

No. 815,434.

PATENTED MAR. 20, 1906.

M. KINZEY.
VENTILATOR.

APPLICATION FILED MAY 10, 1905.

Fig. 1.

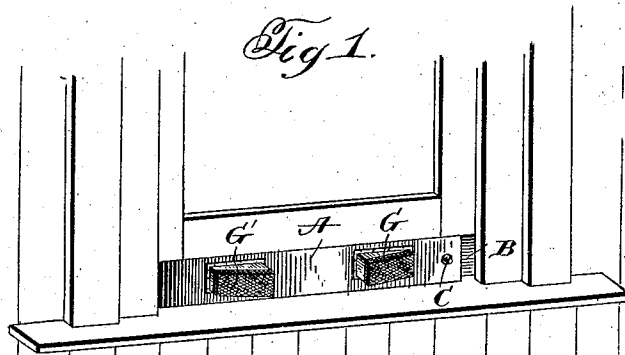


Fig. 2.

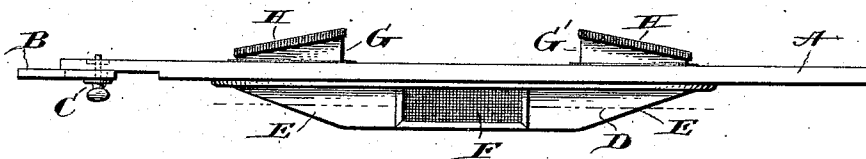


Fig. 3.

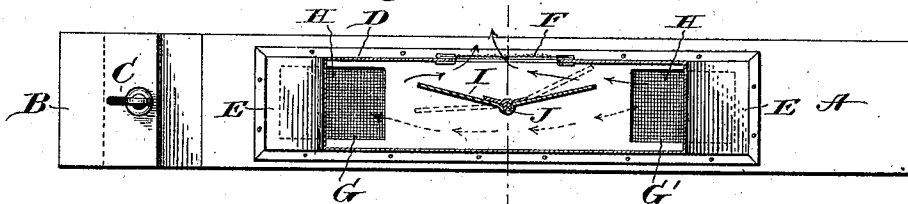
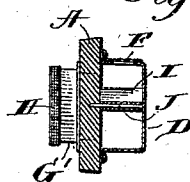


Fig. 4.



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UNITED STATES PATENT OFFICE.

MORTIMER KINZEY, OF NEWARK, NEW JERSEY, ASSIGNOR TO JOHN E. HELM, OF NEWARK, NEW JERSEY.

VENTILATOR.

No. 815,434.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed May 10, 1905. Serial No. 259,720.

To all whom it may concern:

Be it known that I, MORTIMER KINZEY, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Ventilators, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in ventilators, and has for its primary object the provision of a device of this character which will be adapted to fit windows as ordinarily installed and of various sizes and also be susceptible of efficient use either in fixed structures, such as buildings, or moving structures, such as passenger-cars.

With the foregoing object in view a practical embodiment of the invention comprises a supporting-frame, a casing carried thereby, preferably arranged on the inside of the frame and having an exit-opening at its top, oppositely-disposed inlet-openings facing outwardly from the frame, and a balanced horizontally-disposed movable deflector in the casing beneath the exit-opening thereof and intermediate the oppositely-disposed inlet-openings, said deflector being balanced, so as to be highly sensitive to any gust or perceptible air-current and to close toward the incoming air to prevent direct escape thereof through the exit-opening on the interior of the device, such movement causing said air to pass through the casing and out of the opposite opening, thereby creating a suction or opposite draft from the room or car. Under normal conditions—as, for instance, when a car is at a standstill, and in the case of a house when there is no perceptible air-current without—the deflector will assume its normal or true horizontal position to permit a light comfortable ingress of air through both of the inlet-openings into the casing and thence through the exit-opening of said casing into the room or car.

The foregoing, as well as other novel details in the construction and arrangement of the parts of the ventilator, will be apparent from the detailed description hereinafter given when read in connection with the accompanying drawings, forming part hereof, wherein a convenient embodiment of the invention is illustrated.

In the drawings, Figure 1 is a perspective view of a fragmentary portion of an ordinary passenger-coach, showing the ventilator applied to one of the windows thereof. Fig. 2 is a top plan view of the ventilator removed. Fig. 3 is a vertical sectional view of the same, showing the movable deflector in its balanced position and also showing in dotted lines the position of said deflector when subjected to the influence of a current of air flowing in the direction indicated by the arrow, and Fig. 4 is a cross-section of Fig. 3.

Referring more specifically to the drawings, wherein like reference characters refer to corresponding parts in the several views, A designates a convenient supporting-frame, which may be readily formed of wood or any other material suitable to the conditions attending the use for which it is provided, said frame having an extensible section B at one end adjustable through the medium of a slot-and-screw connection C, whereby the frame may be adjusted with respect to its length to fit window-casings of various widths within a given range.

On the inside of the frame I mount a casing D, preferably formed of metal of a style and color to agree with the surroundings attending its use, the ends of said casing inwardly toward each other, as at E. The top wall of this casing is provided with an opening to afford ready passage of air therethrough into a room or the like, said opening being screened, as represented at F.

G G' are box-like inlets projecting outwardly slightly beyond the outer surface of the frame A and communicating at their inner ends with opposite ends of the casing, these inlets being also preferably directly opposite the inclined walls of the casing, whereby the air admitted through the inlet will be deflected inwardly and longitudinally of the casing by said inclined walls. The outer ends of the box-like inlets just referred to are screened, as at H, and are each inclined inwardly and toward the end of the device at which it is located, whereby they face in opposite directions, as clearly shown in Figs. 3 and 4.

Within the casing, beneath the opening constituting the exit therefrom and also intermediate the inlet-openings G G', a pivoted

deflector I is supported upon the pivot J, the pivot being centrally arranged and the opposite ends of the deflector being balanced, whereby its normal position is in a horizontal plane and longitudinally of the casing. As shown, this deflector is of somewhat angular formation, the ends thereof being turned upwardly toward the top of the casing for a purpose as will presently appear.

The position of the parts being assumed to be that last above defined, when there is no perceptible air-current on the outside both of the inlets G G' may admit to an agreeable extent air into the casing, from which latter it will escape through its exit-opening into the room or car. When, however, there is a sudden gust of wind or a perceptible current of air without the device, the same will enter the inlet-opening G or G', facing in the direction opposite to the direction of flow of the air, and owing to the impingment of the air upon the nearest upturned end of the deflector the same will be rocked into the position indicated in Fig. 3, whereby to close the exit-opening of the casing against said air-current, thereby compelling the same to pass on through the casing and out of the opposite opening G or G', as the case may be, the latter under these conditions serving as an exit-opening, as is obvious, with the resultant effect that a vacuum for outdraft from the room through the casing is secured. Of course when the ventilator is employed on moving vehicles, such as railway passenger-cars, the deflector occupies one of its shifted positions continuously during the movement of the train and the device operates as an exhaust. However, when the train is at a standstill the operation is just the same as when the ventilator is used in a fixed structure.

It is to be understood that the invention is susceptible of other embodiments than that disclosed herein and also that the form of device shown may be altered and changed without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a ventilator of the character described, a casing having closed ends and a pair of oppositely-disposed inlet-openings, and an exit-opening, the ends of said casing being inclined toward the outlet-opening, and the inlet-openings being opposite and at an angle to said inclined ends whereby to deflect the air inwardly, and a movable deflector in said casing intermediate said inlet-openings.

2. In a ventilator of the character described, a casing having closed ends an inlet-opening at each end, and an exit-opening, the end walls of said casing being inclined toward

the exit-opening, and the inlet-openings being opposite and at an angle to said inclined end walls.

3. In a ventilator of the character described, a supporting-frame, a casing secured to one side of said frame, said casing having an exit-opening, a balanced deflector mounted within the casing, and oppositely-disposed box-like inlets mounted upon the other side of the frame and communicating therethrough with the interior of the casing.

4. In a ventilator of the character described, a supporting-frame, a casing secured to one side of said frame, said casing having closed ends and also having an exit-opening, a balanced deflector mounted within the casing, and oppositely-disposed box-like inlets mounted upon the other side of the frame and communicating therethrough with the interior of the casing, the end walls of the casing directly opposite the inlets being inclined toward the exit-opening of said casing.

5. In a ventilator of the character described, a casing having closed ends and a pair of oppositely-disposed inlet-openings, and an exit-opening, the ends of said casing being inclined toward the outlet-opening, and the inlet-openings being opposite and at an angle to said inclined ends whereby to deflect the air inwardly, and a movable balanced deflector in said casing intermediate said inlet-openings.

6. In a ventilator of the character described, a casing having a pair of box-like inlets, arranged at an angle to the major axis of the casing and facing in opposite directions toward the ends of the ventilator, and an exit-opening, and a movable deflector in said casing intermediate said inlet-openings.

7. In a ventilator of the character described, a supporting-frame, a casing secured to one side of said frame, said casing having an exit-opening, a movable deflector mounted within the casing, and oppositely-disposed box-like inlets mounted upon the other side of the frame and communicating therethrough with the interior of the casing, the ends of said box-like inlets facing in opposite directions toward the ends of the ventilator.

8. In a ventilator of the character described, a supporting-frame, a casing secured to one side of said frame, said casing having closed ends and also having an exit-opening, a movable deflector mounted within the casing, and oppositely-disposed box-like inlets mounted upon the other side of the frame and communicating therethrough with the interior of the casing, the end walls of the casing directly opposite the inlets being inclined toward the exit-opening of said casing, and the ends of said box-like inlets facing in opposite directions toward the ends of the ventilator.

9. In a ventilator of the character de-

scribed, a supporting-frame, a casing secured to one side of said frame, said casing having an exit-opening, a movable deflector mounted within the casing, and oppositely-disposed box-like inlets mounted upon the other side of the frame and communicating there-through with the interior of the casing.

In testimony whereof I affix my signature in presence of two witnesses.

MORTIMER KINZEY.

Witnesses:

THOS. R. HEATH,
JOS. H. MILANS.