

(No Model.)

G. L. S. BROCK.
HEATING DRUM.

No. 318,541.

Patented May 26, 1885.

Fig. 1.

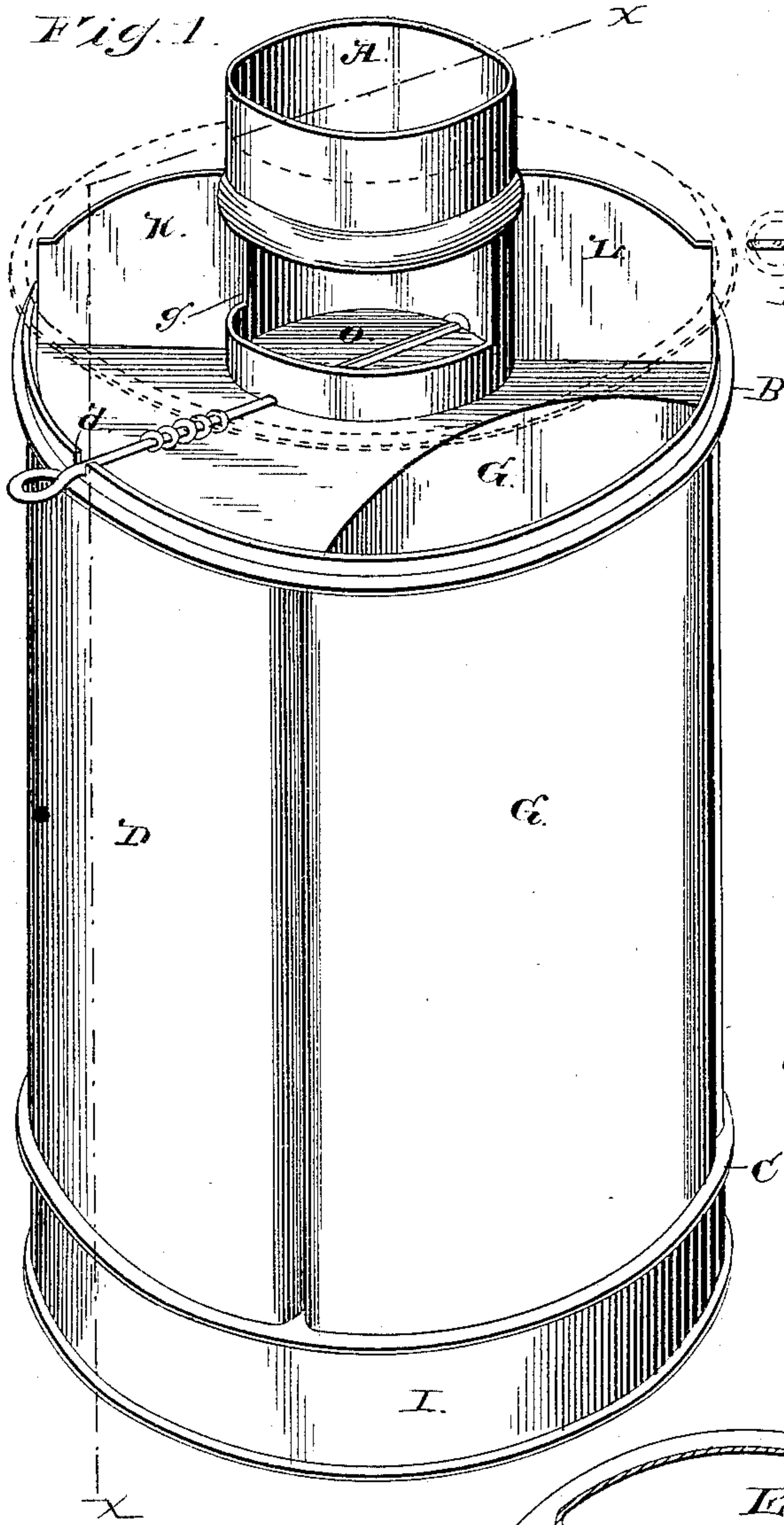


Fig. 2.

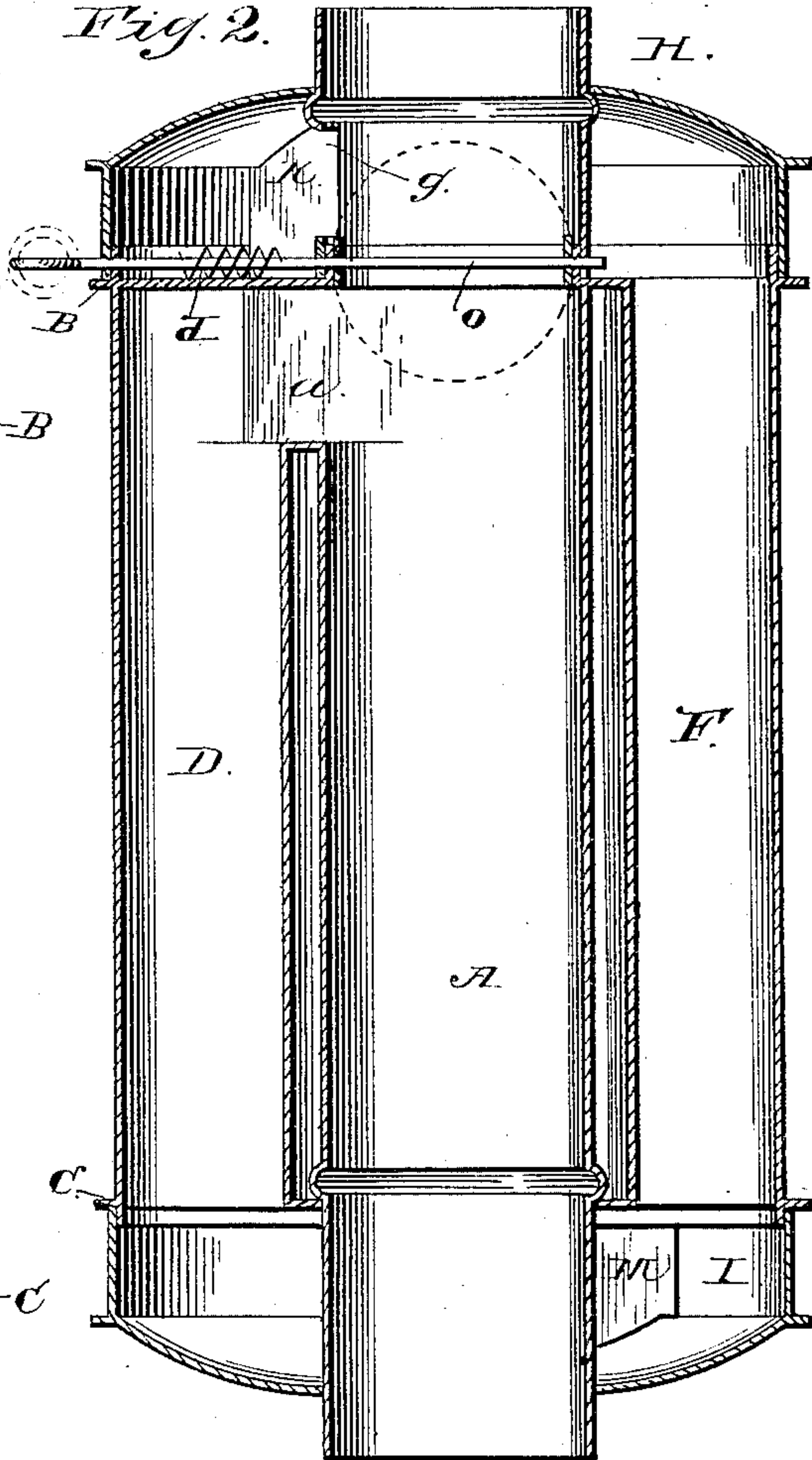
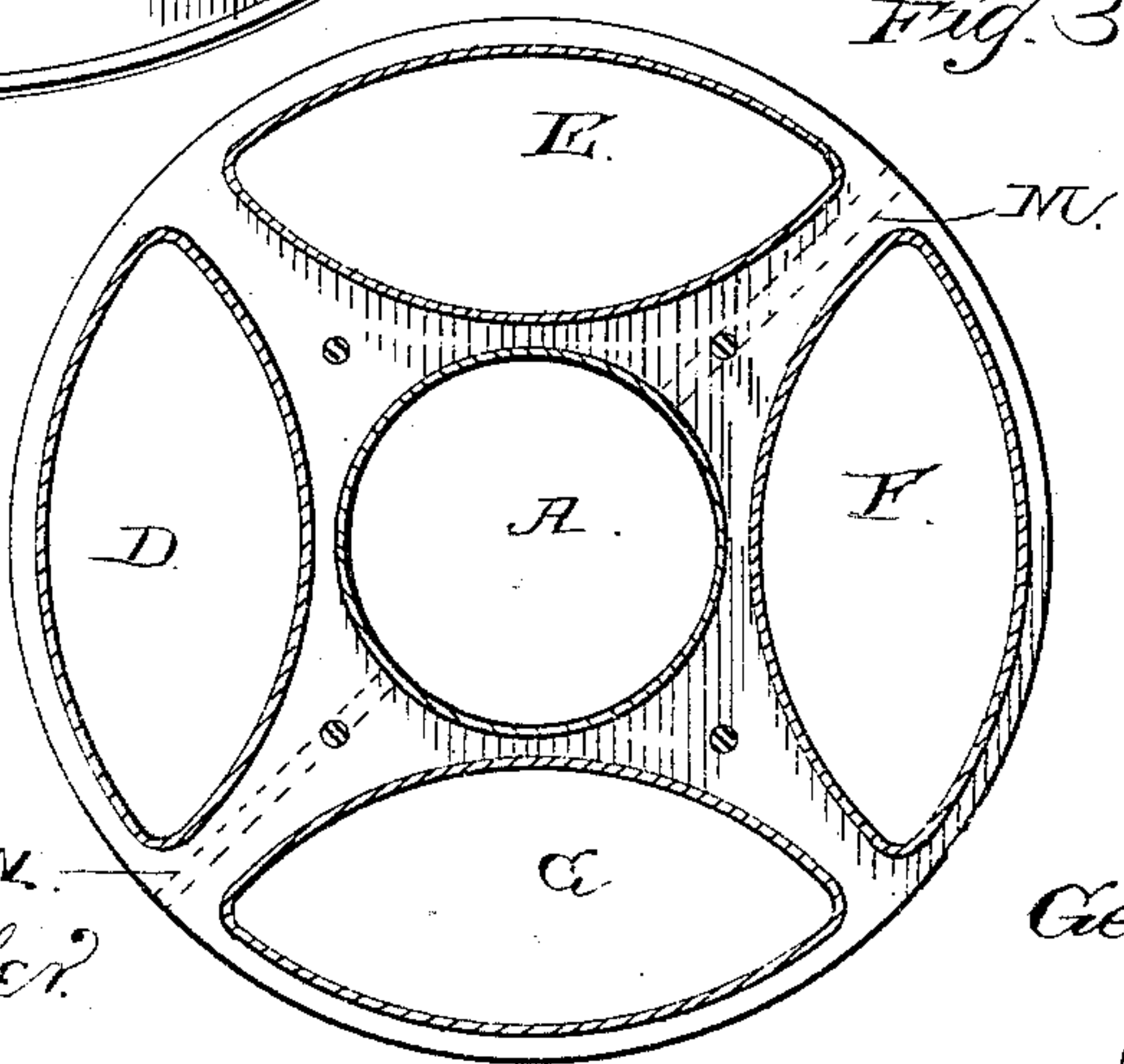


Fig. 3.



WITNESSES

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GEORGE LUCKEY SAMUEL BROCK, OF DECATUR, INDIANA.

HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 318,541, dated May 26, 1885.

Application filed February 26, 1885. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. S. BROCK, a citizen of the United States, residing at Decatur, in the county of Adams and State of Indiana, have invented a new and useful Improvement in Heating-Drums, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in heating-drums; and it consists in the peculiar construction and arrangement of devices that will be more fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a perspective of a drum embodying my invention, the cover being represented in dotted lines. Fig. 2 is a vertical sectional view taken on the line *xx* of Fig. 1. Fig. 3 is a transverse sectional view.

A represents a central vertical flue which corresponds in diameter to the size of stove-pipe to which the drum is designed to be attached. Heads B and C are secured near the upper and lower ends of the flue A. These heads are circular in shape and project beyond the sides of the flue A concentrically therewith, and around the flue A are arranged the vertical flues D E F G, which extend from the head B to the head C. The upper end of the flue D is closed, as at *d*, but the upper and lower ends of the remaining flues are open, as shown, with respect to the heads B and C. A cover, H, is formed with the upper end of the drum, which forms a chamber above the flues D E F G, and a similar chamber, I, is formed at the lower end of the drum, which also communicates with the said flues. In the chamber H is placed a partition, K, between the upper ends of the flues D and E, and a partition, L, between the upper ends of the flues F and G. In the chamber I is placed a partition, M, between the lower ends of the flues E and F, and a partition, N, between the lower ends of the flues G and D. Just below the head B the flue A communicates with the flue D, as at *a*, and the flue G communicates with the flue A just above the head B, as at *g*. In the flue A, about on a line with the head B, is placed a damper, O. When the damper is open, the heat and products of combustion pass directly up through the flue A without heat-

ing the drum. When the damper is closed, the heat and products of combustion pass through the opening *a* from the flue A into the flue D, down flue D under head C and into flue E, up flue E over head B into flue F, down flue F under head C into flue G, up flue G through opening *g* into flue A, and from thence into the chimney. When the heat is caused to pass through the flues, as described, the drum is heated, and thus the heat which would otherwise escape directly up the chimney and be wasted is utilized.

A drum thus constructed is cheap and simple, and is adapted to be attached to any ordinary stove-pipe.

I am aware that it has been heretofore proposed to construct a heating-drum with a rectangular chamber having an inlet and an outlet opening, and a series of vertically-extending pipes communicating with the chamber at their lower ends and connected by horizontal pipes at their upper ends, and this construction I disclaim.

I am also aware that it has been heretofore proposed to construct a heating-drum having an upper and a lower chamber adapted to be attached to an ordinary stove-pipe, and vertical pipes or flues connecting the upper and lower chambers, the said flues or pipes being arranged in a circle, and dampers for controlling the draft through the drum, and this also I disclaim. My invention differs from these in that I employ a central flue surrounded by the outer flues, one of which communicates with the lower head or chamber and with the central flue, the others communicating with the heads or chambers and the damper in the upper end of the central flue. This construction enables me to allow the heat to pass directly through the central flue without affecting the outer surrounding flues when it is not desired to heat the room in which the drum is placed—an advantage which the heating-drums hereinbefore disclosed do not possess.

Having thus described my invention, I claim—

A drum composed of the flue A, a damper located in said flue, flues D E F G, arranged around flue A, flue D communicating with flue A, as at *a*, flue G communicating with

flue A, as at *g*, the flues E and F communicating with each other at their upper ends, the flues F and G and D and E communicating with each other at their lower ends, for
5 the purpose set forth, substantially as described.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in presence of two witnesses.

GEORGE LUCKEY SAMUEL BROCK.

Witnesses:

J. T. MERRYMAN,
JOHN T. FRANCE.