

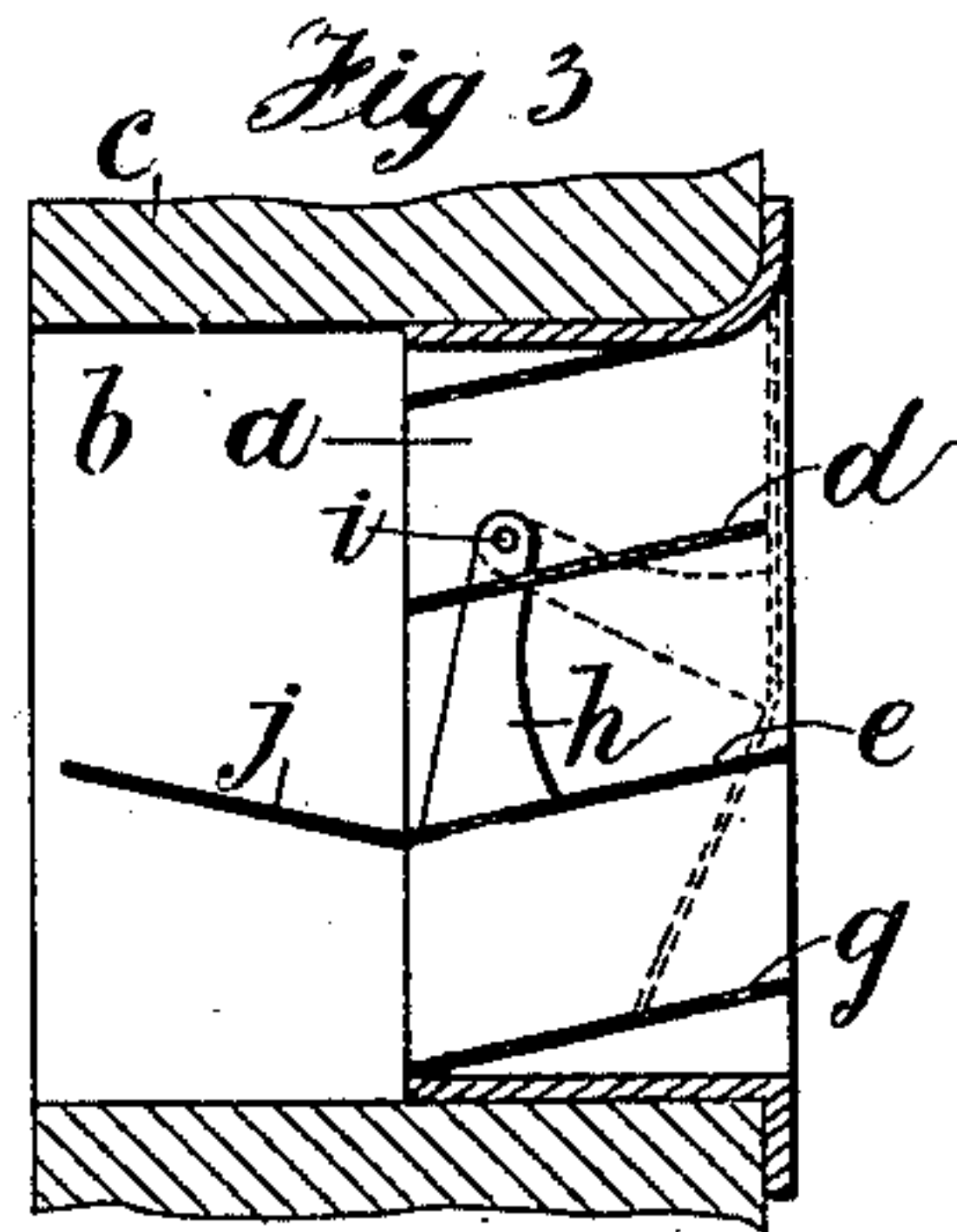
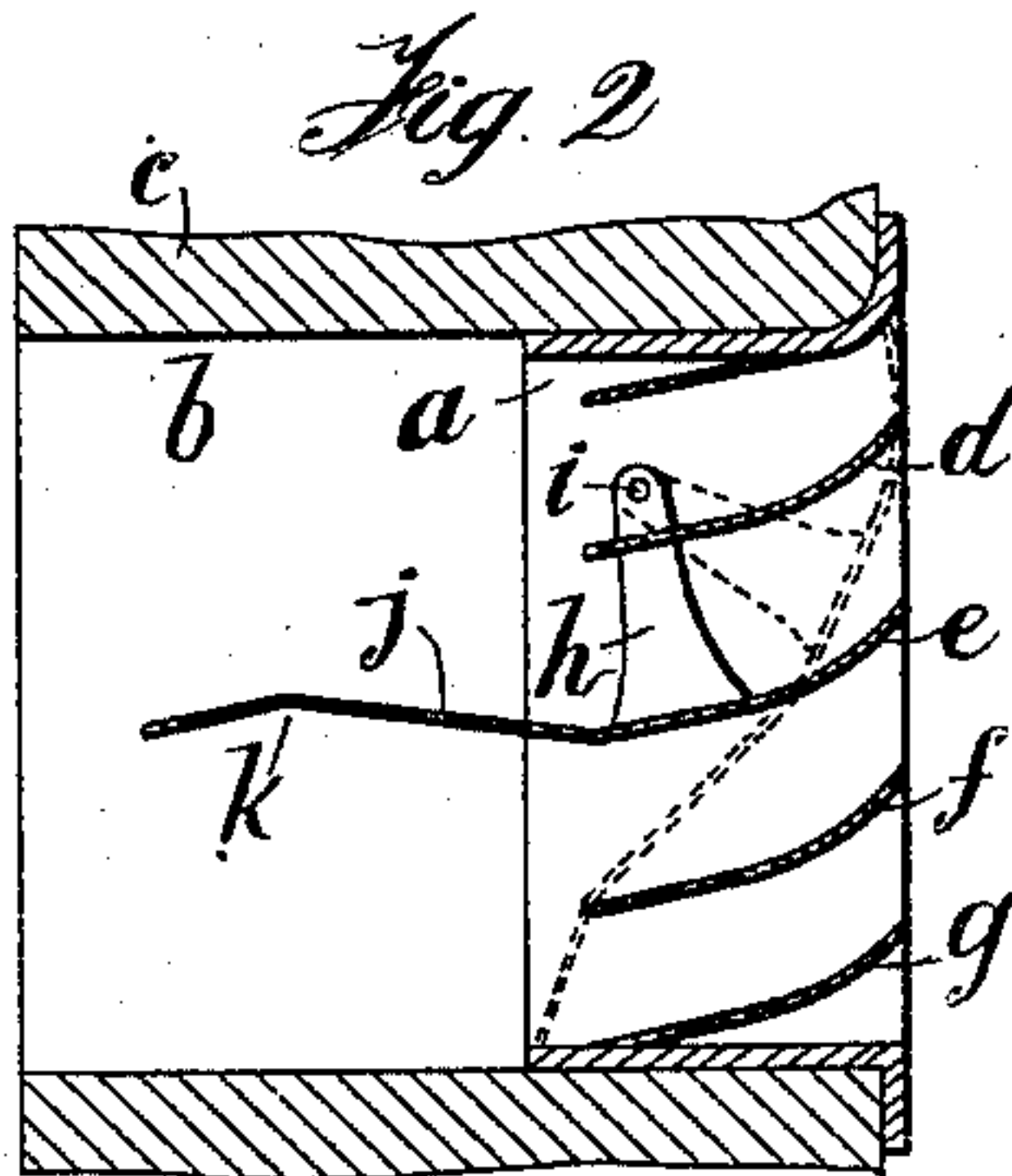
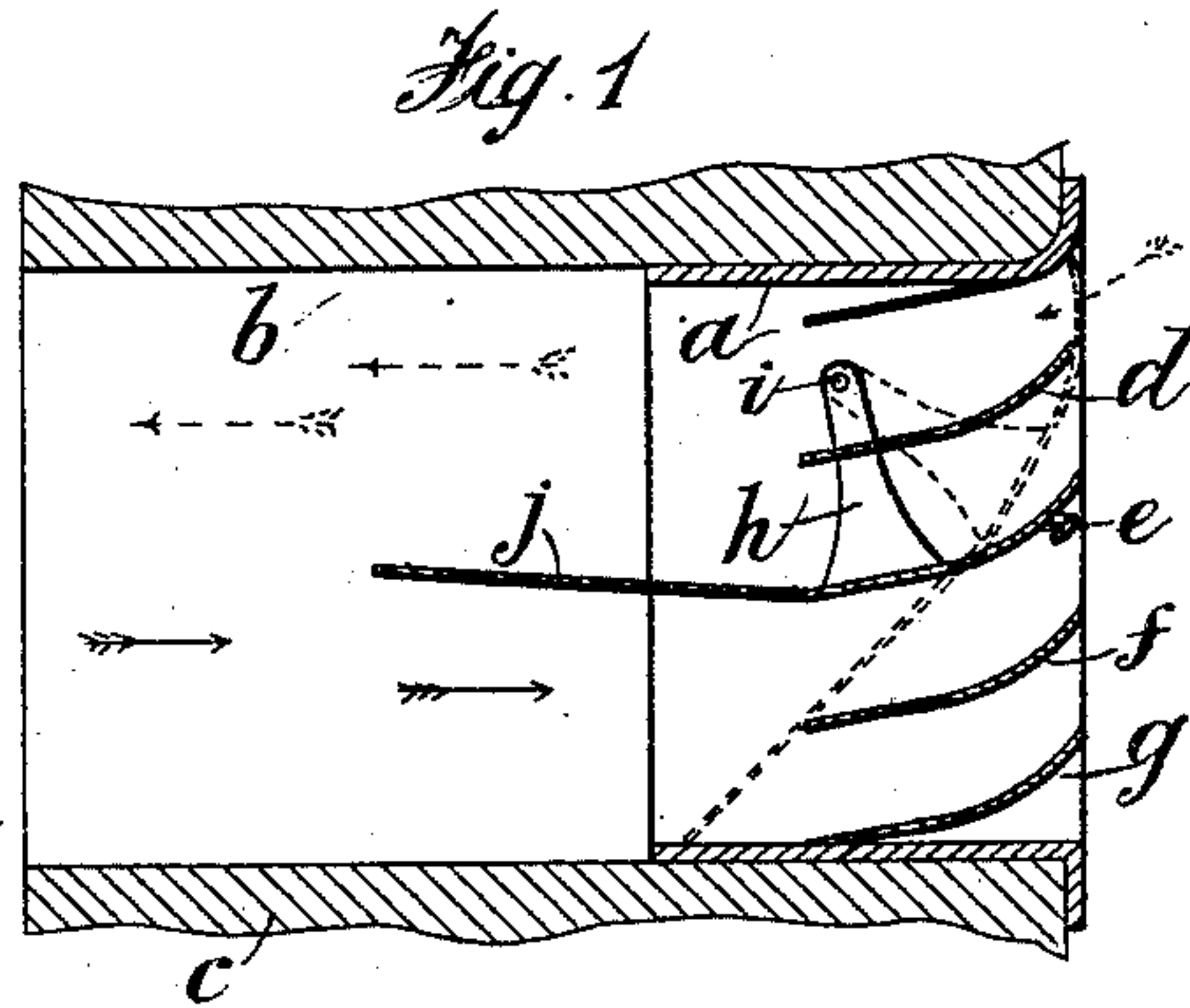
No. 676,259.

Patented June 11, 1901.

W. B. JOHNSON.
VENTILATOR.

(Application filed May 29, 1900.)

(No Model.)



Witnesses
Robert Crail.
Henry Duggan.

Inventor
W. B. Johnson

UNITED STATES PATENT OFFICE.

WILLIAM B. JOHNSON, OF LIVERPOOL, ENGLAND.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 676,259, dated June 11, 1901.

Application filed May 29, 1900. Serial No. 18,358. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BURGELAND JOHNSON, a subject of the Queen of Great Britain, residing at Liverpool, in the county of Lancaster, England, have invented new and useful Improvements in Ventilators, of which the following is a specification.

The object of this invention is to provide a ventilator of simple construction by which the passage of air into a room may be directed so as to prevent drafts onto persons in such room and also be easily regulated or completely stopped, as desired. I attain this object by appliances such as are illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of a ventilator under my invention. Fig. 2 is a longitudinal section of a modification of the ventilator. Fig. 3 is a longitudinal section of another modification.

For the purposes of my invention and referring to Fig. 1, I make use of a box or frame *a*, fitting within an air opening or passage *b* through the wall *c* of the room or space to be ventilated. *d e f g* are curved vanes or plates fixed to the sides of the box and so disposed that air entering in the direction of the arrow is directed upward and prevented from blowing down onto persons in the room. One of the vanes *e* is made movable and is provided with side pieces or cheeks *h*, pivoted to the box at *i*, so that such vane can be moved either to partly close the openings between the vanes or can be moved into the position shown by dotted lines to completely close the ventilator and prevent entrance of air. The pivot *i* is preferably placed at such distance from the plane of the vane that the end of the vane will not project into the room when the ventilator is open, and where the side pieces *h* pass through the vane *d* such vane is slotted to allow movement of the side pieces. The vane *e* is formed with an extension-piece *j*, movable with the vane and which acts to close the lower part of the ventilator when shut, and when open such extension-piece prevents eddy-currents in the box, and guides the air in parallel layers to the vanes *d e f g*. In some cases when the atmosphere is still and the air in the room highly heated a current of hot air will pass out along the

top of the passage *b*, as shown by the dotted arrows, and a current of cold air will enter along the bottom, the extension-piece *j* enabling this to take place by preventing the interference of the two currents. The vanes may instead of being fixed to the box *a* be fixed to a loose frame fitting into the box and which can be withdrawn therefrom for the purpose of cleaning the vanes.

Referring to Fig. 2, in this modification the extension-piece *j* on the vane *e* is bent at *k*, so that a shorter length of extension-piece is required to effect the closing than when it is straight. This is convenient when the ventilator is placed in comparatively thin walls. The bend *k* does not interfere with the inflow of air to any appreciable extent.

Referring to Fig. 3, in this modification there are only three vanes *d e g*, and the extension-piece *j* of the vane *e* is so arranged that the end beds on the lowest vane *g* when the ventilator is closed, as shown by the dotted lines, a still shorter extension-piece *j* than that in Fig. 2 being used.

I do not confine myself to the particular modifications shown, as many others may be devised without departing from my invention. For instance, when it is desired to direct the air to any particular place the vanes may be suitably arranged for that purpose.

I claim—

1. In a ventilator, the combination with an air-channel, of stationary vanes near one end thereof, and a movable vane between two of the stationary vanes and arranged to close the space between them, said movable vane having an extension arranged to close the space between other stationary vanes; substantially as described.

2. In a ventilator the combination with an air-passage of stationary vanes near one end thereof, a movable vane arranged between the stationary vanes, side pieces attached to the movable vane, and pivots on which the movable vane is hung by means of the side pieces, said movable vane having an extension arranged to close the space between other stationary vanes, substantially as described.

3. In a ventilator the combination with an air-passage of stationary vanes near one end

thereof a movable vane arranged between
the stationary vanes, and a bent extension-
piece connected with the movable vane, said
movable vane and extension - piece being
5 adapted to close the openings between the
vanes, substantially as described.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

W. B. JOHNSON.

Witnesses:

ROBERT CRAIL,
HENRY DUGGAN.