

H. F. WEIDEL.

LOCK.

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938,926.

Patented Nov. 2, 1909.

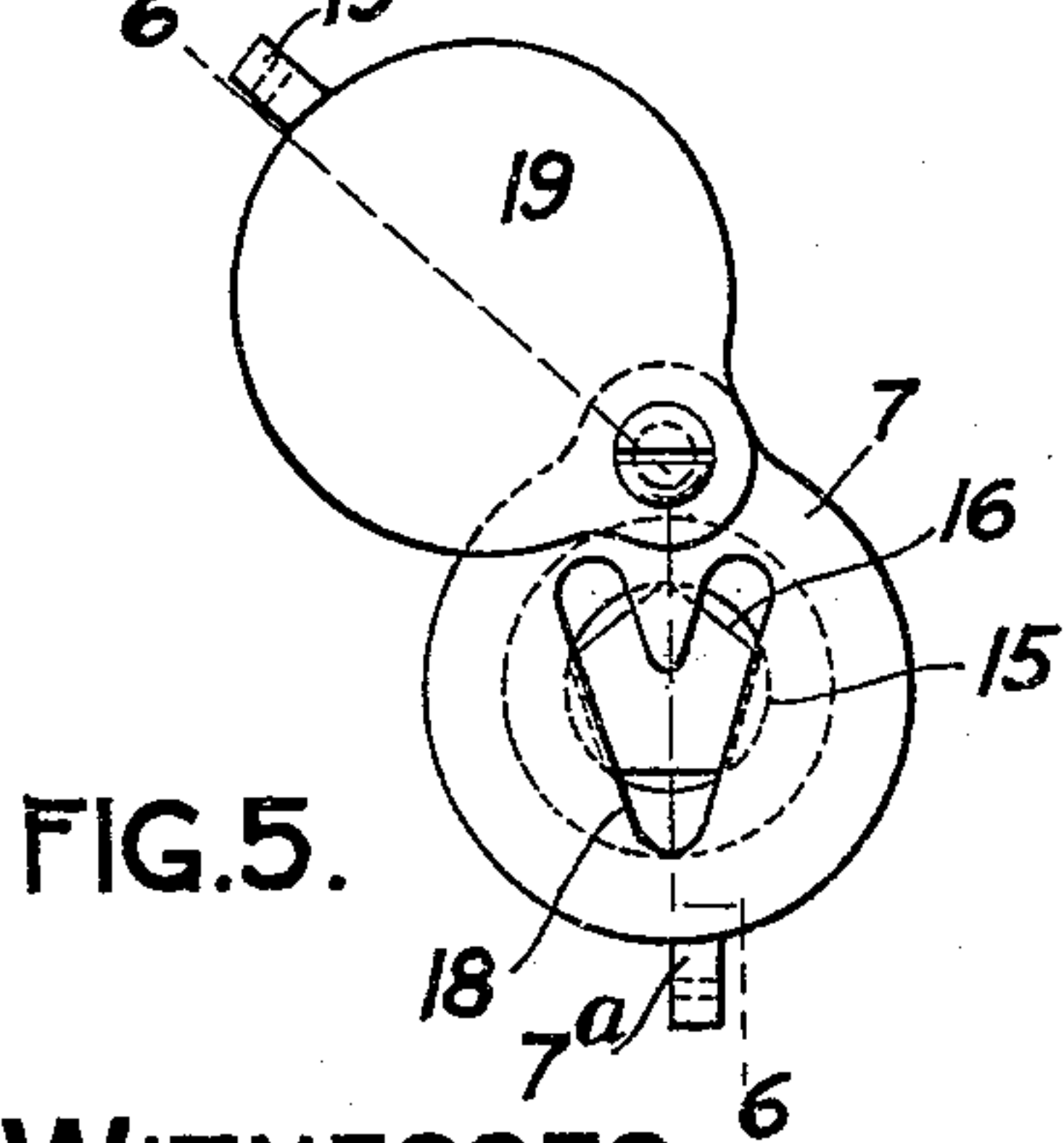
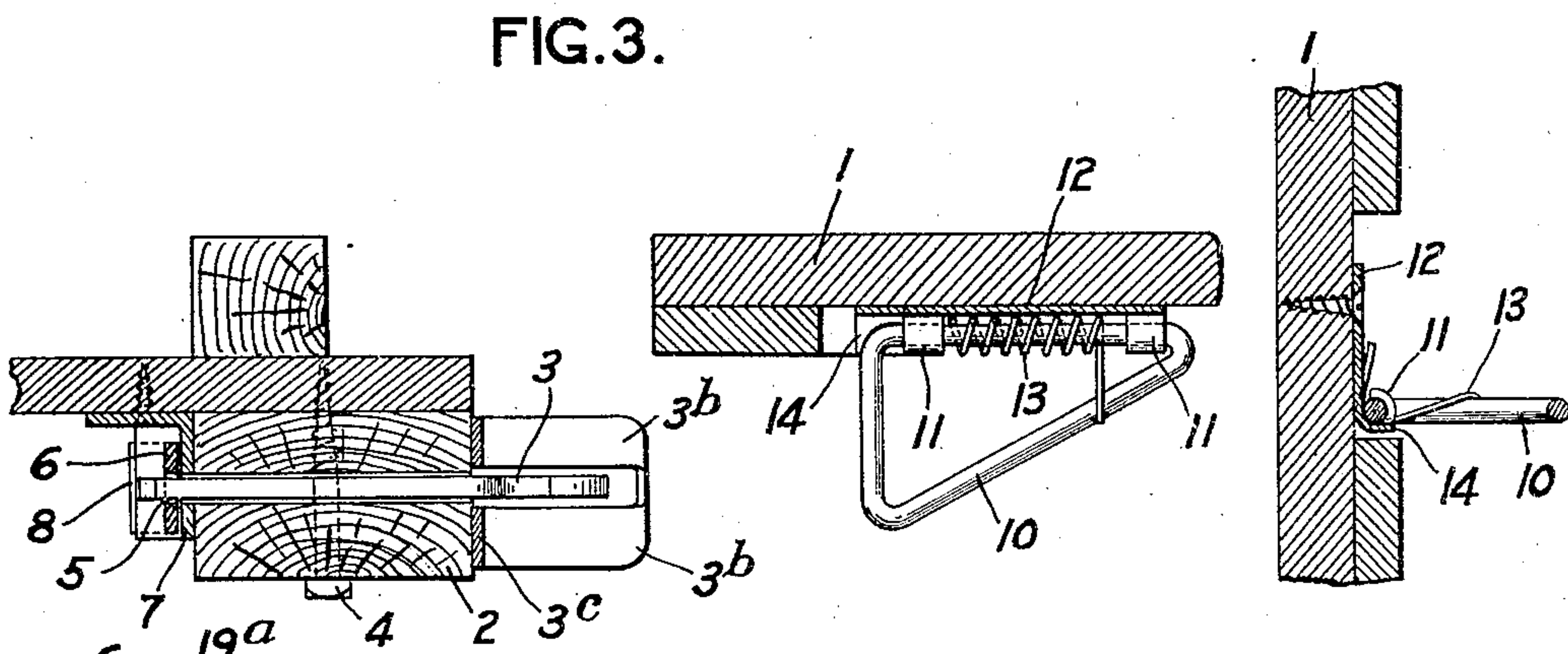
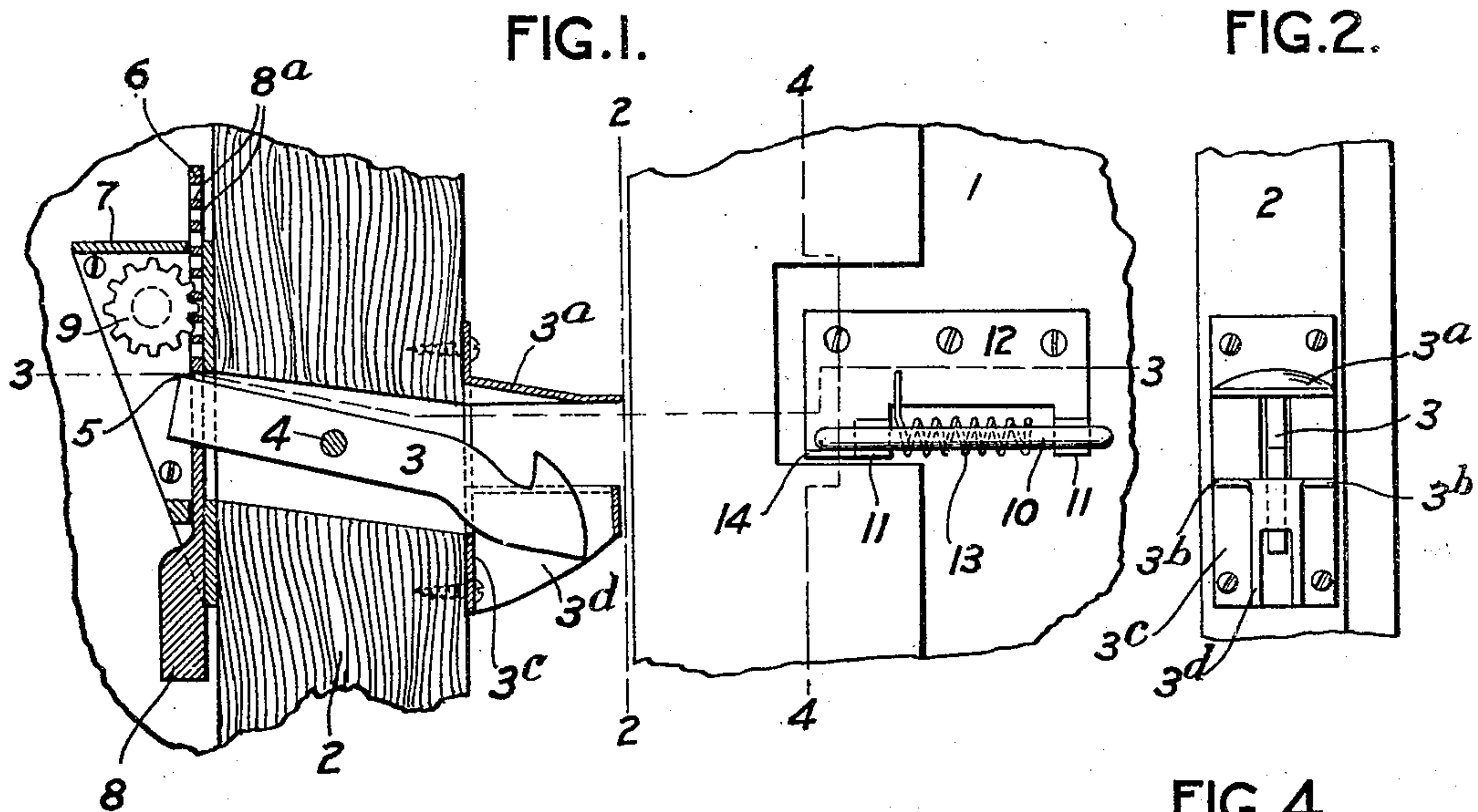


FIG. 5.

WITNESSES:

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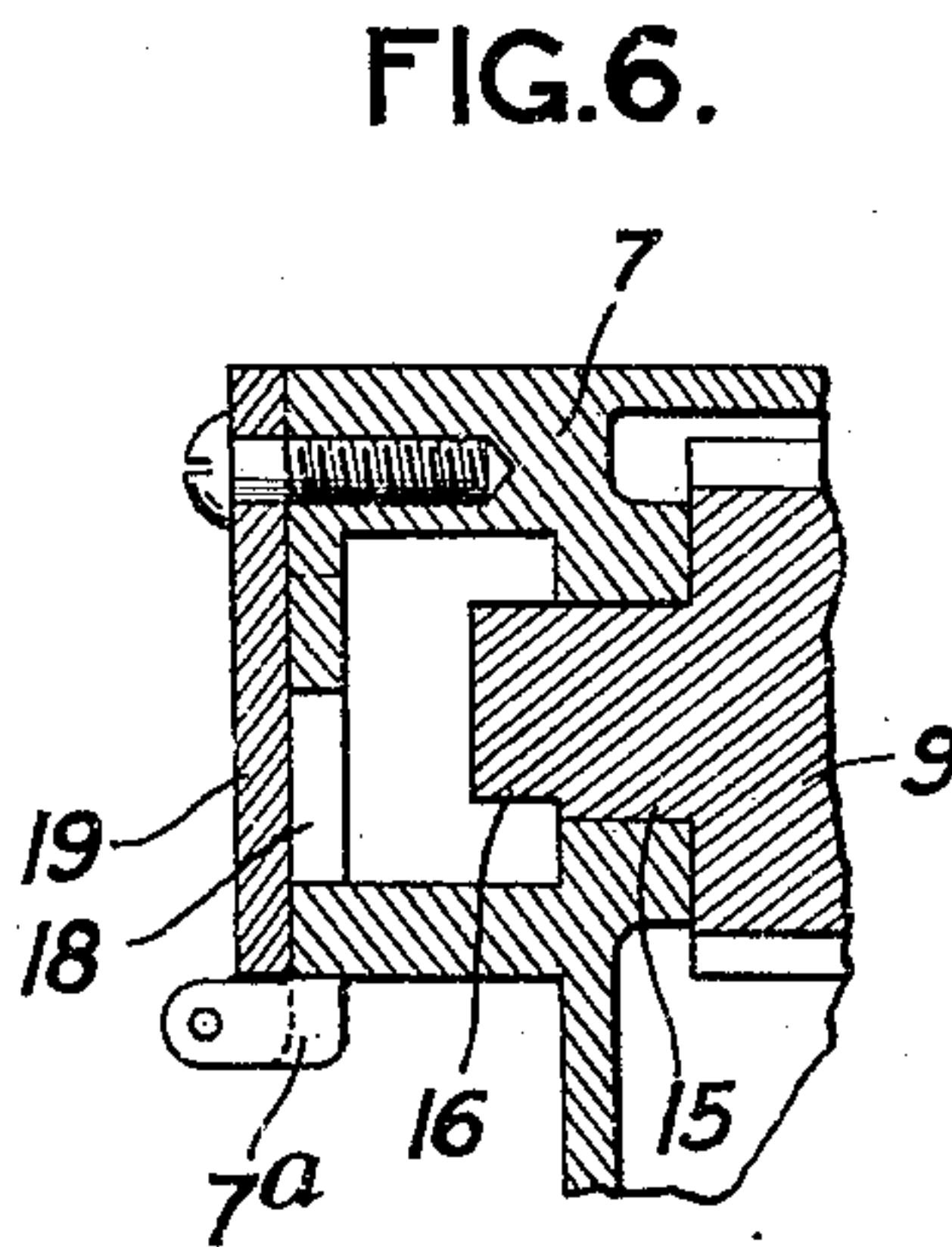


FIG. 6.

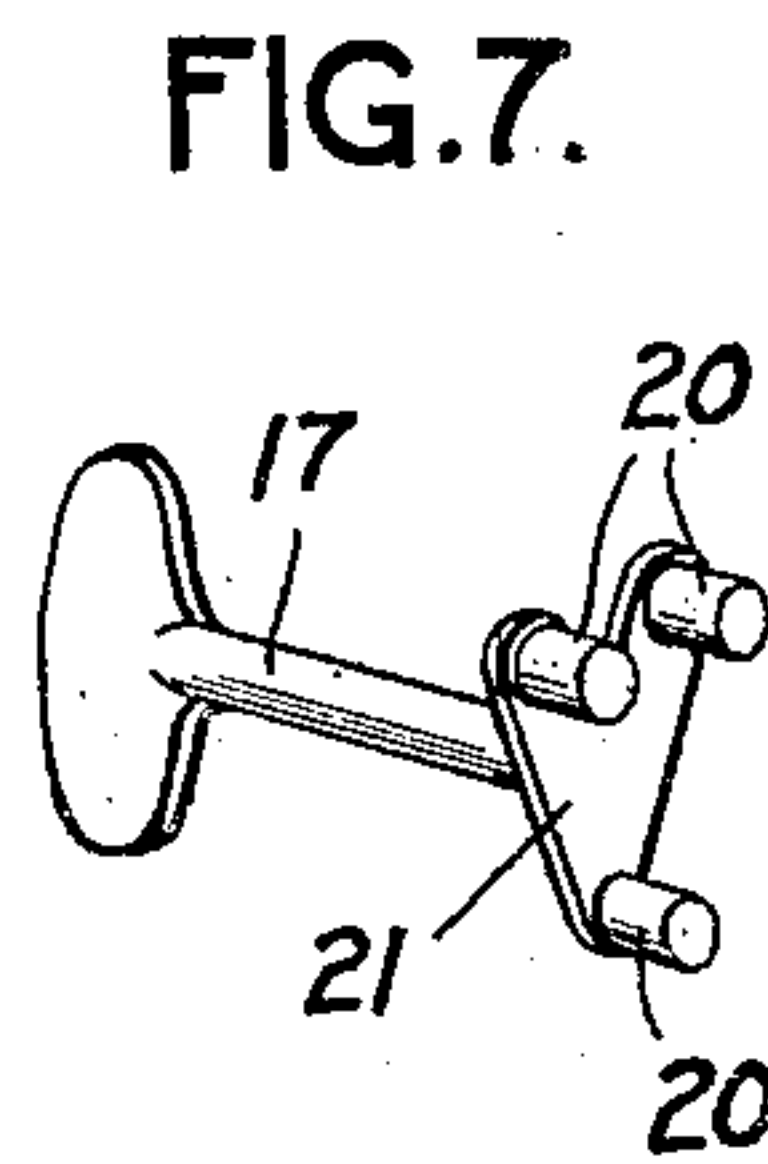


FIG. 7.

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UNITED STATES PATENT OFFICE.

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LOCK.

938,926.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HERMAN F. WEIDEL, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to locks, and has for its object one that engages automatically, can be disengaged only by the use of a special key or wrench, and which is protected at all points from being tampered with.

In the drawings:—Figure 1 is a sectional side elevation of a lock embodying this invention; Fig. 2 is a cross-section on the line 2—2 of Fig. 1; Fig. 3 is a sectional plan view on the line 3—3 of Fig. 1; Fig. 4 is another cross-section on the line 4—4 of Fig. 1; Fig. 5 is an exterior view of the key-socket; Fig. 6 is a section on the line 6—6 of Fig. 5; and Fig. 7 is a perspective view of the special key used in disengaging the lock.

The device is shown in connection with a sliding door, like those on freight cars, for which it is particularly adapted. 1 represents such a door as this, and 2 is the post that forms one side of the door-frame. A latch consisting of a hook-lever 3, which preferably is set in the post 2, is pivoted on a stud 4 (Fig. 1). The hooked end of said lever projects beyond the side of said post, while the straight end extends through a slot 5 in a vertically sliding bar 6. This bar is slidably supported in a fixed bracket 7 that in turn is screwed to the door frame. Said bar has on its lower end a counterweight 8 that tends to pull it downward and so normally tilt the lever 3 into a horizontal position, and it also has slots, or projecting teeth, 8^a, as the case may be, that are operatively engaged by a revoluble pinion 9 for the purpose of tilting the lever 3 into the position shown in Fig. 1.

The keeper for coöperating with the hook-lever 3, and which is carried by the door when the lever is attached to the door post, consists of a rod 10 that is supported in brackets 11, 11 on a plate 12, and which has the form of a right-angled triangle. This keeper is maintained in the horizontal position shown by the pressure of a spring 13 that is coiled around it, and which presses the keeper downward against an abutment 14 on the bracket 12 (Fig. 4).

When the door 1 is closed, the rod 10 is engaged by the latch and caused to ride up over the hooked end of the lever 3, whereupon the spring 13 forces it back into the hook. Thus the door is locked, and can only be opened by turning the pinion 9 as indicated, which raises the bar 6 and tilts the lever 3 to the position shown in Fig. 1. When the hook recedes below the bottom of the rod 10, the door can be opened. This keeper is adapted to fold up against the door, out of the way, so that the door can be pushed wide open.

Guards 3^a and 3^b, above and below the hook respectively, protect the lock from any instruments that might be inserted between the door and frame for the purpose of picking the lock. These guards are shown as lugs that project horizontally out from the plate 3^c, which also has vertical wings 3^d, one on each side of the hook, for its better protection.

As stated before, the pinion 9 can be turned only by a special key or wrench. A suitable form of wrench of irregular outline is shown in Fig. 7, and the part which it engages is shown in Figs. 5 and 6.

The pinion 9 before mentioned (Fig. 6) has a circular hub 15 that supports it in the bracket 7 and permits it to rotate. An extension 16 of this boss constitutes a shaft with a head whereby it can be operated by the wrench 17, and in the drawings the head is represented as pentagonal in form. The bracket 7 extends some distance out beyond the head 16, and forms a boxlike inclosure for it, with an irregular opening 18 into it that is covered by a pivoted plate 19. When the latter is swung aside, the wrench 17, which conforms in outline to the irregularities of the opening 18 into the box, may be inserted through said opening. This key has on its ends a number of studs 20, that engage the head 16, and so enable the pinion 9 to be turned.

The peculiar outline of the opening 18 in connection with the form and dimensions of the nut 16 makes it practically impossible for any device other than the wrench 17 to operate the latch. It should be noted that the bracket 7 extends far enough beyond the head 16 to permit the key 17 to be turned after it is inserted through the opening 18, to bring it into proper position for engaging said head.

If desired, a lug 7^a may be cast on the lower edge of the face of the bracket 7, and a corresponding lug 19^a on the plate 19. A hole in each of said lugs enables a wire to
5 be passed through them, to carry another lock or seal, so that the door may be doubly protected.

What I claim is:—

10 1. A lock comprising a shaft, a latch operatively connected therewith; and a box inclosing the head of said shaft, within which the jaws of a wrench for said shaft can turn for adjustment with reference to the head of said shaft, and which is
15 slotted to conform to a wrench having jaws of irregular outline; substantially as shown and described.

20 2. A lock comprising a latch, operatively connected to a sliding bar having a ratchet; a pinion revolvably supported adjacent said ratchet and having an angular extension

adapted to be engaged by a wrench; and a box inclosing said extension, within which the jaws of the wrench can turn for adjustment with reference to said extension, and
25 which is slotted to receive a wrench of irregular outline; substantially as shown and described.

3. A lock comprising a latch having a recess in its end, means for holding said latch
30 normally in horizontal position when in place upon one of the parts to be locked together, a spring controlled keeper, yieldingly held in the path of the latch, and adapted to fold
35 in against the part to which it is attached, and means for operating said latch, substantially as shown and described.

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Witnesses:

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