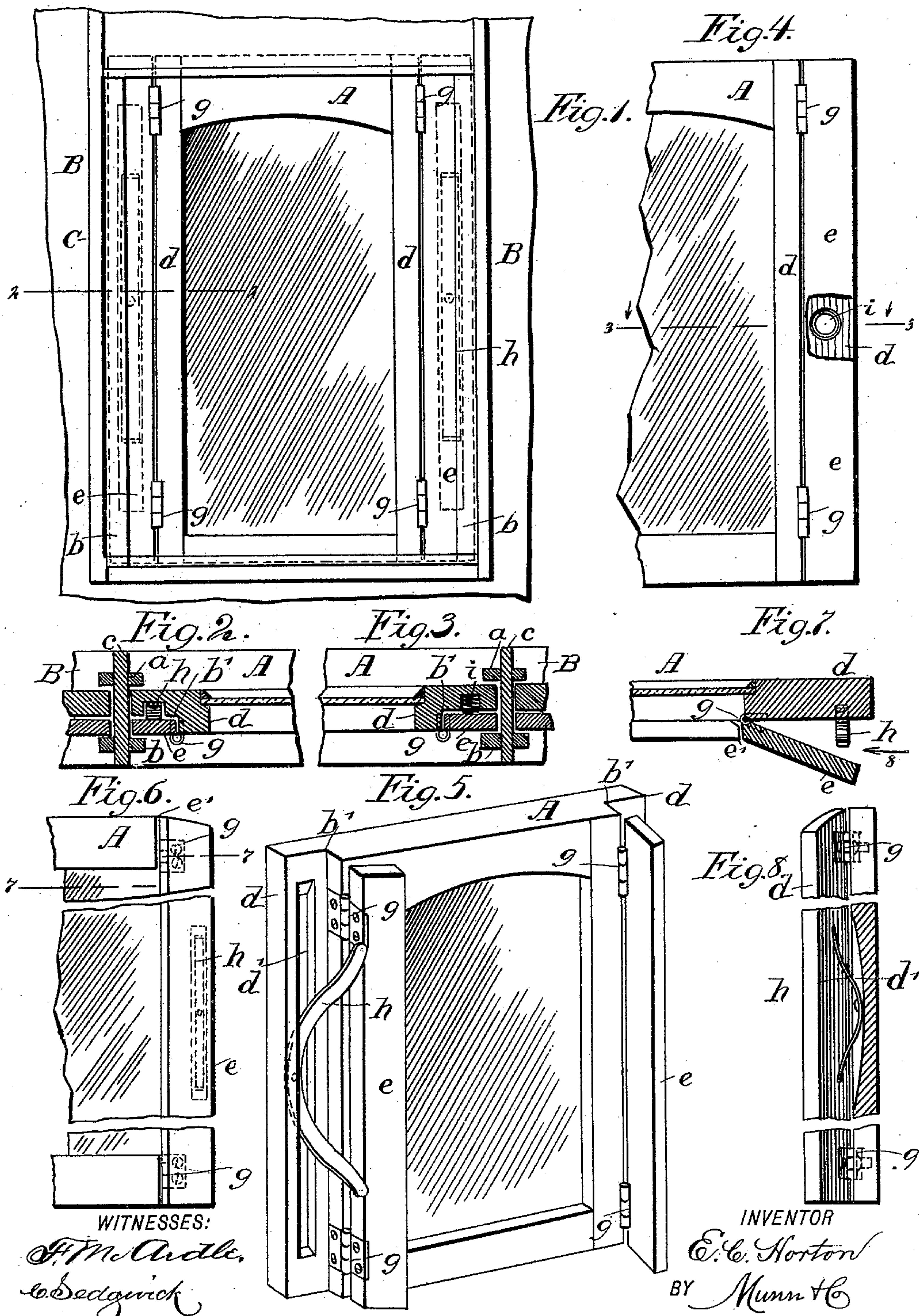


(No Model.)

E. C. HORTON.
WINDOW.

No. 498,119.

Patented May 23, 1893.



UNITED STATES PATENT OFFICE.

EVERETT C. HORTON, OF JERSEY CITY, NEW JERSEY.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 498,119, dated May 23, 1893.

Application filed January 14, 1893. Serial No. 458,359. (No model.)

To all whom it may concern:

Be it known that I, EVERETT C. HORTON, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and
5 useful Improvement in Windows, of which the following is a full, clear, and exact description.

My invention relates to improvements in devices for closing the side joints of window
10 sashes where they slide between bead strips and parting strips on the stiles of the window casement, and has for its object to provide a simple, inexpensive and practical device of novel construction, which will automatically
15 close the crevices at the sides of window sashes and also afford means for the support of the sash at any desired point of elevated or lowered adjustment; and will adapt the sashes for easy movement, produce tight
20 joints, and compensate for changes in thickness of the sashes due to expansion or shrinkage.

To these ends my invention consists in the construction and combination of parts, as is
25 hereinafter described and claimed.

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

30 Figure 1 is an inner side view of a window sash and casement, with the improvement applied thereto. Fig. 2 is a transverse sectional view on the line 2—2 in Fig. 1. Fig. 3 is a transverse sectional view on the line 3—3 in
35 Fig. 4, showing a slightly modified form of the improvement. Fig. 4 is an inner side view, in part, of a sash having the improvement in position thereon and slightly modified in construction. Fig. 5 is a perspective
40 view of the inner side of a sash having the improvement constructed as indicated in Figs. 1 and 2. Fig. 6 is an inner side view, in part, of a window sash whereon another modified form for the improvement is shown. Fig. 7
45 is a transverse sectional view of the modification shown in Fig. 6, on the line 7—7 in said figure; and Fig. 8 is a side edge view of parts shown in Fig. 7, opposite the arrow 8 in said figure.

50 The drawings represent the novel appliance in connection with a car window, but it

is also applicable to windows in buildings, to close side crevices between the sashes and the casing strips, and thus exclude wind and dust, and at the same time prevent rattling of the
55 sashes and adapt the upper or lower sash to slide easily and stay where adjusted.

In the views shown, A represents a single sash of suitable dimensions to close an opening made for its reception in the side B, of a
60 car shown in part. Between the bead strips *a, b*, that are projections from the inner sides of the stiles *c*, the side bars of the sash A are fitted to slide, these parts containing the improvement, as will be presently described. 65

It will be seen that the parallel side bars *d* of the sash A, are rabbeted on their inner surfaces along the free edges, so as to afford an open recess on each bar, of a depth that will
70 reduce the thickness of said bars a proper degree, and of such a width as will permit a portion of each bar to remain of full thickness near the edges that receive the glass.

Upon the reduced portions of the sash side bars *d*, similar closing strips *e* are fitted,
75 which are of such proportionate dimensions as will fill out the bars and render them of equal thickness throughout their length and breadth. The strips *e* are secured to the shoulders *b'*, on the side bars *b*, with hinges
80 *g*, so as to swing freely thereon as indicated in Fig. 5, said strips having their free edges and ends co-incident with like edges and ends on the side bars *d*, when lap-folded upon them. 85

The bars *d* are recessed on their faces that lie adjacent to the joint closing strips *e* for the embedment of springs, which may be plate springs shaped as shown at *h* in Fig. 5, or be given a spiral form, as indicated in Figs. 3,
90 and 4 at *i*.

The springs *h* are preferably located in the elongated channels or recesses *d'* formed in the side bars *d* for their reception, and are centrally secured thereto as by a nail or screw,
95 so that their outwardly curved end portions will normally project beyond the faces of the side bars.

It will be seen that the compression of the springs *h* will be required to allow the strips
100 *e* to lie in contact with the adjacent faces of the side bars *d*, and that such an adjustment

of parts is had when the sash A is introduced between the bead strips *a*, *b*, which will cause the closing strips *e* to be forcibly pressed by the springs *h* against the strips they are opposite, and seal the joints between said parts.

The elastic force of the springs *h* should be proportioned to the weight of the sash A, so that a sufficient frictional resistance will be produced between the closing strips *e* and inner bead strips *b* to maintain the sash at any desired point of elevated adjustment that may be desired, the expansion of the springs effecting such a result in an obvious manner.

When spiral springs such as *i*, are employed, these are located in circular pockets or recesses in the side bars *d*, and their force in like manner as that of the springs *h*, is gaged to suit the weight of the sash to be supported, and if necessary, a series of these springs *i* may be employed for each side bar of a sash that is to be furnished with the improvement.

If it is desired to entirely conceal the hinges *g*, and attain the same efficiency in operation as is afforded by the plans of construction hereinbefore described, the closing strips *e* are hinged to the sides of the sash frame A, as shown in Figs. 6, 7 and 8, there being a slight gap allowed at the inner side edge of the closing strip, as at *e'*, in Figs. 6 and 7, which will permit the swinging inward movement of the strips sufficiently to insure their pressure against the bead strips *b*, of the sash frame, by the resilient force of the plate springs *h*, or spiral springs *i*, as may be preferred in the construction of the improvement.

As before stated, the improvement is applicable to windows having two sashes, and will serve to close the side joints on such a window, compensate for changes in thickness of

the sash, retain the sash at any desired point of elevated or lowered adjustment, and exclude the elements, as before explained.

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

1. The combination with a window casement and a sash adapted to slide therein, of hinged and laterally spring-pressed closing strips held on the side bars of the sash, substantially as described.

2. The combination with a window casement and opposite bead strips thereon, of a sash rabbeted on its side bars, closing strips hinged to swing laterally thereon and filling the rabbets when closed, and springs between the side bars and closing strips, substantially as described.

3. The combination with a window casement and parallel bead strips on each stile of said casement, of a sash rabbeted on the same side of each of its side bars, a recess or pocket in the rabbeted face of each side bar, a spring in each recess or pocket, and a closing strip for each side bar, hinged to shoulders thereon and adapted to fold against the springs, substantially as described.

4. A window sash rabbeted on the same side of each of its side bars, pockets or recesses in rabbeted faces of said side bars, closing strips adapted to fill the rabbeted sides of the side bars, hinges attached to shoulders on the side bars and the edges of the closing strips, and springs in the recesses or pockets, and adapted to press on the closing strips, substantially as described.

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Witnesses:

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