No. 848,050. PATENTED MAR. 26, 1907.

W. D. ROBINSON.

VENTILATOR.

APPLICATION FILED MAY 9, 1906.

Fig. 1.

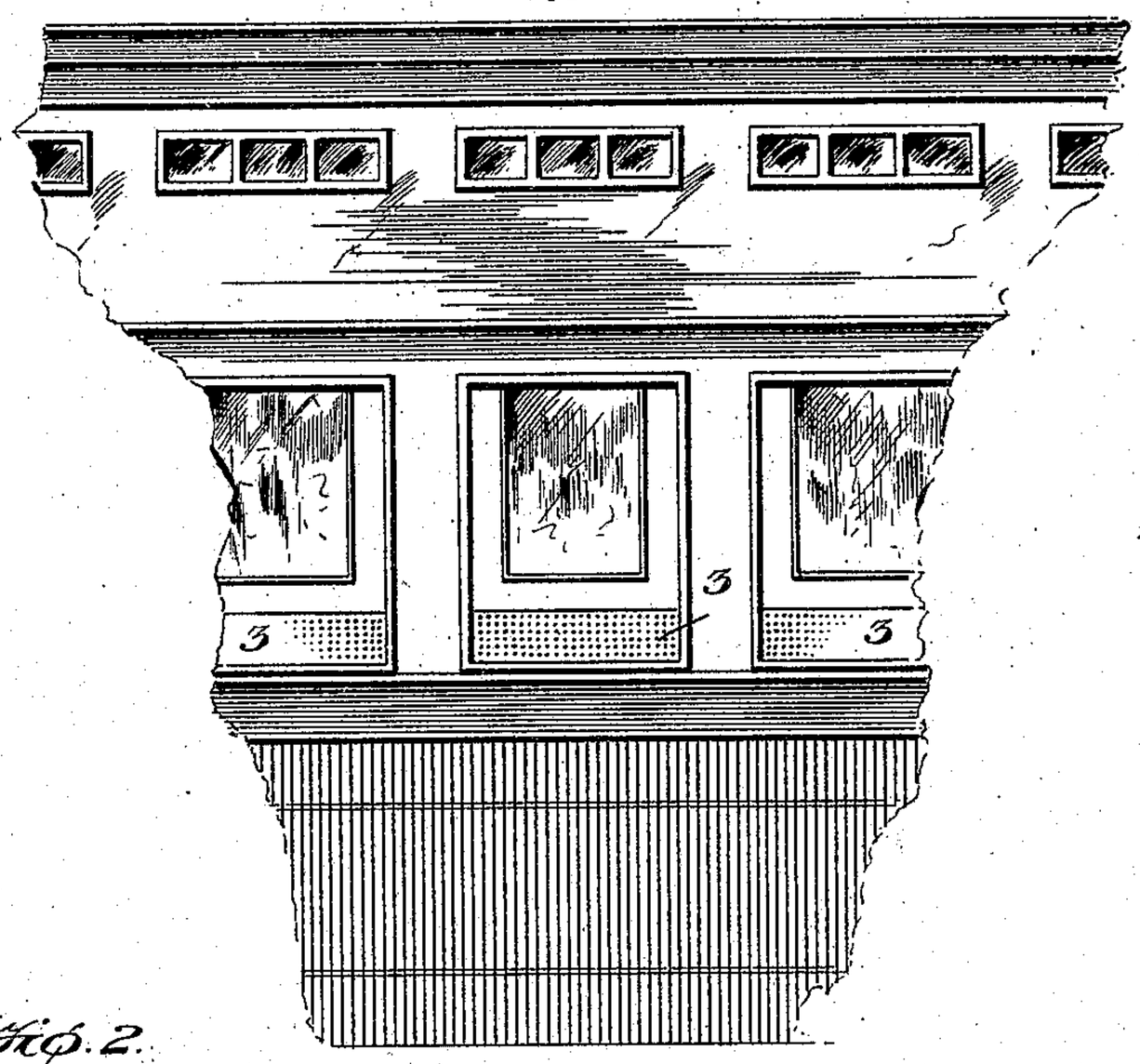
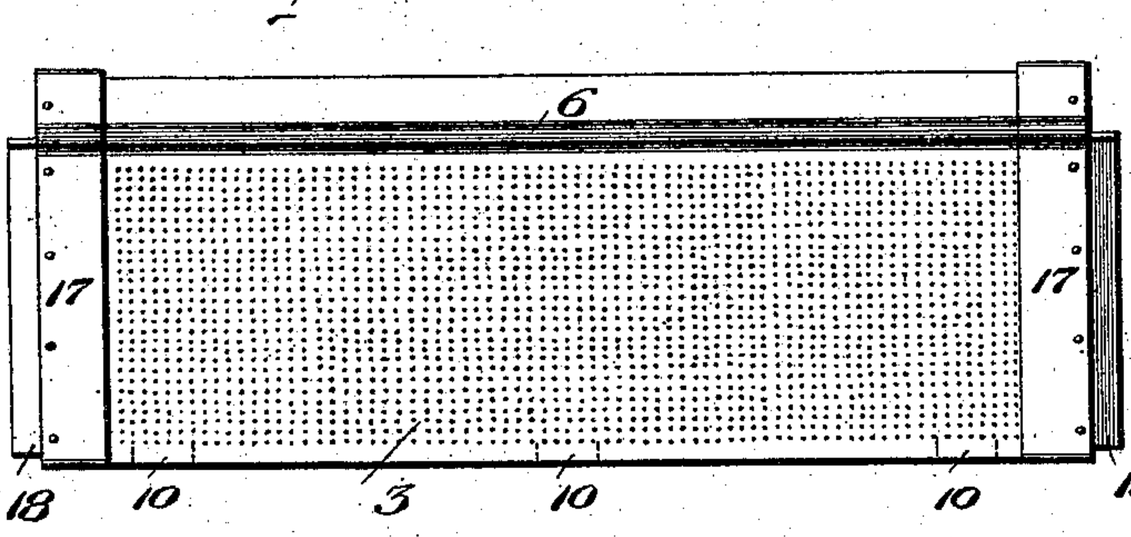


Fig. 2.



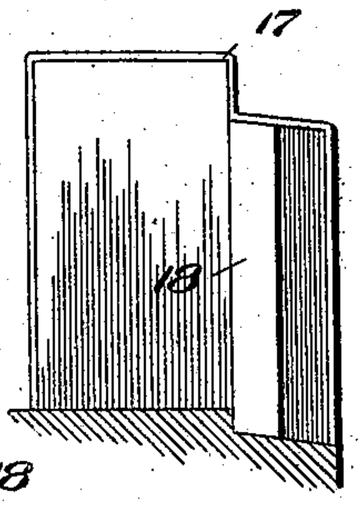
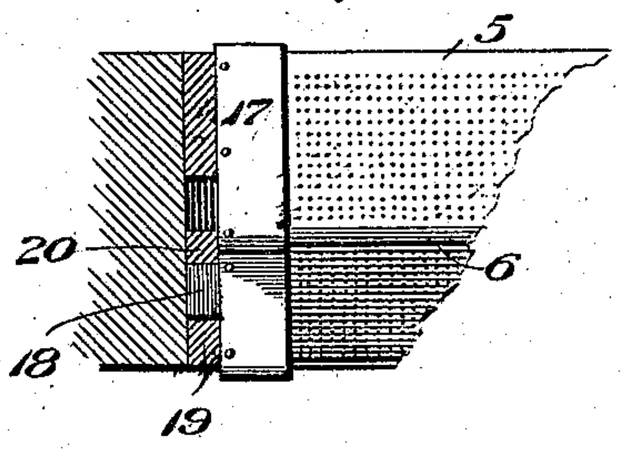


Fig. 3.

Fig. 4.



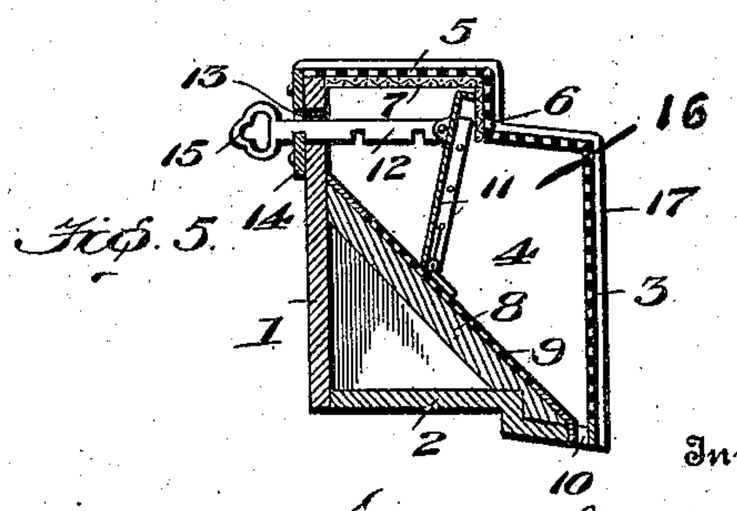


Fig. 5.

Inventor

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UNITED STATES PATENT OFFICE.

WILLIAM DUNCAN ROBINSON, OF TRAVERSE CITY, MICHIGAN.

VENTILATOR.

No. 848,050. Specification of Letters Patent. Patented March 26, 1907.

Application filed May 9, 1906. Serial No. 315,944.

To all whom it may concern:

Be it known that I, WILLIAM DUNCAN ROBINSON, a citizen of the United States, residing at Traverse City, in the county of Grand Traverse and State of Michigan, have invented certain new and useful Improvements in Ventilators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to ventilators for use in windows of passenger-cars, although the same is also adapted for use in any forms of windows where a sliding sash is employed.

The object of the invention is to provide a ventilator which is so constructed as to permit fresh air to readily pass therethrough, the quantity being readily regulated by means of a novel device provided for that purpose.

A still further object is to provide means whereby dust and other objectionable particles may be prevented from passing into the car or room with the fresh air.

A still further object is to provide means whereby accumulations within the ventilator may be automatically discharged therefrom without the necessity of removing the device.

With the above and other objects in view the invention consists of a casing which is shaped so as to fit snugly upon the sill of a window-frame, and the upper portion thereof is shaped so as to permit a sash to contact therewith and partly overlap it. The outer wall of the device is formed of metallic fabric or perforated metal, and the upper wall of the device is likewise constructed so that air is permitted to pass through the outer wall and upward through the top of the ventilator and into the car or room. A damper is movably mounted within the ventilator in such a manner that the quantity of air passing therethrough may be easily regulated by a person within the car. Means are employed within the ventilator for preventing moisture from accumulating therein, said means also serving to retard the passage of dust and other foreign particles through the ventilator.

The invention also consists in further novel construction and combination of parts hereinafter more fully described and claimed.

In the accompanying drawings I have shown the preferred form of my invention, and in said drawings Figure 1 is a side elevation of a portion of a car, showing my improved ventilator in position. Fig. 2 is an outside elevation of the ventilator. Fig 3 is an end view thereof. Fig. 4 is a horizontal section through one side of the window-frame and showing one end of the ventilator in plan, and Fig. 5 is a central vertical section through the device.

Referring to the figures by numerals of reference, 1 is a casing formed of any suitable material, the bottom 2 thereof being so shaped as to fit snugly upon the sill of a window-frame. The outer wall 3 of the ventilator is formed, preferably, of a sheet of perforated metal, which is suitably secured to end blocks 4. The top 5 is similarly constructed and has a recess 6 along its front edge, which is so shaped and disposed as to receive the lower rail of the sash after the ventilator has been placed in position upon the sill. In addition to the perforated metal used in the formation of the top 5 I also provide a lining 7 of fine-wire fabric, which serves to further retard the passage of dust, &c., through the ventilator.

Disposed longitudinally within the casing 1 is an inclined false bottom 8, which extends downward from the inner wall of the casing to the forward portion of the bottom 2, and this false bottom is covered by a sheet 9, of perforated metal. Disposed at the lower edge of the inclined false bottom 8 are a suitable number of outlet-openings 10, and it is therefore obvious that any solid particles which may be deposited upon the bottom 8 will slide downward thereon by gravity and will be discharged through the openings 10. Hinged upon the bottom 8 and extending longitudinally thereon is a damper 11, which when in its normal position abuts against the downwardly-extending portion of the top 5, thereby absolutely closing communication between the openings in the wall 3 and those in the top 5.

A notched strip 12 is pivoted to the damper 11 adjacent the center of the upper edge thereof and is slidably mounted within an opening 13, formed in the inner wall of the casing 1. A keeper in the form of an apertured plate 14 is secured to the inner wall of the casing, and one wall of the aperture therein is adapted to project into any of the notches in strip 12, so that the damper can be held in any position to which it may be adjusted. The outer end of the strip 12 is provided with a suitable handle 15, whereby the same may be readily manipulated.

In order that the ventilator may be easily fastened within a window-frame, I provide end caps or heads 16, having metallic strips 17, secured upon the edges thereof, which are adapted to fit over the ends of the ventilator, as shown particularly in Figs. 2 and 4, and each of these heads has a vertically-disposed bead 18 thereon, which is adapted to fit between the bead-strip 19 and parting-strip 20 of the window-frame, as shown in Fig. 4.

In using the device herein described the same is placed upon the sill of a window-frame so as to fit snugly thereon. The heads or caps 16 are thus placed with their beads 18 in proper position between the bead and parting-strips 19 and 20, respectively, after which said heads are slid downward between the ventilator and the window-frame until the metallic retaining-strips 17 assume positions upon the ends of the ventilator. The entire device is thus held securely in place and cannot be removed except by first raising one or both of the heads 16. The sash is then lowered, so as to assume a position within the recessed portion 6 of top 5. The ventilator is then ready to be used. It is obvious that when the damper 11 is in the position shown in Fig. 5 it becomes impossible for air to enter through the openings in wall 3 and pass upward through the openings in the top 5. Should it be desirable, however, to cause the passage of air through the ventilator, it is merely necessary to swing the damper 11 toward the inner wall of casing 1 by properly manipulating the strip 12. Air will then enter the apertures in wall 3 and will flow past the damper through the top 5. Should any dust be carried into the ventilator by the fresh air, it will first come into contact with the inclined false bottom 8, and the apertured metallic covering thereon will serve to retard its upward passage. However, should any of the dust pass the damper 11 it will be retained by the fine screen 7, which is utilized as a lining for the top 5. The dust, &c., accumulating within the ventilator will descend by gravity to the openings 10, from which they will be discharged. It will be seen that this ventilator is very simple in construction and can be readily placed in position.

In order to clean the ventilator, it does not become necessary to remove any of the parts. Moreover, it is impossible for moisture to pass through the ventilator because of the inclined false bottom 8.

What I claim is—

1. In a ventilator the combination with a casing having an apertured outer wall and top constituting an inlet and an outlet respectively; of an inclined bottom within the casing having outlets at its lower edge, said bottom having an irregular surface, and means mounted upon the bottom for controlling communication between the inlet and outlet walls.

2. In a ventilator the combination with a casing having an apertured outer wall and top constituting an inlet and an outlet respectively; of an inclined bottom within the casing having outlets at its lower edge, said bottom having an irregular surface, and a damper movably mounted upon the bottom and adapted to control communication between the inlet and outlet walls.

3. In a ventilator the combination with a casing having an apertured outer wall and an apertured top constituting an inlet and an outlet respectively, of an inclined bottom within the casing having outlet-openings at its lower edge said bottom being provided with an irregular surface, a damper hinged upon the bottom and adapted to control communication between the inlet and outlet and manipulating means connnected to the damper and extending from the casing.

4. In a ventilator the combination with a casing having an apertured outer wall and top constituting an inlet and an outlet respectively; of means within the casing for controlling communication between said inlet and outlet and heads detachably mounted upon the ends of the casing and adapted to engage the sides of a window-frame.

5. In a ventilator the combination with a casing having an apertured outer wall and top constituting an inlet and an outlet respectively; of means interposed between said inlet and outlet for controlling communication therebetween, a head slidably and detachably mounted upon each end of the casing and adapted to overlap said end and means upon each head for engaging the sides of a window-frame.

6. In a ventilator the combination with a casing having an apertured outer wall and top constituting an inlet and an outlet respectively; of a screen-lining for said top, an inclined bottom within the casing having outlet-openings at its lower edge, said bottom provided with an irregular upper surface, a damper hinged upon the bottom and extending longitudinally of the casing, means for manipulating the damper to control communication between the inlet and outlet, heads slidably mounted upon and overlapping the ends of the casing and means on said heads for engaging the sides of a window-frame.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM DUNCAN ROBINSON.

Witnesses:
JOHN J. TWEDELLE,
PEARL THACKER.