

E. E. GOLD.
WIND OPERATED VENTILATOR.
APPLICATION FILED NOV. 26, 1909.

1,041,616.

Patented Oct. 15, 1912.

Fig. 1.

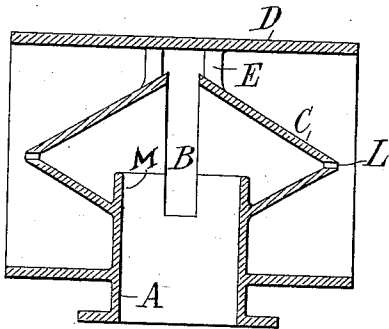


Fig. 3.

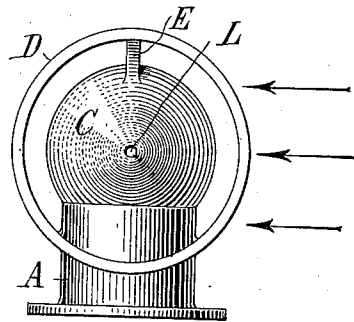


Fig. 2.

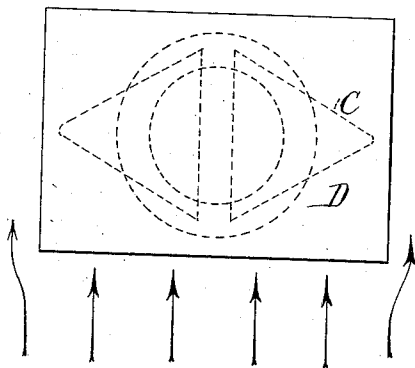


Fig. 5.

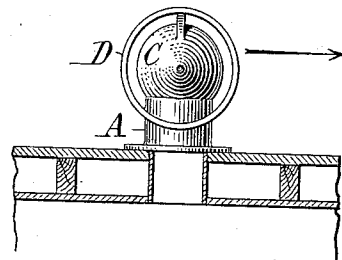
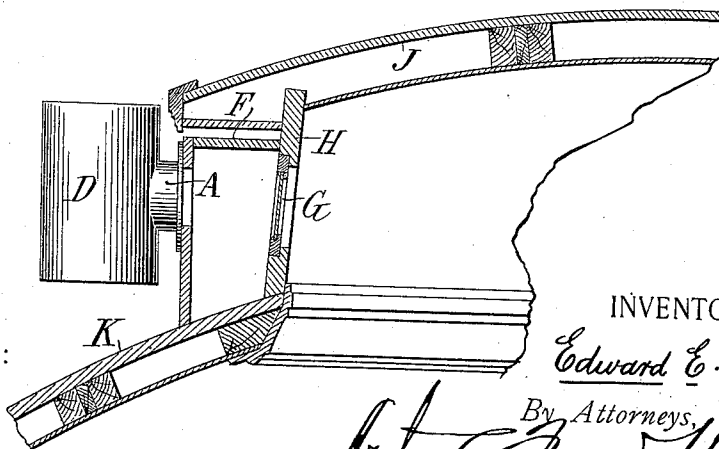


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWARD E. GOLD, OF NEW YORK, N. Y., ASSIGNOR TO GOLD CAR HEATING & LIGHTING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

WIND-OPERATED VENTILATOR.

1,041,616.

Specification of Letters Patent.

Patented Oct. 15, 1912.

Application filed November 26, 1909. Serial No. 529,902.

To all whom it may concern:

Be it known that I, EDWARD E. GOLD, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Wind-Operated Ventilators, of which the following is a specification.

This invention aims to provide improvements in ventilators of a type generally employed for railway cars, and by means of which at little or no increase in cost the efficiency is materially increased.

The accompanying drawings illustrate an embodiment of the invention.

Figure 1 is a longitudinal section; Fig. 2 an outer end view; Fig. 3 is an end view; Fig. 4 is a side view of a ventilator applied to the side of a railway car. Fig. 5 is a longitudinal section through the top of a car on which the ventilator is mounted.

Referring to the embodiment of the invention illustrated, the pipe A forms the entrance for the bad air which is to be withdrawn. In line with this entrance is an outlet B between the bases of the pair of cones C whose axes extend transversely to the axis of the entrance pipe A. Over the outlet B is a hood D of cylindrical shape arranged a slight distance beyond the bases of the cones C and attached to the inlet pipe A and preferably also supported at the outer side by thin supports E designed to offer a minimum amount of obstruction to the passage of air and gases. The hood D being cylindrical, the outer faces of the cones are inclined away from the hood. The ventilator is arranged in use in such a position that the wind blows against the side of the cylindrical hood, as shown by the arrows in Figs. 2 and 3. The hood D extends completely around the cones and over substantially their entire lengths, so that the wind does not directly strike the cones but only blows over their ends and the open ends of the cylindrical hood. I find by experiment that this protecting of the ends of the cones from the direct contact of the wind causes a material increase in the efficiency of the ventilator, that is to say, in the speed with which it withdraws air from a car or other compartment for a given rate of wind blowing against the ventilator on the outside.

The ventilator is adapted for use in various

situations and upon various other compartments besides cars. When used on a car it may be mounted upon the top of the roof with the axis of the inlet pipe A vertical (Fig. 5), and the axes of the cones extending transversely to the direction of the motion. In some cases, however, it will be applied as shown in Fig. 4 at the side of a box F mounted on the outside of the ordinary hinged ventilating window G on the deck-plate H of a car, between the upper and lower roofs J and K. The opening of the ventilating window G to a greater or less extent will control the withdrawal of air from the car, and the ventilator will maintain a steady and strong suction as long as the car is moving and creating a wind against the side of the ventilator.

The long hood D, besides increasing the ventilating draft, protects the outlet to a great extent against the entrance of cinders, dust and rain. Where the ventilator is to be used in the position of Fig. 4 small openings L may be provided at the apexes of the cones for the escape of any water which may be blown into the space between the cones. The flanges M substantially prevent the escape of such water into the inlet pipe A.

What I claim is:—

1. A wind operated ventilator, having an outlet in line with the entrance, a hood over said outlet and a face extending from said outlet at an inclination away from said hood, said hood covering the entire length of said inclined face, and extending slightly beyond the same to protect the ends thereof from the wind, in combination with a structure to be ventilated, said ventilator being mounted on said structure and being so arranged that in use the wind shall blow against the side of said hood.

2. A wind operated ventilator, having an outlet in line with the entrance, a conical face with its base adjacent to said outlet and a cylindrical hood over said outlet and extending around said conical face and over its entire length, and extending slightly beyond the same to protect the ends thereof from the wind, in combination with a structure to be ventilated, said ventilator being mounted on said structure and being so arranged that in use the wind shall blow against the side of said hood.

3. A wind operated ventilator, having an

outlet in line with the entrance, a pair of cones with their bases forming the sides of said outlet and a cylindrical hood over said outlet and extending around said cones over
5 their entire length, and extending slightly beyond the same to protect the ends thereof from the wind.

4. The combination with a car of a wind operated ventilator having an inlet pipe A,
10 a pair of cones C on the end of said pipe with their bases facing and slightly separated from each other and their axes in line with each other and a cylindrical hood D
15 over the space between said cones and extending around the entire lengths of said cones and extending slightly beyond the
ends thereof so as to protect said ends from the wind, said cones having openings L in
20 their ends for the escape of water, and said hood being located upon a car with its axis transverse to the direction of travel.

5. The combination with a car of a wind operated ventilator having a horizontal inlet pipe A, a pair of cones C on the end of
said pipe with their bases facing and
25 slightly separated from each other and their axis vertical and a cylindrical hood D over the space between said cones and extending
around the entire lengths of said cones and
30 extending slightly beyond the ends thereof so as to protect said ends from the wind, said cones having openings L in their ends
for the escape of water, and said hood being
located upon a car with its axis vertical.

In witness whereof, I have hereunto
35 signed my name in the presence of two subscribing witnesses.

EDWARD E. GOLD.

Witnesses:

D. ANTHONY USINA,
FRED WHITE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."