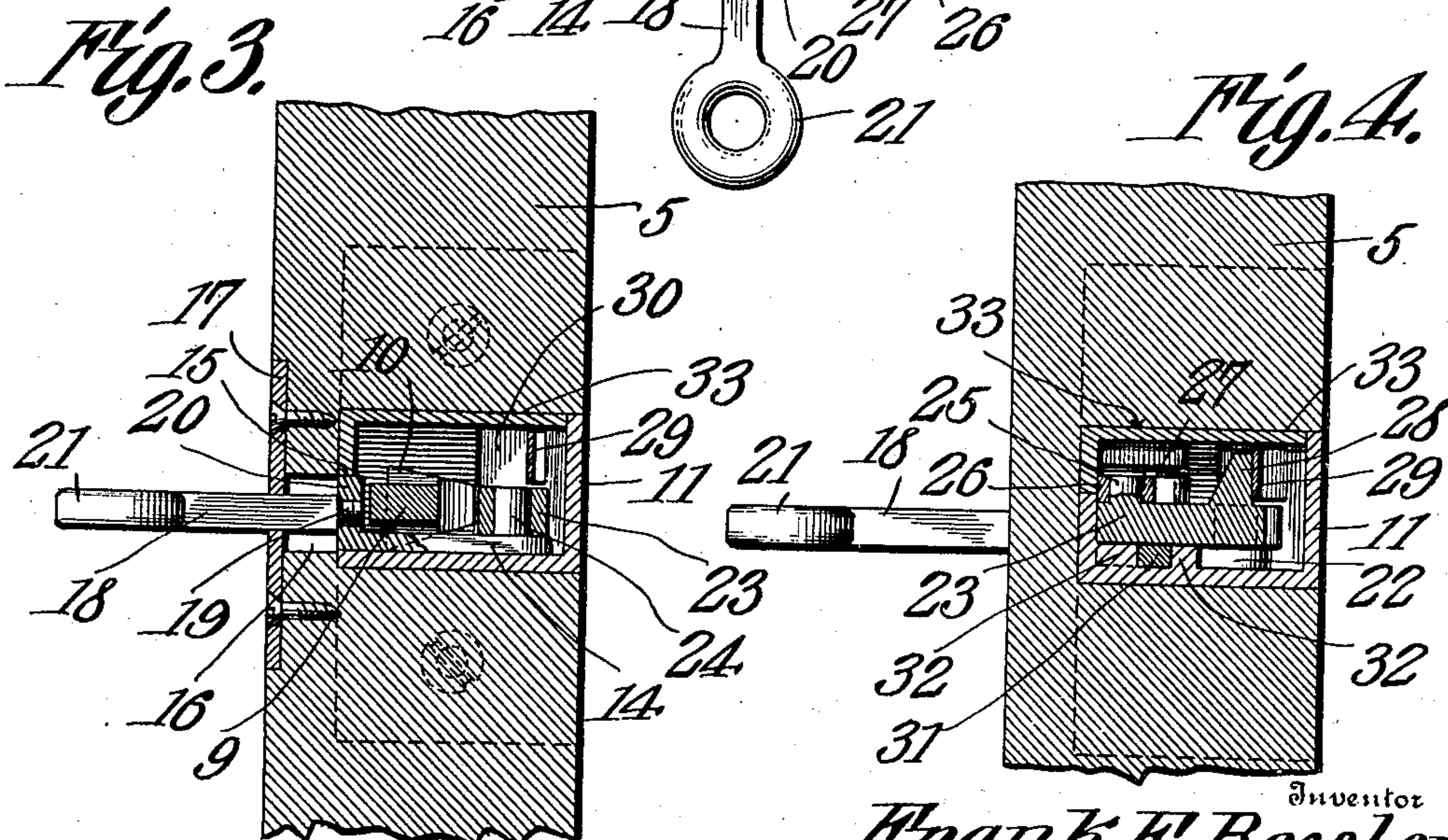
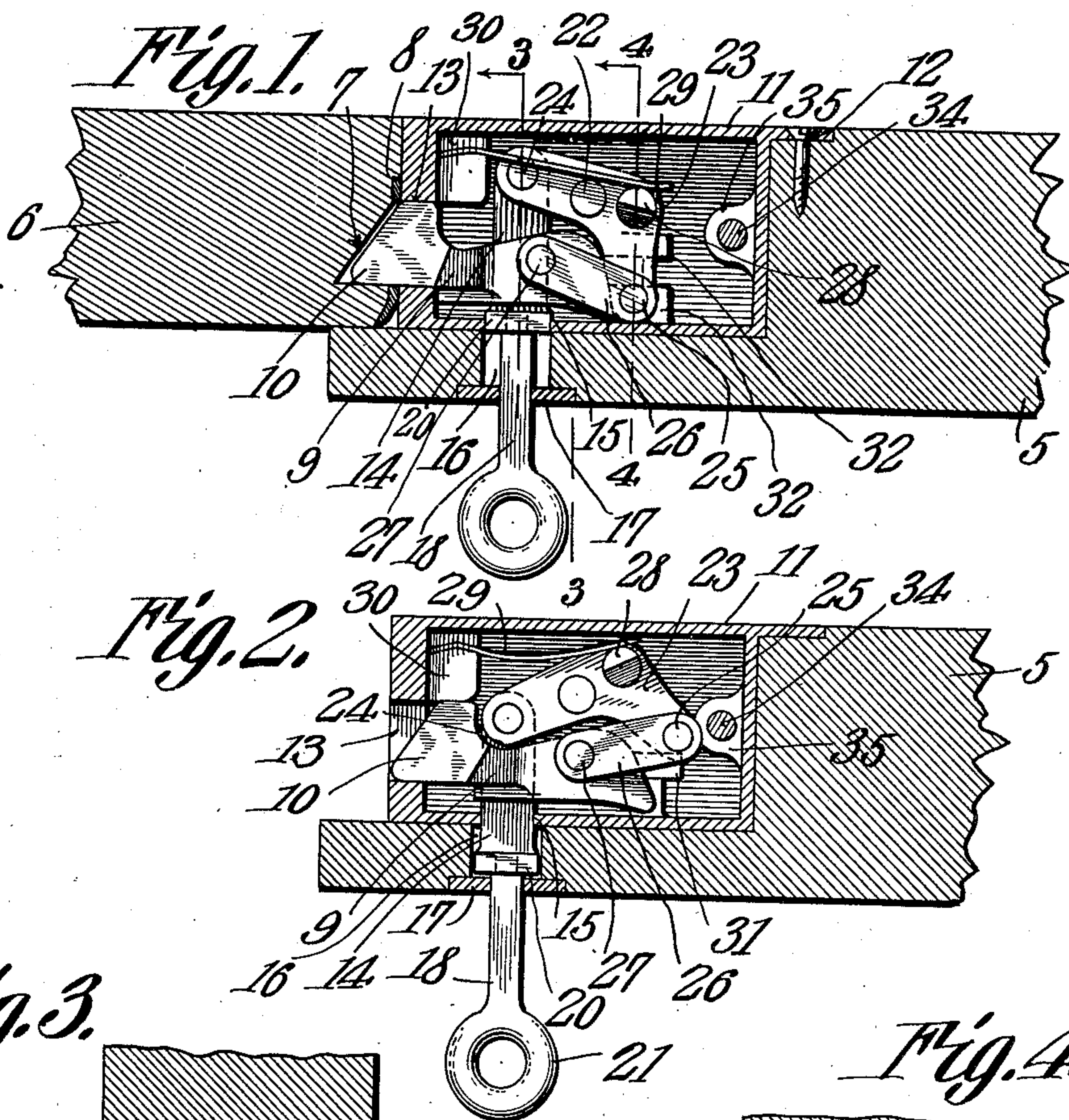


F. E. BESSLER.
DOOR LATCH.
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956,273.

Patented Apr. 26, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK E. BESSLER, OF AKRON, OHIO.

DOOR-LATCH.

956,273.

Specification of Letters Patent.

Patented Apr. 26, 1910.

Application filed April 12, 1909. Serial No. 489,413.

To all whom it may concern:

Be it known that I, FRANK E. BESSLER, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a new and useful Door-Latch, of which the following is a specification.

This invention relates to door latches, and has for its object to provide in an article of this kind improved means for operating the same, the operating mechanism being connected to a stem which projects from the door, and which is taken hold of to pull the same open, the arrangement being such that a pull on the stem to open the door, simultaneously disengages the latch from its keeper, thus enabling the door to be opened with one hand.

The invention also has for its object to provide a latch having but a few uncomplicated parts which can be quickly and easily assembled, and also to provide a latch embodying a novel combination and arrangement of parts to be hereinafter described and claimed.

In the accompanying drawings Figure 1 is a plan view of the latch, the casing thereof, as well as the door and the door jamb, being shown in section. Fig. 2 is a similar view showing the parts in another position. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a section on the line 4—4 of Fig. 1.

In the drawing 5 denotes the door to which the latch is applied, and 6 is the jamb against which the door stops, the face of the jamb being formed with a socket 7 serving as a keeper for the latch. A plate 8 is let into the face of the jamb, and has an opening which registers with the recess 7. The latch bolt comprises a stem 9 formed at one end with a head 10 adapted to enter the socket 7. The head is beveled on one side as usual so that it will be automatically thrown back as the door is closed, by contact with the jamb.

The latch is mounted in a casing 11 which is let into a mortise made in the door 5, and secured in said mortise by a screw 12 or in any other suitable manner. The outer end of the casing has an opening 13 through which the head 10 of the latch is adapted to protrude.

The stem of the latch 9, within the casing 11, is spaced from the bottom thereof, and between said stem and said bottom is mounted a slide 14 which extends at right angles

to the stem. In one of the side walls of the casing 11 is an opening 15, and in line with said opening, the door 5 is formed with an opening 16, extending therethrough to one side thereof. This opening in the door is closed by an escutcheon 17 provided with an opening to receive a stem 18 having a reduced and threaded end 19 which screws into an upstanding flange 20 on the slide 14. The stem terminates in a head 21 whereby a finger-hold is had, which is taken hold of when the latch is to be withdrawn from the keeper. The openings 15 and 16 are large enough to accommodate the slide 14 when the latch is operated as shown in Fig. 2 of the drawing.

The connection between the slide 14 and the latch stem 9, whereby the latch is operated, is as follows: From the bottom of the casing 11 rises a stud 22 on which is pivoted a bell-crank lever 23 having one of its branches connected to a pin 24 rising from the inner end of the slide 14. From the other branch of the bell-crank lever rises a pin 25 which is connected by a link 26 to a pin 27 rising from the latch stem 9. From this bell-crank lever also rises a stud 28 against which bears the free end of a spring 29 secured to a block 30 within the casing. The inner end of the latch stem 9 is formed with a tongue 31 which slides in a groove formed by a pair of parallel extending ribs 32 rising from the bottom of the casing 11, whereby the latch is guided to move in a straight line. The casing 11 is provided with a cover 33, held in place by a screw 34 passing therethrough and into a lug 35 on the inside of the casing.

The operation of the latch will be apparent from the foregoing description, but it may be summarized as follows: When the door is swung closed, the head 10 of the latch upon striking the jamb, is automatically retracted against the tension of the spring 28, and when the head comes in line with the socket 7, the latch is shot forward, and the head enters said socket. To withdraw the latch head, the stem 18 is pulled outwardly which, through the slide 14, the bell-crank 23, and link 26, retracts the latch as shown in Fig. 2, and thus releases the door. The pull on the stem simultaneously pulls the door open, thus enabling the door to be opened with one hand.

The stem 18 is angular in cross-section and the hole in the escutcheon plate 17 through

which the stem passes is correspondingly shaped, so that the stem cannot turn after the parts are assembled on the door, and it is therefore effectually prevented from being separated from the slide.

What is claimed is:

A latch comprising a casing, a slide mounted therein, a latch bolt extending across the slide, a bell crank lever having one of its branches connected to the slide, a link connecting the other branch of the bell crank lever to the latch bolt, means for operating the slide, a stud projecting from one of

the branches of the bell crank lever, and a spring fastened at one end to the casing, and engageable at its free end with the stud, said spring tending to swing the bell crank lever in a direction to advance the latch bolt.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANK E. BESSLER.

Witnesses:

GEORGE H. ELLIS,
FRANK E. REAM.