J. HALL.

Improvement in Heating-Drums.

No. 131,875. Patented Oct. 1, 1872.

Fig. 1.

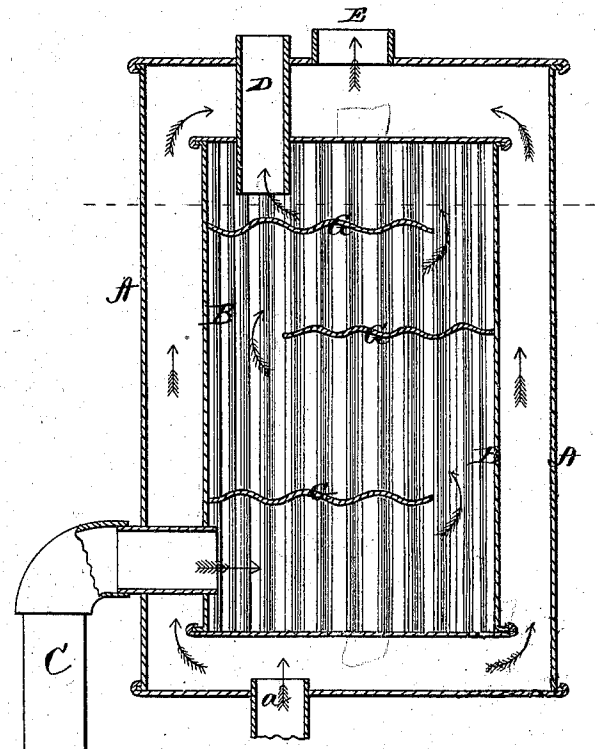
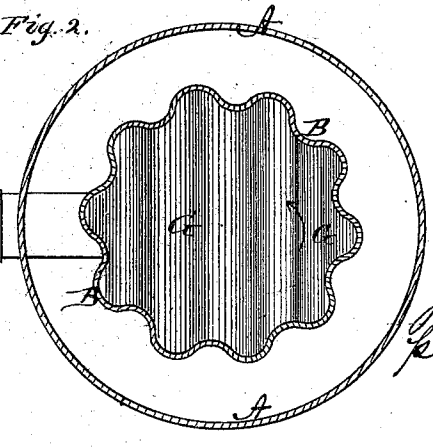


Fig. 2.



Witness:

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per

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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

JOSEPH HALL, OF PLEASANT HILL, ILLINOIS.

IMPROVEMENT IN HEATING-DRUMS.

Specification forming part of Letters Patent No. **131,875**, dated October 1, 1872.

To all whom it may concern:

Be it known that I, JOSEPH HALL, of Pleasant Hill, in the county of McLean and in the State of Illinois, have invented certain new and useful Improvements in Heating-Drums; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in a corrugated drum provided with interior corrugated shelves or ledges, through which drum the air passes to be heated, and said corrugated drum inclosed within an exterior drum, the smoke and heat passing up between the two, and completely enveloping the interior drum.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section, and Fig. 2 is a horizontal section, of my invention.

A represents the outer drum, in the bottom of which is an opening, *a*, to be placed over the stove-pipe collar on a stove, the drum resting on the top of the stove. Through this opening the fire, heat, and smoke are received from the stove. B represents the inner drum, which is corrugated longitudinally around its entire circumference, and which extends from near the bottom to near the top of the outer drum A. Cold air is let into the inner drum at or near the bottom by means of a pipe, C, passing through the outer drum and extending downward to near the floor, or communicating with a pipe leading from the outside of the building. The air heated in the drum B is discharged into the room through the pipe D at the top, or by an aperture in the side near the top with a pipe from said aperture through the outer drum. The fire, heat, and smoke completely envelope the inner drum, passing entirely around the same on all sides, as well as top and bottom, and then out through the smoke-pipe E. The inner drum B is provided with two, three, or more shelves or breakers, G G, on the inside, arranged as shown, to prevent the passage of the cold air through the inner drum before it is sufficiently heated. These shelves or breakers G G are corrugated, as shown, which, in connection with the corrugated surfaces of the drum B, increases the heating-surfaces very materially without increasing the space to be occupied by the drum.

This air-heating apparatus may be manufactured separate from any stove, and used upon or in connection with any stove by simply removing the stove-pipe and connecting the stove-pipe hole in the stove with the aperture *a* in the bottom of the outer drum.

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

The combination of the outer drum A with apertures *a* and E, the interior corrugated drum B with inside corrugated shelves or breakers G G and the pipes C and D, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of September, 1872.

JOSEPH HALL.

Witnesses:
J. M. MASON,
EDM. F. BROWN.