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R. H. FAGER

VENTILATOR

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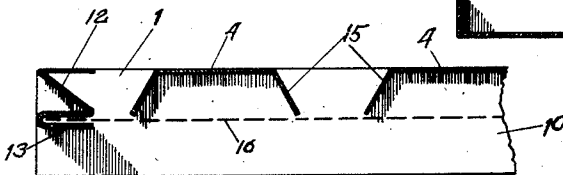
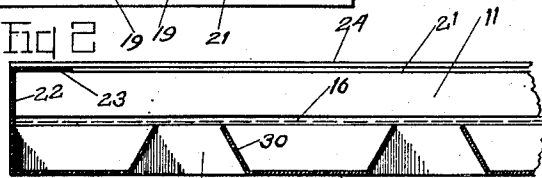
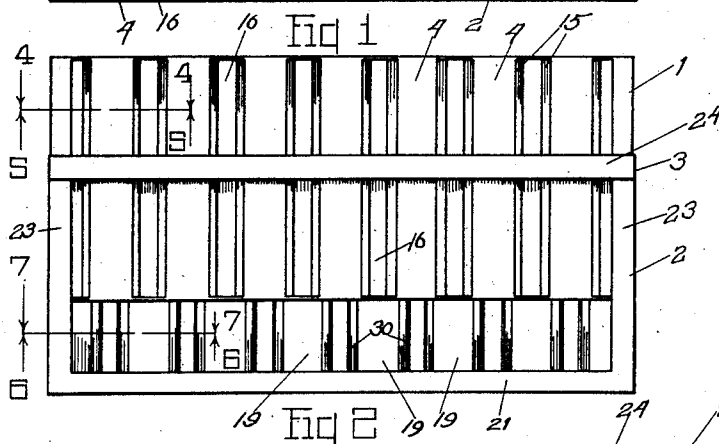
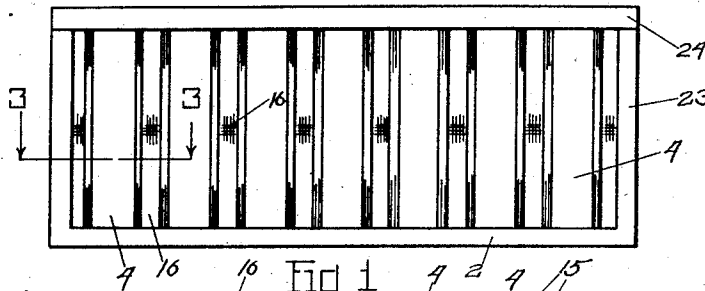


Fig. 5

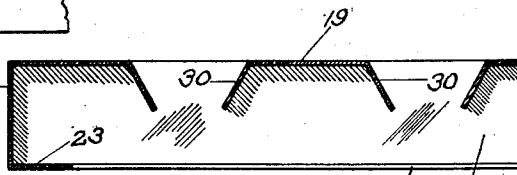


Fig. 7

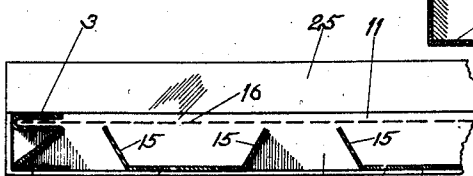


Fig. 4

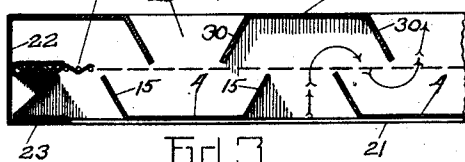


Fig. 3

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## UNITED STATES PATENT OFFICE.

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## VENTILATOR.

Application filed May 21, 1927. Serial No. 193,116.

My invention has for its object to provide a window ventilator that may be formed of sheet metal, having parts therefrom struck up by the operation of two co-acting properly formed dies and wherein the parts will be so interrelated that the movement of air through the ventilator will be baffled so as to reduce the current of air that may be passing through the window ventilator. The invention also provides means for supporting a screen between the parts that cooperate to baffle the air to prevent the movement of any insects through the ventilator and at the same time prevent the movement of moisture in the form of rain or in the form of a stream of water, as when the windows are washed by a stream from a garden hose, from passing through the ventilator. The invention also provides a ventilator having parts for baffling the air that may be passing through the ventilator and wherein the parts are so mounted that they may be separated by movement in a direction in the plane of the window. Thus the ventilator may be located in the channel in which the window is located and the baffled parts may be separated from each other by movement of one set of parts from the other set of parts in a direction in which the window is normally raised and lowered when it is opened and closed. Also the thickness of the ventilator is, preferably, substantially the same as that of the thickness of the window frame and the ventilator may be located in the same channel or groove formed between the window strips that guide the window, and thus the ventilator may be placed in position in the channel or groove and give a uniform appearance as between the window frame and the ventilator.

The invention may be contained in ventilators that vary in their details of construction and to illustrate a practical application of the invention, I have selected a ventilator containing the invention as an example of constructions that embody the invention, and shall describe the ventilator hereinafter. The ventilator selected for purposes of illustration is shown in the accompanying drawing.

Fig. 1 of the drawings is a front view of the ventilator when its parts are in their normal positions relative to each other. Fig. 2 illustrates the ventilator when one of the parts having one set of baffles is slight-

ly raised with respect to the other part. Fig. 3 is a view of a section taken on the plane of the line 3—3 indicated in Fig. 1. Fig. 4 is a view of a section taken on the plane of the line 4—4 and looking in the direction indicated by arrows in Fig. 2. Fig. 5 is a view of a section taken on the plane of the same line and looking in the direction indicated by the arrows 5—5 shown in Fig. 2. Fig. 6 is a view of a section taken on the plane of the line 6—6 and looking in the direction of the arrows as shown in Fig. 2. Fig. 7 is a view on the same line and looking in the direction of the arrows 7—7 shown in Fig. 2.

The parts 1 and 2 of the ventilator 3 are formed of sheet metal. The parts 1 and 2 are made in the form of frames with cross strips 4 that extend across the frames. The frames are formed of edge portions of the sheet metal which are bent at an angle to the cross strips 4. Thus the part 1 is provided with a horizontally extending portion 10 that forms the top of the frame of the part 1 and a horizontally extending portion 11 that forms the bottom of the frame of the part 1 and an edge portion 12 bent in the form of a Z and having an inturned portion 13 that forms the ends of the frame of part 1. The cross strips 4 integrally unite the top and bottom horizontally extending edge portions 10 and 11 and the portions 10 and 11 are integrally united with the portions 12 and 13 that form the ends of the frame. The strips 4 are formed by cutting crosswise between the edge portions 10 and 11 and short distances on each side of the cross cuts so as to form the wings 15. The wings 15 are bent inwardly to substantially the plane of the returned portions 13 formed at the ends of the Z shaped parts 12. A wire mesh screen 16, of the type known as fly screen, is located between the Z shaped end portions 12 and the returned portions 13 and the returned portions are bent so as to clamp the sides of the end portions of the screen 16. The screen 16 has a width substantially the same as the length of the strips 4 and is thus located between the top and bottom parts 10 and 11 of the frame 1. The wings 15 thus extend to the screen 16, and yet their width is sufficient to locate them at an angle other than 90 degrees to the plane of the strips 4.

The part 2 has also a frame that is formed by bending an edge portion 20 at an angle to

the cross strips 19. If desired, the part 20 may also be bent upwardly as at 21 to form an upwardly extending edge of the frame. End portions 22 are bent at right angles to the plane of the strips 19 to form the ends of the frame. The edge portions may be further bent inwardly as at 23 to form a front portion of the frame. The latter portions may be united at the top of the frame by means of a strip 24 extending the length of the frame. The strip 24 may be welded to the turned edge portions 23 of the frame. The frame of the part 2 also has a turned edge portion 25 that extends towards the strip 24. The part 25 is formed by bending the upper edge portion at right angles to the plane of the cross strips 19. The width of the part 25 is about half the width of the part 20 that is turned to form the bottom of the frame, and the lower end 11 of the part 1 of the ventilator, namely, the part 11 of the frame, is insertable between the inner edge of the part 25 of the other frame and the longitudinal strip 24.

The cross strips 19 are also provided with the wings 30 that extend diagonally towards the interior of the frame of the part 2. They are preferably located at an angle other than 90 degrees to the plane of the cross strips 19 and extend to near the plane of the inner edge of the side 25 of the frame and which is parallel to the plane of the cross strips 19. The width of the part 11 of the frame is substantially the same as the width of the part 25 and the distance between the edge of the part 25 of one frame from the longitudinal strip 24 of the other frame, is substantially the same as the width of the part 11 and so that the lower end of the part 1 is insertable between the edge of the part 25 and the strip 24 and is movable downward between the turned-in edge portions 23 of the lower frame and the turned-in wings 30 of the other frame. When the part 1 is thus inserted in position in the part 2 of the ventilator, the screen 16 will be located between the cross strips 4 and 19. The cross strips 4 and 19 are each located relative to each other so that the center lines of the cross strips will be op-

posite of the centers of the spaces between the turned-in wings 15 and 30 of the cross strips of the other part of the ventilator. Thus air passing through the ventilator will be baffled by one set of cross strips and will be baffled towards the other set of cross strips by the wings 15 and 30. Also, the air will pass through the screen 16 and ordinarily will pass through the screen three times in order to pass through the ventilator since the edges of the inturned wings are substantially in contact with the screen. Also, the screen will prevent insects from passing through the ventilator and in case of rain, the water will be quite entirely excluded, the same is also true when the windows are being washed. When water is dashed against the ventilator it will not be permitted to pass through the ventilator by reason of the cross strips, the wings formed integral therewith and the screen. However, when it is desired to clean the interior of the ventilator, this may be readily done by separating the parts so as to remove insects and dust or other obstructions that may be lodged between the parts of the ventilator.

I claim:

In a ventilator formed of two interfitting parts, the parts formed of sheet metal having portions struck up from the plane of the sheet metal from which they are formed, the said portions comprising frames and cross strips extending across the frames, the cross strips having wings inclined to the planes of the cross strips, the cross strips being so located relative to each other that the spaces between the inclined edge portions of the cross strips of one part will be located opposite the center lines of the cross strips of the other parts, one of the frames having inturned edge portions, a screen clamped between the inturned edge portions and extending the length of the frame and substantially in contact with the edges of the inclined portions of the said strips.

In witness whereof I have hereunto signed my name to this specification.

RAYMOND H. FAGER.