

No. 616,210.

Patented Dec. 20, 1898.

A. SYVERSON.  
LOCK.

(Application filed Apr. 23, 1898.)

(No Model.)

Fig. 1.

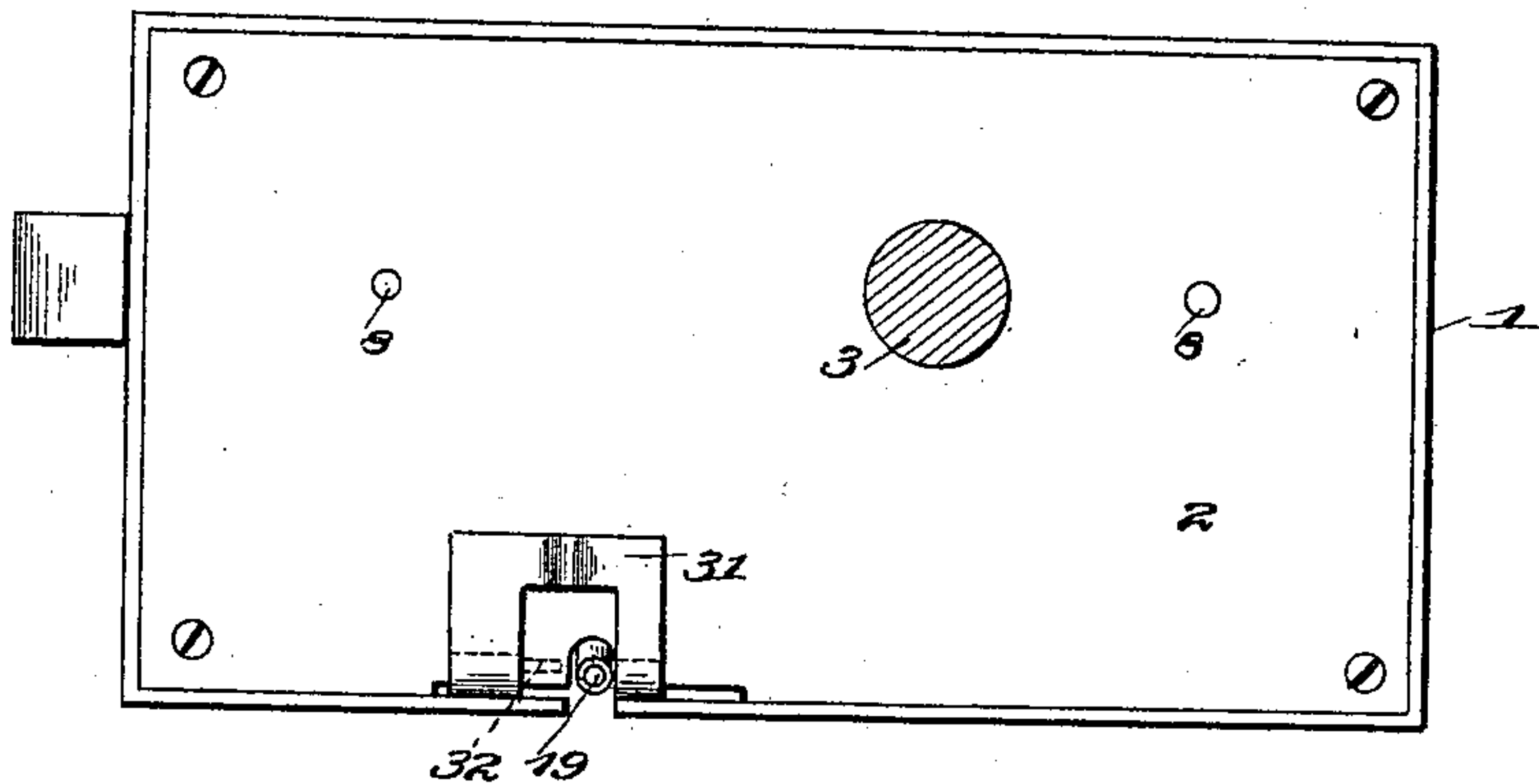


Fig. 2.

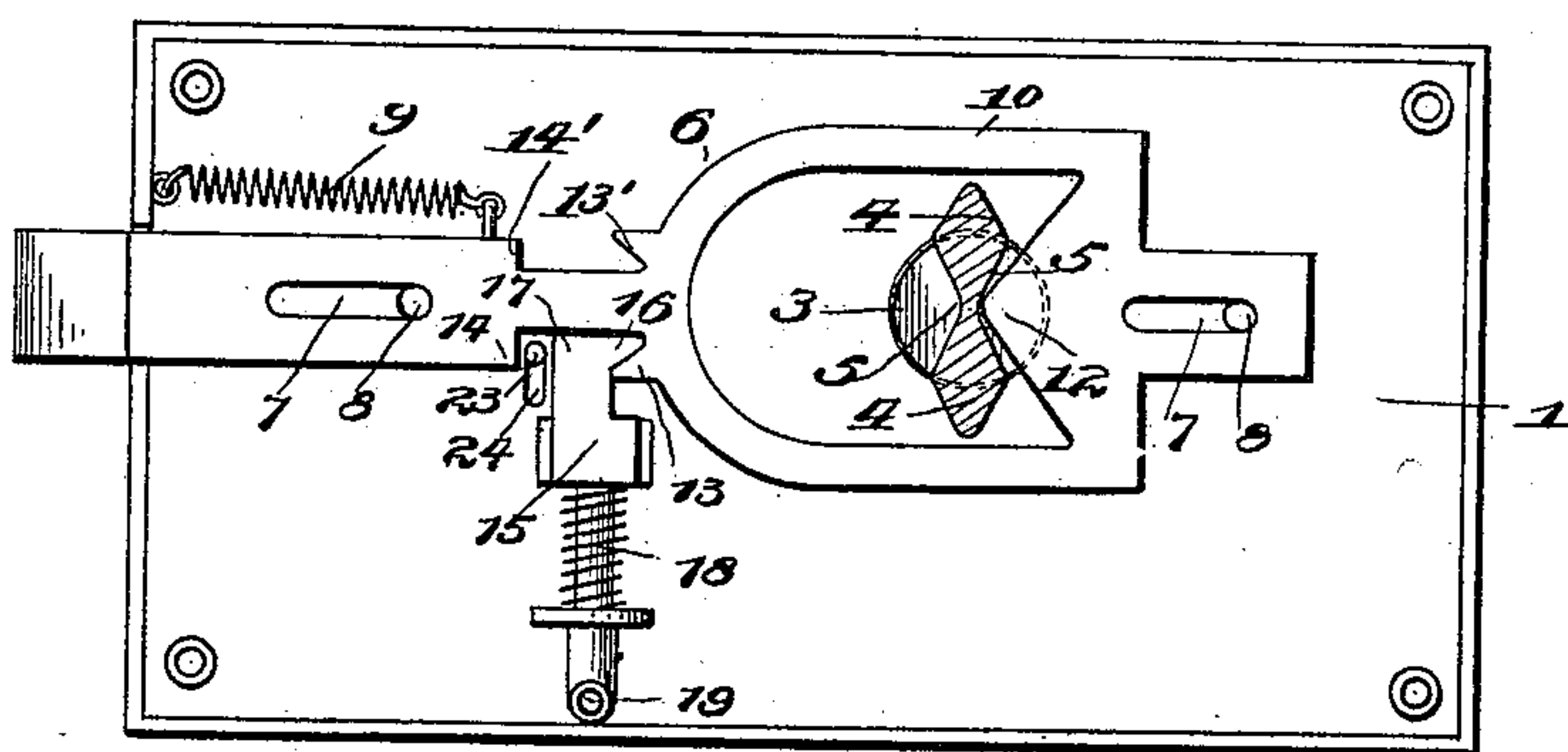


Fig. 3.

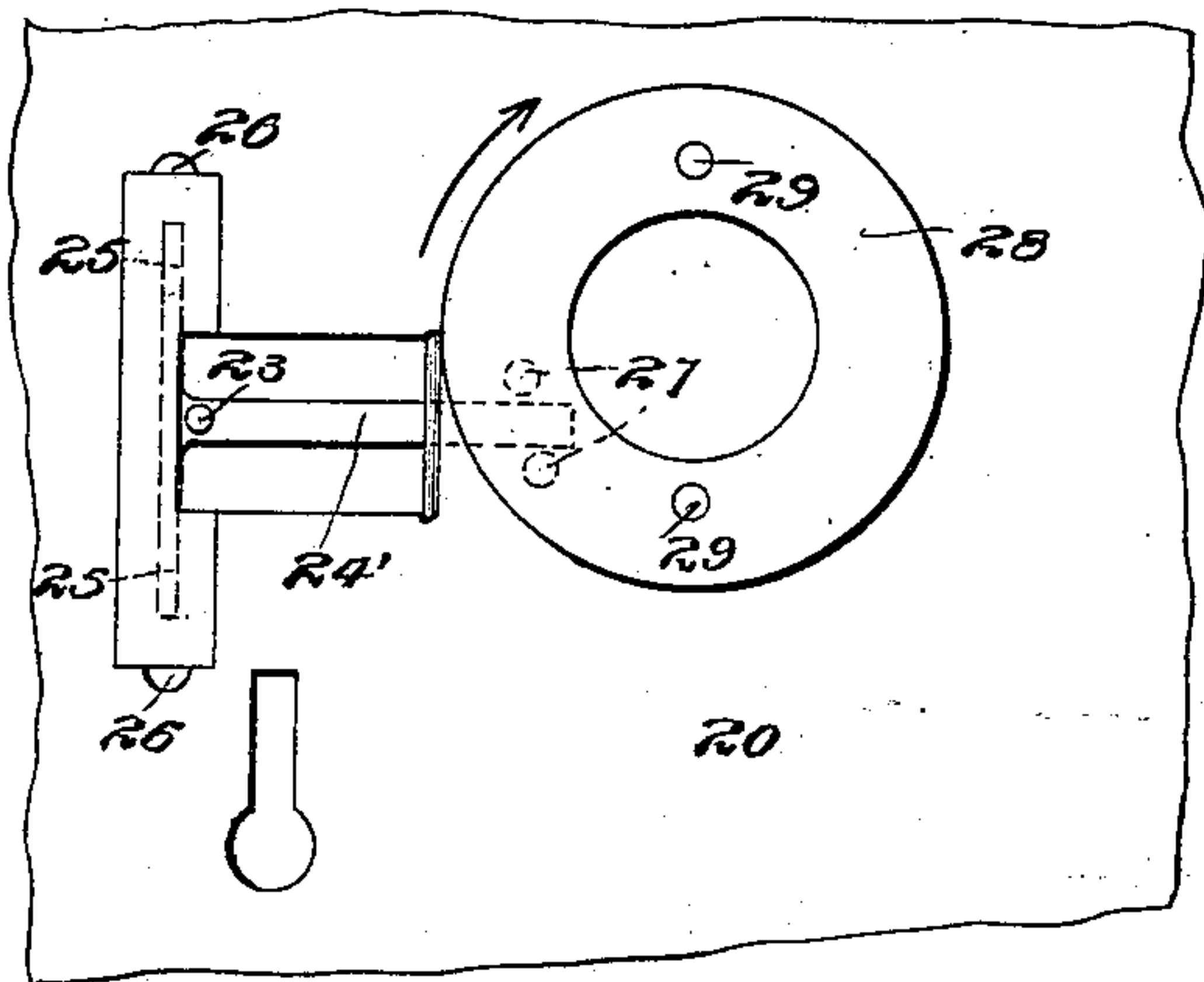


Fig. 4.

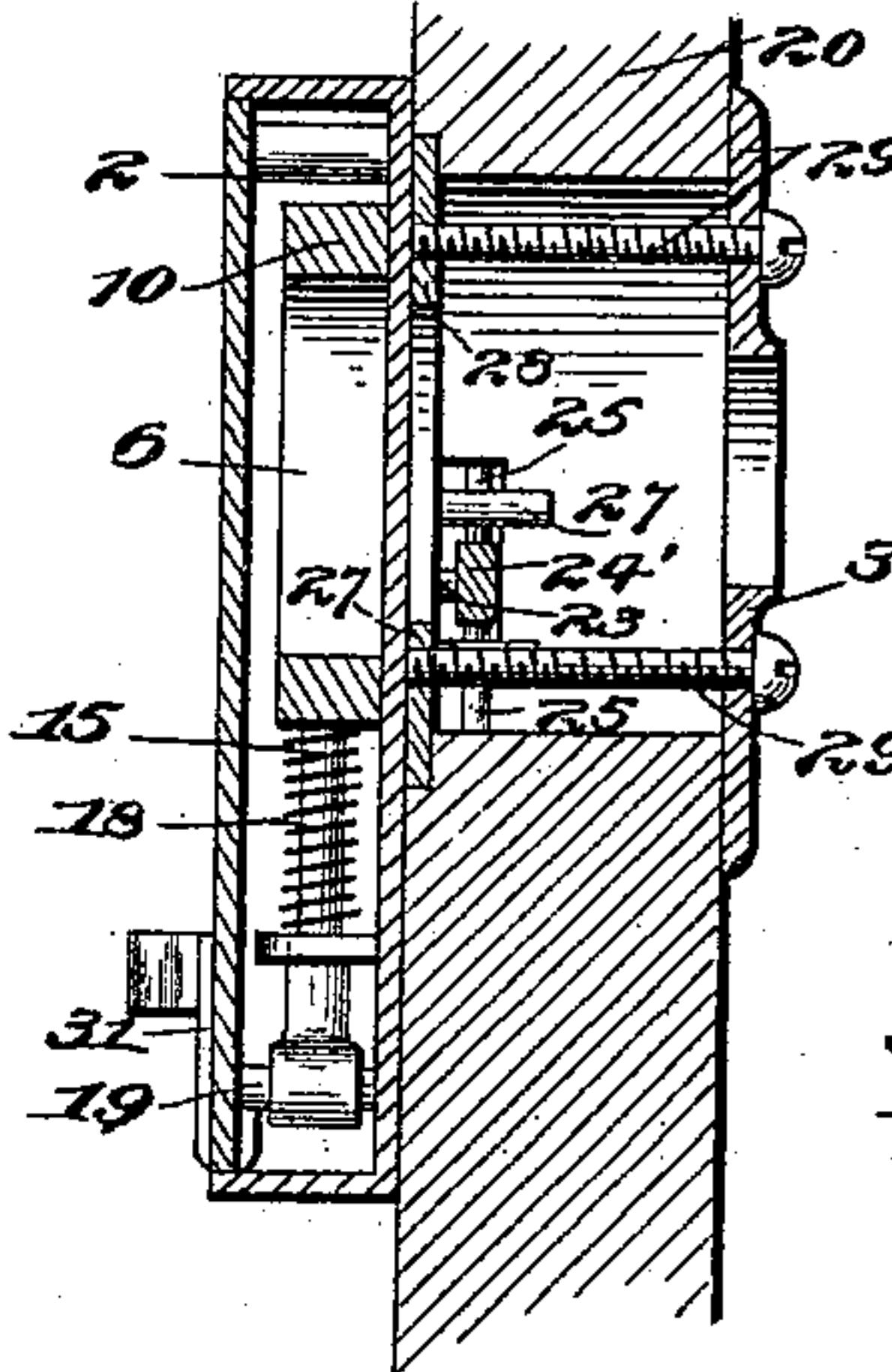
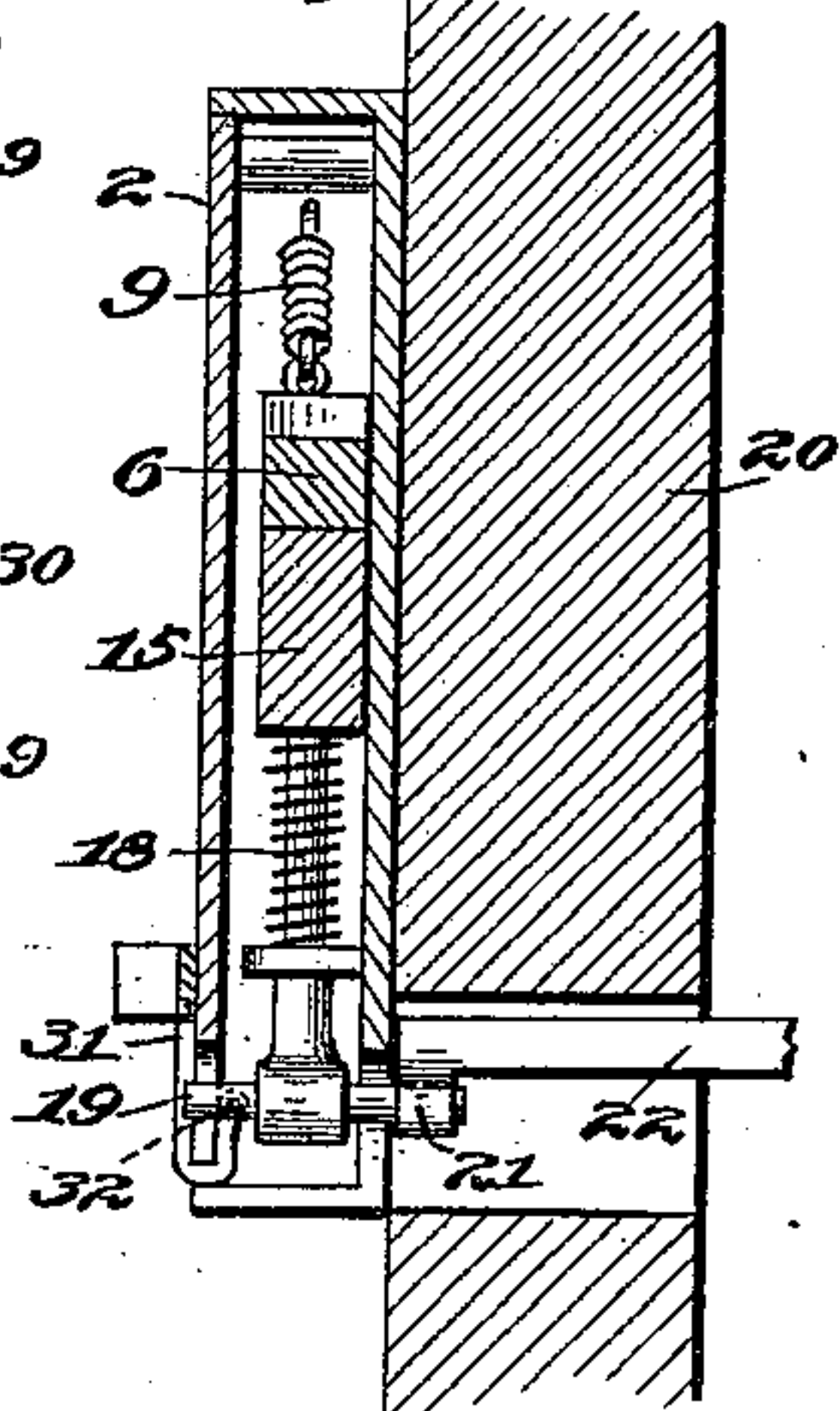


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## LOCK.

SPECIFICATION forming part of Letters Patent No. 616,210, dated December 20, 1898.

Application filed April 23, 1898. Serial No. 678,667. (No model.)

*To all whom it may concern:*

Be it known that I, AMAND SYVERSON, a citizen of the United States, residing at Pleasant Valley, in the county of Eau Claire and State of Wisconsin, have invented certain new and useful Improvements in a Combined Door and Safe Lock; and I do 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.

My invention relates to improvements in combined door and safe locks; and the object is to provide a simple, inexpensive, effective, and durable device of this character.

To this end the invention consists in the construction, combination, and arrangement of the device, as will be hereinafter more fully described, and particularly pointed out in the claims.

The accompanying drawings show my invention in the best form now known to me; but many changes in the details might be made within the skill of a good mechanic without departing from the spirit of my invention as set forth in the claims at the end of this specification.

The same reference characters indicate the same parts of the invention.

Figure 1 is a front elevation of a lock embodying my invention. Fig. 2 is a similar view, partly in section, with the front plate removed. Fig. 3 is a similar view of the door after the lock has been removed. Fig. 4 is a vertical section on the line 4 4 of Fig. 2. Fig. 5 is a similar view on the line 5 5.

1 denotes the lock-case, 2 the front plate, and 3 the knob-spindle, which is formed with oppositely-disposed radial lugs 4 4, between which are formed the V-shaped recesses 5 5.

6 denotes the reversible bolt, formed with longitudinally-alined guide-slots 7 7 to receive the studs 8 8, fixed in the lock-case, and 9 represents a retractile spring fixed at one end to the bolt and at the other to the case.

10 denotes the bolt-yoke, and its rear inner edge is formed with a V-shaped toe 12, which projects into the corresponding recess in the spindle, so that when said spindle is rotated in either direction one of the lugs 4

will come in contact with the upper or lower beveled face of the toe 12 and retract the bolt, and when the knob is released the spring 9 restores the bolt to its normal position. The shank of the bolt is formed with a projecting tooth 13 and a right-angular shoulder 14, arranged longitudinally opposite said tooth. 15 represents a locking-tumbler formed on one side with a projecting lip 16, which engages the tooth 13, and on its opposite side with a shoulder 17, which extends into the path of the shoulder 14 and locks the bolt against being withdrawn.

18 represents a spiral spring encompassing the body of the tumbler to normally hold it in contact with the bolt, and the opposite end of said tumbler terminates in a cylindrical cross-bar 19, which extends in opposite directions through the lock-case and door, and either end of this cross-bar 19 is adapted to receive the encompassing socket 21 on the removable key 22.

23 denotes a lateral pin extending through a vertical slot 24 in the lock-case and into the shoulder 14 on the bolt. This pin 23 is fixed on the side of a longitudinal bar 24', which is formed at one end with vertical guide-rods 25 25, which have a reciprocating movement in the guide-eyes 26 26, fixed in the door, and the free end of said bar 24 extends between the pins 27 27, fixed in the annular collar 28, encompassing the spindle, and which in turn is secured by the screws 29 29 to the knob-escutcheon 30, the heads of the screws projecting slightly beyond the outside face of the escutcheon, so that a limited rotary movement may be communicated to it to raise and lower the pin 23. As the escutcheon 30 is rotated to the right the collar 28 (see Fig. 3) is carried in the direction of the arrow. The pins 27 27 on the collar carry the bar 24' with it. The bar being fixed to the guide-rods 25 25, working in the alined guide-eyes 26 26, is permitted to rise and fall vertically, according to the direction in which the escutcheon is turned, and as it is rotated in the direction of the arrow it carries the lateral pin 23 with it and into the path of the shoulder 14 on the bolt 6, as shown in Fig. 2, while a reverse movement of the escutcheon will withdraw the pin 23 from the path of the



shoulder 14, and consequently permit the bolt to be withdrawn.

The shank of the bolt 6 is provided with a duplicate tooth 13' and a corresponding angular shoulder 14', so that the bolt may be reversed, so as to adapt the lock to a right or left hand door.

31 denotes a slide on the plate 2, and it is provided with a projecting pin 32, which projects under the cross-bar 19 and holds the tumbler out of contact with the bolt, so as to convert the same into an ordinary self-closing latch.

The operation is as follows: When the bolt is locked and it is desired to unlock it, the escutcheon is first turned to the right, which withdraws the pin 23 from the shoulder 14 on the bolt. Then the knob is turned to the right or left as far as it will go until the shoulder 14 of the bolt abuts against the contiguous face of the tumbler 15 and held in that position and the key inserted, so as to engage the cross-bar 19, which is now lifted upward to release the tumbler from the bolt, so that a further movement of the knob-spindle in the same direction will withdraw the bolt and permit the door to be opened.

Having thus fully described my invention, what I claim as new and useful, and desire to

secure by Letters Patent of the United States, is—

1. The combination in a lock of the class described, of the spring-actuated bolt 6, formed with the tooth 13, angular shoulder 14 and the V-shaped toe 12, the spindle 3 formed with the lugs 4 4 and recess 5, the spring-actuated tumbler 15, formed with the lip 16, angular shoulder 17 and cross-bar 19 and a removable key provided with a socket adapted to engage said cross-bar, substantially as shown and described.

2. The combination in a lock of the class described, of the spring-actuated bolt 6, formed with the angular shoulder 14, the knob-spindle arranged to withdraw said bolt, the lateral pin 23 projecting into the path of said shoulder, knob-escutcheon and means whereby the rotation of said escutcheon will project and withdraw said pin, substantially as shown and described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

AMAND <sup>his</sup> X SYVERSON.  
mark

Witnesses:

OLE VALD,  
E. BRATBERG.