(No Model.)

R. WAIDE.

VENTILATOR.

No. 279,291. Patented June 12, 1883.

Fig. 1.

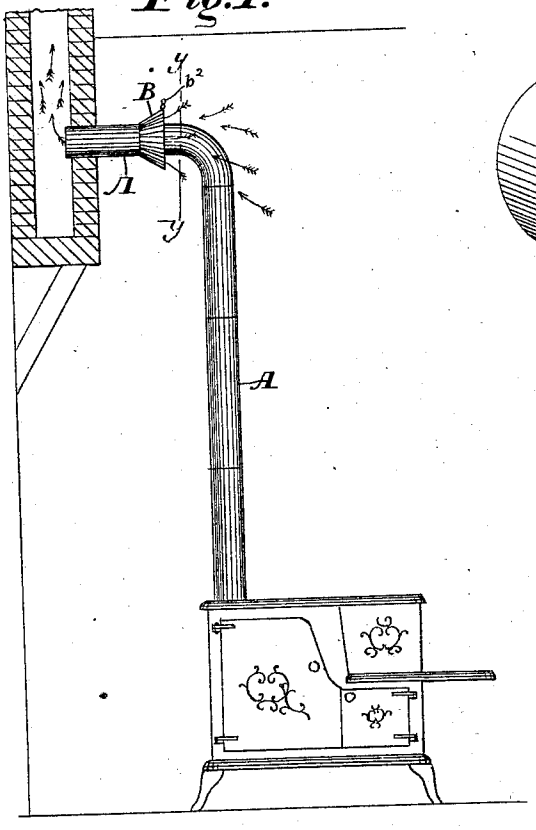


Fig. 2.

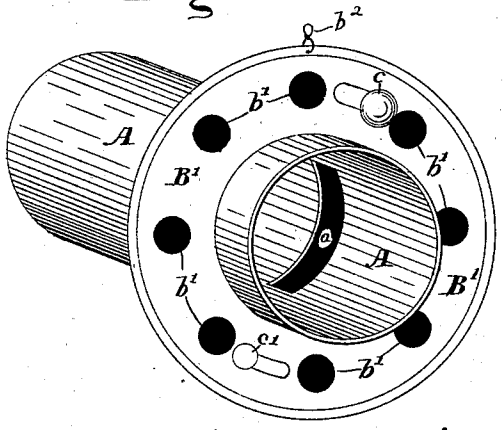


Fig. 3.

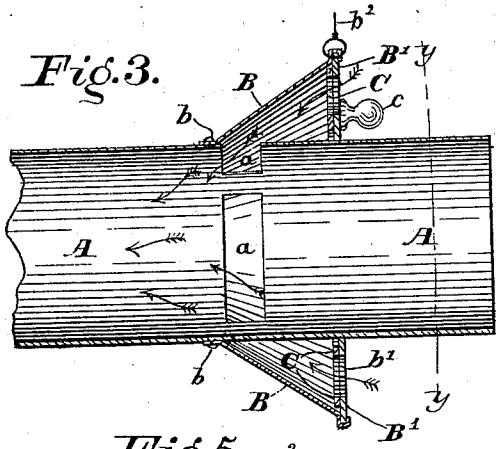


Fig. 4.

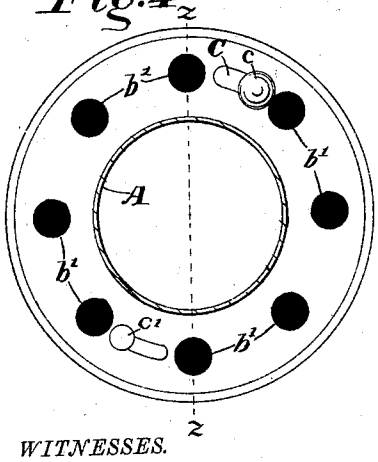
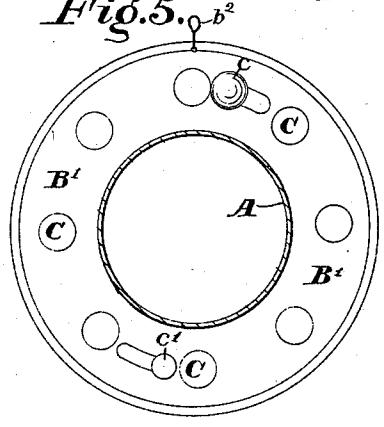


Fig. 5.



WITNESSES.

Chas. A. Leonard.

Chas. L. Thurber.

INVENTOR.

Robert Waide,

PER

C. Bradford.

ATTORNEY.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

ROBERT WAIDE, OF INDIANAPOLIS, INDIANA.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 279,291, dated June 12, 1883.

Application filed December 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, ROBERT WAIDE, of the city of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

My said invention consists in an improved ventilator to be used in connection with stove-pipes, &c., as will be hereinafter more particularly described.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a stove, its pipe, and a portion of the wall and chimney of the building, illustrating my invention in the position in which I prefer to use it; Fig. 2, a perspective view of a section of the pipe provided with my improved ventilator; Fig. 3, a longitudinal section of the same on the dotted line *z z* in Fig. 4; Fig. 4, a view looking to the left from the dotted line *y y* in Figs. 1 and 3, showing the ventilator in elevation, with the openings or perforations open; and Fig. 5, a similar view to Fig. 4, except that the openings are closed.

In said drawings the portions marked A represent the pipe; B B′, the ventilator-case, and C the slide.

The pipe A is or may be any ordinary stove-pipe, and has orifices *a* cut therein, preferably near where the small end of the ventilator is secured thereto.

The ventilator is composed of the funnel-shaped portion B, and the annular disk-like head or end B′, which is joined at its outer edge to said portion B. The portion B is preferably formed of the same material as the pipe A, and is secured to said pipe by rivets *b*, or otherwise. The head or end B′ is preferably of cast metal, and has openings or perforations *b′* therein, as shown, through which the foul air or gases will enter the ventilator, and pass from thence to the pipe and up the flue, as indicated by the arrows in Figs. 1 and 3. I usually provide an eye or hook, b^2, to which a stay-wire may be attached, if desired, which obviates the necessity of winding such wires around the pipe, as has been usual.

The slide C should be placed inside the head B′, and secured thereto by studs *c* and *c′*, which pass through slots in said head, and are riveted or screwed to said slide. The stud *c* projects far enough to form a handle, by which the slide may be moved back and forth, as it is desired to open or close the ventilator.

The operation of my invention may be described as follows: When it is desired to purify the air in the room, the ventilator is opened, as shown in Figs. 1, 2, 3, and 4, and the smoke, the odor arising from cooking, or whatever else the air may be impregnated with will speedily pass out through the ventilator into the pipe and up the chimney. When the ventilator is closed, as shown in Fig. 5, it is inoperative, and the operation of the stove and pipe is the same as though no ventilator were used.

I have found by experiment that the use of this ventilator does not impair the draft of the stove, as cutting holes directly into the pipe would, but, on the contrary, rather improves it. I have also found that a room filled with smoke and odors from victuals accidentally burned in cooking can by the use of my invention be cleared, so that the air will be practically pure, in fifteen to twenty minutes.

The reason why my ventilator improves rather than impairs the draft is that the cooler air of the room, passing into the pipe obliquely through the openings *b′* and *a*, strikes first the portion of the pipe A covered by the ventilator, and then the commingled rarefied air, smoke, and gases, or products of combustion passing up the pipe, condensing the latter, thus causing a vacuum into which the products of combustion from below will rush, the result of which is of course to accelerate the draft.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the pipe A, having openings *a*, and the ventilator B B′, having openings *b′*, substantially as set forth.

2. The combination of the pipe A, having openings *a*, the ventilator B B′, having openings *b′*, and the slide C, adapted to close the openings *b′*, substantially as set forth.

3. The combination of the stove-pipe A and

the cone-shaped ventilator B, said pipe having openings *a* at or near the point of the ventilator, and said ventilator being secured to and surrounding said pipe, so as to inclose said holes, substantially as shown and described, and for the purposes specified.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 14th day of December, A. D. 1882.

ROBT. WAIDE. [L. S.]

In presence of—
C. BRADFORD,
E. W. BRADFORD.