

AMBROSE MARRIOTT.  
Improvement in Ventilators.

No. 121,639.

Patented Dec. 5, 1871.

Fig. 1.

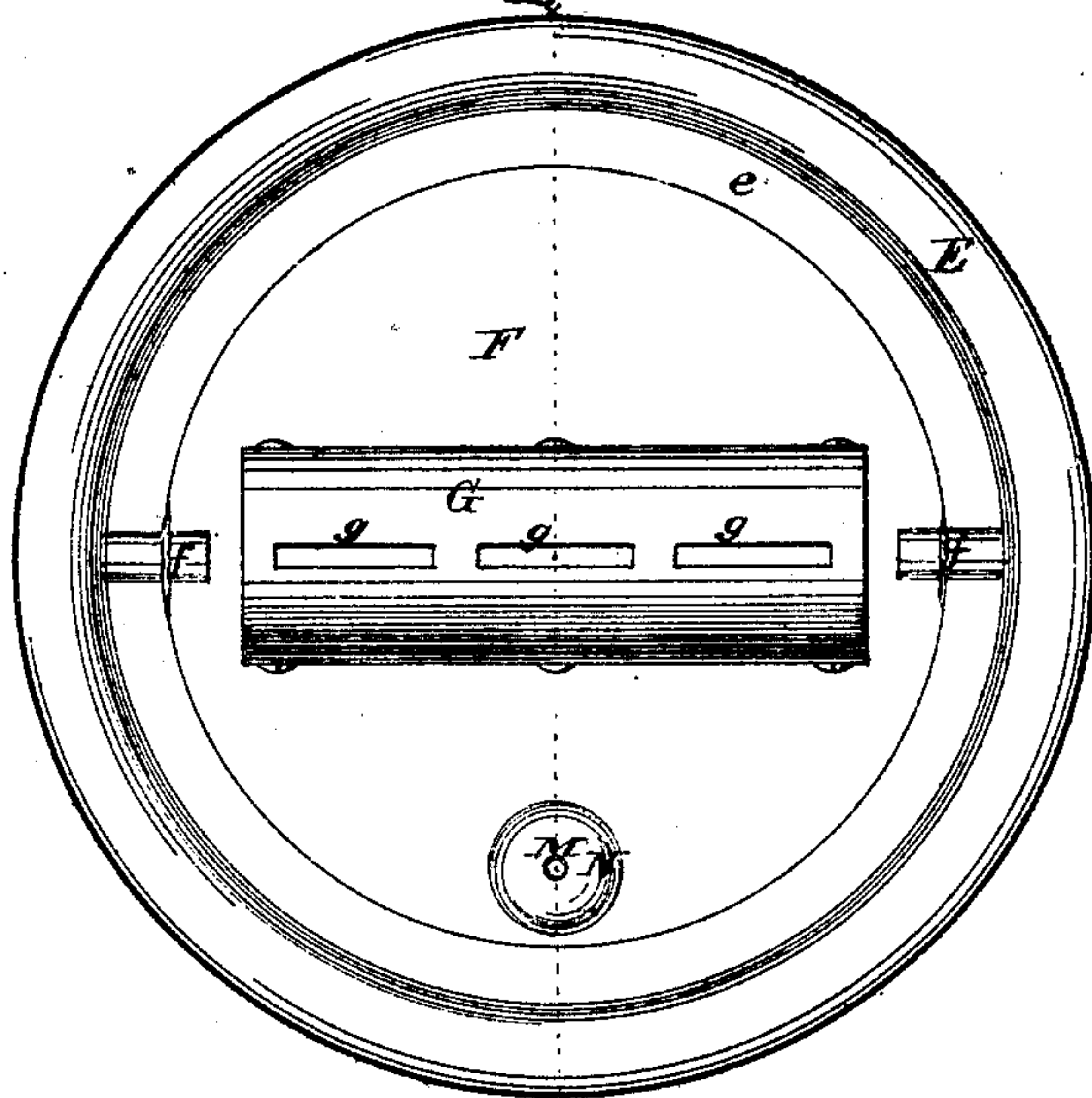
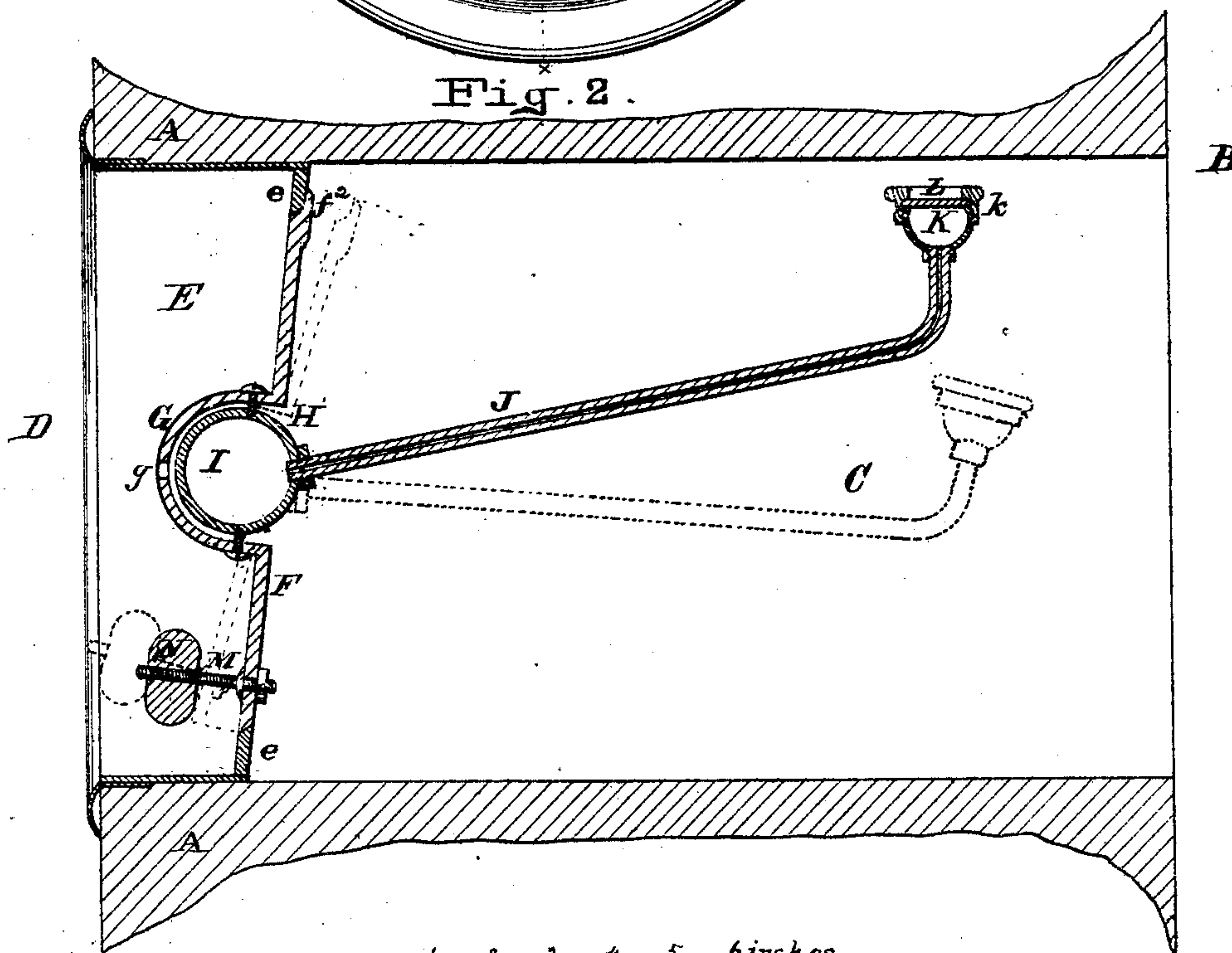


Fig. 2.



1 2 3 4 5 inches  
Scale

Attest  
Jas L. Ewin  
Walter Allen

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By Knight, Brewster & Attys.

# UNITED STATES PATENT OFFICE.

AMBROSE MARRIOTT, OF ST. LOUIS, MISSOURI.

## IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. 121,639, dated December 5, 1871.

*To all whom it may concern:*

Be it known that I, AMBROSE MARRIOTT, of the city and county of St. Louis and State of Missouri, have invented a certain Improved Automatic Ventilator, of which the following is a specification:

My invention relates to that class of ventilators which is placed in the wall of a room to allow the escape of heated air; and my invention consists: First, in the combination with a pivoted disk or plate of a vessel containing mercury, from which extends a neck having at the end a receiver which, like the neck, also contains mercury. The expansion of the mercury by heat drives a greater quantity into the receiver, whose increased weight, acting upon the pivoted plate or disk, causes it to open more or less. The second part of my invention consists in the combination with the said pivoted plate of a regulating bob-nut, by which the balance may be adjusted.

Figure 1 is a front view of my ventilator. Fig. 2 is a section at the line X X, Fig. 1.

A is the wall of a room; B, a chimney or flue; and C, an opening in the wall leading from the room, D, to the flue B. E is a cylindrical case occupying the mouth of the opening C, and having an interior flange, *e*, whose edge is beveled and fits the beveled periphery of the pivoted disk F. The disk F has a forwardly-projecting part, G, forming a rear recess, H, in which is supported a cylindrical vessel, I, containing mercury. From the rear side of the vessel extends a pipe, J, (of small bore,) whose free end communicates with a cup, K, whose screw-cap *k* is annular and screws down upon the edge of an India-rubber cover, L. The cylindrical vessel I is so placed in the recess H that there is an air space between the vessel I and case G, the air entering this space through orifices *g* in the case and passing into

the flue. M is a screw-rod extending from the face of the disk F. The screw-rod carries an adjusting bob-nut, N, by turning which so as to change its distance from the disk the balance of the disk E upon its pivots *f* is adjusted. *f*<sup>2</sup> is a lug on the disk that comes in contact with the flange *e* when the ventilator is closed. An open-work shield may be hinged to the case E to act as a screw.

The ventilator is preferably located near the ceiling, and operates as follows: The air continually passes from the room through the orifices *g* and around the vessel I, the heat of the air affecting the mercury within the vessel, and when the temperature of the mercury is raised to a certain height its expansion causes it to pass up the tube J and flow into the cup K, (the elastic cover L permitting this,) and the additional weight in the cup will cause the disk to open more or less, and the heated air will find exit. The office of the bob-nut N is to regulate the balance of the disk F upon its pivots so that it may be caused to open at any desired temperature of the air. The disk-pivots are so far back that when the mercury in the vessel is at a low temperature the disk will remain closed.

I claim as my invention—

1. The ventilator, consisting substantially of the pivoted plate F, in combination with the automatic regulating device I J K, as set forth.

2. In combination with the elements E F I J K, the adjusting device M N, as set forth.

In testimony of which invention I have hereunto set my hand.

AMBROSE MARRIOTT.

Witnesses:

SAML. KNIGHT,  
HENRY G. ISAACS.

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