

J. W. MARK.
Ventilator.

No. 230,952.

Patented Aug. 10, 1880.

Fig. 1.

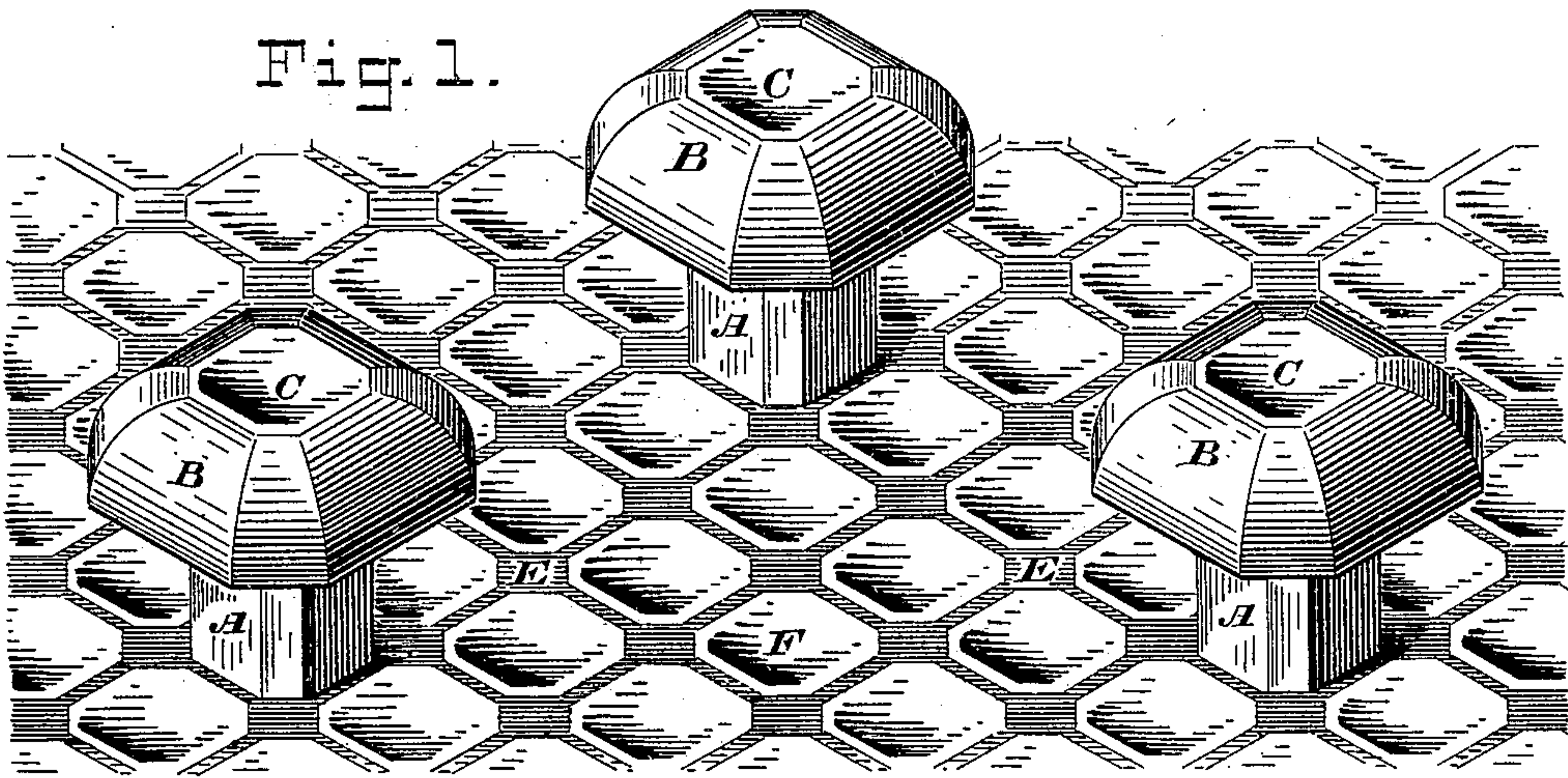


Fig. 3.

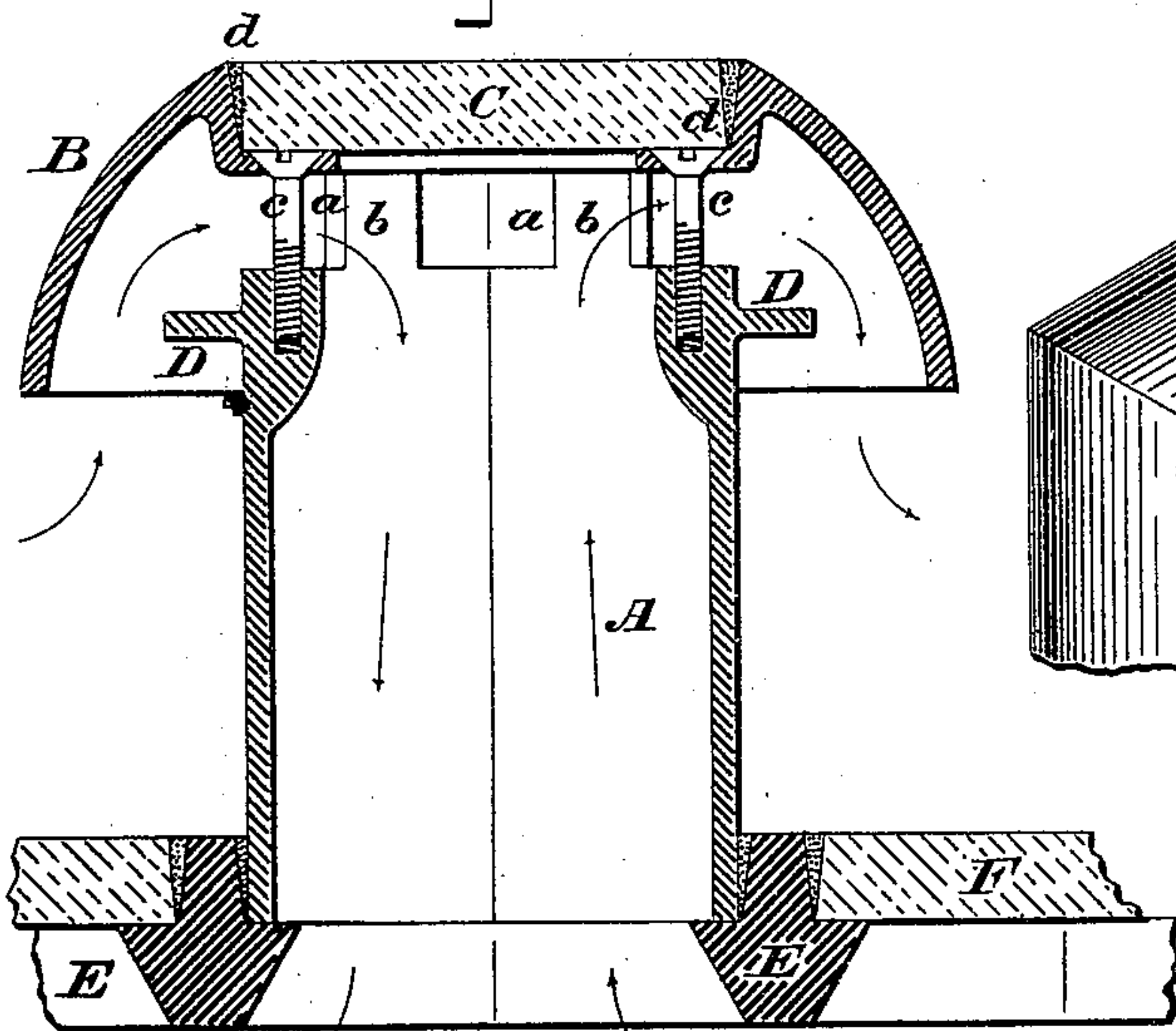


Fig. 4.

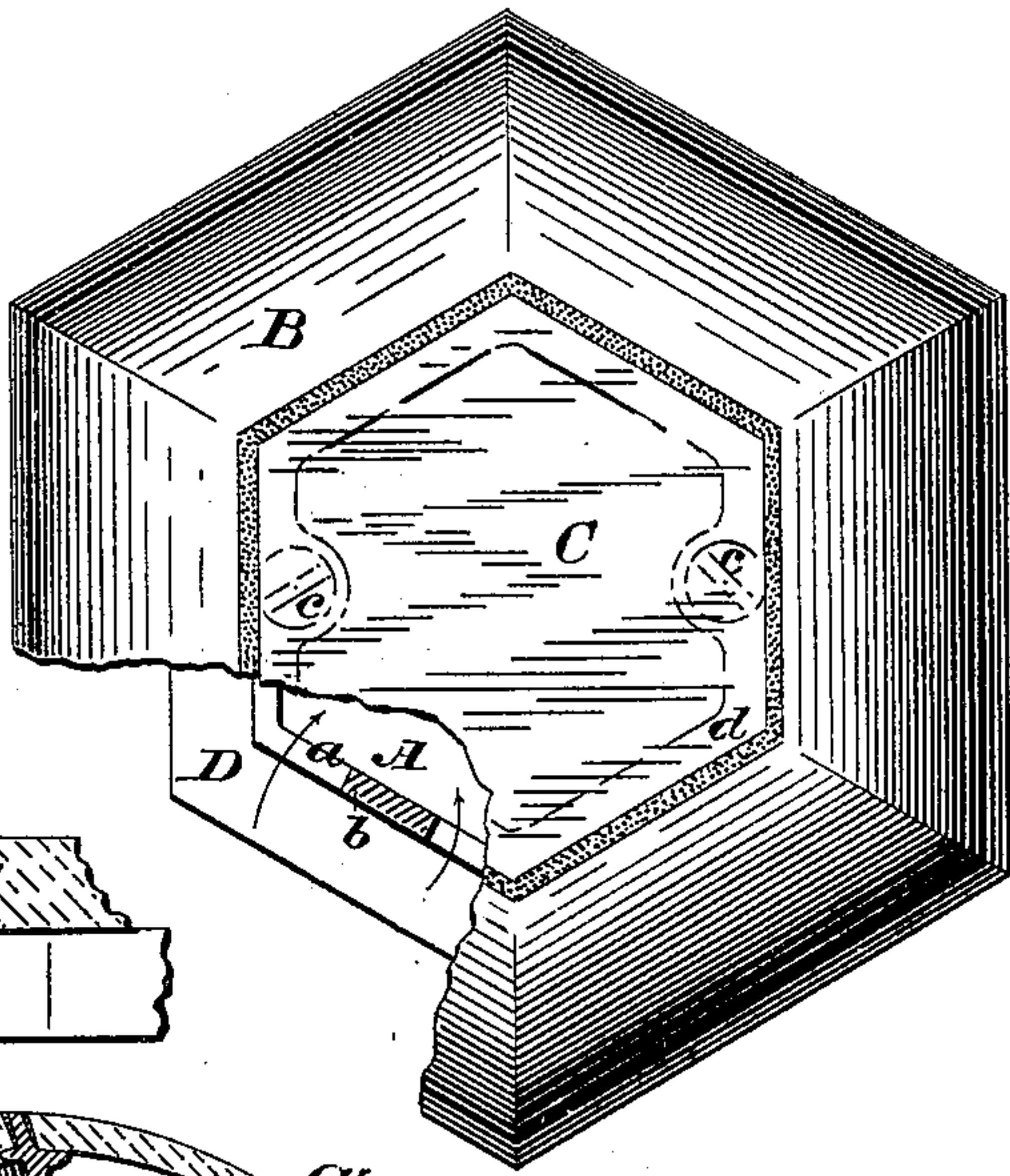
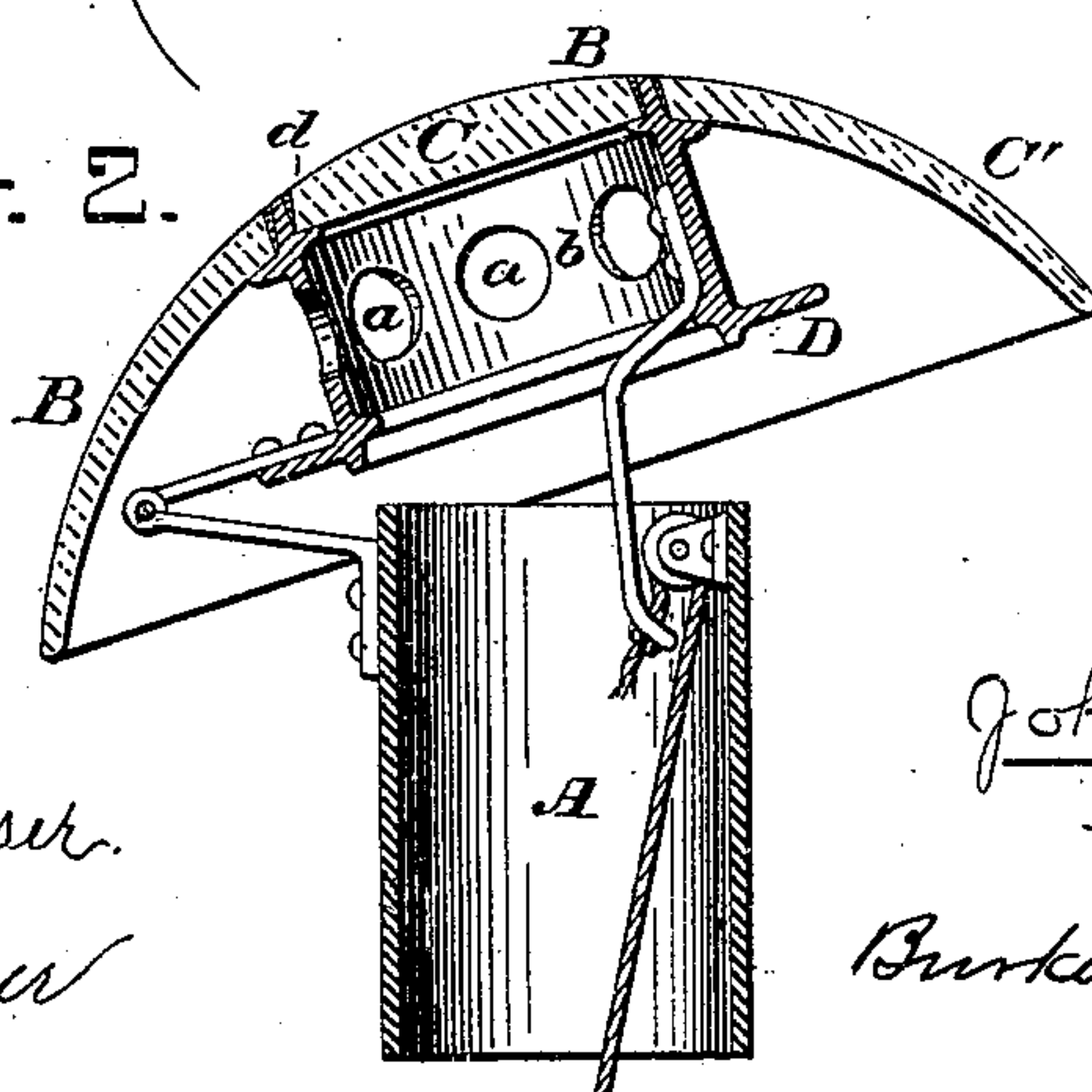


Fig. 2.



ATTEST:

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UNITED STATES PATENT OFFICE.

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VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 230,952, dated August 10, 1880.

Application filed February 21, 1880.

To all whom it may concern:

Be it known that I, JOHN W. MARK, of the city, county, and State of New York, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

My invention is chiefly applicable to sky and roof lights, its objects being to afford a sufficient admission of pure air to the room and to avoid the condensation which takes place in cold weather on the under side of sky or roof lights, and which, by gathering into drops and falling down upon goods beneath, is a source of great annoyance to the occupants of rooms so lighted.

It has been found that the admission of a small quantity of cold air to the under side of the roof-light will effectually prevent the condensation; and it has been attempted to effect this admission of air by locating an ordinary large ventilator in the center or at one side of the roof; but this has produced an objectionable draft through the room, and has prevented the condensation upon only a limited area around it.

My invention provides a suitable ventilator for application to roof-lights and for other purposes; and it consists, first, of a tube whose upper end is provided with air-openings and covered by a hood which is transparent directly over the tube, so as to admit light into the same; second, of a ventilator-tube the bottom of which is capable of being set in a lens-socket of a roof-light and the hood of which has a lens-socket directly over the tube, which conforms in shape and size to the bottom of the tube; and, third, in providing a roof-light with a series of ventilators, each consisting of an air-tube whose top is covered by a hood, they being set at intervals over its surface in the lens-sockets in place of lenses; and it also consists of certain details of construction, all of which will be fully hereinafter set forth.

In the drawings, Figure 1 is a perspective view of a roof-light provided with ventilators of my invention. Fig. 2 is a vertical mid-section of a ventilator embodying all the features of my invention. Fig. 3 is a like section of a modified form of my ventilator, which is shown as set in a roof-light, and Fig. 4 is a plan of

the latter construction removed from the roof and partly in horizontal section.

Let A designate a vertical tube forming the air shaft or duct of the ventilator, and B a hood or cap mounted upon and partially enclosing the upper end of the same. At or near the junction of the tube and hood are formed one or more air openings or passages, *a a*, which may be formed by perforating the tube A, as shown in Fig. 2, or by elevating the hood above it on spurs *b b*, as shown in Fig. 3, as desired.

The portion of the hood which is directly over the tube is formed of transparent material, so as to admit light into the tube.

The hood may be made entirely of transparent material, if desired; but I prefer to construct it in part of metal, and to form directly over the tube A a socketed aperture, *d*, for the reception of a glass plate or lens, C, which may be secured therein by cement, and which, when in place, forms a part of the hood B.

In Fig. 2 I have shown a glass flange or rim, C', surrounding the center lens, C.

To keep rain from spattering up under the hood, as well as to somewhat obstruct or deflect the current of air, I provide a spatter-flange, D, projecting from the tube A below the air-openings *a a* and above the lower edge or skirt of the hood B, so that the latter incloses and protects it.

In order that the amount of air which enters or escapes through the ventilator may be controlled at will, I arrange the hood so that it may be adjusted vertically above the tube, the adjustment being effected from below.

This construction is shown in Fig. 2, the hood being hinged, and a cord and pulley being provided by which to raise it. In lieu of hinging the hood, vertical guides may be provided for it to slide on. The apertures *a a*, through which the air may pass when the hood is seated, may be arranged in the hood or in a part of the tube carried by the hood, as shown.

If it is desired that all passage of air shall cease when the hood is seated the openings *a a* may be omitted.

The form of ventilator just described is well adapted for ordinary purposes of ventilation,

as well as for preventing sweating of roof-lights; but when it is to be used for the latter purpose alone the air-adjusting device may be omitted, rendering the construction simpler and cheaper.

In Figs. 3 and 4 I have shown such form of my ventilator, the hood being fixed permanently to the top of the tube by screws *c c*.

Figs. 1 and 3 show my ventilator as applied to a roof-light, *E* designating the iron frame or sash, and *F F* the glass lights or lenses composing the same.

The bottom of the tube *A* is of the same conformation in plan as the lenses *F F*, so that by removing a lens the ventilator may be set in its place, no special arrangement of the frame or sash being necessary. I can thus readily apply my ventilators to roof-lights that are already constructed and in place. The tube *A* is fixed in the opening in the sash by the use of suitable cement or in any other sufficient manner.

I form the socket in the hood to correspond with the lens-sockets in the frame *E*, so that when a lens, *F*, is removed to make room for the ventilator it may be reset in the hood as the light *C*. The hood *B* should also have the same general shape as the tube *A*, that the ventilators may harmonize with the roof-light in which they are set.

By the use of my ventilators a uniform circulation of air is secured, pure air being admitted into the room in several small and gentle streams, causing no draft, and the condensation of moisture upon the under side of the roof-light is effectually prevented.

I make no broad claim to a ventilator composed in part of transparent material, as I am aware that a box has been raised above the general level of a roof or area covered with glass panes or lights, and a ventilating door or transom set in its side.

I claim as my invention—

1. A ventilator consisting of a tube, *A*, provided with an air opening or openings at or near its top, in combination with a hood or

cap, *B*, whose portion directly opposite the end of the tube is formed of transparent material, that it may admit light into the tube, substantially as set forth.

2. A ventilator consisting of a vertical tube, *A*, provided with an air opening or openings, *a*, and with a projecting spatter-flange, *D*, in combination with a hood, *B*, mounted upon and inclosing the upper end of said tube and extending below the said spatter-flange, substantially as set forth.

3. A roof-light consisting of a frame, *E*, and lenses *F F*, provided with a series of ventilators arranged at intervals over its surface, each ventilator consisting of a tube, *A*, provided with air-openings and covered by a partially-transparent hood, *B*, which admits light into the tube, each being set in one of the lens-sockets in the frame *E* in the place of one of the lenses *F F*, whereby air is admitted through the roof in a series of divided currents, and light is admitted through the ventilators as well as through the roof-lenses, substantially as set forth.

4. A ventilator consisting of a tube, *A*, whose lower end is adapted to be set into a lens-socket in a roof-light, and a hood, *B*, covering the upper end of the tube and provided with a socketed aperture, *d*, arranged directly over the said tube and adapted to receive a roof-light lens of the same conformation as the lower end of the tube *A*, substantially as and for the purposes set forth.

5. A ventilator consisting of a vertical tube, *A*, and a hood, *B*, covering the upper end of the same, and capable of being lifted therefrom, in combination with means for so lifting it from below, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN WM. MARK.

Witnesses:

ARTHUR C. FRASER,
HENRY CONNETT.