E. P. CORBY.

Automatic Stove-Pipe Ventilator.

No. 199,619. Patented Jan. 29, 1878.

FIG. 1.

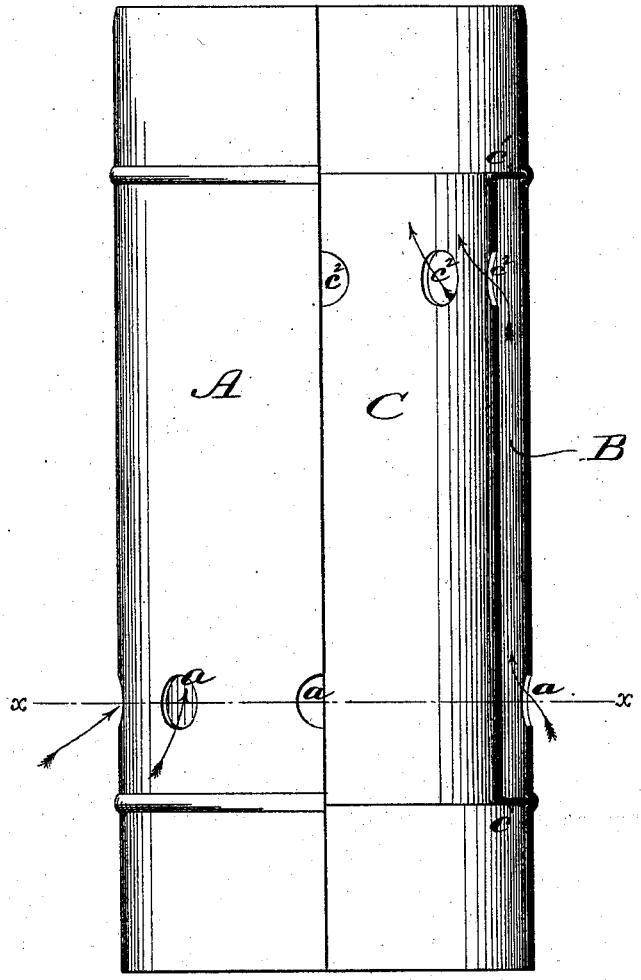
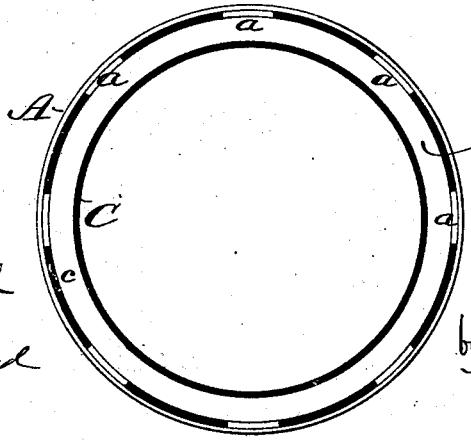


FIG. 2.



ATTEST:

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EDWARD P. CORBY, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN AUTOMATIC STOVE-PIPE VENTILATORS.

Specification forming part of Letters Patent No. **199,619**, dated January 29, 1878; application filed December 12, 1877.

To all whom it may concern:

Be it known that I, EDWARD P. CORBY, of St. Louis, Missouri, have invented a new and useful Automatic Stove-Pipe Ventilator, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is an elevation, partly in section, of the invention; and Fig. 2, a horizontal section, taken on the line *x x* of Fig. 1.

Similar letters refer to similar parts.

My aim is to provide a simple and efficient means for ventilating, that can be attached to and made part of an ordinary stove-pipe. It is useful for the discharge from the apartment containing the stove or furnace of foul air generally; but it is especially valuable for carrying off the gas escaping into the apartment from the stove or furnace with which the pipe is connected, and particularly from stoves of the class known as "base-burners," in the magazines of which the gas, as is well known, is apt to collect, thence to escape into the apartment.

Referring to the drawings, A represents a joint of the escape-pipe of a stove or furnace. B represents a flue formed within the joint, and preferably, by means of a smaller pipe, C, arranged concentrically therein. The flue is closed at the lower end by means of the flange *c*, and at the upper end by the flange c^1. The joint A is perforated opposite the lower end of the flue B, and the pipe C is perforated opposite the upper end of the flue. Thus made, communication is established through the perforations *a a*, flue B, and perforations c^2 c^2 between the apartment, outside the pipe A, and the interior of the pipe.

In operation, the heat-currents, passing from the stove or furnace upward through the pipe C, warm the air in the flue, generating an ascending current therein, and from the apartment into the flue, and thence into the pipe, as indicated by the arrows. Now, as is well understood, the aerial currents in a room being heated flow from all parts of the room to the heating-agent—the stove in this case—and thence upward by the stove and pipe. Hence the present ventilator is in the most favorable position to intercept and carry off the foul air from all parts of the room. But the gas escaping from the stove also ascends in the immediate vicinity of the stove-pipe, and is brought near the apertures *a a*, into which it is drawn, and thereby discharged from the apartment into the flue B, and thence into the stove-pipe. By this means an important objection to the use of magazine-stoves is removed.

To prevent the draft of the stove from being unfavorably affected, it is essential that the air passing from the apartment into the stove-pipe be first heated as much as is practicable. To this end the perforations *a a* and c^2 c^2 should be removed as far as is practicable from each other, in order that the air may pass over as much heating-surface as is possible before entering the inner pipe.

It is further important that the flue B, at its lower end, be closed to the interior of the stove-pipe, to prevent the escape of smoke into the apartment. It is desirable, also, that its upper end be protected by the flange c^1, to prevent the soot from falling into the flue. But, so far as ventilation is concerned, the apertures c^2 c^2 might be omitted, and the flue B be made to open directly at its upper end into the pipe A. The flanges *c* c^1 are valuable, however, for conveniently holding the inner pipe and for strengthening the construction.

As shown, the pipe C is cylindrical. It may, however, be made tapering or of other suitable shape.

I am aware that flues have been perforated, and that a jacket has been arranged around the flue opposite such perforations; but the perforations extended up and down the whole length of the jacket, the object being to check the escape of sparks.

I claim—

The combination of the joint A, having the perforations *a a*, and the pipe C, having the flanges *c* c^1 and apertures c^2 c^2, constructed and arranged substantially as described.

EDWARD P. CORBY.

Witnesses:

CHAS. D. MOODY,

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