

A. C. J. ROY.
WINDOW SASH LOCK.
APPLICATION FILED AUG. 13, 1909.

956,427.

Patented Apr. 26, 1910.

Fig. 1.

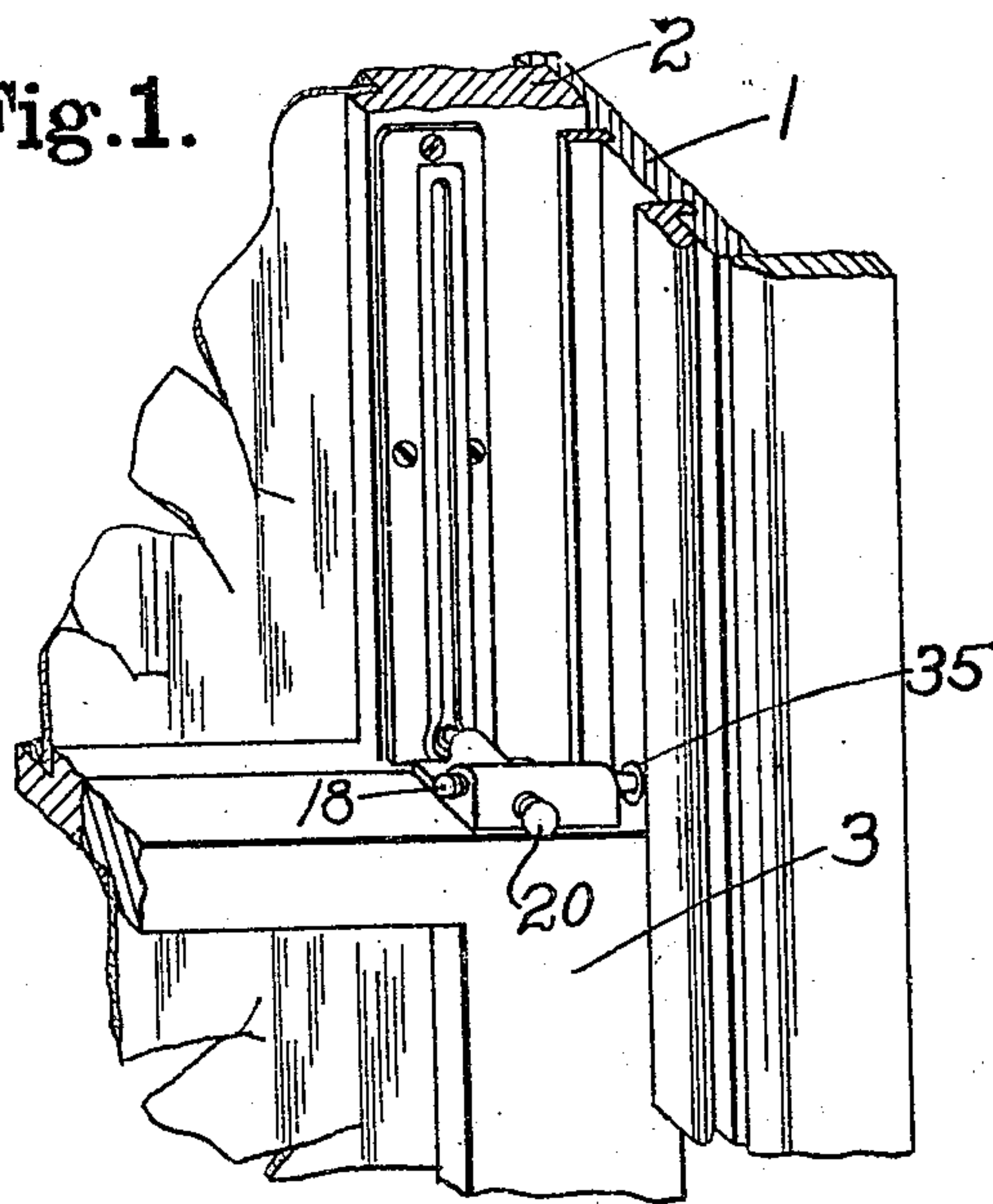


Fig. 3.

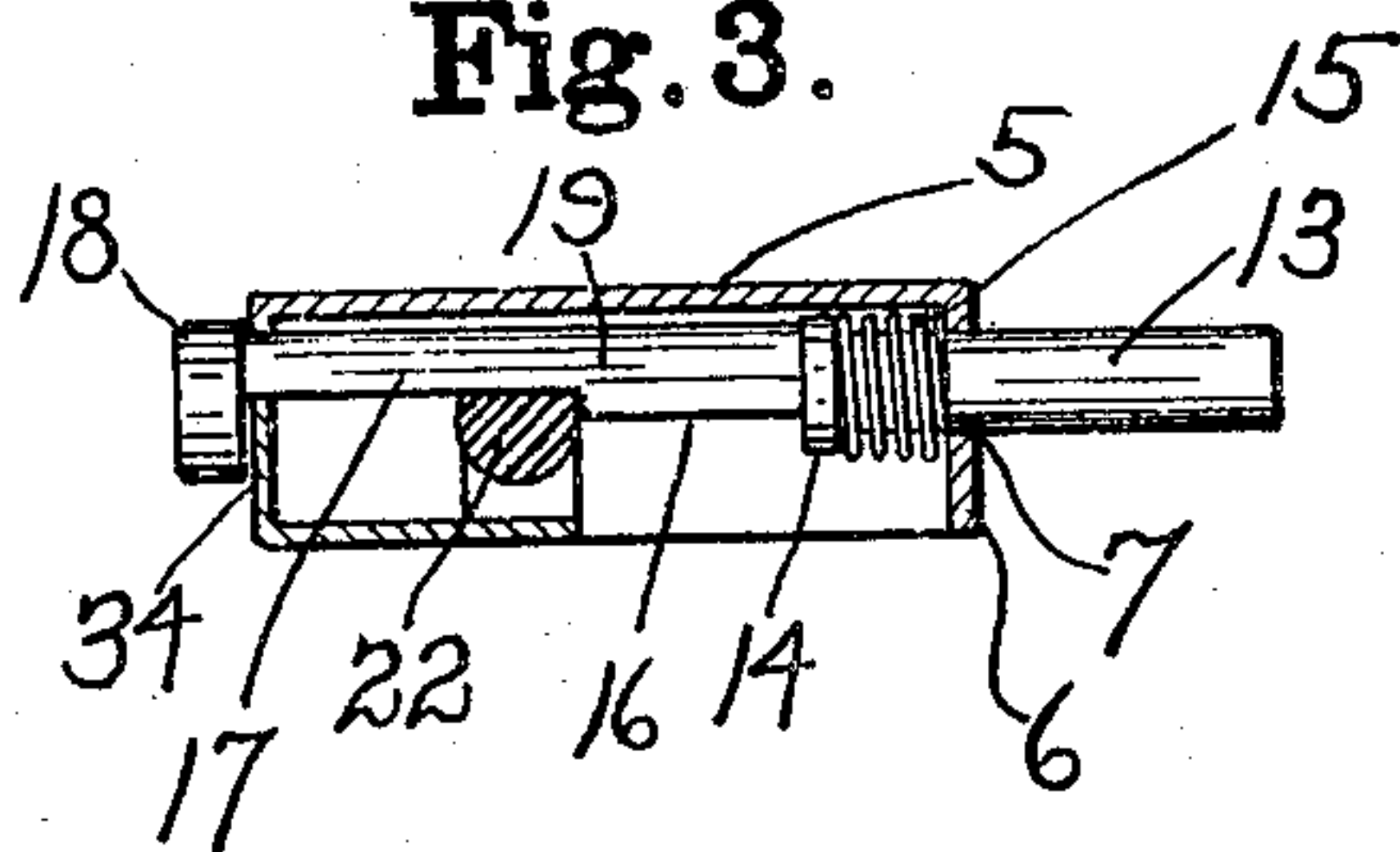


Fig. 4.

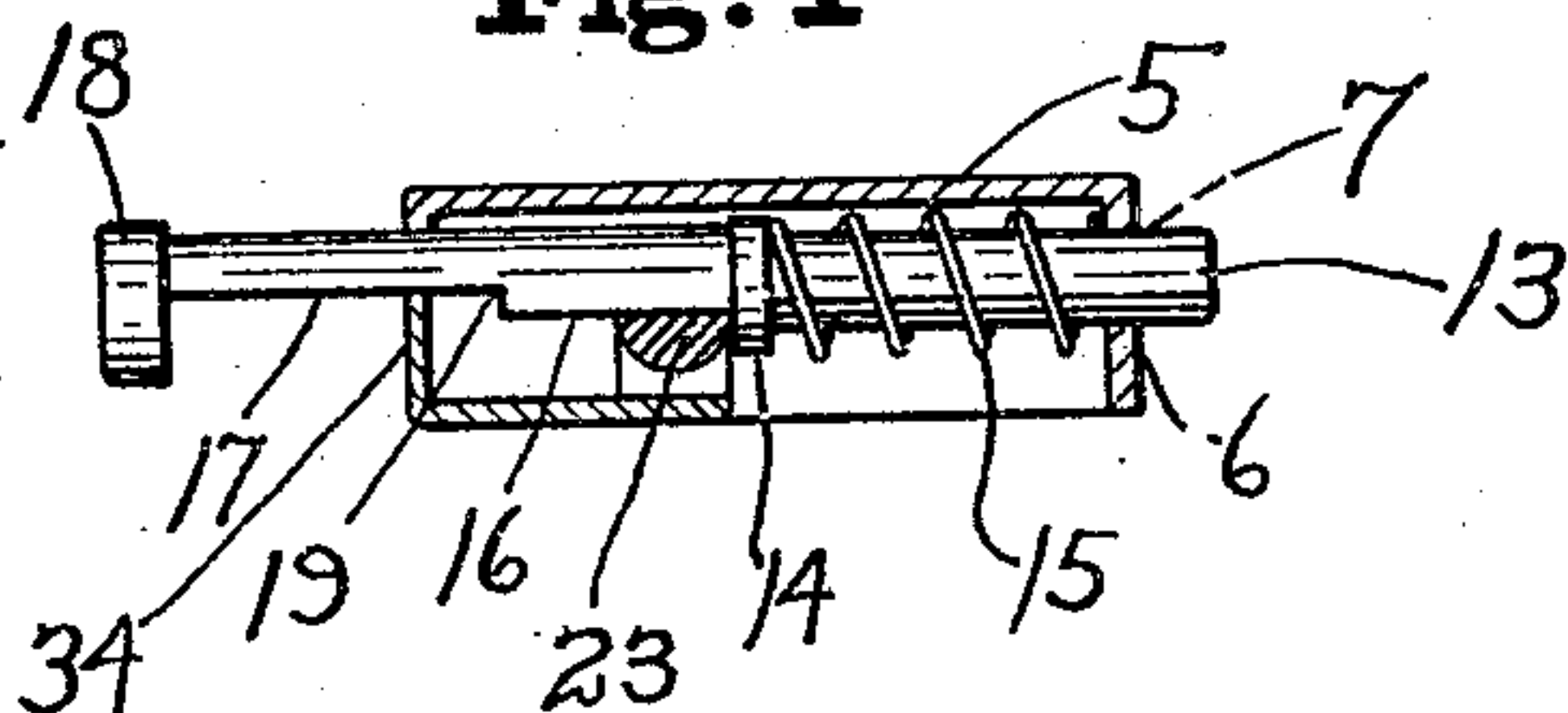


Fig. 5.

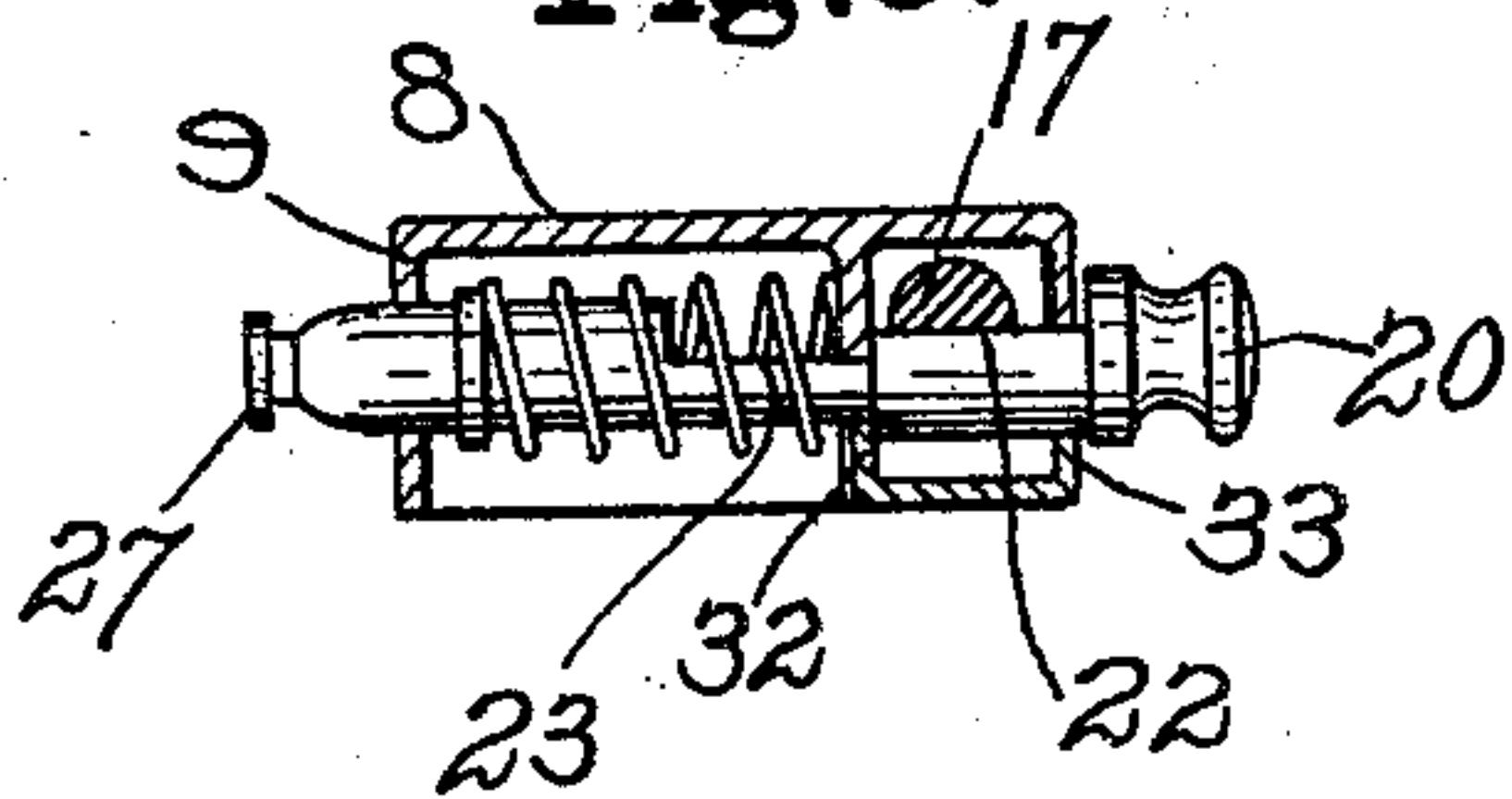


Fig. 6.

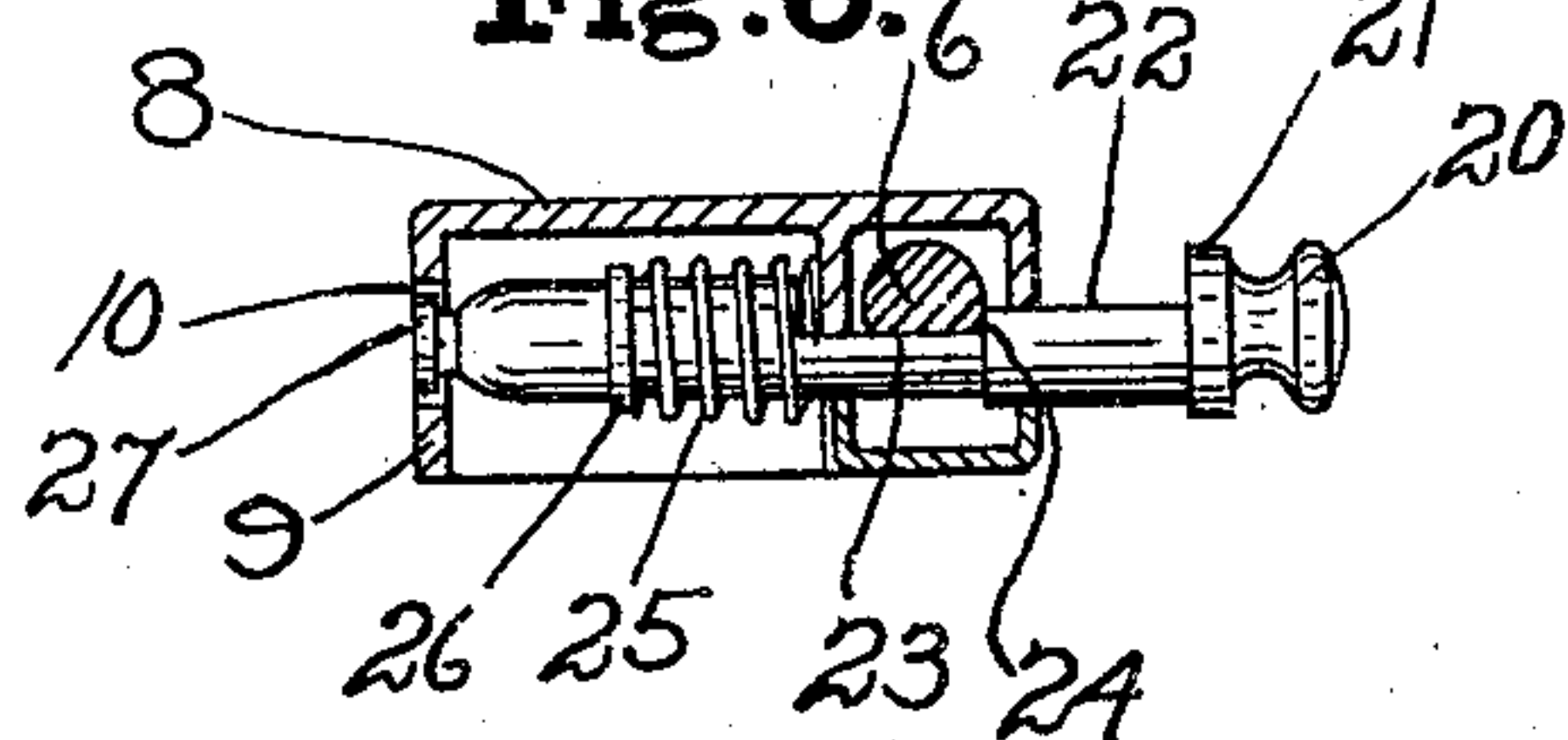


Fig. 7.

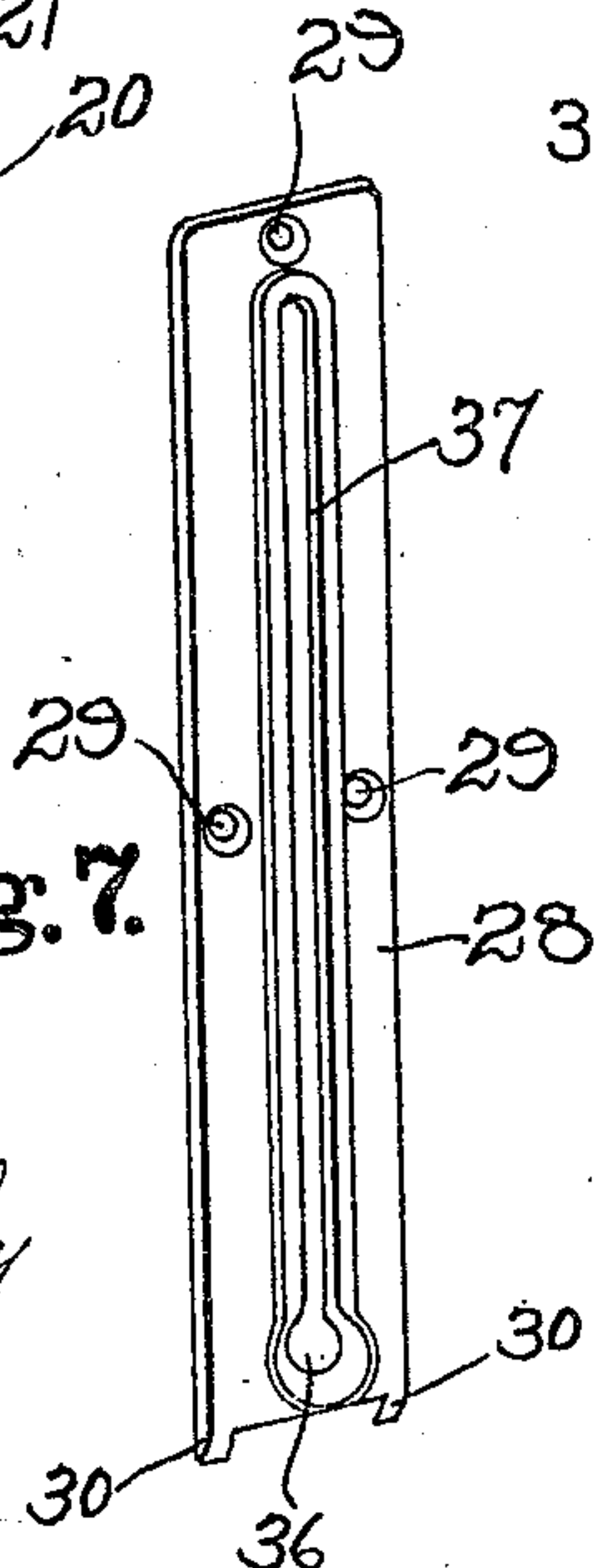


Fig. 2.

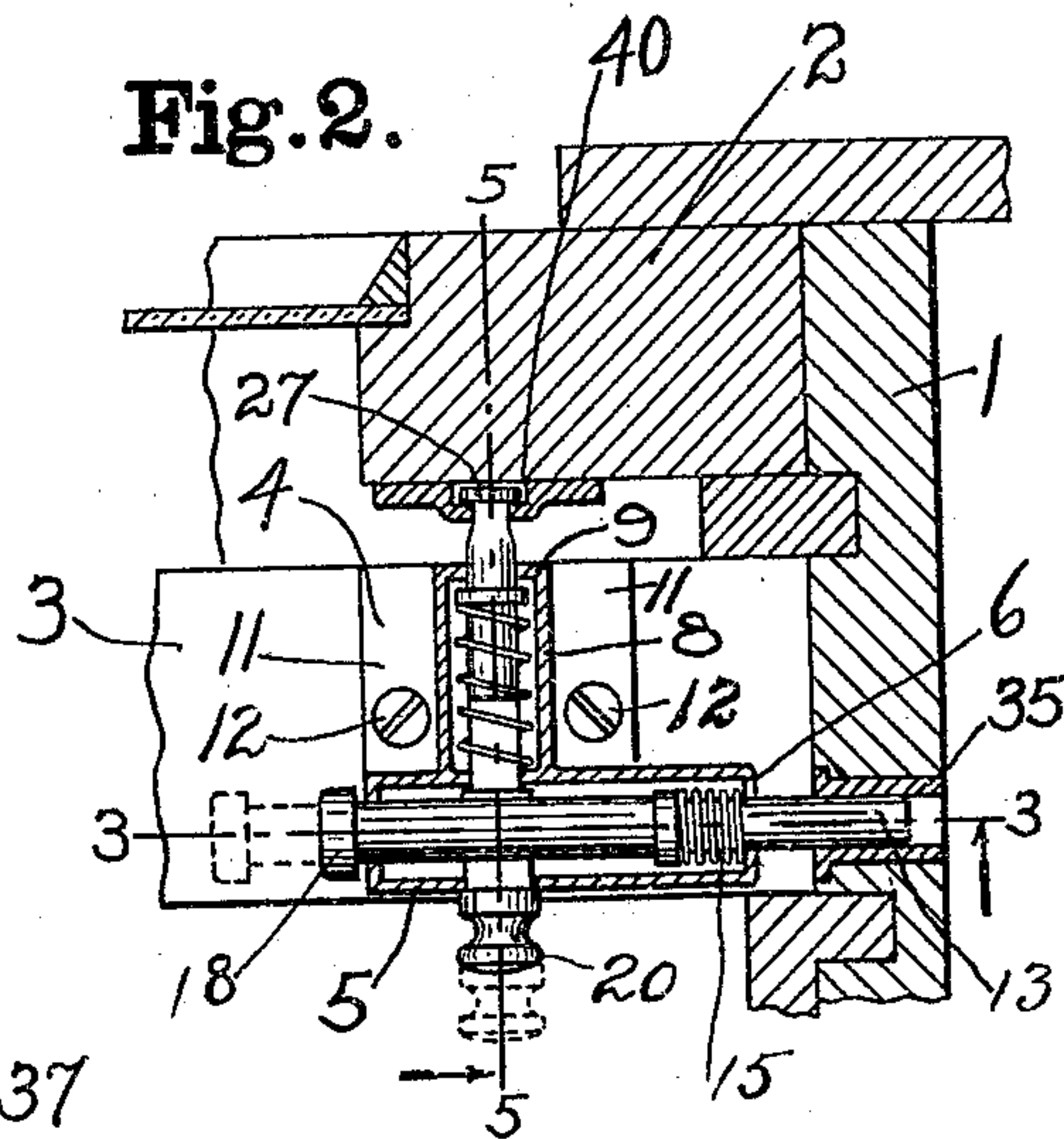
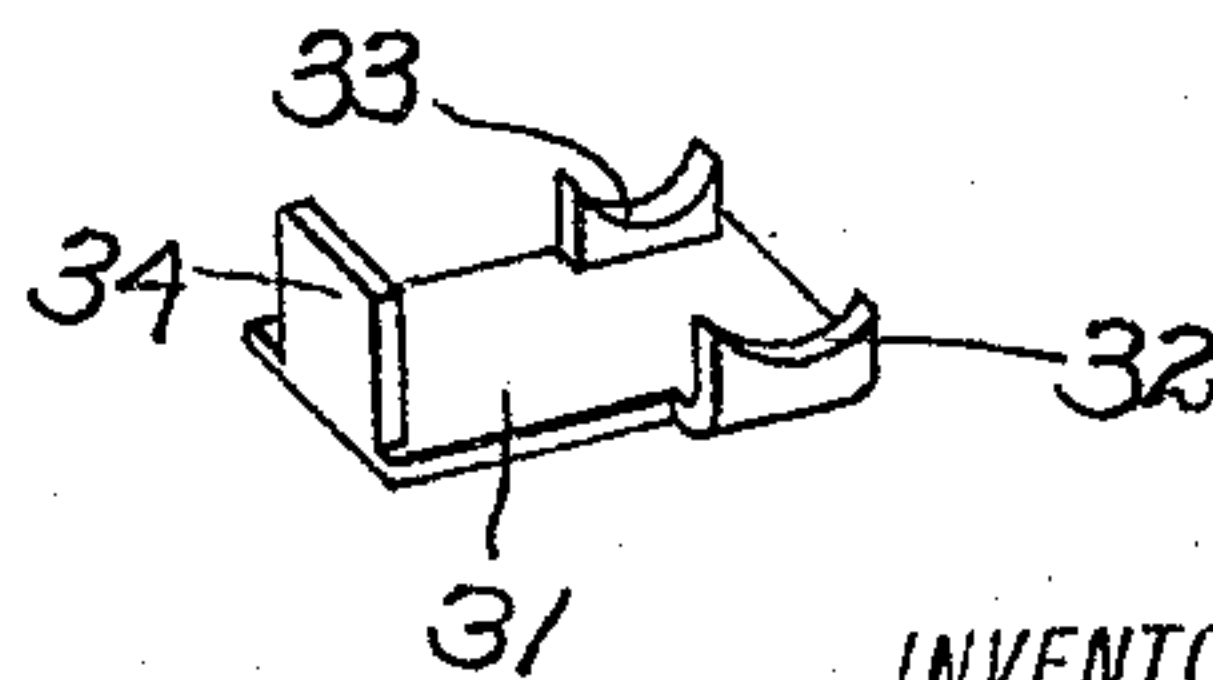


Fig. 8.



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WINDOW-SASH LOCK.

956,427.

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To all whom it may concern:

Be it known that I, ARTHUR C. J. ROY, a citizen of the United States, residing at the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Window-Sash Locks, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to sash fasteners, and has for its object to provide a simple, inexpensive and effective fastener adapted to be readily applied to a window whereby the lower sash may be securely locked to the frame and the upper sash permitted to be dropped down or partially opened to admit of better ventilation.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1— is a perspective view of a portion of a window and frame illustrating my improved lock applied thereto. Fig. 2— is a plan view in section showing the device as applied to a window, the full lines representing both of the bolts in their locked position and the dotted lines, their withdrawing position. Fig. 3— is a side elevation of the lock section through the casing, on line 3—3 of Fig. 2, showing the lower sash locking bolt in its engaging position. Fig. 4— is the same as Fig. 3 with the exception that the bolt is in its unlocked or disengaging position. Fig. 5— is a side elevation of the lock sectioned through the casing on line 5—5 of Fig. 2 showing the limit bolt in its engaging position. Fig. 6— is the same as Fig. 5 illustrating said limit bolt as withdrawn or in its disengaging position. Fig. 7— is a perspective view of the slotted limit plate which is engaged by the limit bolt whereby the amount of opening of the window is limited. Fig. 8— is a detail of the small plate adapted to inclose the underside of the bolt casing and operatively retain the bolts therein.

Referring to the drawings, 1 represents the window casing, 2 the upper sash and 3 the lower sash, both of which are adapted to slide in said casing. It is found in some instances most convenient to be able to lock the lower sash against being raised from

the outside of the house by unauthorized persons, and at the same time to drop the upper sash for a short distance to admit of a better circulation of air. In order to control both of these sashes in the manner above described I have provided a lock constructed with a pair of cooperating and interlocking bolts, each being arranged to be engaged and retained by the other, one while in its locked and the other while in its unlocked position.

The device is constructed of a casing 4 which is made substantially in the form of the letter T, the whole being formed hollow and open on its underside and nicely rounded over and closed on its upper side. The stock at one end of the head portion 5 is carried down at 6 and drilled at 7 forming a bearing through which the engaging end of the lower sash bolt, which is retained in this hollow portion, projects, the opposite end of said bolt being operatively retained by a bearing plate hereinafter described. The outer end of the stem portion 8 of the casing is also closed at 9 and drilled at 10 through which the upper sash limit bolt is adapted to project and receive its bearing. Flanges 11—11 are provided on the sides of this stem portion which are drilled to receive the retaining screws 12—12.

The lower sash lock bolt is constructed with a round portion 13, which extends back to the collar 14 against which collar one end of the withdrawing spring 15 rests. A small portion of this bolt is cut away leaving the same flattened slightly at 16 for a short distance from this collar extending toward the handle end, the same is then cut considerably deeper and flattened at 17 back to the operating knob or handle 18 forming a square shoulder 19.

The upper sash or limit bolt is provided with an operating handle 20 having a collar portion 21 forward from which the bolt portion extends, this being cut away forming a flattened portion at 22 for a short distance. The bolt portion is then slightly reduced and cut deeper at 23 for another short distance leaving a stop shoulder 24. The bolt then assumes its normal diameter forming a barrel portion around which the spring 25 is wound, one end of which engages and presses against the collar 26 to normally hold this bolt in its closed position. This bolt then extends forward for a short dis-

tance and near its end the stock is reduced to a small neck forming a thin circular head 27 on the end of the bolt.

In order to allow the upper window sash 2 to be lowered for a short distance a limit plate 28 is provided, the same having holes 29—29 for the reception of screws by which it may be fastened to the window sash, as illustrated in Fig. 1. In order that this plate may be more securely retained to the sash a pair of spurs 30—30 have been formed on its lower edge which may be driven into the sash. This plate is provided with a slot 37 running nearly its entire length. At the lower end of the slot is a hole 36 through which the head of the bolt is adapted to enter. The back portion of this slot is recessed as at 40, see Fig. 2, to permit the head 27 of the limit bolt to slide up and down therein. When these cooperating and interlocking bolts are placed in their respective positions in the casing it is found convenient to provide a small bearing plate 31, see Fig. 8, which is adapted to fit into the recess in the bottom of the casing. This plate is provided with two bearing members 32 and 33 which are adapted to engage the underside of the limit bolt to support the same in its operative position. The plate is also provided with an intumed finger 34 adapted to engage the outer end of the lower sash locking bolt, see Figs. 3 and 4, to support the same in its operative position.

In assembling and operating this device the lower sash bolt is first placed in the casing in its unlocked or withdrawn position, its spring tending to hold it normally in this position. The limit bolt is then placed in position across and at right angles to the limit bolt also in its unlocked or withdrawn position, the tension on its actuating spring serving to press it into its locked position, but this bolt is retained in this unlocked position by the portion 16 of the lock bolt engaging the shoulder 24 of said limit bolt, as illustrated in Fig. 6.

After the bolts have been placed in their respective positions they are operatively retained by the bearing plate 31 which is then permanently secured in the back of the casing by solder or other convenient means. When it is now desired to move both bolts to their locked position it is only necessary to press the lock bolt inward to the position illustrated in Figs. 2 and 3, causing the end of said bolt to engage the hole 35 in the window casing, effectually locking the lower sash. By this inward movement of the lock bolt the portion 16 of said bolt will pass forward and release the shoulder 24 of the limit bolt allowing the latter to be automatically carried forward into its locked position, as illustrated in Figs. 2 and 5. The head 27 of said limit bolt entering the hole 36 in the

bottom of the slot 37 in the plate 28 whereby the upper sash may be lowered the length of said slot only. The forward motion of this limit bolt carries the portion 22 into engagement with the shoulder 19 of the lock bolt effectually retaining said latter bolt from being withdrawn from its locked position until the limit bolt is first withdrawn by hand.

When it is desired to unlock the windows the upper sash must first be entirely closed, then the limit bolt may be withdrawn by hand. By this construction it will be seen to be impossible to unlock the window by a person on the outside reaching through the partially opened sash. The outward movement of the limit bolt causes the portion 22 to be disengaged from the shoulder 19 of the lock bolt and allows said bolt to return to its unlocked position under tension of its spring, which position causes its portion 16 to engage the shoulder 24 of the limit bolt to hold it firmly in its unlocked position.

The device is extremely simple and inexpensive in construction and effective in its operation.

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

1. A window sash lock comprising a bolt for securing the lower sash to the casing, a bolt for controlling the movement of the upper sash, each adapted to work across the other, and means whereby the positioning of the first named bolt releases the last bolt to automatically lock the lower sash and also lock the first bolt from being withdrawn.

2. A window sash lock comprising a bolt for securing the lower sash to the casing, a bolt for controlling the movement of the upper sash, each adapted to work across the other, and an engaging portion on the body of the last named bolt whereby the withdrawing of the same releases the first bolt to be automatically withdrawn.

3. A window sash lock comprising a bolt for securing the lower sash to the casing, a slotted plate on the upper sash, a bolt for engaging the slot in said plate whereby the upper sash may be dropped a predetermined distance only, and means in the body of the first bolt whereby the positioning of the same releases the last bolt to automatically lock the first bolt from being withdrawn.

4. A window sash lock comprising a bolt for securing the lower sash to the casing, a slotted plate on the upper sash, a bolt for engaging the slot in said plate whereby the upper sash may be dropped a predetermined distance only, means in the body of the last named bolt whereby the withdrawing of the same releases the first bolt to be automatically withdrawn, and means in the body of the first bolt for retaining the second named bolt in its withdrawn position.

5. A window sash lock comprising a bolt for securing the lower sash to the casing, a bolt for controlling the movement of the upper sash, each adapted to work across the other, and a raised portion in the body of the last named bolt whereby when positioned is adapted to lock the first bolt from being withdrawn.

6. A window sash lock comprising a bolt for securing the lower sash to the casing, a bolt for controlling the movement of the upper sash, each adapted to work across the other, and a reduced portion in the last named bolt whereby the withdrawing of the same releases the first bolt to be automatically withdrawn.

7. A window sash lock comprising a bolt for securing the lower sash to the casing, a bolt for controlling the movement of the upper sash, the same being adapted to work across each other, means in the last named bolt whereby the withdrawing of the same automatically releases the first bolt to be withdrawn, and a raised portion in the first bolt for engaging the second named bolt and retaining the same in its withdrawn position.

8. A window sash lock comprising a bolt for securing the lower sash to the casing, a withdrawing spring for said bolt, a bolt for controlling the movement of the upper sash, a spring for pressing said upper sash bolt to its locked position, and means in the last named bolt whereby the positioning of the same locks the first bolt from being withdrawn.

9. A window sash lock comprising a bolt for securing the lower sash to the casing, a withdrawing spring for said bolt, a bolt for controlling the movement of the upper sash, a spring for setting said latter bolt in its locked position, and means in the last named bolt whereby the withdrawing of the same releases the first bolt to be automatically withdrawn.

10. A window sash lock comprising a bolt for securing the lower sash to the casing, a withdrawing spring for said bolt, a bolt for controlling the movement of the upper sash, a spring for setting said latter bolt in its locked position, one side of the last named bolt being cut away whereby the withdrawing of the same releases the first named bolt to be automatically withdrawn, and means in the upper sash bolt for retaining the lower sash bolt in its projected position.

11. A window sash lock comprising a bolt for securing the lower sash to the casing, a withdrawing spring for said bolt, a bolt

for controlling the movement of the upper sash set at substantially right angles to and intersecting with said lower sash bolt, a spring for pressing said upper sash bolt to its locked position, the intersecting portion of said latter bolt being adapted when in its locked position to engage the first named bolt and prevent the same from being withdrawn.

12. A window sash lock comprising a bolt for securing the lower sash to the casing, a withdrawing spring for said bolt, a bolt for controlling the movement of the upper sash set at substantially right angles to and intersecting with said lower sash bolt, a spring for pressing said upper sash bolt to its locked position, the intersecting portion of said lower sash bolt being adapted when in its unlocked position to engage the said upper sash bolt and retain the same in its withdrawn position.

13. A window sash lock comprising a bolt for securing the lower sash to the casing, a withdrawing spring for said bolt, a slotted plate on the upper sash, a bolt for engaging the slot in said plate whereby the upper sash may be dropped a predetermined distance only, said upper sash bolt being set at substantially right angles to and intersecting with said lower sash bolt, a spring for pressing said upper sash bolt to its locked position, the intersecting portion of said latter bolt being adapted when in its locked position to engage the first named bolt and prevent the same from being withdrawn.

14. A window sash lock comprising a bolt for securing the lower sash to the casing, a withdrawing spring for said bolt, a slotted plate on the upper sash, a bolt for engaging the slot in said plate whereby the upper sash may be dropped a predetermined distance only, said upper sash bolt being set at substantially right angles to and intersecting with said lower sash bolt, a spring for pressing said upper sash bolt to its locked position, the intersecting portion of the upper sash bolt being cut away whereby the withdrawing of the same releases the lower sash bolt to be automatically withdrawn and the intersecting portion in the lower sash bolt being arranged to retain the upper sash bolt in its withdrawn position.

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

ARTHUR C. J. ROY.

Witnesses:

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E. I. OGDEN.