Feb. 16, 1943. C. J. NIESNER 2,311,122

WINDOW VENTILATOR

Filed Dec. 27, 1940

Fig. 1

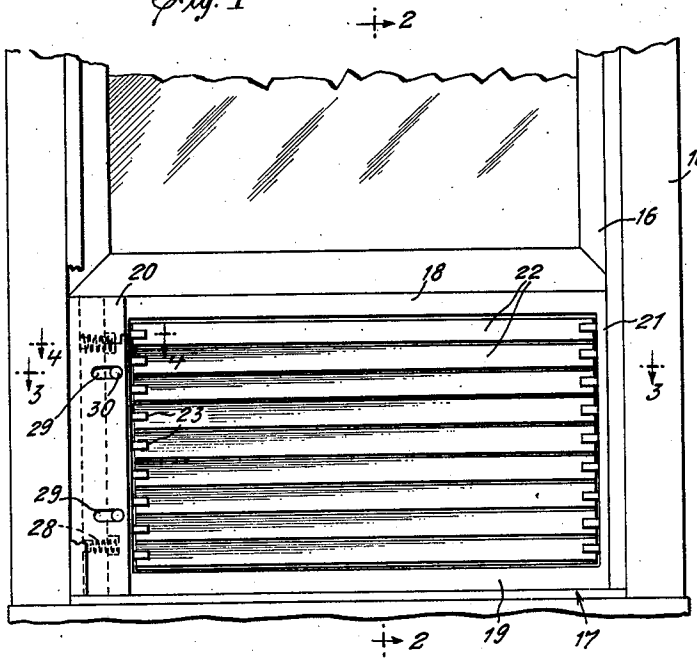


Fig. 2

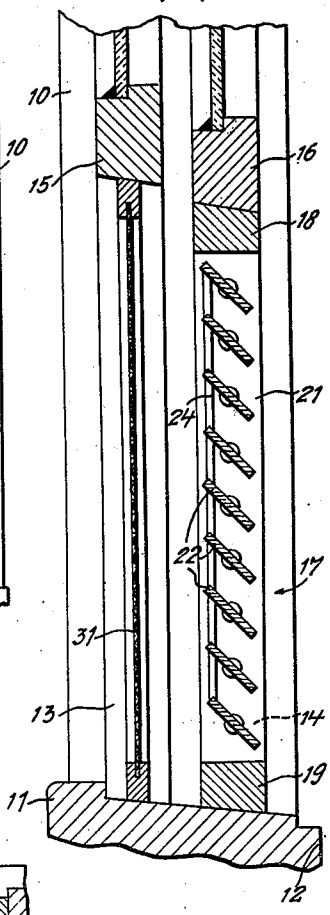
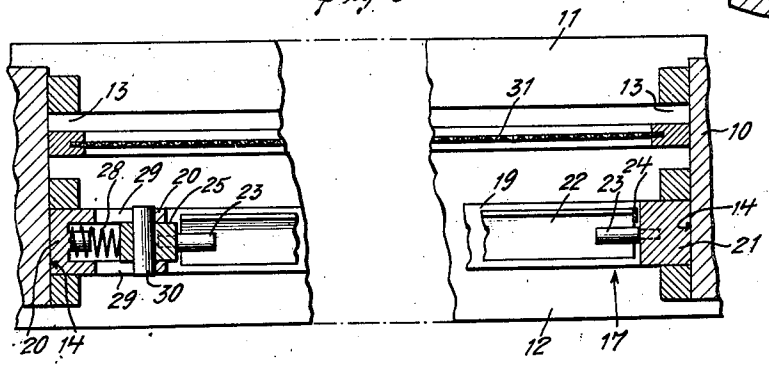


Fig. 3



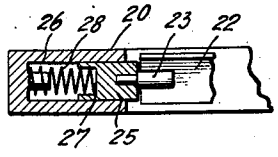


Fig. 4

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WINDOW VENTILATOR

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1 Claim. (Cl. 98—99.8)

This invention relates to window ventilators, and aims to provide an improved window ventilator which is simple in construction, inexpensive in cost of manufacture, and efficient and practical in operation. Its purpose is to serve as a means for keeping rain from entering the room while permitting air to enter, and its adjustable shutters permit of control of the entering air both in volume and direction thereof. With this ventilator mounted in place, it is possible to leave the house with the window open to assure circulation of air therethrough with the assurance that no rain will enter. The device is further designed and mounted in the window frame in such a manner as not to interfere with the free operation of the window screen.

When the ventilator is used on a window having a fixed screen covering the entire opening of the window frame on the outside, as is the common way in suburban and country houses, the ventilator is set in the window from the inside or outside and is held in place by resting against the screen or screen frame. In the drawing, however, the ventilator is shown as it would be applied to the commonest type of city dwelling, wherein a removable window screen is mounted below the front window sash and registers in the grooves of the latter.

An added object of the invention is the provision of self-adjusting means to accommodate the width of the ventilator to the width of the window, as windows which are nearly of the same width nevertheless often vary within a small range. With this feature it is possible to standardize production so that the ventilator will fit any size of window within the range of the adjustable feature. This feature may be omitted, however, if not desired. The ventilator further permits of privacy and seclusion from the eyes of persons outside the house, and gives a slightly shading and cooling effect.

The above and other objects will become apparent in the description below, in which characters of reference refer to similarly-numbered parts in the accompanying drawing. It is to be understood that the drawing serves the purpose of illustration only and should not be construed to limiting the invention to the exact details shown.

Referring briefly to the drawing, Figure 1 is a front elevational view of a window with the ventilator mounted therein, as seen from without.

Figure 2 is a cross-sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a cross-sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a cross-sectional view taken on the line 4—4 of Figure 1.

Referring in detail to the drawing, the numeral 10 indicates a window frame having the inner sill 11 and the outer sill 12. The grooves of the inner sash are shown at 13 and those of the outer sash at 14. The inner sash is indicated at 15 and the outer sash at 16.

The ventilator 17 comprises a rectangular frame composed of the horizontal frame members 18 and 19 and the side members 20 and 21. The thickness of the frame members is approximately equal to the width of the window grooves, and it is set into the grooves 14 beneath the rear sash 16.

Mounted between the side members 20 and 21 are a plurality of spaced horizontal shutters 22, each shutter being supported on its ends by pins 23 which are rotatably mounted in the side members 20 and 21. Of course, any other suitable shutter construction, with any desired type of pins other than those shown, may be used.

The shutters 22 are all joined pivotally to a vertical rod 24, whereby all of the shutters are swung synchronously about their pins when any one of the shutters is rotated. The horizontal frame members 18 and 19 are shown with their outer surfaces sloping outward, that is, the upper surface of the member 18 and the lower surface of the member 19. The degree of such sloping may vary and is dependent upon the slope of the window grooves.

The mounting of the pins 23 on the left-hand side in the side member 20 is achieved through the medium of a horizontally slidable vertical block or rail 25, as shown in Figures 3 and 4. The side member 20 is channel-shaped in cross-section and the rail 25 is horizontally slidable therein. A series of spaced nipples 26 is provided along the vertical base of the channel 20, and horizontally opposite to each nipple 26 a recess 27 is formed in the rail 25. A coiled spring 28 nests in each recess 27 and at its other end encircles the nipple 26, thus positioning the spring against displacement. Adjacent each spring 28, a horizontal slot 29 is formed through both opposed walls of the channel 20, and a guide pin 30, rigid with and extending from both sides of the rail 25, is slidable horizontally in the slot 29. It is apparent that the springs 28 normally urge the channel side member 20 outward from the frame of the ventilator, so that the latter will thus fit snugly into the window

grooves 14. Furthermore, the variable width of the ventilator thereby attained enables adjustment thereof to the width of the window within the range of movement of the self-adjusting feature.

The ventilator is mounted in the grooves 14 after raising the rear window sash 16. The shutters 22 are adjusted at will, as desired, after raising the inner sash. When it is desired to leave the house, the shutters 22 are turned upward to the opposite position to that shown in Figure 2, so as to keep possible rain out and yet permit fresh air to enter. The ventilator thus does not in any way interfere with the free use of the screen 31, nor the raising or lowering of the inside window.

It is apparent from the above that a very practical and useful window ventilator has been provided, whereby it is possible to permit free entry of fresh air at all times and during all weathers, without danger of having the rain get in. The ventilator is of particular advantage during the summer, when it would be most uncomfortable to have to keep the windows closed in order to exclude the rain.

Obviously modifications in form and structure may be made without departing from the spirit and scope of the invention.

I claim:

A window ventilator comprising a substantially rectangular frame comprising side members and upper and lower horizontal members, one of said side members comprising a channel-shaped member having its open side facing the frame and a vertical rail horizontally slidable therein, a plurality of spaced shutters pivotally mounted between said rail and the other of said side members, a cylindrical nipple on the rear wall of said channel-shaped member, said rail having a cylindrical recess of greater diameter than said nipple on its outer side positioned horizontally opposite said nipple, and a coiled spring loosely nested at one end in said recess and at the other end encircling said nipple, said channel-shaped member having a pair of horizontal slots cut through the opposed front and rear webs thereof at the same horizontal level, said rail having a rigid horizontal pin extending therethrough at right angles to and in the same plane as said horizontal slots with the extremities thereof extending beyond the front and rear walls of the rail, said extremities of said pin registering slidably in said slots.

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