

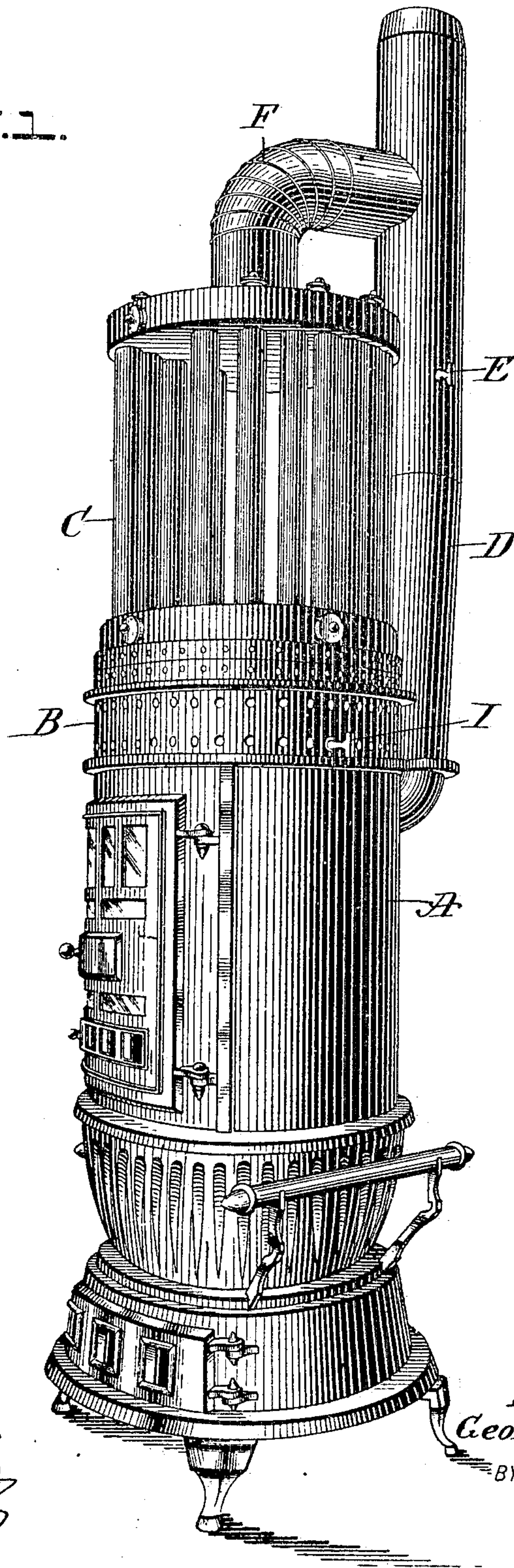
No. 798,809.

PATENTED SEPT. 5, 1905.

G. E. LEONARD.
AIR HEATING DRUM.
APPLICATION FILED MAR. 20, 1905.

2 SHEETS—SHEET 1.

FIG. 1.



WITNESSES:

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Geo. J. Hoston

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2 SHEETS—SHEET 2.

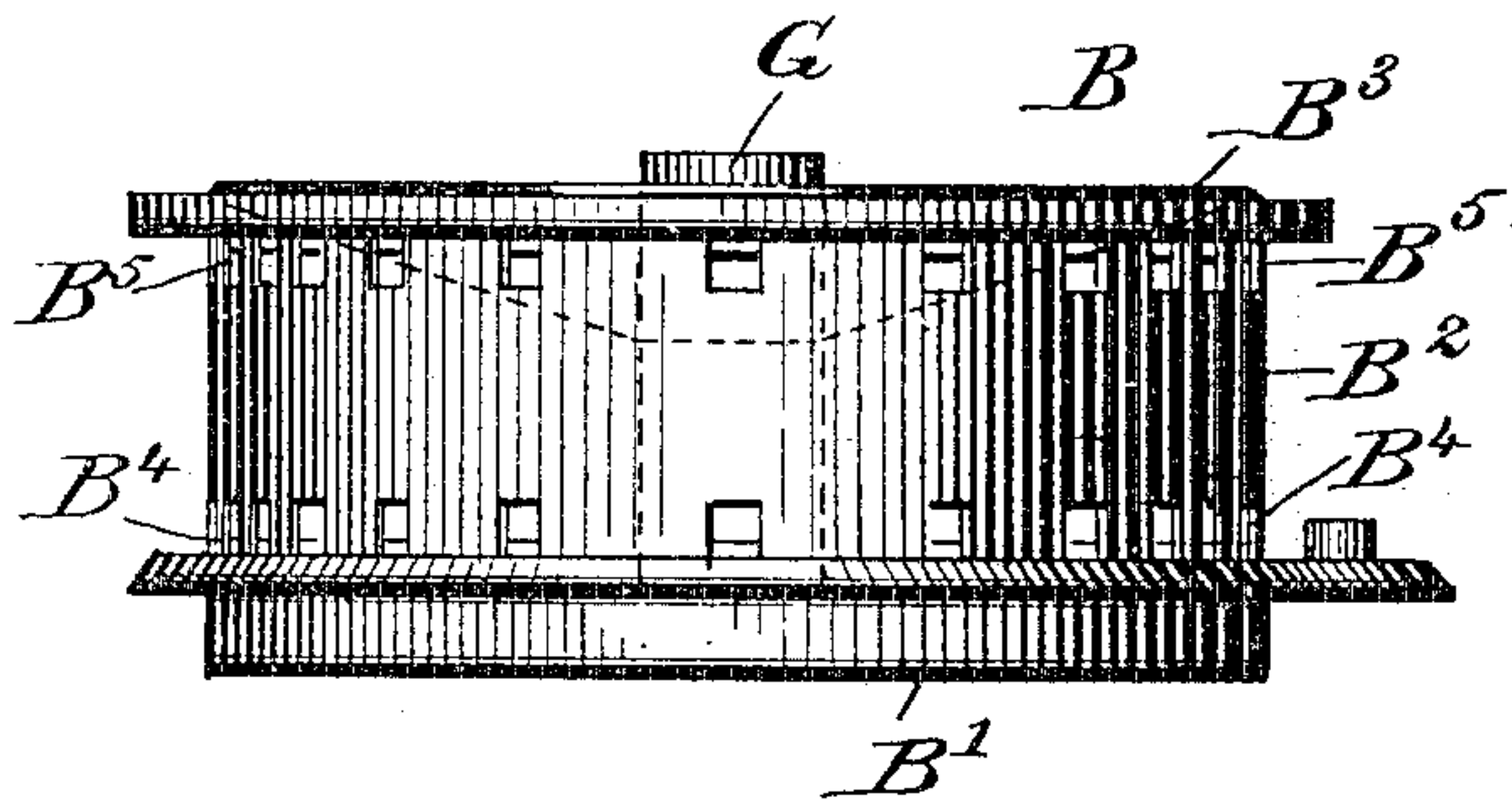


FIG. 2.

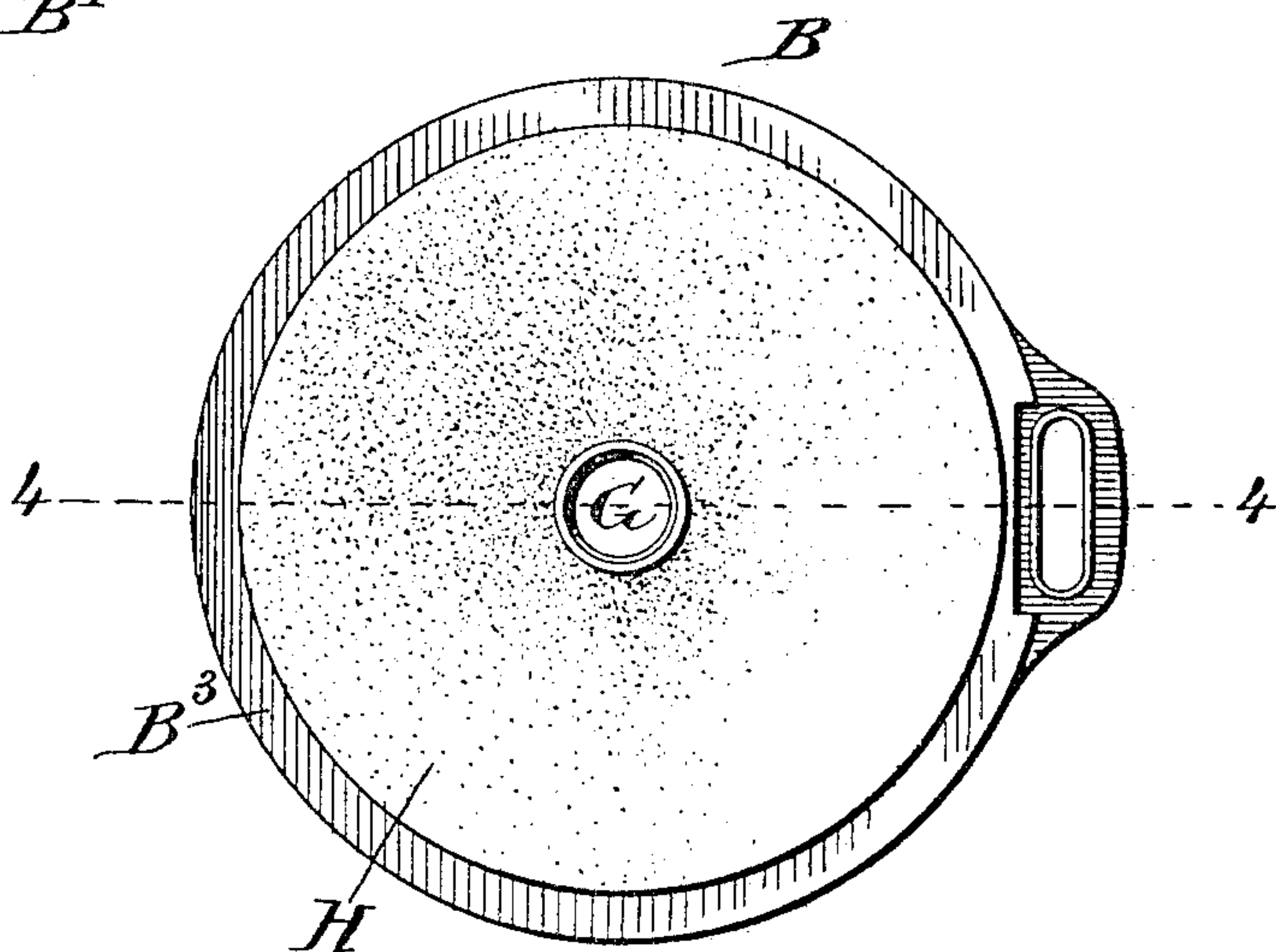


FIG. 3.

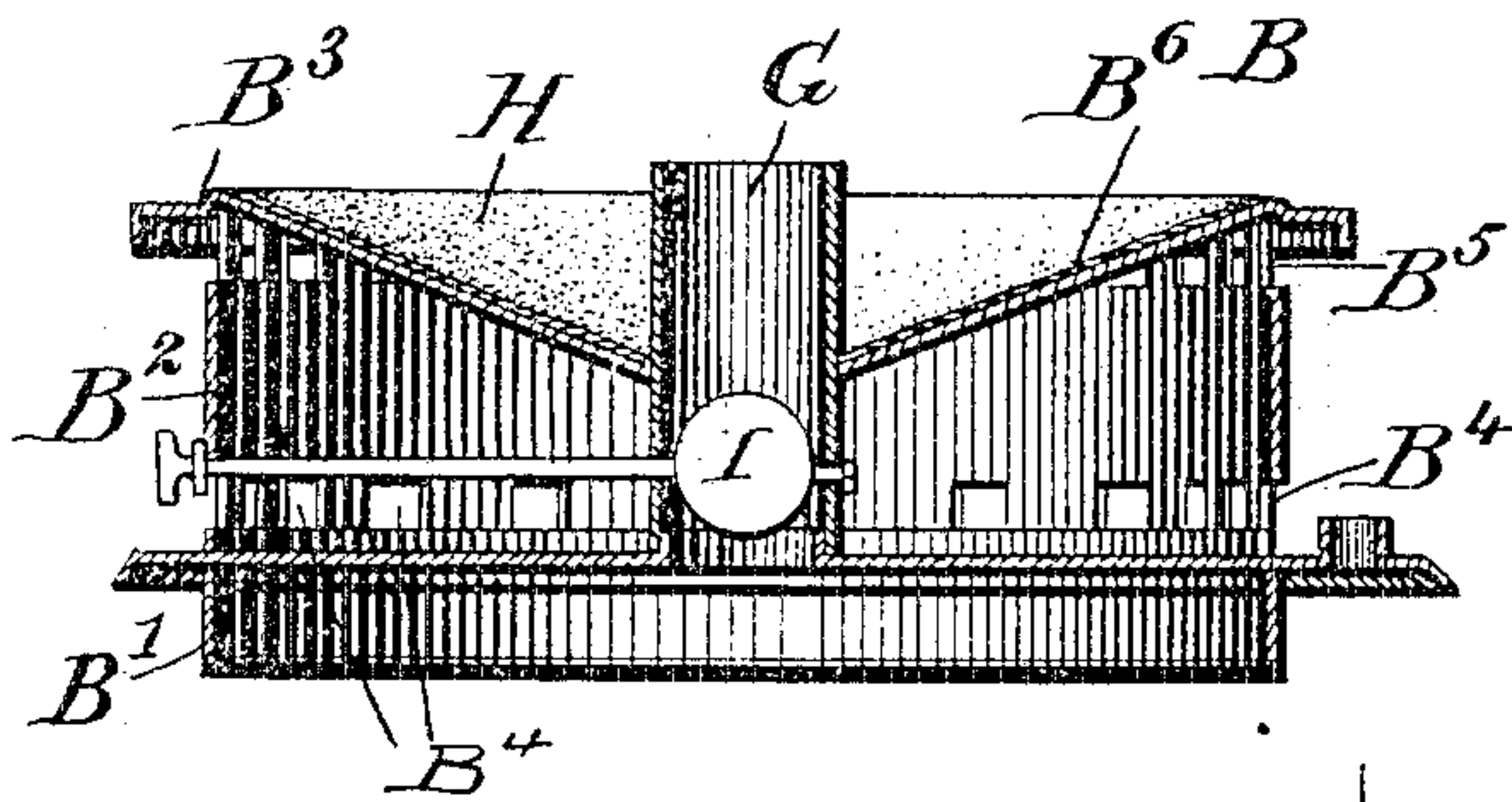


FIG. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE E. LEONARD, OF SHERIDAN, WISCONSIN.

AIR-HEATING DRUM.

No. 798,809.

Specification of Letters Patent.

Patented Sept. 5, 1905.

Application filed March 20, 1905. Serial No. 251,038.

To all whom it may concern:

Be it known that I, GEORGE E. LEONARD, a citizen of the United States, and a resident of Sheridan, in the county of Waupaca and State of Wisconsin, have invented a new and Improved Air-Heating Drum, of which the following is a full, clear, and exact description.

The invention relates to heating-stoves having a tubular heating-drum, such, for instance, as shown and described in the Letters Patent of the United States, No. 417,874, granted to me December 24, 1889.

The object of the present invention is to provide a new and improved air-heating drum for stoves arranged to support the tubular heating-drum on a comparatively cool surface by causing a rapid circulation of air through the heating-drum and providing the top thereof with an asbestos filling.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a stove provided with the improvement. Fig. 2 is a side elevation of the improvement. Fig. 3 is a plan view of the same, and Fig. 4 is a sectional side elevation of the same on the line 4 4 of Fig. 3.

The fire-box or combustion-chamber A of the stove supports on its top an air-heating drum B, carrying a tubular radiating-drum C of the construction shown and described in the Letters Patent of the United States above referred to. From the upper end of the fire-box A leads a chimney-flue D, having a suitable damper E, and from the top of the tubular radiating-drum C leads a branch pipe F to the chimney-flue D. Through the air-heating drum B extends a tube G to allow a portion of the smoke and gases arising from the burning fuel in the fire-box A to pass to the tubular radiating-drum C.

The air-heating drum B is preferably made of three parts—namely, a bottom ring B', fitted on the upper end of the fire-box A and having in its top an opening and support for the centrally-located flue G previously men-

tioned. On the top of the ring B' is set an air-chamber B², supporting a cover B³, on which rests the tubular radiating-drum C. In the side wall of the chamber B², near the lower end thereof, are arranged air-inlet openings B⁴, and air-outlet openings B⁵ are arranged in the side wall, near the top thereof, so that air can pass into the air-chamber B² by way of the inlets B⁴ and pass out through the outlets B⁵.

In order to insure a quick circulation of the air through the chamber B², the cover B³ is preferably in the form of an inverted cone, so as to direct the air rising in the chamber B² to the outlets B⁵ for the air to quickly escape after circulating through the chamber B². The cone-shaped portion B⁶ of the cover B³ is provided on its top with a filling or lining H, of asbestos or other non-heat-conducting material, which provides a comparatively cool surface for the under side of the tubular radiating-drum C to prevent the latter from being easily destroyed by the heat and gases passing from the fire-box A through the flue G into and through the radiating-drum C.

In order to regulate the amount of smoke and gases passing up through the flue G, as described, a suitable damper I is provided, operated from the outside by having its stem extending through one of the air-inlets B⁴ to the outside of the heating-drum to permit the operator to conveniently manipulate the damper whenever it is desired to do so.

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

1. An air-heating device for stoves, comprising an air-heating drum, resting upon the stove, provided with air inlet and exit openings, and a radiating-drum supported by said heating-drum.

2. An air-heating device for stoves, comprising an air-heating drum, resting upon the stove, provided with air inlet and exit openings, and a radiating-drum supported by said heating-drum, said first-named drum being provided interiorly with a deflector.

3. An air-heating device for stoves, comprising an air-heating drum, resting upon the stove, provided with air inlet and exit openings, and a radiating-drum supported by said heating-drum, said first-named drum being provided with a central flue extending through the same.

4. An air-heating device for stoves, comprising an air-heating drum, resting upon the stove, provided with air inlet and exit openings, and a radiating-drum supported by said
5 heating-drum, said first-named drum being provided interiorly with an inverted conical deflector.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE E. LEONARD.

Witnesses:

M. B. SCOTT,
JOHN VELIE.