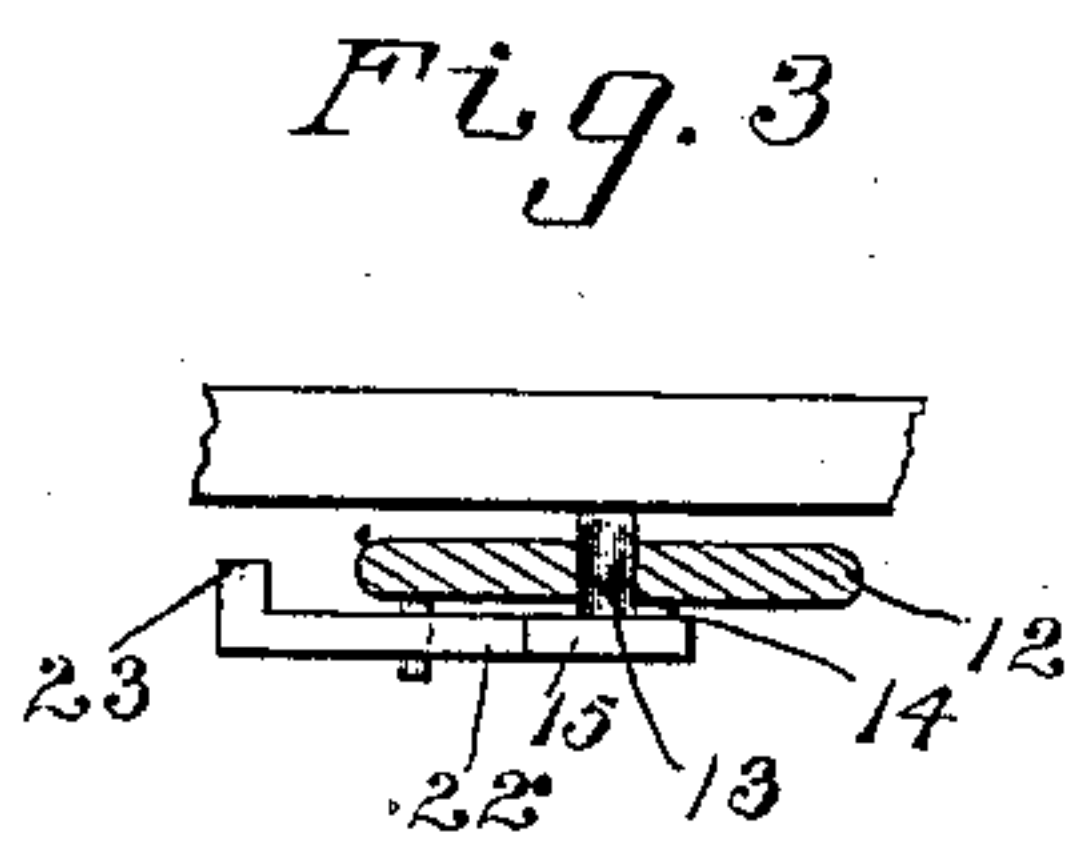
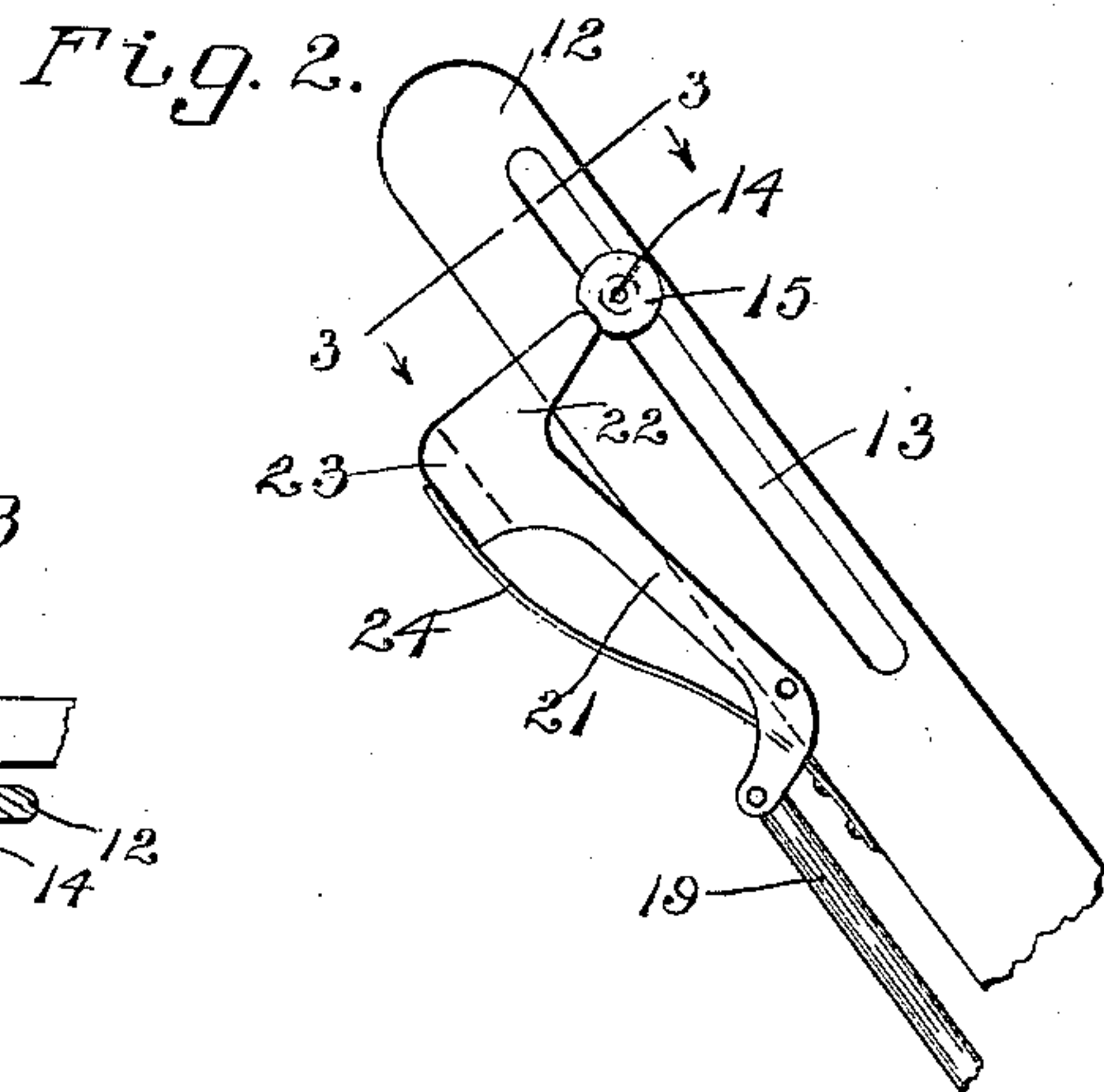
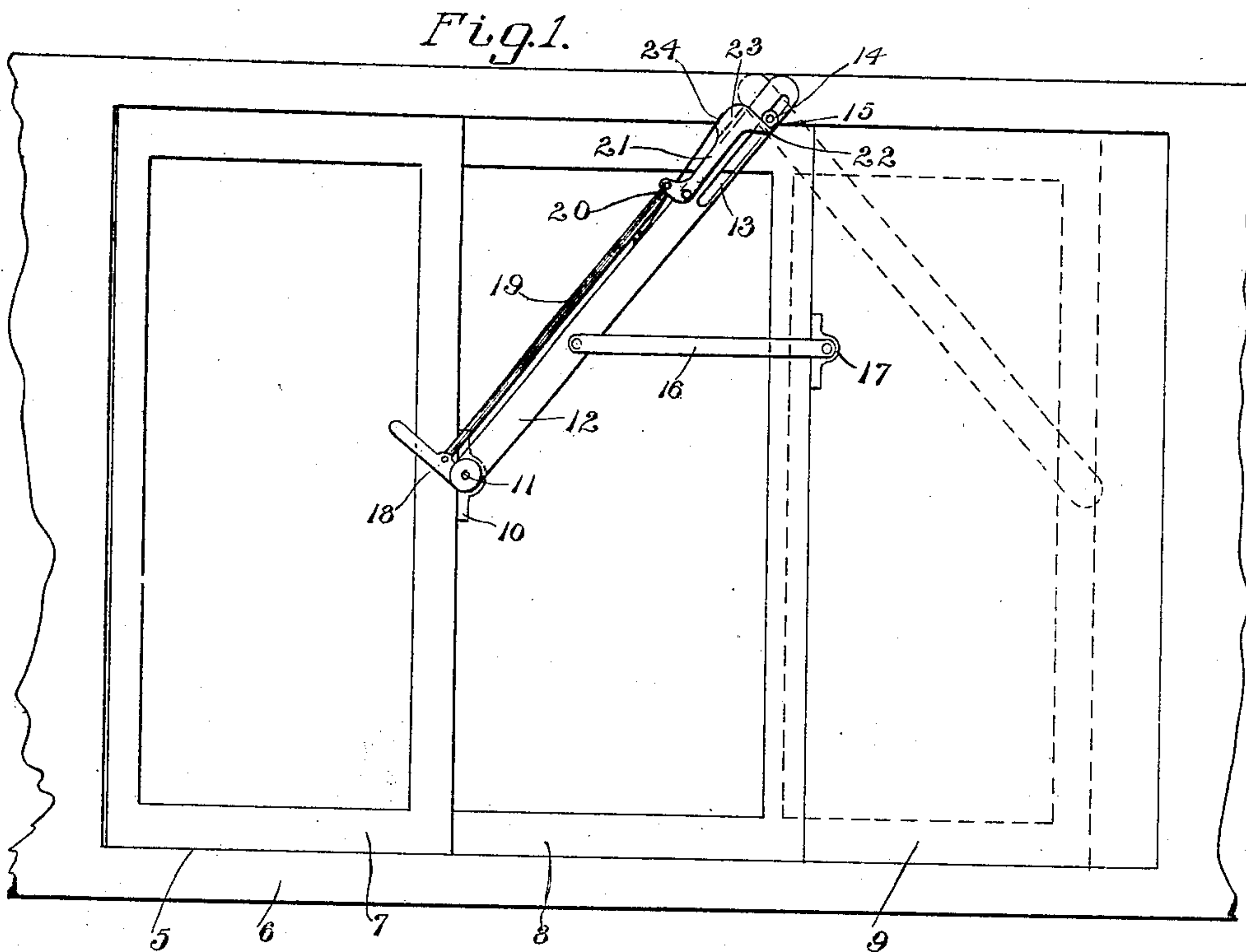


A. KRAUSE.
MEANS FOR OPERATING SLIDING DOORS.
APPLICATION FILED MAR. 14, 1906.

935,795.

Patented Oct. 5, 1909.



Witnesses.
Raphael G. Blanc.
Phyllis Toner.

Inventor:
August Krause
By Henry J. Miller
att'y

UNITED STATES PATENT OFFICE.

AUGUST KRAUSE, OF BOSTON, MASSACHUSETTS.

MEANS FOR OPERATING SLIDING DOORS.

935,795.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed March 14, 1906. Serial No. 305,935.

To all whom it may concern:

Be it known that I, AUGUST KRAUSE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Means for Operating Sliding Doors; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in means for operating sliding doors and particularly relates to means for locking the door operating means.

The invention consists in a lever operating device for a sliding door furnished with locking means adapted to lock against a fixed part adjacent to the lever.

The invention also consists in a double lever operating device for a pair of sliding doors and means for locking one of said levers from lengthwise movement.

The invention also consists in such other novel features of construction and combination of parts as shall hereinafter be more fully described and pointed out in the claims.

Figure 1, represents an elevation of a series of sliding doors adapted for closing the opening to an elevator shaft and illustrating the improved door closing device. Fig. 2, is an enlarged view, in elevation, of the upper portion of the primary lever illustrating the position of the latch lever when the door is in the open position. Fig. 3, is a sectional view taken on line 3—3 Fig. 2 looking in the direction indicated by the arrows.

Similar numbers of reference designate corresponding parts throughout.

As shown in the drawings 5 indicates an opening designed to be closed by sliding doors, as the opening of an elevator shaft, and furnished with any usual frame 6, or support on which, or in which the door sections 7 and 8 are slidable, the section 9 being preferably fixed in position.

Secured to the door section 7 is the bracket 10 having the pivot 11 on which is pivoted the primary lever 12 having the slot 13 extending longitudinally near its upper end; this slot works over the pivot guide 14, having the shoulder 15, located near the upper portion of the opening 5 and preferably secured to the frame 6. To the primary lever 12 is pivoted the link 16 which is also pivoted to the bracket 17 of the door section 8, this latter link 16 being so proportioned to

the dimensions of the door sections 7 and 8 and to the movement of the lever 12 as to secure the desired relative movement of the door sections, this being preferably such that the section 7 shall move approximately twice as far as the section 8 moves.

On the pivot 11 is pivotally mounted the hand lever 18 to which is pivotally secured the connecting rod, or member 19 the upper end of which is pivoted to the arm 20 of the latch lever 21 which lever is pivotally mounted on the lever 12 and has the locking tongue 22 and the stop lip 23, this latter being adapted to engage the edge of the lever 12 to limit the movement of the latch lever 21 under the action of the spring 24 which is secured to the lever 12 and bears against the lip 23 of said latch lever.

The handle lever 18 being located near the rear edge of the door section 7 is in a particularly convenient position to be operated by a person standing before the door section 8; when this lever 18 is swung downward the upper end of the latch lever 21 is swung outward from the lever 12 and the tongue 22 of the latch lever is disengaged from the shoulder 15 of the pivot guide 14 and the door section 7 may be moved backward, in this movement the lever 12 moves upward and swings, on its pivot 11, toward the vertical position, the pivot guide 14 on which the edges of the slot 13 are free to ride and swing permitting such movement of this lever 12, while the movement of the lever 12 is transmitted by the link 16 to the door section 8 in proportionate degree until both of said door sections are fully opened and the lever 12 occupies the position shown in Fig. 2. When the door section 7 slides toward the closed position the operation of the lever 12 and link 16 is reversed and, when the door section 7 approaches the closed position the inclined edge of the latch tongue 22 rides over the rounded edge of the shoulder 15 until the upper edge of the tongue clears such shoulder when the spring 24 presses the latch lever 21 inward below said shoulder 15 whereby the lever 12 is locked against upward movement.

It is of course evident that when the lever 12 passes the vertical position, in the opening or closing of the sliding door, the weight of the lever will then assist in such movement, it being necessary only to give such an impulse to the door section 7 as will carry

the lever 12 past the vertical to effect the opening or closing of the door.

It is of course obvious that when a single sliding door is to be operated the link 16 is omitted, and it is also apparent that the locking mechanism may be considerably modified to so operate with any system of levers for operating sliding doors without departing from the present invention.

10 Having thus described my invention, I claim as new and desire to secure by Letters Patent.

1. A sliding door closer comprising a lever adapted to be pivotally secured to the door, 15 means for slidably supporting the upper end of said lever on which the lever may swing, and a latch carried by the lever and adapted to lock against said support.

2. A sliding door closer comprising a 20 gravity lever adapted to be pivotally secured to the door, means adapted to be fixed above the door for guiding said lever, a latch pivoted to said lever and designed to engage a

fixed part of said guiding means, a hand lever adapted to be pivotally mounted adjacent the lower end of said gravity lever, and a connection between said hand lever and said latch. 25

3. The combination with a sliding door and its upper frame, of a closing lever pivotally mounted on said door, means for guiding said lever to permit the same to swing mounted on said frame, a spring actuated latch pivotally mounted on said lever and adapted to engage a member of 35 said guiding means, a hand lever pivoted on the center on which the closing lever swings and a connection between said hand lever and said latch.

In testimony whereof I affix my signature 40 in presence of two witnesses.

AUGUST KRAUSE.

Witnesses:

HENRY J. MILLER,
PHYLLIS TONER.