No. 620,468. Patented Feb. 28, 1899.

F. J. LOWERY & F. E. BILLINGS.

WINDOW FASTENER.

(Application filed Dec. 1, 1898.)

(No Model.)

Fig. 1.

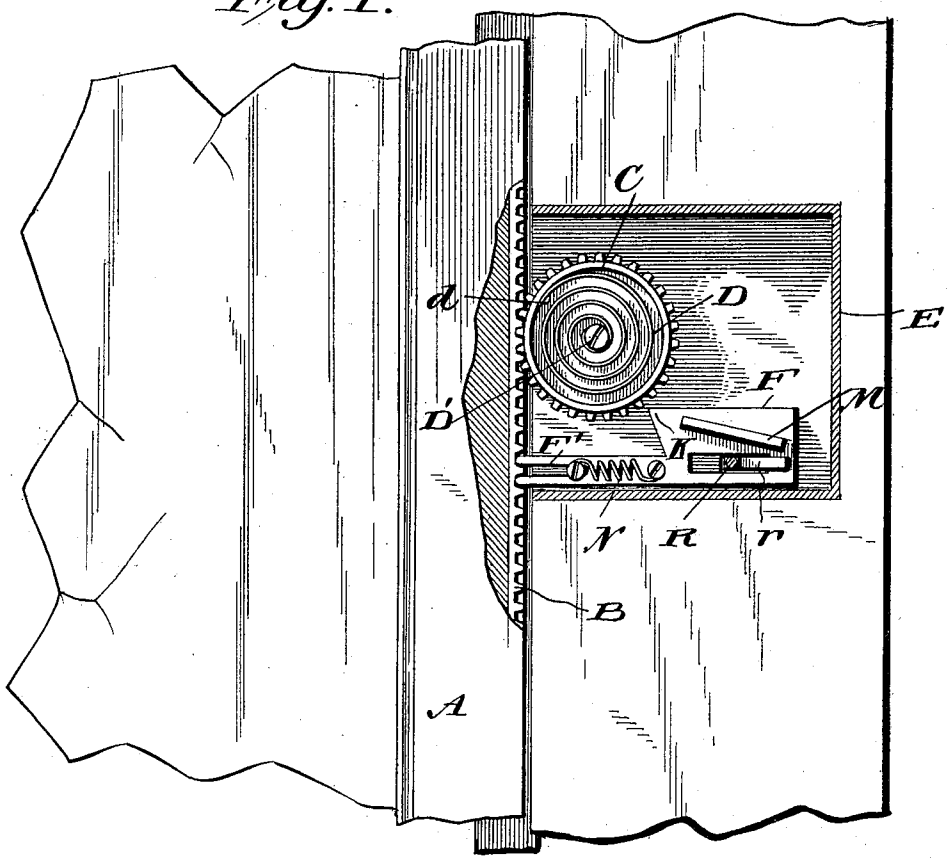
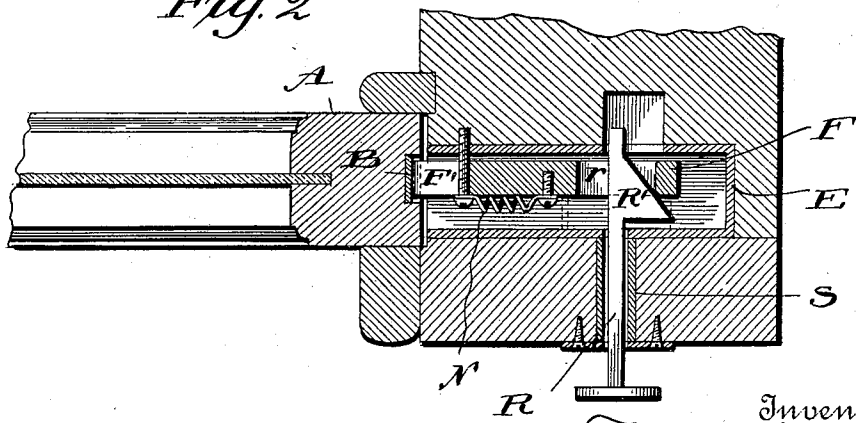


Fig. 2



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK J. LOWERY AND FRANK E. BILLINGS, OF FORT FAIRFIELD, MAINE.

WINDOW-FASTENER.

SPECIFICATION forming part of Letters Patent No. 620,468, dated February 28, 1899.

Application filed December 1, 1898. Serial No. 697,981. (No model.)

To all whom it may concern:

Be it known that we, FRANK J. LOWERY and FRANK E. BILLINGS, citizens of the United States, residing at Fort Fairfield, in the county of Aroostook and State of Maine, have invented certain new and useful Improvements in Window-Fasteners; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in devices for raising window-sashes; and it consists in the provision of a device whereby the sash may be automatically raised by operating a push-button, allowing the window to be raised, means being provided for holding the sash at any height and locking it in such a position.

More specifically our invention consists in the provision of a sash having a rack-bar upon one of its vertical strips, the teeth of which rack-bar are designed to mesh with the teeth of a spring-actuated cog-wheel mounted in the window-casing, and a locking device which holds the sash at any desired position and also prevents the rotation of the spring-actuated cog-wheel should the sash be removed for any purpose.

To these ends and to such others as the invention may pertain, the same consists, further, in the novel construction, combination, and adaptation of parts, as will be hereinafter more fully described and then specifically defined in the appended claims.

Our invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an elevation of our invention, parts being broken away to better illustrate the construction. Fig. 2 is a sectional view showing the construction of the push-button and its connections.

Reference now being had to the details of the drawings by letter, A designates the window-sash, which has seated in one of its vertical strips, on its outside adjacent to the window-casing, a rack-bar B. The teeth of this rack-bar are flush with the edge of the sash, as shown, and not visible when the sash is in place in the window-casing. Seated in a recess in the casing of the window is a hollow cog-wheel C, in which a coiled spring D is located, one end of which spring is secured to the pivot D′, on which the cog-wheel is mounted, while the other end of the spring is secured to the inside of the flange of the wheel, as at *d*. This cog-wheel C is so located that its teeth will extend out beyond the facing of the casing and mesh with the teeth of the rack, whereby as the wheel is rotated in one direction or another the sash will be raised or lowered. Mounted in the inclosed casing E, containing the cog-wheel, is a sliding lock-plate F, the outer forked end F′ of which extends through the window-casing adjacent to the rack-bar, and the said forked end is designed to engage with the teeth of the rack-bar and hold the sash at a given height, not allowing the sash to be raised or lowered from its locked position until the locking-slide is withdrawn from the teeth of the rack-bar.

In order to prevent the unwinding of the cog-wheel in case the sash should be removed for any purpose, we provide on the sliding locking member a projection K, which is designed to engage with the teeth of the cog-wheel when the locking member is at its farthest outward throw. To guide the locking member, which is thrown forward by means of the coiled spring N, in its longitudinal movements, its forked ends extend through apertures in the window-casing, while a block M, mounted on the broad face of the locking member, bears against the inside face of the cover to the casing inclosing the cog-wheel. This casing may be made of metal and set into the window-casing similarly as door-locks are inserted into the door-casing.

The push-button R (shown in the detail sectional view) has an L-shaped shoulder with a slanting bracket edge, as seen at R′, and the lower end of said push-button extends through an aperture S in the wall of the casing containing the cog-wheel and sliding lock, while the other end of the push-button extends through the opposite wall of the casing. The sliding locking member is apertured, as at *r*, through which aperture the push-button

passes, with the slanting edge of the push-rod bearing against one end of the aperture in the locking member, while the longitudinal straight edge of the push rod or button engages the edges of the apertures in the opposite walls of the casing inclosing the cog-wheel, whereby as pressure is applied to the outer end of the push button or rod the slanting edge of the push-button will bear against the end of the aperture in the locking member and draw the same back under the tension of the spring connected to said member and the forked end of the locking member will be withdrawn from engagement with the teeth of the rack-bar and allow the window-sash to be raised or lowered.

In order to allow the window-casing to raise and lower easily, antifriction-rollers may be placed in the window-casing on the opposite side from that in which the cog-wheel turns.

Having thus described our invention, what we claim to be new, and desire to secure by Letters Patent, is—

1. In a device for raising and locking a window-sash, the combination with the sash, the rack-bar mounted thereon, the cog-wheel having teeth meshing with the teeth of said rack-bar, the spring carried by the cog-wheel, the spring-actuated locking member having a forked end designed to engage with the teeth of the rack-bar, and a projection designed to engage with the teeth of the cog-wheel, and a push-button for drawing the locking member out of engagement with the teeth of the rack-bar and cog-wheel, as set forth.

2. In combination with the sash, the cog-wheel, the locking member having a forked end, the forks of which pass through apertures in the window-casing, the block secured to the face of the locking member, and the push-button, all substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK J. LOWERY.
FRANK E. BILLINGS.

Witnesses:
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