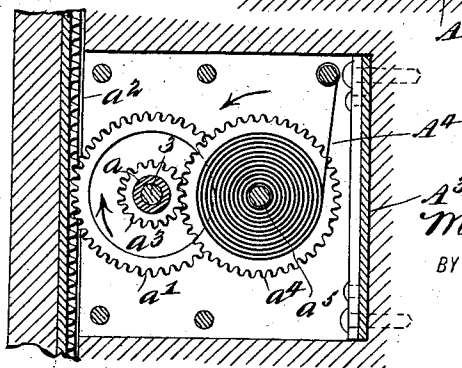
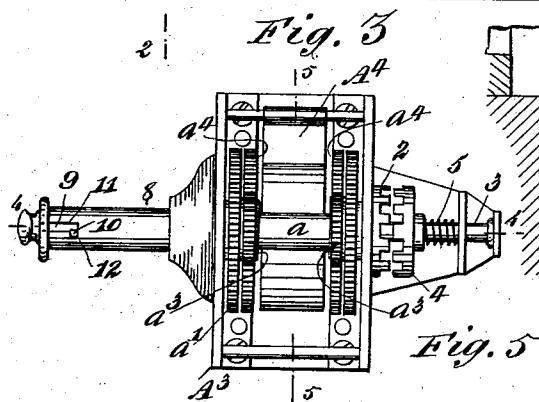
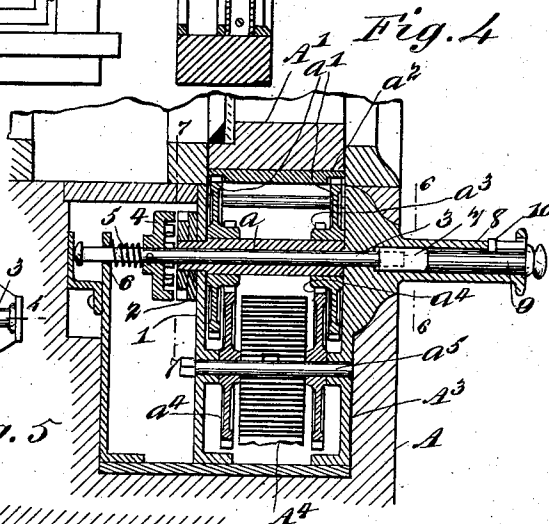
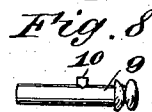
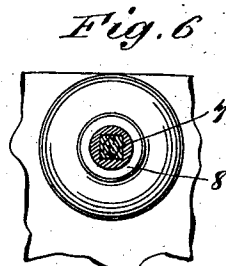
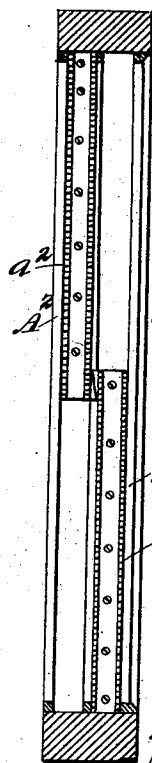
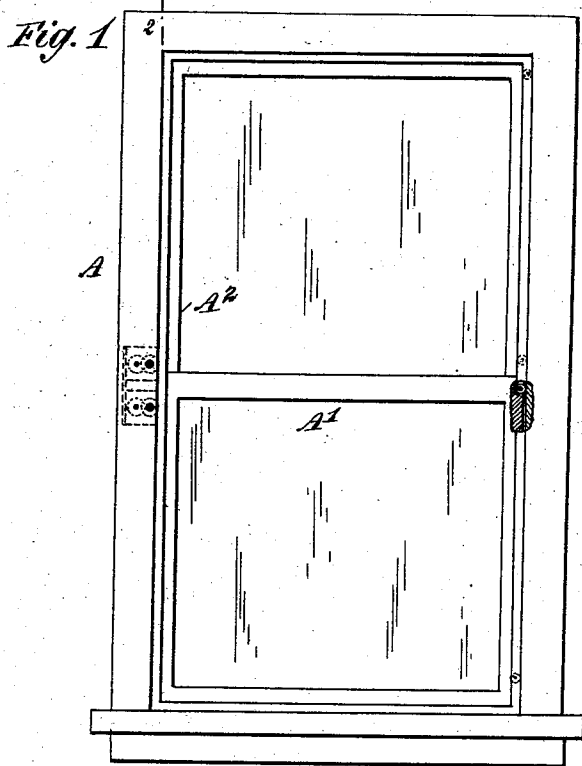


(No Model.)

M. F. ROBINSON.
SASH LOCK AND OPERATOR.

No. 567,255.

Patented Sept. 8, 1896.



WITNESSES:

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MICHAEL F. ROBINSON, OF NEW YORK, N. Y., ASSIGNOR OF TWO-THIRDS
TO PATRICK M. CULLINY, OF SAME PLACE.

SASH-LOCK AND OPERATOR.

SPECIFICATION forming part of Letters Patent No. 567,255, dated September 8, 1896.

Application filed September 12, 1895. Serial No. 562,285. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL F. ROBINSON, of New York city, in the county and State of New York, have invented new and Improved Window-Sash Locking and Raising Devices, of which the following is a full, clear, and exact description.

This invention relates to devices for raising the sash of a window, and comprises mechanism for locking the sash at any desired elevation or when entirely closed, the object being to obviate the use of the ordinary weights and sash-cords employed, and, further, to so construct the device that a sash may be locked at any desired opening for ventilation or other purposes.

With this end in view the invention comprises gearing engaging with a rack or racks on the sash and a spring for operating the gearing in connection with a locking device comprising a clutch, one member of which is connected to the gearing and the other member of which is movable in and out of engagement therewith.

It further consists in the construction and novel arrangement of parts, as hereinafter specified, and pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of a window-casing and the sash therein and showing the position of my invention as attached thereto. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a front elevation of the locking and raising mechanism. Fig. 4 is a horizontal section thereof on the line 4 4 of Fig. 3, showing the locking and raising mechanism as secured within the window-casing. Fig. 5 is a section on the line 5 5 of Fig. 3, showing the device as secured within the casing and engaging with a sash. Fig. 6 is a partial elevation and partial section on the line 6 6 of Fig. 4. Fig. 7 is a face view of a portion of a clutch employed and a sectional view on the line 7 7 of Fig. 4 of a rod employed for carrying the other section of the clutch, and Fig. 8 is a side view of a push-pin or key employed.

Referring to the drawings, A designates a

window-casing of the ordinary construction, A' the lower sash therein, and A² the upper sash, both being movable vertically in the casing. As the locking and raising device for one sash is similar to that for the other sash a description of one will answer for both, stating, however, that the device for the lower sash will be located at the upper portion of one side rail of the lower sash and the device for the upper sash will be placed at the normally lower end of the side rail of the said sash. It may be further stated that a locking and raising device may be employed on each side of a sash, if desired, but I have here shown it as located on one side only.

The locking and raising device comprises a shell or casing A³, designed to be seated and secured within the recess in the casing A between the stop and parting beads. Within the casing A³ is journaled a tubular shaft *a*, upon which are rigidly mounted gear-wheels *a'*, the front portions of which extend slightly beyond the inner surface of the sash and engage with racks *a*², secured to the side rail of the sash. Formed integral with the gear-wheels *a'* are pinions *a*³, engaging with gear-wheels *a*⁴, mounted on a shaft *a*⁵, having bearings in the casing A³. To this shaft *a*⁵ one end of a coiled spring A⁴ is attached, the other end of the spring being attached to a fixed portion of the casing. As a means for turning the shaft *a*⁵ for the purpose of giving the proper tension to the spring A⁴ before the device is inserted in the window-casing, I provide the shaft *a*⁵ with a square portion adapted to be engaged by a key.

The tubular shaft *a* has its bearings in and extends through the rear wall 1 of the casing A³ and has attached to it a clutch-section 2. A rod 3 extends through the tubular shaft *a* and has secured to its free end a clutch-section 4, adapted to engage with the clutch-section 2, and a spring 5 surrounds the rod between the clutch-section 4 and the bearing 6, through which the rod extends. This spring 5 serves to force the clutch-section 4 into engagement with the clutch-section 2 for the purpose of locking the parts. The front end of the rod 3 is provided with a square portion 7, movable in a tubular extension 8, which extends outward through the front face of the

window-casing. The portion of the rod which passes through the bearing 6 is square or made angular, so as to prevent a rotary movement of the rod 3.

5 The tubular portion 8 extends somewhat beyond the end of the square portion 7 and is designed to receive a removable push-pin or key 9, which has a projection 10 on one side, adapted to pass through a longitudinal slot 11, formed in the tubular portion 8, the inner end of this slot 11 terminating in an offset slot 12.

The operation of the device is as follows: When it is desired to raise a window, the push-pin or key 9 is inserted and by means of it the rod 3 is forced rearward to disengage the clutch-sections. When under the influence of the spring A⁴, the gear-wheels *a'* will be rotated to raise the sash. By turning the projection 10 on the push-pin 9 into the offset slot 12 the clutch-section 4 will be locked out of engagement with the clutch-section 2, thus obviating the necessity of holding or pushing inward on the push-pin when it is desired to move a window-sash to its extreme opening. Obviously by engaging the clutch-sections and removing the push-pin a window-sash may be locked at any desired opening, and the locking mechanism of course cannot be manipulated by any one outside of the house and reaching through the opening beneath the window, thus making it practically safe to leave a window slightly open during the night for the purpose of ventilation.

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

1. A device for raising and locking a window-sash, comprising gear-wheels mounted on a tubular shaft, pinions on said tubular shaft, a rack adapted to be secured to a window-sash or the like and meshing with said gear-wheels, gear-wheels on another shaft

engaging with said pinions, a spring having connection with said shaft and with a fixed portion of the casing of the device, a rod extended through the tubular shaft, a clutch-section on said rod, and a clutch-section on the tubular shaft with which said first-named section is adapted to engage, substantially as specified.

2. A locking and raising device for a window-sash, comprising a casing designed to be inserted in a window-casing, a tubular shaft mounted in said casing, gear-wheels mounted on said tubular shaft and adapted to engage with racks on a window-sash, pinions on said tubular shaft engaging with spring-driving mechanism, a non-rotary rod extended through said rotary shaft, a clutch-section on said rod adapted to engage the clutch-section on the tubular shaft, a tubular portion extended outward through the window-casing and having a bayonet-slot, and a push-pin having a lateral projection movable in said slot, substantially as specified.

3. A window-fastener, comprising a casing, a shaft rotatively mounted therein, a spring coiled on the central portion of the shaft and connected at its end to the casing, gear-wheels secured on said shaft on opposite sides of the spring, a second shaft journaled in the casing and having pinions meshing with said gear-wheels, gear-wheels on said last-named shaft, a rack adapted to be secured to a window-sash or the like and meshing with the gear-wheels on said last-named sash, and a locking device carried on the casing and having engagement with the one of said shafts to hold the same against rotative movement, substantially as set forth.

MICHAEL F. ROBINSON.

Witnesses:

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