A. W. STEWART.

VENTILATING LOUVER.

APPLICATION FILED SEPT. 23, 1908.

911,457. **Patented Feb. 2, 1909.**

2 SHEETS—SHEET 1.

Fig 1.

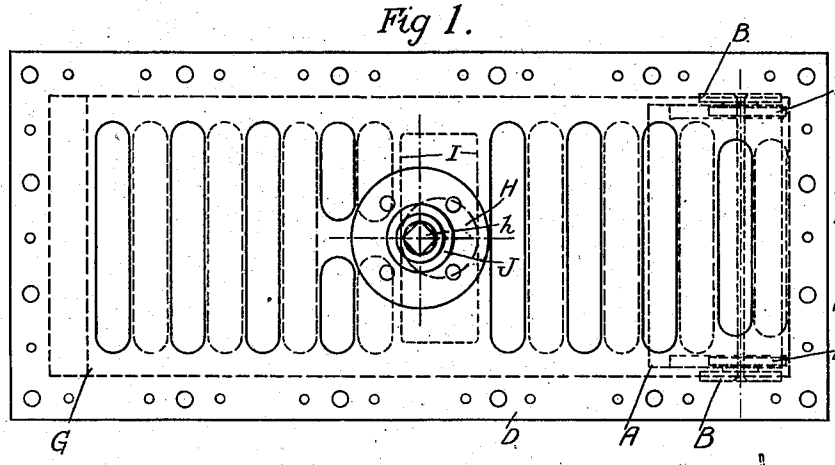


Fig 2.

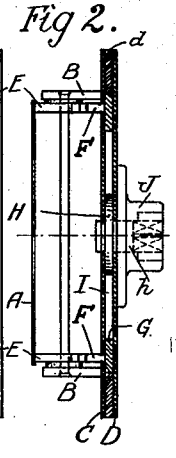


Fig 3.

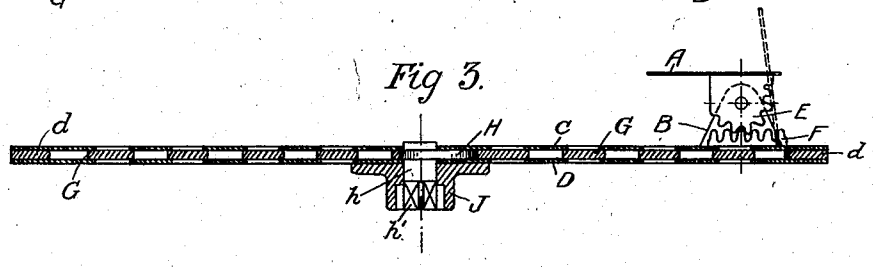


Fig 4.

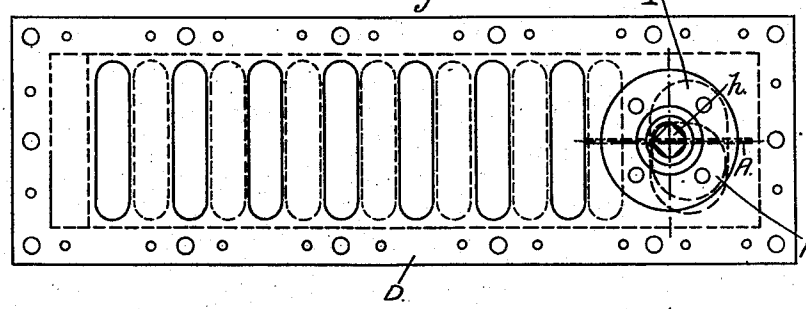


Fig 5.

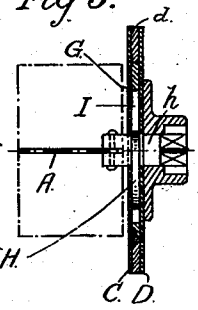
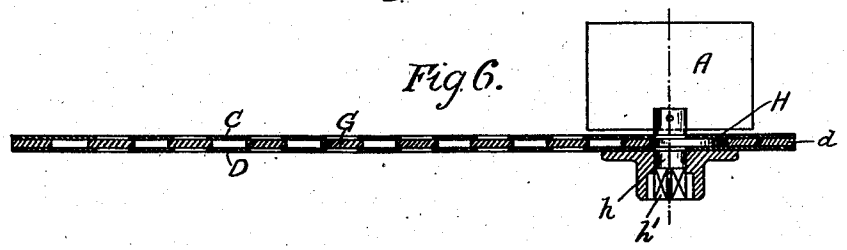


Fig 6.



Witnesses:-

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Inventor:-

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A. W. STEWART.

VENTILATING LOUVER.

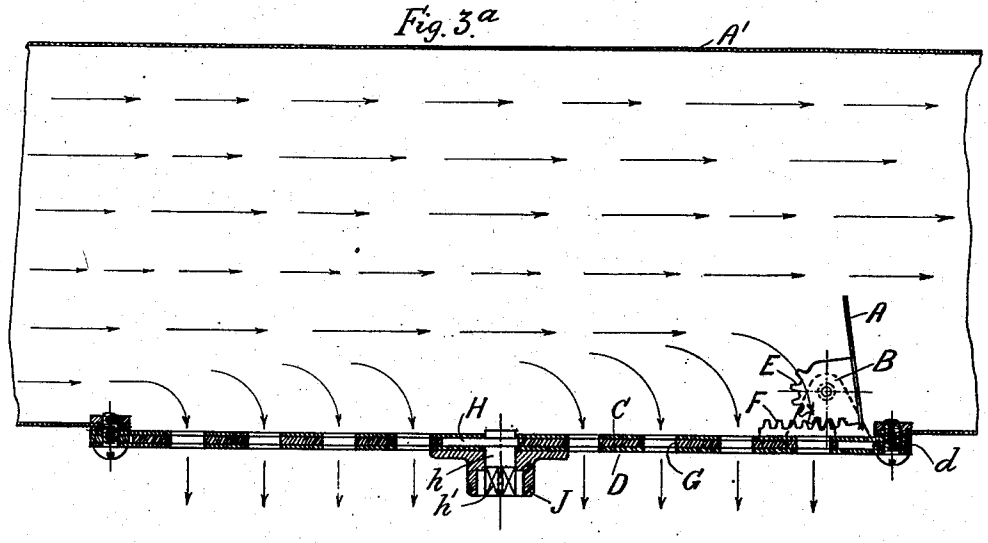
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2 SHEETS—SHEET 2.

Fig. 3a



Witnesses:-

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UNITED STATES PATENT OFFICE.

ALEXANDER WILLIAM STEWART, OF GLASGOW, SCOTLAND.

VENTILATING-LOUVER.

No. 911,457. Specification of Letters Patent. Patented Feb. 2, 1909.

Application filed September 23, 1908. Serial No. 454,411.

To all whom it may concern:

Be it known that I, ALEXANDER WILLIAM STEWART, a subject of the King of the United Kingdom of Great Britain and Ireland, and residing at Glasgow, Scotland, have invented a certain new and useful Improvement in Ventilating-Louvers, of which the following is a specification.

This invention relates to ventilating louvers of the hit-and-miss type more especially of the kind in which a deflecting plate is used to deflect the air through the ventilator openings in its passage along the air supply trunk or the like.

The primary object of the present invention is to provide means whereby the deflecting plate is automatically controlled by the means for imparting movement to the usual sliding plate of the louver either directly or through the intermediary of said sliding plate so that according to the degree of opening of the louver the deflector plate correspondingly varies the resistance to the passage of the air along the trunk.

In the accompanying drawings Figure 1 is an elevation, Fig. 2 is a transverse section and Fig. 3 is a horizontal section of a louver embodying the invention. Fig. 3ª is a horizontal section showing the louver attached to the air supply trunk. Figs. 4, 5 and 6 are like views to Figs. 1, 2 and 3 but show an alternative construction.

In the preferred form shown in Figs. 1 to 3ª, the louver which is attached to the air supply trunk A^1 (Fig. 3ª) has the deflecting plate A pivoted to it at one end on bracket arms B secured to the fixed frame of the louver, said fixed frame comprising two apertured plates C, D, with an interposed frame *d* serving as a distance piece. To said deflecting plate A is attached a toothed quadrant or quadrants E adapted to gear with a toothed rack or racks F on the apertured sliding plate G of the louver which sliding plate G is mounted between the plates C, D, which form an airtight joint with the sliding plate. The arrangement is such that when the louver is closed the deflecting plate A is in horizontal position and according to the degree of opening of the louver the deflecting plate A is raised correspondingly.

In lieu of the deflecting plate A being operated by means of toothed quadrant and rack gear E, F, equivalent devices may be employed to produce the same result.

Any well known device may be employed to operate, and adjust the position of, the sliding plate of the louver; but preferably a cam H is employed which cam is adapted to work in conjunction with a slot I in the sliding plate G, and is mounted between the fixed plates C, D, which also provide bearings for the ends of the cam spindle *h*; or the cam H may be fitted between a bridge piece and the plate D, said bridge piece being secured to the plate D and accommodated in a slot in the plate C. The outer end h^1 of the cam spindle *h* which may be fitted in any suitable position is protected by a guard bearing J and is of square or like section for engagement with a portable box key by which means the cam H and likewise the slotted sliding plate G are operated and adjusted to any desired extent.

In the alternative construction shown in Figs. 4, 5 and 6, the perforated or slotted sliding plate G of the louver is also fitted between two correspondingly perforated or slotted plates C, D, which, with the interposed frame *d* comprises the stationary part of the louver, the inner faces of said stationary plates C, D, being arranged to form an air tight joint with the faces of the sliding plate G. The said sliding plate G is operated in the manner described above; but in lieu of the deflecting plate A being actuated by movement of the sliding plate G, said deflecting plate A is secured after the manner of a butterfly valve to the inner end of the spindle *h* which actuates the cam H or other device for imparting movement to the sliding plate G so that on movement of the said spindle *h*, which in this construction is fitted at one end of the louver, the deflecting plate A assumes a position corresponding to that of the sliding plate G and correspondingly varies the resistance to the passage of the air along the supply trunk.

Having now described my invention what I claim and desire to secure by Letters Patent of the United States is:—

1. A ventilating louver comprising a stationary apertured member, a sliding apertured member guided by said stationary member, and a deflector movable with said sliding member.

2. A ventilating louver comprising a stationary apertured member a sliding apertured member guided by said stationary member, a deflector, and means for mov-

ing said sliding member and said deflector simultaneously.

3. A ventilating louver comprising a stationary apertured member, a sliding apertured member guided by said stationary member, a deflector connected to said fixed member and movable with said sliding member.

4. A ventilating louver comprising a stationary apertured member, a sliding apertured member guided by said stationary member, a deflector, means operable to move said sliding member, and devices for communicating movement from said sliding member to said deflector.

5. A ventilating louver comprising a stationary apertured member, a sliding apertured member guided by said stationary member, turnable cam devices operable to move said sliding member, and a deflector movable with said sliding member.

6. A ventilating louver comprising a stationary apertured member, a sliding apertured member guided by said stationary member, means operable to move said sliding member, a deflector pivoted to said stationary member and rack and sector gearing for communicating movement of said sliding member to said deflector.

7. A ventilating louver comprising two stationary apertured plates, an apertured plate slidable between said stationary plates, cam devices operable to move said sliding plate, a deflector pivoted to one of said stationary plates, and rack and sector gearing for communicating movement of said sliding plate to said deflector.

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

ALEXANDER WILLIAM STEWART.

Witnesses:

WALLACE CRANSTON FAIRWEATHER,
JOHN MCCLEARY.