

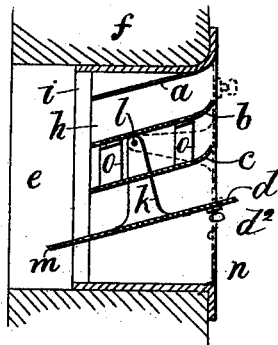
No. 676,262.

Patented June 11, 1901.

W. B. JOHNSON.  
VENTILATOR.

(No Model.)

(Application filed Mar. 5, 1901.)



Witnesses

E. Owen.  
M. Harris

Inventor

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# UNITED STATES PATENT OFFICE.

WILLIAM BURGELAND JOHNSON, OF LIVERPOOL, ENGLAND.

## VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 676,262, dated June 11, 1901.

Application filed March 5, 1901. Serial No. 49,674. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM BURGELAND JOHNSON, a subject of the King 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 objects of the invention are to provide a ventilator by which when open or partly open air entering a room may be directed toward certain points and which when closed will present a flush or level surface to the interior of the room without ledges or recesses whereon dust may collect. I attain these objects by appliances such as are illustrated in the accompanying drawing, which is a longitudinal section of a ventilator constructed according to my invention.

On the drawing, *a b c d* are vanes or plates fitted within an opening or air-passage *e* through the wall *f* of the room or space to be ventilated. The vanes *a b* are preferably fixed to pieces *h*, placed at each side of and movable into or out of a box *i*, so that such side pieces and the vanes may be easily removed for cleaning. The vanes connect the side pieces *h* rigidly together. The box *i* is fitted into the opening *e* in the wall. The vane *c* is not fixed by its ends to the side pieces *h*, but is supported by brackets or the like *o* from the vane *b*, so that the ends of the vane *c* are clear of the side pieces *h*, as hereinafter described. The vane *d* is provided at the sides with arms *k*, pivoted to the sides *h* at *l*. The position of the pivot *l* is so arranged relatively to the plane of the vane *d* that when it is desired to completely close the venti-

lator the vane *d* can be moved into the position shown by dotted lines *d'*, flush or level with the outer face of the box *i*. The ends of the vane *c* are by means of the brackets *o* held at such distance from the sides *h* as to allow free motion between such ends and side pieces of the arms *k*, connected to the vane *d*. The lower edge *m* of the vane *d* rests when closed against a vertical stop or closing piece or plate *n*, secured to the side pieces *h* and flush with the outer face of the box *i*. The vane *d* may be retained in any desired position between closed and full open by means of any usual frictional device or catch.

The flush front of the vane *d* allows of ornamentation, so as to present a pleasing appearance when the ventilator is closed.

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

In a ventilator the combination with an air-passage of a flat vane secured to arms pivoted at the sides of the passage at one end thereof and adapted in conjunction with a vertical stop-plate to close the air-passage, independent vanes fitted within the passage adjacent to the flat-armed vane, at least one of such vanes being suspended from the vane above it and clear of the arms of the flat vane substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM BURGELAND JOHNSON.

Witnesses:

E. OWEN,  
M. HARRIS.