

No. 611,961.

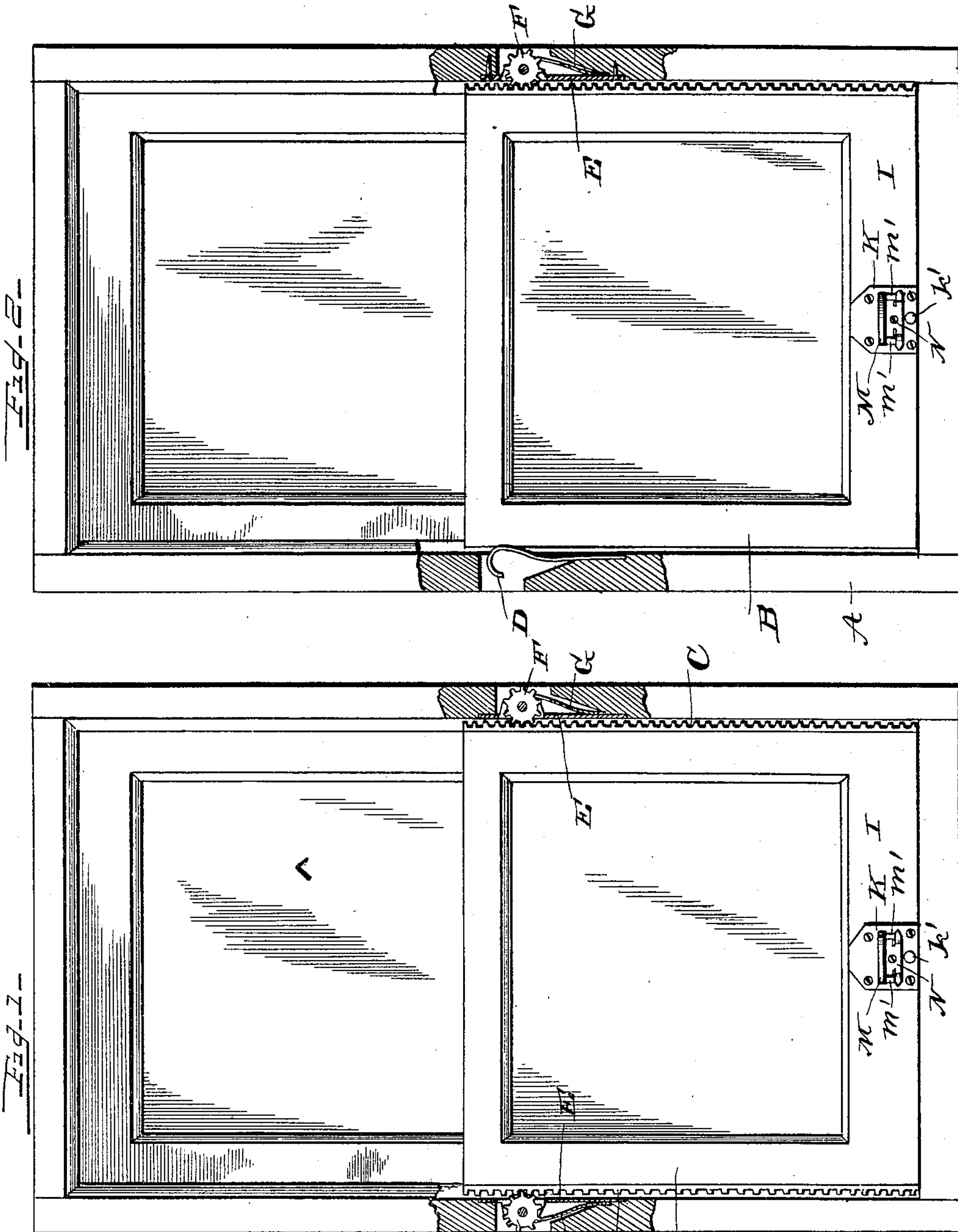
Patented Oct. 4, 1898.

D. GARDNER.
SASH FASTENER.

(Application filed Dec. 9, 1896. Renewed Aug. 10, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES—

J. A. Pauberschmitt,
J. D. Kingsbury

INVENTOR—
Daniel Gardner
By Whitaker & Brewster attys.

No. 611,961.

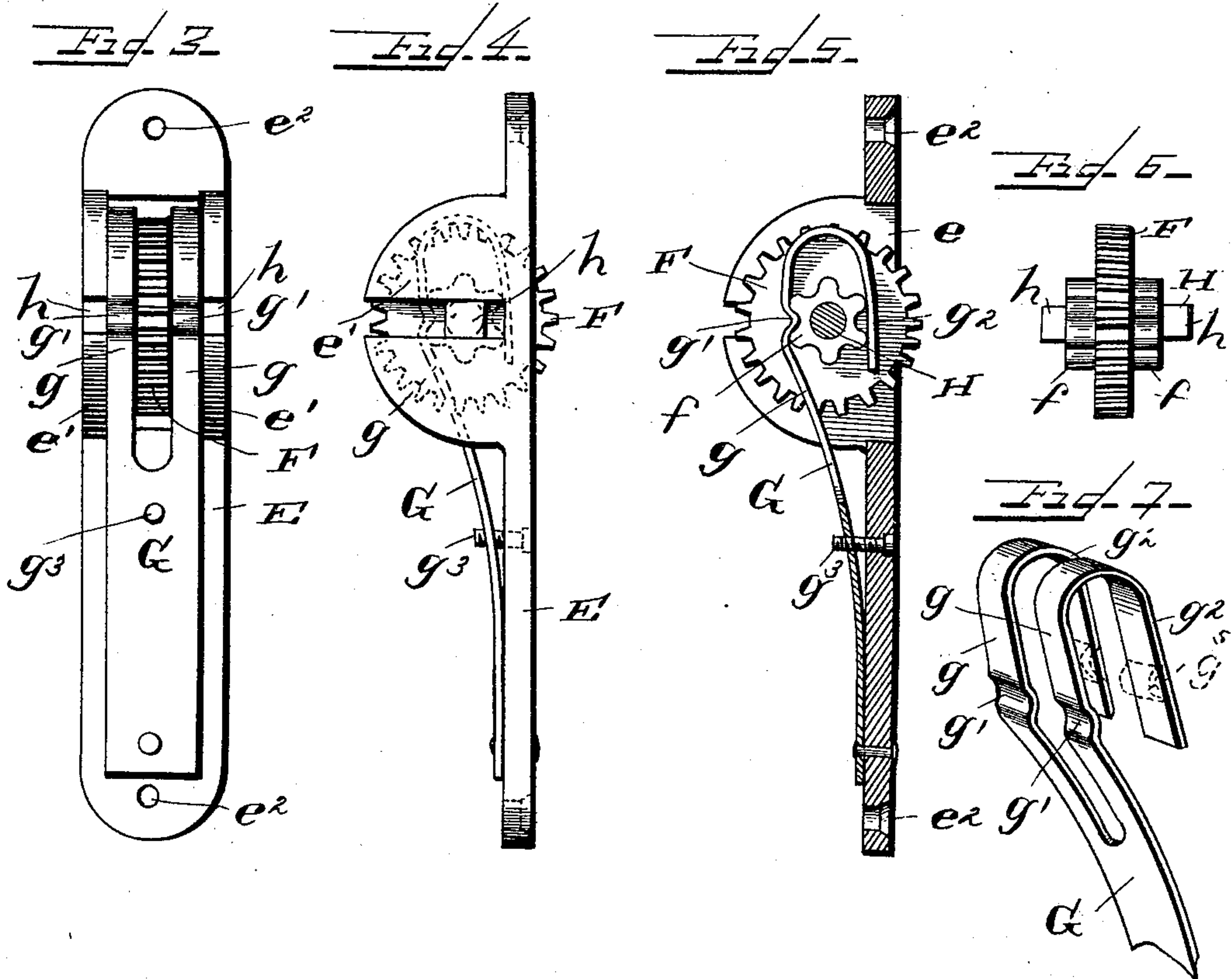
Patented Oct. 4, 1898.

D. GARDNER.
SASH FASTENER.

(Application filed Dec. 9, 1896. Renewed Aug. 10, 1898.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES—

G. A. Rauberschmidt,
J. H. Kungshery

INVENTOR—

Daniel Gardner
By Whitaker & Frost
Atty.

UNITED STATES PATENT OFFICE.

DANIEL GARDNER, OF NEWBURG, NEW YORK.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 611,961, dated October 4, 1898.

Application filed December 9, 1896. Renewed August 10, 1898. Serial No. 688,312. (No model.)

To all whom it may concern:

Be it known that I, DANIEL GARDNER, a citizen of the United States, residing at Newburg, in the county of Orange and State of New York, have invented certain new and useful Improvements in Window-Sash Holders; and I do hereby 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.

My invention is an improvement in devices for holding sashes in any desired position to which they may be raised or lowered; and it consists in the novel features hereinafter described, reference being had to the accompanying drawings, which illustrate one form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following description and claims.

Referring to the said drawings, Figure 1 represents a view, partly in section, of a window-casing, showing the lower sash provided with my improved sash-holding device on both sides. Fig. 2 is a view similar to Fig. 1, showing the sash-holding device on one side replaced by a spring, a construction which can be advantageously used with light sashes. Fig. 3 is a detail rear elevation of one of the sash-holding devices. Fig. 4 is a side view of the same. Fig. 5 represents a vertical longitudinal section of the same. Fig. 6 is an edge view of the pinion. Fig. 7 is a detail perspective view of the retaining-spring.

In the drawings, A represents the window-casing, and B represents one of the vertically-sliding sashes. One or both of the outer vertical edges of the sash are provided with a vertical rack C. In Fig. 1 I have shown both sides provided with racks, and in Fig. 2 I have shown only one side so provided.

In the construction shown in Fig. 1 I employ one of my sash-holding devices on each side and in Fig. 2 only one of said devices. In the latter case I employ a spring D on the side of the window-casing opposite to the sash-holder to bear against the sash and hold it over against the sash-holding device.

My improved sash-holding device is shown in detail in Figs 3, 4, 5, 6, and 7.

E represents the frame of the device, formed, preferably, of cast-iron and consisting

of a flat plate provided with an opening *e* intermediate its ends, on each side of which is a flange *e'*, preferably semicircular in form and provided with a central open-ended slot perpendicular to the main portion of the frame E. The plate or frame E is provided at each end with an aperture *e*² to receive a screw or nail by which it may be secured to the window-casing, which will be recessed to receive said plate and the parallel flanges *e' e'*.

F represents a pinion which is provided with gear-teeth of a pitch to engage the teeth of the rack C on the sash B, and on each side of the pinion is a hub *f*, preferably formed integrally therewith, which is provided with rounded teeth having depressions between them and forming what I term a "ratchet-hub" on each side of the pinion.

G represents a spring which is secured at one end to the plate E by riveting or otherwise and has its other end bifurcated, forming two spring-arms *g g*, which are bent over until the ends are substantially parallel with the main portion, as shown at *g*² *g*² in Figs. 5 and 7, and the main portions of these spring-arms between the point of attachment and the bend are each provided, preferably, with an inwardly-bent portion or tooth *g' g'* to fit between two of the rounded teeth of the ratchet-hubs.

When the spring G is in operative position, its bifurcated portions engage the two ratchet-hubs of the pinion on one side and the curved ends engage the opposite sides of said hubs, thus holding the teeth *g' g'* in the recesses between adjacent teeth of the hub. When the pinion is rotated, the turning of the hubs with it will push back the teeth *g' g'* as the teeth of the hub slip past. This movement will be resisted not only by the spring G itself, but also by the bent ends *g*² *g*² of the spring-arms, which bear against the opposite sides of the hubs, thus enabling the spring to readily hold the pinion in position unless an unusual amount of pressure is brought to bear upon it.

The pinion F and hubs *f f* are mounted upon a shaft H, which is preferably provided with squared ends *h*, engaging and sliding in the open slots in the flanges *e' e'*, as shown, so that the pinion may be moved rearwardly

in the plate E in order to insert and remove the sash. It will be seen that the pinion F engages the rack C of the sash and holds the sash in any desired position. When it is desired to raise or lower the sash, the operator seizes the sash and pulls it upward or pushes it down, when the additional force thus exerted will permit the ratchet-hubs to turn until the force is removed, when the sash will be held rigidly in position.

As previously stated, one or both sides of the window-casing and sash may be provided with the rack and sash holding device. The construction shown in Fig. 2, in which one of said devices is replaced by the spring D, is very advantageous and effective for small light sashes, such as car-windows and the like.

In order to increase or diminish the tension of the spring G, I provide the plate E with an adjusting-screw g^3 , which engages the spring between its point of attachment and the teeth $g' g'$.

In order to remove the sash from the window-casing, the side strip or cleat is removed as usual, and by inserting any pointed instrument between the pinion and the rack and pressing the pinion away from the rack the sash can be removed, and it can be replaced in the same manner by pressing the pinion back into the casing. It will be noted that the spring G not only prevents the pinion from turning under the action of the weight of the sash, but it also holds the pinion firmly in engagement with the rack.

It is obvious that if found desirable I may provide the pinion with only one ratchet-hub and a spring having a single spring, and I may also provide the outer bent ends g^2 of

the spring with a projecting portion or tooth to engage the ratchet-hub on the side opposite the teeth g' , as indicated in dotted lines at g^5 in Fig. 7.

What I claim, and desire to secure by Letters Patent, is—

1. The combination with the rack adapted to be secured to a sliding sash, of a pinion for engaging said rack and provided with a ratchet-hub, and a spring having a portion intermediate its ends engaging said hub, on one side and having one of its ends bent around and engaging said hub on the other side, one of said hub-engaging portions of the spring being provided with a projection, substantially as described.

2. The combination with the sliding sash provided with a rack, of a frame adapted to be secured to the window-casing provided with slotted arms, a pinion mounted in said slotted arms and provided on each side with a ratchet-hub, a spring secured to said plate and having its free end bifurcated to form two arms, each of said arms having a projection engaging one of the ratchet-hubs on one side, and having its end bent over and engaging said hub on the opposite side, and an adjusting-screw engaging said spring between the bifurcated portions and the point of attachment whereby said screw will adjust the pressure of both of said arms upon said ratchet-hubs simultaneously, substantially as described.

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

DANIEL GARDNER.

Witnesses:

WILLARD M. TERPENING,
SANDFORD E. HUDDERSON.