May 26, 1931. V. W. I. FREDERICK 1,806,847

WINDOW VENTILATOR

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Fig. 1.

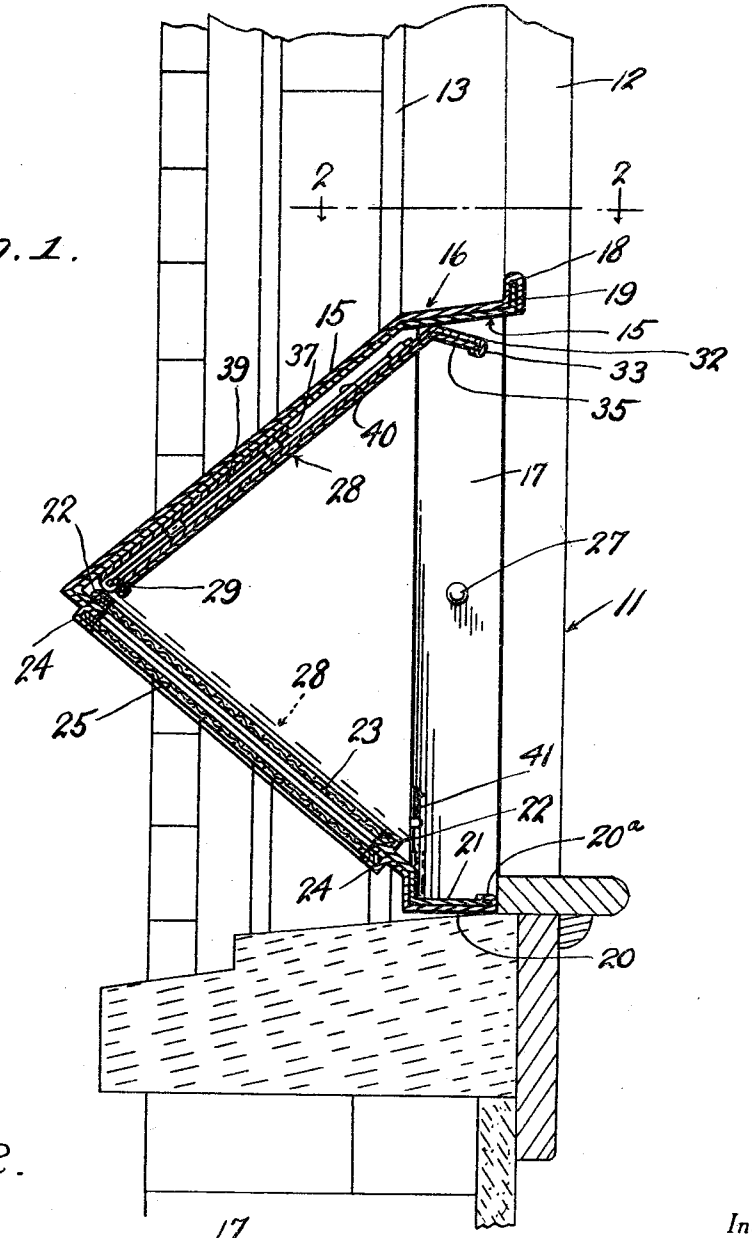


Fig. 2.

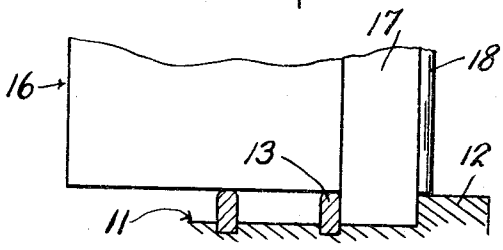


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Fig. 3.

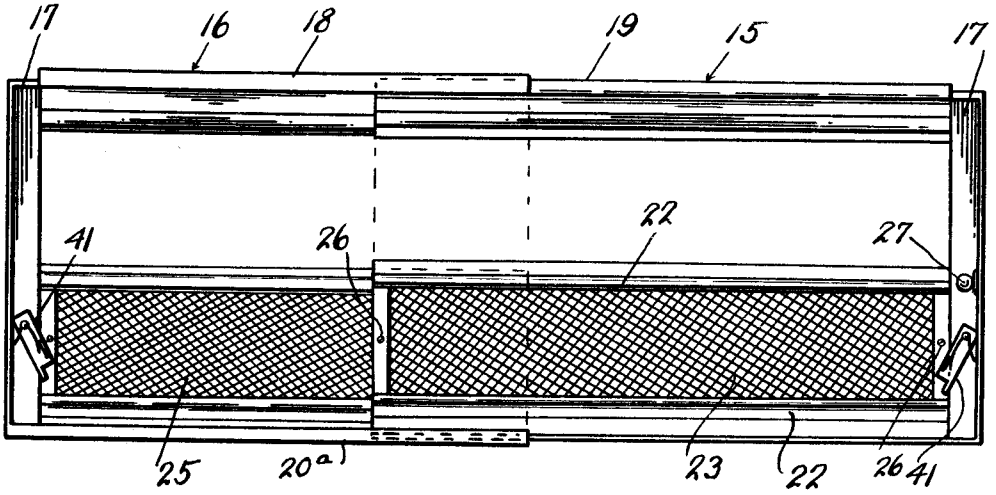


Fig. 4.

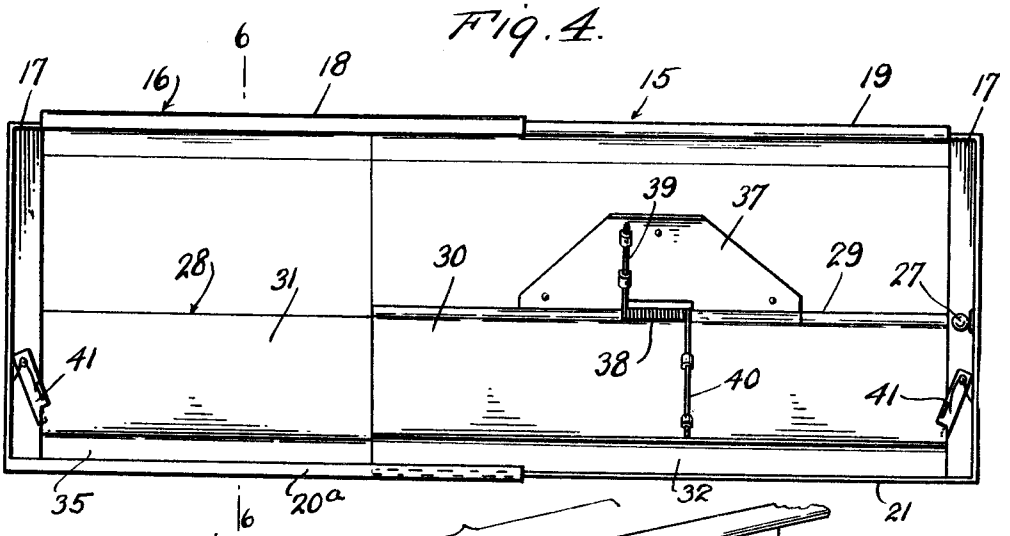


Fig. 7.

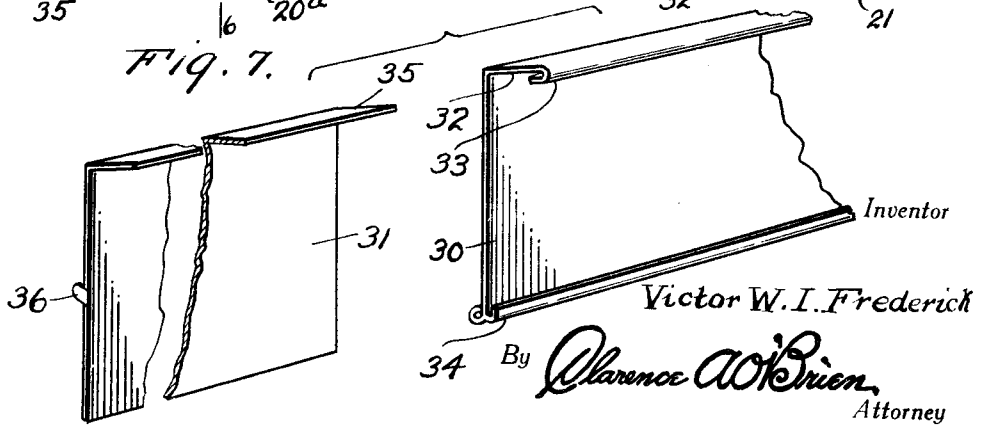


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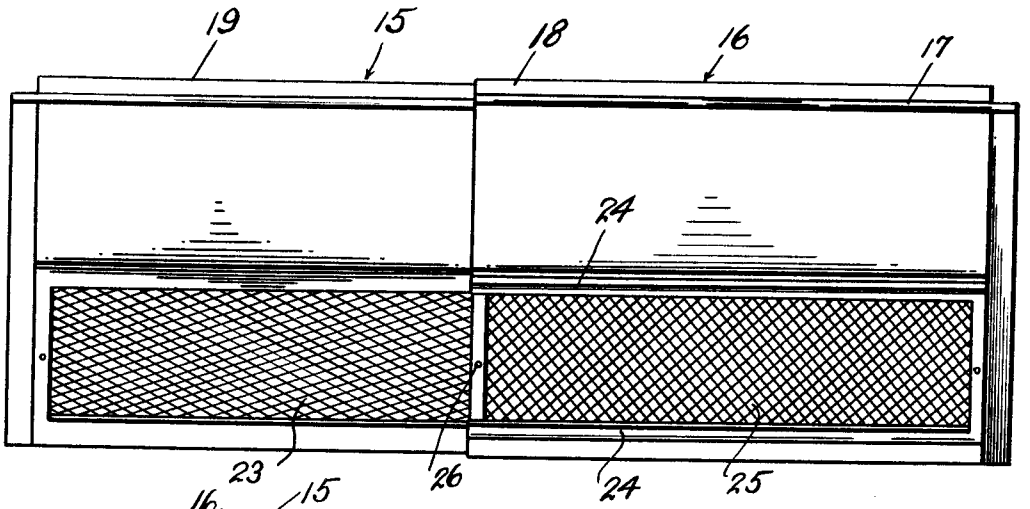
Fig. 5.



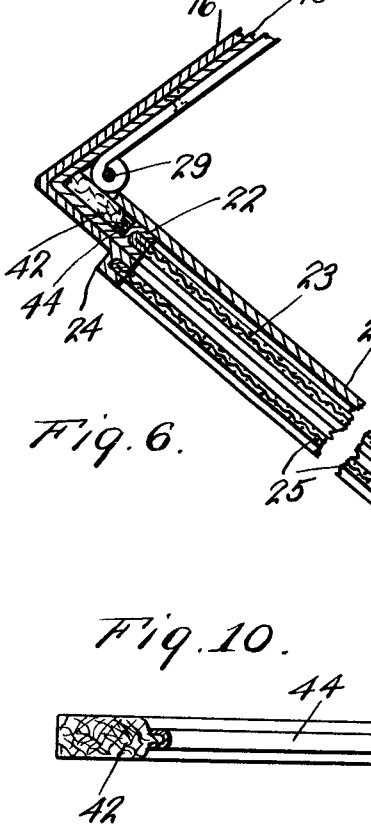




Fig. 6.

Fig. 10.

Fig. 8.

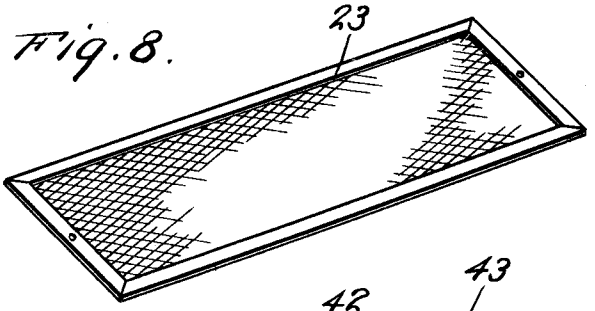
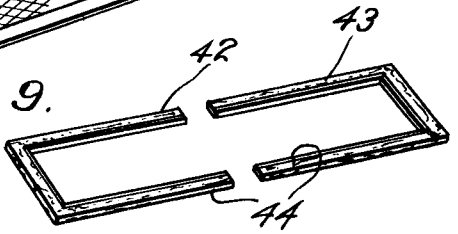



Fig. 9.

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Patented May 26, 1931 1,806,847

# UNITED STATES PATENT OFFICE

VICTOR W. I. FREDERICK, OF BROOKLYN, NEW YORK

## WINDOW VENTILATOR

Application filed August 17, 1929. Serial No. 386,709.

This invention relates to an improved ventilator which is especially, but not necessarily, adapted to be used in association with window structures of the type embodying a bead equipped frame, and upper and lower sliding sashes mounted therein.

My principal aim is to generally improve upon inventions of this class by providing a structure which is characterized by numerous refinements and improvements which cooperate in producing a new composite structure, distinguishable from similar ventilators in that it is comparatively economical to both the manufacturer and the user, susceptible of expeditious installation in the window, and otherwise capable of fulfilling the requirement of a structure of this class in a highly satisfactory manner.

Briefly stated, the improved ventilator herein shown and described comprises a pair of complemental half-sections which are telescopically connected together, whereby to permit the structure to be adjusted to accommodate window frames of varying widths.

More specifically stated, I have evolved and produced a compact and convenient arrangement of parts including a substantially V-shaped casing made up of complemental telescopically connected sections including an imperforate top, a screened bottom, and an internal hingedly mounted cover or valve plate for the screened bottom, the arrangement being such as to permit the casing to be positioned to project exteriorly of the window frame to allow full and free entrance of atmospheric air, while at the same time shedding rain, snow, and the elements in general.

In accordance with the invention this V-shaped casing has its opposite ends provided with vertically disposed channel shaped projections defining attaching or anchoring means which is adapted to be self-sustained between the inner bead on the window frame and the adjacent parting strip on said frame.

A particular advantage is derived from the V-shaped construction in that it allows the screened bottom to be arranged at an outwardly and upwardly inclined angle with respect to the sill, whereby to facilitate unimpeded entrance of the air for efficient ventilating purposes.

A further feature of the construction is the provision of the internal hingedly mounted and adjustable plate serving as a closure for the screened bottom in inclement weather, the same being normally maintained in an open position by automatically operable spring means, and being retained in closed position by a pair of self-engaging spring-pressed retaining clips.

A still further feature is predicated upon the incorporation in the structure of removable screens arranged in confining and retaining tracks and suitably held in place to permit replacement or repair whenever needed.

Moreover, an important advantage is derived from the use of packing felt associated with the screened bottom and adapted to be interposed beneath said bottom and the hingedly mounted closing plate, to secure a substantially weather tight joint when said plate is closed.

Other features and advantages will become more readily apparent from the following description and drawings.

In the drawings:—

Figure 1 is a view showing a fragmentary portion of a window and frame structure with the improved ventilator mounted therein and arranged to project toward the exterior of the frame.

Figure 2 is a fragmentary detail view taken approximately upon the plane of the line 2—2 of Figure 1.

Figure 3 is an inside elevational view of the complete ventilator per se.

Figure 4 is a view like Figure 3 showing the closing plate swung down to closing position over the screened bottom.

Figure 5 is an outside elevational view of the ventilator observing the same in the direction from left to right in Figure 1.

Figure 6 is an exaggerated fragmentary detail section taken approximately on the plane of the line 6—6 of Figure 4.

Figure 7 is a group perspective view of the parts of the closing plate.

Figure 8 is a perspective view of one of the removable screens.

Figure 9 is a perspective view of the packing material or felt.

Figure 10 is a cross-section through one of the sections of the felt packing.

Referring first to Figure 1 it will be observed that the reference character 11 designates an ordinary window frame having the inner bead 12 and the adjacent parting strip 13 defining the usual sliding groove for the lower window sash (not shown).

As before stated, the improved ventilator comprises a substantially V-shaped casing constructed of appropriate metal and the casing itself is composed principally of two substantially duplicate complemental sections 15 and 16, respectively. The apex portion of the casing is adapted to project exteriorly of the window frame as seen in Figure 1 in order to provide an imperforate top and a screened bottom. That portion of the casing which faces the room and which may be designated as the face is formed with a surrounding marginal portion of substantially flat configuration. In other words the top is substantially flat to allow the sash to come down into tight engagement therewith and the bottom is of the same configuration to permit it to rest firmly on the sill as seen in Figure 1. The end portions project outwardly and are of channel shaped cross-section and are distinguished by the reference characters 17 and these being of a width commensurate with the sash groove project into and are received between the bead 12 and the parting strip 13 as shown in Figure 3. It is the portions 17 which serve to sustain the casing rigidly in position without requiring the use of special fastening or retention devices. The section 16 is formed on the face side with a guide channel 18 and a complemental section 15 is formed with an upstanding flange 19 which has interlocking sliding connection therewith. The features 18 and 19 are disposed substantially flush with the inner edges of the bead 12 so that when the window sash comes down, these features project up below the lower edge of the lower rail of the sash forming a substantially wind tight connection or guard. It is also to be observed from Figure 1 that the flattened bottom portion 20 of the section 16 terminates in a guide channed $20^a$ slidably receiving the correspondingly bent flange portion 21 of the section 15 thus joining the two sections slidably together and providing the desired telescoping action to render the casing adjustable to window frames of varying widths. On the interior of the inclined bottom are spaced parallel longitudinally extending tracks 22 receiving a removable screen 23. On the exterior of the section 16 are similar tracks 24 receiving the lower screen 25. These two screens form the so called complete screened bottom which as before stated is located at a substantially acute angle to the window sill 14 to render it susceptible to permitting free entrance of air. The screens are fastened in place by appropriate securing devices indicated at 26 in Figure 3. This permits the screens to be removed and repaired or permits entire new screens to be substituted. The reference character 27 in Figure 1 merely designates a knob which permits the two sections 15 and 16 to be readily slid together or apart for easy adjustment.

The reference character 28 designates generally an internal shutter or closure plate which is hingedly mounted in the apex portion of the casing as indicated generally at 29. This shutter is composed of a pair of complemental plate sections 30 and 31 as seen in Figure 7. The section 3 has an angularly disposed flange on one longitudinal edge as at 32 terminating in a hooked extremity 33. The opposite edge is also formed with a similarly bent hook 34 and thus forming guides for the complemental plate 31. The plate 31 has an angularly bent flange 35 slidably received in the guideway 33. It is also provided at one end with a finger grip 36 to facilitate adjustment of the plate sections to permit the length of the shutter to be adjusted commensurate with the length of the complete casing.

It is obvious from Figure 4 that the hinge means includes a leaf 37 rigidly fastened to the section 15 of the casing on the interior of said section and that this hinged leaf carries the plate 30 and the plate 30 in turn carries the sliding plate 31 thus providing a novel mounting for the shutter. Moreover the reference character 38 designates a coil spring having one end portion 39 anchored on the leaf 37, the other end portion 40 anchored on the plate 30 in any suitable manner. The purpose of this spring arrangement is to normally maintain the shutter 28 in the open position as seen in Figure 1. The shutter can, however, be swung down to the closed position seen in Figure 4 at which time the spring-pressed pivotally mounted latches 41 at the ends of the casing serve to automatically engage the plates 30 and 31 to hold the shutter down in screen closing position. It is obvious that by pushing the latches 41 out, the shutter will automatically swing up to open position, through the action of the spring 38. In this connection it is to be stated that the shutter is closed in the inclement weather, and for winter use it has been found advisable to employ a packing means between the shutter and the screen. For instance, the packing means is illustrated better in Figure 9 and comprises a pair of U-shaped felt members 42 and 43 having metallic reinforcing runners 44 as seen in Figure 10 to maintain the desired rigidity.

These are furnished with the device as manufactured and may be cut off with scissors to fit the desired length of the casing as it is adjusted. Then they are simply laid around the marginal portions of the screen to occupy the position seen in Fig. 6, when the cover plate is closed.

Careful consideration of the description in connection with the drawings, will enable persons skilled in the art to which the invention relates to obtain a clear understanding of the construction, the assembly, the method of application, and the features and advantages of this improved ventilator.

Therefore, a more lengthy description is regarded as unnecessary. Minor changes in shape, size, materials, and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice if desired.

Having thus described my invention, what I claim as new is:—

1. A ventilator of the class described comprising a longitudinally extensible casing of V-shaped configuration, including a downwardly and outwardly inclined imperforate top, and an upwardly and outwardly inclined screened bottom, a shutter plate hingedly mounted in the apex portion of the casing for covering said screened bottom, said shutter being composed of extensible sections to permit the shutter to be adjusted commensurate with the length of the casing, spring means associated with the shutter and top of the casing for normally maintaining the shutter in an elevated open position, together with hingedly mounted retaining latches mounted within the bottom portion of the casing and on the ends of said casing for co-operation with the end portions of the shutter for holding the shutter down over the screened bottom while in a closing position.

2. In a ventilator of the class described, a casing of V-shaped form composed of a pair of telescoping complemental half sections, said sections having a substantially horizontal flat marginal portion adjacent the open front portion, and an upstanding sash engaging flange associated with said flattened portion and including a channel on one section slidably receiving a companion flange on the remaining section, said sash flange and flattened portion being adapted for co-operation with the lower rail of the adjacent window sash, the end walls of said sections being formed with outwardly pressed channel shaped attaching ribs, and the bottom portions of said sections being fashioned along the front edge to provide a window sill engaging abutment.

In testimony whereof I affix my signature.

VICTOR W. I. FREDERICK.