

J. HERR.
SAFETY LOCK.
APPLICATION FILED JUNE 6, 1908.

907,234.

Patented Dec. 22, 1908.

Fig. 1.

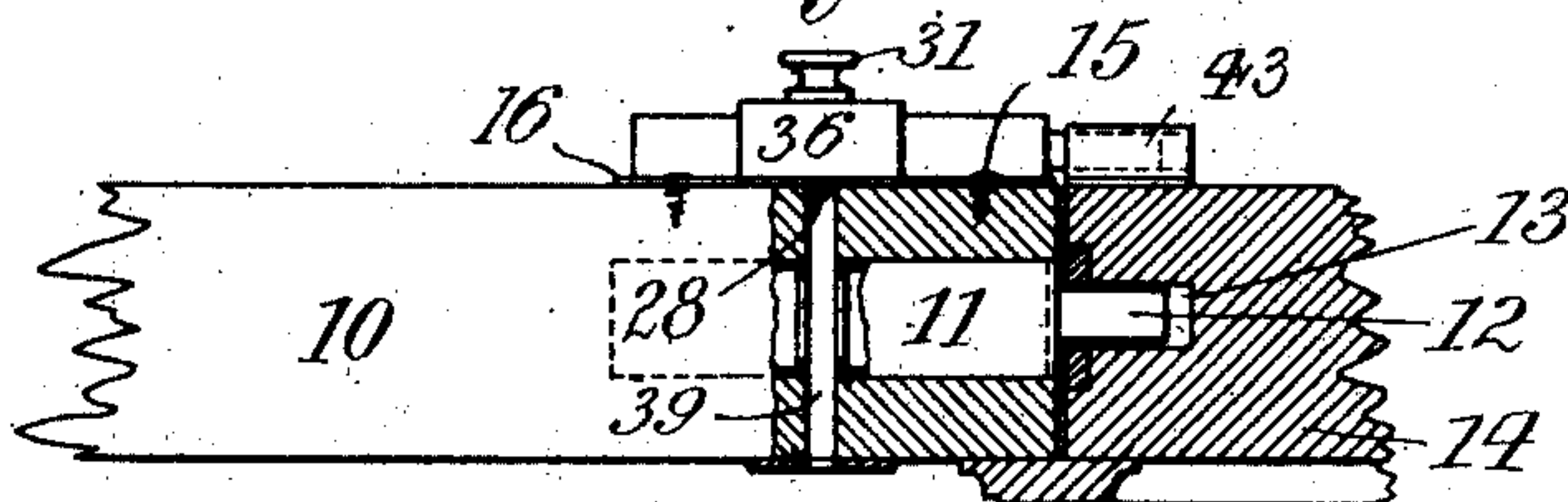


Fig. 2.

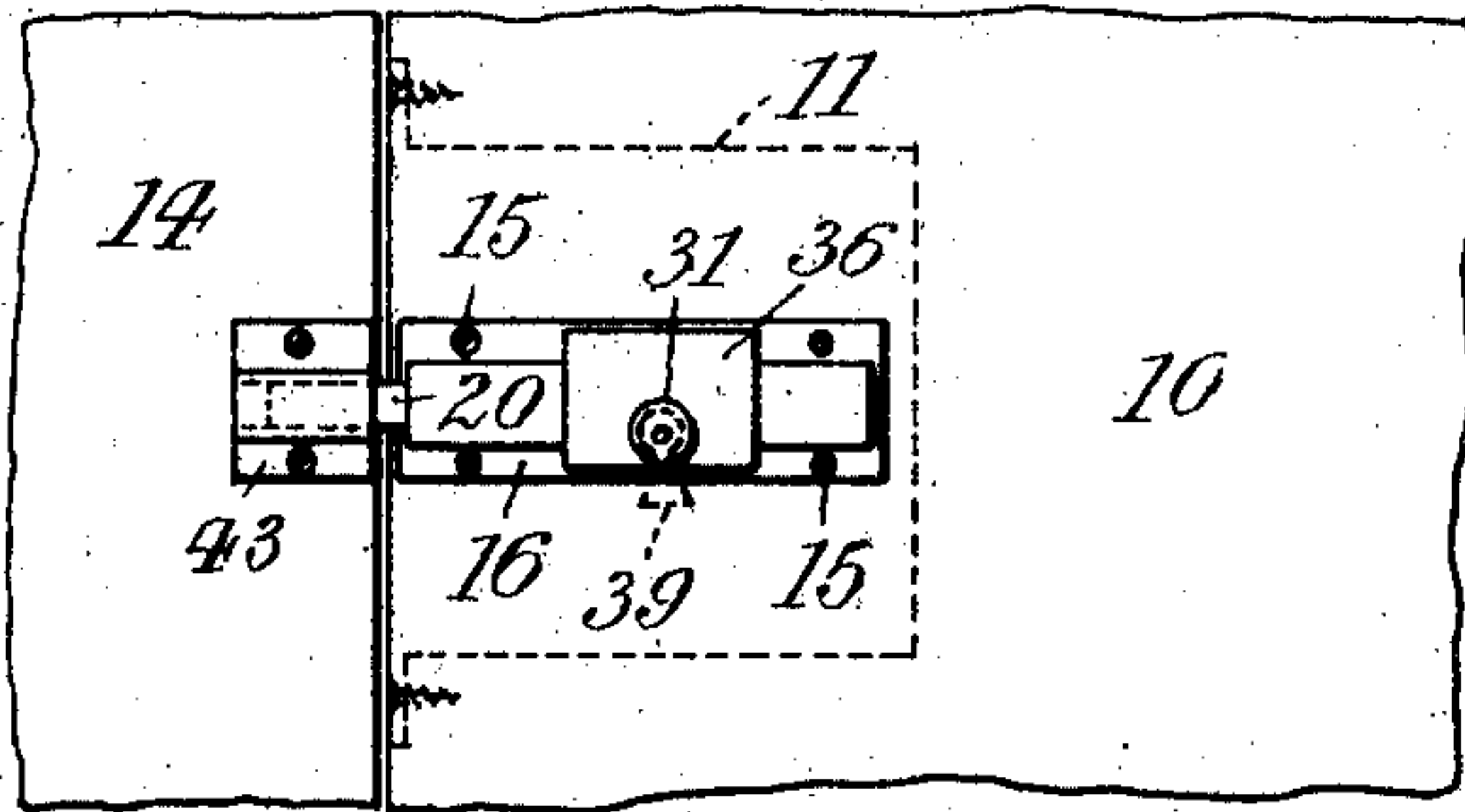


Fig. 8.

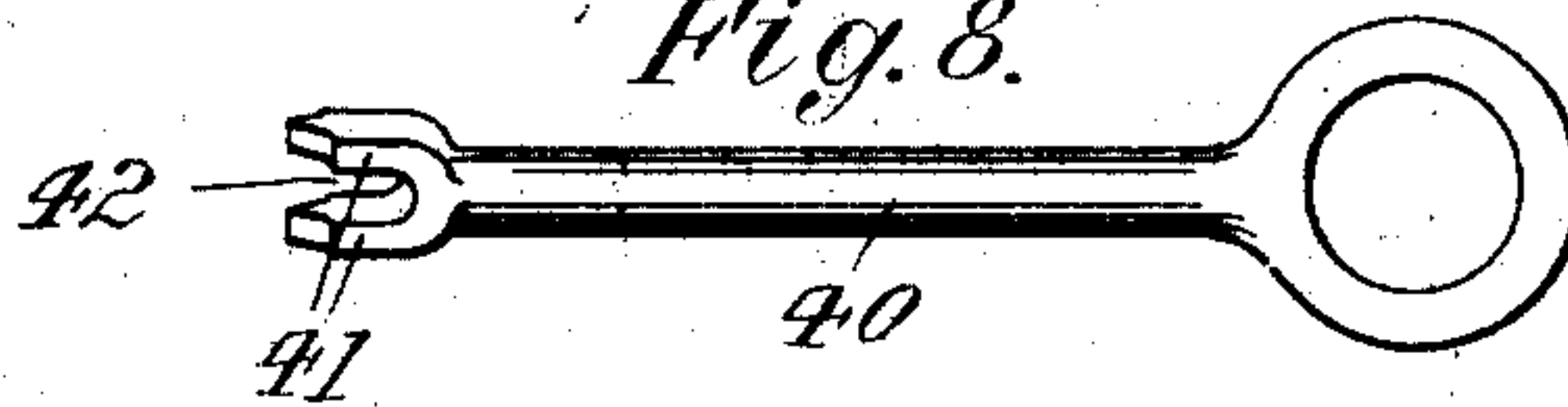


Fig. 3.

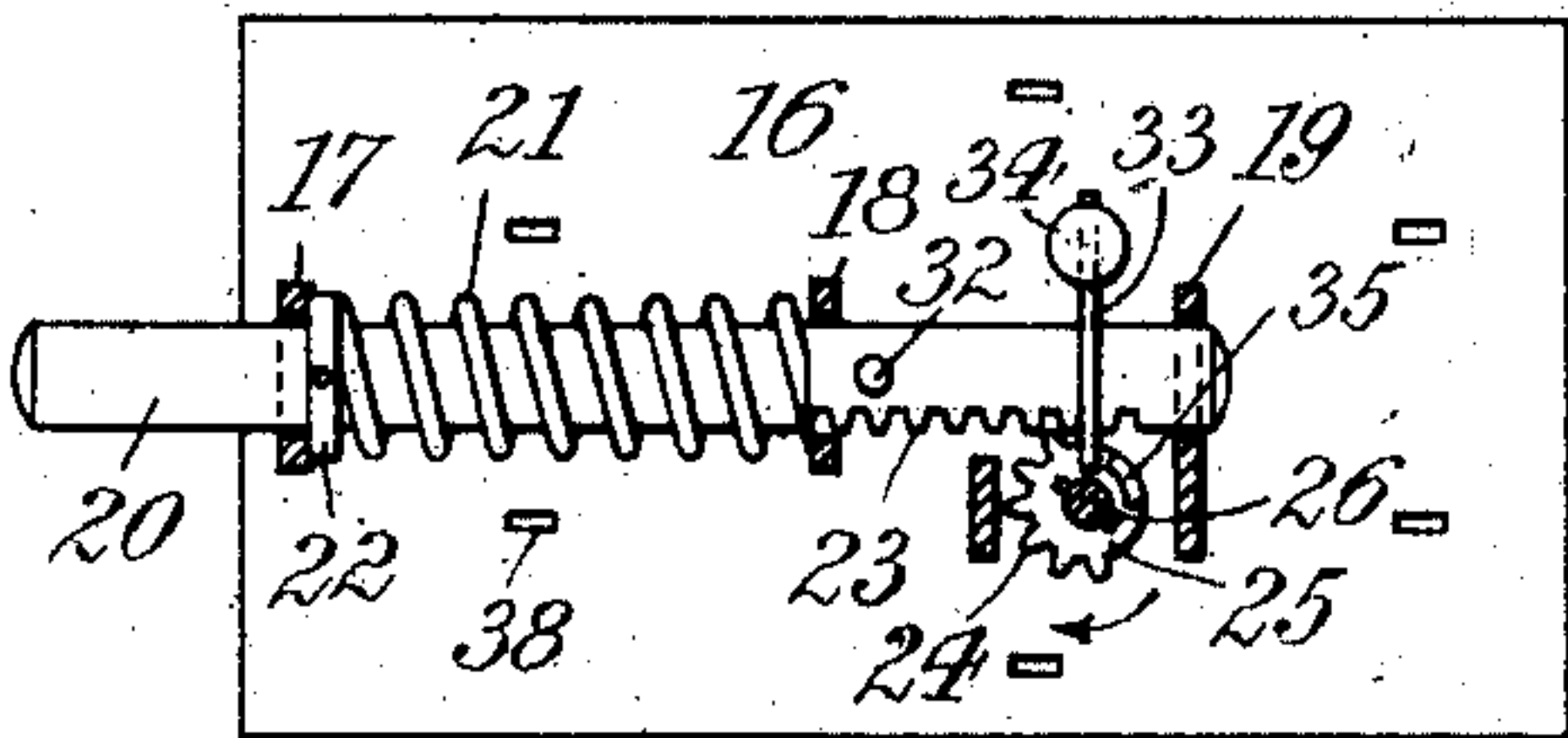


Fig. 4.

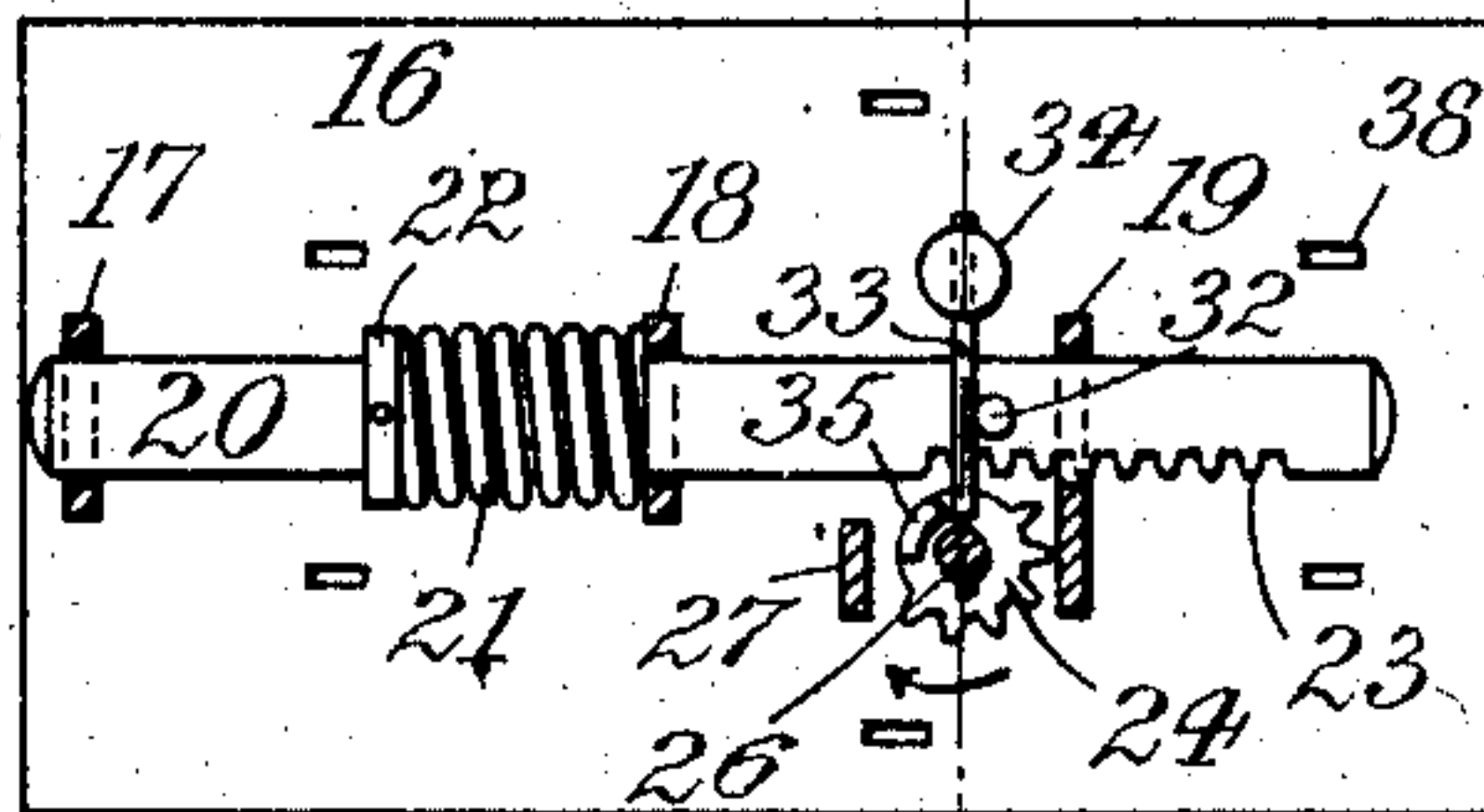


Fig. 5.

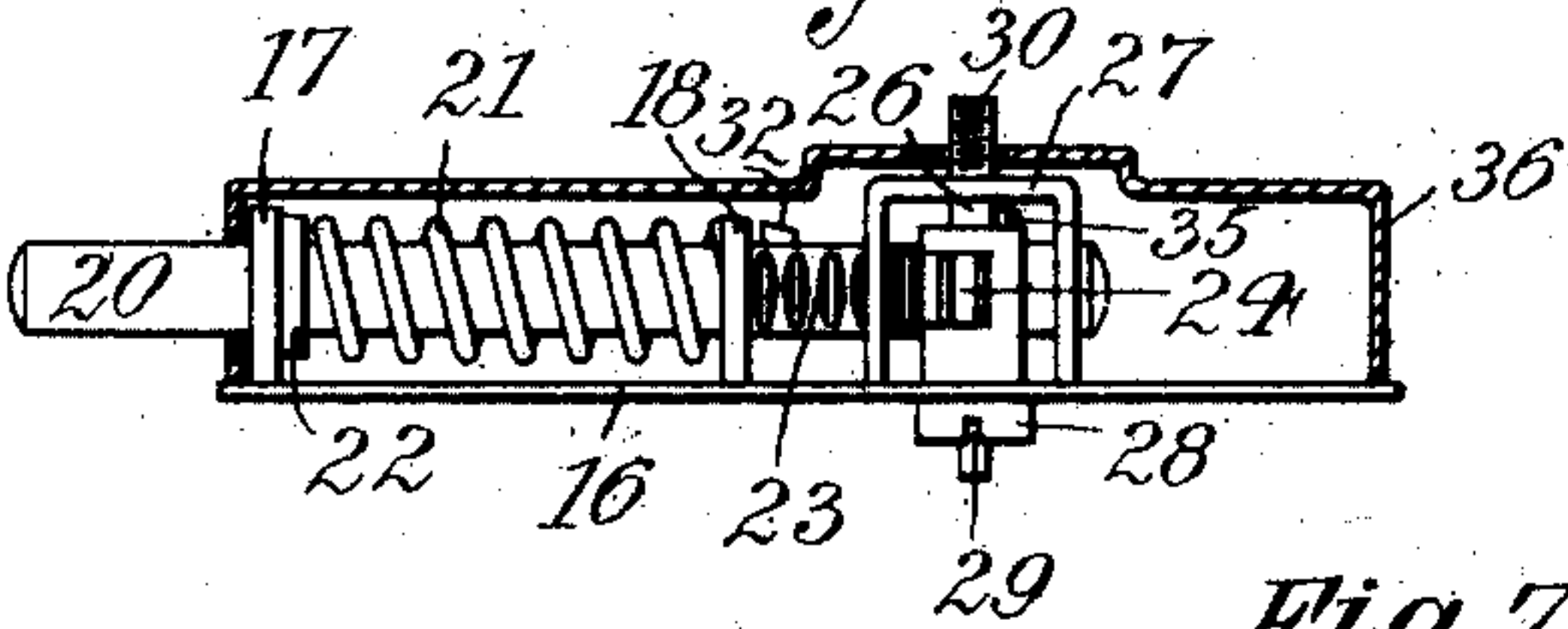


Fig. 6.

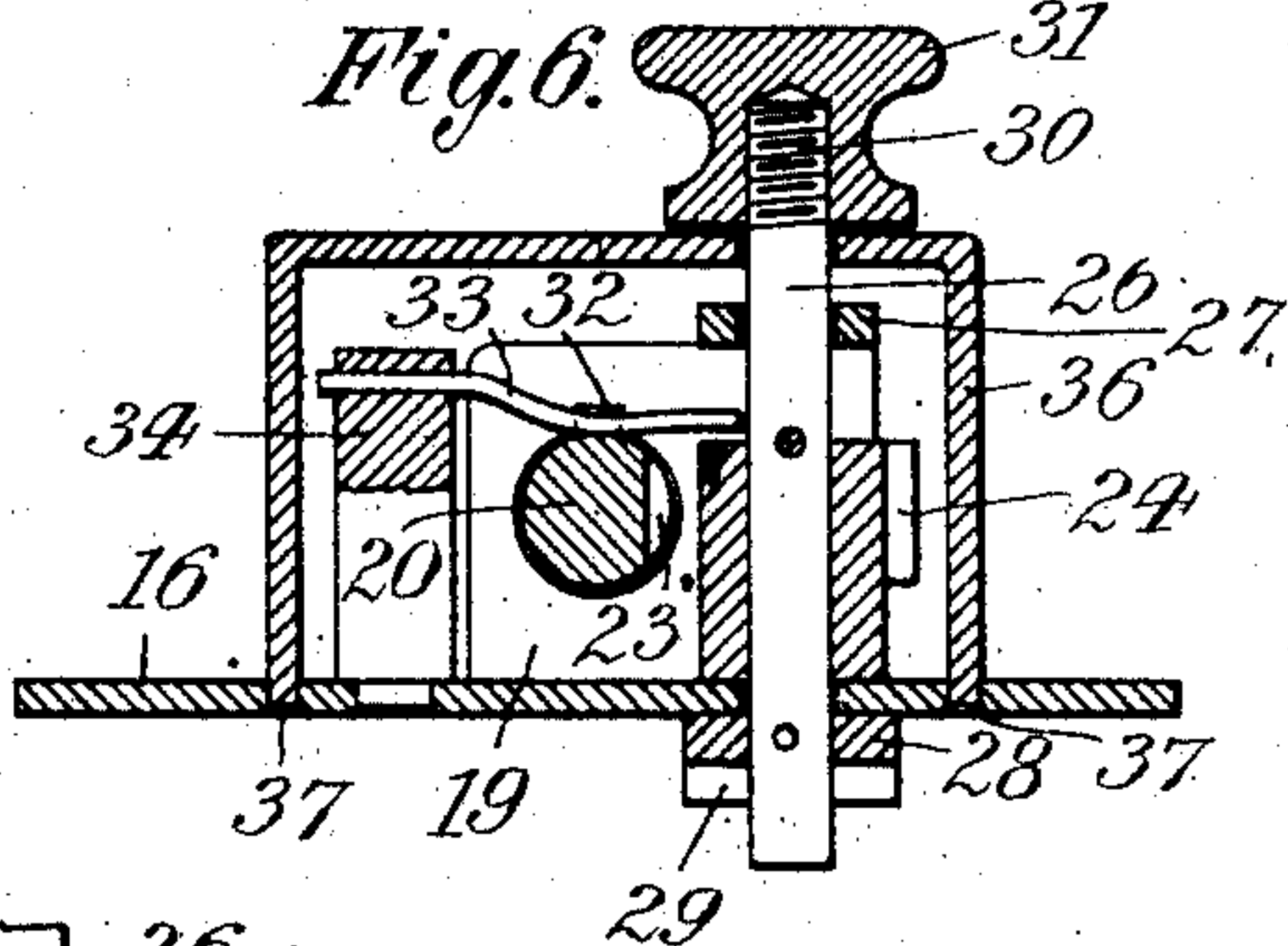
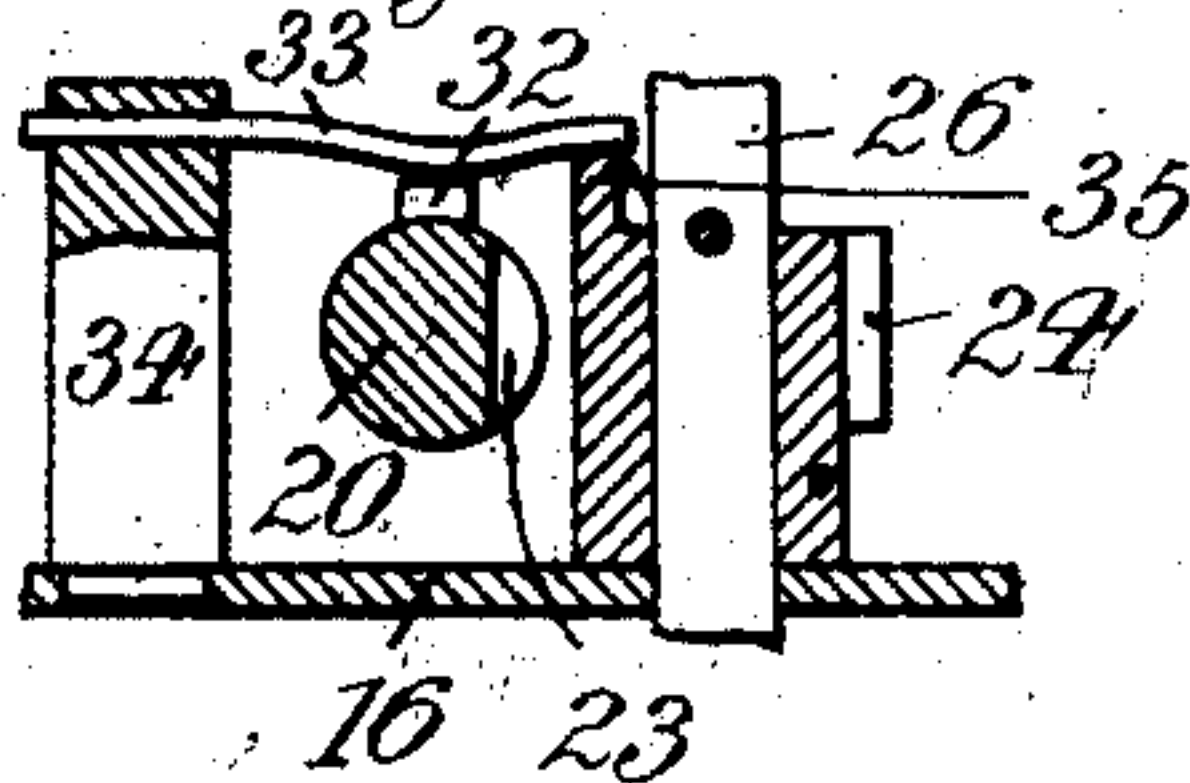


Fig. 7.



WITNESSES
H. R. Schuch.
August Miner.

INVENTOR
Josef Herr,
BY
Arthur E. Gumpfer
his ATTORNEY.

UNITED STATES PATENT OFFICE.

JOSEF HERR, OF NEW YORK, N. Y.

SAFETY-LOCK.

No. 907,234.

Specification of Letters Patent.

Patented Dec. 22, 1908.

Application filed June 6, 1908. Serial No. 437,139.

To all whom it may concern:

Be it known that I, JOSEF HERR, a citizen of Austria, and a resident of New York city, Manhattan, county and State of New York, have invented new and useful Improvements in Safety-Locks, of which the following is a specification.

This invention relates to a safety lock secured to the inner side of a door, and adapted to be operated by a key which is introduced into the usual key hole of the main lock of such door.

In the accompanying drawings: Figure 1 is a plan, partly in section, of a door provided with my improved safety lock; Fig. 2 a front elevation, partly broken away, of Fig. 1; Fig. 3 a front view, partly in section, of the safety lock, with the cover removed; Fig. 4 a similar view showing the parts in a different position; Fig. 5 a plan view of Fig. 3, showing the cover in section; Fig. 6 an enlarged cross section on line 6—6, Fig. 4; Fig. 7 a similar section, showing the parts in a different position; and Fig. 8 a perspective view of the key.

The door 10 is provided with the usual lock 11 the bolt 12 of which is adapted to be projected into a corresponding recess 13 of door frame 14. To the inner side of door 10 is secured by screws 15 the base plate 16 of my improved safety lock. Base plate 16 is provided with a number of perforated posts 17, 18 and 19 for the support of an axially movable locking bolt 20. The latter is normally pressed outwards by a coiled spring 21, interposed between post 18 and a collar 22 of bolt 20. The rear or inner section of the bolt is toothed as at 23 for the engagement with a toothed wheel or pinion 24, having a mutilated section 25, and keyed to a spindle 26. The latter passes through corresponding perforations of plate 16 and of a frame 27, which may be made integral with post 19. Near its one end, spindle 26 is provided with a collar 28, grooved as at 29, the spindle projecting slightly beyond such collar. At its other end, spindle 26 is threaded as at 30 for the engagement with a knob or handle 31.

In order to retain bolt 20 in its retracted position, if so desired, bolt 20 is provided with a pin or stud 32 having a beveled top (Fig. 5), and adapted to be engaged by a resilient arm 33 secured to a post 34 of base plate 16. The co-relation of the parts is such that, when spindle 26 is rotated in the

direction of the arrow, (Fig. 3), either by knob 31 or by a suitable key, hereafter more fully described, pinion 24 will engage rack 23, to retract bolt 20, until stud 32 has passed underneath arm 33, whereupon the mutilated section of pinion 24 arrives opposite rack 23, (Fig. 4). During the retraction of bolt 20, the beveled stud 32 comes into engagement with the free end of arm 33, so that the latter will be gradually raised, while stud 32 passes with its inclined top underneath the arm. After the stud has cleared the arm, the latter will, owing to its resiliency, descend in front of stud 32, to prevent spring 21 from projecting bolt 20 outwards, after the teeth of pinion 24 have cleared rack 23. For releasing bolt 20, pinion 24 is provided at its mutilated section 25 with a shoulder 35, adapted to engage the free end of arm 33. It will be readily understood that, when pinion 24 is turned in the direction of the arrow, (Fig. 4,) shoulder 35 will lift arm 33, until it clears stud 32, (Fig. 7,) so that spring 21 is free to project bolt 20 outwards (Figs. 3 and 5).

The operating parts of the safety lock are inclosed within a suitable casing 36, riveted to plate 16, for which purpose casing 36 is provided with a number of prongs 37, engaging corresponding openings 38 of plate 16.

In applying the safety lock described to door 10, base plate 16 is so secured to the inner side thereof, that the free end of spindle 26, as well as collar 28 are received within the key hole 39 of lock 11 (Figs. 1 and 2). For operating the safety lock from the outside, a key 40 is used, which terminates in a sharpened fork 41, adapted to enter grooves 29 of collar 28, while the recess 42 of the key accommodates the protruding end of spindle 26.

If the occupant of an apartment, provided with my improved safety lock, leaves the same, he retracts bolt 20 by properly operating knob 31, and closes door 10. Key 40 is then introduced into key hole 39, and after the key has grasped grooved collar 28, it is turned to the left, until shoulder 35 raises arm 33 to liberate stud 32, whereupon spring 21 will project bolt 20 into engagement with a keeper 43 of door frame 14. The door is then locked by means of lock 11 in the usual manner.

If a burglar should attempt to enter the apartment through door 11, and if he

should succeed in opening lock 11, he will find the door still locked. He will thus assume that the same must be bolted from the inside by the person or persons occupying the apartment, and will abstain from forcibly opening the door. The reason for setting collar 28 back from the end of spindle 26 is to prevent the opening of the safety lock by means of a screw driver or a similar tool. It is obvious that the head of spindle 26, which enters key hole 39, may be shaped differently for the use of keys, others than that shown in Fig. 8, without departing from the spirit of my invention.

When the occupant returns to his apartment, he will readily gain access thereto by successively opening the regular lock and the safety lock.

I claim:

1. A device of the character described, comprising a door, a lock secured thereto and having a key hole, a safety-lock, a bolt slidable therein, and a spindle rotatably mounted in the safety lock and operatively connected to the bolt, said spindle projecting partly into the key hole of the first named lock, substantially as specified.

2. A device of the character described,

comprising a door, a lock secured thereto and having a key hole, a safety-lock, a bolt slidable therein, a spindle rotatably mounted in the safety lock and operatively connected to the bolt, and a collar on the spindle that is received within the key hole of the first named lock, substantially as specified.

3. A safety lock, comprising a spring-influenced bolt having a toothed section, a mutilated pinion adapted to engage the same, a resilient arm adapted to lock the bolt in its retracted position, and means on the pinion for disengaging the arm from the bolt, substantially as specified.

4. A safety lock, comprising a spring-influenced bolt having a toothed section, a stud on the bolt, a mutilated pinion adapted to engage the toothed bolt section, a resilient arm adapted to engage the stud, and a shoulder on the pinion adapted to engage the arm, substantially as specified.

Signed by me, at New York city, (Manhattan,) N. Y., this fourth day of June, 1908.

JOSEF HERR.

Witnesses:

ARTHUR E. ZUMPE,
W. R. SCHULZ.