

G. H. PEDLAR.
Heating-Drums.

No. 148,978.

Patented March 24, 1874.

Fig. 1.

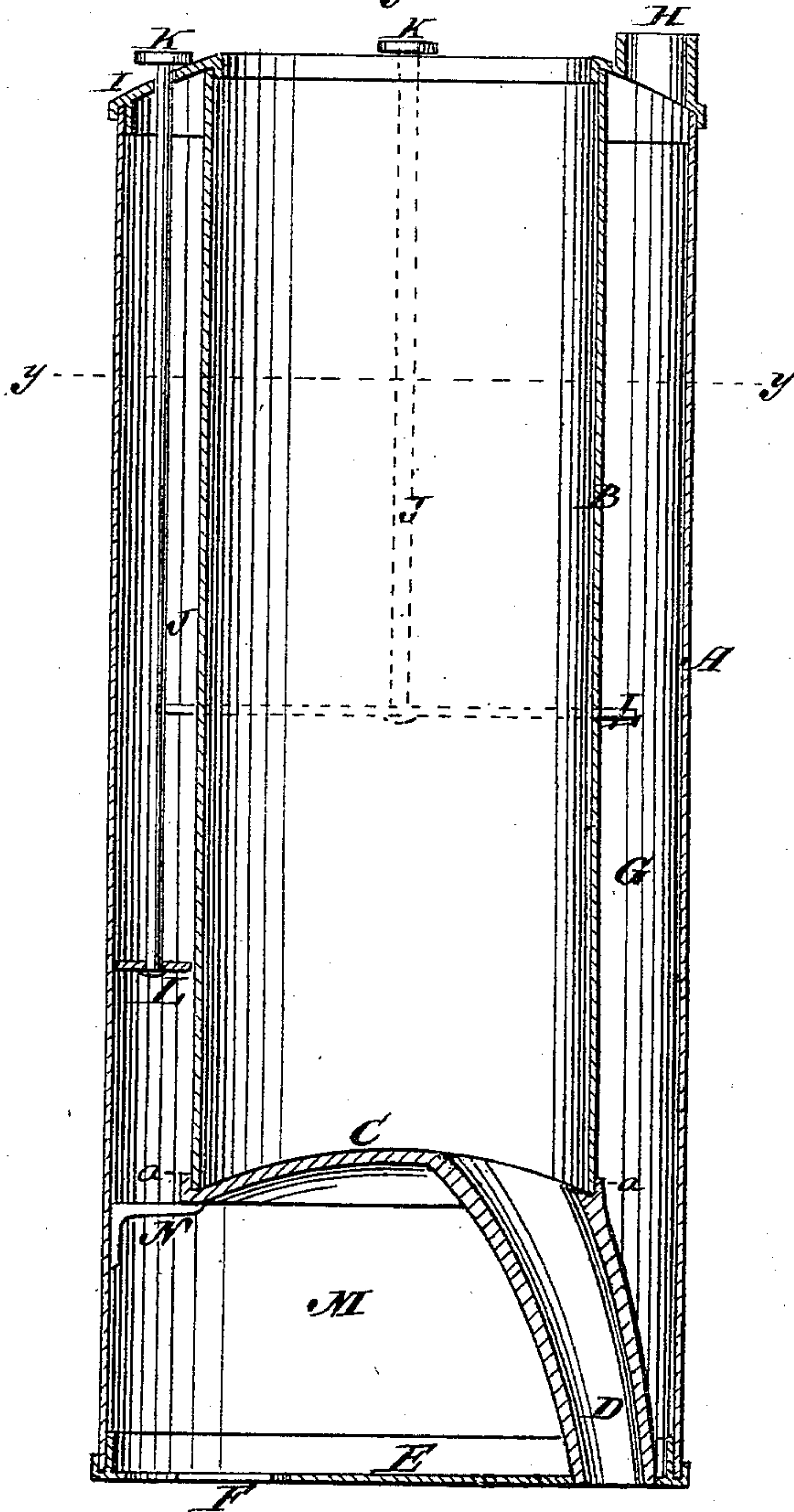
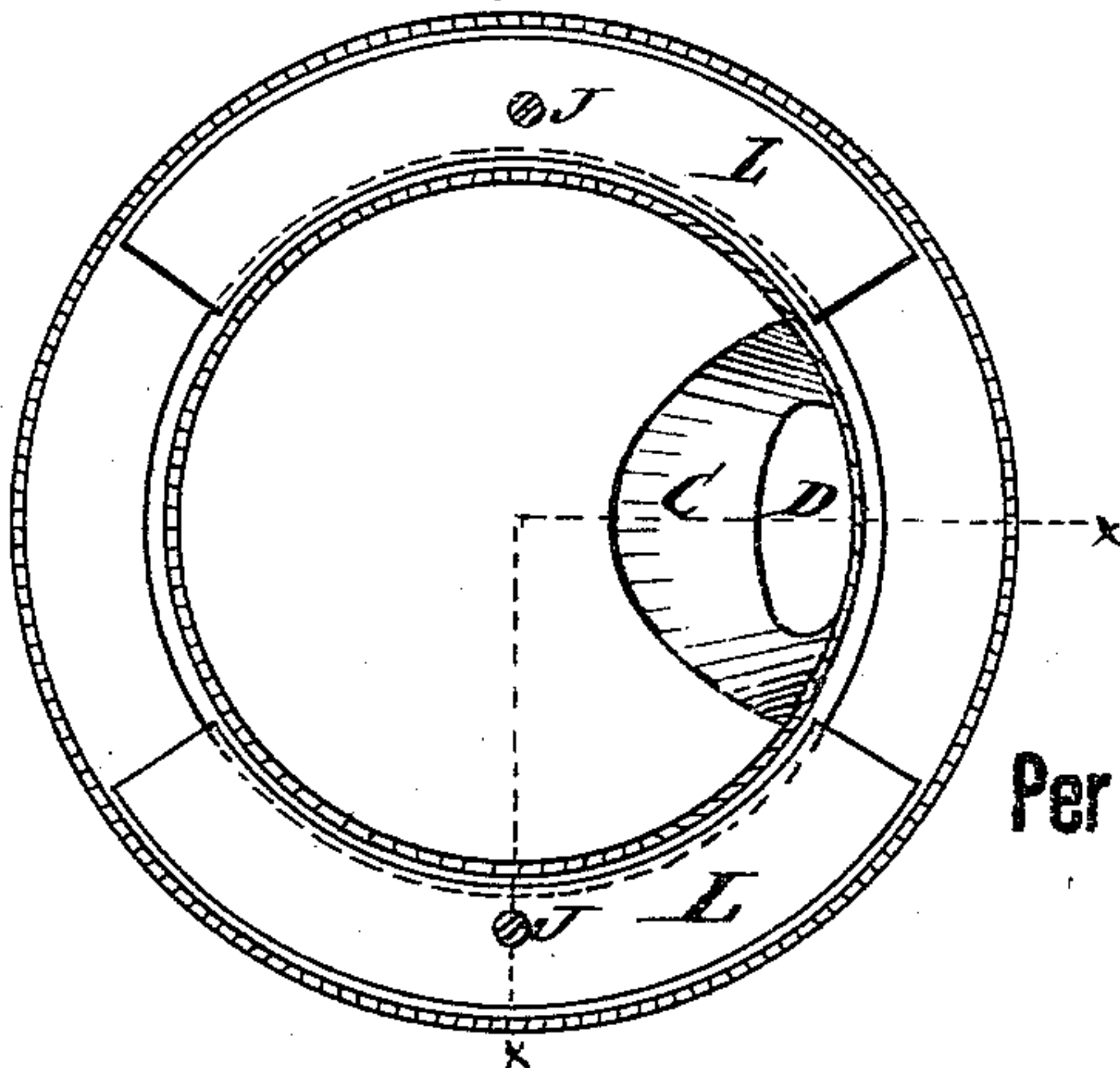


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE H. PEDLAR, OF OSHAWA, CANADA, ASSIGNOR TO SAMUEL PEDLAR,
OF SAME PLACE.

IMPROVEMENT IN HEATING-DRUMS.

Specification forming part of Letters Patent No. **148,978**, dated March 24, 1874; application filed
May 17, 1873.

To all whom it may concern:

Be it known that I, GEORGE H. PEDLAR, of Oshawa, in the Province of Ontario and Dominion of Canada, have invented a new and useful Improvement in Heaters, of which the following is a specification:

My invention relates to hot-air drums, which may be applied to stoves or stove-pipes; and the particular feature of invention claimed herein consists of a separate base-plate, having an encircling rim or flange to support and embrace the lower end of the inner drum, a concave bottom, and a single horn flue for cold air, flaring upward from the bottom of the drum, and entering the separate concave base, with which it is integral; the object being to obtain a cheap and durable drum, in which the parts may be put together without trouble, on account of the simplicity in its construction, in having the more difficult parts in a single base and constituting the seat for the inner drum, and into which the cold-air flue enters, thus dispensing with much labor, and having the important advantage of forming a perfect and permanent air-joint at the point most exposed to the heated products and the cold air, whereby the air for inhalation is kept pure and free from gases, which, in ordinary sheet-iron jointed drums, is quite impossible, by reason of the impracticability of making durable air-tight joints with sheet-iron; the chief object of my invention being to obtain a base for the air-drum that is not likely to be warped and twisted by heat, thereby opening its connecting-joints and damaging the heated air.

In the accompanying drawing, Figure 1 represents a vertical section of the heater, taken on the line *x x* of Fig. 2. Fig. 2 is a horizontal section of Fig. 1, taken on the line *y y*.

Similar letters of reference indicate corresponding parts.

A is the outer cylinder or casing. B is an inner cylinder, of less diameter, which is arranged within the outer casing, as seen in the drawing. C represents the base of this cylinder, which is concave in form, and preferably made of cast-iron, with a hanging air-tube, D, of any desired form and size. The cylinder

B is, of course, made of sheet-iron, and the two are joined together by riveting, or in any suitable manner. E is the bottom of the heater, through which the air-tube D passes. F is an opening in the bottom, which allows the drum to be placed over the smoke-flue collar of a stove, or over the end of the stove-pipe when the drum is used in an upper room, with the stove below. M is a chamber, into which the heat is received, and from which it ascends through the annular flue.

The heated products of combustion impinge against the concave base C, which absorbs a large portion of the heat; but the smoke and gaseous products of combustion are spread by the concave base, and pass upward through the annular flue G, between the outer and inner cylinders, and find an exit through the pipe H in the annular cap I of the heater.

J J are rods, which pass through the annular cap I, with knobs K K on their upper ends, and having deflecting-plates L L on their lower ends. These plates are segments of circles which, in width, nearly fill the annular flue G, and of a length sufficient to inclose about one-fourth of the surface of the inner cylinder each, as seen in Fig. 2. These plates deflect and retard the gaseous products of combustion as they ascend, and thereby allow an increased quantity to be absorbed by the air-cylinder B. These plates also serve to clear the cylinder B of the soot and foreign matter which adheres to it, by means of a vertical movement which is given them by means of the rods.

The cold-air tube D may, by means of a pipe, receive air from the outside of the building, if desired. The air-cylinder B is open at the top, so that a current of heated air is constantly ascending and being discharged into the apartment in which the heater is placed.

When not convenient to place the heater upon a stove or stove-pipe, as before stated, there may be a side opening made into the chamber M to admit the products of combustion.

N is a bracket attached to the outer drum, for supporting the base and air-cylinder.

I do not confine myself to any particular form, size, or proportions.

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

The separate concave base-plate C, as a seat for the inner drum B, and having a vertical collar, rim, or flange, *a*, to close the joint of

the drum, and provided with a single upward-flaring horn, D, integral with the base and its joint-rim, and a support, N, as shown and described, and to obtain the advantages stated.

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Witnesses:

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