E. P. CORBY.

Stove-Pipe Ventilator.

No. 199,620. Patented Jan. 29, 1878.

FIG. 3.

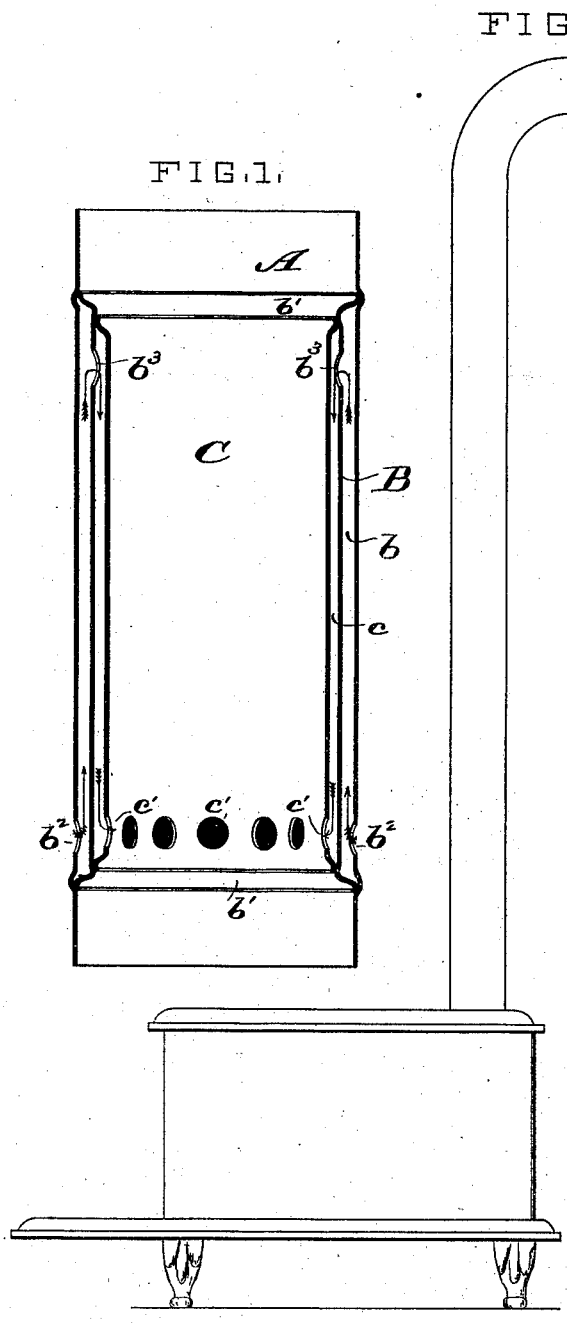
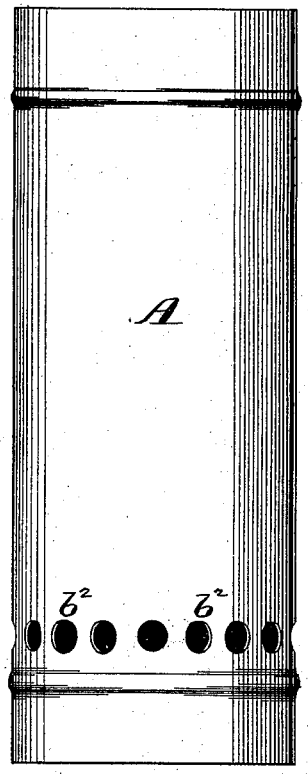


FIG. 1.

FIG. 2.



ATTEST.

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UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN STOVE-PIPE VENTILATORS.

Specification forming part of Letters Patent No. **199,620**, dated January 29, 1878; application filed January 5, 1878.

To all whom it may concern:

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

Figure 1 is a longitudinal section of the invention; Fig. 2, an elevation; and Fig. 3, a view illustrating the preferable arrangement of the invention in the escape-pipe of a stove.

Similar letters refer to similar parts.

I have heretofore invented a device for ventilating an apartment, that is attached to and made part of a stove-pipe, and that is serviceable not only for the ventilation generally of the apartment containing the stove, but especially for carrying off the gas escaping from the stove into the apartment.

The device referred to consists, substantially, of an annular flue formed within the pipe, and by means of a tube arranged concentrically within the pipe. The flue extends longitudinally in the pipe, and at its lower end is connected with the apartment outside the pipe, and at its upper end with the interior of the pipe. The latter being heated by the passage of the products of combustion, the air within the annular flue is warmed, causing the air to flow from the apartment into the flue within the pipe, and thence into the pipe. The device is measurably effective; but, owing to the fact that the air entering the flue does not become sufficiently heated therein before it passes into the interior of the stove-pipe, the draft of the stove is unfavorably affected, and the aim of the invention to that extent is frustrated.

To overcome the difficulty referred to is the aim of the present invention.

Referring to the drawing, A represents a joint of the escape-pipe of a stove or other heater. B and C represent tubes, one of smaller diameter than the other, arranged concentrically within the pipe A, as shown in Fig. 1, and forming thereby two annular flues, *b* and *c*. The flue *b* is closed to the interior of the pipe A by means of the flanges b^1 b^1, but is connected with the apartment outside the pipe by means of the perforations b^2, which are arranged in the pipe A opposite the lower end of the flue, and with the flue *c* by means of the perforations b^3, arranged in the tube B at or toward the upper end of the flue *b*. The flue *c*, at its upper end, is closed to the interior of the stove-pipe A, but at its lower end is connected therewith, by means of the perforations *c'*. The flues *b* and *c* extend nearly the length of the joint A.

In operation, the heat-currents, passing from the stove or heater upward through the pipe, warm the air within the flues *b* and *c*, generating a current therein, and from the apartment into the flue *b*, thence into the flue *c*, and thence into the pipe A, as indicated by the arrows, Fig. 1. The air is warmed somewhat in passing through the flue *b*; but, from having to pass through the flue *c* before entering the pipe A, it becomes heated to such a degree as not to impair the draft of the pipe. The consequence is that the ventilation proceeds freely without in the least degree interfering with the operation of the stove.

I claim—

The herein-described ventilator, consisting of the joint A, having the perforations b^2, the flue *b*, having the perforations b^3, and the flue *c*, having the perforations *c'*, substantially as described and shown.

E. P. CORBY.

Witnesses:

CHAS. D. MOODY,

D. W. C. SANFORD.