J. N. COHEN.

VENTILATOR.

APPLICATION FILED NOV. 11, 1911.

1,042,399. Patented Oct. 29, 1912.

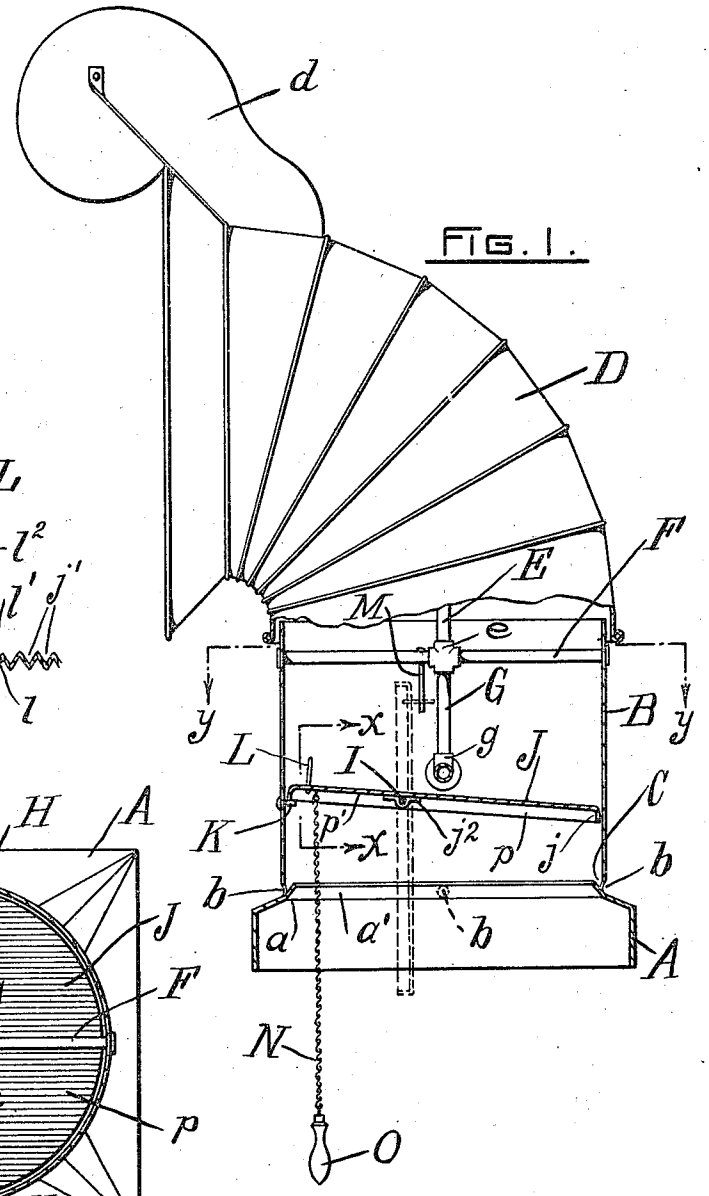

FIG. 1.

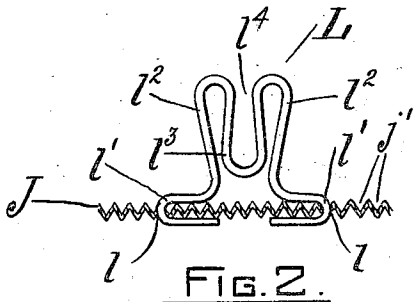

FIG. 2.

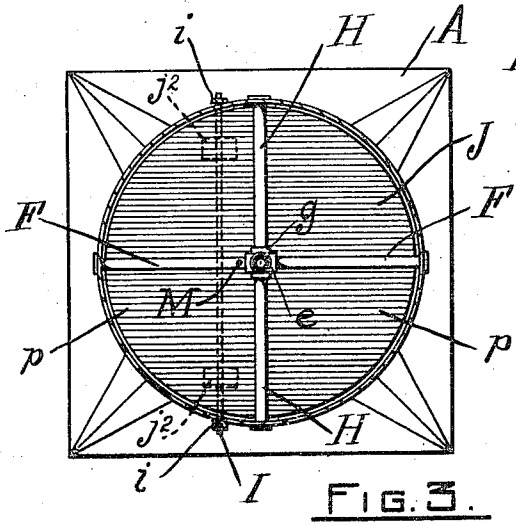

FIG. 3.

WITNESSES.

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VENTILATOR.

1,042,399. Specification of Letters Patent. Patented Oct. 29, 1912.

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To all whom it may concern:

Be it known that I, JACOB N. COHEN, a subject of the Czar of Russia, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

My invention relates to ventilators, and more particularly to the damper and cooperating parts thereof.

The purposes of my invention are primarily to guide and discharge from the interior of the ventilator the water entering the ventilator and the moisture accumulating upon the damper and other parts by reason of condensation; also to facilitate and render more certain the action of the damper itself; and to attain the above ends by a simple and inexpensive mechanism.

To the enumerated ends essentially my invention consists in such novel parts and in such combinations of parts as fall within the scope of the appended claims.

In the accompanying drawings which form a part of this specification and in which like reference characters indicate like parts throughout the views,—Figure 1 is a side elevation, partially in vertical central section, of a ventilator embodying my novel invention. Fig. 2, a section of the same on line *x x* of Fig. 1, and Fig. 3, a section taken on line *y y* of Fig. 1.

A is a hollow rectangular base having a circular opening, *a*, in its top bounded by an inwardly directed upwardly inclined annular flange *a'*. Fixed to or integral with the top of the base is a cylindrical casing B provided at its bottom margin with openings *b* in alinement with flange *a'*. The flange and the casing wall combine to form an internal trough or gutter C. Upon the casing is mounted the cowl member D with the usual vane *d*. The means for mounting the cowl may be of any preferred or usual construction comprising the usual vertical pivot rod E connected by a joint *e* with diametrically disposed braces F fixed to the casing, and with a vertical rod G connected by a joint *g* to a horizontal brace H.

Transversely of the casing at one side of its center is a pintle I fixed to the casing by nuts *i* or otherwise. Pivotally mounted upon the pintle is a circular damper plate J, provided with a series of straight parallel channels *j'* and with an annular downwardly directed marginal flange *j* nearly in contact with the casing wall. A strap j^2 fixed to the bottom of the plate J loosely receives the pintle I and forms a journal therefor. In the casing wall at a point not lower than the pintle is an inwardly directed stop or lug K upon which rests the edge of the flange *j*. Fixed to the plate J near the stop K is a vertically disposed clasp L. In detail this clasp is bent up from resilient wire having its ends passing through openings *l* in the plate J and clamped tightly thereto by loops *l'*, whence the material is bent to form two interspaced vertical loops l^2 and an intermediate downwardly directed loop l^3. The opening l^4 of the last mentioned loop is retracted relatively to the closed or lower portion thereof. In one of the braces F above the plate J is fixed a downwardly directed pin M.

Near the member L on the plate J is fixed the upper end of a chain N to whose lower end is attached a weighted handle O. Since the damper plate J is pivoted at one side of its center it is evident that the weight of one portion *p* of the plate will be greater than the other portion of the plate *p'*. The weight of the portion *p'* to which the chain N is attached is, together with the handle O, in excess of the weight of the portion *p*. Therefore the flange *j* is normally held down upon the stop K; but when the handle O is manually lifted the weight of the portion *p* is sufficient to force the plate J into a vertical position as shown in broken lines in Fig. 1, whereby the pin M, which is of greater diameter than the width of the loop opening l^4, is forced into the loop l^3 where it is held against accidental escape by the resilient loops l^2. The described balancing of the damper parts makes its operation possible with very little exertion on the part of the manipulator. The height of the member K and the depth of the flange *p* relatively to the plane of the pintle I causes the damper plate J when in normal or closed position to be inclined.

The corrugations upon the plate J together with its inclination induces a certain delivery of all moisture accumulated upon both the top and bottom of the plate J. This collected liquid is precipitated into the gutter C whence it percolates through the openings *b* to the exterior of the base A onto

the roof, so that no precipitation of moisture is possible from any portion of the ventilator through the opening *a*.

What I claim is,—

1. In a ventilator, the combination with the casing, of a pintle mounted in the casing transversely thereof, a stop member fixed in the casing, a damper plate upon the pintle, and a downwardly directed marginal flange upon the plate normally resting upon the stop member.

2. In a ventilator, the combination with the casing, of a pintle mounted in the casing transversely thereof and near the center of the casing, a stop member fixed in the casing in the plane of the pintle, a damper plate upon the pintle, a downwardly directed marginal flange upon the plate normally resting upon the stop member, and a gutter in the casing below the flange.

3. In a ventilator, the combination with a casing provided with openings near its bottom, of an upturned internal flange upon the perimeter of the casing adjacent the openings, a pintle mounted in the casing above the flange and transversely of the casing, a damper plate upon the pintle, a stop member fixed in the casing, and a flange upon the damper plate resting upon the stop member and overhanging the first mentioned flange.

4. In a ventilator, the combination with the casing, of a brace within the casing extending transversely thereof, a pintle mounted in the casing transversely thereof at one side of the center of the casing, a stop member in the casing, a damper plate upon the pintle, a flange upon the plate resting upon the stop member, a chain attached to the plate adjacent the stop member, a weighted handle upon the chain, and a catch upon the plate near the stop member comprising two interspaced resilient loops, and a pin in the brace in the path of the loops of greater diameter than the space between the loops.

In testimony whereof I have affixed my signature in presence of two witnesses.

JACOB N. COHEN.

Witnesses:
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HORATIO E. BELLOWS.