

J. BALLOU.
Ventilators.

No. 142,140.

Patented August 26, 1873.

Fig. 1.

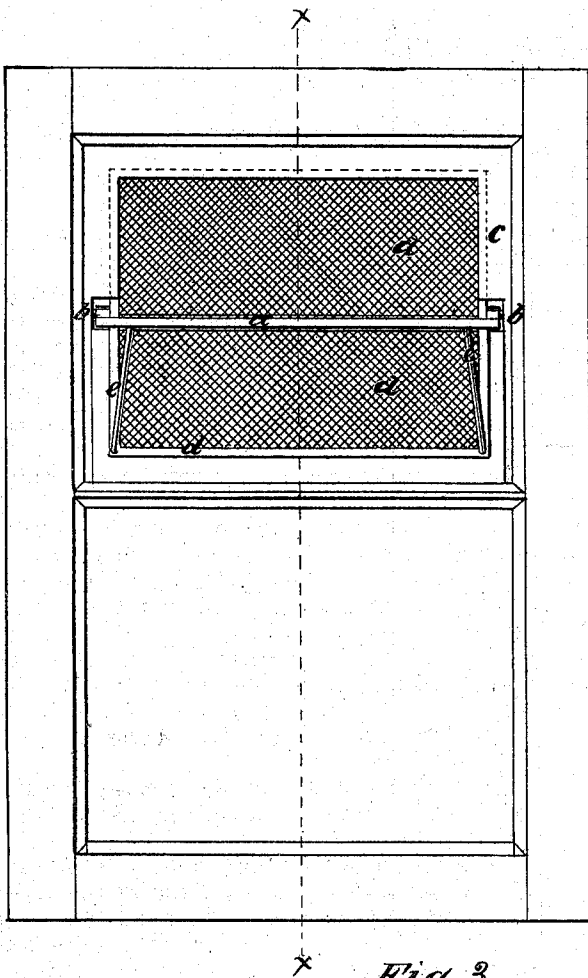


Fig. 2.

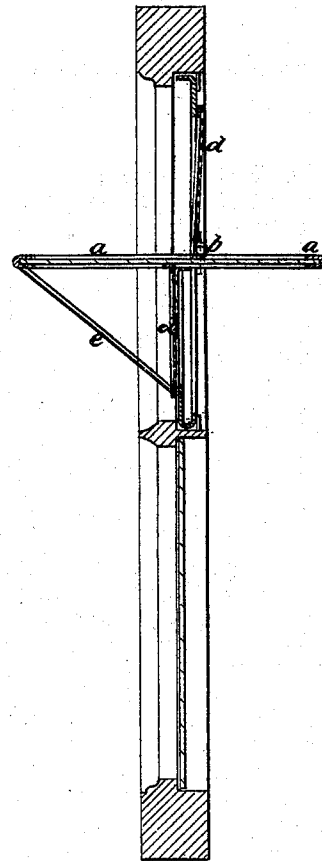
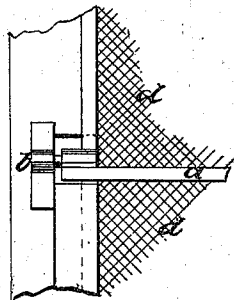


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN BALLOU, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. **142,140**, dated August 26, 1873; application filed April 26, 1873.

To all whom it may concern:

Be it known that I, JOHN BALLOU, 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:

My invention is an improvement in the class of ventilators for dwellings and other edifices which are formed partly of wire-gauze or other perforated material, and partly of glass or other imperforated material. The invention consists in a revolving ventilator in the form of a cross, to the respective arms of which wire-gauze and glass plates are secured, as hereinafter described.

In the accompanying drawing, Figure 1 is a front view, showing my ventilator applied to a window. Fig. 2 is a vertical section of Fig. 1, taken on the line *x x*. Fig. 3 is a detail, showing one of the pivots on which the ventilator is suspended so as to revolve.

Similar letters of reference indicate corresponding parts.

This ventilator consists of a frame, *a*, which is of the size of the opening in the window or wall, in which frame is placed one or more plates of glass or other transparent material to admit light and close the opening. This frame is hung on central pivots *b b*, so that it will revolve. In practice, I hang this frame to an outer removable frame, *c*, which may take the place of one of the sashes of a window; and I prefer this mode of applying the

ventilator, but it may be arranged in an opening without an outer removable frame. At right angles with the glass, and on each side thereof, attached to the frame *a* at or near the pivots, I place a piece of perforated metal, wire-gauze, or similar material, *d*, of half the size of the glass, both pieces being equal in size to the glass in the frame *a*. These pieces are supported by the braces *e*, which are attached to the frame *a*, as seen in the drawings.

It will be seen that, by a quarter revolution, the glass will be thrown into a horizontal position, and the perforated pieces *d d* will take its place, thus admitting air while excluding insects.

It is likewise apparent that, whatever be the position of the ventilator, the light is never excluded, while its adjustment may be almost instantaneously effected for admission or exclusion of air.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The improved revolving ventilator formed of the perforated plates *d d* and glass plates, attached to the frame *a* at right angles to each other, and radiating from the axis terminating in the pivots *b b*, as shown and described.

JOHN BALLOU.

Witnesses:

J. W. SNOW,
H. P. YOUNG.