

No. 633,003.

Patented Sept. 12, 1899.

G. T. HOFF.
HEATING DRUM.

(Application filed June 24, 1899.)

(No Model.)

Fig. 1.

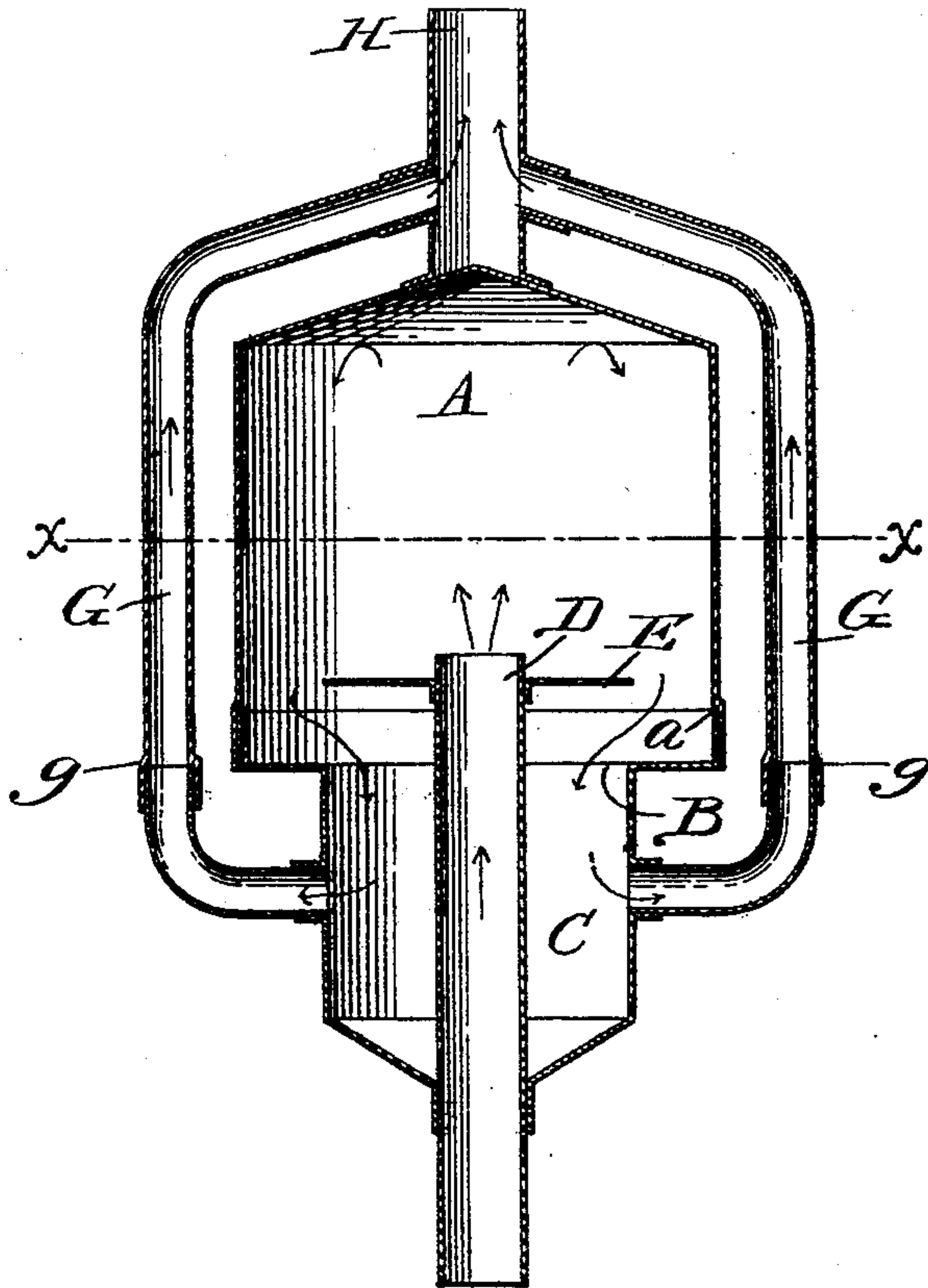
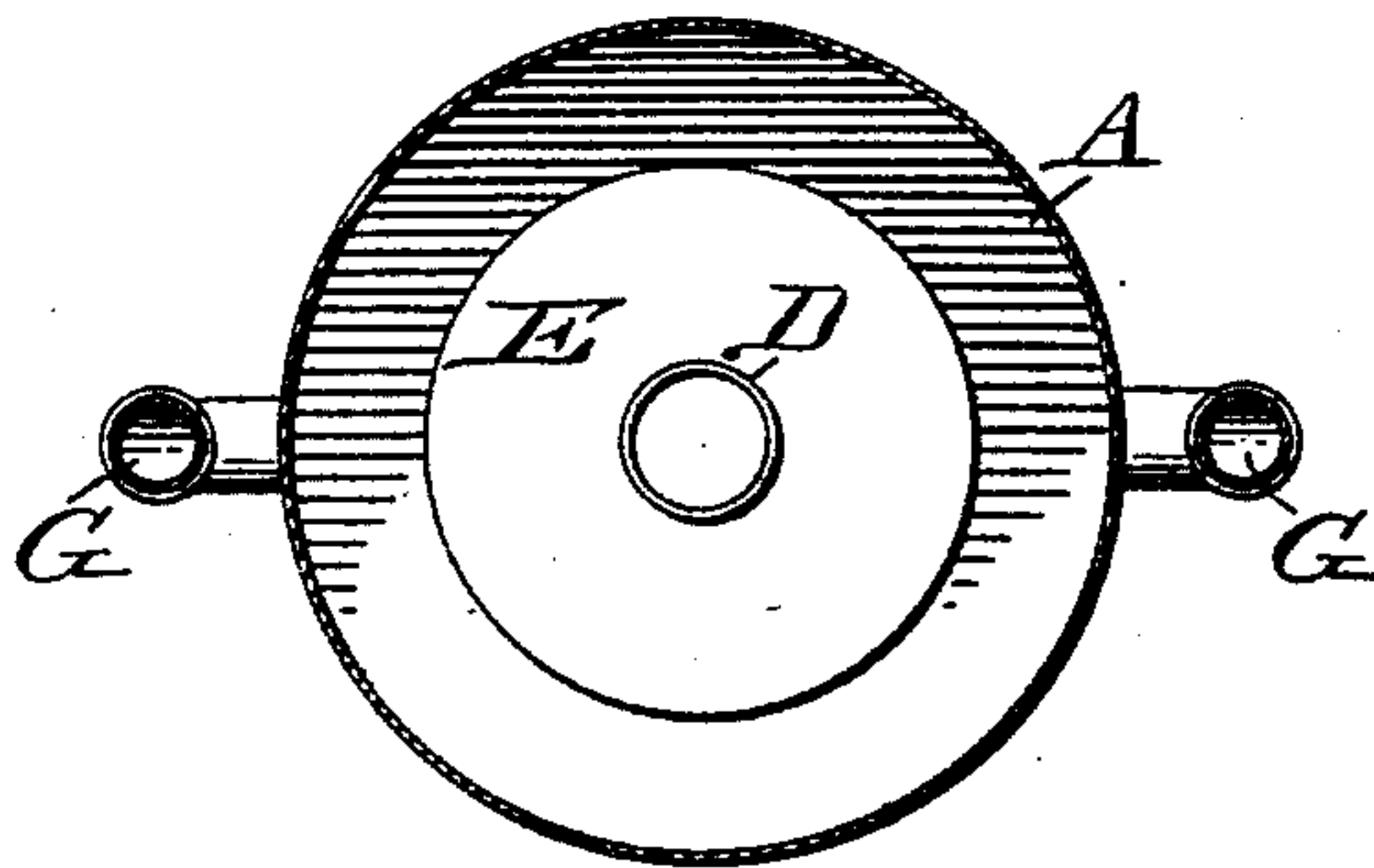


Fig. 2.



WITNESSES:

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HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 633,003, dated September 12, 1899.

Application filed June 24, 1899. Serial No. 721,769. (No model.)

To all whom it may concern:

Be it known that I, GILBERT T. HOFF, a citizen of the United States, and a resident of Ashby, in the county of Grant and State of Minnesota, have invented certain new and useful Improvements in Heating-Drums; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a central vertical section of the invention. Fig. 2 is a section on the line xx , Fig. 1.

This invention is designed to provide a heating-drum of improved character adapted for attachment to a stove or stovepipe for the purpose of saving and utilizing by radiation a large percentage of the heat contained in the gases and products of combustion and which is usually carried off and lost.

With this object in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates a drum, preferably cylindrical, although it may be of other desired form. This drum is closed at the top and at the bottom has a large opening B, which communicates with a supplemental smaller drum C, which forms a downward extension of the drum A. This smaller drum C is closed at its bottom, and extending vertically through it is a pipe D, whose open upper end terminates within the drum A at a point some distance above the bottom of the latter. Secured to the upper end portion of this pipe D is a deflector-plate E. The lower end of this pipe D, which extends any desired distance below the drum C, is designed to fit onto a stove or upon a section of a stovepipe, between sections of which the entire device may be interposed.

G G designate two pipes or tubes which communicate at their lower ends with opposite sides of the drum C and which extend up adjacent to opposite sides of the drum A and inwardly over the top of the same, entering

at their upper ends opposite sides of a pipe or tube H, which is secured to the top of the drum A, but which does not communicate therewith and to which the stovepipe-sections leading into the flue or chimney are designed to be connected. For convenience in cleaning the interior of the drum A it is preferably made in two sections, united at a by a telescopic or other suitable joint, and the pipes G are also preferably made in sections, as indicated at g .

The heated gases and products of combustion first enter the drum A by way of the pipe D and pass from the said drum at the bottom through the opening B into the supplemental drum C. From this drum they pass into and through the pipes G, and from thence through the pipe or tube H and attached stovepipe-sections into the flue or chimney. The deflector-plate E serves to hold the gases and smoke in the drum A somewhat by obstructing their immediate passage into the supplemental drum and causes them to come into greater contact with the surrounding walls of the said drum A. In this circuitous passage from the stove to the flue or chimney the products and gases of combustion part with a large percentage of their contained heat, which is radiated from the walls of the drum A and its adjuncts.

By the use of this device a very considerable saving in fuel is effected. There is also obviated the danger of setting fire to chimneys.

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

1. The herein-described heating device, consisting of a drum closed at its top and having an opening at the bottom, a smaller drum communicating with the first-named drum through the said opening, a pipe adapted for connection with a stove or stovepipe-section and extending through the smaller drum and into the larger drum, the pipe or tube connected to the top of the larger drum but not communicating therewith, and the pipes or tubes communicating at one end with the smaller drum and at the opposite end with the said pipe or tube, substantially as specified.

2. The herein-described heating device,

consisting of the large sectional drum A, closed at the top, the smaller drum C forming a downward extension of the large drum and communicating therewith by a large
5 opening, the pipe D which extends through the drum C and into the drum A, the deflector-plate E on the upper portion of the pipe D, the pipe or tube H secured to the top of the drum A but not communicating there-
10 with, and the sectional pipes or tubes G

which communicate at one end with the drum C and at the opposite end with the pipe or tube H, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

GILBERT T. HOFF.

Witnesses:

T. B. MADLAND,

JESSIE P. MADLAND.