A. VAN HORN.

VENTILATORS FOR CHIMNEYS.

No. 188,989. Patented March 27, 1877.

Fig: 1.

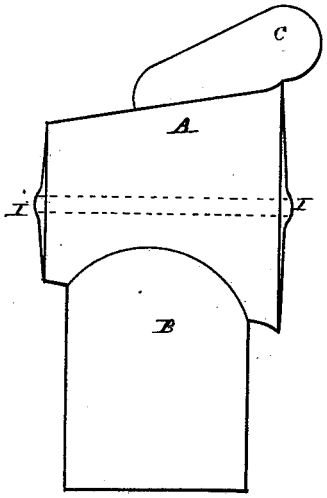


Fig: 2.

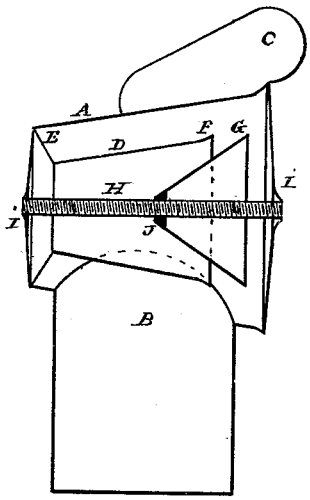


Fig: 3.

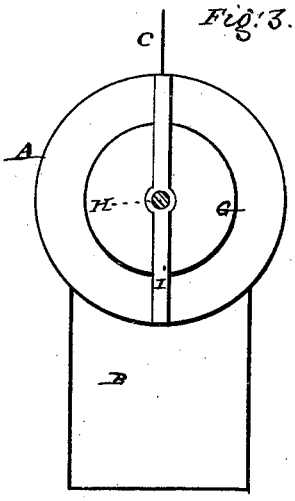
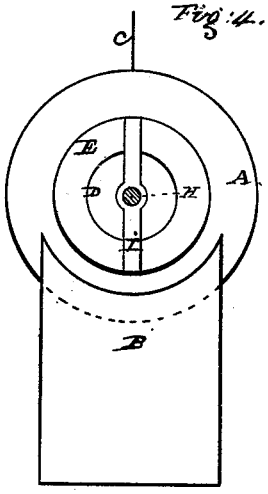


Fig: 4.



Witnesses
Charles L. Darrell
Henry Basquenault

Inventor
Andrew Van Horn

UNITED STATES PATENT OFFICE.

ANDREW VAN HORN, OF BROOKLYN, E. D., N. Y., ASSIGNOR OF TWO-THIRDS OF HIS RIGHT TO ABNER VAN HORN AND HENRY BARAGWANATH, OF SAME PLACE.

IMPROVEMENT IN VENTILATORS FOR CHIMNEYS.

Specification forming part of Letters Patent No. **188,989**, dated March 27, 1877; application filed February 7, 1877.

To all whom it may concern:

Be it known that I, ANDREW VAN HORN, of Brooklyn, E. D., Kings county, State of New York, have invented an Improved Ventilator for Chimneys and other Purposes, of which the following is a specification:

The object of my invention is to graduate or regulate the draft of the ventilator, according to the use it is to be applied to, and particular place of application; and the nature of my invention consists in combining with the ventilator an adjustable air-deflector, by means of a screw-rod arranged centrally from end to end of the hood of the ventilator, whereby the draft may be increased or diminished at pleasure, and without any extra labor or cost, as would be the case if no such adjustable devices were used; but to describe my invention more particularly, I will refer to the accompanying drawings, forming a part of this specification, the same letters of reference referring to like parts wherever they occur.

Figure 1 is a side view of the ventilator. Fig. 2 is a vertical cut-section of the same. Fig. 3 is a rear-end view of the same. Fig. 4 is a front-end view of the same.

Letter A represents the external shell, B the pipe, and C the rudder. To enable the ventilator to rotate, it will be supported on a spindle secured in the pipe B, in the common and well-known way of securing ventilators to chimneys.

The length of the ventilator is but a few inches greater than the diameter of the pipe B, and is made tapering, with a slight flare at its rear end. Inside of the shell is arranged an exhaust-tube, D, the front end of which is attached to the front end of the shell by an air-tight beveled flange, E, as shown in Fig. 2. The rear end of the tube is made flaring, as shown at F, Fig. 2, and terminates within the diameter of the pipe B. The object of this construction of the exhaust-tube relatively to that of the opening of the pipe B and the flaring end of the shell is, first, for the free admission of the smoke to the expanding space surrounding the rear end of the exhaust-tube; second, that the current of air through the exhaust-tube, and between the sides of the conical deflector G, is directed toward the outer circumference of the rear end of the shell, and thus, acting upon the attenuated or expanded gases, is enabled to keep up a perfect ventilation of the building. To regulate or graduate draft, according to place of attachment of the ventilator, the conical deflector G is secured upon a horizontal adjusting-rod, H, having screw-threads cut thereon, and secured to the opposite ends of the ventilator by the bearings I, or other suitable means. The moving of the deflector is by means of a screw-nut, J, secured in or upon the apex of the deflector. When thus arranged, it may be regulated at pleasure, by manipulations applied to the outer edges of the deflector.

Having now described my invention, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States.

In a gas or foul-air ventilator, I claim the combination of the flare F of the exhaust-tube D, adjustable conical deflector G, and screw-rod H, substantially as described.

ANDREW VAN HORN.

Witnesses:

CHARLES L. BARRITT,

HENRY BARAGWANATH.