

Aug. 25, 1936.

L. L. DOLLINGER

2,052,453

VENTILATOR

Filed Aug. 5, 1933

2 Sheets-Sheet 1

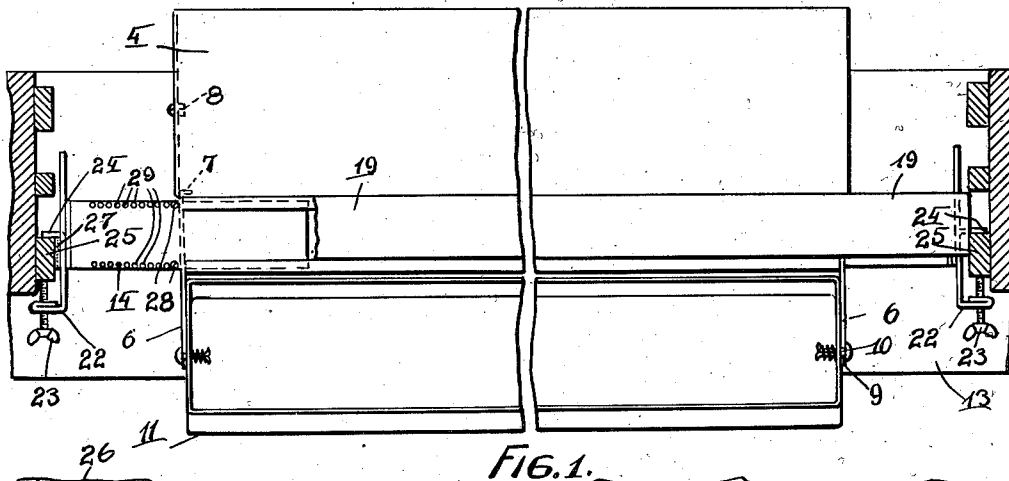


Fig. 1.

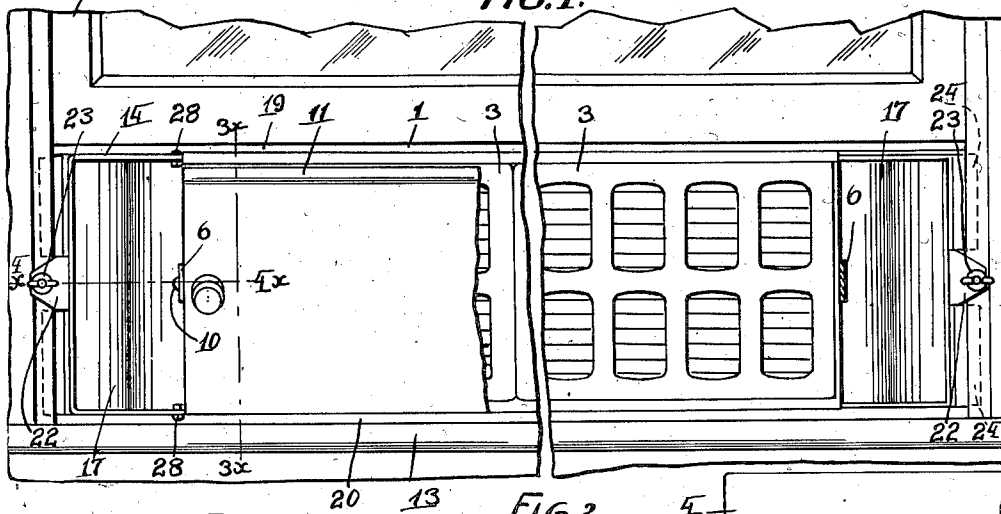


FIG. 2.

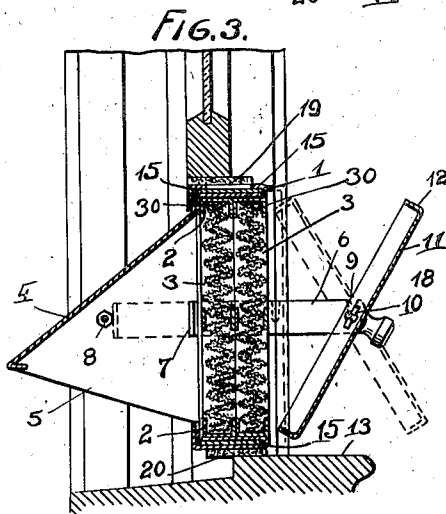


FIG. 3.

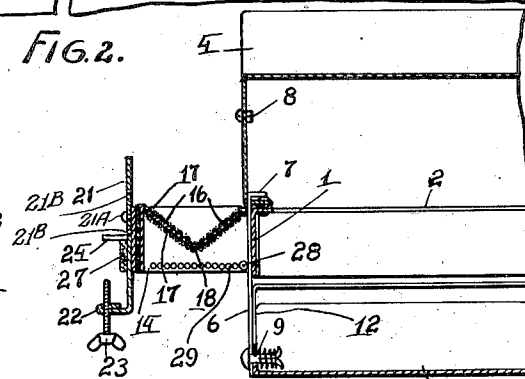


Fig. 4. INVENTOR

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2 Sheets-Sheet 2

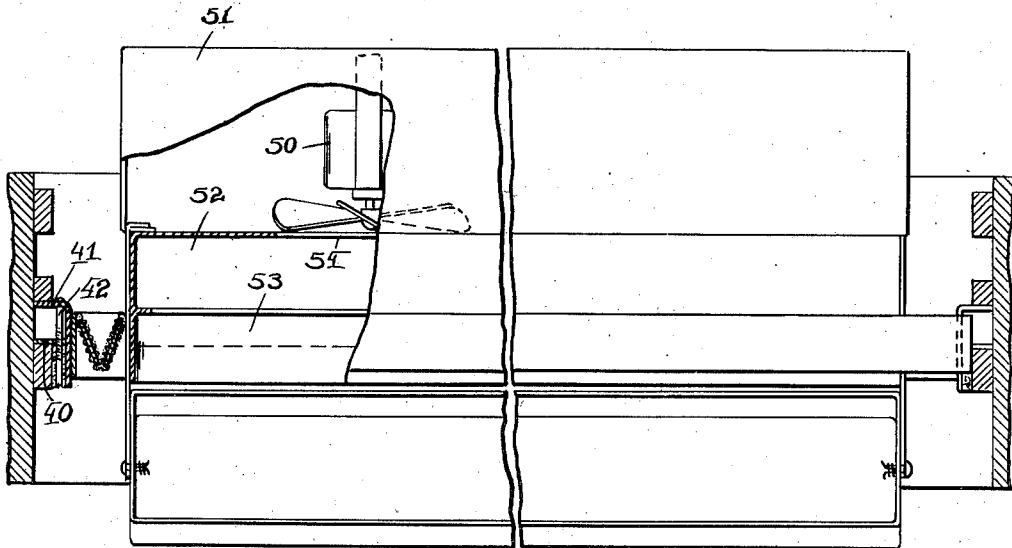


Fig. 5.

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2,052,453

VENTILATOR

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Application August 5, 1933, Serial No. 683,751

6 Claims. (Cl. 98—94)

This invention relates to window ventilators and has for one of its objects to provide a new and improved form of ventilator having an air filter incorporated therein.

Another object of this invention is to make the ventilator sound proof so as to effectively prevent sound from penetrating therethru.

Another object of this invention is to provide the ventilator with a combined cover and deflector with which the entrance of the air current from the ventilator may be regulated.

A further object of this invention is to so construct the mounting of the ventilator that it may be adjusted to various widths of windows and centered in the window opening.

Another object of this invention is to provide adjustable anchoring means for the ventilator.

These and other objects of this invention will become more readily apparent from the detailed description thereof which follows, reference being had to the accompanying drawings in which

Figure 1 is a top plan view of the ventilator and horizontal section of the window frame in which it is mounted.

Figure 2 is a front elevation of the ventilator and window frame partly broken away.

Figure 3 is a vertical sectional view of the ventilator and window frame, the section being taken on the line 3x—3x of Figure 2.

Figure 4 is a horizontal sectional view of one end of the ventilator taken on line 4x—4x of Figure 2.

Figure 5 is a top plan view of a modified form of the ventilator partly broken away.

In the several figures of the drawings like reference numerals indicate like parts.

The ventilator forming the subject matter of my present invention is constructed and adapted to be mounted in a window frame below the window in such a manner that only filtered air is admitted into the room while sound is deadened and kept from penetrating thru the ventilator into the room.

As illustrated in the several figures of the drawings, the ventilator comprises a rectangular casing 1 which is open at the front and back. An inwardly projecting flange 2 surrounds the open back of the ventilator casing and serves as a stop against which the air filter units 3 rest when placed into the ventilator casing. Fastened to the back of the ventilator casing and projecting rearwardly therefrom is the angular storm hood 4 which is open at the bottom to provide the inlet 5 for the ventilator.

On the outside of each end of the ventilator casing in the middle thereof is mounted to slide in any suitable manner a horizontal arm 6, the rear end of which projects into the end of the storm hood 4. A flange 7 bent in from these arms engages the flange 2 at the rear of the ven-

tilator casing when the arms are pulled out and thus serve as stops for limiting the outward movement of the arms. Stops for the inward movement of the arms 6 are provided by the bolts 8 which are fastened into the ends of the storm hood 4.

In the top near the outer end of each of the supporting arms 6 is provided a vertical slot 9. These slots serve as bearings for the spring pressed pivot studs 10 of the front cover 11 of the ventilator. The cover 11 is surrounded by a flange 12 and in this flange at each end of the cover are mounted the pivot studs 10, 10 so as to engage the bearing slots 9 in the supporting arms and permit the cover to swing between them. When it is desired to close the ventilator the cover 11 is pushed against the ventilator casing in a vertical position and in so doing the supporting arms are moved rearwardly into the dotted line position illustrated in Figure 3 in which they support the cover in a vertical position directly in front of the ventilator casing so as to prevent air from passing therethru. To open the ventilator, the cover is pulled from the casing and swung into either the full or dotted line angular position indicated in Figure 3. In this way the air passing thru the ventilator may be directed up or down from the window sill 13 on which the ventilator is supported.

In order to permit the mounting of the ventilator into various size window frames, an extension is provided at each end of the ventilator. Each of these extensions comprises a horizontally positioned U shaped extension frame 14, the free ends of which are mounted to slide in suitable horizontal guides 15, 15 provided at the top and bottom of the ventilator casing 1. Each extension frame is thus adjustable toward and away from the end of the ventilator casing proper. In each of the extension frames is mounted a collapsible or folding partition which consists of a pair of vertical metal plates 16, 16 which are covered at the front and back with a sheet of fabric 17 such as felt so as to join the opposing ends of the metal plates and provide a flexible joint 18 between them. In addition one end of the fabric covering 17 is clamped to the inside end of the extension frame 14 while the other end is clamped to the end of the ventilator casing so as to form flexible joints between the metal plate 16 and the extension frame at one end and the ventilator casing at the other end and permit the partition thus formed to be folded and extended as the extension frame is moved toward or away from the ventilator casing. The top and bottom of the covering 17 of the partition rest against the inside of the top and bottom of the extension frame in order to keep air from passing thru between the partition and the bottom of the frame. If desired the metal parti-

tion plates 16 may be perforated and the covering 17 made up of suitable filtering material in order that air can filter thru the partition in addition to the ventilator proper.

5 The top and bottom of the ventilator casing proper and its extensions on either end of it have the felt sealing strips 19 and 20 attached thereto to provide a seal cushion at the top and bottom of the ventilator.

10 The ventilator is anchored at each end to the window casing by means of a clamp provided at the end of each of the extension frames 14. These clamps are formed by a horizontal member 21 which is adjustably fastened to the end of the
15 extension frame by means of the screw 21A which is adapted to be threaded into the extension frame 14 thru the holes 21B provided in the arm 21. A finage 22 is bent laterally at the forward end thereof. A clamping screw 23 is threaded
20 into this flange and cooperates with a pair of vertical clamping flanges 24, 24 above and below the horizontal member 21 to grip the guide member 25 of the slideway of the lower sash 26. A suitable sealing strip 27 is provided at the end of
25 the extension frames in front of the clamping flanges 24 in order to seal the end of the extension frames against the sides of the window frame when clamped thereto. The guide members 25 of the slideways have various widths and their
30 location varies with relation to the inside of the window frame and it is for this reason that the horizontal member 21 is made adjustable endwise on the end of the extension frames in order
35 to locate the ventilator in the proper position in the window frame opening below the window sash.

After the extension frames have been adjusted to bring the ventilator casing proper centrally of the window they are held in their extended positions by means of bolts 28 which are fastened
40 into the innermost exposed hole of the series of holes 29 provided in the top and bottom of the extension frame. These bolts serve as stops and keep the extensions properly extended for the
45 size window opening in which the ventilator is mounted.

The filtering units used in the ventilator are substantially the same as those illustrated in my prior application Serial No. 639,669, filed October 26, 1932, except that a double layer of the filtering material is used and two of these double
50 layered units are fastened together, one behind the other, as illustrated in section in Figure 3. Two of these built up units 30, 30 are used in the ventilator and placed into the casing end to end
55 as illustrated in Figure 2.

In the modified form of ventilator illustrated in Figure 5, the ventilator frame is fastened into the vertical guideway of the window sash by means of a fixed flange 40 and a movable flange
60 41. The movable flange is provided with a threaded stud 42 which is threaded thru the fixed flange so that on the rotation of this stud, the movable flange 41 is moved toward or away from the fixed flange 40. In mounting the ventilator
65 into the window frame, the two flanges are first brought together for insertion into the guideway and are then moved apart to have the movable flange forcibly engage the opposite side of the guideway.

70 In the modification of the ventilator illustrated in Figure 5, the air is forced therethru by one or more fans 50 which are suitably mounted in the storm hood 51. In order to evenly distribute the

air from the fan or fans in this form of the ventilator, a manifold 52 is provided between the filtering units 53 and the inlets 54 thru which the air is forced from the storm hood thru the filtering units.

I claim:

1. A ventilator comprising a casing having an open front and back, a storm hood overhanging the open back of said casing, a pair of arms mounted to move horizontally in and out of
10 said casing intermediate the top and bottom and a combined cover and deflector pivotally supported between said pair of arms in front of said casing.

2. A ventilator comprising a casing, an extension frame slidably mounted at each end of said casing, a collapsible partition mounted in said extension frames and comprising a pair of rigid members flexibly connected end to end, one of
15 said rigid members being hinged to said casing and the other of said rigid members being hinged to said extension frame, and an air filter removably mounted in said casing.

3. A ventilator comprising a casing, an extension frame slidably mounted to and from each
25 end of said casing, a collapsible partition in each of said extension frames and comprising a pair of rigid members flexibly connected end to end, one of said rigid members being hinged to said casing and the other of said rigid members being
30 hinged to said extension frame and an anchoring clamp on each of said extension frames extending horizontally at the ends thereof.

4. A ventilator comprising a casing, a horizontally U shaped extension frame telescopically
35 mounted at each end of said casing, a collapsible partition located within said extension frames, said extension frames having holes in the top and bottom thereof, stop means engaging said
40 holes to hold said extension frames extended on said casing.

5. A ventilator comprising a casing, a guide channel at the top and bottom of said casing, a horizontally arranged U shaped extension frame telescopically mounted in said guide channels at
45 one end of said casing, a fixed vertical clamping member at the outer end of said extension frame, an arm movable endwise at the outer end of said extension frame at right angles to said fixed vertical
50 clamping member, means for adjustably fastening said arm to the end of said extension frame and a horizontally adjustable clamping member carried by said arm and located in front of and spaced from said vertical clamping member
55 and movable toward and away therefrom.

6. A ventilator comprising a casing having an open front and a restricted opening in the back, a manifold in the back of said casing, a filtering panel mounted in said casing in front of said
60 manifold, a storm hood provided back of said manifold, said restricted opening in the back of said casing leading into said manifold to provide an intake opening leading thereinto for the admission of air and its distribution from said
65 storm hood over the back of said filtering panel and a fan mounted on the outside of said manifold to force air thru said restricted intake opening into said manifold to cause an equal distribution of air to be delivered from said manifold so
70 as to be forced at a uniform pressure thru substantially the entire filtering area of the filtering panel in said casing.

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