

(No Model.)

A. H. BAKER.
SASH FASTENER.

No. 539,565.

Patented May 21, 1895.

Fig. 1.

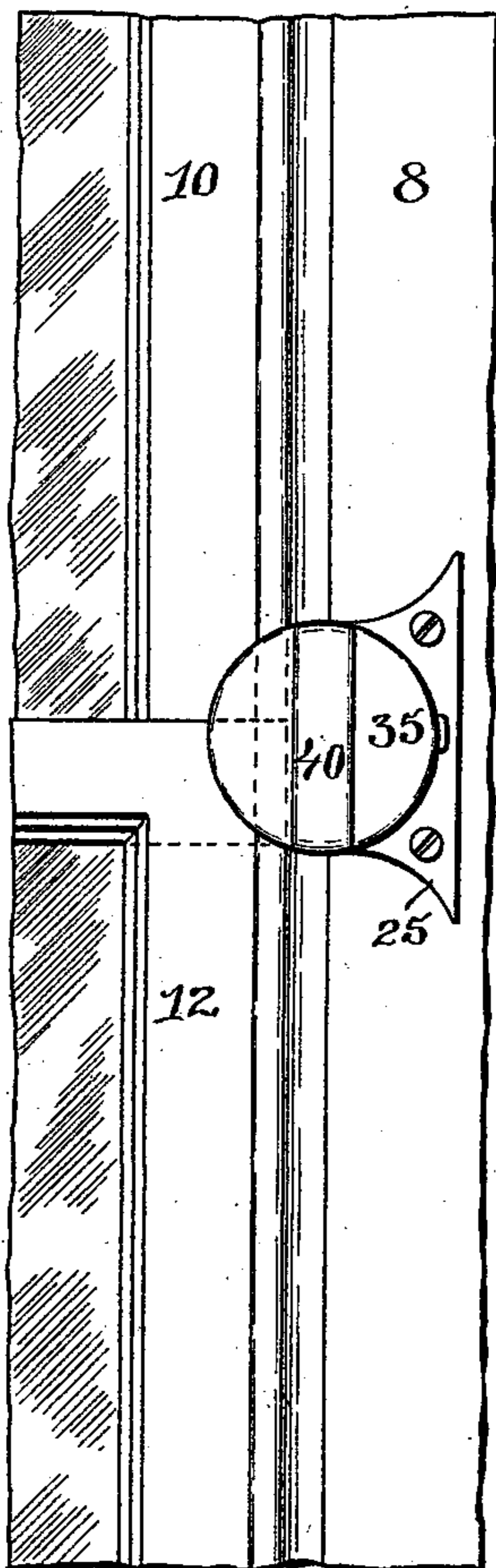


Fig. 2.

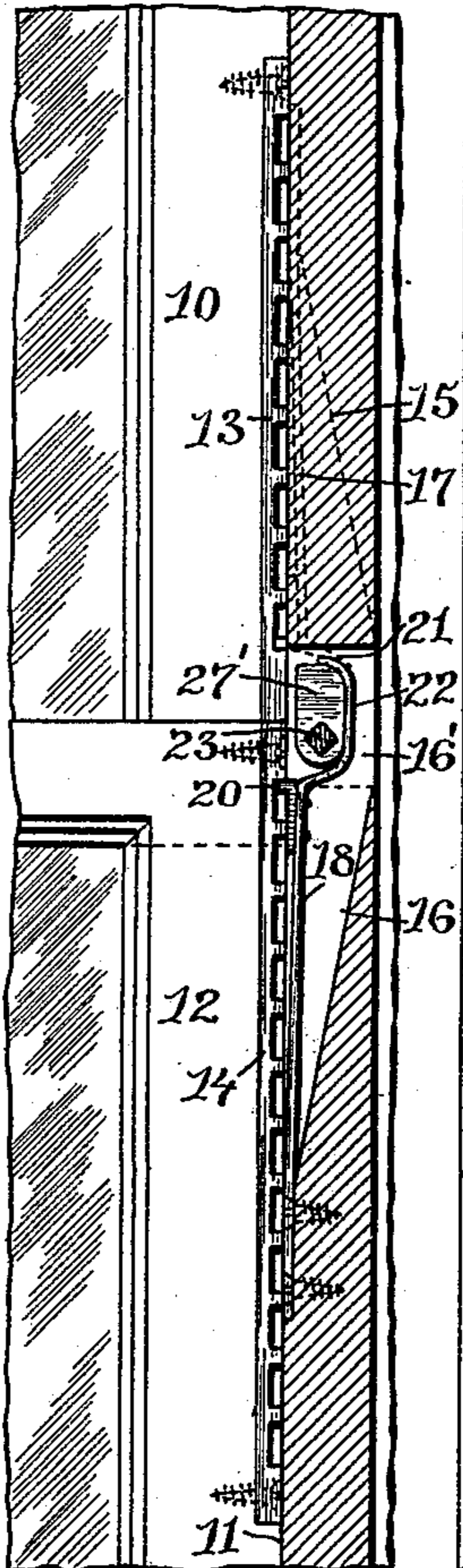


Fig. 3.

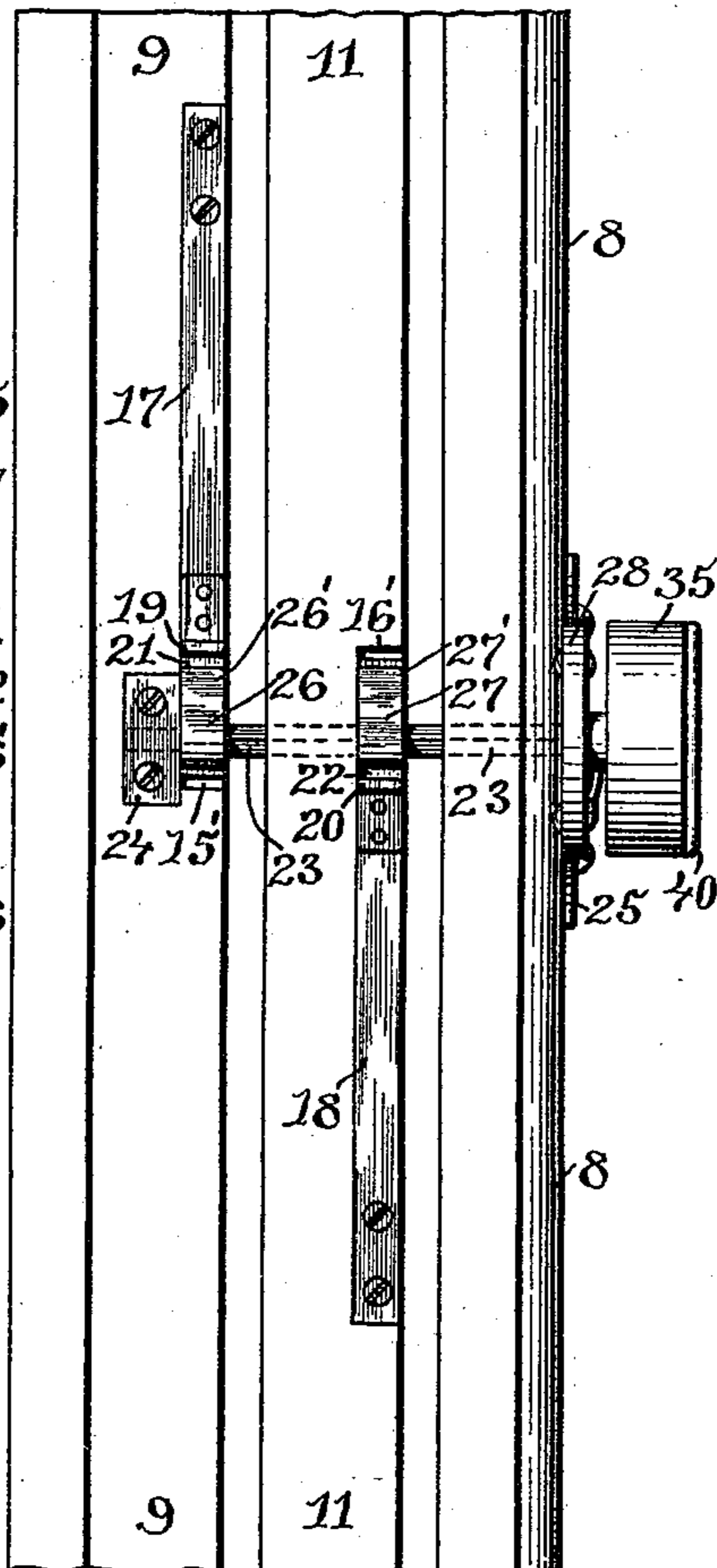


Fig. 4.

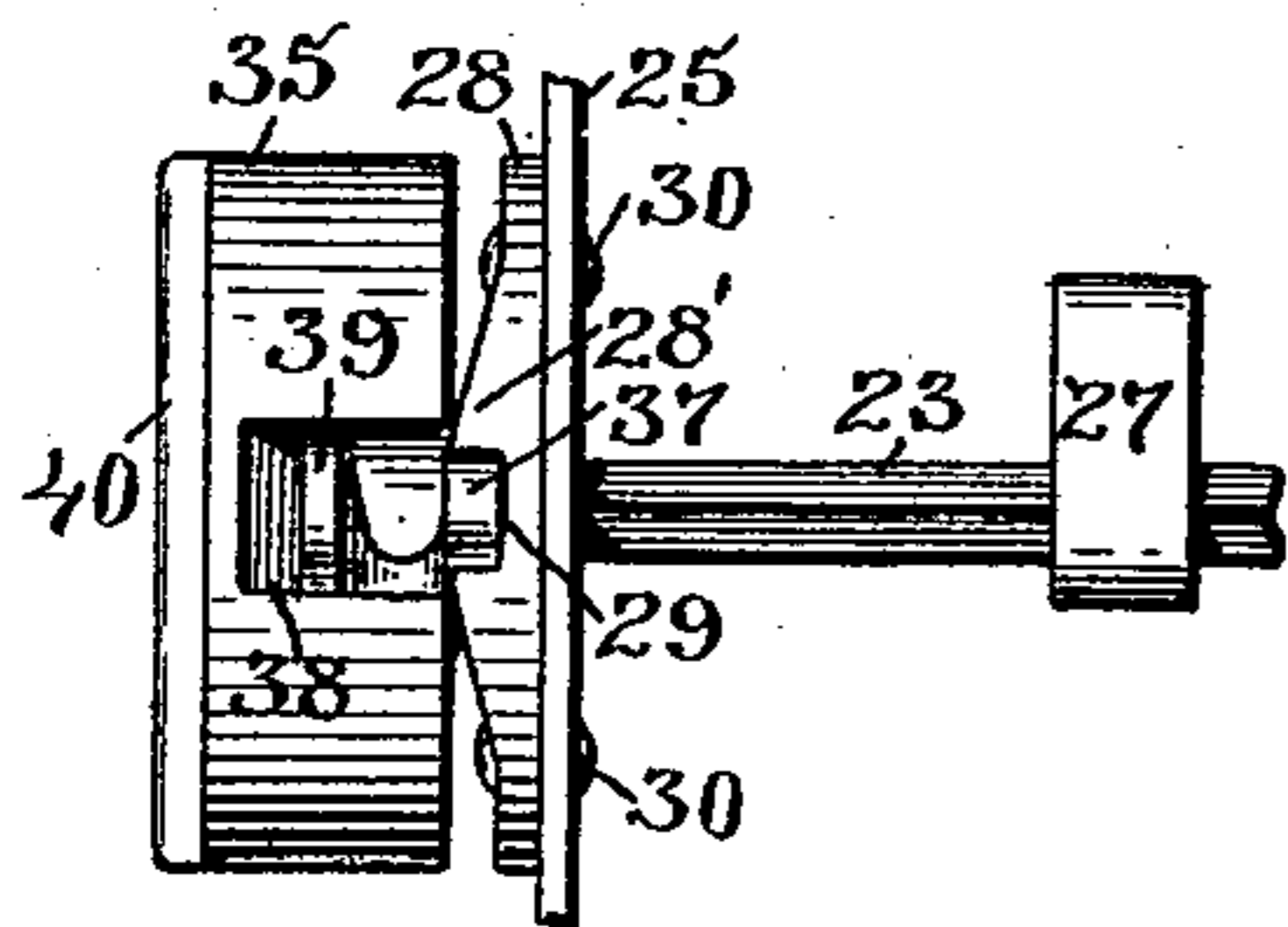


Fig. 5.

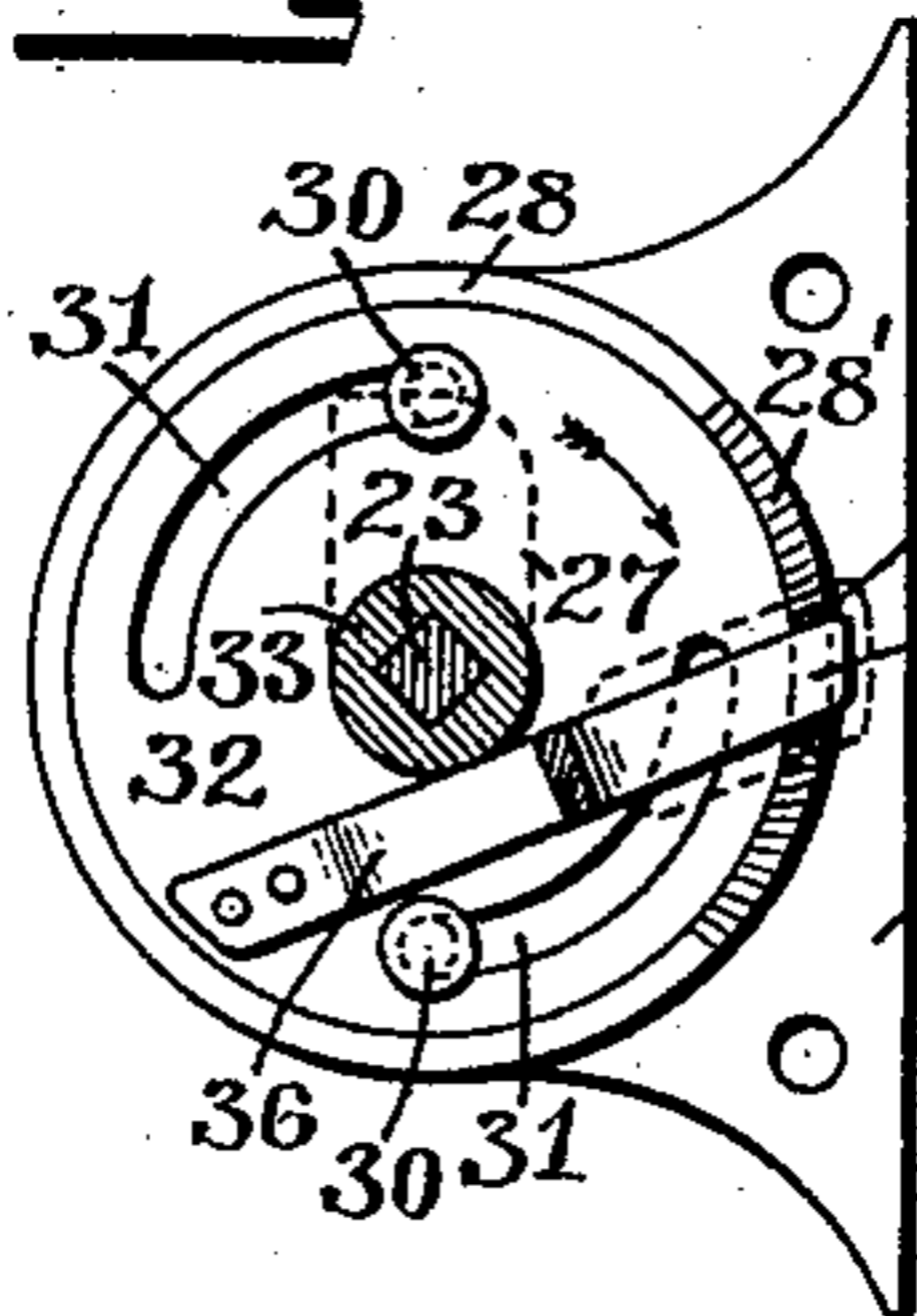
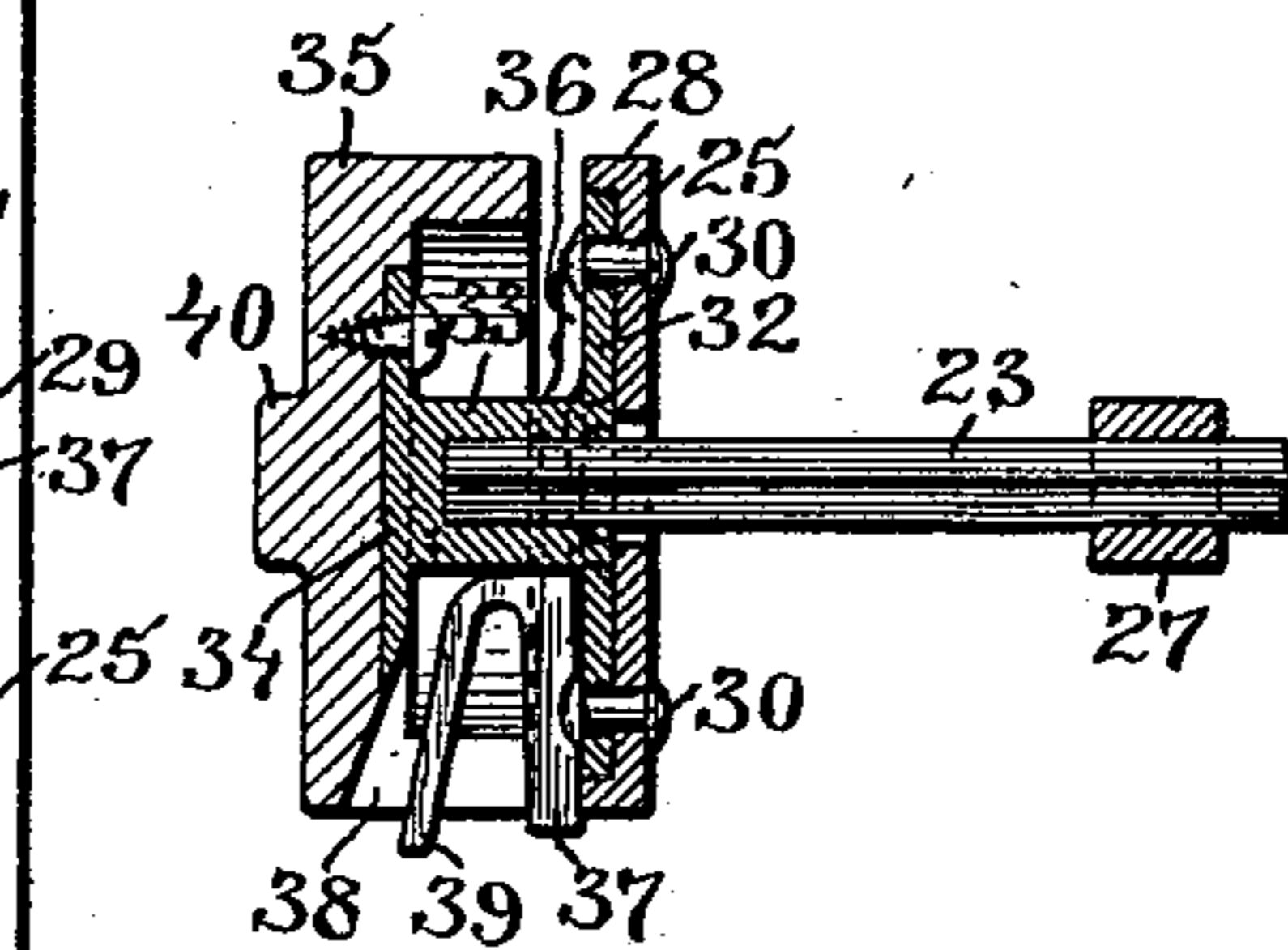


Fig. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

AUGUSTUS H. BAKER, OF PROVIDENCE, RHODE ISLAND.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 539,565, dated May 21, 1895.

Application filed September 17, 1894. Serial No. 523,180. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS H. BAKER, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Sash-Locks; 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 devices for locking window-sashes in the open or closed positions or in intermediate positions.

The object of the invention is to provide a novel sash-lock which can be economically applied to a window frame and sash and can be conveniently operated to lock the sash at any point in its traverse to allow of ventilation while the device for operating the locking-mechanism may be more securely fastened than those heretofore constructed.

This invention consists in the peculiar construction of the locking-mechanism and its operating-device.

Figure 1 represents an inner view of portions of a window-frame and its sashes, showing the operating-knob and its bracket-plate. Fig. 2 represents a view of the same, the casing being in vertical section to more clearly show the locking-springs and the racks on the sash. Fig. 3 represents a face view of the frame, showing the locking-springs, the operating shaft and knob, and the cam-arms on the shaft. Fig. 4 represents a side view of the knob, its bracket-plate, a portion of the operating-shaft, and one of the cam-arms on the shaft. Fig. 5 represents a bottom view of the knob, the shaft being shown in section. Fig. 6 represents a sectional view of the knob taken on a line with the shaft, the cam-arm being shown in cross-section.

Similar numbers of reference designate corresponding parts throughout.

In the drawings 8 represents the inner casing of a window-frame having the way 9 for the upper sash 10 and the way 11 for the lower sash 12, to the corresponding edges of which sashes are respectively secured the racks 13 and 14 which are recessed in these edges of the sashes. Portions of the ways 9 and 11 are cut away to form recesses 15 and

16 which taper respectively from the upper and lower portions of the ways toward the center, the deepest portions of these recesses 15' and 16' extending past each other. To the ways 9 and 11 are secured the springs 17 and 18 which extend toward the deepest portions of the recesses 15 and 16, being furnished with the stops 19 and 20 beyond which the material of the springs is bent backward and then forward to form the hook-shaped ends 21 and 22.

Through the casing 8 and the ways 9 and 11 is formed a perforation through which the shaft 23 extends passing through the hook-shaped ends 21 and 22 of both the springs, the inner end of the shaft being journaled in the bearing 24 secured in the window-frame outside of the casing, while the inner end of this shaft is rotatably supported in a perforation in the bracket-plate 25 through which the shaft extends. On this shaft, opposite to the hook-shaped ends 21 and 22 of the springs, are mounted the cam-arms 26 and 27 shaped to fit these hook-shaped ends and having square shoulders 26' and 27' which, when the arms are thrown inward by the turning of the shaft, will bear against the flattened portion of these ends and prevent the return of the springs to place until the shaft is turned backward.

The bracket-plate 25 is adapted to be secured to the inner window-casing 8 and has a circular raised flange 28 having a portion 28 raised from the general plane and furnished with a notch 29. Through perforations in the bracket-plate extend the rivets, or pins, 30—30, which also extend through the curved slots 31—31 in the circular bearing-plate 32, for securing the bearing-plate to the bracket and to serve as stops limiting the rotation of the bearing-plate to the length of the slots 31—31. The bearing-plate has also a socketed-post 33 into which the end of the shaft is engaged, the outer end of the post being furnished with a plate 34 to which the hollow knob 35, or other device for rotating the shaft, is secured. To the bearing-plate 32 is secured the spring 36 one end of which extends beyond the plate forming a catch 37, while a portion of the spring extends upward and outward through the opening 38 of the knob to form the thumb-piece 39. On the outer

surface of the knob may be secured a cross-piece 40 to serve as an indicator whereby the position of the locking mechanism may be indicated.

5 In placing the device in position, the racks 13 and 14 being secured to the sashes 10 and 12 and the recesses 15 and 16 cut in the window-frame, the perforation for the shaft 23 is prepared and the bearing 24 secured in
10 place,—the shaft, being furnished of sufficient length to extend through the required portion of any ordinary frame, is cut to suitable length, it is then passed through the perforation in the inner casing until its end comes
15 nearly to the spring 18. Then the arm 27 is slipped on to the shaft the square perforation through the arm preventing the turning of the same independent of the shaft. The shaft is then pushed onward until its end is
20 brought to a position where the arm 26 may be slipped on and is finally received by the bearing 24. The bracket 25 may now be secured in place on the window-casing, the inner end of the shaft being at the same time
25 engaged in the square socket of the post 33. In operating the device the thumb-piece 39 is first raised to disengage the end 37 of the spring 36 from the notch 29 in the flange 28. The knob 35 is then given a one-quarter turn
30 toward the right, the shaft 23 being thus rotated will cause the arms 26 and 27 to bear against the hook-shaped ends 21 and 22 of the springs 17 and 18 and throw the same backward releasing the stops 19 and 20 on said
35 springs from the racks 13 and 14. When the shaft reaches its limit of rotation governed by the slots 31—31 of the bearing-plate and the stop-pins 30—30, the square portions 26' and 27' of the ends of the arms 26 and 27 will
40 bear against the ends of the springs and hold them in position. The sashes may now be moved upward or downward and adjusted at pleasure. For cleaning purposes the sash-lock may be left in this position, but generally
45 after the sashes have been adjusted the knob 35 is turned backward allowing the springs to move back to their normal positions with their stops 19 and 20 bearing on the teeth of their respective racks or engaged between
50 the teeth, if in the first position, the slight upward or downward movement of the sash will bring the depressed space between two of the rack teeth opposite the stop 19 or 20, which, engaging in this depression, will effectually
55 lock the sash and bearing on the rack will tend to prevent the rattling of the sash. By this construction the operating device, namely, the knob or its equivalent, is so placed as to be practically inaccessible from outside the window,
60 particularly as two motions must be made for the unlocking, first the lifting of the thumb-piece and then the turning of the knob. The portion of the window-frame at which the knob is located is also generally protected

from the outside by the sash unless both of the same be either wholly raised or lowered.

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

1. In a sash-lock, the combination with a window-sash, and a rack secured thereto, of a window-frame in which the sash is reciprocally movable, a spring secured to said frame and having a stop for engaging the rack on the sash, a shaft rotatably mounted in the casing, an arm secured to the shaft and adapted to bear on the spring to disengage the same from the rack, a knob secured to the outer end of the shaft, a spring-latch secured in said knob, and a catch secured to the window-frame adjacent to the knob with which the spring-latch may engage an operating-device secured to the outer end of the shaft, and means for locking the operating-device.

2. In a sash-lock, the combination with a rack adapted to be secured to a movable shaft, of the spring 18 adapted to be secured to the casing and having the stop 20 and the hook-shaped end 22, the shaft 23 adapted to be journaled transversely to the spring 18, the cam-arm 27 mounted on the shaft for operating the spring, a device mounted on the shaft for turning the same, and means for locking this device in the closed position.

3. The combination with a sash, and the rack 13 or 14 secured thereto, of a frame, in which the sash is reciprocally movable, having a recess 15 or 16, the spring 18, having the stop 20 and hook-shaped end 21, secured to the casing and adapted to be bent into said recess, the shaft 23 journaled at right angles to the spring, an arm mounted on the shaft and adapted to bear in the hook-shaped end of the spring, a bracket secured to the casing through which the shaft extends, a knob rotatably mounted on the bracket and adapted to engage the shaft, and means for locking the knob against rotation.

4. In a sash-lock having a rotatable shaft for operating the locking-device in one direction, the combination with this shaft, and the bracket 25 secured to the window-frame and having the notched flange 28, of the bearing-plate 32 having the socket-post 33 with the plate 34 and the slots 31—31, the rivets 30—30 extending through these slots, and the bracket-plate for securing the same together, the spring 36 secured to the bearing-plate and having the catch 37 and the thumb-piece 39, and the knob 35 secured to the plate 34 and having the opening 38 through which the thumb-piece extends, as described.

In witness whereof I have hereunto set my hand.

AUGUSTUS H. BAKER.

Witnesses:

HENRY J. MILLER,
M. F. BLIGH.