G. D. Greenleaf,

Heating Drum.

No. 47,945. Patented May 30. 1865.

Fig. 1.

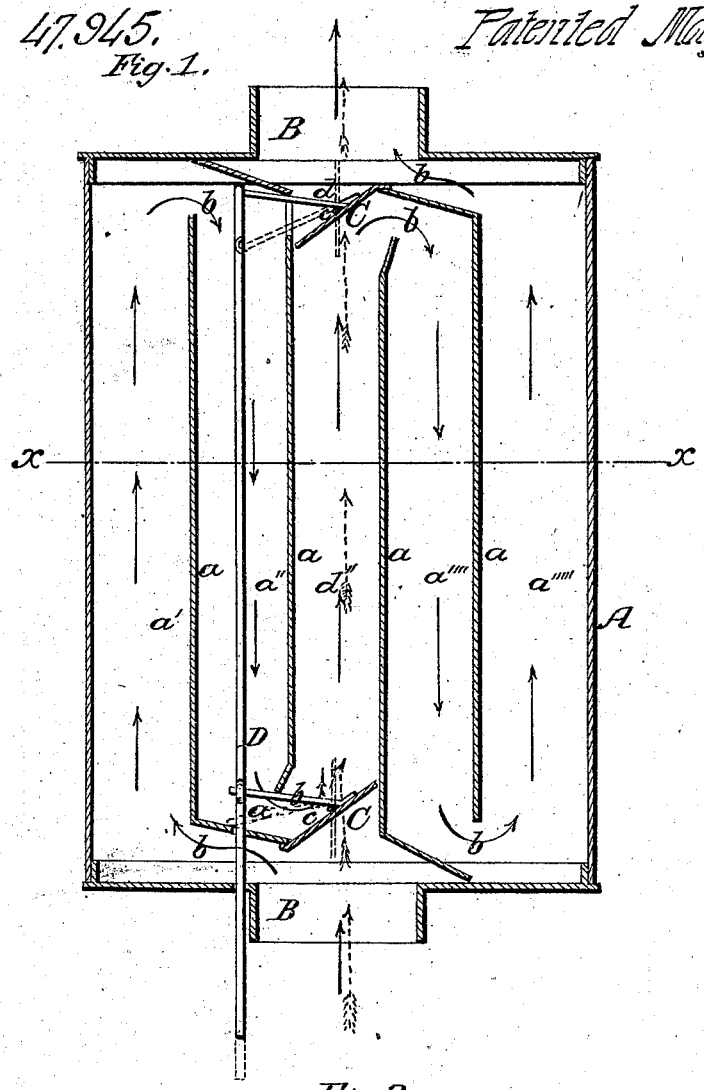
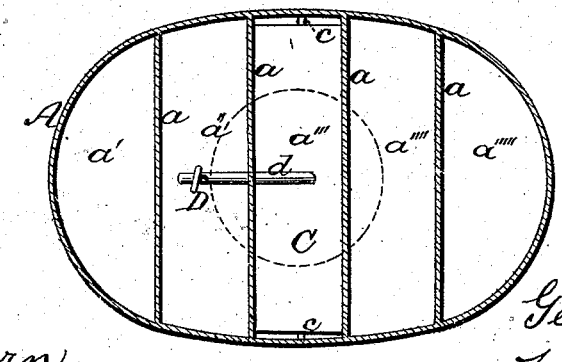


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEO. D. GREENLEAF, OF THREE MILE BAY, NEW YORK.

STOVE-PIPE DRUM.

Specification forming part of Letters Patent No. **47,945**, dated May 30, 1865.

To all whom it may concern:

Be it known that I, GEORGE D. GREENLEAF, of Three Mile Bay, in the county of Jefferson and State of New York, have invented a new and Improved Heat-Radiator for Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical central section of my invention; Fig. 2, a horizontal section of the same, taken in the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved heat-radiator to be applied to stove-pipes for the purpose of radiating the heat, which would otherwise escape into the chimney.

The invention consists in a novel arrangement of draft passages or flues placed within a drum, and provided with dampers in such a manner that either a direct or sinuous draft may be obtained within the drum, as required.

A represents a drum, which may be of cylindrical or oval form, the latter being preferable. This drum is provided at its upper and lower ends with collars B, to receive the joints or pieces of stove-pipe with which the drum communicates. Within this drum there are placed and permanently secured four vertical partition-plates, *a*, which form five flues, *a' a'' a''' a'''' a'''''*, which communicate with each other and with the collars B B by means of openings *b*, all of which are shown in Fig. 1. The flue *a'''* has a central position within the drum A, and is in line with the collars B B, and said flue *a'''* has a damper, C, at its upper and lower ends, the two dampers working on pivots *c* at the centers of their ends, and connected by arms *d* with a vertical rod, D, the lower end of which projects through the bottom of the drum. By thus connecting these dampers they are both moved simultaneously by actuating the rod D. When the dampers C are open, a direct draft is obtained through the flue *a'''*, as indicated by the dotted arrows in Fig. 1, and when the dampers are closed a sinuous draft is obtained, the products of combustion passing up through flue *a'* into the upper part of flue *a''*, down the latter into the lower end of flue *a'''*, up the latter into the upper end of flue *a''''*, and down flue *a''''* into the lower end of flue *a'''''*, and up said flue into the stove-pipe, as indicated by the solid arrows. By this arrangement a very circuitous draft is obtained and a large amount or volume of heat radiated into the apartment in which the drum is placed, and at the same time, when a direct and strong draft is required—as in kindling a fire, for instance—it may, by a simple adjustment of the dampers, be obtained.

I claim as new and desire to secure by Letters Patent—

The combination, in heat-radiators for stoves, of the drum A, flues *a' a'' a''' a'''' a'''''*, arms *d d*, and rod D, substantially as and for the purposes set forth.

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Witnesses:

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