J. A. SHEA.

WINDOW VENTILATOR.

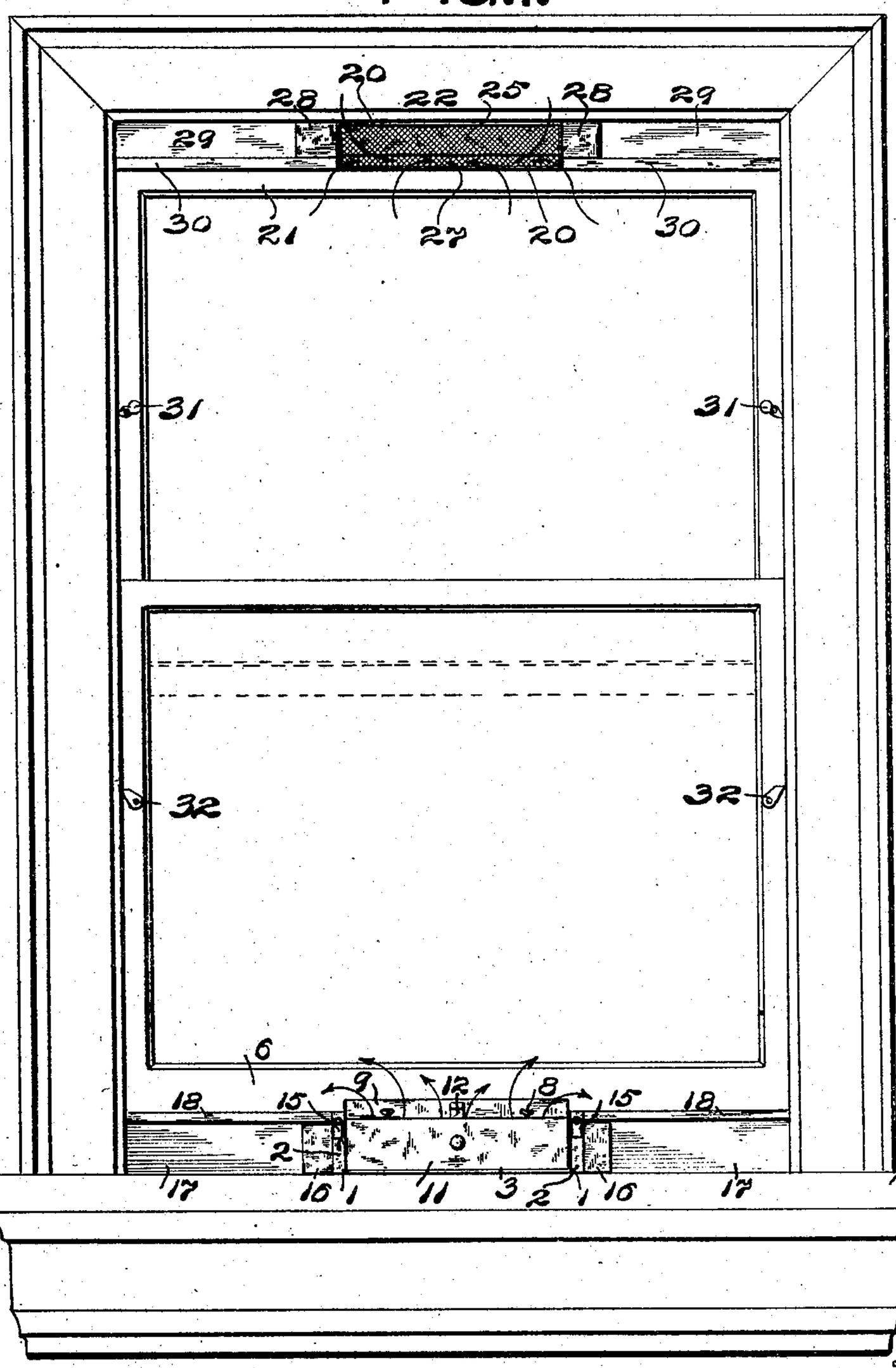
APPLICATION FILED JULY 23, 1908.

905,241.

Patented Dec. 1, 1908.

2 SHEETS—SHEET 1.

FIG. 1.



Witnesses

M. E. Harrison.

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Inventor

James A. Shea,

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2 SHEETS—SHEET 2.

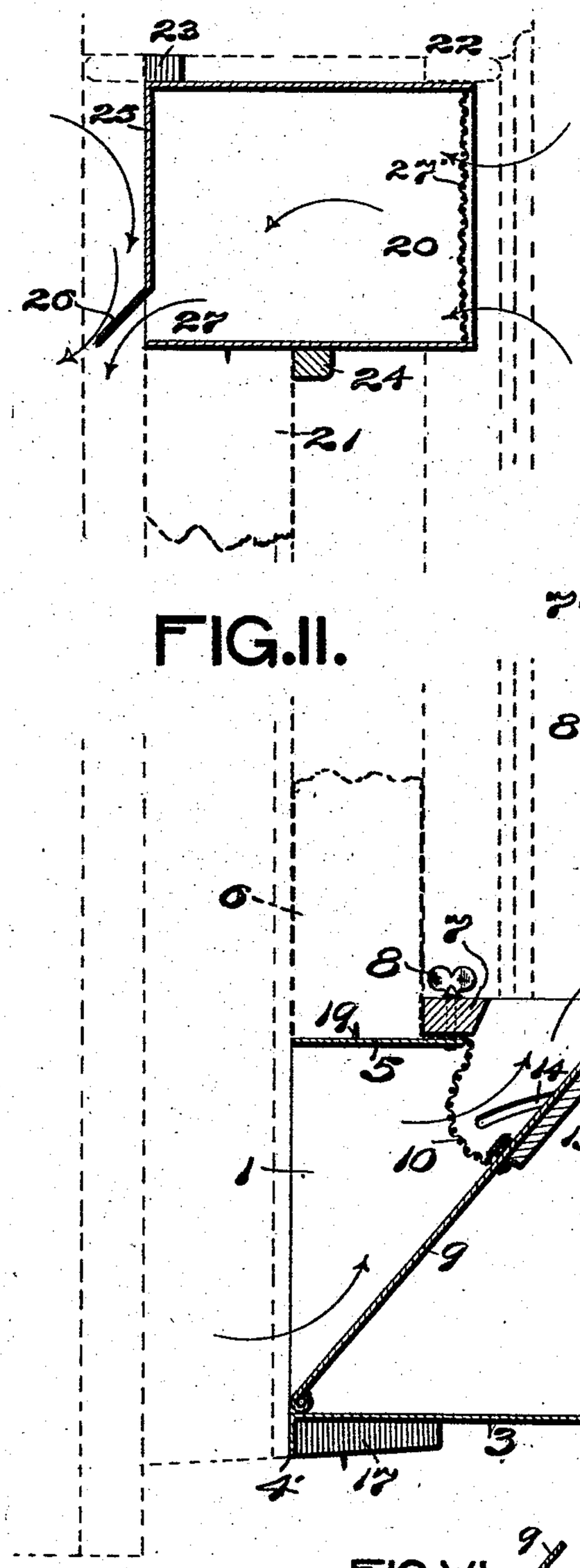

FIG. II.

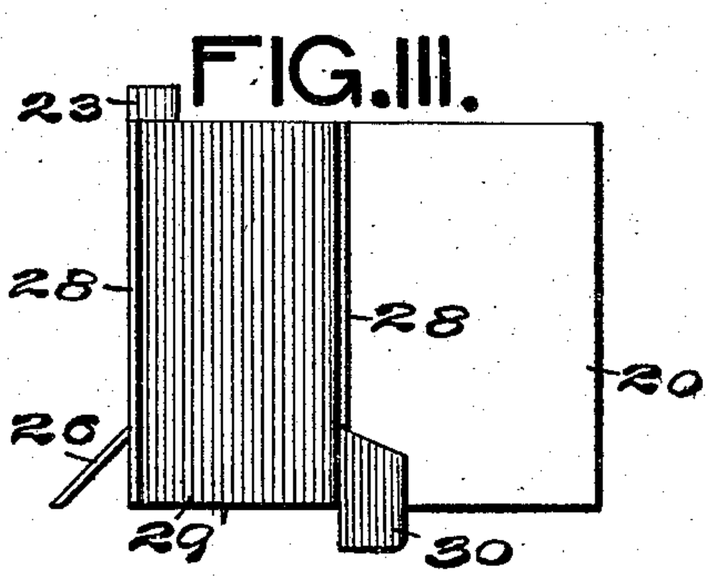

FIG. III.

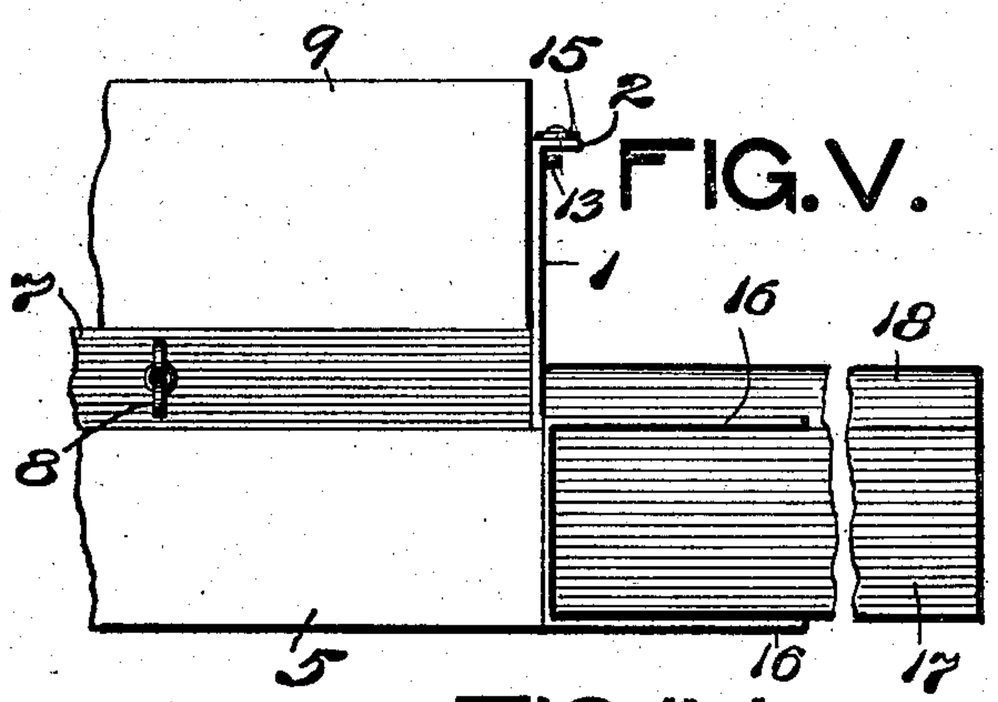

FIG. V.

FIG. VI.

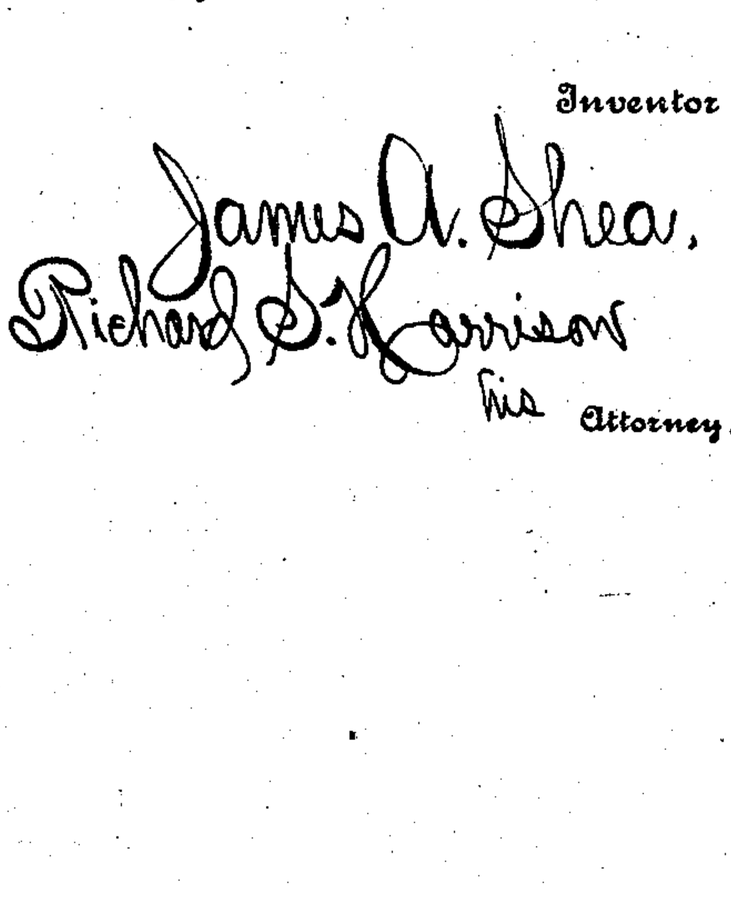

FIG. IV.

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UNITED STATES PATENT OFFICE.

JAMES A. SHEA, OF PITTSBURG, PENNSYLVANIA.

WINDOW-VENTILATOR.

No. 905,241. Specification of Letters Patent. Patented Dec. 1, 1908.

Application filed July 23, 1908. Serial No. 444,903.

To all whom it may concern:

Be it known that I, JAMES A. SHEA, citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Window-Ventilators, of which the following is a specification.

My invention relates to ventilators and is especially adapted for service in the windows of dwellings, offices, etc.

The invention has for its object the provision of ventilator means whereby fresh air is taken into the room and the impure air withdrawn, said invention having certain new and novel features of construction and operation as will be hereinafter more fully described in connection with the accompanying drawings forming a part of this specification, in which drawings:

Figure I, is a front elevation of the inside of a window and attending frame, showing the application of my improved ventilator thereto. Fig. II, is an enlarged transverse sectional view through the same. Fig. III, is an end elevation of the air outlet member for the upper portion of the window. Fig. IV, is an end elevation of the air intake member for the lower portion of the window. Fig. V, is a plan view of a portion of the intake member and Fig. VI, is a side sectional view of a modified form of means to support the intake deflector blade, said views having similar parts designated by like numerals of reference.

The invention comprises an intake member which consists in structure of an elongated frame, preferably formed of sheet metal, the side walls 1 thereof having outwardly disposed flanges 2 at the front and the base portion 3 which is adapted to engage upon the sill proper 4 and has at its rear a downwardly disposed flange 4′ to engage the sub-sill, said frame having its upper portion 5 formed at an elevation below that of the upper edge of the side walls and extends from the rear but part way inwardly so as to form a support for the lower sash and carries upon its inner upper edge a weather strip 7 which is secured thereto by screws 8. Pivotally secured to the rear of and within the base of said frame is a movable deflector blade 9 which inclines in an upward direction through the open space at the top, which blade has suitably secured to the upper surface thereof a gauze fabric or screen wire 10 which is also secured between the aforesaid weather strip 7 and top portion 5 of the frame. Pivotally secured at the base of and within the front portion of the frame is an adjustable support 11 the upper edge of which is tapered to a fine edge and engages a strip of wood or other suitable material 12 of a non-slipping nature attached to the underside of the deflector blade, said support carrying pins 13 which extend through radial slots 14 in the side walls of the frame, said slots being closed at the front of the frame by the small plates 15 carried by the frame to limit the inward movement of the support. Secured to the side walls of the frame are the laterally disposed flanges 16 into which are loosely fitted the wooden extension pieces 17 carrying weather strips 18 to engage the sash and sill and fill up the space between the same and frame, which extension pieces I prefer be provided with small pins 19 to enter the sash and assist in retaining the same in position.

The air outlet member consists of a frame 20, preferably formed of sheet metal, to engage between the upper sash 21 and frame 22 and is provided with a strip 23 at the top to preserve a level position with the inner portion of the frame and with a weather strip 24 upon its under side to engage the inner portion of the sash, said frame having a rear wall 25 which extends down vertically and thence outwardly at an angle to a point on about a level with the base of the frame leaving a narrow air outlet space 27. This frame is also provided with a screen 27′ and, like that of the intake, is preferably elongated in form and is also provided with laterally disposed flanges 28 between which engages wooden extensions 29 provided with weather strips 30 to fill up the remaining space between the window frame and sash.

In order to make the window sashes secure against movement from the outside, I provide suitable fasteners 31 for the upper sash 21 and fasteners 32 for the lower sash 6.

In practice, the deflector blade, which is shown as occupying its extreme inward inclination, is adjusted by means of the support 11, so as to open or close the space between the blade and strip 7 to regulate the intake space and consequent amount of air desired, or shut off the supply if desired by moving the plate 11 toward the deflector blade to cause the said blade to engage against the said strip 7.

When air is being supplied to the room, through the intake, as indicated by the arrows, a constant circulation of air through the room is induced by the action of the external air currents upon the deflector lip 26 of the outlet member, causing a tendency to form a vacuum in the outlet member with the result that the air in the room is drawn off through the outlet member at the same time as fresh air is being supplied through the intake member.

By making the extension pieces 17 and 29 of wood, they may be readily shortened to fit any sized window.

At Fig. VI, the deflector blade 9 is shown as provided with a toothed rack 12′ which may be substituted for the previously mentioned strip of wood 12 to be engaged by the support 11.

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

1. In a window ventilator, a frame adapted to engage between the lower window sash and the frame sill, the air inlet thereof embracing the rear and a portion of the frame top, an upwardly and inwardly inclined deflector blade pivotally secured at its base in said frame, the free end of which extends into the space at the top of the frame and is adapted to be adjusted to regulate the flow of air therethrough, and an upwardly disposed member pivotally attached to the frame beneath the said blade for supporting and adjusting the latter.

2. In a window ventilator, a frame adapted to engage between the lower window sash and the frame sill, the air inlet thereof embracing the rear and a portion of the top of the frame, an upwardly and inwardly inclined deflector blade pivotally secured at its lower end to the frame, the free end of which extends into the space at the top of the frame and is adapted to be adjusted to regulate the flow of air therethrough, an upwardly disposed member pivotally attached to the frame beneath the said blade for supporting and adjusting the latter, and a screen disposed across the air inlet and attached to the frame and blade.

3. In a window ventilator, a frame adapted to engage between the lower window sash and the frame sill, the air inlet thereof embracing the rear and a portion of the top of the frame, an upwardly and inwardly inclined deflector blade pivotally secured at its lower end to the frame, the free end of which extends into the space at the top of the frame and is adapted to be adjusted to regulate the flow of air therethrough, an upwardly disposed member pivotally attached to the frame beneath the deflector blade for supporting and adjusting the same, a screen disposed across the air inlet and attached to the frame and blade, and laterally disposed members fitted between the sash and frame and against the ends of the ventilator frame to fill up the space therebetween.

4. In a window ventilator, a frame adapted to engage between the lower window sash and the frame sill, the air inlet thereof embracing the rear and a portion of the top of the frame, an upwardly and inwardly inclined deflector blade pivotally secured at its lower end to the frame, the free end of which extends into the space at the top of the frame and is adapted to be adjusted to regulate the flow of air therethrough, an upwardly disposed member pivotally attached to the front of the frame beneath the deflector blade and is adapted to support and adjust the same, a screen disposed across the air inlet and attached to the frame and blade, laterally disposed members fitted between the sash and frame and against the ends of the ventilator frame, and means arranged between the upper window sash and frame top to withdraw the impure air displaced in the room by the intake member.

5. In a window ventilator, a frame adapted to engage between the lower window sash and frame sill, the air inlet thereof embracing the rear and a portion of the top of the frame, an upwardly and inwardly inclined deflector blade pivotally secured at its lower end to the frame, the free end of which extends into the space at the top of the frame and is adapted to be adjusted to regulate the flow of air therethrough, a hinged door on the front of the frame the upper free end of which engages with and is adapted to adjust the said blade, a screen disposed across the said inlet and attached to said frame and blade, laterally disposed members fitted between the sash and window frame the inner ends of which engage between flanges carried by the ends of the ventilator frame, and means arranged between the upper window sash and frame top to withdraw the impure air displaced in the room by the intake member.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. SHEA.

Witnesses:
RICHARD S. HARRISON,
W. M. MCMILLIN.