C. D. MOODY.

HEATING AND VENTILATING STOVE.

No. 182,529. Patented Sept. 26, 1876.

Fig. 1.

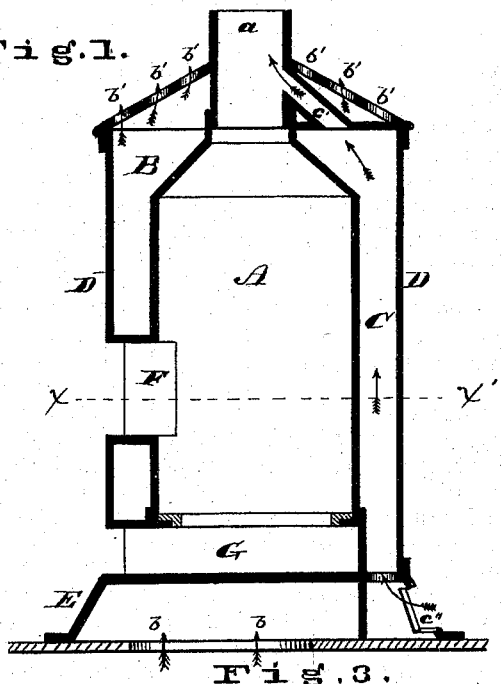


Fig. 2.

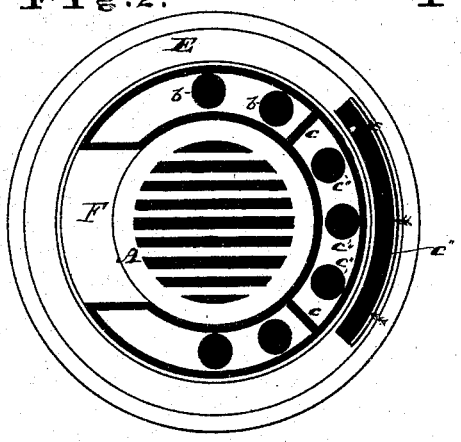
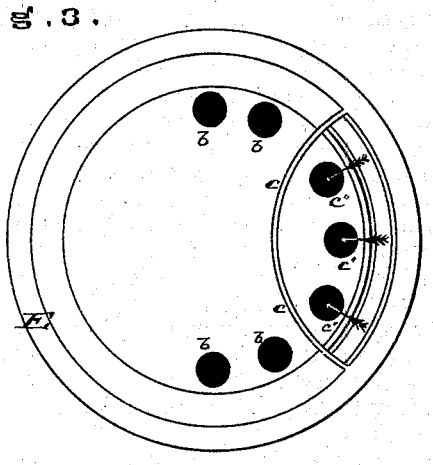


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN HEATING AND VENTILATING STOVES.

Specification forming part of Letters Patent No. **182,529**, dated September 26, 1876; application filed February 17, 1876.

To all whom it may concern:

Be it known that I, CHARLES D. MOODY, a resident of the city and county of St. Louis, State of Missouri, have invented a new and useful Improvement in Heaters and 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 central sectional elevation of the invention; Fig. 2, a horizontal section on the line X X′ of Fig. 1; and Fig. 3, a bottom view.

Like letters indicate like parts.

The present invention relates to an improved construction for heating and ventilating a room or building.

Referring to the annexed drawing, A represents a heater or furnace of any approved design. B represents what I term a hot-air chamber. It partially surrounds the heater, or furnace, and, preferably the front and sides thereof. C represents what I term the ventilating-chamber. It also partially surrounds the heater, and, preferably, the back thereof. The two chambers abut upon each other, and, together, surround the heater, saving the needed space for openings thereto; and the two chambers are preferably formed by means of a casing, D, extending around the heater, and at a suitable distance therefrom, and two partitions, *c c*, arranged vertically inside the casing, on either side of the back part of the heater, and extending from the casing in to the wall of the heater. At the bottom the ventilating-chamber is open to the room or building, and at the top the chamber is provided with a ventilating-shaft leading to the open air outside the apartment or building, and, preferably, by connecting it with the ordinary smoke-pipe *a* of the heater. The hot-air chamber at its bottom is closed to the apartment or building, but at that point is, by means of the openings *b b b*, provided with a communication with the open air outside the apartment or building. At its top the hot-air chamber is provided with openings leading to the apartment or building that is being heated and ventilated. E represents the base of the construction; F, the door or passage-way to the heater, and G represents the ash-pit.

The operation of the invention is as follows: Let the improvement be located in the apartment that is being warmed and ventilated. The heater, in such case, is preferably arranged with its base E resting directly upon the floor of the apartment. The heater is fired in the usual way, and through the door F. Air from without the apartment is drawn into the hot-air chamber through the openings *b b b*, &c., where it is heated, and then, through the openings *b′ b′ b′*, &c., in the top of the chamber, it is delivered into the apartment. At the same time the ventilating-chamber, from being in close proximity to the heater, is heated. This induces a current from the apartment, which, entering the ventilating-chamber through the openings *c″*, &c., at its bottom, is caused to rise to be delivered through the ventilating-shaft *c′* to the open air outside the apartment. In this manner the apartment is not only warmed, but, in addition, there is a constant supply of fresh air and a constant discharge of foul air. When the improvement is located without the apartment or apartments to be warmed and ventilated, suitable connections are made by which pure air from without the building or apartment can be delivered to the hot-air chamber, and by which, after being heated, the hot-air can be delivered into the apartment or apartments; and also connections by which the foul air from the apartment or apartments can be delivered to the ventilating-chamber.

I am aware that heretofore a heater has been surrounded with a hot-air chamber, and the hot-air chamber, in turn, by a ventilating-chamber; but such a construction is more expensive, bulky, and complicated than the one above described, and, in consequence of the ventilating-chamber being removed from the heater, the ventilation is not so thorough and sure. I am also aware that systems of tubes by which fresh air from without is discharged into the apartment, and the foul air of the apartment is withdrawn therefrom and discharged into the chimney, have been combined with a heater. But such tubes, either

singly or jointly, do not surround the heater, or even the principal portion thereof; nor do they abut upon each other, as in the case of the heating-chamber and ventilating-chamber in the present construction.

What I claim is—

The combination of the heater A, hot-air chamber B, ventilating-chamber C, openings *b b*, *b' b'*, &c., *c''*, shaft *c'*, and pipe, *a*, substantially as described.

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Witnesses:

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