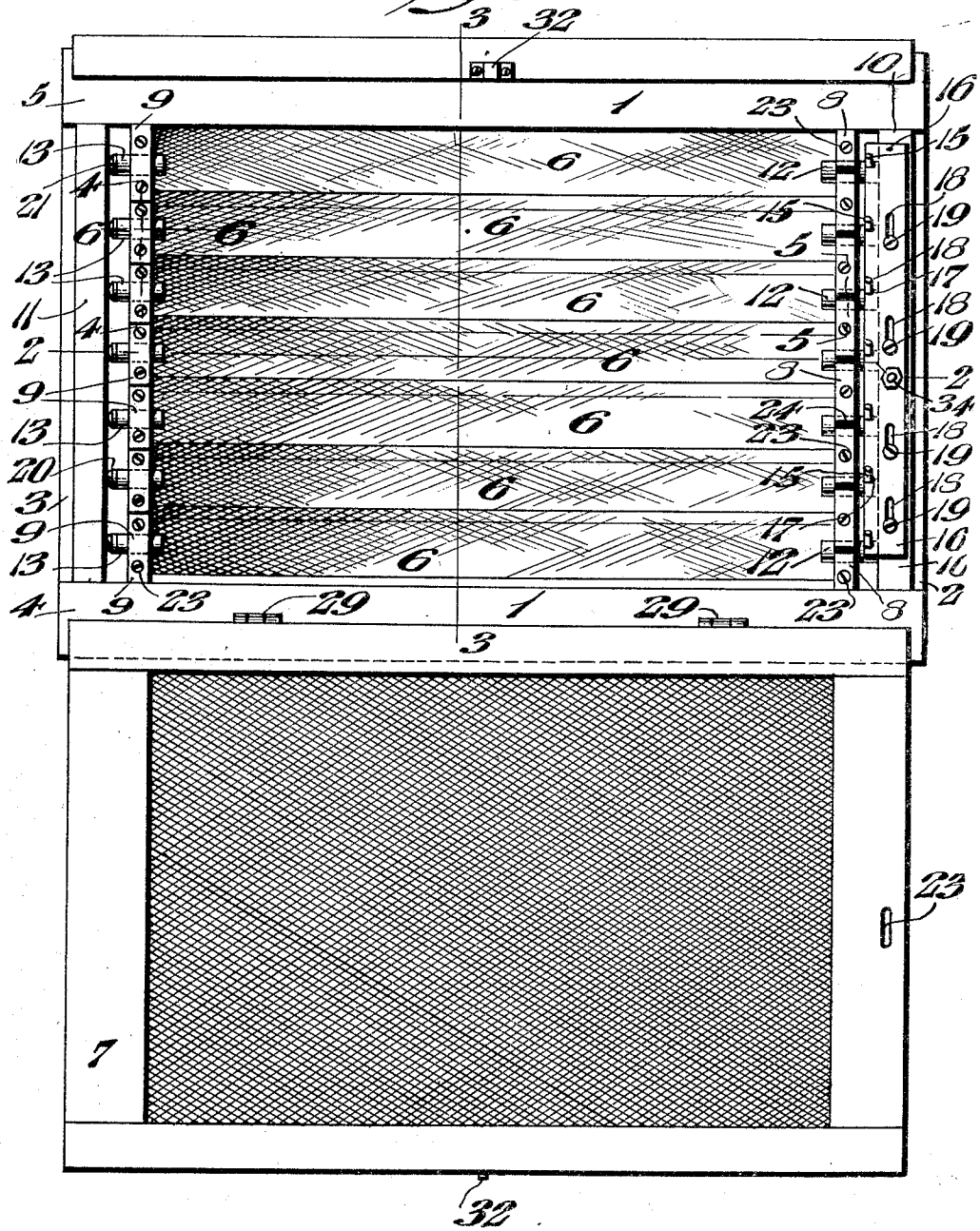
April 27, 1926. 1,582,111

M. WOGAN

COMBINED SCREEN AND ADJUSTABLE TRANSPARENT VENTILATOR

Filed Feb. 27, 1924 3 Sheets-Sheet 1

Fig. 1.



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April 27, 1926. 1,582,111

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COMBINED SCREEN AND ADJUSTABLE TRANSPARENT VENTILATOR

Filed Feb. 27, 1924 3 Sheets-Sheet 2

Fig. 2.

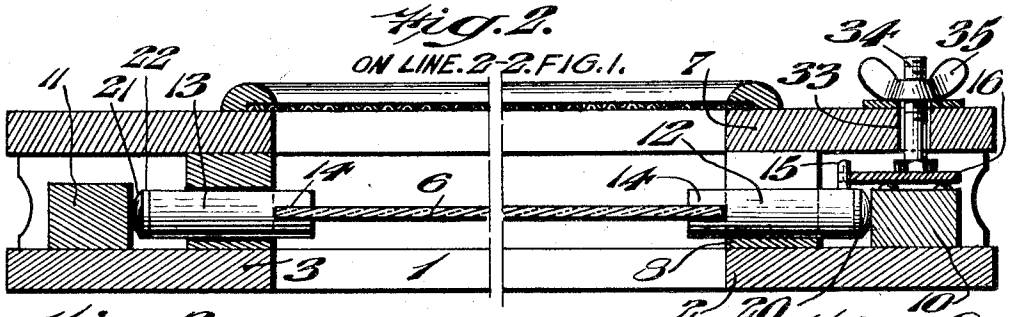


Fig. 3.

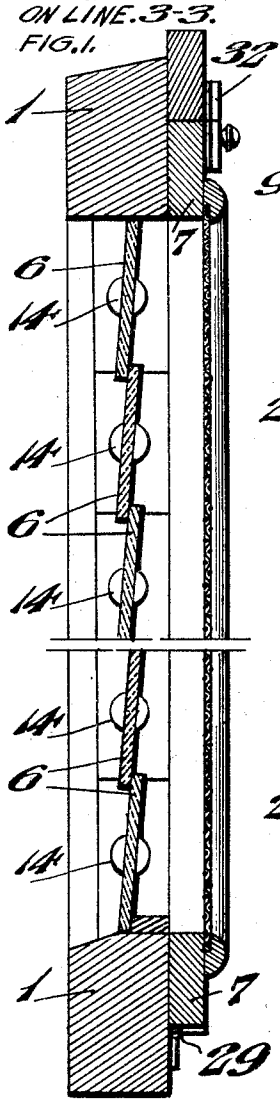


Fig. 4.

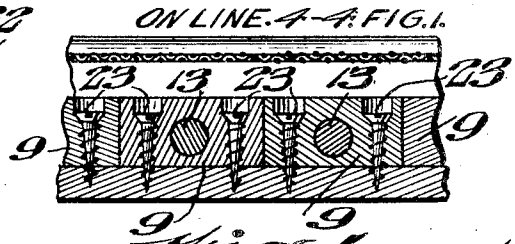


Fig. 5.

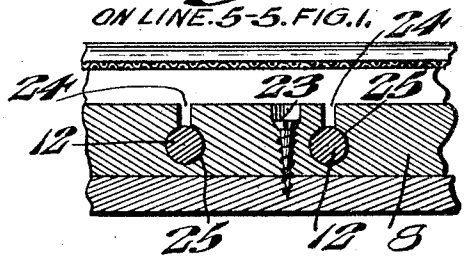


Fig. 6.

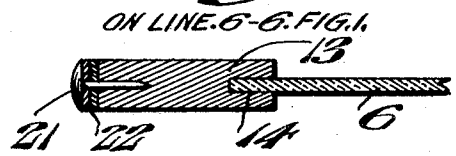


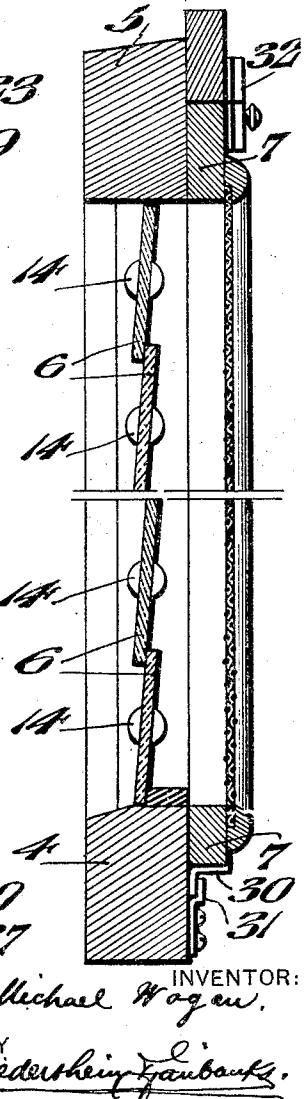
Fig. 7.



Fig. 8.



Fig. 9.



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April 27, 1926. 1,582,111

M. WOGAN

COMBINED SCREEN AND ADJUSTABLE TRANSPARENT VENTILATOR

Filed Feb. 27, 1924 3 Sheets-Sheet 3

Fig. 10.

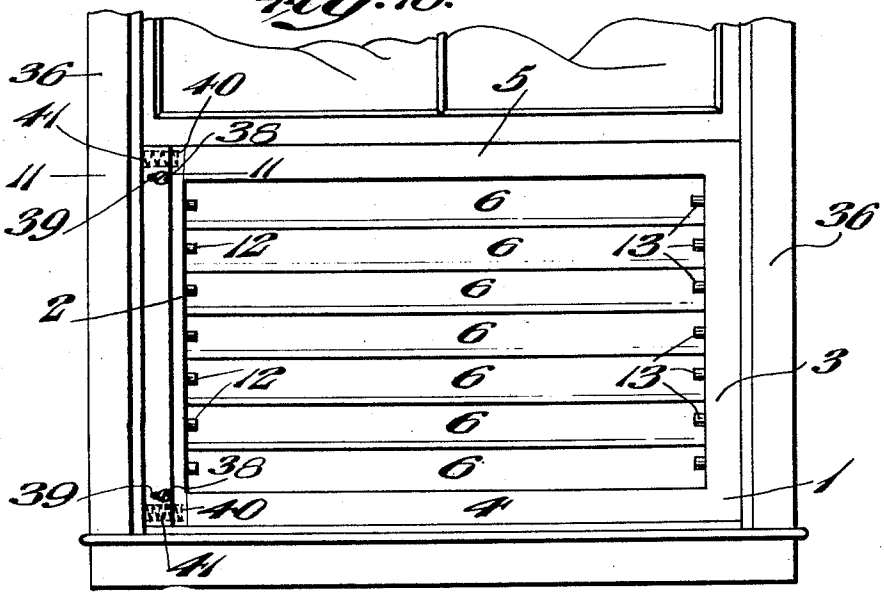


Fig. 11.

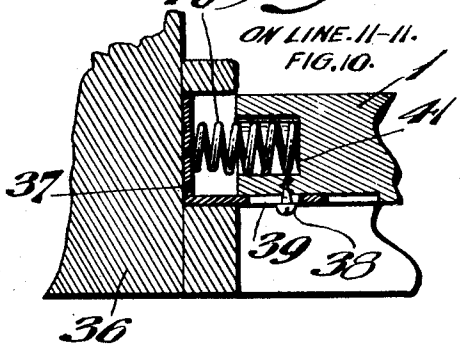


Fig. 12.

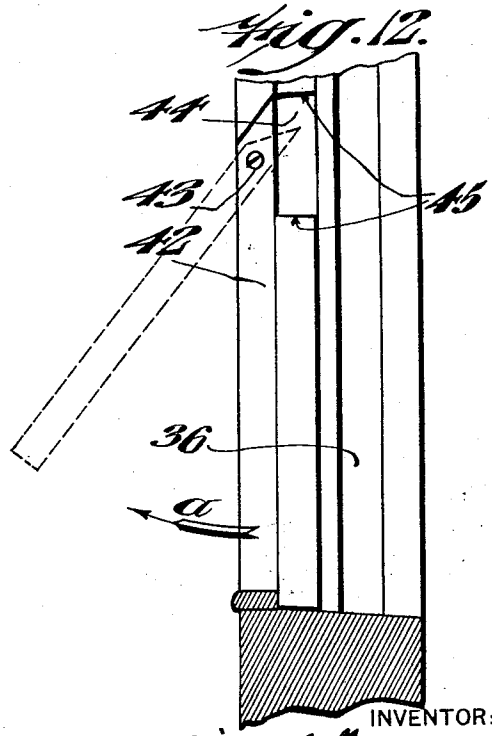
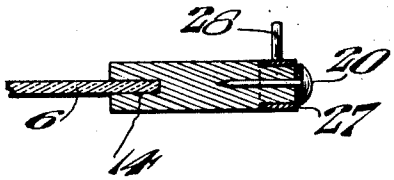


Fig. 13.



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Patented Apr. 27, 1926. 1,582,111

UNITED STATES PATENT OFFICE.

MICHAEL WOGAN, OF PHILADELPHIA, PENNSYLVANIA.

COMBINED SCREEN AND ADJUSTABLE TRANSPARENT VENTILATOR.

Application filed February 27, 1924. Serial No. 695,407.

To all whom it may concern:

Be it known that I, MICHAEL WOGAN, a citizen of the United States, residing at Philadelphia, county of Philadelphia, State of Pennsylvania, have invented a new and useful Combined Screen and Adjustable Transparent Ventilator, of which the following is a specification.

My invention consists of a novel construction in combined screen and transparent ventilator whereby, a compact unitary structure is produced, embodying both a screen and an adjustable ventilator which may be readily inserted into and removed from the window frame.

My invention relates particularly to the type of transparent adjustable ventilators used in windows, which permit a free passage of light therethrough regardless of whether the ventilator is open or closed.

My invention further consists of certain novel construction whereby the operation of said ventilator is greatly facilitated so as to enable the same to be adjusted from within the room, without removing the screen.

My invention consists more particularly of certain novel features in the construction of my combined screen and ventilator whereby a more serviceable screen and ventilator can be produced, and at a lower cost than has been possible heretofore.

My invention consists also of certain novel details of construction whereby both the screen and the transparent ventilator panels may be readily replaced in case of breakage.

For the purpose of illustrating my invention I have shown in the accompanying drawings, forms thereof which are at present preferred by me, since the same have been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Figure 1, represents a view in elevation of a combined screen and transparent ventilator embodying my invention, with the screen opened inward.

Figure 2, represents a section on line of 2—2 of Figure 1.

Figure 3, represents a section on line 3—3 of Figure 1.

Figure 4, represents a section on line 4—4 of Figure 1.

Figure 5, represents a section on line 5—5 of Figure 1.

Figure 6, represents a section on line 6—6 of Figure 1.

Figures 7 and 8, represent a front elevation view in section and an end view respectively of a modification of my invention.

Figure 9, represents a sectional view similar to that shown in Figure 3, and illustrating a modification of my invention.

Figure 10, represents an outside view in elevation of a combined screen and ventilator embodying my invention, showing a manner and means of inserting same into the window frame.

Figure 11, represents a section on line 11—11 of Figure 10.

Figure 12, represents a side elevation of a window frame showing my novel combined screen and ventilator inserted into the same.

Figure 13, represents a sectional view of another modification of a detail of my invention.

Referring to the drawings.

Similar numerals of reference indicate corresponding parts.

1 designates the frame of my novel screen and ventilator construction, said frame being composed of the two vertical side members 2 and 3 respectively and the two horizontal members 4 and 5 respectively. Mounted within this frame is a plurality of horizontally pivoted panels of glass 6 in vertical alignment with each other, and to the inner side of said frame is secured the auxiliary screen frame 7 in any suitable manner by hinges as shown in Figures 1, 3 and 9, and adapted to permit the adjustment of said glass panels for the purpose of ventilation, and protection from rain or snow without removing or dislocating the screen in any way.

In order to support the glass panels 6 pivotally, I provide a single fixed multiple bearing block 8 secured to the vertical frame member 2 and a plurality of independent bearing blocks 9 secured to the vertical frame member 3, in a removable manner. Adjacent and parallel to the bearing block 8

and the bearing blocks 9 respectively, I provide the end thrust members 10 and 11.

In the preferred embodiment of my invention I secure to the respective ends of each of the panels of glass 6, the trunnions 12 and 13 of any suitable material such as wood; and in a manner illustrated in Figures 1, 2, 3, 6, 9 and 13, namely, the trunnions are provided with the panel retaining slot or recess 14 at one end, into which recesses are permanently secured the ends of the glass panels, by any suitable means such as cement or glue, or retaining pins (not shown in the drawings).

While as an alternative means of providing pivots for the glass panels 6 I may cast the pivots of glass, and integral with the panels as shown in Figure 7; I prefer to simply use plate or window glass cut to the proper size and independent trunnions secured to the same; since this method is less expensive and equally serviceable.

The regulation or adjustment of the ventilation is accomplished by simply turning the glass panels about their pivots; namely when the panels are in a substantially vertical position as shown in Figures 3 and 9, the panels overlap and thereby completely close the ventilator, and when desiring to open the ventilator it is only necessary to turn the panels into a horizontal plane, or to any intermediate angle.

In order to permit a simultaneous operation of all the panels, I provide each of the trunnions 12 with a pin 15, which pins are placed substantially at an angle of 45 degrees to the plane of the panels, and I further provide the slidable operating plate 16, supported on anti-friction bearings with the recesses 17 along one edge thereof adapted to receive the pins 15, and the elongated guide openings 18 therethrough to receive the plate retaining screws 19, as illustrated in Figures 1 and 2. By sliding the operating plate upward the glass panels are all brought into the vertical or closed position, and will be retained in that position until the operating plate is moved downward, thereby turning the glass panels into the horizontal or open position.

For the purpose of retaining the panels against any lateral movement, I cut the trunnions 12 and 13 to the proper length and provide anti-friction ends 20 and 21 respectively, on the extremities thereof. The anti-friction ends are simply round head metallic nails, and in order to take up any wear, I interpose a resilient washer 22 between the head of the nail and the trunnion. The lateral pressure thus exerted on the ends of the trunnions 12 and 13 also helps to keep the ends of the glass panels rigidly secured in the recesses 14.

In order to permit the ready removal and replacement of the glass panels 6 individually and independently of each other, in case of breakage of the glass or wear on any part of the trunnion, I provide the series of independent bearing blocks 9 on one side of the frame 1, secured by screws 23, so that any one of the series may be removed without affecting the others; (as shown in Figures 1 and 4) and also provide the slots 24 in the fixed multiple bearing block 8, above each bearing 25 therein, as shown in Figures 1 and 5, so that the trunnions 12 may be removed from their respective bearings, by simply sliding the same out laterally;—the pins 15 passing through the slots or grooves 24. As an alternative means of removing the trunnions 12 from the bearing block 8, I may provide the said trunnions with a square end 26 onto which I place a closely fitting metallic collar 27, having the pin 28 integral therewith. In this modification of my invention the slots or grooves 24 have been dispensed with, and the pin 28 replaces the pin 15.

To the frame 1, I secure the auxiliary screen frame 7, by means of the horizontal hinges 29, or the tongue and retaining strips 30 and 31 respectively, as illustrated in Figures 3 and 9 respectively; and the latch 32. The frame 7 is provided with the elongated opening 33 for receiving the operating handle 34, which is secured to the operating plate 16 at a right angle thereto and about midway of its length, as shown in Figures 1 and 2. For added convenience in operating the ventilator, I may provide the operating handle with a knob or nut threaded thereto such as the ring nut 35 in Figure 2.

By this means the ventilator, which is on the outer side of the window, may be conveniently and expeditiously regulated from within the room, without removing or in any way dislocating the screen frame 7; the screen frame however, may be opened inwardly or entirely removed when it is desired to clean or effect repairs on the ventilator panels 6 or any other part of the ventilator.

In order to provide ready means of inserting and removing my novel combined screen and transparent ventilator from the window frame 36 illustrated in Figure 10, I may provide a yielding edge on one side of the frame 1 which yielding edge consists of an angle strip 37 secured to the vertical frame member and held in position by means of screws 38 passing through the elongated guide openings 39. The helical compression springs 40 seated within the holes 41 in the side of the frame 1 bear against the inner side of the angle strip 37, as shown in Figure 11. The insertion and removal of the frame 1 is accomplished by simply contracting the yielding edge and subsequently releasing the same into the expanded position.

In place of the yielding edge I may simply provide a section of the sash bead strip 42 pivotally supported, as at 43, so that it may be turned out in the direction shown by the arrow *a*. When inserting or removing the frame 1, the pivotally supported section 42 of the sash bead is turned outward into the position shown by the dotted lines.

When in the normal position, the bead section 42 is prevented from turning, by the window sash 44, the lower edge 45 of which then rests against the upper edge of the frame 1, and when it is desired to turn the bead strip outward it is only necessary to raise the sash 44 until the lower edge 45 thereof clears the upper end of the bead strip, as shown by the dotted lines.

It is further seen that by my novel construction I may obtain a variable ventilation under all conditions of weather because my ventilator is capable of adjustment from within, and the panels of the ventilator are adapted to shed rain or snow when partially open.

It will now be apparent that I have devised a novel and useful construction which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description and while I have in the present instance shown and described the preferred embodiments thereof which have been found in practice to give satisfactory and reliable results, it is to be understood that the same are susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention what I claim is new and desire to secure by Letters Patent, is:—

1. In a combined screen and transparent ventilator, a frame, a plurality of vertically aligned glass panels pivotally supported within said frame; a fixed bearing block on the one side of said frame and a plurality of vertically aligned bearing blocks removably attached to the other side thereof; trunnions rigidly fixed to the respective ends of said panels, and coacting with said bearing blocks to support said glass panels; and thrust members, parallel to the bearing blocks on the two sides of the frame respectively, contacting with the ends of the respective trunnions adapted to prevent lateral displacement thereof.

2. In a combined screen and transparent ventilator, a frame; a plurality of vertically aligned glass panels within said frame; bearing blocks secured to the respective sides of said frame; trunnions rigidly fixed to the respective ends of said panels and coacting with said bearing blocks to pivotally support said panels about horizontal axes; and operating means, for adjusting said panels simultaneously, consisting of pins secured to each of the trunnions on one side of the frame, at a right angle to the axes of said panels, a vertically slidable operating member having notches in the body thereof for engaging said pins, and an operating handle secured to said operating member at a right angle thereto.

MICHAEL WOGAN.