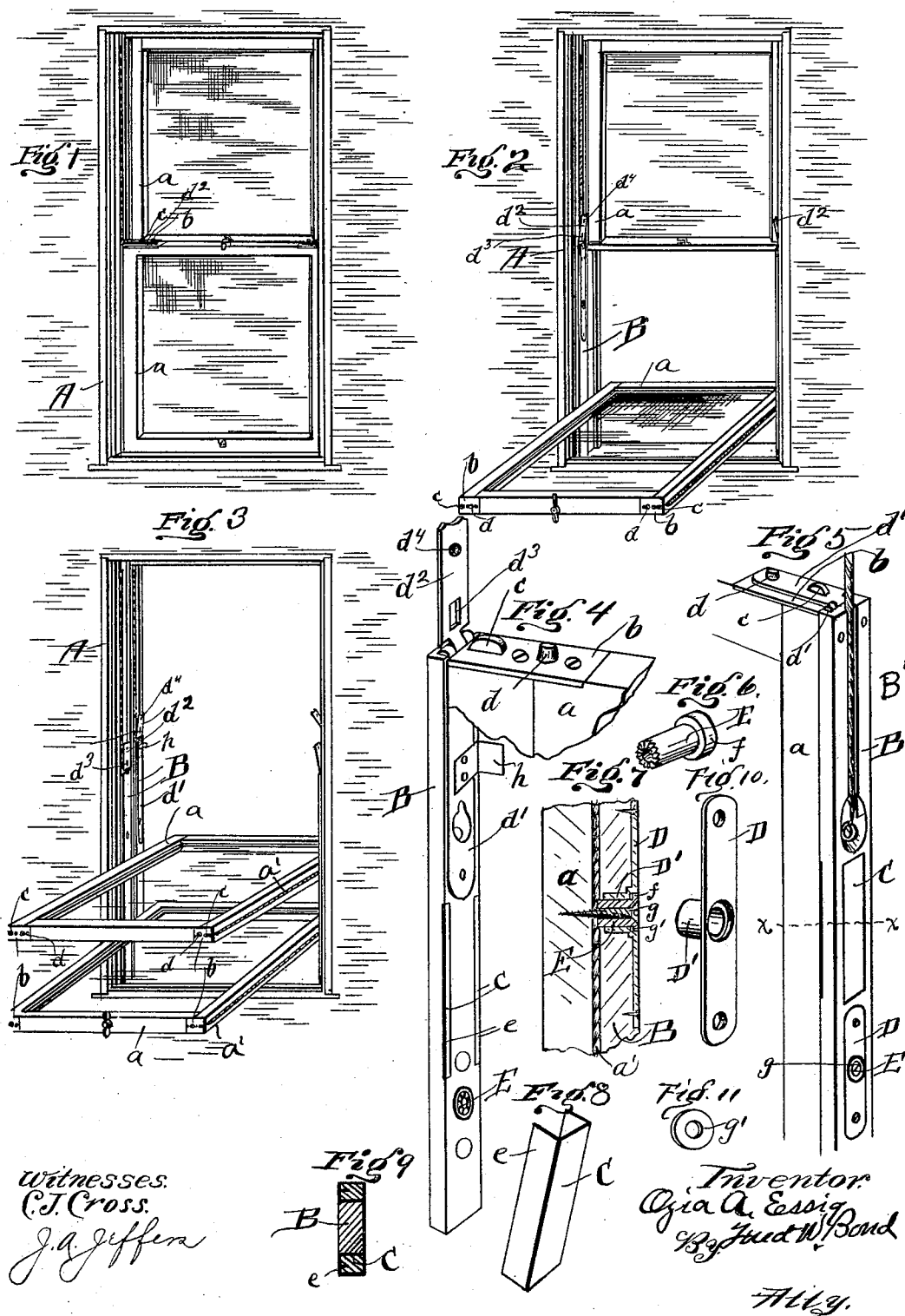


(No Model.)

O. A. ESSIG.
WINDOW SASH.

No. 583,038.

Patented May 25, 1897.



UNITED STATES PATENT OFFICE.

OZIA A. ESSIG, OF CANTON, OHIO.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 583,038, dated May 25, 1897.

Application filed December 14, 1896. Serial No. 615,600. (No model.)

To all whom it may concern:

Be it known that I, OZIA A. ESSIG, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Window-Sashes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a front view showing the window-sashes in their normal position. Fig. 2 is a perspective view showing the lower window-sash turned upon its pivotal points. Fig. 3 is a view showing the two window-sashes lowered and turned upon their pivotal points. Fig. 4 is a view showing a portion of the window-sash and illustrating one of the side strips and its notch or catch. Fig. 5 is a similar view showing the catch closed. Fig. 6 is a detached view of the bearing or thimble. Fig. 7 is a longitudinal section showing a portion of the side strip attached to the window-sash. Fig. 8 is a view showing the metal strengthening-bar to be connected to the side bar. Fig. 9 is a transverse section through line *x x*, Fig. 5, except the window-sash is not shown. Fig. 10 is a detached perspective view of the thimble-plate. Fig. 11 is a detached view of the washer.

The present invention has relation to window-sash; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

The object of the present invention is to so construct the window-sash and attach them to a frame that they can be turned so as to bring the outer sides of the window-sash, together with the glass attached thereto, in such a position that they can be cleaned without going upon the outer side of the building.

In the accompanying drawings, A represents the window-frame, which is constructed in the ordinary manner and is to be provided with the ordinary grooves for the vertical movements of the window-sashes. The win-

dow-sashes *a*, when in their normal positions, are located as usual and may be constructed in the usual manner, reference being had to 55 attaching my improvements thereto. To the outer edges of the stiles of the window-sash are located the side strips *B*, which are formed of a length to correspond with the length of the stiles forming part of the sash, and when 60 in their normal positions are located in the grooves of the window-frames. The side strips or bars *B* should be formed of a thickness to correspond substantially with the depth of the grooves of the window-frame, 65 and for the purposes hereinafter described the thickness of the side bars should be somewhat greater than the depth of the grooves. To the upper corners of the sashes *a* are located the metallic plates *b*, which metallic 70 plates are securely attached by means of screws or their equivalents.

The plates *b* are each provided with the rounded lugs *c*, which lugs are substantially of the form shown in Fig. 4. The plates *b* 75 are also provided with the tapered pins or lugs *d* and are located substantially as shown in Fig. 4. To each of the side strips or bars *B* are attached the metal plates *d'*, which metal plates are set into the strips, so that their 80 outer faces will come flush with the inner faces of the strips or bars *B*. To the upper ends of the metal plates *d'* are hinged the short bars or clasps *d''*, said bars being located and arranged substantially as shown in Figs. 85 4 and 5. Each of the short bars or clasps *d''* is provided with the elongated slots *d'''*, which are for the purpose of receiving the lugs *c*; and for the purpose of causing the side strips to be brought snugly against the edges of the 90 stiles of the sashes the rounded lugs *c* are so arranged and formed that when the clasps *d''* are closed, as illustrated in Fig. 5, they will engage the elongated slot *d'''* and draw said side pieces toward the edges of the stile. 95 For the purpose of assisting in holding the bars *d''* in proper position the pins *d* are provided, which are received into the apertures *d''*, as illustrated in Fig. 5. Another object and purpose of providing the lugs *c* and the 100 pins *d* and entering the same into the elongated slots *d'''* and apertures *d''* is to provide a means for preventing any lateral displacement of the side strips or bars *B* when the

metal bars d^2 are brought into the proper position to clamp the side pieces to the stiles of the window-sash. For the purpose of stiffening the side pieces or bars B the metal strengthening-strips C are provided, which strips are originally formed as illustrated in Fig. 8 and their parallel edges passed through kerfs formed in the side pieces B after the extended edges of the parallel portions e are bent over and into the wood, as illustrated in Fig. 9. It will be understood, however, that the metal strengthening-pieces C can be dispensed with and the objects of the present invention accomplished, but I prefer to use the metal strengthening-pieces in case the side strips B are formed of considerable length.

To each of the side pieces B are attached the metal plates D, which metal plates are located upon the outer sides of said strips, as illustrated in Fig. 5. Each of the metal plates D is provided with the thimbles or sockets D', which thimbles or sockets are preferably formed integral with the plates D and are seated into the wood or other material composing the side pieces B. Within the thimbles D' are located the bearings or centers E, which bearings or centers are each provided with the heads f . For the purpose of causing the bearings or centers E to turn with the window-sashes when said sashes are brought into position (illustrated in Figs. 2 and 3) the inner ends of the bearings E are serrated, which serrated ends press or bear against the outer edges of the stiles of the window-sashes and are seated into said outer edges. For the purpose of holding the strips or bars B in proper position and preventing any displacement of the bearings E the screws g are provided, which screws are located substantially as shown in Fig. 7. For the purpose of reducing friction, washers, such as g' , may be located between the inner faces of the head f and the outer ends of the thimbles D', thereby allowing the bearings to be drawn tightly, and at the same time permitting the window-sashes to be turned into the position illustrated in Figs. 2 and 3.

In use when it is desired to turn the window-sash upon their bearings the metal plates or clasps d^2 are elevated, as illustrated in Fig. 4, after which the window-sash are free to be turned into any desired position, either for the purpose of cleaning the outer sides of the glass or for ventilating purposes. For the purpose of stopping the upper window-sash at the proper point to be clamped or attached to the side bars B the stops h are provided and are located and arranged substantially as shown in Fig. 4, it being understood that said stops should be so formed that they will not interfere with the movements of the upper window-sash until they are brought into proper position to be clamped, as shown in Fig. 5. It will be understood that the side pieces or bars B, when properly clamped, move up and down with the window-sash, but said side pieces or bars do not move up and

down when the window-sash are turned upon their bearings unless it is desired to adjust the window-sash up or down after they have been turned.

It will be understood that the window-cords B' always remain in their normal positions, inasmuch as they are not removed from the grooves at any time, except when it becomes necessary to adjust or fix the window-weights.

For the purpose of making a tight joint between the side pieces B and the edges of the sash a the fabric strips a' are provided and are properly seated into the edges of the stiles forming part of the window-sashes.

For the purpose of preventing the screws g from working loose the bearings or thimbles E are serrated or toothed at their inner ends and are so formed for the purpose of causing said bearings to rotate axially at the time the window-sashes are turned. By this arrangement the bearings E and the screws g rotate axially in unison, by which arrangement the screws g are prevented from becoming loosened, and at the same time the strips B can be held tight against the edges of the stiles of the window-sashes, and by the use of an antifriction-washer, located as shown, the sashes can be turned upon their pivotal points with ease, and at all times preserving the tight joint between the stiles of the window-sash and the strips when said window-sashes are brought into their normal position. It will be understood that if the inner ends of the bearings E were formed without teeth or serrations they would not rotate with the sash, and hence the screws g would rotate independent of the bearings or during the time the bearings are at rest, thereby causing the screws to become loosened by the operations or movements of the window-sashes.

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

1. The combination of the window sash or sashes a , provided with the side strips B, the metal plates d' , having hinged to their top or upper ends the bars or clasps d^2 , provided with the elongated slots d^3 and the apertures d^4 , the plates b , provided with the tapered pins or lugs d , and the rounded lugs c , and the sashes journaled to the side bars B, substantially as and for the purpose specified.

2. The combination of the window sash or sashes a , provided with the side strips B, the bearings E, provided with serrated or toothed inner ends seated against the outer edges of the stiles of the window-sashes, and the screws g , extended through the bearings E, and into the stiles of the window-sash, substantially as and for the purpose specified.

3. The combination of the sash or sashes, the side strips B, having attached thereto the metal plates D, provided with the thimbles or sockets D', the bearings E, mounted in the thimbles or sockets D', and provided with serrated or toothed inner ends, and the screws g , located through the bearings E, and con-

nected with the stiles of the window-sash, substantially as and for the purpose specified.

4. The combination of a window-frame having vertically-moving sashes located therein, said sashes pivotally attached between their upper and lower ends, means for stopping the upper sash at a point parallel with the side pieces, the hinged plates or clasps d^2 , provided with the elongated slots d^3 and the apertures d^4 , the plates b , provided with the

rounded lugs c , and means for stiffening the side pieces B , substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

OZIA A. ESSIG.

Witnesses:

F. W. BOND,

J. A. JEFFERS.