

No. 711,179.

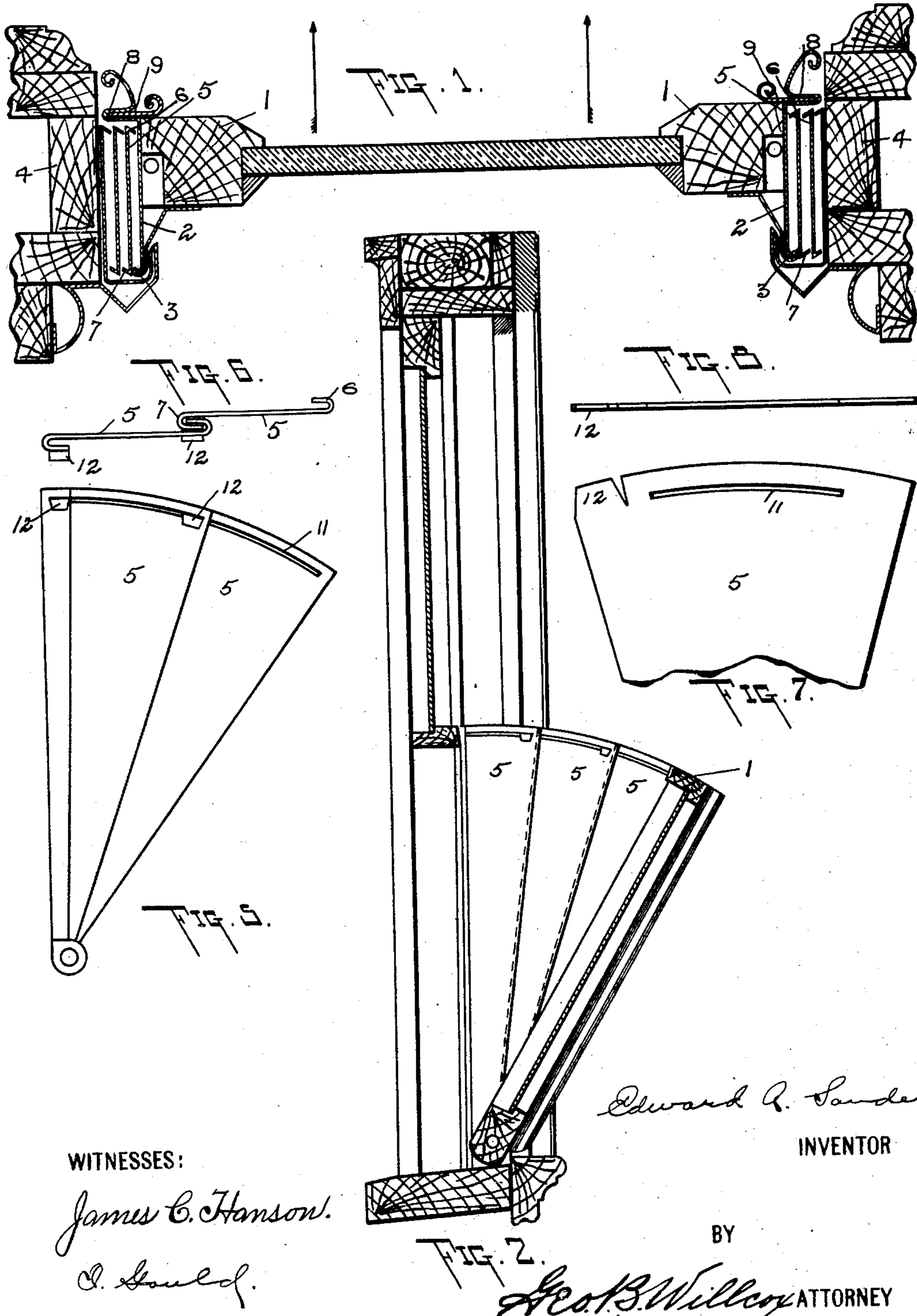
Patented Oct. 14, 1902.

E. A. SANDERS.
WINDOW.

(Application filed Apr. 7, 1902.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

James C. Hanson.
O. Gould.

Edward A. Sanders,
INVENTOR

BY

Geo. B. Wilcox ATTORNEY

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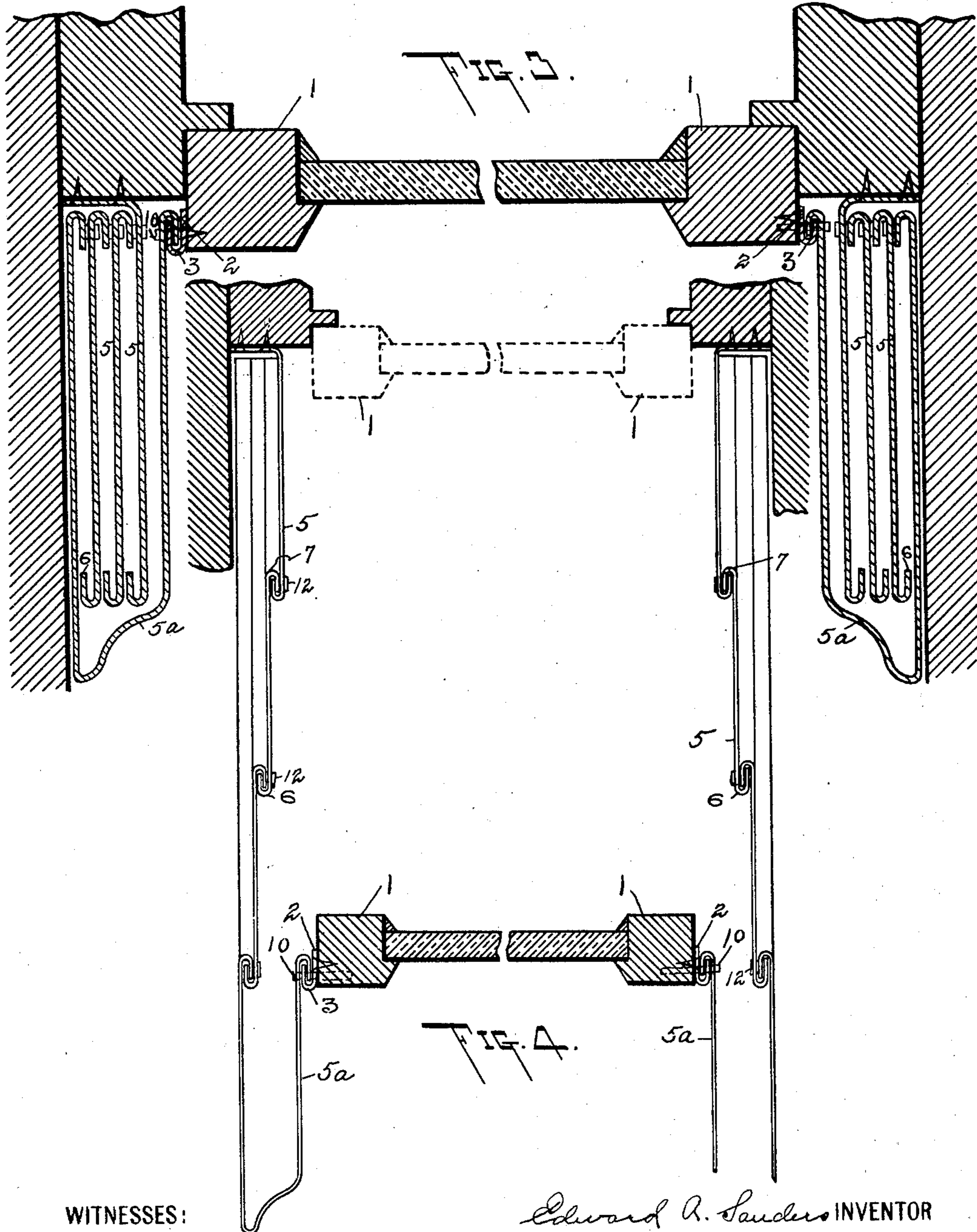
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UNITED STATES PATENT OFFICE.

EDWARD A. SANDERS, OF SAGINAW, MICHIGAN.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 711,179, dated October 14, 1902.

Application filed April 7, 1902. Serial No. 101,719. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. SANDERS, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Windows; 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.

This invention relates to windows with tilting or swinging sash; and the improvement consists in the construction and arrangement of folding fan-like screens at the sides of the sash, the object of the screens being to prevent the entrance into the room of wind, rain, and dust, which would otherwise enter through the opening between the tilted sash and the window-frame.

Another object is to arrange the joints of the folding screen so that they will be practically storm-proof.

A further object is to so construct the folding screens that when the window is closed the screens will occupy but small space and form a neat finish for the window-frame at the side of the sash.

My invention also comprises a construction whereby the sash may be opened without extending the folding screen, thus making the window accessible for cleaning, &c.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a horizontal section of a window frame and sash embodying my improvement. Fig. 2 is a vertical section on a smaller scale. Fig. 3 is a horizontal section showing a modified form of the device. Fig. 4 is a diagrammatic view showing the screens extended. Fig. 5 is a side view showing two blades of a screen in detail. Fig. 6 is a top view of the parts shown in Fig. 5. Fig. 7 is a developed detail of the upper part of a blade. Fig. 8 is a top view.

In the drawings, 1 is a tilting window-sash, which may be pivoted at the bottom, as shown in Fig. 2, or at the top, if desired. Removably secured to the side of each sash is a member 2, that extends from the top to the bottom of the sash and carries on its outer edge a hooked flange 3. Between the member 2 and the face of the window-frame 4 are nested

a number of fan-blades 5, pivoted at their lower ends, as shown in Fig. 5. One edge of each blade is bent to form a hooked flange 6, and the other edge has a similar but oppositely-placed hooked flange 7. When the window is tilted outward in the direction of the arrows, Fig. 1, the flange 3 of the member 2 engages the hooked flange 6 of the blade 5 and draws the blade 5 outward. In like manner the rear flange 7 of the blade 5 engages the flange of the next blade, and thus all the blades are drawn outward to form the fan-shaped screen shown in Figs. 2 and 5. In order to permit the sash to be tilted outward without extending the screen, so as to afford access to the window-frame for cleaning, &c., I provide means for disengaging the edge of the sash from the screen. A groove 8 is formed in the member 2, and a strip of metal 9 is slid therein to normally lock the sash 1 and the member 2 together. By removing the strip 9 the sash is left free to swing out independent of the member 2 and the blades 5.

In Fig. 1 the blades 5 are located at the sides of the sash; but in the modified form shown in Fig. 3 they are located in front of the sash. In the construction shown in Fig. 3 the locking-strip 9 is omitted, and a bolt 10, carried by the sash, serves to lock the member 2 and the flange of the blade 5^a together. In the construction shown in Figs. 3 and 4 the first blade 5^a is so bent as to form an inclosing case to conceal and protect the remaining blades. The case thus formed provides a neat finish or molding for the sash. The means by which the blades are interlocked and prevented from separating while opening and closing is illustrated in Figs. 5 and 6. An arc-shaped slit 11 is provided in each blade, and a corresponding flange 12 is provided near the edge of the blade. The flange 12 of each blade slides in the slit 11 of the next succeeding blade when the blades are folded and unfolded and keep the blades close together and properly aligned. By this means the screens when extended are rendered practically storm-proof.

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

1. In combination with a tilting window-sash, a series of fan-like blades pivotally mounted at each side of the sash, the edges

of said blades being provided with interlocking flanges, for the purposes set forth.

2. In a metallic screen for tilting windows, the combination with a series of pivoted fan-like blades having flanges adapted to interlock said blades consecutively; of means carried by the window-sash for detachably securing the outermost blade to the sash, substantially as and for the purposes set forth.

3. In a metallic screen for tilting windows, the combination with a series of pivoted fan-blades having flanges adapted to interlock said blades consecutively; of the members 2; the grooves 8 therein; and metal strips 9 removably engaging said slits, substantially as described.

4. In a metallic screen for tilting window-sash, the combination of a series of pivoted blades adapted to be nested at the side of the

sash when the sash is closed, and to extend fan-like when the sash is open, one of said blades being curved to form a recess or pocket which incloses the remaining blades when closed, substantially as described.

5. In combination with a tilting window, a series of extensible blades having interlocking flanges; together with guiding means for said blades comprising arc-shaped slots formed in the upper ends of said blades, and an inwardly-bent flange on each blade to slidably engage the arc-shaped slot of the next succeeding blade, for the purposes set forth.

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

EDWARD A. SANDERS.

Witnesses:

I. GOULD,
JAMES C. HANSON.