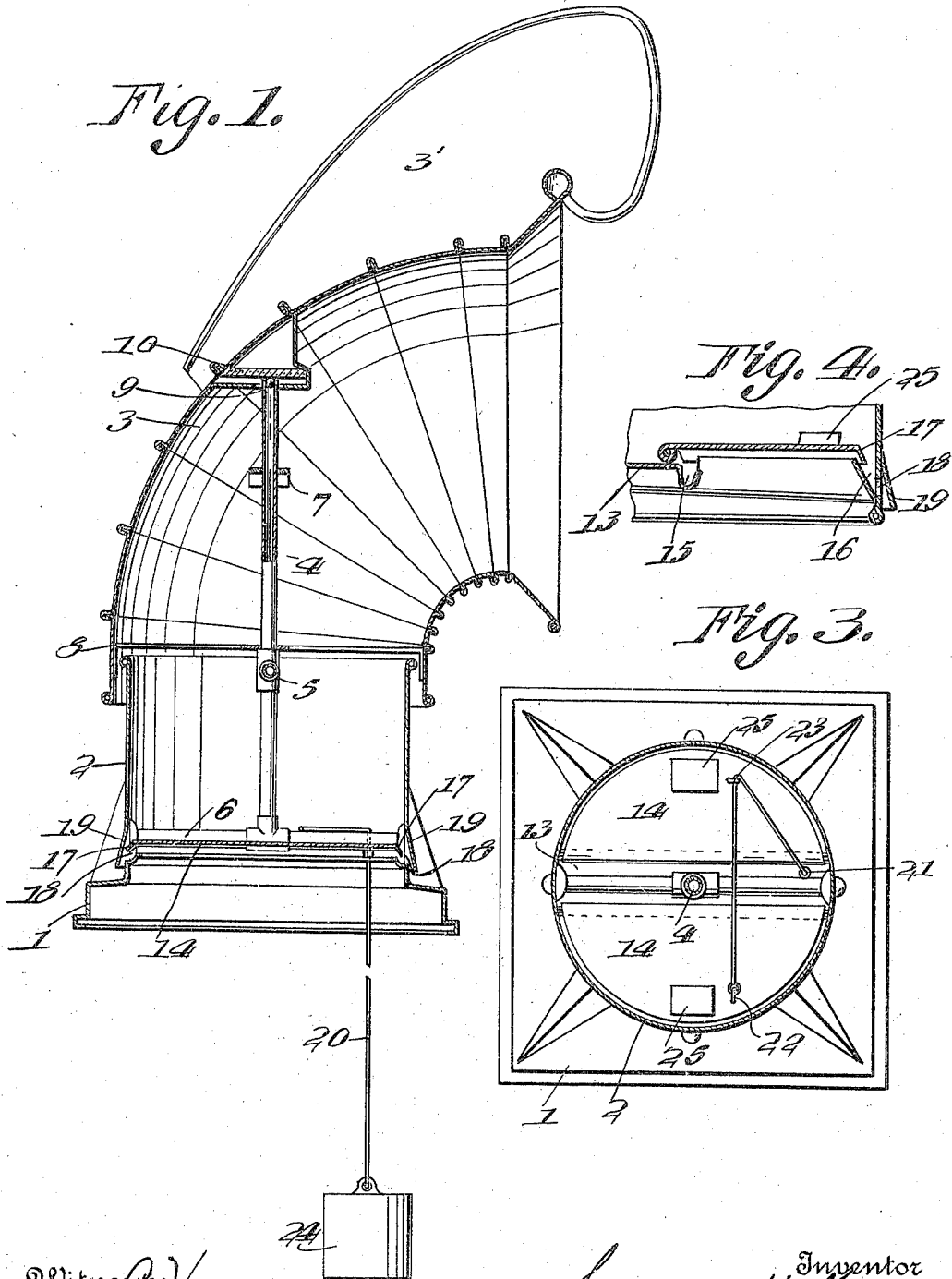


S. H. MILLMAN.
VENTILATOR FOR CHIMNEYS OR FLUES.
APPLICATION FILED NOV. 18, 1909.

951,508.

Patented Mar. 8, 1910.

2 SHEETS—SHEET 1.



Witnesses
Ada V. Fagerty
Eleanor R. Ryder

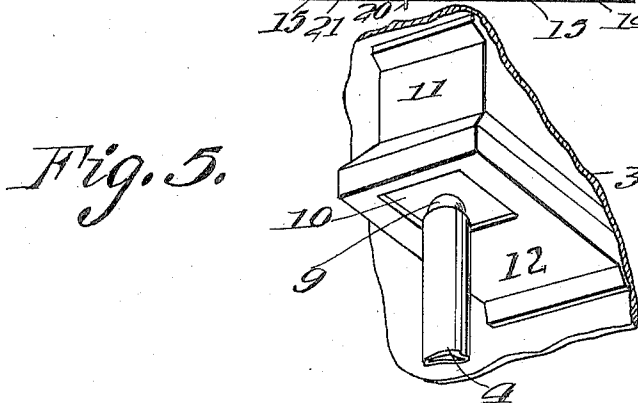
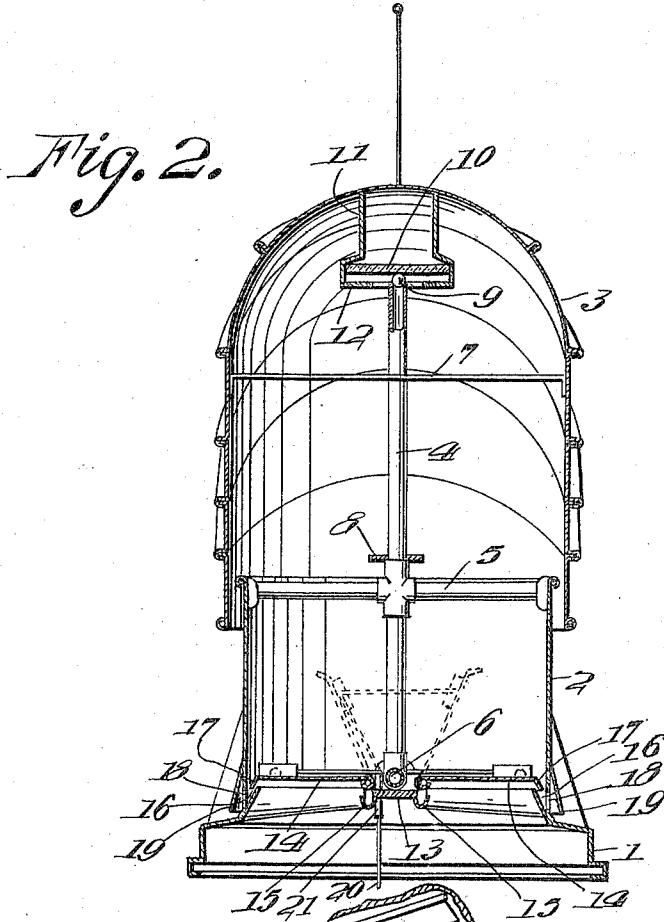
Inventor
Samuel H. Millman
by Joseph A. Miller
Attorney

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UNITED STATES PATENT OFFICE.

SAMUEL H. MILLMAN, OF PROVIDENCE, RHODE ISLAND.

VENTILATOR FOR CHIMNEYS OR FLUES.

951,508.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed November 18, 1909. Serial No. 528,751.

To all whom it may concern:

Be it known that I, SAMUEL H. MILLMAN, a subject of the Czar of Russia, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Ventilators for Chimneys or Flues, of which the following is a specification.

This invention relates to ventilators for chimneys or flues and pertains more particularly to that class of ventilators known as "cowls" wherein a rotatable member is adapted to be revolved to automatically regulate the draft.

The first object of this invention is to provide a cowl which will be more readily and quickly affected by winds of small strength.

A second object is to provide a cowl in which the draft openings are easily increased or decreased at will.

A further object of the invention is to construct a cowl which is adequately provided with means for protecting the interior of the chimney or flue, that is, the cowl is provided with means for collecting the moisture and drainage from rain or snow and conducting said drainage from the interior of the ventilator.

With these, and the further object of improving the general construction of ventilating cowls, in view, my invention will now be fully set forth and described, reference being had to the accompanying drawings, in which:—

Figure 1 is a vertical sectional view of the cowl, Fig. 2 is a vertical sectional view at right angles to the section of Fig. 1, Fig. 3 is a cross sectional view, looking downwardly upon the dampers, Fig. 4 is a fragmentary sectional view showing the portion of one of the dampers, and Fig. 5 is a detail perspective view showing the principal bearing supporting the revolvable element upon the stationary member.

Referring more particularly to said drawings, 1 indicates a base member of any suitable cross sectional formation but shown herein as square, and having mounted thereon a cylindrical casing 2. Said casing 2 is rigidly mounted on said base and is provided with exterior buttresses to sustain it in firm and lasting position upon said base.

A rotatable cowl member proper or elbow 3 of usual construction, and having the vane 3' mounted thereon, is carried by said casing in a manner to permit its ready and ade-

quate response to the slightest breeze. Said elbow 3 is mounted as follows:—Cross bars 5 and 6 are disposed diametrically within the casing 2, one at the upper end and one at the lower end, and at right angles to one another. Said cross bars consist of tubular rods soldered or otherwise secured within the casing 2, and provided centrally with joints through which a vertical upright or rod 4 is projected and supported. Said rod 4 extends above the upper end of the casing 2, and is adapted to project through apertures formed in cross bars 7 and 8 suitably formed or secured within the vertical arm of the elbow 3. Said cross bars 7 and 8 are thus rendered revoluble on said rod 4.

The upper end of rod 4 is provided with a round bearing head, which may be formed by inserting or setting a ball 9 of suitable non-corrosive and wearing material, preferably glass, into the upper end of the upright or rod 4. Said ball or head 9 projects, with the end of the rod into a housing 11 formed or secured within the elbow 3, at a point above the rod 4, and bears against a bearing plate 10, also preferably formed of glass. Said plate 10 is secured in the lower part of the housing 11 by being slid horizontally into a groove formed for that purpose. A cover 12 inclosing the lower end of the housing 11 protects the glass plate 10 at all points except the aperture through which the ball or head 9 operates. Thus it will appear that the elbow 3 is pivotally carried by a frictionless bearing, the cross bars 7 and 8 serving only to prevent lateral movement of the elbow. The lower end of the vertical arm of the elbow telescopes the upper end of the casing 2, thereby forming a joint which is adapted to maintain the interior of the cowl comparatively tight.

Located below the lower cross bar 6 and substantially parallel thereto is a horizontal sheet metal cross support 13 secured to the casing 2 at its ends, upon which are hinged the dampers 14. Dampers 14 are substantially semi-circular flat valves, and are hinged to open toward the center. The cross support 13 has gutters 15 which are formed by turning downwardly, outwardly and upwardly the cross support 13 on both its longitudinal edges. Said gutters 15 are formed to occur along the edges of the cross support 13 under and extended beyond the hinges of the damper element 14, in order that, when moisture is caught upon the

dampers 14 and trickles down toward the hinges, it will find its way into said gutters 15, and be prevented from dropping down into the chimney or flue.

5 The interior annular part of the casing 2 (or the base portion 1 may be so constructed) is provided with upwardly and inwardly inclined circular flanges which form gutters 16. Said gutters extend on each side to the 10 gutters 15, the grooved element forming which is seated into the gutter formed by said curved flange and is joined thereto, whereby a continuous gutter is formed on each side of the cross support 13, each gutter 15 being a substantial semi-circle. The dampers 14 are downturned as at 17 around 15 their peripheral edges, whereby, when the dampers are flat or closed, the moisture will be directed into the gutters 16, as well as into the gutters 15. At points spaced around the 20 casing 2 and communicating with the gutters 16 are openings 18, by means of which the said gutters are connected with the outside, and through which the collected moisture is permitted to escape. Each aperture 18 25 is covered and protected by a cone-shaped hood 19, which is open only at its bottom so as to fully protect the opening, and still permit the discharge of moisture there- 30 through.

Dampers 14 are operated from the inside by a chain 20, passing up through apertures 21 formed in support 13 to be connected to said dampers. Chain 20 is connected to one 35 damper, as at 22; is then passed through loop 23 on said other damper, and passes thence through said aperture 21, into the room or other locality from which the cowl is to be controlled. A weight 24 suitably 40 suspended from the chain 20, counterbalances the dampers, which are weighted, as at 25, whereby said dampers may be set at any desired position. Thus a perfect control of the amount of draft is maintained.

45 It is evident from the above that the device described is well adapted to perform the functions set forth. The rotatable elbow or cowl proper is perfectly supported and balanced in practically frictionless manner, 50 thus rendering it capable of ready response to the slightest breeze. The damper and gutter construction and arrangement render it free of the objectionable features attendant on cowls or ventilators which permit 55 the access of rain, sleet or snow into the flue. Furthermore, the dampers are rendered self-balancing and are capable of adjustment to any desired size of opening.

Having thus described my invention, I claim as new and desire to secure by Letters Patent;—

1. A cowl ventilator, comprising, in combination, a stationary member, an upright vertically extended above said stationary member, an elbow rotatably mounted on 65 said upright, dampers diametrically hinged to said stationary member, and means for conducting moisture from said dampers and said stationary member to the outside of the latter. 70

2. A cowl ventilator, comprising, in combination, a stationary member, an upright vertically extending above said stationary member, an elbow rotatably mounted on said upright, dampers diametrically hinged to 75 said stationary member, and gutters formed around the edges of said dampers to conduct moisture from the dampers and the stationary member, and said stationary member having apertures located adjacent said gut- 80 ters to permit the escape of the moisture.

3. A cowl ventilator, comprising, in combination, a stationary member, an upright vertically extended above said stationary member, an elbow rotatably mounted on said 85 upright, a cross support carried by the lower portion of said stationary member, semi-circular dampers hinged to said cross support, gutters formed along the longitudinal edges of said cross support, gutters formed in- 90 teriorly of said stationary member, and communicating with said first mentioned gutters, and said stationary member having apertures through which said gutters com- 95 municate with the exterior of said stationary member.

4. A cowl ventilator, comprising, in combination, a stationary member, an upright vertically extended above said stationary member, an elbow rotatably mounted on said 100 upright, dampers diametrically hinged to said stationary member, means for conducting moisture from said dampers and said stationary member to the outside of the latter, means connected to one damper and 105 slidably connected to the other and communicating with the interior of a building whereby said dampers may be adjusted variously to regulate the draft.

In testimony whereof I have signed my 110 name to this specification in the presence of two subscribing witnesses.

SAMUEL H. MILLMAN.

Witnesses:

ADA E. HAGERTY,
J. A. MILLER.