

B. J. Burnett

House Ventilator.

No. 45,814.

Patented Jan. 10, 1865.

Fig. 1

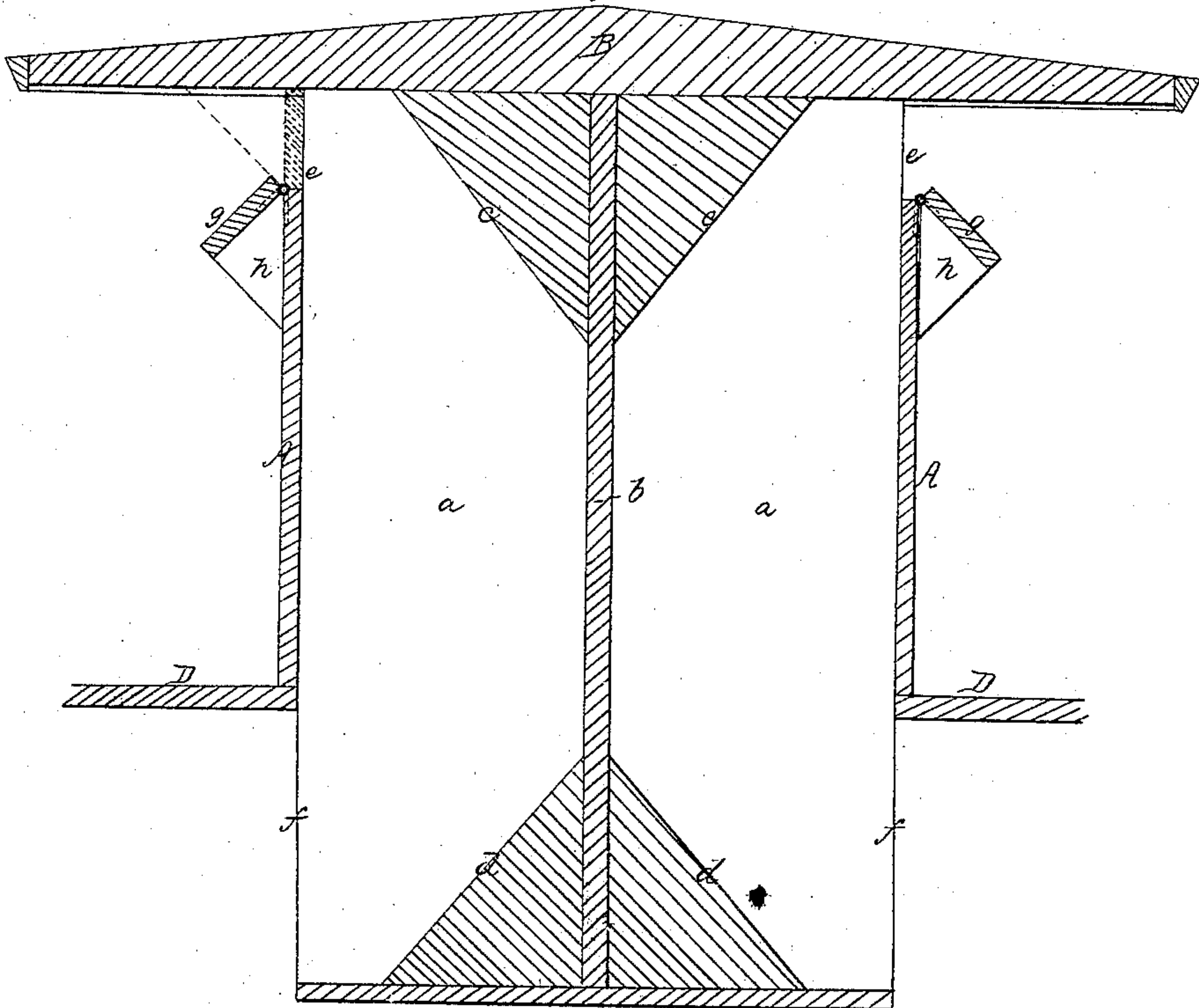
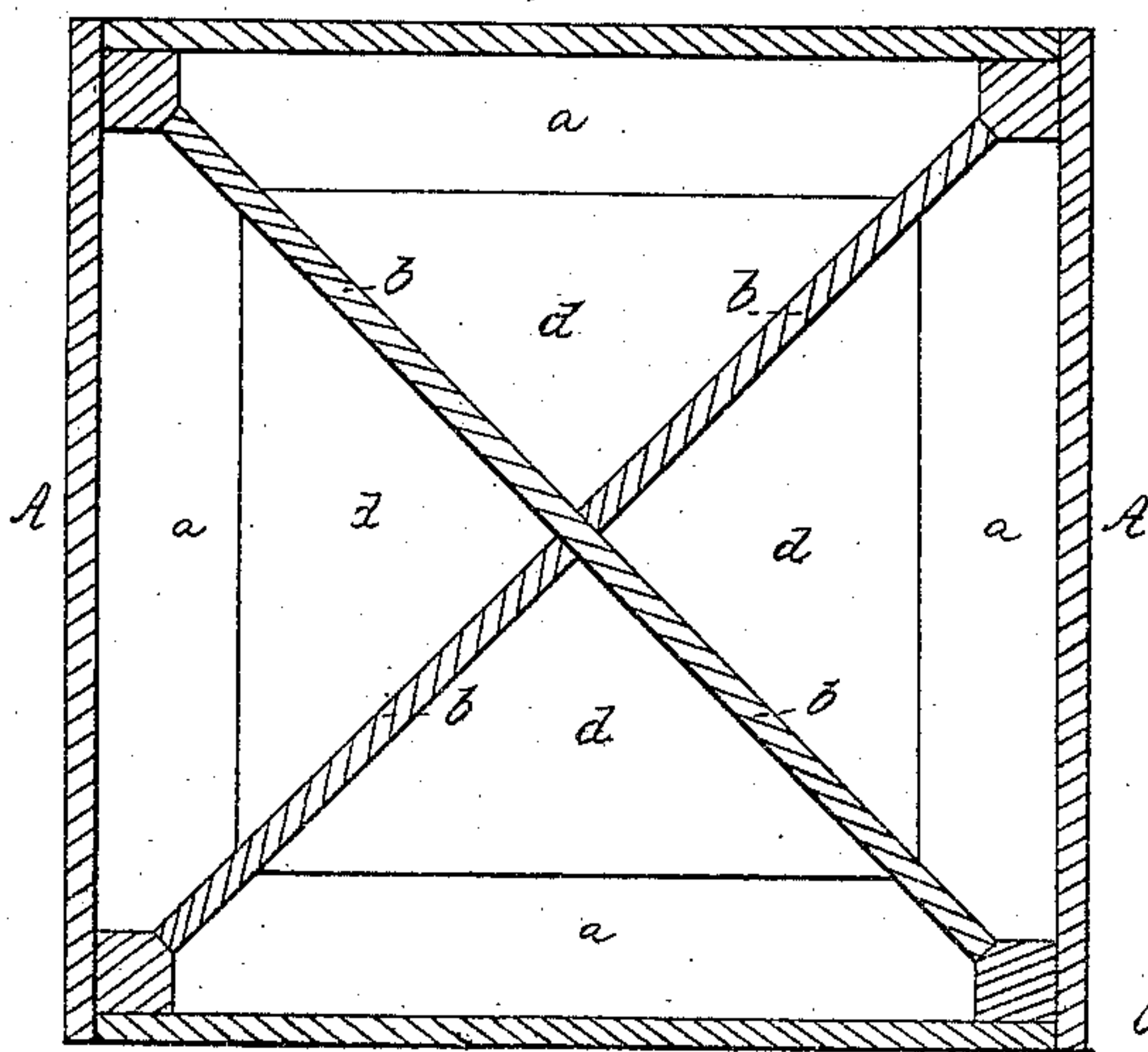


Fig. 2



Witnesses:
J. W. Loombe
W. Reed

Inventor:
Benj. J. Burnett

UNITED STATES PATENT OFFICE.

BENAJAH J. BURNETT, OF MOUNT VERNON, NEW YORK.

IMPROVED VENTILATOR.

Specification forming part of Letters Patent No. 45,814, dated January 10, 1865.

To all whom it may concern :

Be it known that I, BENAJAH J. BURNETT, of Mount Vernon, in the county of Westchester and State of New York, have invented a new and useful Improvement in Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a central vertical section of a ventilator constructed according to my invention. Fig. 2 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates to ventilators to be applied to the roofs of houses, churches, factories, and other structures; and it consists in a certain novel construction of such ventilators, whereby the wind, blowing in one direction, is caused to produce an incoming current of fresh air on one side of the ventilator and an outgoing current of heated or vitiated air on the opposite side.

A is an upright trunk, of wood or other material, of square form in its horizontal section, divided into upright chambers or compartments *a a* by upright boards or partitions *b b*, extending diagonally from corner to corner and intersecting or meeting in the center. These chambers or compartments are fitted with deflectors *c c* and *d d* at top and bottom, the said deflectors having their faces inclined at an angle of about forty-five degrees—the upper ones, *c c*, having a downward inclination toward the center of the trunk or the backs of their respective chambers, and the lower ones, *d d*, having an upward inclination thereto, as shown in Fig. 1.

The trunk has an overhanging cap, B, to exclude rain, and immediately below this cap and opposite the deflectors *c c* there are openings *e e* in the sides, extending all across the chambers. Openings *f f* are also provided in the lower parts of the sides opposite the deflectors *d d*.

The ventilator thus constructed is built firmly into an opening provided in the roof of the building or structure to be ventilated in such manner that the openings *f f* come below

or within the roof, and the other part of the trunk above, as shown in Fig. 1, in which D represents a portion of the roof.

The operation is as follows: The wind entering the chamber or chambers *a*, which are toward it, strikes the upper deflectors, *c*, and is thus caused to form downward incoming currents of fresh air, which, striking the lower deflectors, are caused to enter the building or structure, and thus produce therein a sufficient pressure of air to force out a portion of the vitiated or heated air through the opposite openings, *f*, and into the chambers *a*, with which those openings communicate, and thus produce outgoing upward currents through those chambers, which, striking the deflectors *c*, are caused to pass out from the latter chambers through the openings *e*, outside of which there is a less pressure than on the sides toward the wind.

In order to provide for the closing of the openings *e e* in winter time or when ventilation is not desired, hinged shutters *g g* are attached to the lower edges of the said openings. These shutters have attached to their outer sides buckets *h h*, which, when the said shutters are open, as shown on the right side of Fig. 1, and in black outline on the left side of that figure, come into contact with the sides of the trunk in such manner as to stop the said shutters in such inclined positions that they form deflectors upon which the wind strikes in such manner that its entrance into said openings *e e* is encouraged. One of the shutters *g g* is shown on the left side of Fig. 1 in red outline in a closed condition.

This ventilator is of very simple and cheap construction, requiring no moving parts, except the shutters, and can be constructed by any builder, carpenter, or other person of ordinary mechanical ability.

I do not confine myself to the construction of the ventilator of quadrangular form in its horizontal section and with four chambers, as it may be made of other polygonal form and with a corresponding number of chambers.

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

1. A ventilator composed of an upright trunk, A, divided into chambers *a a*, having openings *e f* above and below the roof, with

opposite inclined deflectors, *c d*, substantially as herein specified.

2. The hinged shutters *g g*, with their attached brackets *h h*, so applied in combination with the upper openings, *e e*, of a ventilator of a construction substantially as herein described, that when open the said shutters

form deflectors to encourage the entrance of air into the said openings, substantially as herein specified.

BENAJAH J. BURNETT.

Witnesses:

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HENRY T. BROWN.