E. VAN NOORDEN.

Ventilator.

No. 211,872. Patented Feb. 4, 1879.

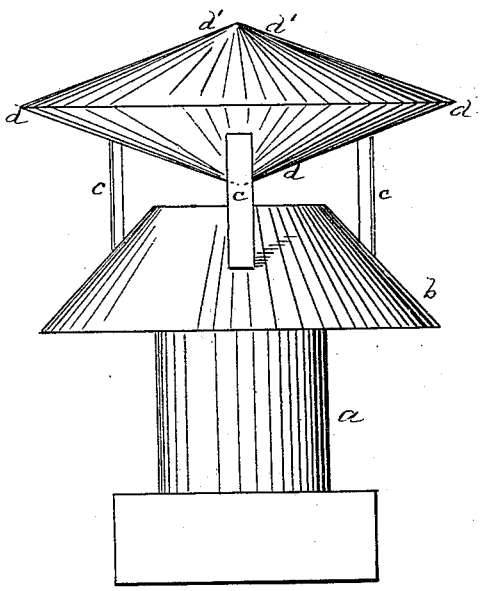


Fig. 1.

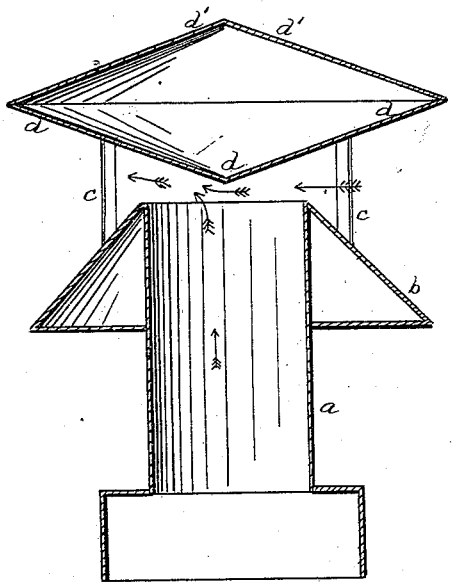


Fig. 2.

WITNESSES

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# UNITED STATES PATENT OFFICE.

EZEKIEL VAN NOORDEN, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. **211,872**, dated February 4, 1879; application filed December 16, 1878.

*To all whom it may concern:*

Be it known that I, EZEKIEL VAN NOORDEN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Ventilators, of which the following is a specification:

This improvement relates to that class of ventilators which are placed in the open air upon buildings, and it may be used either as a ventilator or as a chimney-cap. It is an improvement, more particularly, upon what is known as the "Emerson ventilator."

In the accompanying drawings, Figure 1 is an elevation of my improved ventilator or chimney-cap; and Fig. 2 is a vertical section of the same.

*a* is the flue, and *b* the flange, constructed as in the Emerson ventilator. Instead of supporting a flat disk over the top of the flue *a*, as in the Emerson ventilator, I support, by means of the posts *c*, an inverted cone, *d*, having its vertex pointing down into the flue *a*, and quite near the surface of the same. This inverted cone may be provided with a roof of any desirable shape, preferably a slanting one, as in the drawings.

The advantage which is derived from the application of the inverted cone is, that it causes a greater draft in the flue than can be obtained by means of the disk in the Emerson ventilator, now so generally in use.

When the wind blows against my ventilator it enters the flaring opening presented at all sides by means of the flange *b* and cone *d*, and as it blows toward the center of the surface of the flue increases in force as its passage becomes more narrow. The point or vertex of the inverted cone carries the air close to the surface of the flue, so that it, by its tendency to produce a vacuum, catches the air at the flue-opening and draws it swiftly out, creating a strong draft, much more powerful than can be produced by a flat disk.

A variation would be to slightly cut off the point of the cone, producing an inverted frustum.

Having thus fully described my improvement, what I claim, and desire to secure by Letters Patent, is—

The hereinbefore-described improvement in ventilators or chimney-caps, consisting of the combination, with the flue *a* and flange *b*, of the inverted cone or frustum *d*, the vertex being over and near to the center of the flue-opening, and the sides producing, in connection with said flange, a flaring entrance to and a swift draft across such flue-opening, as above set forth.

EZEKIEL VAN NOORDEN.

Witnesses:

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