

No. 839,386.

PATENTED DEC. 25, 1906.

L. L. HOLLADAY.
VENTILATING FAN.
APPLICATION FILED AUG. 14, 1903.

Fig. 2.

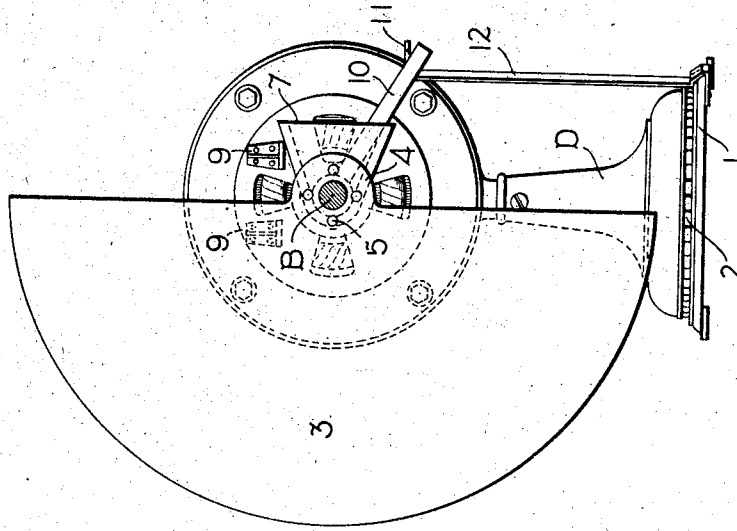
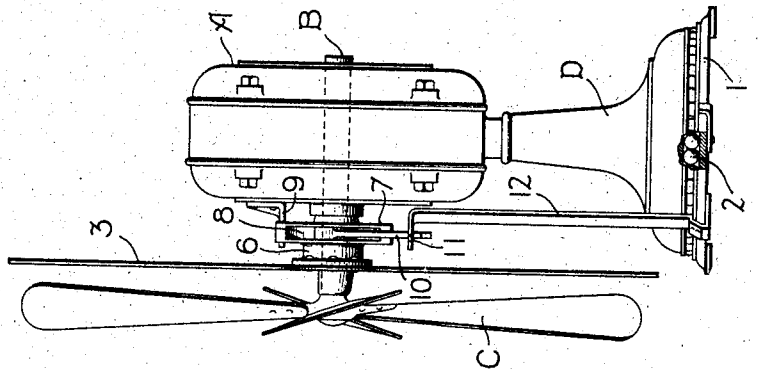


Fig. 1.



Witnesses.

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UNITED STATES PATENT OFFICE.

LEWIS L. HOLLADAY, OF LYNN, MASSACHUSETTS, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

VENTILATING-FAN.

No. 839,386.

Specification of Letters Patent.

Patented Dec. 25, 1906.

Application filed August 14, 1903. Serial No. 169,484.

To all whom it may concern:

Be it known that I, LEWIS L. HOLLADAY, a citizen of the United States, residing at Lynn, in the county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Ventilating - Fans, of which the following is a specification.

The present invention relates to rotary ventilating-fans, and more particularly to that class of rotary fans which are adapted to be automatically shifted about a pivoted axis, so that the air-blast created thereby sweeps over a considerable area instead of being confined to one particular path.

The object of my invention is to provide an improved device of this character and in which oscillations about a pivotal axis are produced by the thrust of its own air-blast controlled by means which may be applied to the ordinary forms of motor-fans in such a manner as not to detract from their general design or appearance.

The invention consists in combining with a pivotally-supported motor-fan means for screening more or less of the air-impelling member on alternate sides of the pivotal axis and means for reversing the position of the screening means.

My invention will be readily understood upon reference to the following description and the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a pivotally-supported motor-fan embodying one form of my invention; and Fig. 2 is a front elevation thereof with the blast-impelling member removed.

The motor A, the armature-shaft B, to which the blast-impelling blades C are connected, and the upright supporting-base D may be of any of the ordinary constructions. The upright base D is carried by a subbase 1 and pivotally supported thereon about a pivotal axis by a concentric ball-bearing 2, located near the peripheries of the bases.

The means for screening the blades C, so that the air thrust thereon will be unequal on opposite sides of the plane of the axes of rotation and oscillation, consists of an eccentric plate or sector 3, supported in proximity to the blades C and adapted to be shifted from its position on one side of the plane of the axes, as indicated in Fig. 2, to the opposite side thereof. The sector 3 is provided with a

side lug 4, having an aperture through which the shaft B passes, and is secured by a row of rivets 5, concentric with the aperture, to a sleeved block 6, journaled upon the shaft. The block 6 has projecting radially from its rear end an arm 7, having an outwardly-flaring recess 8 therein and adapted to engage at its respective outer edges with stop projections 9, secured to the front end of the frame of the motor A to prevent the sector 3 from swinging beyond its respective operative positions when shifted from one to the other.

The means for shifting the sector 3 from one side of the vertical plane to the other consists of a narrow lever 10, pivoted at its inner end about the shaft B, extending outwardly through the flaring recess 8 and adapted by the lost motion permitted by the wide space between the flaring walls of the recess, which constitute spaced shoulders, to normally rest with its outer end below the horizontal plane of the shaft B, so that when it meets some stationary part 11 as it is carried along in the oscillation of the fan about its vertical axis it will be caused to turn, downwardly and rearwardly, carrying with it the sector 3 until the center of gravity of the latter has been moved to the opposite side of its pivotal point, when the disk will fall under the action of gravity to its reversed position and produce a counter oscillation of the fan. The stationary part 11 consists of an outturned end of a bracket 12, extending up from the subbase D.

In the arrangement shown each oscillation comprises a complete rotation of the fan. However, in cases where it is desirable to restrict the movement of the fan to oscillations of less than three hundred and sixty degrees a second bracket 12 may be provided, which will be spaced from the first distance proportional to the length of oscillations desired.

I do not desire to restrict myself to the particular embodiment herein described and illustrated, for it is apparent that it may be changed and modified in many respects without departing from my invention.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination with a pivotally-supported ventilating-fan, of a screen mounted on the axis of the blast-impelling member with its center of effective area normally to one side of said axis, and means for moving

said screen from one side to the other of said axis

2. The combination with a pivotally-supported ventilating-fan, of a screen pivotally mounted on the axis of the blast-impelling member with its center of effective area normally to one side of said axis, and means for moving said screen from one side to the other of said axis.
3. The combination with a pivotally-supported ventilating-fan, of a screen mounted on the axis of the blast-impelling member, with the center of its effective area normally to one side of said axis, means for moving said screen from one side to the other of said axis, and means to limit the movement of said screen.

4. The combination with a pivotally-supported ventilating-fan, of a screen mounted

for eccentric movement in proximity to the blast-impelling member thereof and having spaced shoulders thereon, and a lever supported between said shoulders and adapted to engage some stationary part.

5. The combination of a pivotally-supported ventilating-fan, of a sleeved block journaled upon the shaft of the blast-impelling member thereof and provided with a radial recess, a screen secured at one edge to said block, and a lever pivoted upon said shaft extending through said recess in the block and adapted to engage some stationary part.

In witness whereof I have hereunto set my hand this 12th day of August, 1903.

LEWIS L. HOLLADAY.

Witnesses:

DUGALD MCK. MCKILLOP,
JOHN J. WALKER.