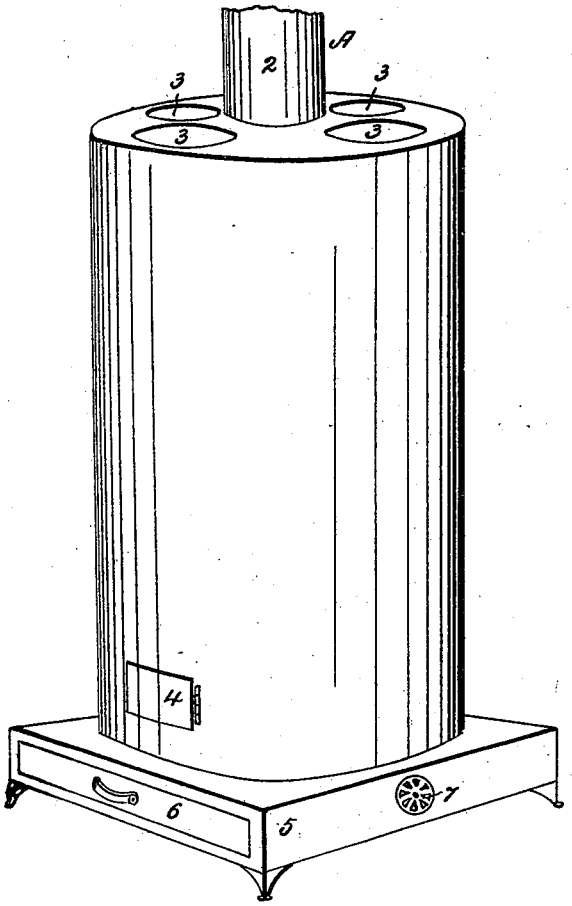
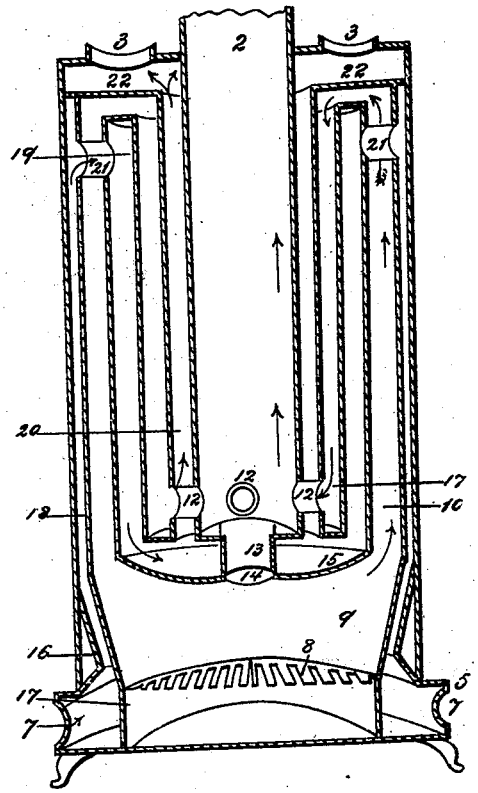
E. D. LOVELAND.

Heating Stove.

No. 4,637. Patented July 14, 1846.





Inventor.

E. D. Loveland.

UNITED STATES PATENT OFFICE.

ELEAZER D. LOVELAND, OF NEW YORK, N. Y.

HOT-AIR STOVE.

Specification of Letters Patent No. 4,637, dated July 14, 1846.

To all whom it may concern:

Be it known that I, ELEAZER D. LOVELAND, of the city, county, and State of New York, have invented a new and Improved Hot-Air Stove, by means of a certain combination of cylinders, forming chambers or flues, through which a current of air passes in contact with the heated surface of the smoke or gas flues, and the bed or fire plate, which rests immediately on the furnace and over the fire; and I do hereby declare that the following is a full and exact description of the same.

Letter A, see drawing, represents a perspective view of the stove, when complete with the hot air holes for pipes, and the smoke pipe.

Letter B, represents a sectional view.

Figure 1, of letter B, is the outside cylinder extending down to the base Fig. 5, and surrounding the furnace.

Figure 2, is the smoke flue, connected by a collar to the bed or fire plate Fig. 15, supported immediately over the fire.

Figure 3, 3, are hot air holes, to which the pipes are attached for distributing.

Figure 5, is the base of the stove.

Figs. 7, 7, air holes, through which a current of air rushes, and following the direction of the arrows is carried between the collar Fig. 16, and the sides of the furnace, and through the flues Figs. 18, 19, 20, and 21, to the distributing chamber Figs. 22 and 22, and thence into the air pipes as represented by Figs. 3, 3.

Figure 8, is the furnace grate to be used in the usual manner of cylinder stoves as a drop grate, when desirable to remove the ashes, cinders &c., preparatory to kindling a fire; Figure 9, interior of the furnace; Figures 10 and 11, gas or smoke flues, as represented by the arrows, the gas from the furnace passing up Fig. 10, between the air pipes Figs. 18 and 19, up over 19, and down Fig. 11, to the connecting pipes Figs. 12 and 12, through which it passes into the main flue as represented in letter B, Fig. 2. Figures 12, 12 and 12, small pipes connecting the gas pipes to the main pipe, and around which the current of air passes.

Figure 13, is the collar to the main smoke pipe or flue connected at its lower end of the bed or fire plate Fig. 15, having a damper in it at Figure 14. Figure 14, lower opening of the collar Figure 13, having a damper in it to be used as a direct draft in kindling fires, and in cleaning the ashes, dust, &c., collected in the smoke flues. Figure 15, bedplate in fire plate, to be used either with or without fire brick, soap stone, or other material as a lining, and used as a radiating surface for the current of air to come in contact with in its passage to the air chamber Figure 22 and 22. Figure 11, cylinder surrounding the furnace, so as to carry the currents of air close in contact with the heated sides of the furnace, and having a space between it and the outside cylinder to prevent the absorption of heat by contact with the surrounding air. Figure 17, the partition to confine the air from passing underneath the grate, and making an air chamber, which passes around the three sides of the base, the front being left open to admit the ash pan. Figures 18, 19, 20 and 21, flues through which the current of air passes as shown by the arrows after its entrance at Figure 7. Figures 22, and 22 distributing chamber having four outlets as represented in letter A, Figure 3, 3, 3 and 3.

Now I do not claim, in the foregoing description of my improvement in hot air stoves, having any originality in the arrangement of the fire plate under the hot air flues, nor the damper for governing the direct draft, they being of common use in most hot air stoves; but

What I do claim and wish to secure by Letters Patent, is—

The manner herein described of combining the six cylinders and flue spans, by which a great extent of heating surface for the purpose herein set forth is obtained.

ELEAZER D. LOVELAND.

Witnesses:

BENJ. F. RYEN,

J. D. WHEELER.