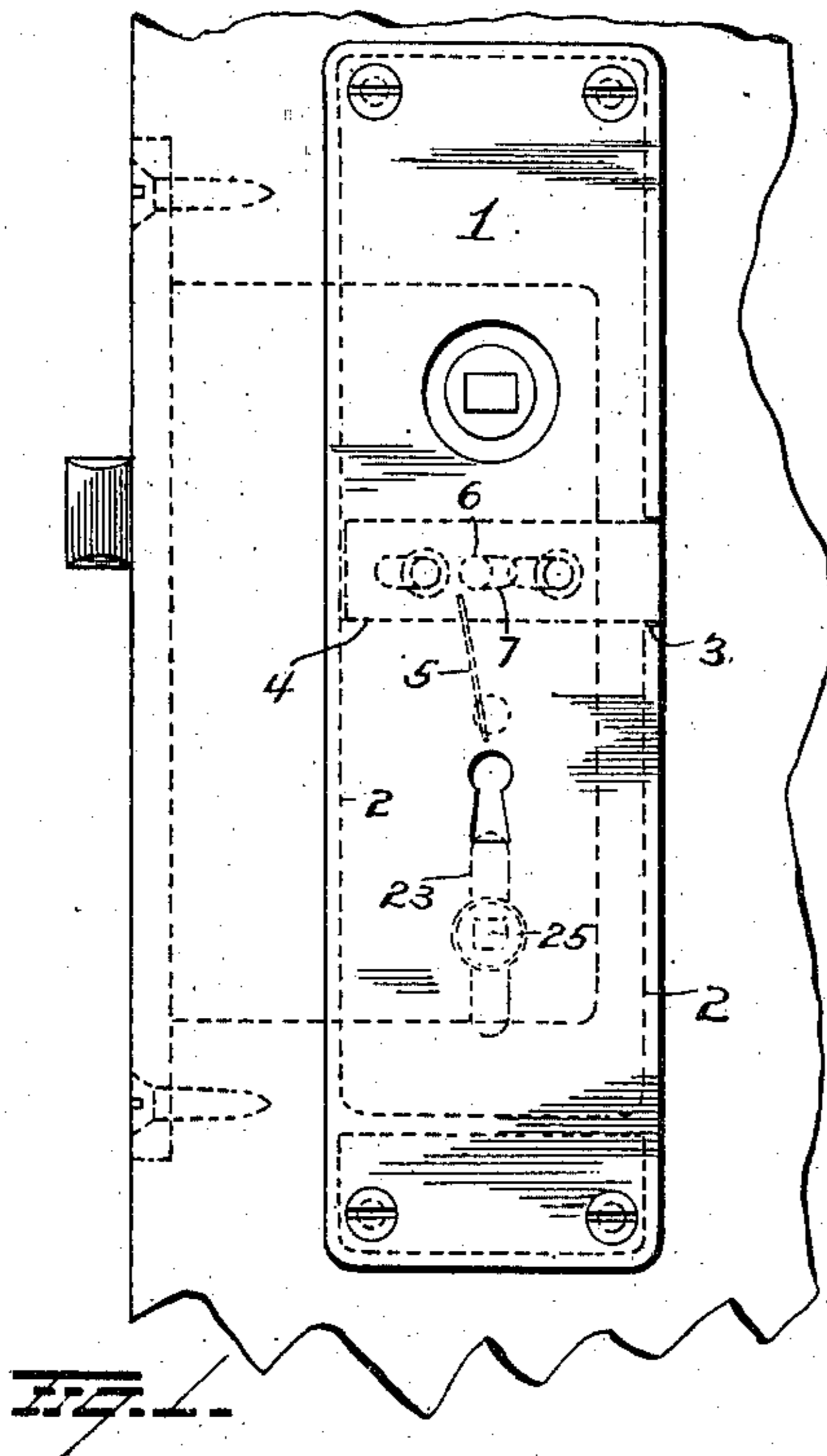
E. H. JONES.
INDICATOR LOCK.

APPLICATION FILED JUNE 19, 1909.

963,712.

Patented July 5, 1910.

2 SHEETS—SHEET 1.



WITNESSES
E. J. Nottingham
G. P. Downing

INVENTOR
E. H. Jones
By H. A. Seymour
Attorney

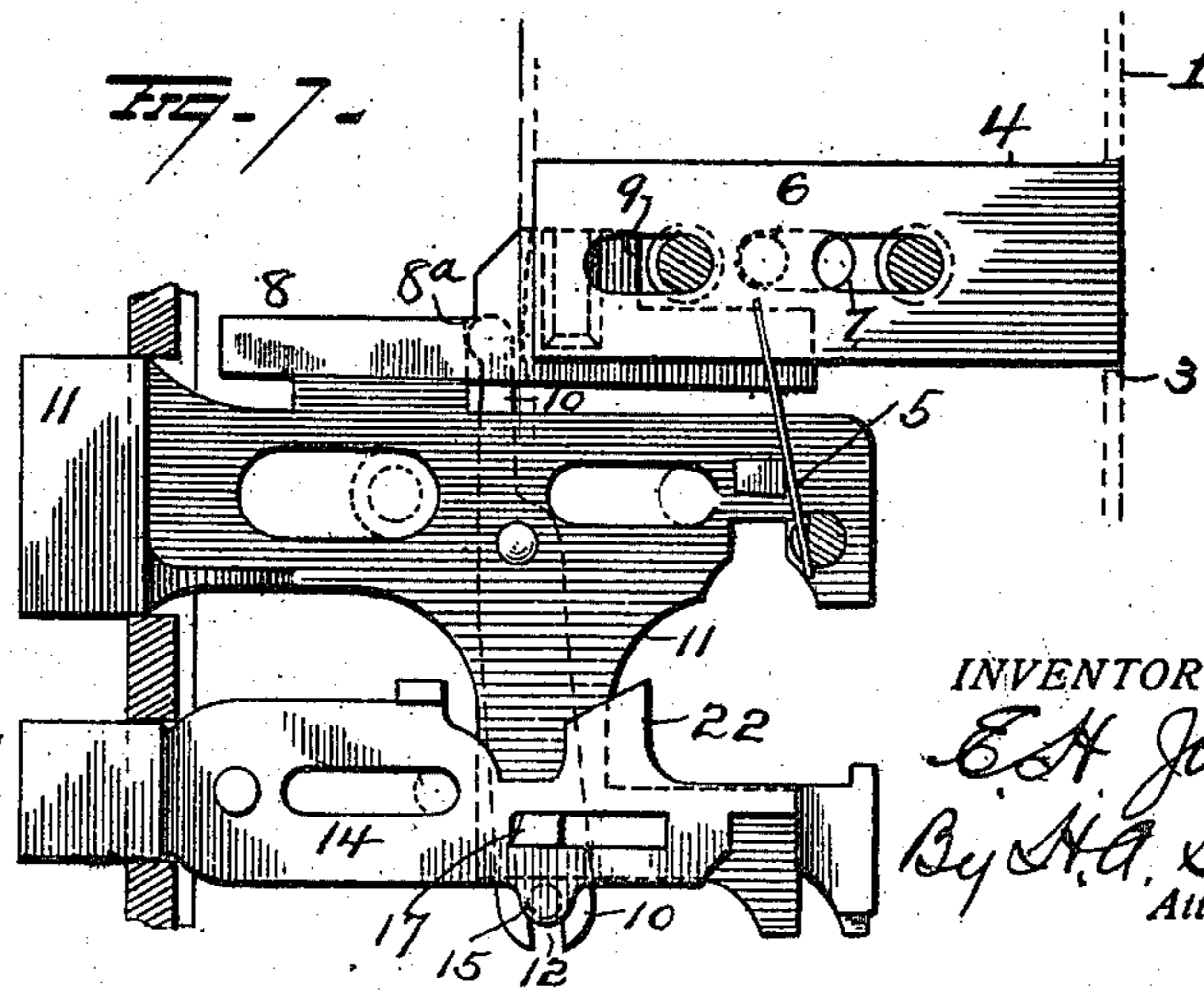
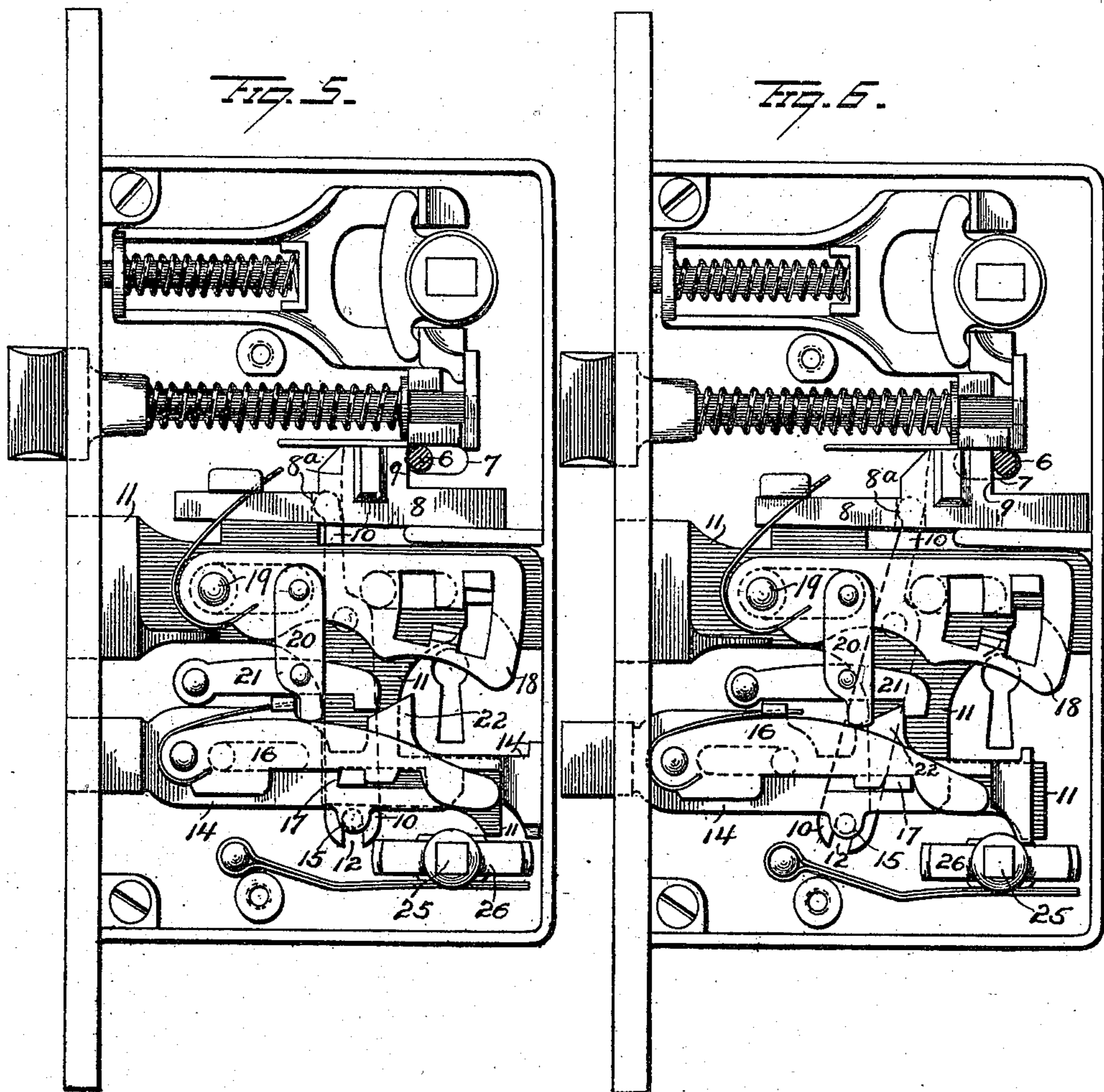
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UNITED STATES PATENT OFFICE.

ELLIS H. JONES, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF STAMFORD, CONNECTICUT.

INDICATOR-LOCK.

963,712.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed June 19, 1909. Serial No. 503,231.

To all whom it may concern:

Be it known that I, ELLIS H. JONES, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain
5 new and useful Improvements in Indicator-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
10 make and use the same.

My invention relates to an improvement in indicators for locks, the object being to provide means for indicating at the outside, whether the door has been locked from the
15 inside or the outside, and it consists in the parts and combination of parts as will be more fully explained and pointed out in the claims.

In the accompanying drawings, Figure 1
20 is a view in elevation of a section of a door with my improvement applied thereto, the indicator being retracted and shown in dotted lines. Fig. 2 is a similar view showing the indicator projected. Fig. 3 is a view
25 in rear elevation of the outer escutcheon plate showing the indicator thereon. Fig. 4 is a view of the inner escutcheon plate removed. Fig. 5 is a view in plan of the lock showing the position of the parts when
30 the door is not locked. Fig. 6 is a view of the same showing the position of the parts when the door is locked from the inside and Fig. 7 is a view of the main bolt, secondary bolt, lever, slide and indicator removed, both
35 bolts being shown in their projected positions.

1 represents the outer escutcheon plate provided with a key hole and an opening for the knob, and with a marginal flange 2
40 adapted to bear against the outer face of the door and hold the body of the plate slightly removed from the surface of the door. The rear flange 2 is cut away at 3 for the reception of the indicator 4, which
45 latter is simply a rectangular plate suitably mounted to slide against the rear face of the escutcheon. In the present instance I have shown this plate slotted and held in place by studs formed on the inner face of the
50 escutcheon and passing through the slots, the studs carrying washers overlapping the

plate, but it is evident that other means of guiding and holding the indicator may be employed, hence I do not confine myself to this detail of the construction. This indi- 55
cator plate is connected to a spring 5 which tends to hold the indicator in its retracted position, and is also provided with the fixed post 6 which latter passes through that portion of the door between the escutcheon 60
plate and mortise lock, and through a slot 7 in the lock case, and is engaged by the indicator actuating slide 8. This slide is mounted in the lock case, and is provided with a shoulder 9 normally resting in front 65
of the post 6 on the indicator plate 4, and is adapted, when moved rearwardly by the lock mechanism to be hereinafter described, to engage the post 6 and move the indicator against the action of its spring 5, rear- 70
wardly to its projected position and thus indicate to the eye, and also to the touch, that the door is locked from the inside.

The slide 8 is provided with a recess 8^a in which the end of the lever 10 rests. This 75
lever 10, is, in the present instance, pivoted to the shank of the main dead bolt 11, and projects downwardly to the shank of the secondary dead bolt 14, and is provided at its free end, with a slot 12 in which a lug 80
15 on the shank of the bolt 14 rests. The bolt 14 carries a tumbler 16, having a shoulder adapted, when the bolt 14 is retracted, to engage the rear face of the fence 17 carried by the main bolt shank, and thus lock 85
the bolt in its retracted position, the bolt being deadlocked in its projected position by the latch 21, as hereinafter described.

The main dead bolt 11 is locked in its two positions by a series of tumblers 18 mounted 90
on a post 19 secured to the lock case, the said tumblers coöperating with a fence on the bolt in the usual and well known manner. The outermost tumbler 18 of the series is connected by a link 20 with the latch 21, 95
which latter is pivotally mounted on a post carried by the lock case, and is adapted when the lower bolt is projected, to rest with its head or hooked end in rear of the shoulder 22 on the secondary dead bolt 14. 100

From the foregoing it will be seen that if both dead bolts be in their retracted posi-

tion, and the key be inserted from the outside and turned, that, by reason of the connection between the two dead bolts, both will be projected in unison, and if the key
5 be turned in the reverse direction both bolts will be retracted.

When the bolts move in unison, the lever
10 will be moved bodily forward as the bolts are projected, and move slide 8 away
10 from post 6 on the indicator plate, without disturbing the latter, and as the bolts are retracted, the lever 10 and slide 8 will be moved back to their normal position without disturbing the post 6 or the indicator. The
15 secondary dead bolt 14 is also actuated by the thumb piece 23 mounted in the inner escutcheon plate 24, and carrying an angular shank 25, which passes into the lock casing and engages the cam 26. This cam first ac-
20 tuates the tumbler 16 to release the same from the fence 17, and then projects the bolt. When the bolt 4 is projected it may be retracted by turning the cam 26. As the cam engages the tumbler it elevates the latter, which, by
25 its engagement with the lower end of link 20 lifts the latter and the latch 21 pivotally connected to the link until the hook on latch is clear of the shoulder 22, thus releasing the bolt and permitting it to be withdrawn or
30 retracted by the continued movement of the cam. When the bolt is projected it is deadlocked by the engagement of the shoulder 22 thereon with the pivoted latch 21. As the lever 10 is pivoted to, and carried by the
35 shank of the main dead bolt 11, it follows that when the secondary dead bolt is projected by the thumb piece, the movement of the bolt causes lever 10 to turn on its fulcrum, thus moving its upper end inwardly,
40 and forcing shoulder 9 of slide 8 into contact with the post 6, and thus move the indicator plate 4 to its projected position where it can be seen and felt.

From the foregoing it will be seen that
45 the outside key actuates both bolts, and that when the bolts are actuated by a key from the outside, the indicator 4 is not disturbed, but remains in its retracted position, but when the secondary bolt is projected by the
50 inner thumb piece or key, the indicator will be projected and indicate by its position that the door has been locked from the inside. When locked from the inside, it can be unlocked by a key from the outside, but
55 to do this, the main bolt must be first projected by the key. When the key is applied and turned, the inclined front face of the fence 17 bearing against the inclined rear face of the shoulder on tumbler 16, elevates
60 the latter, and permits the dead bolt 11 to move to its projected position. After the main bolt has been projected, the secondary bolt, which is then locked to the shank of the main bolt by the tumbler of the second-

ary bolt, will be retracted by any key that 65 will retract the main bolt.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my 70 invention, hence I would have it understood that I do not wish to confine myself to the exact construction and arrangement of parts shown and described, but,

Having fully described my invention what 75 I claim as new and desire to secure by Letters-Patent, is:—

1. In a lock, the combination with an escutcheon plate and an indicator carried thereby and adapted to be projected at one 80 end beyond one edge of the escutcheon, of a bolt movable in a plane parallel with the plane of movement of the indicator, means connected to and actuated by the bolt for shifting the indicator, whereby when the 85 bolt is projected the indicator will move to project at one end beyond the edge of the escutcheon, and means on the inner side of the door for actuating the bolt.

2. In a lock, the combination with an 90 escutcheon, and an indicator carried thereby and adapted to be projected at one end beyond the side of the escutcheon, of a bolt, a pivoted lever within the lock casing and engaging the bolt and means connecting the 95 lever and indicator, whereby the said bolt and indicator will be projected simultaneously.

3. In a lock, the combination with an escutcheon, an indicator having a project- 100 ing post and a slide in the lock casing adapted to engage the post, of a bolt and a pivoted lever connecting said bolt and slide whereby when the bolt is projected the indicator will also be projected. 105

4. In a lock, the combination with a movable indicator, of main and secondary bolts, a lever pivoted to the main bolt and connected to the secondary bolt and means con- 110 necting said lever and indicator.

5. In a lock, the combination with a movable indicator, of main and secondary dead bolts, means for connecting them whereby they will be projected in unison, means for 115 disconnecting the secondary bolt from the main bolt whereby it may be projected independently of the main bolt, a lever pivoted to the main bolt and connected to the secondary bolt and a slide actuated by said lever and connected to the indicator for 120 transmitting movement in one direction to the latter.

6. In a lock, the combination with a movable indicator, of main and secondary dead bolts, means for coupling the bolts together 125 whereby they will be projected in unison by the outside key, means operable from the inside of the door whereby the secondary

bolt may be projected independently of the
main bolt, a lever pivoted to the main bolt
and connected at one end to the secondary
bolt, a slide connected to the opposite end
5 of said lever, and means connecting the slide
and indicator.

In testimony whereof, I have signed this

specification in the presence of two subscri-
ing witnesses.

ELLIS H. JONES.

Witnesses:

WARREN H. TAYLOR,

CHARLES A. BERRY.