May 31, 1927. R. L. CROSTHWAITE 1,630,692

VENTILATOR

Filed July 18, 1925

Fig. 1.

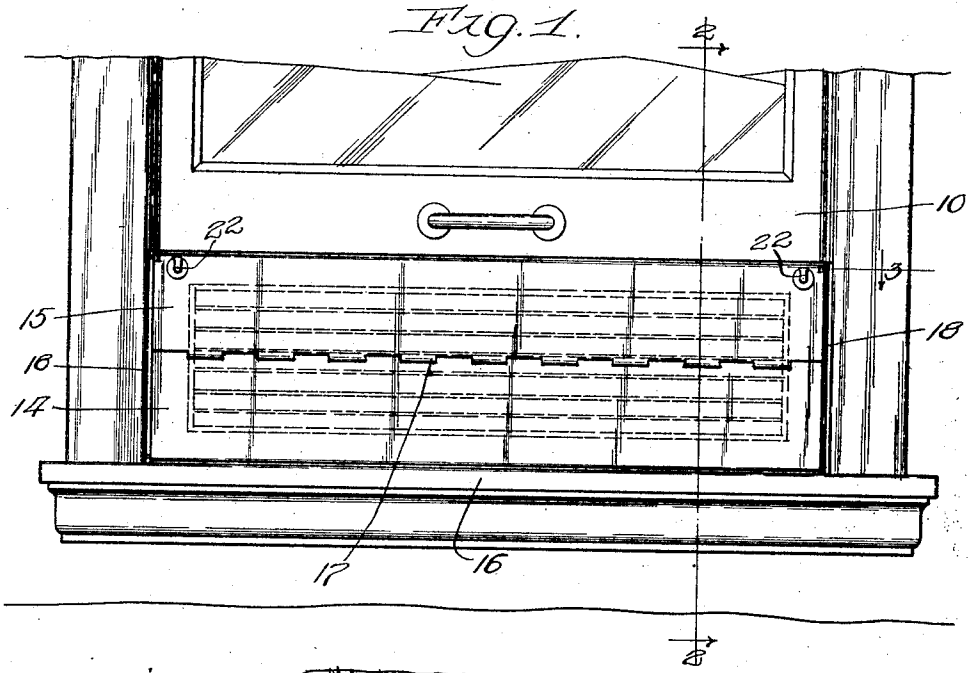


Fig. 2.

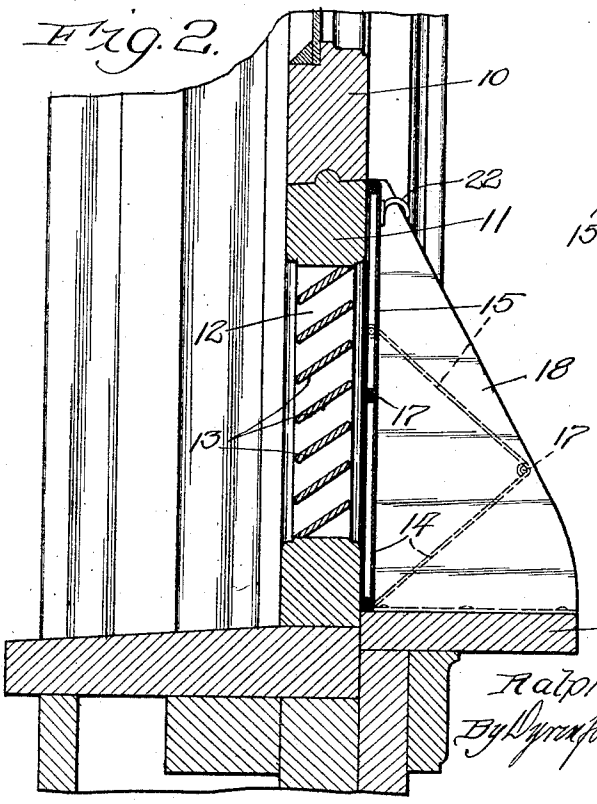
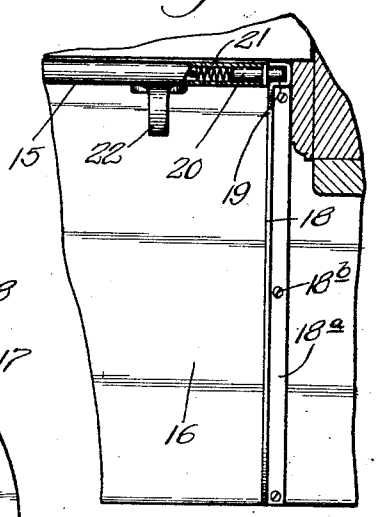


Fig. 3.



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UNITED STATES PATENT OFFICE.

RALPH L. CROSTHWAITE, OF CHICAGO, ILLINOIS.

VENTILATOR.

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This invention relates to improvements in ventilators and is here shown for the purpose of illustration, embodied in a device especially adapted for use in connection with windows.

One of the features of my invention is the provision of means whereby the effective area of a window opening may be quickly and easily varied at will without opening or closing the window itself. For example, in a window with a sliding sash, the sash may be partly raised in order to give a certain opening. The effective area of this opening may then be varied at will by the use of my ventilator without changing the position of the sash. The device is especially useful in connection with ventilating devices such as screens and the like which are adapted to be placed in position below the sliding sash of a window and left there. When such devices are used, the window cannot be closed, or the effective area of the opening reduced, without removing the screen or other ventilating device and then closing the sash.

By the use of my invention such a screen or other ventilating device may be placed in a window below the sliding sash and allowed to remain there. The effective area of the opening, however, may be easily and quickly varied at will, and entirely closed if desired, by the use of my improved device.

My improved device is easy and cheap to make, simple in operation and strong and durable.

Other features and advantages of my invention will appear more fully as I proceed with my specification.

In that form of device embodying the features of my invention, shown in the accompanying drawings, Figure 1 is a view in front elevation of a window showing my improved ventilator in use, Fig. 2 is a view taken as indicated by the line 2 of Fig. 1, and Fig. 3 is a view taken as indicated by the line 3 of Fig. 1

As shown in the drawings 10 indicates a sliding lower sash of a window of ordinary construction. As shown, the sash is slightly raised and there is placed below it a rectangular frame 11 having an opening 12 therethrough provided with louvres 13 of ordinary construction. Instead of the frame 11 with the louvres 13, there may be provided a screen or other suitable device with any kind of desired ventilating openings.

I will now describe the means for varying the effective area of the opening 12 without having to remove the frame 11 or the sash 10. 14 and 15 indicate two rectangular plates extending the full width of the window. The two plates 14 and 15 are wide enough so that together when they are in the position shown by the solid lines in Figs. 1 and 2, they will completely cover the opening 12. 16 indicates the window-sill inside of the window. Each of the plates 14 and 15 is substantially the same width as the window-sill. The plate 14 is hinged at one edge to the window-sill 16 at its edge adjacent the lower ends of the slides in which the sash 10 operates, that is, the plate 14 has one edge hinged adjacent the lower edge of the ventilating device 11. The other edge of the plate 14 is hinged at 17 by means of a piano hinge to the lower edge of the plate 15.

The openings at the ends of the plates 14 and 15 when in their intermediate positions are adapted to be closed by means of the triangular-shape plates 18, one attached at each end of the sill 16, as shown. As here shown, the lower edge of each of these plates has an outwardly bent flange 18^a attached to the sill 16 in any suitable manner as by means of the screws 18^b. Each of these plates 18 at its vertical edge adjacent the slide in which the sash 10 operates is provided with a vertical groove or guide-way 19. The upper corners of the plate 15 are provided with pins 20 outwardly pressed by means of the spring 21. The outer ends of the pins 20 operate in the grooves 19 and the springs 21 cause sufficient frictional engagement between the ends of the pins and the grooves to hold the plates 14 and 15 in any position to which they may be adjusted by hand.

22, 22 indicate finger grips to assist in adjusting the plates 14 and 15.

The operation of the device is as follows: By use of the finger grips 22, the upper edge of the plate 15 may be raised upwardly or downwardly, the pins 20 sliding in the grooves 19. When raised all the way up, the plates 14 and 15 will be substantially in the same vertical plane, as shown by the solid lines in Figs. 1 and 2, and the opening 12 will be entirely closed. Pushing down on the grips 22, will "buckle" or "break" the two plates 14 and 15 at the hinge 17 in order to uncover some of the opening 12. The opening 12 may be uncovered as far as desired by adjustment of

the plates 14 and 15. In Fig. 2 they are shown in an intermediate position in broken lines. When the upper edge of the plate 15 is placed all the way down, the two plates 14 and 15 will lie flat on the window-sill 16 entirely out of the way and the opening 12 will be entirely uncovered.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is my intention to claim all novelty inherent in my invention as broadly as possible in view of the prior art.

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

1. In a window opening; a ventilating device in said opening provided with ventilating openings therethrough; and means for varying the effective area of said ventilating openings, said means comprising, a plate extending substantially the entire width of the window opening and hinged at one edge adjacent the lower edge of the ventilating device, a second plate hinged to the other edge of the first plate, means for raising or lowering the upper edge of said second plate whereby said plates may be moved to a substantially vertical position in the same plane entirely closing the ventilating openings, or collapsed into horizontal positions on the window-sill, means for holding said plates in their intermediate positions, and means for closing the openings at the ends of said plates, said means comprising triangular-shaped plates attached to the window-sill.

2. In a window opening; a ventilating device in said opening provided with ventilating openings therethrough; and means for varying the effective area of said ventilating openings, said means comprising, a plate extending substantially the entire width of the window opening and hinged at one edge adjacent the lower edge of the ventilating device, a second plate hinged to the other edge of the first mentioned plate, means for raising or lowering the upper edge of said second mentioned plate whereby said plates may be moved to a substantially vertical position in the same plane entirely closing the ventilating openings, or collapsed into horizontal positions on the window-sill, spring pressed members on the upper corners of the second mentioned plate, and means for closing the openings at the ends of said plates, said means comprising triangular-shaped plates attached to the window-sill, each of said plates provided with a groove at its outer edge adapted to receive the spring pressed members on the upper corners of the second mentioned plate, said spring pressed members being adapted for upward and downward sliding movement in said grooves, whereby the plates may be held in their intermediate positions.

Witness my hand and seal this 16th day of July, A. D. 1925.

RALPH L. CROSTHWAITE. [L. S.]