

L. R. EDDY.

SASH LOCK.

APPLICATION FILED JAN. 20, 1909.

917,567.

Patented Apr. 6, 1909.

Fig. 1

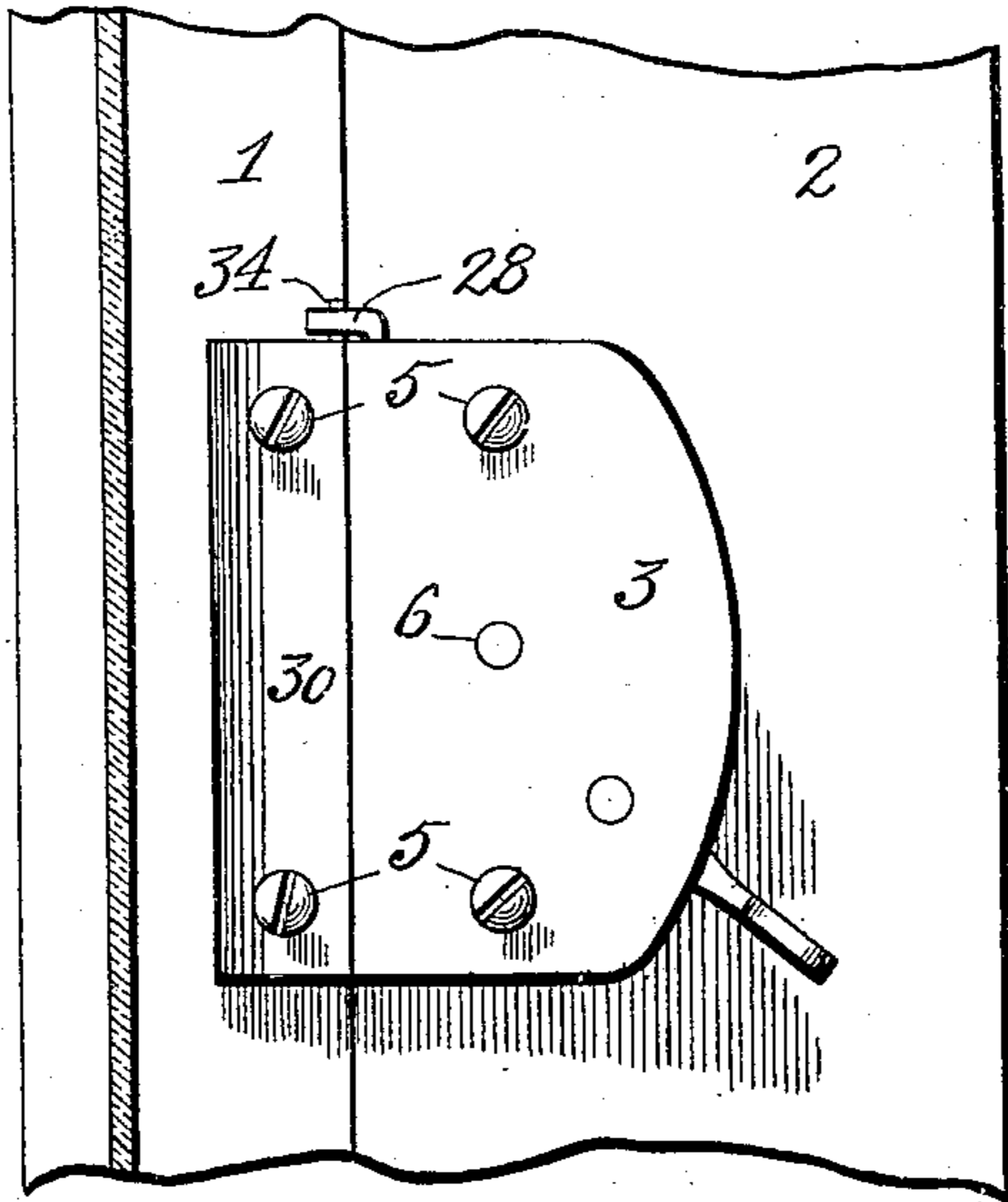


Fig. 4.

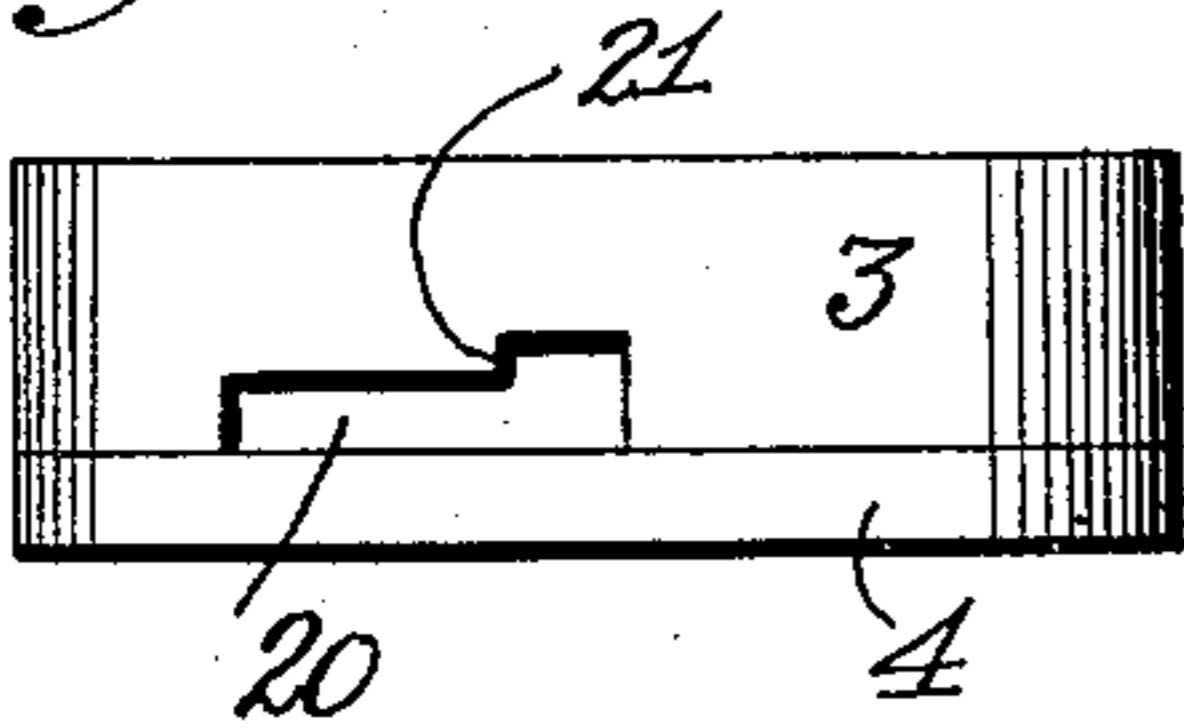


Fig. 2.

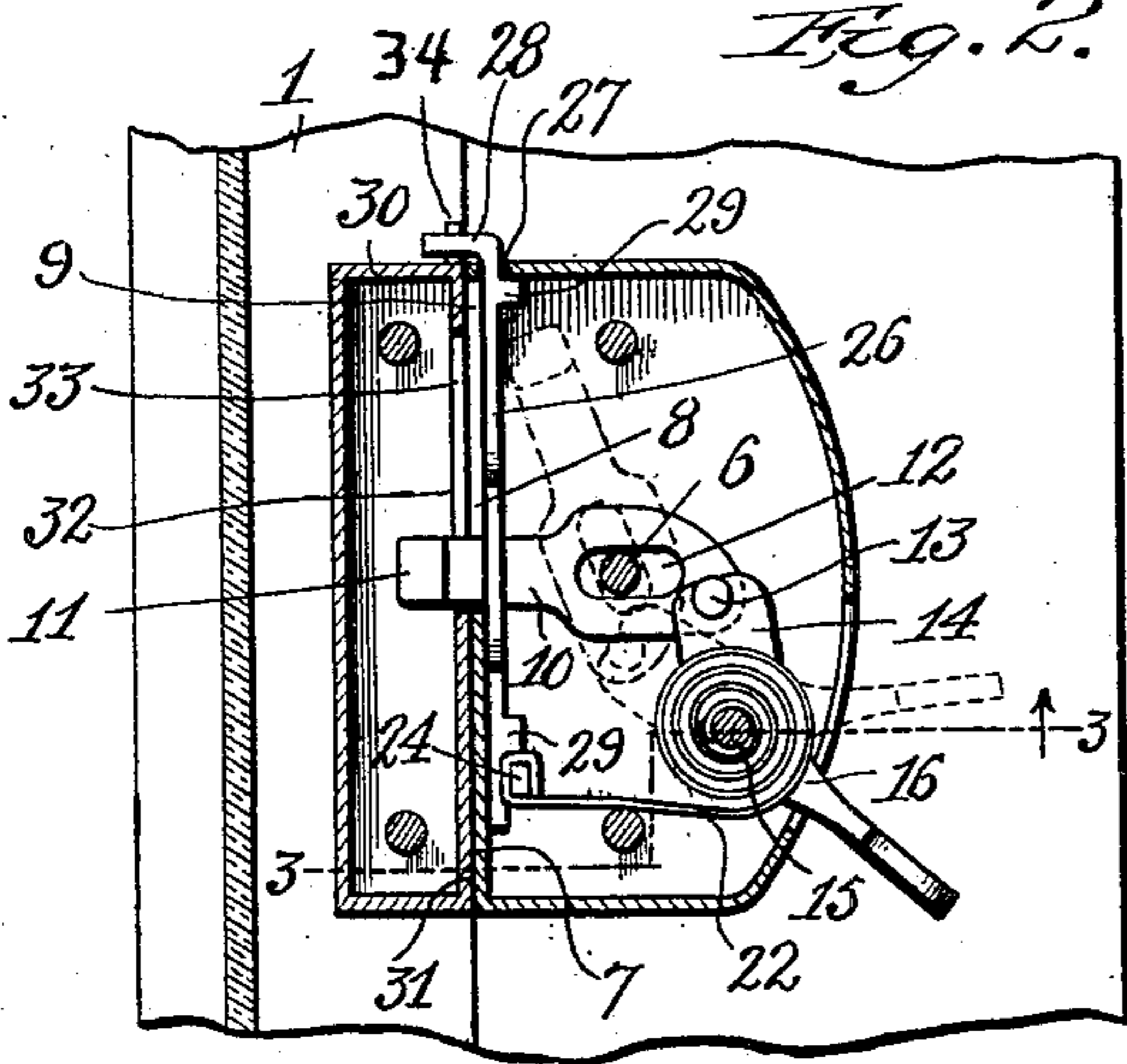


Fig. 5.

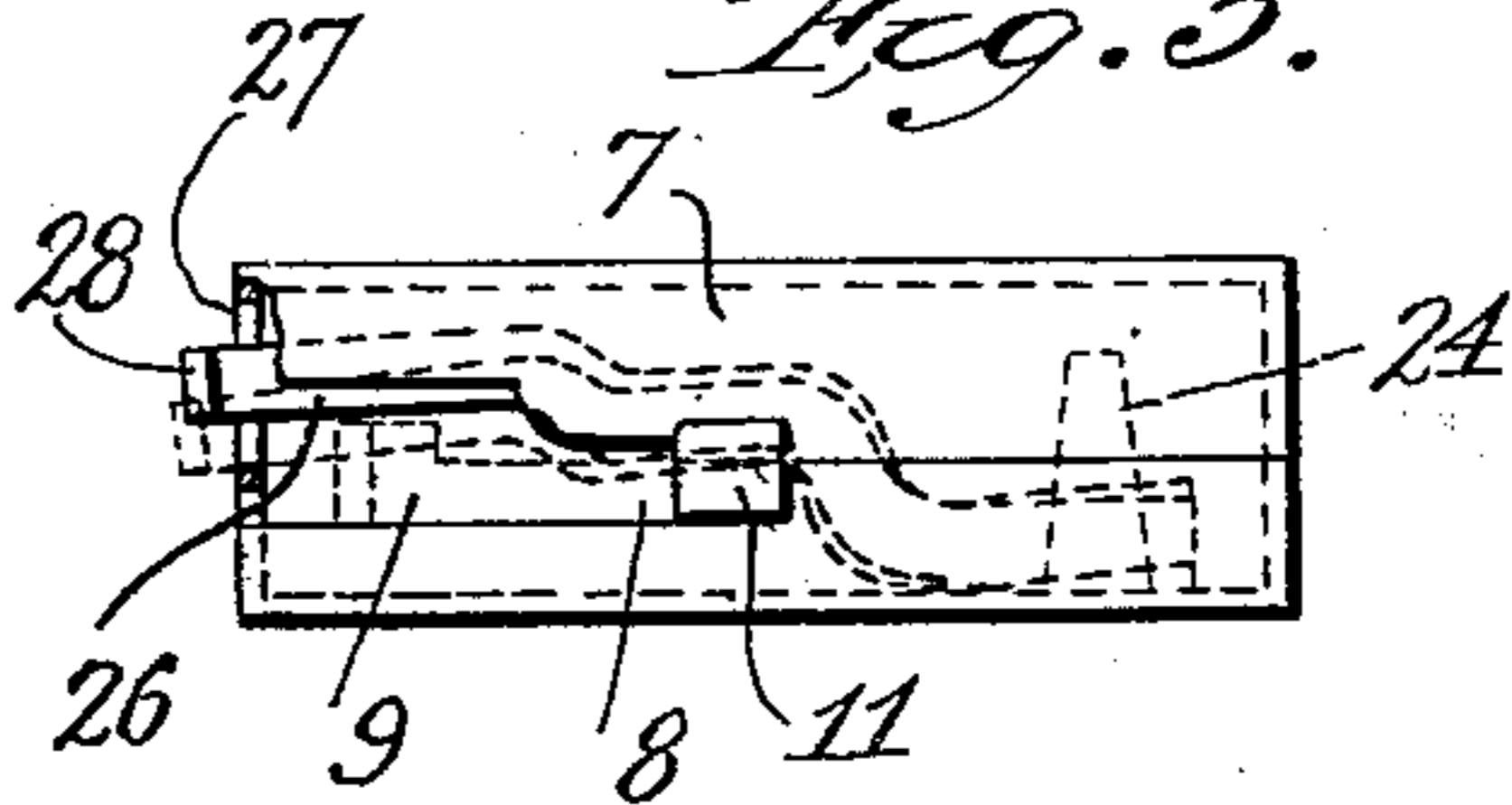


Fig. 6.

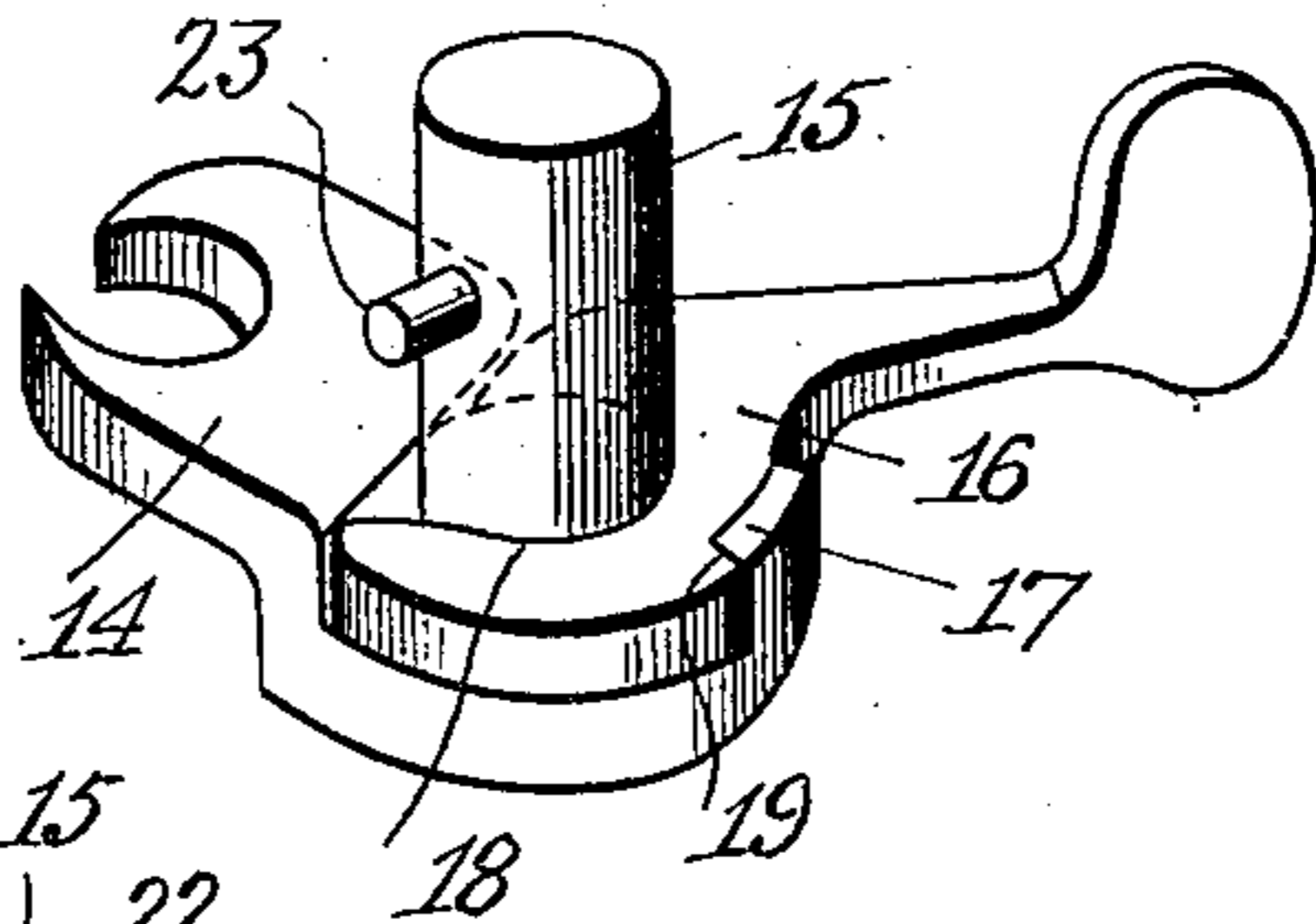
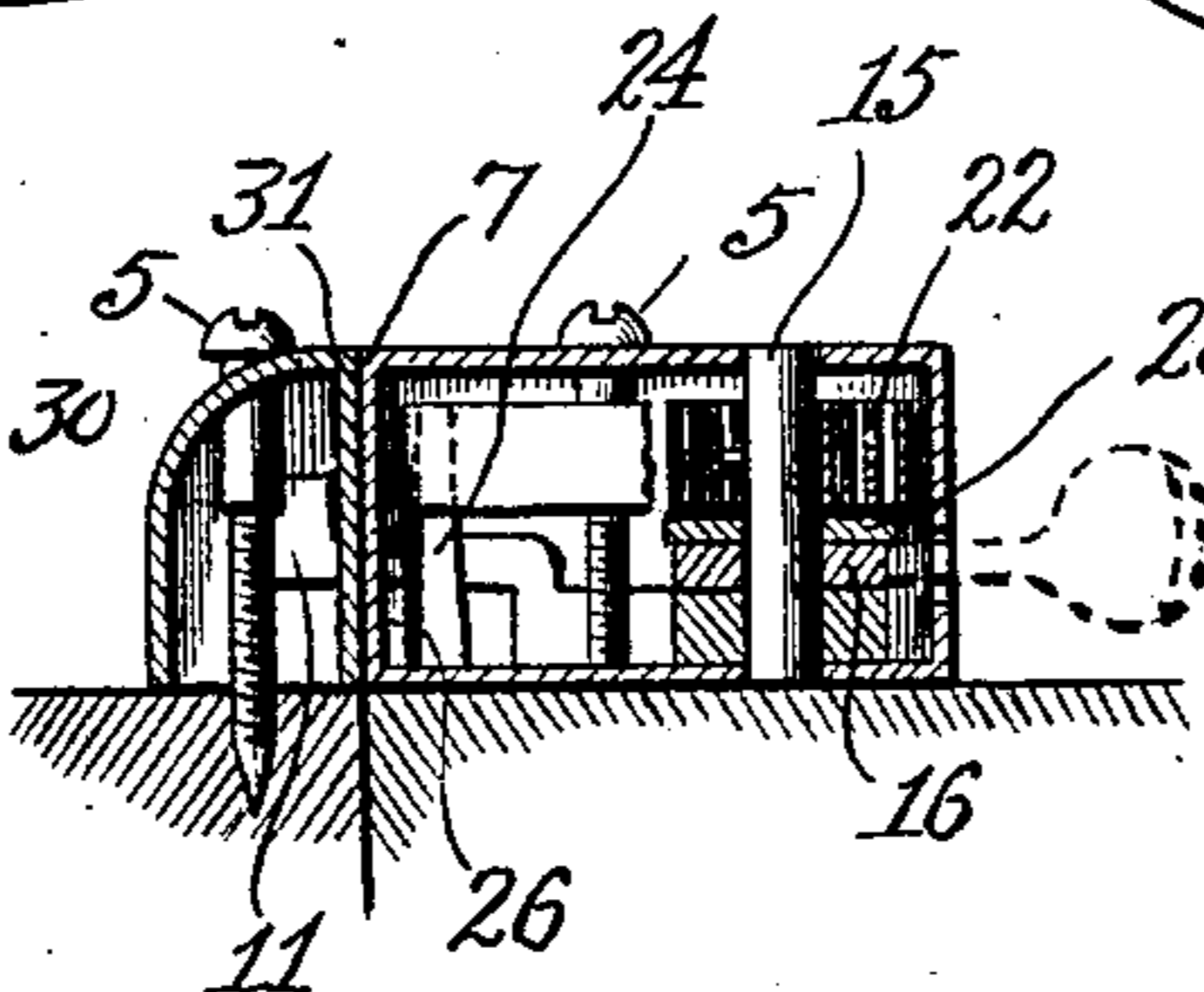


Fig. 3.



Witnesses

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SASH-LOCK.

No. 917,567.

Specification of Letters Patent.

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Application filed January 20, 1909. Serial No. 473,333.

To all whom it may concern:

Be it known that I, LAWRENCE R. EDDY, a citizen of the United States, and a resident of Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Sash-Locks, of which the following is a specification.

The invention relates to improvements in sash - locks of that description which are mounted on the meeting-rails of the sashes whereby the window can be secured to prevent opening of the same from the outside.

More particularly it relates to improvements in the sash-lock disclosed in Patent 865,090, granted to me September 3, 1907. In that device the locking-bolt is operated by means of a gear-mechanism, which is of a somewhat costly and complicated structure and is liable to get out of order after considerable use. In the invention in the present instance it is proposed to do away with the gear-mechanism and to replace the same by a toggle-movement that is efficient and durable, and otherwise simplify the construction as to reduce the cost of manufacture.

The invention consists in the novel construction, combination and arrangement of parts, such as will be hereinafter described, pointed out in the appended claims and illustrated in the accompanying drawings.

In the drawings, in which similar reference characters designate corresponding parts, Figure 1 is a plan view of a sash-lock embodying the invention, showing the same applied to the meeting-rails of a window. Fig. 2 is a horizontal sectional view. Fig. 3 is a cross-sectional view on the line 3—3 of Fig. 2. Fig. 4 is a rear elevation of the main casing. Fig. 5 is a front elevation of the main part of the lock. Fig. 6 is an enlarged detail perspective view of the operating key, arm and shaft.

The meeting-rails 1 and 2, respectively, of the upper and lower sashes of a window are of the usual construction. On the rail 2 is the main casing comprising the main shell 3 and the base 4 attached to the rail by the screws 5. The main shell and base are secured together by the screw 6. In the face 7 of the main casing is the opening 8 having an enlargement 9 at one end. Through this opening projects the bolt 10 when the latter is in locking position. The outer end of the bolt is enlarged to form the head 11. The body of the bolt is provided with an elongated bearing 12 registering with the screw

6, which forms a pivot for the bolt. This bearing is of sufficient length to permit the bolt to be moved outwardly and inwardly of the casing during the locking and unlocking operations.

Means for advancing and retracting the bolt 10 are provided. On the rear or inner end of the bolt is the pin 13 with which engages the arm 14 fast on the vertical shaft 15 journaled at its ends in the casing. The inner end of the arm is recessed to form a seat for the inner end of the key 16 and is provided with a lug 17 for holding the key in place. The inner end of the key is provided with a bearing 18 to engage the shaft and a shoulder 19 to engage the lug 17 on the arm 14. The outer end of the key 16 projects through the opening 20 in the rear face of the main casing. At one end of the opening 20 is the shoulder 21 to engage the free end of the key. On the shaft 15 is secured the inner end of the coiled spring 22 by the pin 23. The outer end of the spring is secured to the post 24 in the main casing. The spring is under tension and tends to turn the shaft 15 to move the arm 14 to project the bolt 10 outwardly. The key 16 serves to turn the shaft 15 against the action of the spring to retract the bolt. Interposed between the spring and the key is the washer 25 to hold the two separated.

In the main casing immediately back of the face 7 is the latch 26. The inner end of the latch is inserted between the post 24 and the face of the casing. The outer end of the latch extends through the slot 27 in the side of the casing and has the forwardly projecting lip 28. The latch is free to move vertically and when the bolt is retracted it falls across the opening 8, 9 and serves to hold the bolt within the casing against the action of the spring. The latch is held in place against longitudinal movement by the shoulders 29.

On the top of the meeting-rail 1 of the upper sash is the supplementary casing 30 having a face 31 to fit the face 7 of the main casing. In the face 31 is the opening 32 with the enlargement 33 to correspond with the opening 8 and enlargement 9 in the face 7 of the main casing. On an end of the supplementary casing is the lug 34 to engage the lip 28 of the latch 26.

The operation of the device is as follows: When the locking members are engaged they are in the relative positions shown in Fig. 2. The bolt 10 projects from the main casing

into the supplementary casing with its shank extending through the reduced openings 8 and 32 and its head engaging the adjacent edges of the face 31 of the supplementary casing. The tension of the spring 22 forcing the head of the bolt against said edges draws the two casings together so as to prevent the meeting-rails from rattling, as well as locking the two sashes together so that the window cannot be opened from the outside. To unlock the window, the key 16 is turned to the position indicated by dotted lines in Fig. 2. This movement of the key, through its engagement with the shaft 15 and the lug 17, turns the shaft against the action of the spring 22. This turning of the shaft swings the outer end of the arm 14 toward the face 7 of the main casing. As the outer end of the arm is pivoted on the pin 13 on the inner end of the bolt, thereby forming a toggle-connection between the shaft and bolt, the latter is moved through the reduced openings 32 and 8 and its head through the enlargements 33 and 9 to the position indicated by dotted lines in Fig. 2, which unlocks the device. The elongated bearing 12 in the body of the bolt, pivoting on the screw 6, permits the bolt to move in the manner described. While the key is held by the hand, or is raised to engage the shoulder 21 in the rear face of the main casing to permit the use of both hands, against the action of the spring, the lower sash is raised slightly to disengage the lug 34 of the supplementary casing from the lip 28 on the latch 26. The latch thereby being freed, drops across the opening 8, 9 and holds the bolt within the main casing. The key can be released from the hand or disengaged from the shoulder 21 and the parts will be in position for another locking operation. When the two meeting-rails are moved together in closing the window the lug 34 on the supplementary casing engages the lip 28 and thereby raises the latch 26. This releases the bolt just as the two faces of the casings come together. The spring, through the intervening mechanism, projects the bolt through the registering openings in the contacting faces of the casings to the locking position.

As an additional safe-guard it may be desirable to have a removable key. This can be done by slightly reducing the size of the engaging parts of the key 16 so that it can be raised from its seat in the arm 14 over the lug 17 and the bearing 18 freed from the shaft 15 so that the key can be withdrawn from the casing.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a sash-lock, a bolt provided with an elongated bearing, a pivot for said bearing, a

rotatable shaft, a toggle-connection between said shaft and said bolt, a spring for rotating said shaft to operate said toggle-connection to project said bolt to locking position, and means for turning said shaft to operate said toggle-connection to retract said bolt to unlocking position.

2. In a sash-lock, a bolt provided with an elongated bearing, a pivot for said bearing, a rotatable shaft, a toggle-connection between said shaft and said bolt, a spring for rotating said shaft to operate said toggle-connection to project said bolt to locking position, means for turning said shaft to operate said toggle-connection to retract said bolt to unlocking position, and a latch operating to hold said bolt in its retracted position against the action of said spring.

3. In a sash-lock, a bolt provided with an elongated bearing, a pivot for said bearing, a rotatable shaft, an arm fast on said shaft pivoted to said bolt, a spring for rotating said shaft to turn said arm to project said bolt forward to a locking position, and a key for turning said shaft against the action of said spring to retract said bolt.

4. In a sash-lock, a bolt provided with an elongated bearing, a pivot for said bearing, a rotatable shaft, an arm fast on said shaft pivoted to said bolt, a spring for rotating said shaft to turn said arm to project said bolt forward to a locking position, a key for turning said shaft against the action of said spring to retract said bolt, and a latch for holding said bolt in a retracted position against the action of said spring.

5. In a sash-lock, the meeting-rails of a window, a main casing on one of said rails having an opening in its face, a pivot in said casing, a bolt having an elongated bearing on said pivot, a pin on the inner end of said bolt, a rotatable shaft, an arm fast on said shaft engaging said pin, a spring for rotating said shaft to move said arm to project said bolt through the opening in the face of said casing, a key for rotating said shaft against the action of said spring to retract said bolt, a latch pivoted in said casing for holding said bolt in its retracted position, a lip on said latch outside of said casing, a supplementary casing on the other of said meeting-rails having an opening in its face to correspond with the opening in the face of said main casing to receive said bolt, and a shoulder on said supplementary casing to engage said lip to raise said latch to free the bolt when the meeting-rails are moved together.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.
LAWRENCE R. EDDY.

Witnesses:

FRED BLACKWELL,
GUSTAV A. VETT.