

D. O. DAVIS.
WINDOW VENTILATOR.
APPLICATION FILED FEB. 5, 1909.

937,205.

Patented Oct. 19, 1909.

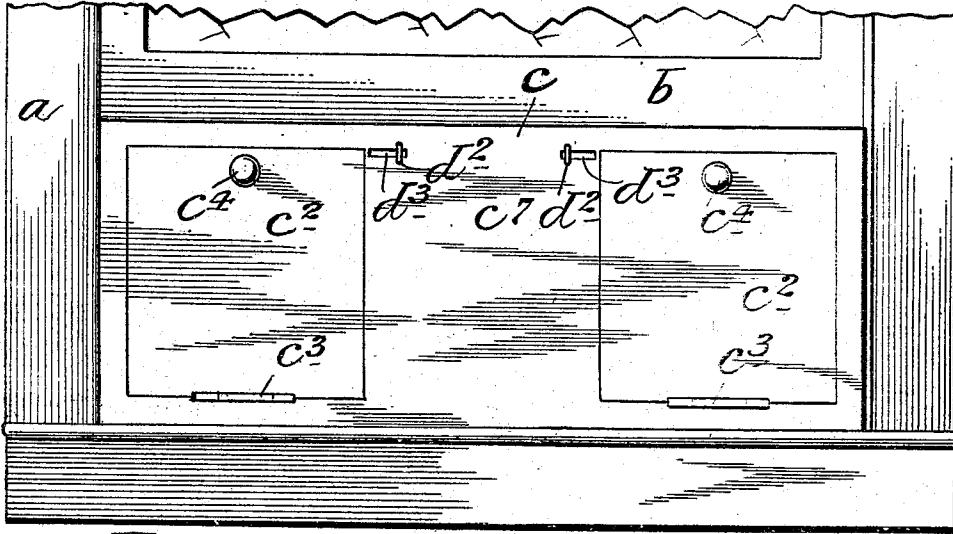


Fig. 1.

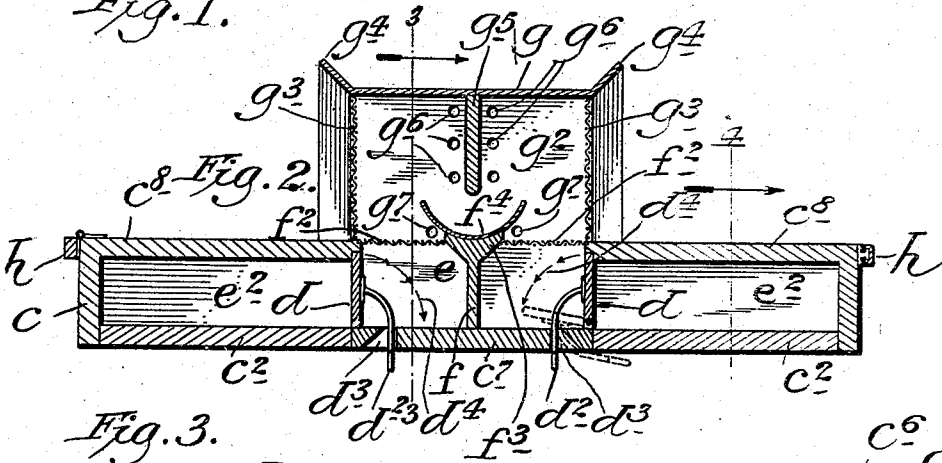


Fig. 2.

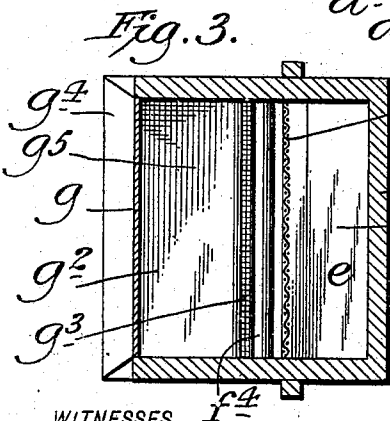


Fig. 3.

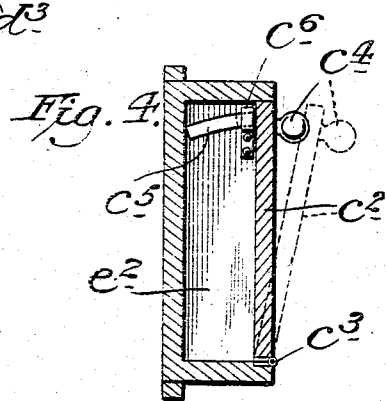


Fig. 4.

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DAVID O. DAVIS, OF NEW YORK, N. Y.

WINDOW-VENTILATOR.

937,205.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed February 5, 1909. Serial No. 476,231.

To all whom it may concern:

Be it known that I, DAVID O. DAVIS, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Window-Ventilators, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to ventilators for use in windows, and the object thereof is to provide an improved device of this class particularly designed for use in windows of railway cars, but which may be used wherever such devices are applicable; a further object being to provide a ventilator of the class specified by means of which a freer circulation of air into and from a car is permitted than by an ordinary screen, and which may be easily closed whenever desired; a further object being to provide a ventilator of the class specified by means of which unnecessary drafts may be controlled or prevented, and by means of which air may be permitted to circulate through one part of the ventilator while excluding it from another, and which will also permit of the ejection of air from within the car; and with these and other objects in view the invention consists of a ventilator of the class specified constructed as hereinafter described and claimed.

The invention which forms a basis of this application is an improvement on that described and claimed in U. S. Letters Patent #706,905 granted to me Aug. 12, 1902, and is fully disclosed in the following specification of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which;—

Figure 1 is an inside view of the bottom portion of a window and showing my improved ventilator placed beneath the bottom sash, Fig. 2 a horizontal section of the ventilator detached, Fig. 3 a transverse vertical section on the line 3—3 of Fig. 2, and;—Fig. 4 a transverse vertical section on the line 4—4 of Fig. 2.

In the drawing forming part of this speci-

fication, I have shown at *a* the bottom portion of a window frame and at *b* the bottom portion of a bottom sash mounted therein, and in the practice of my invention I provide a ventilator comprising an oblong casing *c*, the opposite end portions of which are provided with front or inner doors *c*² which are hinged at the bottom as shown at *c*³, and said doors are provided at or near the top thereof with knobs or handles *c*⁴ and with inwardly directed segmental arms *c*⁵ movable through keepers *c*⁶ secured to the end walls of the casing *c*, and by means of this construction the doors *c*² may be opened at the top and held in any desired position, the parts *c*⁵ and *c*⁶ being so constructed as to permit of this operation.

The central portion of the casing *c* is provided with a stationary inner or front wall *c*⁷, and between the end portions thereof and the back wall *c*⁸ of the casing *c* are placed doors *d* which are hinged to the front wall *c*⁷, and which are provided with curved handles *d*² which pass through slots or apertures *d*³ in the central front wall *c*⁷, and by means of which the doors *d*² may be swung inwardly as indicated by the arrows *d*⁴ in Fig. 2, and said doors divide the box or casing *c* into a central compartment *e* and end compartments *e*² and by means of the said doors the said compartments may be separated or thrown into communication as may be desired.

The central compartment *e* is provided with a central transverse partition *f*, and at the back of said compartment is a screen *f*² divided into separate parts by the partition *f*, and rearwardly of the central compartment *e* and of the screen *f*² is a supplemental outer casing *g* which is connected with the casing *c*, and the length of which is substantially the same as the central compartment *e*, and the casing *g* forms a chamber *g*² at the ends of which are placed screens *g*³, and the ends of the casing *g* are also preferably provided with flaring or outwardly directed end wings or deflectors *g*⁴ at the outer side and at the top and bottom thereof. The casing *g* is also provided in the rear portion thereof with a forwardly ranging partial partition *g*⁵ which extends about two-thirds of the way across said casing and partially

divides the chamber g^2 into separate compartments, each of which is provided in the bottom thereof with holes or apertures g^6 which are designed to permit of the escape
 5 of rain or snow, and any other substances that may collect in the casing g , and the partition f is provided at its rear edge with a thickened portion f^3 to which is secured a concavo-convex deflector f^4 , the concave surface of which is directed outwardly or rearwardly, and the bottom of the casing g is provided between the end portions of the deflector f^4 and the screen f^2 with holes or apertures g^7 similar to the holes or aper-
 10 tures g^6 and for a similar purpose.

In practice my improved ventilator is placed in the bottom of the window frame, and the ends thereof fit in the grooves or spaces in which the sash b is movable and
 20 in order to enable the ventilator to be easily inserted into position the end portions of the casing c are provided with strips or cleats h , one or both of which are hinged as shown in Fig. 2.

By hinging the doors c^2 at the bottom so that they may be opened at the top, I provide means whereby air drawn in or forced into the chambers c^2 may be discharged upwardly into the car or compartment within
 30 the window, and thus prevent the discharge of air directly and horizontally into said car or compartment, and when my improved ventilator is placed in the window of a car, the movement of the car will cause the air to pass in through one of the screens g^3 and a portion of this air will be deflected into the corresponding part of the chamber e from which it will pass into the corresponding chamber e^2 and out into the car if the
 40 door c^2 of said chamber is open at the top; and the corresponding door d also open, and in this operation, if the opposite door d is open, the air will be drawn out through the other chamber e^2 , and will pass out through
 45 the corresponding screen g^3 , and in this way a forced draft is provided, this last operation being accomplished by reason of the fact that a part of the air which enters one end of the supplemental casing g passes
 50 around the partition g^5 in said chamber and out through the opposite end of said casing thus creating a vacuum in one end portion of the central chamber e .

The operation, as will be understood, is
 55 controlled by the doors d , and the fact that the central chamber e is divided, and the doors d , as will be understood, may be controlled at all times by means of the handles d^2 or any other suitable devices provided
 60 for that purpose.

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

1. A ventilator of the class specified com-

prising a main oblong casing provided with
 65 front, back and end walls, the central portion of the front wall being stationary and the side portions thereof being hinged at the bottom to form doors adapted to be
 70 opened at the top, said casing being divided into a central compartment and two side compartments by doors hinged at the ends of the central stationary front wall, the central
 75 compartment being divided centrally by a transverse partition, and the back wall of said compartment consisting of a screen, a supplemental casing secured centrally to the back of the main casing and inclosing said
 80 screen, the end portions of said supplemental casing being open, and provided with screens, and means for operating said doors.

2. A ventilator of the class specified comprising a main oblong casing provided with
 85 front, back and end walls, the central portion of the front wall being stationary and the side portions thereof being hinged at the bottom to form doors adapted to be
 90 opened at the top, said casing being divided into a central compartment and two side compartments by doors hinged at the ends of the central stationary front wall, the
 95 central compartment being divided centrally by a transverse partition, and the back wall of said compartment consisting of a screen, a supplemental casing secured centrally to the back of the main casing and inclosing
 100 said screen, the end portions of said supplemental casing being open, and provided with screens, and means for operating said doors, said supplemental casing being also provided
 105 with a partial partition which extends from the outer or back wall thereof inwardly, and a concavo-convex deflector placed within the supplemental casing centrally of the front
 110 thereof.

3. A ventilator of the class specified comprising a main oblong casing provided with
 115 front, back and end walls, the central portion of the front wall being stationary and the side portions thereof being hinged at the bottom to form doors adapted to be opened at the top, said casing being divided into a central
 120 compartment and two side compartments by doors hinged at the ends of the central stationary front wall, the central compartment being divided centrally by a transverse partition, and the back wall of said compartment
 125 consisting of a screen, a supplemental casing secured centrally to the back of the main casing and inclosing said screen, the end portions of said supplemental casing being open, and provided with screens, and means for operating said doors, said supplemental casing being also provided with a
 130 partial partition which extends from the outer or back wall thereof inwardly, and a concavo-convex deflector placed within the supplemental casing centrally of the front

thereof, and the bottom of the supplemental casing being provided with apertures or openings some of which are placed forwardly of the side edges of the concavo-convex deflector.

5 In testimony that I claim the foregoing as my invention I have signed my name in

presence of the subscribing witnesses this 4th day of February, 1909.

DAVID O. DAVIS.

Witnesses:

C. E. MULREANY,
H. R. CANFIELD.