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ADJUSTABLE WINDOW VENTILATOR

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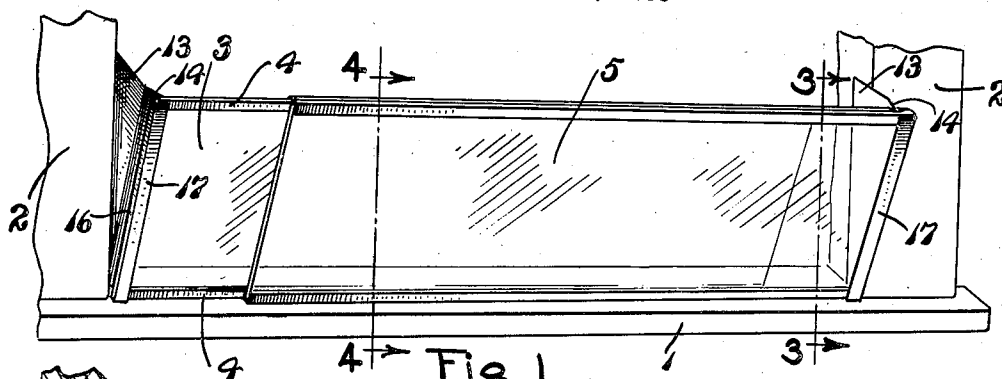


Fig. 1.

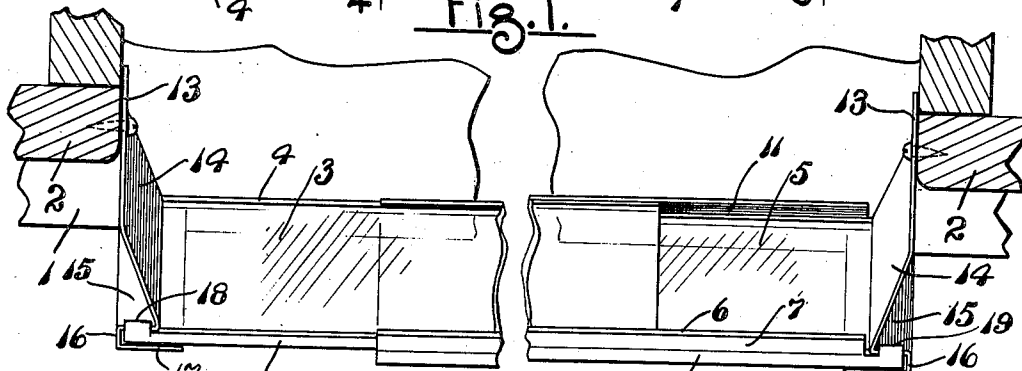


Fig. 2.

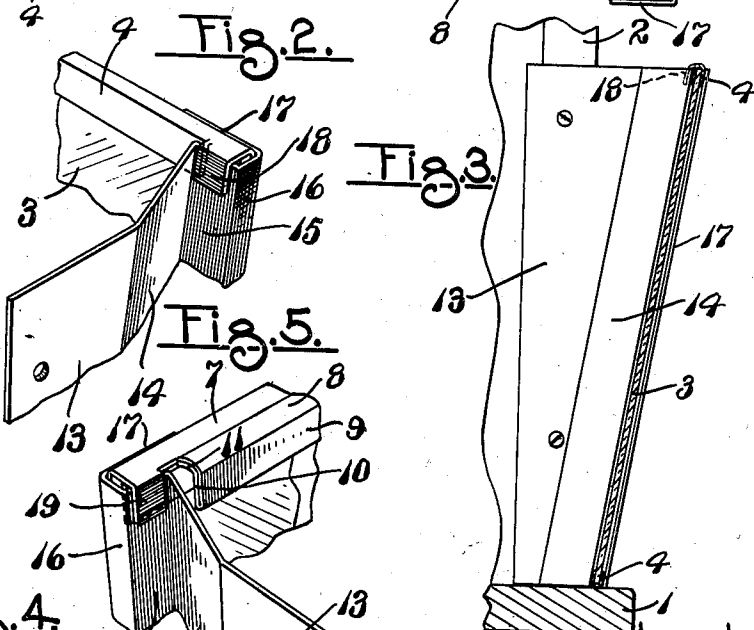


Fig. 3.

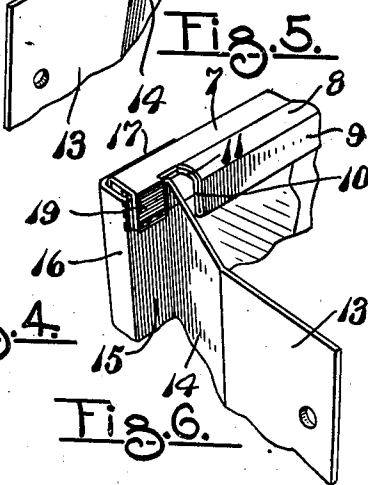


Fig. 4.

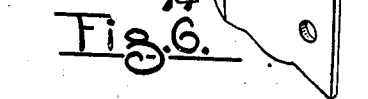


Fig. 5.



Fig. 6.

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UNITED STATES PATENT OFFICE

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ADJUSTABLE WINDOW VENTILATOR

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7 Claims. (Cl. 98—99)

This invention relates to window ventilators, and is primarily concerned with the production of an adjustable ventilator which may be readily applied to windows having different widths.

Ventilators used at the lower ends and at the inner sides of windows usually include an upwardly and inwardly inclined plate of glass. The window being raised less than the vertical height of the glass, air entering the window is carried upwardly and over the upper edge of the ventilator glass into the room without a draft coming directly and straight into the room and against persons therein.

Windows are of varying widths and in many instances in order to provide a ventilator the glass must be especially cut to a length corresponding with the width of each window. With my invention a longitudinally adjustable ventilator is provided which may be adjusted to a desired length in correspondence with the width of the particular window with which it is to be installed. The invention is concerned with many novel constructions and arrangements and organizations of parts for very effectively and practically producing an adjustable window ventilator in which the body thereof is of glass, and to provide simple and practical means for making two glass plates readily adjustable with respect to each other and at the same time attachable at their outer ends to the window casing.

An understanding of the invention may be had from the following description, taken in connection with the accompanying drawing, in which,

Fig. 1 is a perspective view showing the ventilator of my invention located at the inner side of a window.

Fig. 2 is a plan view thereof.

Figs. 3 and 4 are vertical sections substantially on the planes of lines 3—3 and 4—4 of Fig. 1, and

Figs. 5 and 6 are fragmentary perspective views taken, respectively, at the opposite ends of the ventilator construction.

Like reference characters refer to like parts in the different figures of the drawing.

The window at which the ventilator is located has a horizontal lower sill 1 and a casing having vertical sides 2. It is at the inner side of the casing that the ventilator is to be located with its lower edge resting upon the upper side of the sill 1, and with attaching means at the ends of the ventilator connected to the inner sides of the vertical members of the window casing.

In the construction of the ventilator two glass plates are used one of which is indicated at 3 and which at both its upper and lower edges

has a U-shaped metal rim 4 permanently secured thereto. The other length of glass 5 is so located with respect to the glass 3 that the two lengths of glass may have a telescoping movement with respect to each other. At both the upper and lower edges of the second section 5 of the glass a sheet metal member is connected which is bent into the form shown in Fig. 4. There is provided in this sheet metal member a flange 6, which lies at the inner side of the glass plate 5, from which a section 7 is turned at right angles to pass over and under the upper and lower edges of the plate, the metal being continued in a convex curved section 8 and then bent inwardly at 9 to substantially the inner edge of the outer leg of the channel members 4 which are on the plate 3, the metal being then return bent in a section 10 which lies against the section 9, further bent into a curved section 11 lying at the inner side of the concaved section 8, and terminating in a flange 12 which comes at the opposite side of the plate 5, the flanges 6 and 12 being permanently cemented or otherwise connected with the plate 5 at both the upper and lower edge portions of the plate. This provides a telescoping connection of the glass plates, the plate 3 with the U-shaped sheet metal members 4 at its opposite upper and lower edges sliding within the guide provided by the sections 10 and 12.

At the outer end of each glass plate a sheet metal member to be detachably connected with the vertical members of the window casing is used. The sheet metal members are metallic plates 13, wider at their upper than at their lower edges, and each has an angular section 14 bent inwardly for a distance, then bent outwardly to provide a section 15 to lie against the outer sides of the sheet metal rims on the plates 3 and 5 respectively, then bent into a section 16 which lies against the ends of the glass plates and terminating in a flange 17 which parallels the section 15 and lies against the inner side of the rim of the adjacent plate. At the outer end of the glass plate 3 the upper sheet metal border member 4 has a tongue 18 struck from a leg thereof which passes over and embraces the upper end of the section 15 as shown in Fig. 5, thereby precluding endwise movement of the plate 3 with respect to the sheet metal plate 13. The member connected at the outer end of the glass plate 5 is of identical structure. The upper sheet metal member which lies alongside the upper edge of the plate 5 is partly cut away as shown in Fig. 6, adjacent its outer end, and a lip 19 extending directly from the section 7 lies against the upper part of the

section 15 of the end support, serving the same purpose as the tongue 18 described with reference to Fig. 5.

With the construction described the ventilator 5 may be installed with its lower edges upon the upper side of the sill 1 and adjusted in length so that the plates 13 come against the inner sides of the vertical window casing members 2, screws or equivalent detachable fastening devices being 10 passed through the plates 13 and driven into the window casing members. This provides a ventilator which may be applied within limits to windows of varying widths. The narrowest window to which the same can be applied would have a 15 width substantially equal to the length of the longest glass plate section, and the ventilator may be applied to other windows having greater widths until a width is reached which is slightly less than the combined lengths of the glass plates 20 3 and 5. This provides a wide range of use for the ventilator. The invention is of a very simple, practical and efficient construction and has proved exceptionally useful in service.

The claims appended hereto define the invention 25 which is to be considered comprehensive of all forms of structure coming within their scope. I claim:

1. A window ventilator construction comprising 30 two rectangular elongated glass plates, sheet metal members attached to and embracing the opposite longitudinal edges of said plates, means on the sheet metal members on one of said plates 35 slidably receiving the sheet metal members of the other plate, end members of sheet metal formed each at one edge with a channel shape trough, the outer end of each of said glass plates being 40 received therein, the sheet metal members engaging the top edges of said plates being partially slit vertically to form engaging tongues, said tongues being bent in spaced relationship 45 relative to said plates, said tongues operatively engaging the outer face of each of said end members to prevent accidental disengagement thereof.

2. In a window ventilator, a rectangular elongated 50 glass plate, U-shaped sheet metal border strips embracing and permanently connected to the longitudinal edges of said plate, a second glass plate of similar form, metal border strips 55 at each longitudinal edge of the second glass plate formed from a single length of sheet metal bent longitudinally midway between its edges and formed into a double thickness U-shaped guide, one thickness of which passes to one side of the second glass plate and the other to the 60 other side thereof and being permanently secured thereto, the metal border strips of the first glass plate being received in said guide for telescoping sliding movement therein, as specified.

3. The combination with a glass panel having 65 a sheet metal channel member positioned over and securely attached to the edge of said panel, of a lip formed adjacent the end of said channel, and a sheet metal supporting plate, said plate

being mounted at one edge thereof and being 5 formed with an outwardly extending U-shaped channelled guide, the sides of which are substantially at right angles to said plate, said U-shaped channelled guide receiving the outer 10 end of said panel and said lip engaging the outer face of said supporting plate for the purpose described.

4. The combination with a glass panel having 15 a sheet metal channel member positioned over and securely attached to the edge of said panel, one leg of said channel being split vertically adjacent the end thereof to form a cut away portion, said cut away portion being spaced from 20 said panel thereby forming a downwardly extending engaging lip, of a sheet metal supporting plate, said plate adjacent one edge thereof being formed with an outwardly extending U-shaped channel guide, the sides of which are 25 positioned substantially at right angles to said plate, said U-shaped channel guide receiving the outer vertical edge of said panel and said lip engaging the outer face of said supporting plate, for the purpose described.

5. The combination with a glass panel having 30 a sheet metal channel member positioned over and securely attached to the horizontal longitudinal edge thereof, said channel being slit vertically adjacent its end to form a cut away portion, said cut away portion being spaced from 35 said panel, thereby forming a downwardly extending engaging lip, of a sheet metal supporting plate, said plate adjacent one edge thereof being formed into an outwardly extending U-shaped channel guide, the legs of said channel 40 being located substantially at right angles to said plate, said U-shaped channel guide receiving the vertical edge of said panel, and said lip extending over and engaging the leg of said U-shaped channel guide which is adjacent said 45 plate for the purpose described.

6. In an extensible glass panel of the class 50 described having two sheets of glass in face-to-face sliding relation with each other, a double channel member comprising a single length of sheet metal bent longitudinally at a point spaced 55 from one edge thereof for a short distance at substantially right angles, a convex portion extending therefrom, a portion extending from said convex portion in parallel relationship with the 60 first portion, another portion doubled back upon itself adjacent said last named portion and the convex portion, and terminating in an extension parallel to and substantially midway between the other two parallel portions, for the purpose described. 55

7. The combination of elements as defined in 65 claim 6, the first portion and said extension forming two legs of one channel to which is rigidly secured one sheet of glass and the other channel formed thereby adapted to slidably receive the longitudinal edge of the other sheet of glass. 60

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