

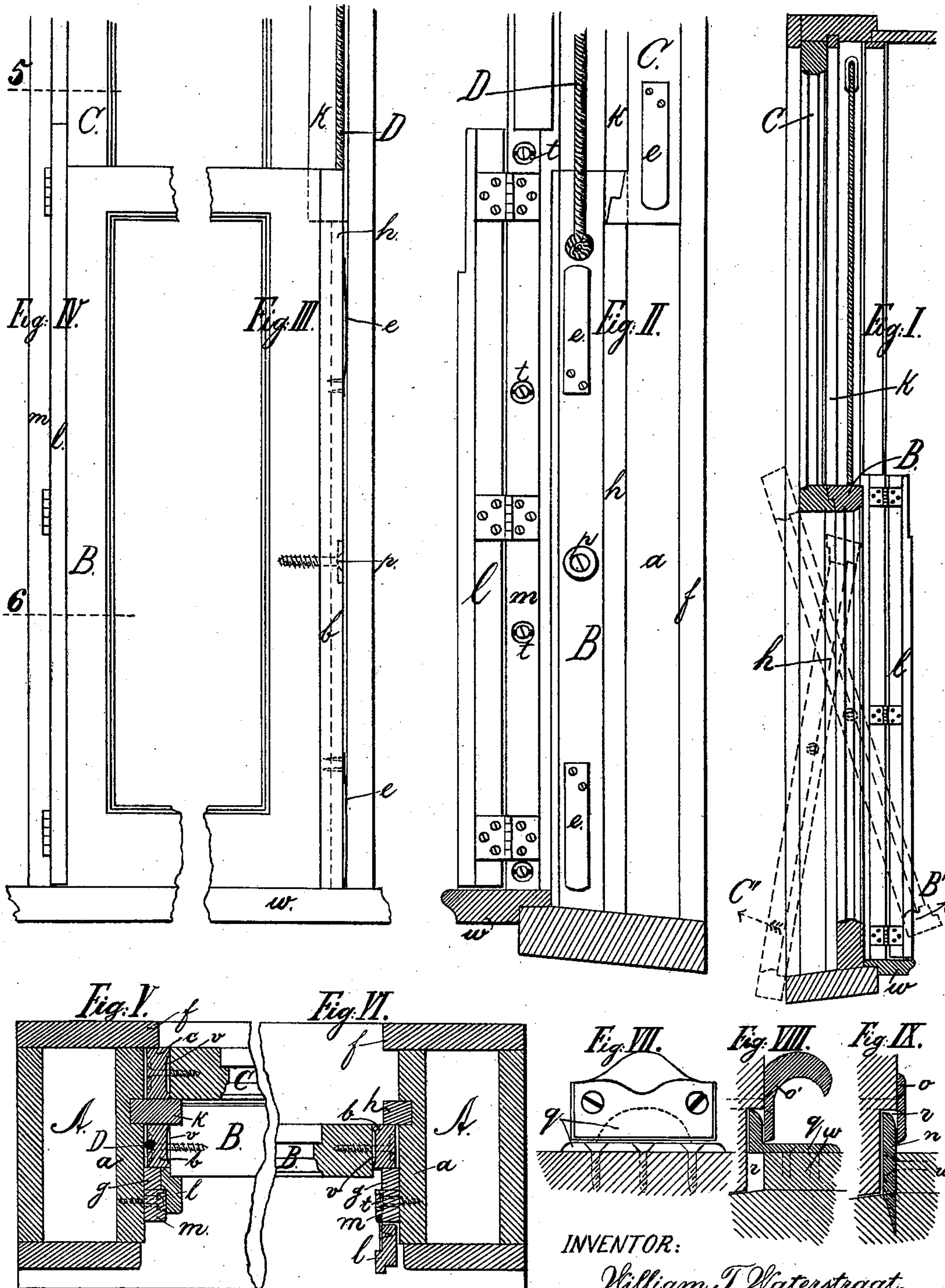
No. 614,149.

Patented Nov. 15, 1898.

W. T. WATERSTRAAT.  
WINDOW.

(Application filed Mar. 18, 1897.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## WINDOW.

SPECIFICATION forming part of Letters Patent No. 614,149, dated November 15, 1898.

Application filed March 18, 1897. Serial No. 628,219. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM T. WATERSTRAAT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Windows, of which the following is a specification.

My invention relates to an improvement in the class of windows to which belongs the window construction set forth in Letters Patent of the United States No. 561,461, granted to me June 2, 1896. A window of this class involves as the generally-stated construction an upper (outer) and lower (inner) sash adapted to be raised and lowered in the frame in which they are confined and each of which is so supported as to adapt it when brought to the lowered position of the inner sash to be readily swung inward into the room to permit access to the outer surface of the sash, as for cleaning, reglazing, and the like.

The primary object of my present improvement is to render windows of the class referred to weatherproof, draft-proof, and dust-proof.

To this end my invention consists in the novel features of construction hereinafter described and as set forth in the combinations of the appended claims.

Referring to the accompanying drawings, Figure 1 is a vertical section of a window provided with my improvement, the view showing the sashes in closed position, the hinged window-stop opened, and by dotted lines the positions of the outer and inner sashes when reversed; Fig. 2, a similar view on a larger scale than the view presented by Fig. 1, showing the lower part of the window and displaying the sashes in edge elevation in their closed positions, with the hinged window-stop opened; Fig. 3, a view in front elevation of the window as shown in Fig. 1, but with the inner stops removed to expose the sliding stiles and their connections; Fig. 4, a similar view of the same with the window-stops closed; Fig. 5, a broken section taken at the line 5 on Fig. 4 and viewed in the direction of the arrow; Fig. 6, a reversed section taken at the line 6 on Fig. 4 and viewed in the direction of the arrow, showing the hinged stop swung out of the way to permit reversal of the sash. Fig. 7 shows a section of the sash

with its attached sash-lift and a draw-plate cooperating therewith shown in elevation; Fig. 8, a cross-sectional view of the same, and Fig. 9 a similar view showing a modified form of draw-plate.

A is the window-frame.

B is the lower or inner sash, pivotally supported in a usual manner, as by means of wood-screws and washers, (indicated at *p*,) upon sliding stiles *b*, through the medium of which it is common to confine the sashes in the vertical guide-grooves in the window-frame. C is the upper or outer sash, similarly supported on the sliding stiles *c*. If the sashes are, as usual, counterpoised, the sash-cords D may be connected with the sliding stiles *b c* near their upper ends. Back of the sliding stiles or interposed between them and the pulley-stiles *a* are fastened springs *e e*, to exert sufficient pressure against the sliding stiles to force and hold them against the sides (edges) of the sashes and thus seal them together. To insure a snugger and more permanent fit between the meeting surfaces of the sashes and sliding stiles, which are liable to shrink or warp more or less, that surface of either or both is grooved or recessed lengthwise between its edges, as shown at *v* of the sliding stile *b* in Figs. 5 and 6.

The springs *e* may, to subserve their purpose, be fastened, as shown, to the sliding stiles to move with them within the window-frame and press against the pulley-stiles, or they may be stationary and fastened to the pulley-stiles.

At *f* is shown the outer stop-bead. *g* is the inner stop-bead, and *h* is the lower parting-strip, (one of each of which is of course provided at each side of the window-frame.) The parting-strip extends from the frame-sill upward short of the upper plane of the lowered inner sash and has an extension or continuation *k*, somewhat wider and projecting farther out beyond the frame, thereby causing it to cover and thus seal the crack or joint between the sliding stile *c* and the outer sash C when the latter is closed in its raised position.

As will be understood, the strips *f*, *g*, *h*, and *k*, in conjunction with the pulley-stiles *a*, form the grooves in the frame for confining the sashes at their sliding stiles.



At *l* is shown the inner window-stop or weather-stop, which may be removable (preferably by hinging it, as shown) either throughout its entire length or only as to the lower section thereof, as illustrated, to adapt it to be swung out of the way of obstructing the sash in turning the latter on its pivotal supports. The upper end of each hinged stop is cut away, as shown in Figs. 1 and 2, to form an offset, so that when the lower sash is raised it clears the offset and frees the stop to enable the sash to be swung.

As the hinged weather-stops are only practically adjustable by removing and resetting the hinges to refit them in case of the shrinkage and twisting of the woodwork, which is to be expected, they are frequently troublesome. I avoid this trouble and enable them to be readily adjusted by unskilled labor by providing auxiliary beads *m*, fastened to the framework through the medium of countersunk slotted washers and round-headed screws, as shown at *t*, or by other suitable means.

A common objection in connection with windows generally is a looseness between the lower rail of the inner sash and the window-stool *w*, which permits rattling of the sash and the ingress of dust, draft, and the like through the meeting-crack at the bottom of the window. To obviate this, I provide means for drawing the lower rail of the inner sash, in closing it, and the window-stool close together, the means referred to comprising a

cam-plate *n*, fastened to the frame or window-stool, as shown, and a plate *o*, fastened to the bottom rail of the sash. Thus when the sash is lowered the plate *n*, one being fastened to each end of the frame or window-stool, and which is shown as countersunk in a cavity *r* in the sash, wherein it is concealed when the sash is down, coöperates with a plate *o*, fastened to the bottom rail of the sash, to draw or force the latter against the window-stool. Instead of the form of draw-plate shown in Fig. 9 the form shown at *q* in Fig. 8 may be employed to coöperate with the ordinary form of sash-lift represented at *o'*.

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

1. In a window of the character described, the combination of the sliding stiles, and the sash pivotally connected therewith, having straight meeting surfaces and the interposed longitudinal grooves between the stiles and sash-rails, and springs interposed between the stiles and window-frame, substantially as and for the purpose set forth.

2. In a window of the character described, the combination with the removable weather-stop of a bead *l* hinged thereto and adjustably fastened to the window-frame to adapt it to be set with relation to the sash, substantially as and for the purpose set forth.

WILLIAM T. WATERSTRAAT.

In presence of—

J. H. LEE,

R. T. SPENCER.