

H. G. VOIGHT.
 LOCK INDICATOR.
 APPLICATION FILED NOV. 26, 1910.

986,659.

Patented Mar. 14, 1911.

Fig. 1.

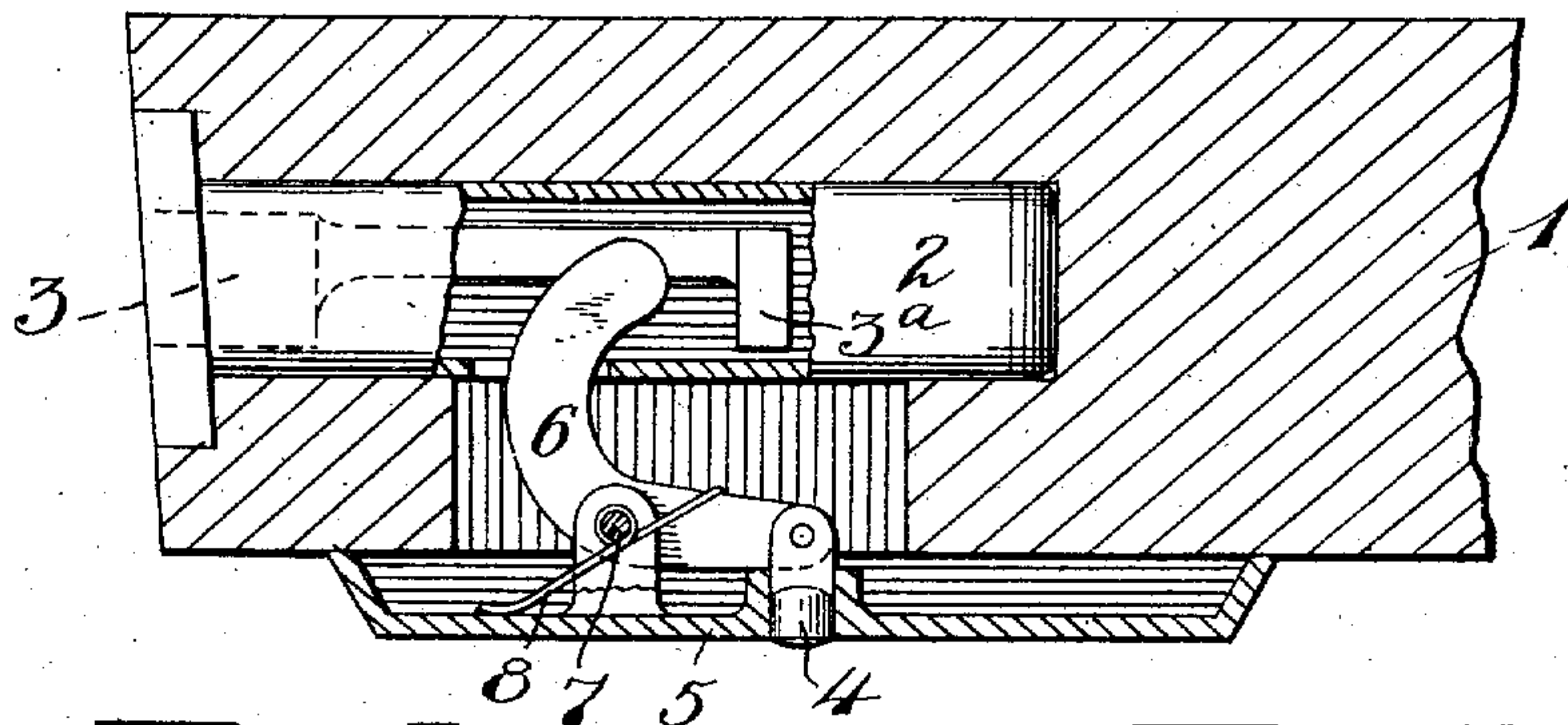


Fig. 2.

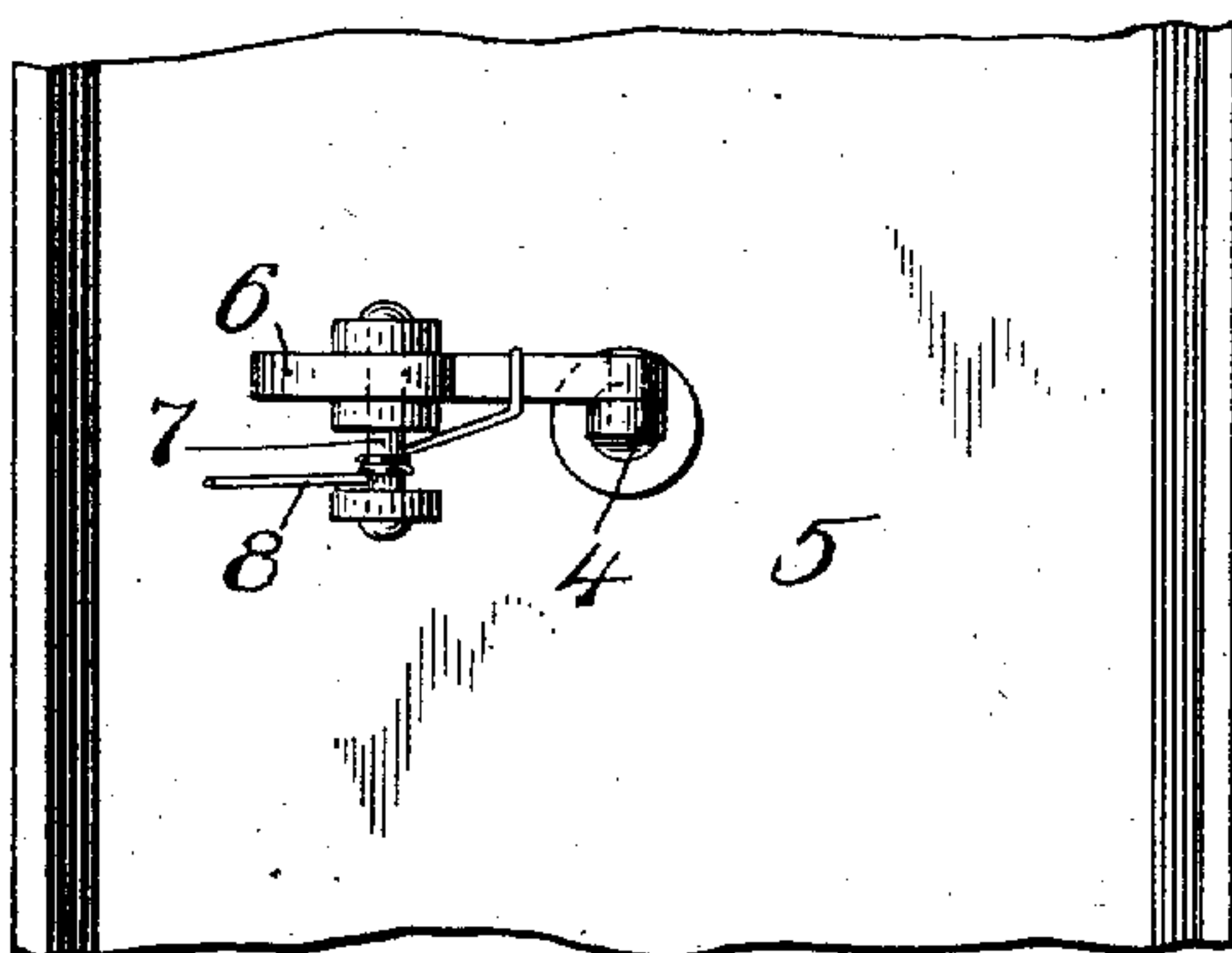


Fig. 3.

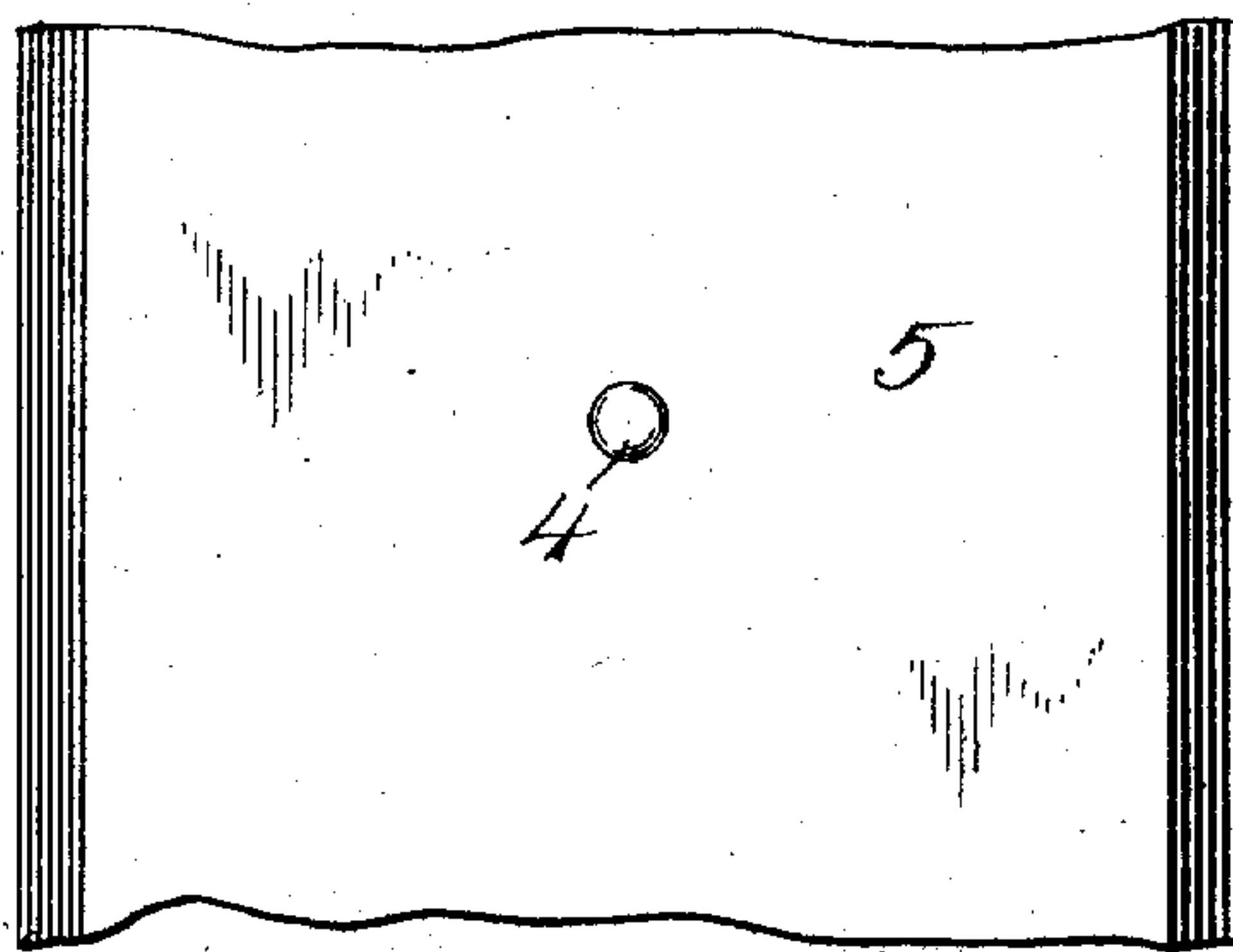
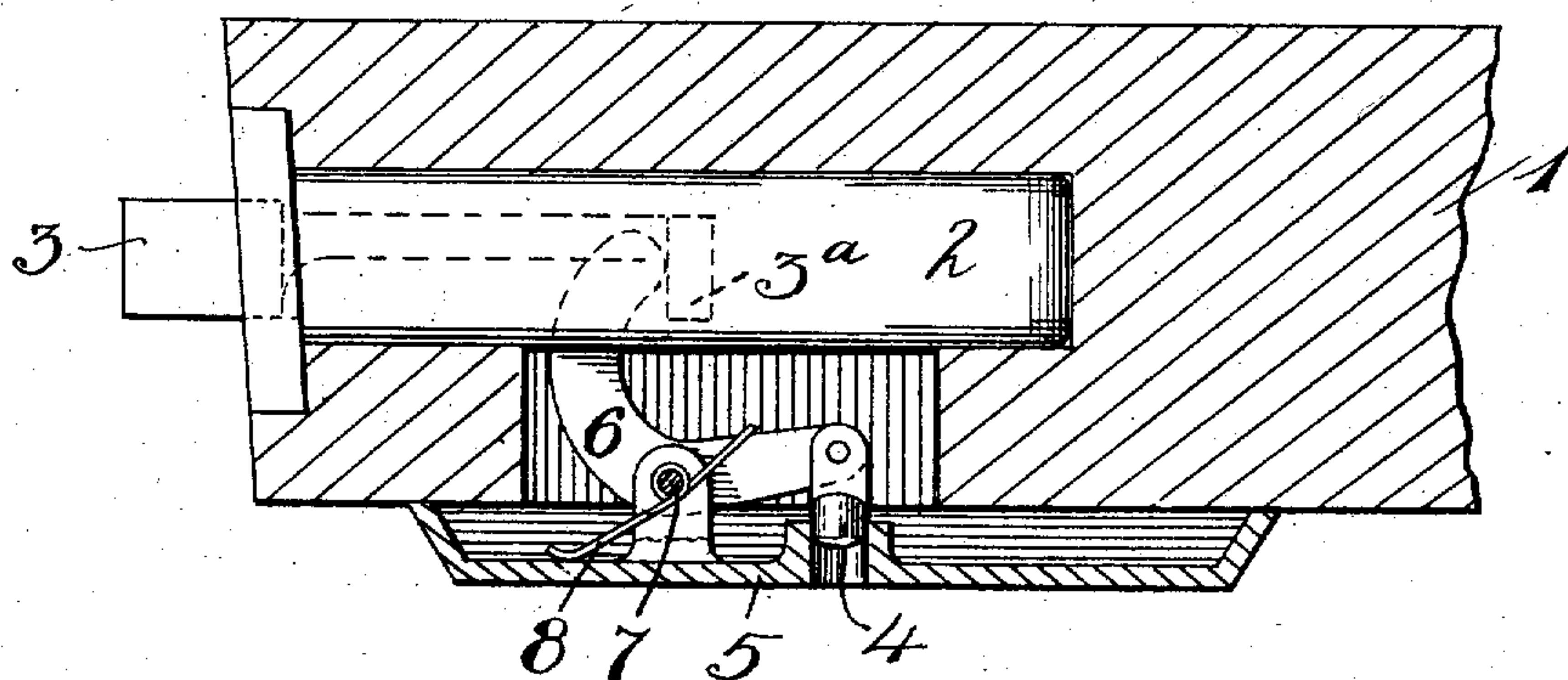


Fig. 4.



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UNITED STATES PATENT OFFICE.

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LOCK-INDICATOR.

986,659.

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To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, Hartford county, State of Connecticut, have invented certain new and useful Improvements in Lock-Indicators, of which the following is a full, clear, and exact description.

My invention relates to improvements in lock indicators; the same having for its object the provision of a means whereby any one on the outside of a door can readily ascertain whether the door is locked or unlocked by feeling of the exposed part, or button end, of the indicating member, which latter is located on the outer side of the door.

In the accompanying drawings, Figure 1 is a plan view of my improved indicating device with certain associated parts in plan and section; Fig. 2 is a rear end elevation of the indicator and its support; Fig. 3 is a front elevation; Fig. 4 is a view similar to Fig. 1 showing the indicator in a different position.

1 represents part of a door; 2 represents a lock case; 3 represents a bolt capable of being advanced and retracted. In this particular instance it may be assumed that the bolt is of a type adapted to be operated in both directions manually by a key or thumb-turn.

4 represents the indicator, in this instance in the form of a button, said indicator being located on the outer side of the door. The position of the button will indicate the relative position of the bolt 3, that is, whether said bolt is advanced or retracted. As shown in Fig. 1, the button 4 stands in its out position and the door is shown as unlocked, the bolt 3 being retracted. If the bolt 3 is advanced to the position shown in Fig. 4 and the door is locked, the indicator button 4 will be seen to be retracted, indicating by its position that the door is locked.

By these means any one located on the outside of a door may quickly and easily detect, by feeling, whether the door is locked or unlocked, thereby avoiding the necessity of inserting a key in the door, or turning the knob and rattling the door in the usual way.

5 represents a mounting, such as an escutcheon plate, in which the button 4 may move in and out, said button being mounted in a suitable passage, or guideway, in said support. On the back of the support is

pivotaly mounted a lever 6, preferably of the bell-crank type, the same being pivoted at 7 and preferably influenced in one direction by a spring 8 which may be mounted on the pivot 7. In this instance, the tendency of the spring 8 is to swing the lever 6 in such a direction as to push the button 4 outwardly, one end of said lever being suitably connected with said button. The free end of the bell-crank lever 6 projects into the lock case 2 and into the path of movement of a shoulder 3^a moved by, or carried upon, the tail of the bolt 3. This shoulder is so positioned that when the bolt is retracted, it permits the lever 6 to move under the influence of the spring 8 to advance the indicator button 4. When, however, the bolt is advanced into the locking position, this shoulder 3^a engages the lever 6 and swings it so as to retract the indicator button, as shown in Fig. 4.

From the foregoing it is apparent that the indicator may be readily applied to any lock, it being merely necessary to provide a clearance opening, or slot, in the side of the lock case 2 to admit the end of the bell-crank lever and to permit said end to move sufficiently for the intended purpose.

From the foregoing it will be seen that the indicator is moved wholly by the bolt, irrespective of, and independently, of any means employed for moving the bolt, such as the well known key or thumb-turn. While I have shown the free end of the lever 6 as projecting into the slot so as to engage the tail of the bolt, it is obvious that a mere reversal of this arrangement, namely, causing part of the bolt to project outwardly through the slot to engage the lever, would be within the scope of this invention.

As will be observed, the bolt 3 partakes of the usual range of movement, and since this movement is substantially longer than that required to operate the indicator, in ordinary cases said shoulder on the bolt may, on one movement of the bolt, recede from that end of the lever which is engaged, thereby providing, in effect, quite a range of lost movement.

I have not attempted herein to show the knobs, latch-bolt, tumbler mechanism, etc., such as is usually provided in door locks, since it is obvious that any well known construction, as to such common details, may, or may not, be employed as desired.

Broadly speaking, it is apparent that it is not material to this invention that the indicator should be "out" to indicate that the door is unlocked, and "in" to indicate that the door is locked, since this mere position could be readily reversed by reversing the parts, or by any other obvious modification. So, also, it is not strictly essential that the indicator be moved in one direction by a spring, since, from an examination and understanding of the broad features of the construction disclosed, obvious changes would readily occur to a mechanic skilled in the art.

It will be understood that this indicator is of special value when employed with the well known type of lock termed a "hotel corridor door lock" in which such locks are provided with two dead bolts, one of which is operated for locking the door by means operable at the inside of the door, the other bolt being operated for the purpose of locking the door by means accessible from the outside. Such locks provided with two bolts are well known, an example of which is shown in my former patent numbered 867,175. As in my former patent, the indicator would, of course, be operated only by the bolt which is manipulated from the inside of the door, since the purpose of such an indicator is merely to advise any one on the outside that the door has been locked from the inside.

What I claim is:

1. In combination, a lock, a bolt, an indicating device movable depthwise relatively to a door upon which the lock is applied, a mounting for said indicating device arranged to be secured upon one surface of such a door and independent of the lock, an operating lever connected with said device and carried by the same mounting, and means of connection between said bolt and said lever whereby a shifting of the bolt will cause a shifting of the indicator.

2. In an indicator for locks, an indicating device movable to and fro, in combination with a lock including a case having a clearance opening or slot, operative means of con-

nection between said indicating device and one of the movable lock parts located within the case, said operative means of connection including one part standing in said opening and movable to and fro across the same.

3. In combination, a lock, a bolt, an indicating device movable depthwise relatively to a door upon which the lock is applied, a mounting for said indicating device arranged to be secured upon one surface of such a door and independent of the lock, an operating lever connected with said device and carried by the same mounting, means of connection between said bolt and said lever whereby a shifting of the bolt will cause a shifting of the indicator, and a spring for moving said lever in one direction.

4. In an indicator for locks, a lock indicating device, a mounting therefor adapted to be secured to one face of a door, said mounting having a guide passage, said indicating device being located therein for movement to and fro, an operating lever for said indicating device, said lever being mounted upon the mounting for the indicating device, in combination with a lock including a bolt, means of connection between said bolt and said lever whereby the movement of the former will produce a movement of the latter, and thereby a movement of said indicating device in one direction, and a spring for moving said lever and thereby said indicating device in an opposite direction.

5. In an indicator for locks, a movable indicating device, a mounting therefor arranged to be secured to the outer side of a door, a lock independently mounted and including a bolt reciprocal to and fro, and operative means of connection between said indicating device and said bolt, said indicating device being operated by a partial movement of the bolt.

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