

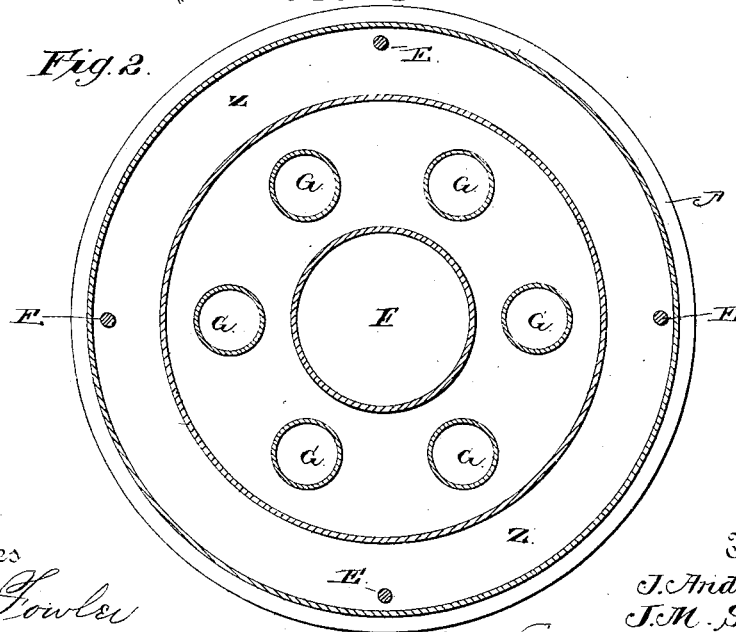
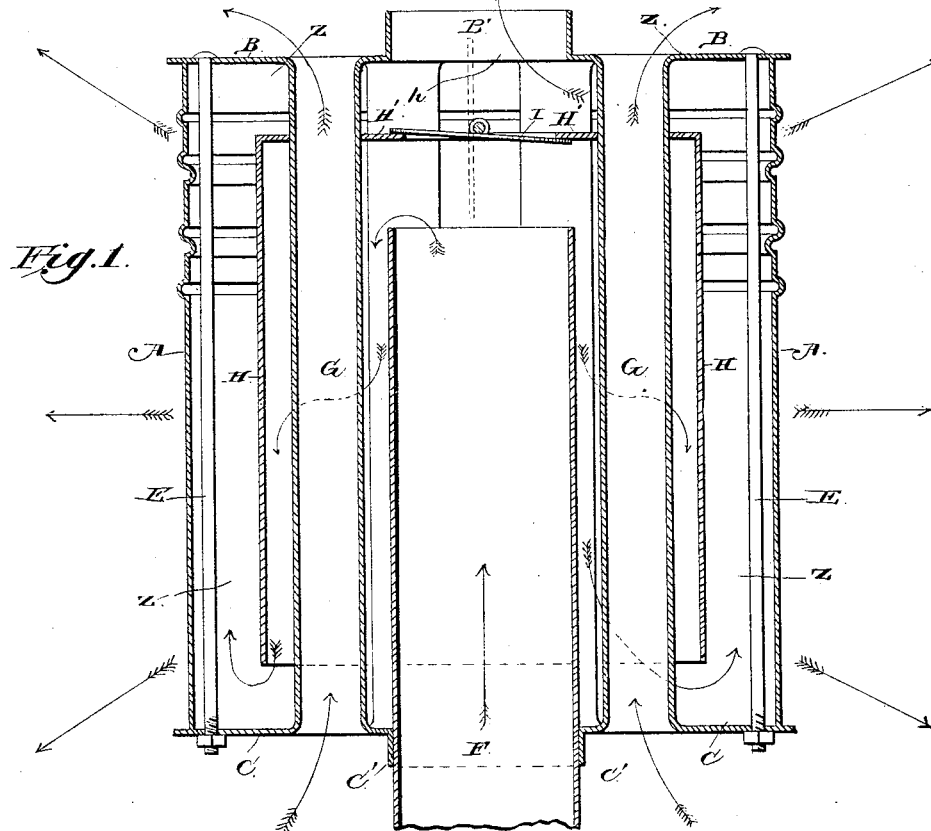
(No Model.)

J. M. SHERMAN & J. ANDERSON.

HEATING DRUM.

No. 344,414.

Patented June 29, 1886.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN M. SHERMAN AND JOSEPH ANDERSON, OF ELLSWORTH, KANSAS.

HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 344,414, dated June 29, 1886.

Application filed December 9, 1885. Serial No. 185,168. (No model.)

To all whom it may concern:

Be it known that we, JOHN M. SHERMAN and JOSEPH ANDERSON, citizens of the United States, residing at Ellsworth, in the county of Ellsworth and State of Kansas, have invented a new and useful Improvement in Heating-Drums, of which the following is a specification, reference being had to the accompanying drawings.

Our invention relates to an improvement in heating-drums; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claim.

In the drawings, Figure 1 is a vertical transverse sectional view of our invention. Fig. 2 is a horizontal transverse sectional view of the same.

A represents the drum, which is preferably cylindrical in shape, and is provided with the top B and the bottom C, which are secured on opposite ends of the cylinder A by means of connecting bolt-rods E, which admit of the said top and bottom being readily removed, when necessary, to clean out the drum. In the center of the bottom is a depending-collar, C', to receive a vertical induction-pipe, F, that is connected to the stove-pipe and extends vertically in the drum for a suitable height. The center of the top B has an opening and a collar, B', for attachment to the stove-pipe, means being thus provided for a direct vertical draft through the drum.

G represents a series of air-flues which extend vertically through the drum, are open at their upper and lower ends, and are arranged in a circle around the induction-pipe, about midway between the said pipe and the outer side of the drum.

H represents a deflecting-cylinder, which is arranged in the drum and extends nearly to the bottom thereof, the upper end, H', of the said cylinder being located a slight distance below the top of the drum, and the air-flues being passed therethrough. This arrangement of the drum and the deflecting-cylinder leaves a space, Z, between the said deflecting-cylinder and the drum, entirely surrounding the cylinder.

In the upper end of the cylinder H is a central opening, h, that aligns with the induction-pipe, and in the said opening is placed a damper, I, which may be turned to either close or open the opening h. This drum is designed to be connected with the stove-pipe, either in

the same room with the stove or in the room above. When the damper is open, the smoke and products of combustion from the stove pass directly up through the center of the drum. When the damper is closed, the smoke and products of combustion enter the drum through the induction-pipe and strike against the upper end of the deflecting-cylinder, and are dispersed therein, thus heating the air-flues, and pass downwardly under the lower edge of the deflecting-cylinder to the space Z, in which the heat rises, thus heating the drum and the surrounding external air by radiation, escaping finally through the opening in the top of the drum up the stove-pipe. The air in the air-flues becomes heated and rises, and the colder subjacent air in the room enters the said flues and becomes heated, and by this means the air in the room is constantly heated and circulated, thus maintaining the temperature in the room at the proper point in all portions thereof.

In Fig. 1 the damper is shown closed in solid lines and open in dotted lines, and the course of the products of combustion is indicated by feathered arrows, the course of the air in the room surrounding the drum being indicated by arrows that are not feathered. A heating-drum thus constructed is cheap and simple, and effects a great economy in the use of fuel, and maintains an even heat in the room in which it is operated.

Having thus described our invention, we claim—

The combination of the drum A, the central vertical induction-pipe F therein, the deflecting-cylinder H, located in the drum at a distance from the sides, top, and bottom thereof, and surrounding the induction-pipe, the said deflecting-cylinder having the damper I at its upper end and being open at its lower end, and the air-flues G passing vertically through the drum and open at their lower and upper ends, the said flues being arranged around the induction-pipe, between it and the deflecting-cylinder, for the purpose set forth, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOHN M. SHERMAN.
JOSEPH ANDERSON.

Witnesses:

C. J. EVANS,
J. F. FLANAGAN.