M. POWER.

WINDOW VENTILATOR.

APPLICATION FILED OCT. 25, 1910.

1,022,870. Patented Apr. 9, 1912.

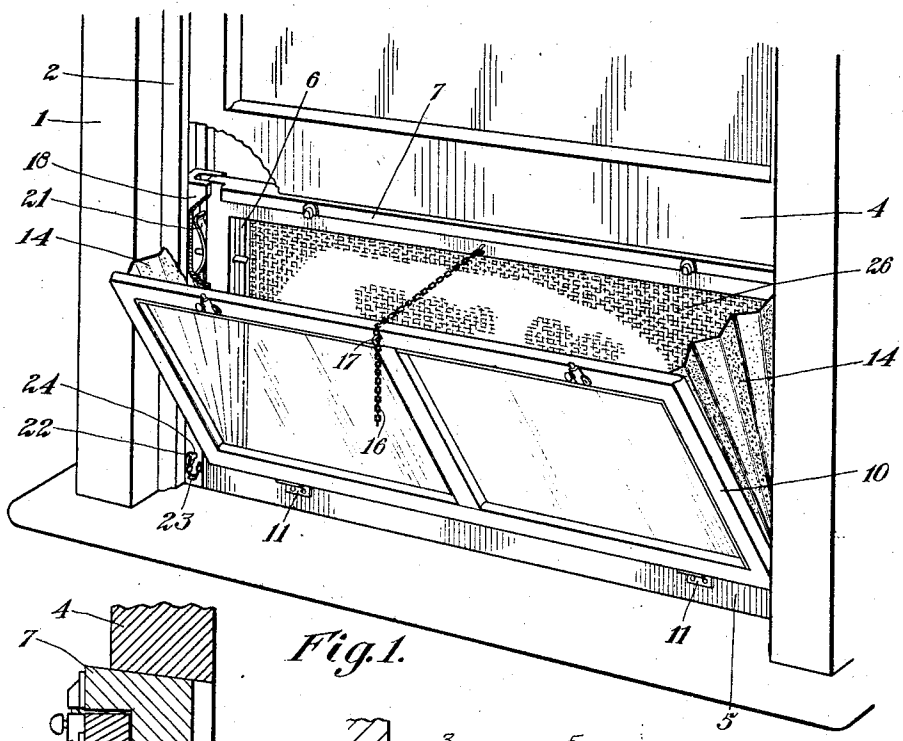
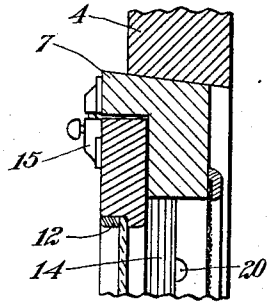


Fig. 1.



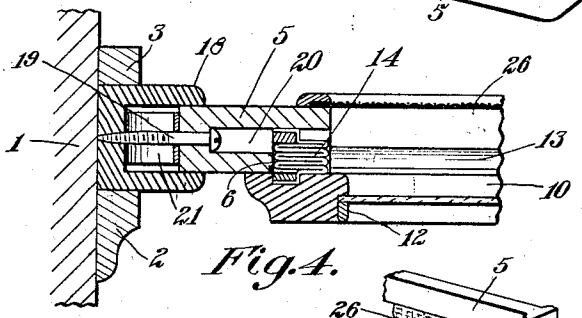


Fig. 4.

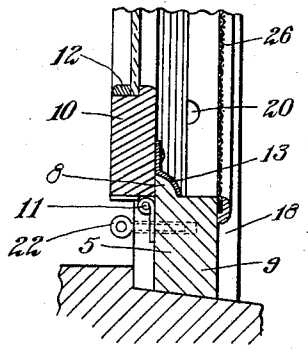


Fig. 2.

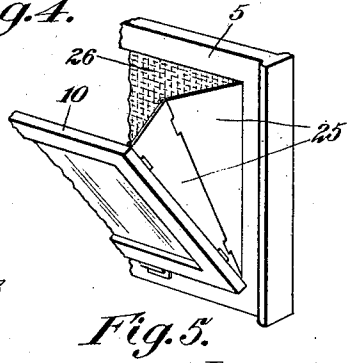


Fig. 5.

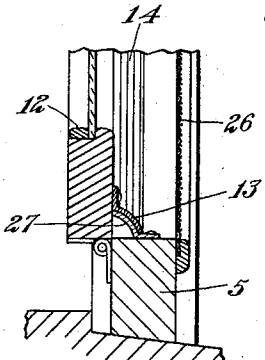


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

MICHAEL POWER, OF TORONTO, ONTARIO, CANADA, ASSIGNOR OF TWENTY-FIVE ONE-HUNDREDTHS TO ROBERT HEBER BOWES AND TWENTY-FOUR ONE-HUNDREDTHS TO ROBERT GEORGE DICKSON, BOTH OF TORONTO, CANADA.

WINDOW-VENTILATOR.

1,022,870. Specification of Letters Patent. Patented Apr. 9, 1912.

Application filed October 25, 1910. Serial No. 589,024.

To all whom it may concern:

Be it known that I, MICHAEL POWER, a subject of the King of Great Britain, and resident of the city of Toronto, county of York, Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Window-Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to improvements in window ventilators, as described in the following specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel construction and arrangement of parts, whereby the outside air entering through the window is directed upwardly by a pivotal member hinged at the bottom to an open frame adapted to be placed in the window frame.

The objects of the invention are, to facilitate the proper ventilation of a room without creating an objectionable draft, and to devise a simple form of ventilator which may be placed in any window frame and may be readily adapted to either temporary or permanent uses.

In the drawings, Figure 1 is a perspective view, partly broken away, of the lower portion of a window frame showing my device placed therein beneath the ordinary window sash. Fig. 2 is an enlarged vertical cross sectional view of my device, partly broken away. Fig. 3 is a vertical cross sectional view of a portion of the device showing a slightly modified means for closing the opening at the pivotal joint. Fig. 4 is an enlarged horizontal sectional view of one end of the ventilator frame and a portion of the window frame. Fig. 5 is a perspective detail of a portion of a ventilator sash showing a slight modification of the means for closing the openings at the ends of the pivotal sash.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is a window frame having the stops 2 and parting strips 3 in the sides thereof and a sash 4 operating therebetween.

5 is an open frame having the vertical recesses 6 formed in the inner sides of the end rails, and the top rail 7 projecting inwardly.

8 is a rib projecting upwardly from the beveled top edge of the bottom rail 9 arranged at the inner edge and extending from end to end thereof, said rib having an arc-shaped upper surface in cross-section.

10 is a glazed sash pivotally secured at the outer side of its bottom rail to the inner side of the bottom rail 9 of the frame 5 by the hinges 11 and adapted to fit snugly against the inner face of the frame 5 and to swing inwardly therefrom. The sash 10 is preferably recessed at the inner side to receive the glass lights and these are secured in place by the strips 12 in the usual manner.

13 is a shield, preferably formed of a strip of sheet metal formed substantially arc-shaped in cross section and secured to the outer face of the sash 10 and extending over the rib 8. The shield 13 projecting over the rib 8 carries the water dripping from the glass over the said rib 8, whether the sash 10 is open or closed, consequently it will not leak through to the inside of the window. This construction also prevents the ingress of air to the room through the opening at the hinge joint between the sash and frame.

14 are pieces of cloth, leather, or other flexible material of bellows form secured to the end edges of the sash 10 and to the inner recessed sides of the frame 5 and are adapted to fold inwardly into said recesses on the closing of the sash. The flexible bellows members prevent the flow of air around the ends of the sash and the said sash, when open, directs the flow of air upwardly thus thoroughly ventilating the room without creating a draft.

15 are spring catches of any suitable design secured to the upper rail of the sash 10.

16 is a chain secured at one end to the upper rail of the frame 5 about the center thereof.

17 is a hook secured to the upper rail of the sash 10 and adapted to engage the links of the chain 16 to hold the said sash at any desired angle.

18 is a strip of wood or other suitable material having a vertical slot extending longi-

tudinally thereof adapted to receive the perpendicular edge of the frame 5, said strip being loosely secured to the frame by the screws 19 secured therein and extending into the orifices 20 in the end rails of said frame.

21 are flat bowed springs secured to the inner wall of the vertical slot in the strip 18 and engaging the edge of the frame 5 to hold said strip outwardly.

In placing this device in a window frame, the strip 18 is inserted between the stops 2 and the parting strips 3 and the frame 5 is pushed into the slot in the strip 18 until the opposite end of the frame will slip between the stop and parting strip at the other side of the window frame. When the frame is released the springs 21 move it outwardly between said stop and parting strip. The frame 5 is thus securely held in place in the window frame, no apertures being left for the entrance of flies or other insects.

The device may be utilized in the manner described under the ordinary sash in a window in dwellings, railway cars, or in fact anywhere desired, or the window sash itself may be made to receive the pivotal sash 10, said pivotal sash directing the air upwardly and preventing a draft blowing on a person sitting close to the window. When the frame is thus placed in position it may be locked securely against removal by any suitable means. A pin 22 attached to a short chain 23 is shown inserted into a hole 24 in the strip 18, said pin extending into a corresponding hole in the sash.

In Fig. 5, I show a slight modification of the means for closing the openings at the ends of the pivotal sash, in this figure, I show a pair of triangular shaped metal plates 25 hinged together and to the inner edge of the end of the pivotal sash and to the frame 5 so that they will fold inwardly on the upward swinging of the said sash. The opening in the frame 5 is preferably covered over by a suitable screen 26 to prevent insects entering the room or when the device is used in railway cars the screen may be of very fine gauze to keep out cinders and dirt.

In the form shown in Fig. 3, the longitudinal rib 8 is replaced by a shield 27, similar to the shield 13, secured to the lower rail of the frame 5 and fitting snugly against the shield secured to the swinging sash. A very secure and weather proof joint is thus secured.

What I claim as my invention is:—

1. In a window ventilator, a frame having an opening therethrough, a sash hinged at its lower edge to the bottom rail of said frame, means for closing the openings at the ends of said sash when it is swung inwardly, a member extending longitudinally from end to end of the top side of the lower rail of said frame and projecting upwardly therefrom, and an arc shaped shield member secured to the outer side of the lower rail of said sash and projecting over said longitudinal member.

2. In a window ventilator, a frame having an opening therethrough, a sash hinged at its lower edge to the bottom rail of said frame, means for closing the openings at the ends of said sash when it is swung inwardly, a metal strip rigidly secured to the upper edge of the lower rail of said frame extending from end to end thereof and having an upwardly and inwardly extending portion arc shaped in cross section, and a metal strip rigidly secured to the outer face of the lower rail of said sash and extending from end to end thereof and having an outwardly and downwardly projecting portion arc shaped in cross section fitting snugly against the arc shaped portion of the strip on said frame.

Signed at the city of Toronto, county of York, Province of Ontario, in the Dominion of Canada, this 21st day of October 1910.

MICHAEL POWER.

In the presence of—
H. DENNISON,
E. HERON.