

(No Model.)

J. F. O'GARA.
VENTILATOR.

No. 576,791.

Patented Feb. 9, 1897.

Fig. 1

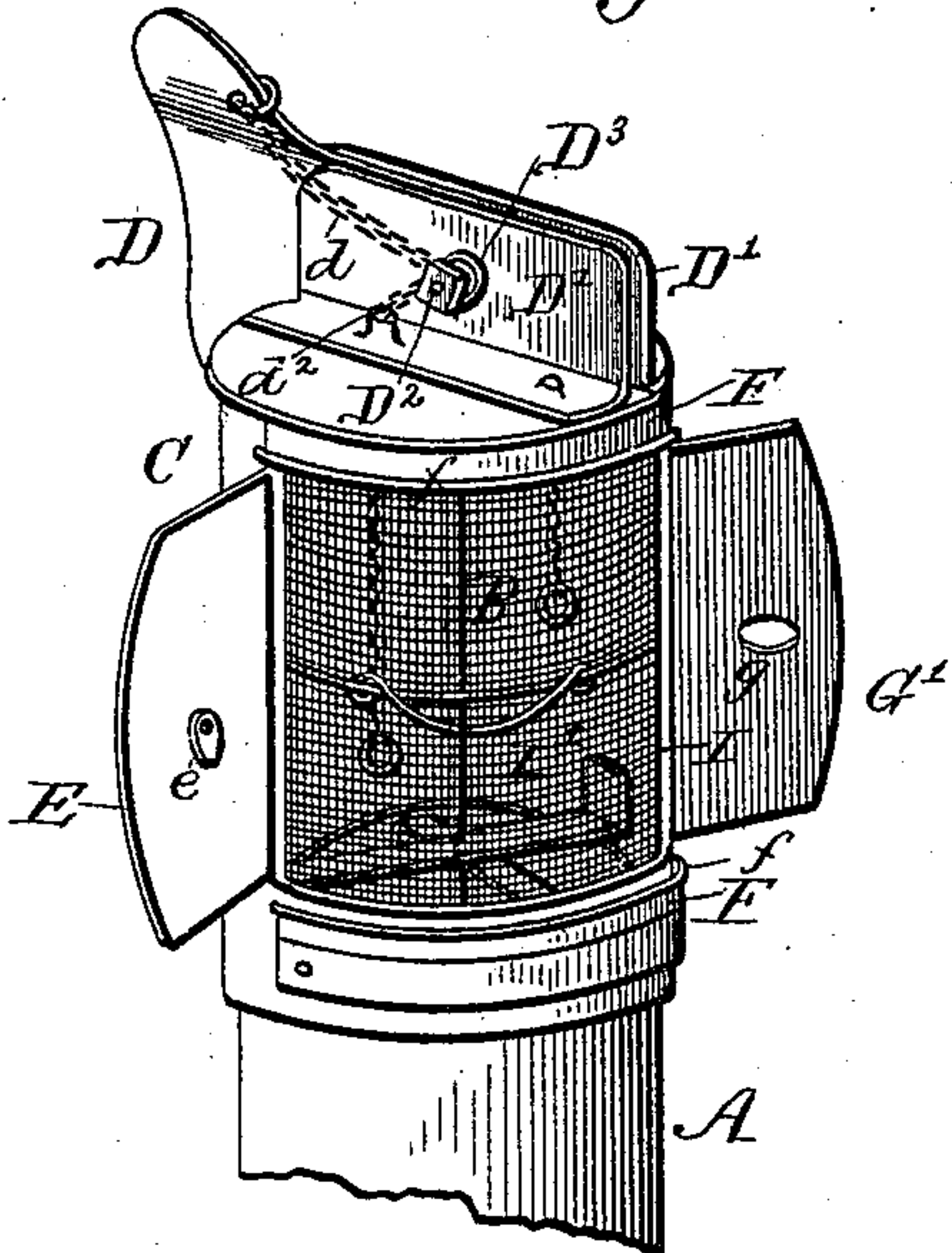


Fig. 2

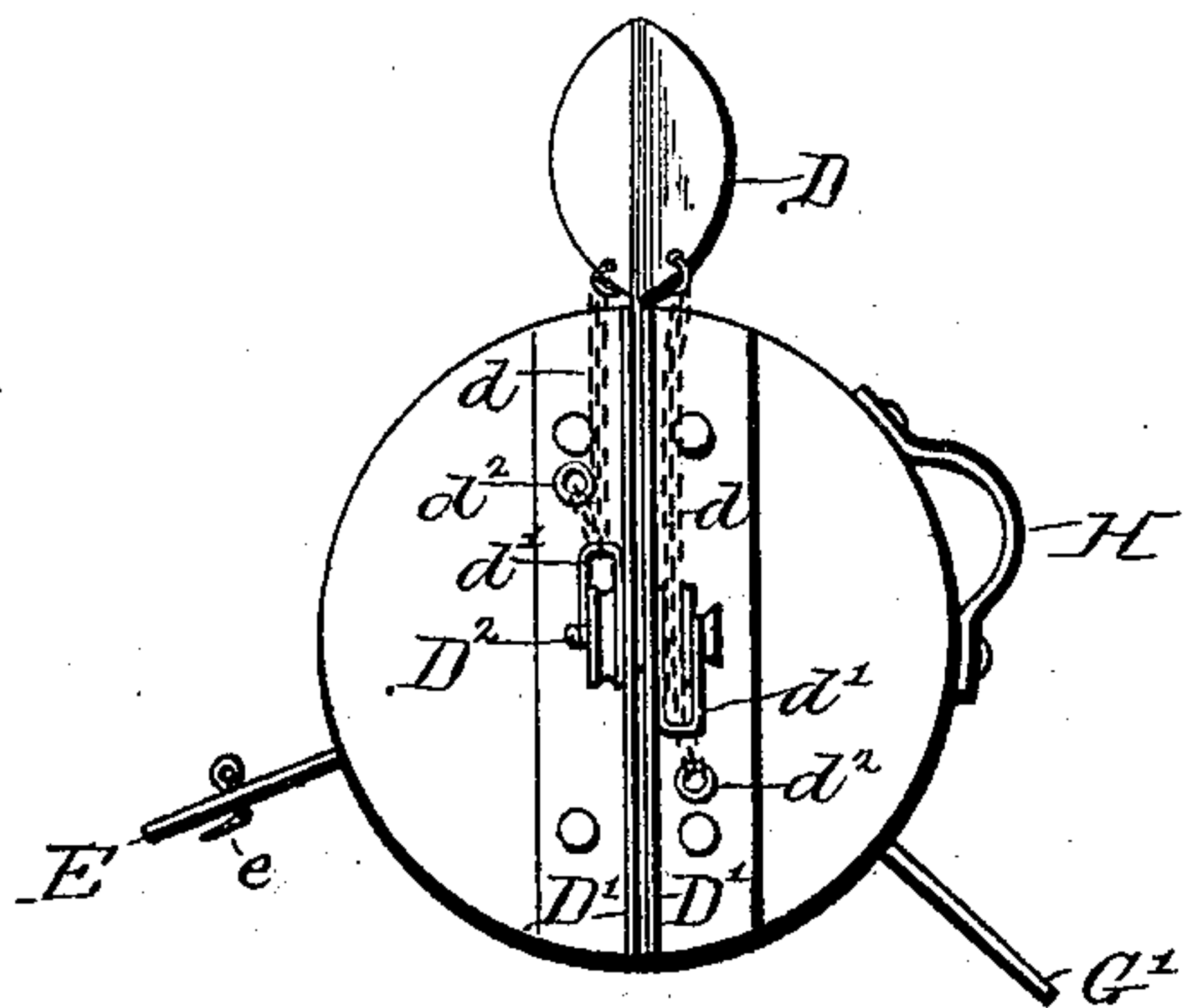
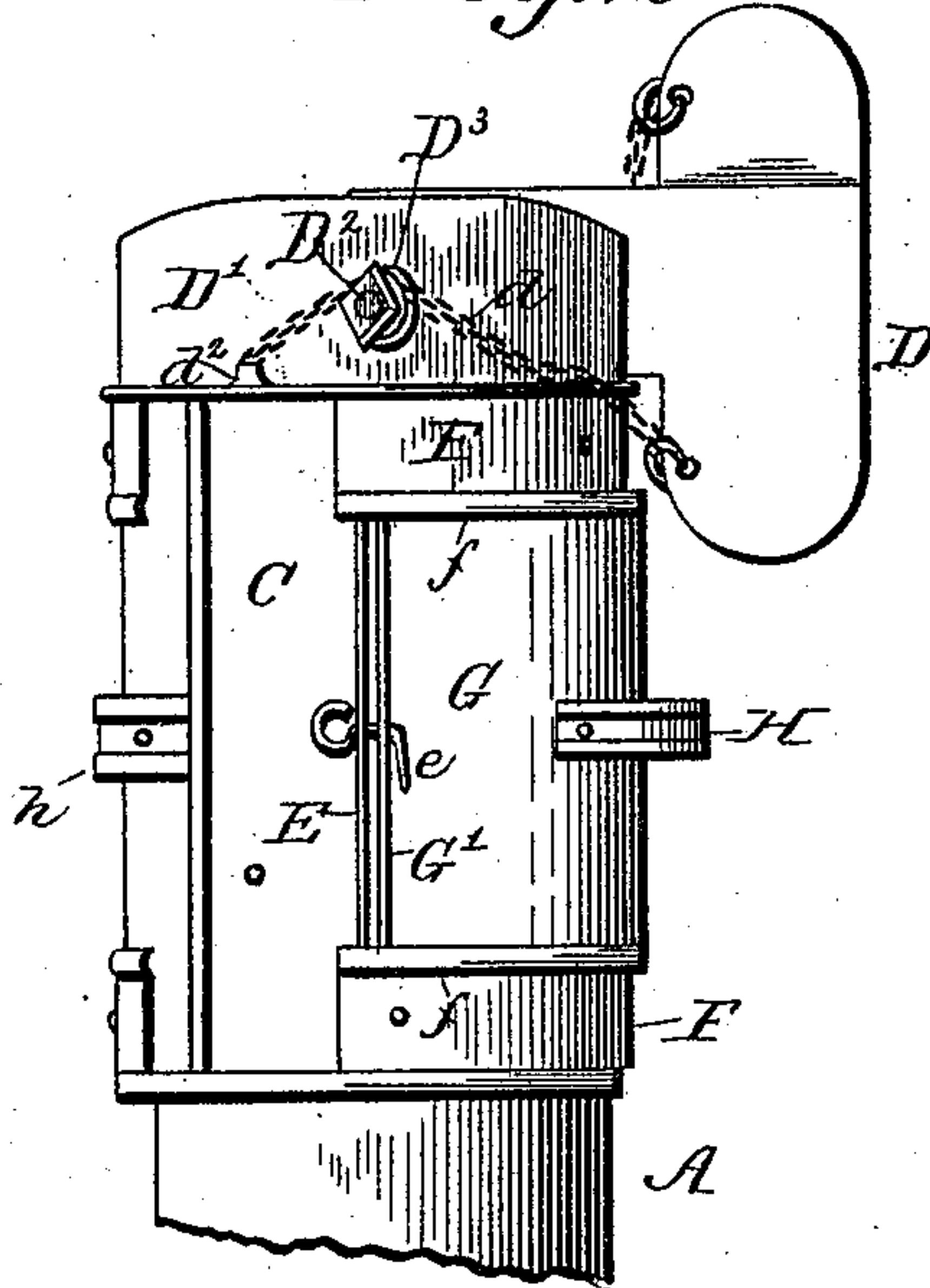


Fig. 3

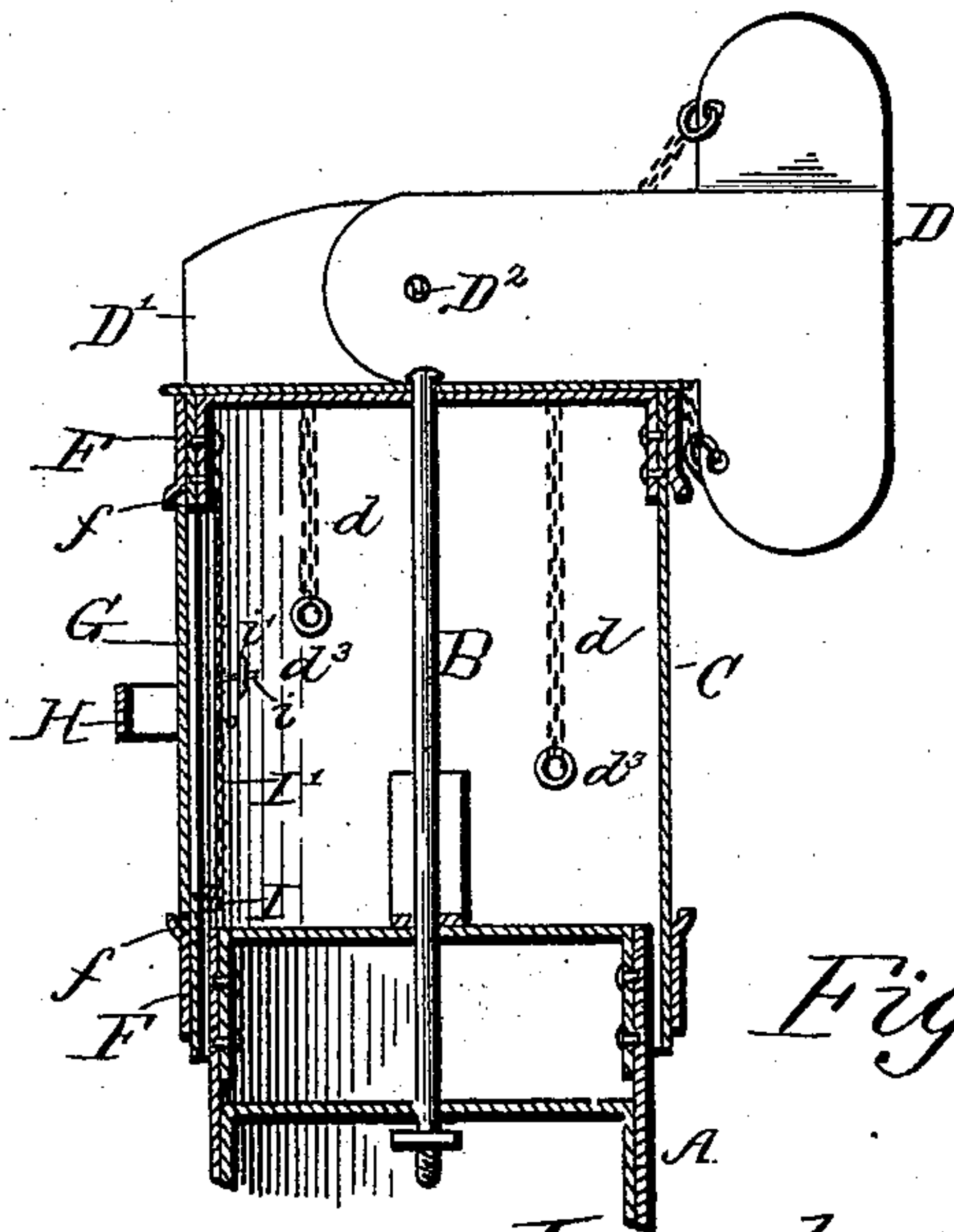


Fig. 4

Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES F. O'GARA, OF CHARLESTON, SOUTH CAROLINA.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 576,791, dated February 9, 1897.

- Application filed January 23, 1896. Serial No. 576,572. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. O'GARA, a citizen of the United States, residing at Charleston, in the county of Charleston and State of South Carolina, have invented certain new and useful Improvements in Ventilators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to ventilators, and has for its object the provision of a ventilator of novel form and construction adapted to be applied to buildings, mines, ships, railway-cars, or other places, and to be operated by either withdrawing foul air and allowing fresh air to supply its place or by forcing fresh air directly into the place to be ventilated.

My invention consists in a ventilator composed of a revolving cap or cowl which is mounted upon the top of a ventilating-pipe and provided with a vane and with an opening on one side, to which is fitted a sliding door, by means of which the opening in the ventilator may be partially or wholly closed.

My invention further consists in the combination, with a ventilator composed of a revolving cap or cowl which is mounted upon the top of a ventilating-pipe, of an adjustable vane adapted to be shifted from the front to the rear of the revolving cowl, or vice versa.

My invention still further consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a perspective view of my improved ventilator, the sliding door being open. Fig. 2 is an elevation of the same with the sliding door closed and locked. Fig. 3 is a top view, and Fig. 4 a vertical sectional view.

A designates the ventilating-pipe, upon which the ventilator is mounted, and B an upright spindle upon which the ventilator is pivotally sustained.

The ventilator consists of a cylindrical section of sheet metal C, having upon its top a vane D, which is of substantially T shape and is pivotally secured between vertical

plates D' D', rising from the top of the cylindrical section or cowl C, upon a shaft D². Upon the outside of each of the plates D' D', and journaled on the shaft D², are pulleys D³ 55 D³, over which pass chains or cords d d, that have each one end secured, respectively, to the two ends of the cross-arm of the T-shaped vane D. The chains or cords d d are guided and kept in proper position with relation to the pulleys D³ D³ by eyes d' d' and depend through holes d² d² into the interior of the cowl and are provided with rings d³ d³ for the accommodation of a hook by which the chains are pulled from within the ventilating-pipe 65 to change the position of the vane. The chains or cords d d, it will be observed, pass down into the cowl on opposite sides of the center of the same, so that when the vane is in one position the chain or cord which is attached to the end of the cross-arm of the vane which is projecting downwardly at that position rests upon top of its pulley D³, while the chain which is attached to the upwardly-projecting arm of the vane hangs loose in its eye d'. Now if the chain which is passing over the pulley be pulled down from within the cowl the vane will be drawn over until it assumes a position slightly beyond an upright one, and the pull on the chain being then relaxed 80 the vane will drop down on the opposite side of the cowl, thus causing the chain on the opposite side to rest upon top of the pulley, while the chain previously in action will hang loosely in its eye. One side of the cylindrical section C is open, the material being turned back to form a flap E. Upon each side of the opening and extending around toward the other side of the ventilator are plates of metal F F, which have flanged edges f f, that form 90 tracks for a sliding door G.

The edge of the door adjacent to the opening in the front of the ventilator is turned back, so as to form a flap G', projecting outwardly at the same angle from the ventilator 95 as the flap E, on the other side of the opening, the said flaps E and G' serving to direct the air into the opening in the ventilator, and serving also as a means for attachment of the locking device for the sliding door, the flap E being provided with a turn-button e, which passes through a hole g in the flap G'

when the sliding door is closed, and which, being turned around, serves to keep the said sliding door locked. A handle H is placed upon the outside of the sliding door, and a block h at the back of the ventilator serves to stop the sliding door at the proper position when it is open.

In order to adapt the ventilator specially for use on railway-cars, in order to exclude dust and cinders, I have provided a screen which is composed of a metallic frame I and a suitable wire-gage center I'. This screen is placed within the opening of the cowl, the frame I being compressed so as to pass through the opening, and is held in position by pins i i on the frame, which rest in hooks i' i' within the cowl.

Where the ventilator is to be used aboard ship, the screen may be omitted, as may also the chains or cords for reversing the position of the vane from within the ventilator, since on board ship the vane is readily accessible from the deck.

The ventilator above described operates generally in the manner of revolving ventilators—that is to say, the vane on the top of the revolving section serves to keep the opening in the side of the same faced toward the wind when the ventilator is operated upon the direct or plenum method, or if the ventilator is operated according to the vacuum method the vane will be so arranged that the opening in the side of the ventilator will be always turned away from the wind.

The sliding door serves as a ready means for tightly closing the ventilator in stormy or rainy weather, and the whole constitutes a complete, simple, and effective ventilator equal in effectiveness to ventilators of ordinary form and having the additional advantage that it may be tightly closed when de-

sired, so as to effectually exclude either wind or rain from the ventilating-pipe.

Having described my invention, I claim—

1. A revolving ventilator having an opening on one side with a flap at the edge in combination with a door adapted to close said opening and having a corresponding flap at its edge and a catch or lock for fastening said door in its closed position, substantially as described.

2. In a ventilator, the combination of the revolving cylindrical section C, having an opening with a flap E, at one side, and a sliding door G, having a flap G', corresponding in shape and position to the flap E, substantially as described.

3. The combination with a revolving cylindrical ventilator-cowl, of a horizontally-pivoted vane movable in a vertical plane and adjustable from front to rear of said cowl, substantially as described.

4. In a revolving ventilator, the combination with the cowl, of a vane horizontally pivoted on top of the same and movable in a vertical plane and means substantially as described for moving said vane to diametrically opposite sides of the cowl, as set forth.

5. In a revolving ventilator, the combination with the cowl, a horizontally-pivoted vane and vertical guiding-plates embracing the vane of chains attached to opposite sides of the vane and passing over bearings on said guiding-plates and into the cowl, substantially as described.

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

JAMES F. O'GARA.

Witnesses:

JNO. W. BUNNESTER,
J. L. HUMBERT.