

M. T. HYNES.

Ventilator.

No. 94,115.

Patented Aug. 24, 1869.

Fig. 1

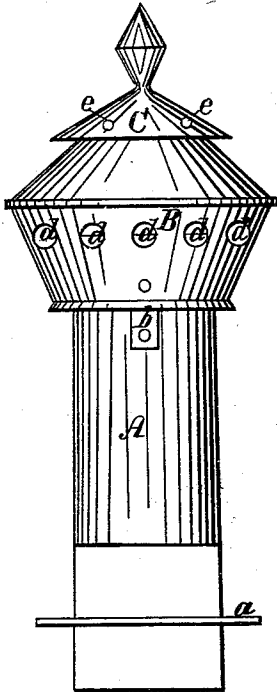
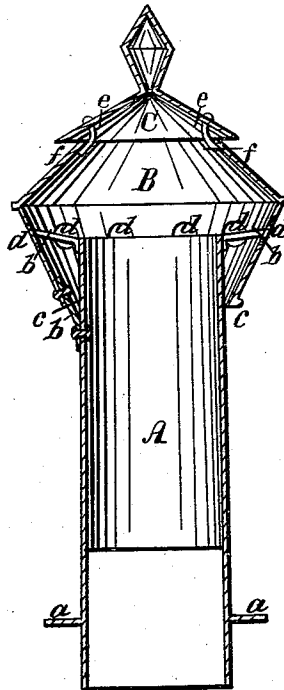


Fig. 2



Witnesses.

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Inventor.

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United States Patent Office.

MICHAEL T. HYNES, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND PATRICK J. WHELTON, OF SAME PLACE.

Letters Patent No. 94,115, dated August 24, 1869.

IMPROVEMENT IN VENTILATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MICHAEL T. HYNES, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain Improvements in Ventilators for Buildings, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of my improved ventilator.

Figure 2 is a central vertical section through the same.

This invention has for its object to improve the construction of ventilators, so as to insure always a strong upward current of air, and at the same time entirely avoid any liability of a downward draught, even in boisterous weather; and consists in the peculiar construction and arrangement of parts, whereby the desired end is effected.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings—

A represents the main pipe through which the air or smoke is drawn up from the ventilating-flue or chimney to which it is attached, a flange, *a*, being provided to facilitate such attachment.

To the upper end of the pipe A is secured, by means of braces *b*, a casing, B, which tapers from near the centre toward both ends, a space, *c*, being left between its lower extremity and the pipe A, for the entrance of an upward current of air.

The upper end of the pipe A extends up, within the casing B, to a level with a horizontal line passing through the centre of a series of apertures, *d*, formed around the casing B, a little below its centre, for the purpose of admitting a current of air which passes through the casing, from one side to the other, immediately over the top of the pipe A, thus creating a partial vacuum within the casing B, and producing a strong upward current through the ventilator, as required, the vacuum thus created also causing the air to rush up through the space *c*, and thus give increased force and velocity to the upward current.

By thus causing the pipe A to extend up to a level with the centre of the apertures *d*, the most perfect result is attained, as the entrance of a current of air from any direction will not only produce a strong upward current within the pipe A, but will effectually prevent any downward draught, even in the most boisterous weather, which would not be the case if the top of the pipe extended much above or below the centre of the apertures *d*.

Furthermore, if two currents of air enter the apertures *d* from opposite sides, no downward draught will be created, but, on the contrary, a strong upward current will be produced.

Any rain which may enter the apertures *d* will run down on the inside of the casing B, and pass out through the space *c*.

The top of the casing B, which is provided with an opening, of a diameter corresponding to that of the pipe A, is surmounted by a conical weather-cap, C, which is supported upon rods or braces *e*, projecting up from the casing B.

The lower edge of this cap C is on a level with the top of the casing B, and is of such diameter as to extend out therefrom and afford a space, *f*, which allows a current of air to pass over the opening at the top of the casing, and thus produce a partial vacuum at this point, which still further increases the force of the upward current of air through the ventilator.

The cap C also serves to exclude the rain and snow in stormy weather.

I prefer to make the cap C of such diameter at its lower end that the width of the space *f* will be equal to about one-fourth of the diameter of the opening at the top of the casing B.

The vitiated air or smoke which ascends through the pipe A is discharged through the openings *d* and space *f*, on the side opposite to that at which the outer current of air enters.

The above-described ventilator may be applied either to the ventilating-flues of buildings or to chimneys, as may be desired, and, being of exceedingly simple construction, may be furnished at a very reasonable cost.

If desired, the cap C may be dispensed with, and the top of the casing B closed, by running it up to a point or otherwise. I prefer, however, to construct the ventilator as first described, as a better result is produced.

Claim.

What I claim as my invention, and desire to secure by Letters Patent, is—

The casing B, with its apertures *d*, in combination with the pipe A, extending up within it to a level with the centre of said apertures, when constructed and arranged substantially in the manner and for the purpose described.

MICHAEL T. HYNES.

Witnesses:

P. E. TESCHEMACHER,
W. J. CAMBRIDGE.