

I. POMERANTZ.
WINDOW VENTILATOR.
APPLICATION FILED FEB. 21, 1910.

1,009,173.

Patented Nov. 21, 1911.

Fig. I.

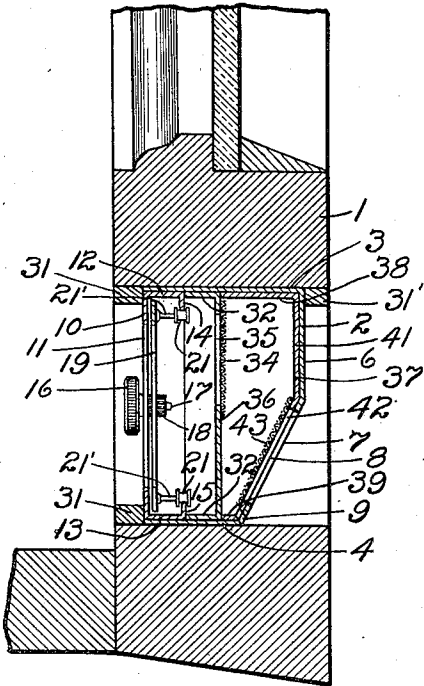


Fig. II.

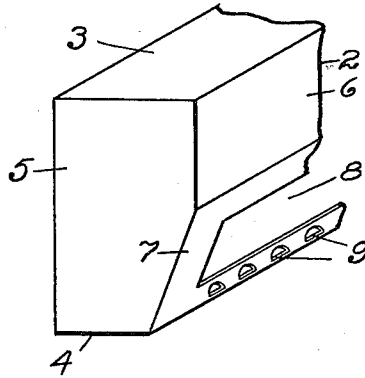


Fig. III.

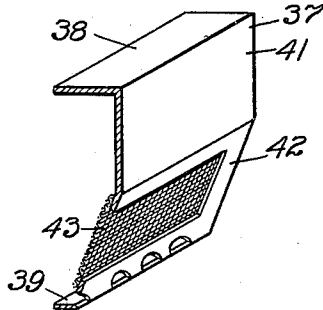


Fig. IV.

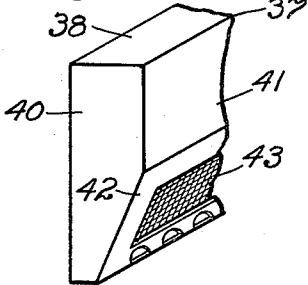
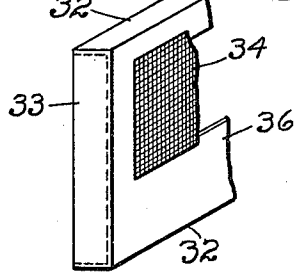


Fig. V.



WITNESSES:

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WINDOW-VENTILATOR.

1,009,173.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ISIDOR POMERANTZ, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Window-Ventilator, of which the following is a specification.

My invention relates to window ventilators and has for its principal object to provide a simple, reliable and efficient means of ventilating rooms without creating a draft.

A further object of my invention is to provide means for adjusting the ventilating area.

A further object is to provide means for screening and filtering the air before it enters the room.

A further object is to provide a simple ventilator which may be applied to any window, and entirely within the window sash, and which can be easily removed for cleaning purposes.

A further object is to provide the other improved details of structure hereinafter described and pointed out in the claims, reference being had to the accompanying drawings, in which:—

Figure I is a vertical section through the bottom rail of a window sash, showing a ventilator secured therein and made in accordance with my invention. Fig. II is a detail perspective of the metal retaining box. Fig. III is a sectional perspective of a part of the removable outer frame. Fig. IV is an end perspective of same. Fig. V is a detail perspective of a part of the removable inner frame.

Referring more in detail to the parts:—1 designates the lower sash rail of a window, which is provided with an opening extending partially thereacross. Located in the sash opening is a retaining box 2, comprising a top portion 3, a bottom portion 4, and end portions 5. One side comprises a vertical longitudinal portion 6 adjacent to which is a downwardly inclined portion 7 having air openings 8 and drain holes 9; the outer side being open, as shown. The vertical longitudinal portion 6 of box 2 acts as a deflector and will hereinafter be designated as such, the object of this construction being to prevent a direct draft through the ventilator.

Removably mounted in the open side of the retaining box 2 is a metal frame 10 pro-

vided with a series of rectangular openings 11. The upper and lower edges of frame 10 are turned inward at right angles thereto, forming flanges 12 and 13 which are again turned inwardly at right angles, forming tracks 14 and 15. Revolvably mounted near the center of frame 10 is a shaft 17 having a knurled knob 16 on its outer end and a pinion 18 on its inner end, which is normally in mesh with a rack for the purpose presently described. Behind the frame 10 and within the retaining box is a sliding plate 19 provided with a series of rectangular openings 20 similar to and adapted to register with the openings 11 of frame 10. At the top and bottom of each end of the plate 19 and projecting perpendicularly inwardly therefrom, are stub shafts 21 upon which are revolvably mounted small flanged rollers 22; said rollers engaging the tracks 14 and 15 and maintaining a sliding contact between the frame 10 and the plate 19. Near the center of plate 19 is a longitudinal slot 23 whose lower edge is formed into a rack which is adapted for engagement with the pinion 18. Thus it is obvious that when the knob 16 is turned, it imparts like motion to the pinion 18 which in turn imparts reciprocal motion to the plate 19, thereby opening or closing the parts 11—20 or adjusting them to any desired area.

Immediately back of frame 10 and sliding plate 19, and within the retaining box 2, is a removable metal frame 36 whose upper and lower edges are turned at right angles to said frame 36 forming the spacing members 32 which are adapted to rest against the tracks 14—15 and the top and bottom 3 and 4 of the retaining box. The sides 33 of the frame 36 are likewise bent at right angles thereto and adapted to rest against the ends 5 of the retaining box. The upper portion of the frame is open and a close mesh screen 34 is fastened securely thereover, for the purpose of breaking the draft and preventing the ingress of insects, dust or any impurities floating in the air, while the lower portion remains uncut, forming a deflector to prevent a direct draft through the ventilator.

Immediately back of frame 36 and formed as to be in close contact with the sides and ends of the retaining box 2, is a removable frame 37 having an upper flange 38, a lower flange 39, end flanges 40, of such length as

to uniformly meet the frame 36 and space the parts definitely apart, a vertical portion 41 and a downwardly inclined portion 42 which is adapted to fit closely against the side 6—7 of retaining box 2. The greater part of the downwardly inclined portion 42, of frame 37, is cut away and covered thereover with a close mesh metal screen 43 which is adapted to cover the openings 8 in the retaining box 2.

Fixed to the outside of the sash, at the top of the opening, is a cleat 31' against which the upper edge of the retaining box 2 bears; and fixed to the inside of the sash are cleats 31 which extend entirely around the inside of the aperture, thus securing the ventilator substantially in position and entirely within the limits of the window sash rail, leaving no projections on either side.

It will be understood that a ventilator similar to that already described is also secured within the upper sash rail whereby the air in the upper part of the room may have an exit; thus creating a circulation which may be adjusted and regulated to the desired degree.

The manipulation of the ventilator is very simple. Having been constructed and mounted as described, the condition of the atmosphere in the room is noted. If the entire ventilating capacity is required the knob 16 is turned, thus turning pinion 18 and moving plate 19 to a position in which the openings 20 register exactly with the openings 11 of frame 10 and which is likewise the limit of movement in that direction. The ventilation is stopped by reversing said motion, whereby the openings in each portion register with each intervening uncut space. It will be obvious therefore that any desired quantity of air within these limits may be obtained by adjustment. It is apparent that should it be necessary to clean the ventilator all of the internal parts may be easily removed and replaced as they are merely set into the box and not secured permanently in place. It will also be obvious that the shape and size of the retaining box and ventilating parts may be varied without departing from the spirit or scope of the invention.

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

1. A ventilator comprising a retaining box having the lower portion of its outer face inclined inwardly and downwardly and provided with a longitudinal opening, a removable frame fitted within the box and

having the lower portion of its outer face inclined inwardly and downwardly and provided with a screened opening overlying the open part of said box, a second removable frame fitted within the box and abutting against the inner edges of the first named frame, and having a screened opening at the top, the lower portion of the frame being imperforate, a slotted keeper frame removably mounted in said box and abutting against the inner edges of the second frame, and a damper plate slidably mounted back of the slotted keeper plate.

2. A ventilator comprising a retaining box having the lower portion of its outer face inclined inwardly and downwardly and provided with a longitudinal opening, and with a plurality of drain openings below the longitudinal opening, a removable frame fitted within the box and having the lower portion of its outer face inclined inwardly and downwardly and provided with a screened opening overlying the open part of said box, a second removable frame fitted within the box and abutting against the inner edges of the first named frame, and having a screened opening at the top, the lower portion of the frame being imperforate, a slotted keeper frame removably mounted in said box and abutting against the inner edges of the second frame, and a damper plate slidably mounted back of the slotted keeper plate.

3. A ventilator comprising a retaining box having the lower portion of its outer face inclined inwardly and downwardly and provided with a longitudinal opening, a removable frame fitted within the box and having the lower portion of its outer face inclined inwardly and downwardly and provided with a screened opening overlying the open part of said box, a second removable frame fitted within the box and abutting against the inner edges of the first named frame, and having a screened opening at the top, the lower portion of the frame being imperforate, a slotted keeper frame removably mounted in said box and abutting against the inner edges of the second frame, the inner ends of the keeper frame being turned toward each other to provide rails, and a damper plate slidably mounted back of the slotted keeper plate, said damper plate being provided with posts, having rollers adapted to travel on said rails.

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Witnesses:

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