J. S. WIGHTMAN.

Ridge-Ventilator.

No. 162,261. Patented April 20, 1875.

Fig. 1.

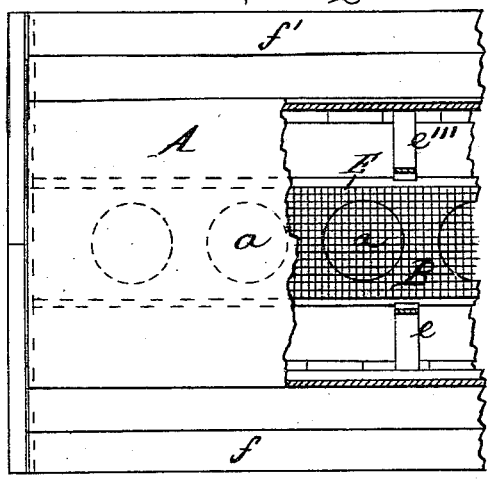


Fig. 2.

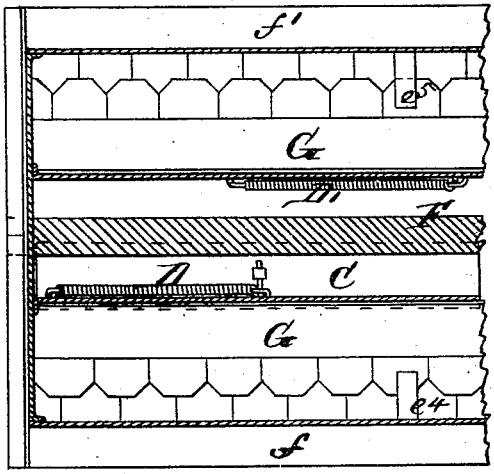


Fig. 3.

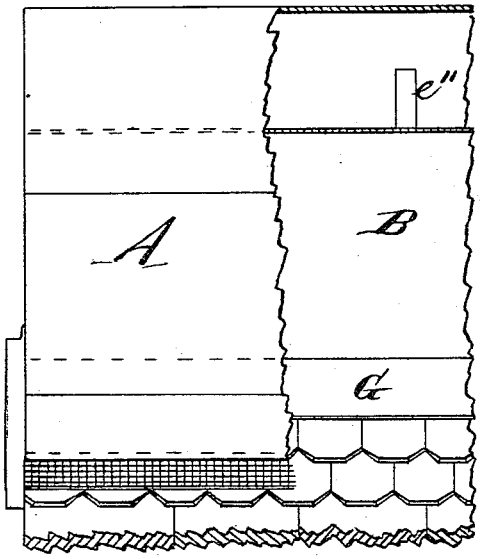
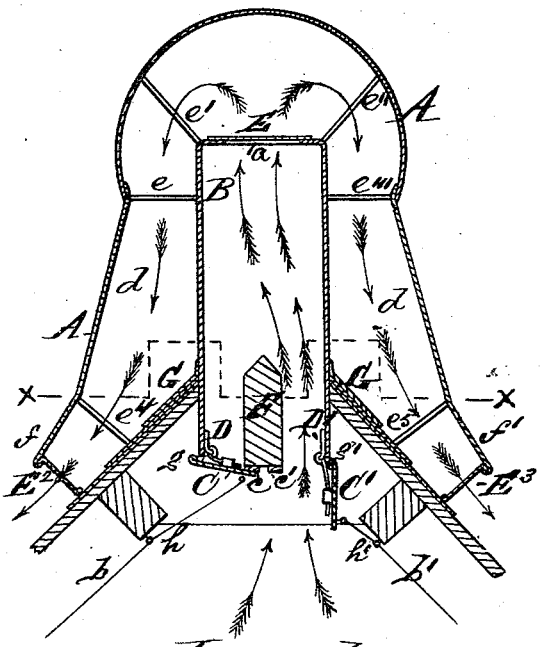


Fig. 4.



Witnesses

J. Orlando Harrisson

Phillips & Abbott.

Inventor

James Stillman Wightman

by his Atty.

W. L. Bennett.

UNITED STATES PATENT OFFICE

JAMES S. WIGHTMAN, OF NEW YORK, N. Y.

IMPROVEMENT IN RIDGE-VENTILATORS.

Specification forming part of Letters Patent No. **162,261**, dated April 20, 1875; application filed November 17, 1874.

To all whom it may concern:

Be it known that I, JAMES STILLMAN WIGHTMAN, of the city, county, and State of New York, have invented a new and useful Ridge-Ventilator; and I hereby declare that the following is a full, clear, and exact description and specification of the same, reference being had to the annexed drawings making part of the said specification.

My improved ventilator extends the whole length of the ridge of a roof, and the circulation of air is controlled by valves that are operated by means of springs.

The object of my invention is to get up a free circulation of air at any desired part of a building; also to regulate the same where the current of air is too violent; also, to prevent leaves, paper, and other light materials from being blown into the ventilator; and to this end my invention consists in certain combinations of ridge-cap, valves, wire-screens, and other parts, which combinations are specifically set forth at the end of this schedule.

In order that persons skilled in the art may fully understand, make, and use my invention, I will proceed to describe it as constructed by me, referring to the accompanying drawings, in which—

Figure 1 represents a top view and horizontal section of parts of my invention. Fig. 2 represents a horizontal section of same at line *x x* of Fig. 4. Fig. 3 represents a side elevation of same, broken off to show elevation of interior casing, &c. Fig. 4 represents a cross-section of my invention at line *y y* of Fig. 1.

The same letters refer to the same parts in all the figures.

A is the storm-shield, which extends the whole length of the building, and is manufactured, in this instance, of galvanized iron, and formed as shown in Fig. 4. B is the interior cap, and extends the whole length of the building, the same as the storm-shield, and is boxed up above the roofing at a convenient height, and perforated at top for ventilating purposes. These perforations *a a* are covered with wire-gauze, as shown at E, Fig. 1. The lower end of this interior cap B extends below the ridge of the roof into the building, and secured to the lower end of this cap are automatic valves C C′, which are operated by means of springs D D′ and cords *b b′*. The ridge-pole F, which occupies a longitudinal central position in relation to the interior cap B, has secured upon its under side felt or india-rubber pads *c c′*, which are placed there not only for the purpose of deadening the sound of the valves when forced against the ridge-pole by the springs, but also to secure a tight joint, and prevent the circulation of air through the openings to the interior cap. This cap B is flashed onto roofing as shown at G, Fig. 4.

The storm-shield A is fastened rigidly in position by means of braces *e e′ e″ e‴*, which extend from the inner face of the storm-shield to the outer surface of the interior cap B of ventilator; also, braces e^4 e^5 extend from storm-shield to roof, as represented in Fig. 4. These braces are secured in the usual manner for securing such braces.

In constructing the ventilator, a space, *d*, is left sufficiently large between the storm-shield and interior cap to allow of a free circulation of air. As the shield approaches the roof it is flared out, as at *f f′*, and this flaring-out part of the storm-shield is about the same angle as that of the roof. The flaring-out of this storm-shield forms a continuous mouth or opening on both sides of the ridge of the roof, and extends the whole length of the ventilator, and to prevent the interior of the ventilator from being choked up by light materials being blown into it through these openings. Wire-gauze E^2 E^3 are fastened into these openings, as represented in Fig. 4.

The automatic valves C C′ are made of tin or galvanized iron, and are hinged at *g g′* to the lower end of the interior cap B of the ventilator, and these valves are operated by means of the coiled springs D D′, secured to the valves in the manner as shown in Fig. 4. Eye-bolts *h h′* are placed in a convenient position to the valves C C′, for the purpose of holding the cords *b b′*, which pass through the eyes of these bolts to within easy reach of the operator of these valves.

The operation is as follows: When ventilation is desired, the valves C C′ are opened by pulling the cords *b b′*. Air then escapes in the direction shown by the arrows, represented in Fig. 4, up through the interior cap B, per-

ferations *a a*, wire-gauze E, down space *d*, and out at wire-gauze E^2 E^3, and these valves can be held in any desired position by means of these cords. If it be desired to stop ventilation, the cords *b b'* are released, and the automatic valves are closed by means of the springs D D'.

The form and construction of the ventilator may be varied to suit the views of different manufacturers—for instance, the interior cap B may be set up in separate lengths of sections, as required for ventilation; also a different contour, if thought desirable, may be adapted for storm-shield, and any adjustable springs for valves may be used that will accomplish the same result.

I claim as my invention—

2. The combination, substantially as hereinbefore set forth, of the storm-shield, the interior cap, the wire-gauze, the ridge-pole, the pads, and the automatic valves.

2. The combination, substantially as hereinbefore set forth, of the interior cap, the automatic valves, and the springs and cords for operating these valves.

Witness my hand this 14th day of November, A. D. 1874.

JAMES STILLMAN WIGHTMAN.

Witnesses:

J. ORLANDO HARRISSON,

PHILLIPS ABBOTT.