(No Model.)

J. W. McKINNON.

VENTILATOR.

No. 383,313. Patented May 22, 1888.

Fig. 1.

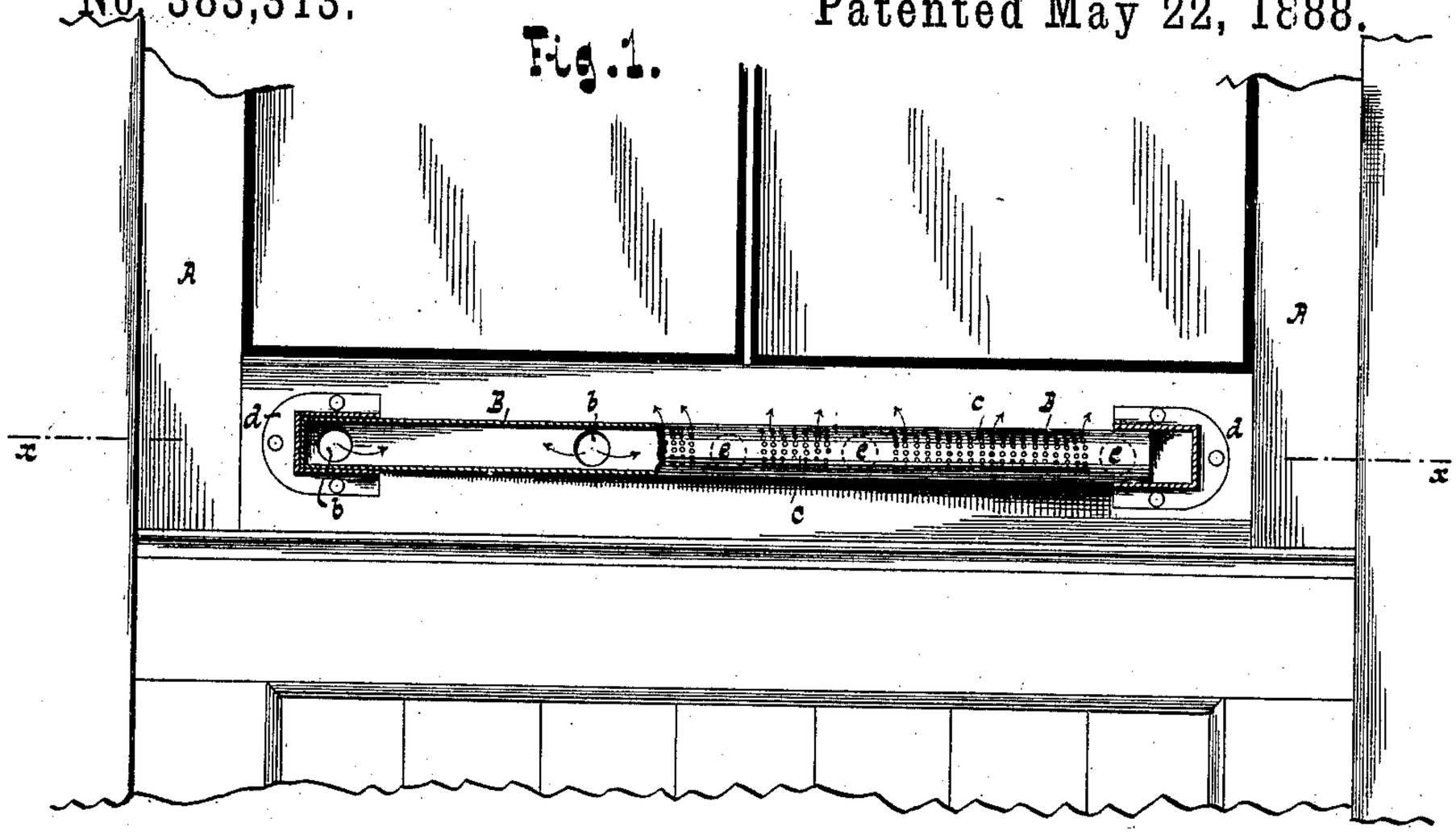


Fig. 2.

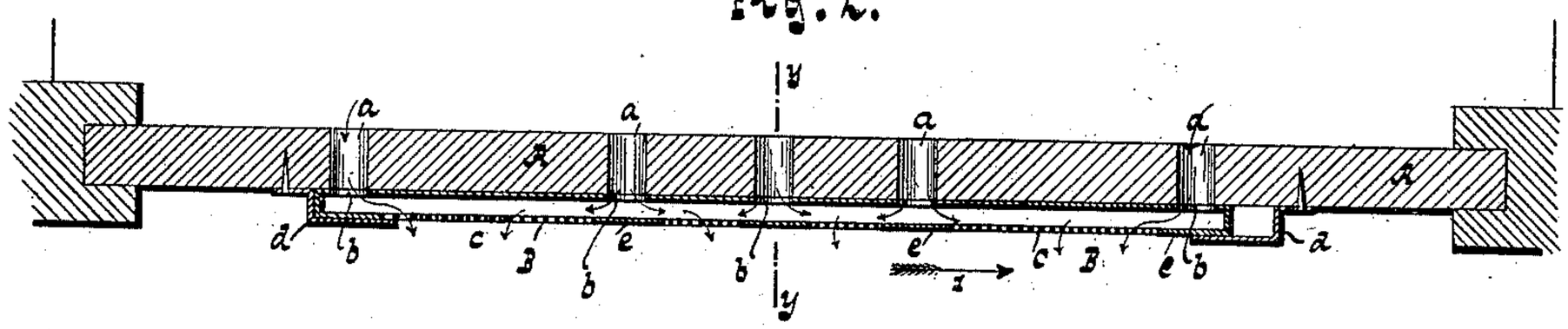


Fig. 3.

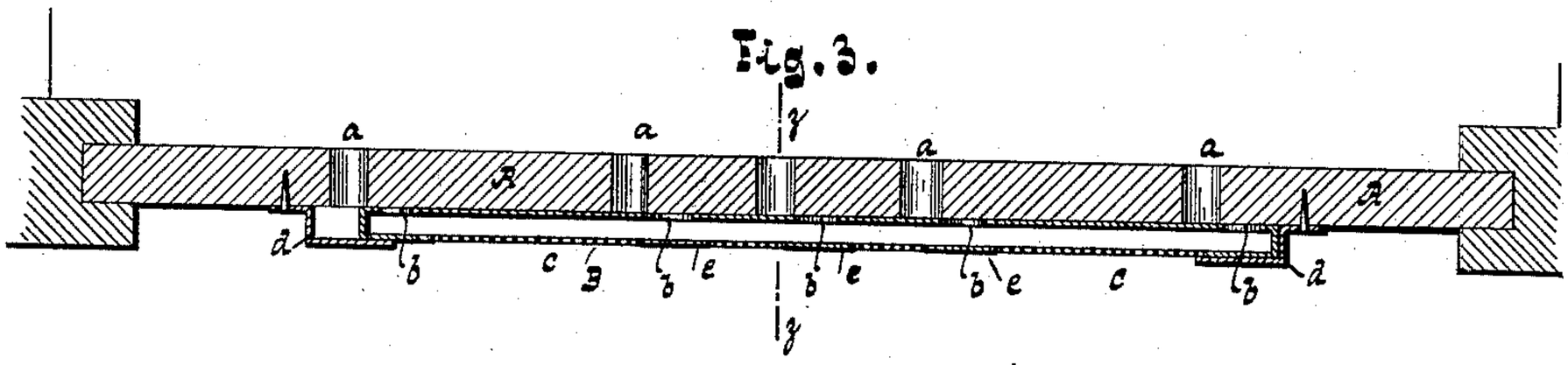


Fig. 4.

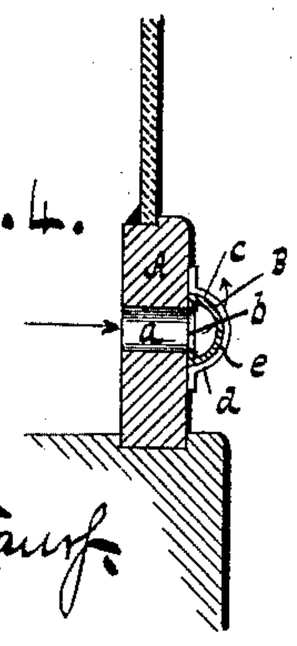
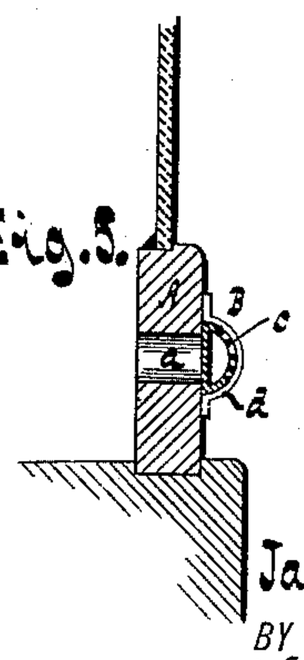


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES W. McKINNON, OF NEWARK, NEW JERSEY.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 383,313, dated May 22, 1888.

Application filed February 2, 1888. Serial No. 262,718. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. McKINNON, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Ventilators, of which the following is a specification.

My invention consists in a ventilator which is especially applicable to the sashes of windows.

It consists, essentially, in the combination with a base—such as a window-sash—having transverse openings therein, of a hollow movable ventilator placed over said openings, said ventilator having in its back openings corresponding to the openings in the base, and a perforated front, all of which is more fully pointed out in the following specification and claims and illustrated in the accompanying drawings, in which—

Figure 1 represents a sectional front elevation of my improved ventilator as applied to the sash of a window. Fig. 2 is a horizontal section in the plane *x x*, Fig. 1. Fig. 3 is a section in the same plane, showing the ventilator closed. Fig. 4 is a vertical section in the plane *y y*, Fig. 2. Fig. 5 is a similar section in the plane *z z*, Fig. 3.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates a base, to which the ventilator B is applied. In the drawings I have shown said base to be the lower sash of a window; but the ventilator can be applied to a door, a wall, or other part of a structure. The ventilator B is made hollow or tubular in form, and in the flat back thereof are formed one or more openings, *b*. When several openings, as shown in the drawings, are made in the back of the ventilator, they extend in a right line through the length of the same. The ventilator is closed at both ends, and provided with a partially or wholly perforated front, *c*, through which the air entering the openings *b* makes its exit. It can be secured to the sash A by the use of any suitable means which will permit it to move in the direction of its length. In the example illustrated in the drawings I show the ends of the ventilator mounted in sockets *d d*, secured to the wood-work of the sash A. In the wood-work of the sash are formed openings *a*, corresponding in number and distance between them to the openings *b* in the back of the ventilator. The ventilator is secured to the sash directly over the openings *a* by the sockets *d d*, previously described.

On inspection of Figs. 1, 2, and 3 it will be seen that when the openings *b* in the back of the ventilator are in line with the openings *a* in the sash the air can pass freely into the ventilator, and subsequently through its perforated front into the room; but when the ventilator is shifted in the direction of arrow 1, Fig. 2, until its end comes into contact with the end of the socket *d*, Figs. 3 and 5, the openings *b* are closed by the back of the ventilator and the ingress of air is obstructed.

To thoroughly distribute the air throughout the body of the ventilator, so that it will issue from all points thereof, and not only at portions directly opposite the openings *b* therein, the portions *e* opposite the openings *b* are not perforated, but left solid, so as to deflect the air in the direction of the length of the ventilator.

In applying my ventilators to windows I usually place a ventilator directly on the lower portion of the lower sash and a ventilator (not shown) on the upper portion of the upper sash. In the lower ventilator the perforations *c* are arranged to extend over the upper curving portion of the front, so as to direct the air upward against the window-panes. In the upper ventilator the perforations are arranged in the lower portion of the front. It is obvious that instead of being perforated the front may be slotted or otherwise cut so as to permit the passage of air therethrough.

By directing a well-distributed current of cold air against the window-panes, as herein described, steaming and frosting of the windows are prevented, as such current counteracts the heat on the inside, and thereby prevents condensation.

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

1. The combination, with a base having transverse openings, of a movable hollow ventilator having openings in its back corresponding to the openings in the base, and a perforated front, substantially as shown and described.

2. The combination, with a base having transverse openings *a*, of a movable hollow ventilator, B, closed at both ends, said ventilator having openings *b* in its back and perforations in its front, and the sockets *d d* affixed to the base for securing the ventilator and permitting a movement of the same in the direction of its length, substantially as shown and described.

3. The combination, with a base having transverse openings, of a movable hollow ventilator having openings *b* in its back corresponding to the openings in the base, and a front having solid portions opposite the openings *b*, and perforated portions between said solid portions, substantially as shown and described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

JAMES W. McKINNON. [L. S.]

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.