G. W. SMITH, T.

Heating-Drums.

No. 148,516. Patented March 10, 1874.

Fig. 1

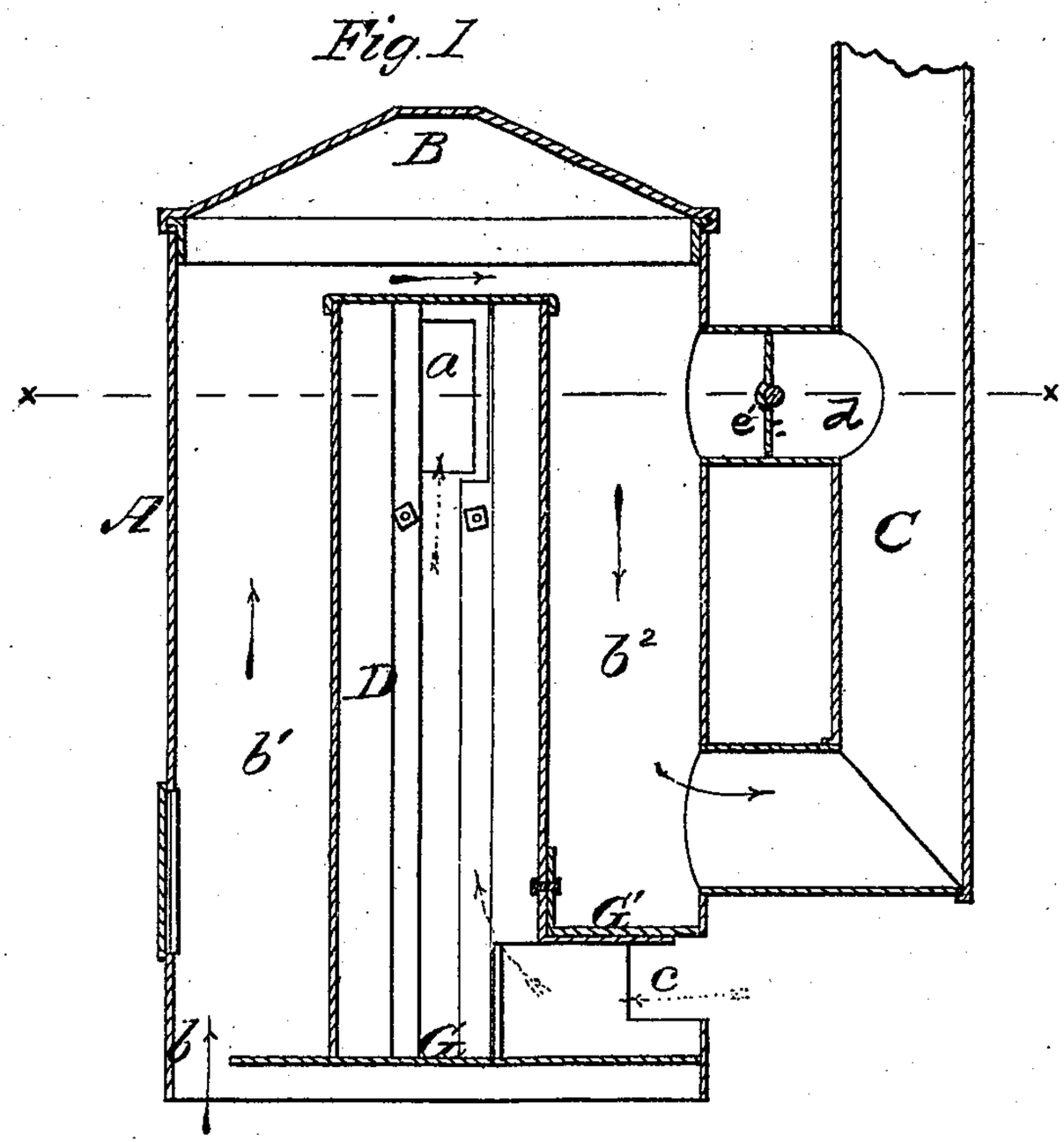


Fig. 3

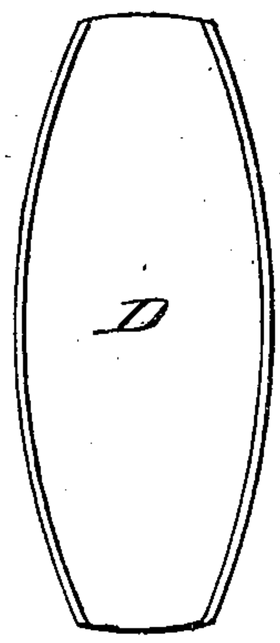
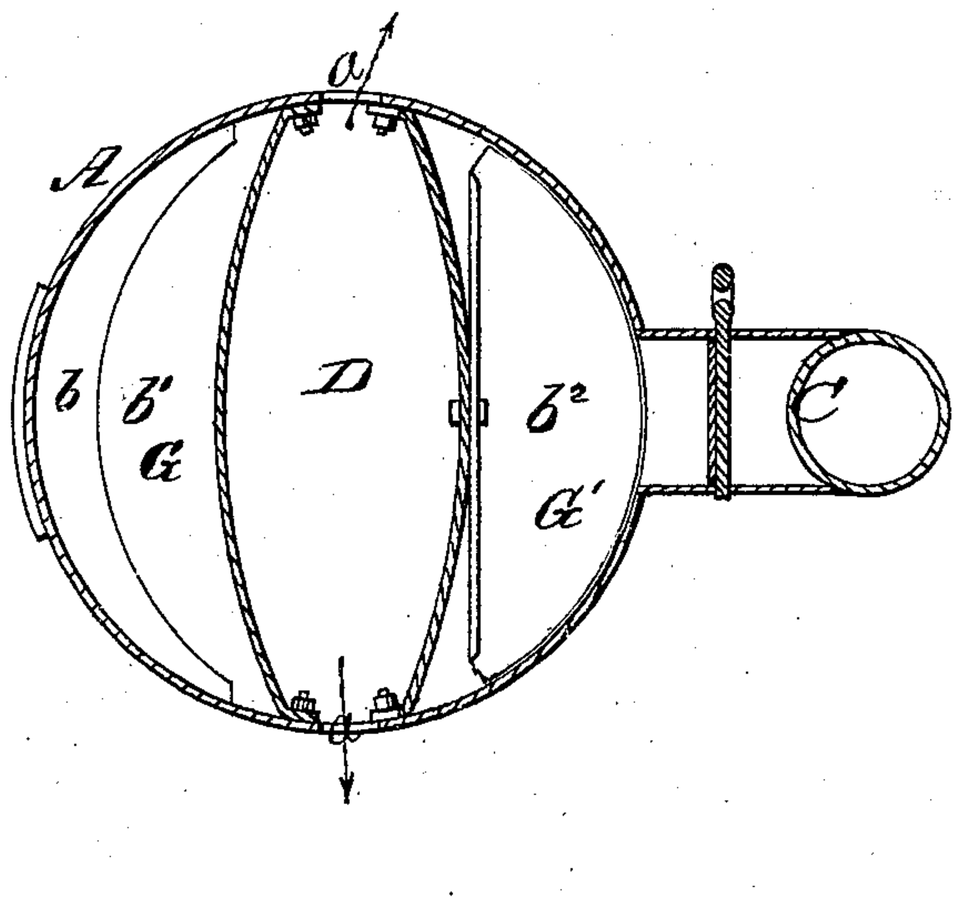


Fig. 2



WITNESSES

Robert Everett.

George E. Upham.

By

INVENTOR

George W. Smith, T.

Chipman, Hoomer, & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE W. SMITH, (T.,) OF KENTLAND, INDIANA.

IMPROVEMENT IN HEATING-DRUMS.

Specification forming part of Letters Patent No. **148,516**, dated March 10, 1874; application filed January 31, 1874.

To all whom it may concern:

Be it known that I, GEORGE W. SMITH, (T.,) of Kentland, in the county of Newton and State of Indiana, have invented a new and valuable Improvement in Stove-Drums; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical section of my stove-drum. Fig. 2 is a transverse horizontal section of same. Fig. 3 is a detail view, showing the box D.

This invention has relation to stove-drums, through which heat is conducted on its way from a stove to the chimney, for the purpose of utilizing such heat for warming rooms.

The nature of my invention consists in a heating-drum having a cold-air box arranged diametrically across it inside, which forms an ascending and a descending passage for the heated products of combustion, in combination with passages for cold air to circulate through the said air-box, as will be hereinafter explained, whereby a very large heat-radiating surface is obtained in a comparatively small drum.

The following is a description of my invention:

In the annexed drawings, A designates the outer shell of the drum, which may be cylindrical and provided with a conical top, B, or it may be of any other suitable shape. The lower end of this shell A is open and adapted to fit on a stove, so that the heat therefrom will circulate through the flue-spaces b^1 b^2 and escape into the chimney through the pipe C. G designates a bottom plate with a crescent-shaped opening, b, through it for the heat to enter the flue b^1, and G′ is a bottom plate to the flue b^2, between which plate and the plate G an opening, c, is made through the shell A for the entrance of cold air into a box, D. This box D rises from the bottom plate G nearly to the top B, and extends diametrically across the shell A, so as to form the two vertical flues b^1 b^2, as shown in Figs. 1 and 2. This box D is closed on top, and has two outlets, a a, leading from it through the shell A, for the escape of heated air into the room.

If desired, the opening c may be provided with a register, and the pipe C may be provided with a damper for regulating the heat.

It will be seen from the above description that the bottom plate G is subjected to the direct action of the flame and heated products, which heat will be communicated to the air as it enters the box D through opening c; also, that the side and top walls of the box D are subjected to the products of combustion as they pass through the flues b^1 b^2 to the pipe C. I thus obtain a very large radiating-surface.

When a more direct draft is desired, a pipe, d, with a damper, e', in it, may lead from the upper end of flue b^2 into the pipe C.

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

In a stove-drum for heating purposes, the inner vertical diametrically-arranged box D, provided with air inlet and outlet passages c a a and forming flues b^1 b^2, in combination with the bottom plates G G′ and opening b, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE W. SMITH, (T.)

Witnesses:

MADISON NEWTON,

JNO. B. CONNER.