(No Model.)

J. ADAMS.

HEATING STOVE OR FURNACE.

No. 344,558. Patented June 29, 1886.

Fig. 1.

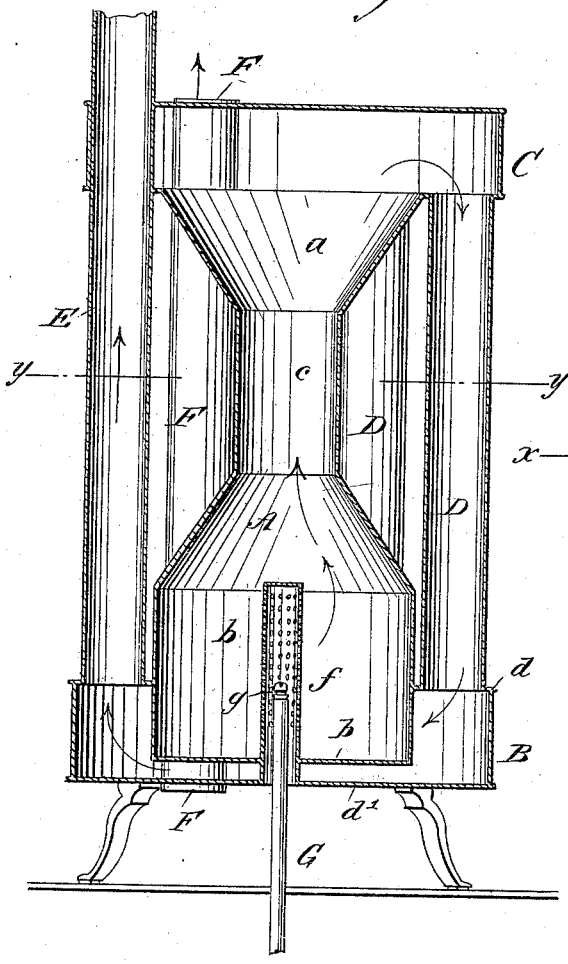
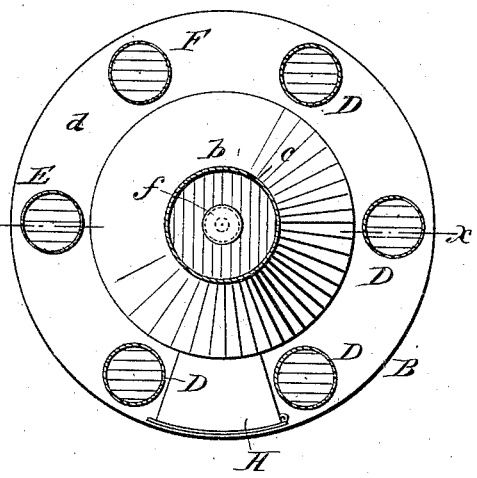


Fig. 2.



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HEATING STOVE OR FURNACE.

SPECIFICATION forming part of Letters Patent No. 344,558, dated June 29, 1886.

Application filed November 12, 1885. Serial No. 182,559. (No model.)

To all whom it may concern:

Be it known that I, JOHN ADAMS, of Findlay, in the county of Hancock and State of Ohio, have invented a new and Improved Heating Stove or Furnace, of which the following is a full, clear, and exact description.

My invention is designed more especially to produce a gas or oil stove of improved construction and heating power; and the invention consists of the arrangement of chambers and flues, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional elevation of my new and improved heating stove or furnace, taken on the line *x x* of Fig. 2; and Fig. 2 is a sectional plan view of the same, taken on the line *y y* of Fig. 1.

A is the combustion-chamber of my new stove or furnace, which chamber is composed of the upper inverted-truncated-cone-shaped chamber, *a*, lower truncated-cone-shaped chamber, *b*, and the chamber or pipe *c*, that connects the two chambers *a b*. The lower chamber, *b*, is held in the upper annular wall, *d*, of the base-chamber B, so that the bottom *b'* of the said chamber *b* stands a short distance above the bottom wall, *d'*, of the base-chamber B, as shown clearly in Fig. 1. The upper chamber, *a*, forms a part of the upper or top chamber, C, of the stove or furnace. The top and bottom chambers, C B, are connected by several return flues or pipes, D D, that surround the combustion-chamber, as shown in Fig. 2, so that the heat and products of combustion from the combustion-chamber A rise first into the top chamber, C, then descend the flues D to bottom chamber, B, and from this chamber pass to chimney through the exit-pipe E. A pipe or flue, F, open at both ends, is fitted in the top and bottom chambers, C B, near the combustion-chamber A, for heating air as it ascends from the floor up through pipe F.

Fitted in the bottom plates, *b' d'*, is the tube *f*. This is perforated within the chamber *b* with numerous small holes, and in it is placed the gas-pipe G and gas-burner *g* when gas is to be used, or, in place of this, an ordinary oil-burner when oil is to be used for fuel.

The gas or oil may be lighted in the stove through a side opening or door, H. (Shown in Fig. 2.)

The air and gas will mix within the perforated tube *f*, which may be termed a "mixing-tube," and the issuing mixture will, when ignited, form a blaze around the outer side of the said tube.

The fuel being lighted, the heat and products of combustion will ascend from chamber A to top chamber, C, descend flues D to bottom chamber, B, pass along this chamber to and out exit-pipe E. In this manner the products of combustion are brought into contact with a large surface of metal, so that large quantities of heat will be radiated, and by employing the two cone-shaped chambers *a b* and separated return-flues D air is permitted to circulate directly in contact with the cones, which are the most highly heated parts of the stove or furnace.

The flue F furnishes a passage for the cold air below the stove to rise and become heated from proximity with the combustion-chamber A.

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

The combination, with a combustion-chamber open at its upper end and closed at its bottom, an upper chamber communicating with the combustion-chamber, a chamber surrounding the lower end of the combustion-chamber, tubes or pipes connecting said upper and lower chambers, and an outlet-flue from the lower chamber, of the perforated mixing-tube leading upward from the outside of the bottom of the lower chamber into the combustion-chamber, substantially as set forth.

JOHN ADAMS.

Witnesses:
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ALBERT J. THOMAS.