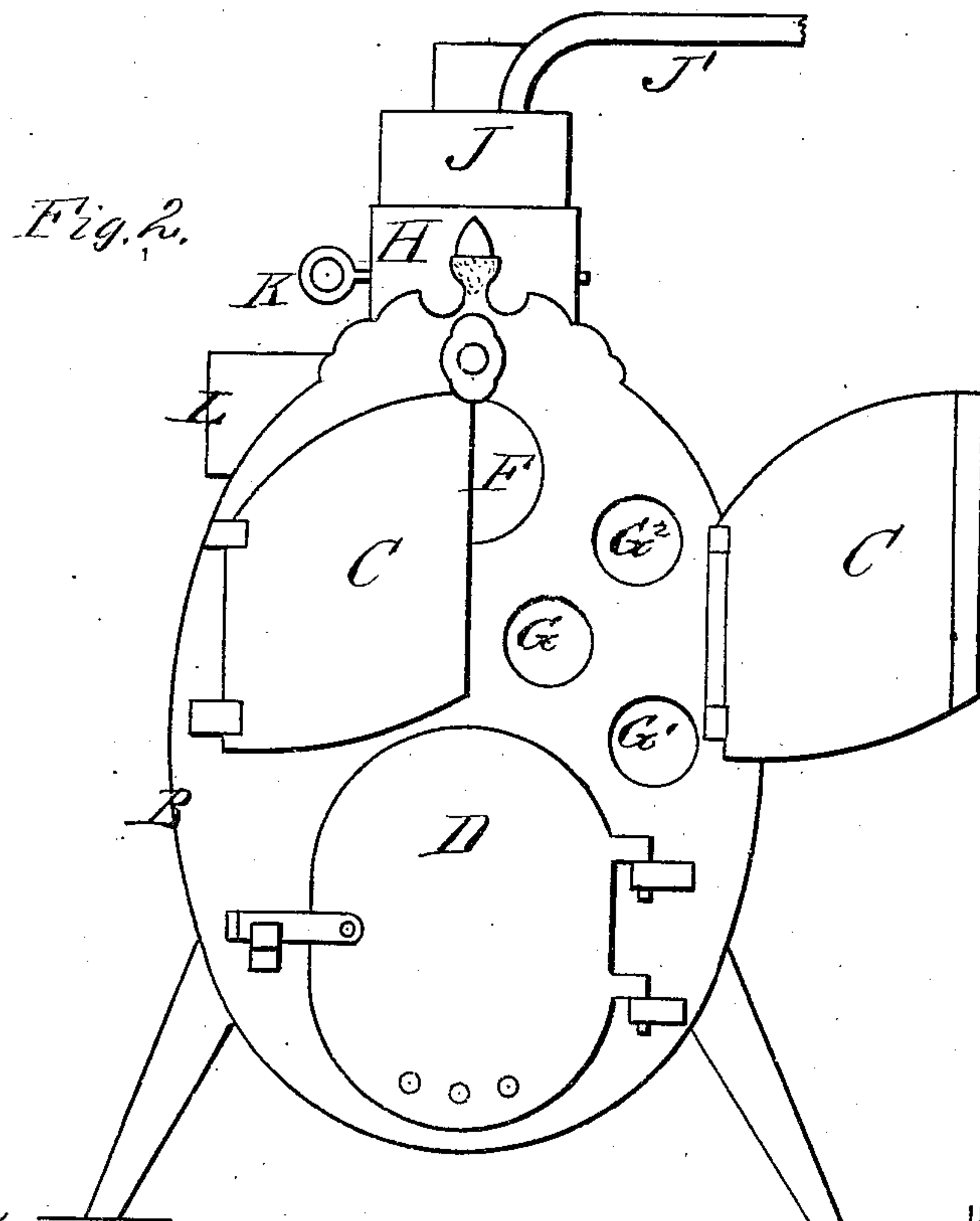
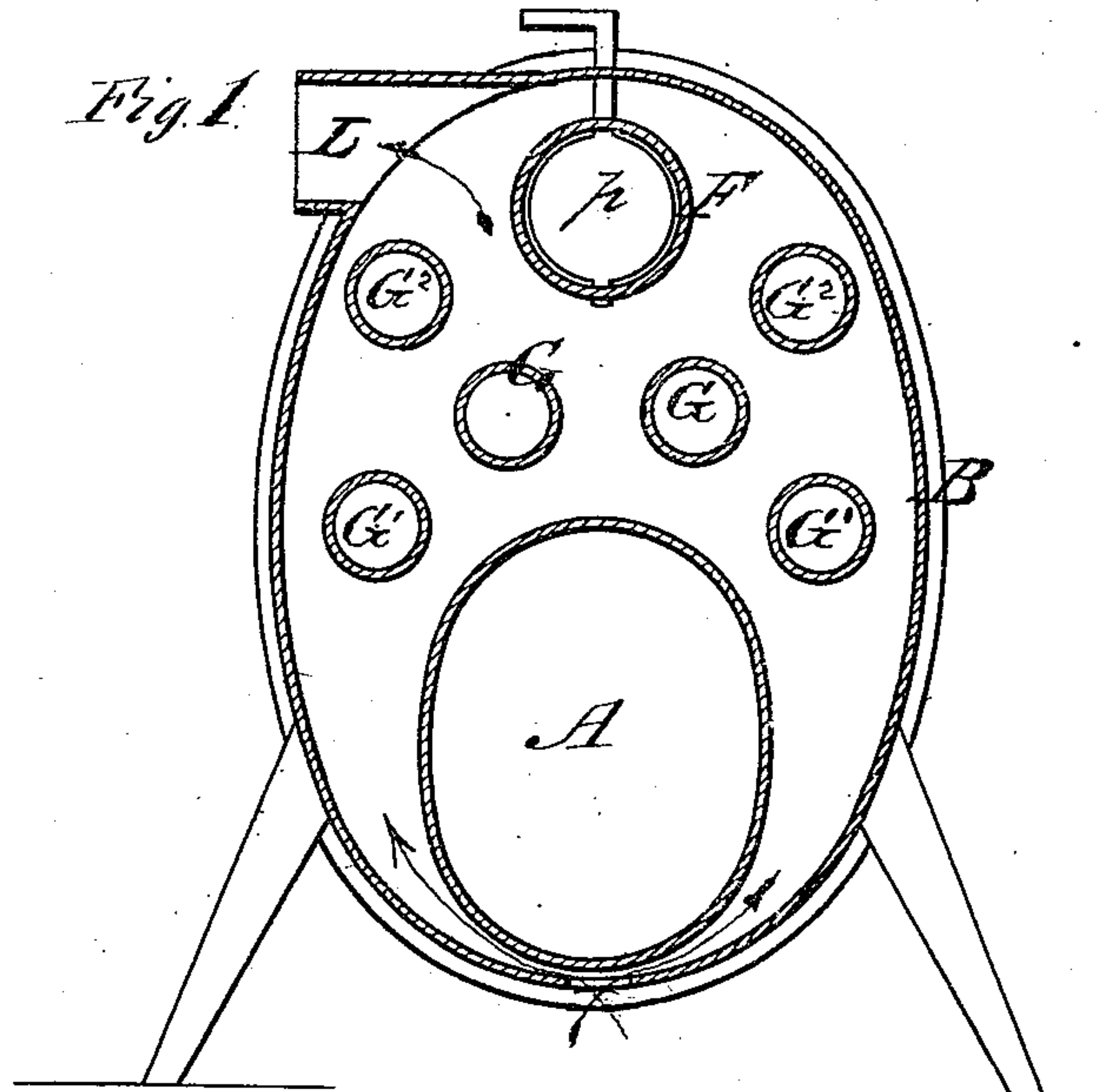


L. R. COMSTOCK.
Stove.

No. 159,797.

Patented Feb. 16, 1875.



WITNESSES

E. H. Bates,
George C. Upham,

INVENTOR

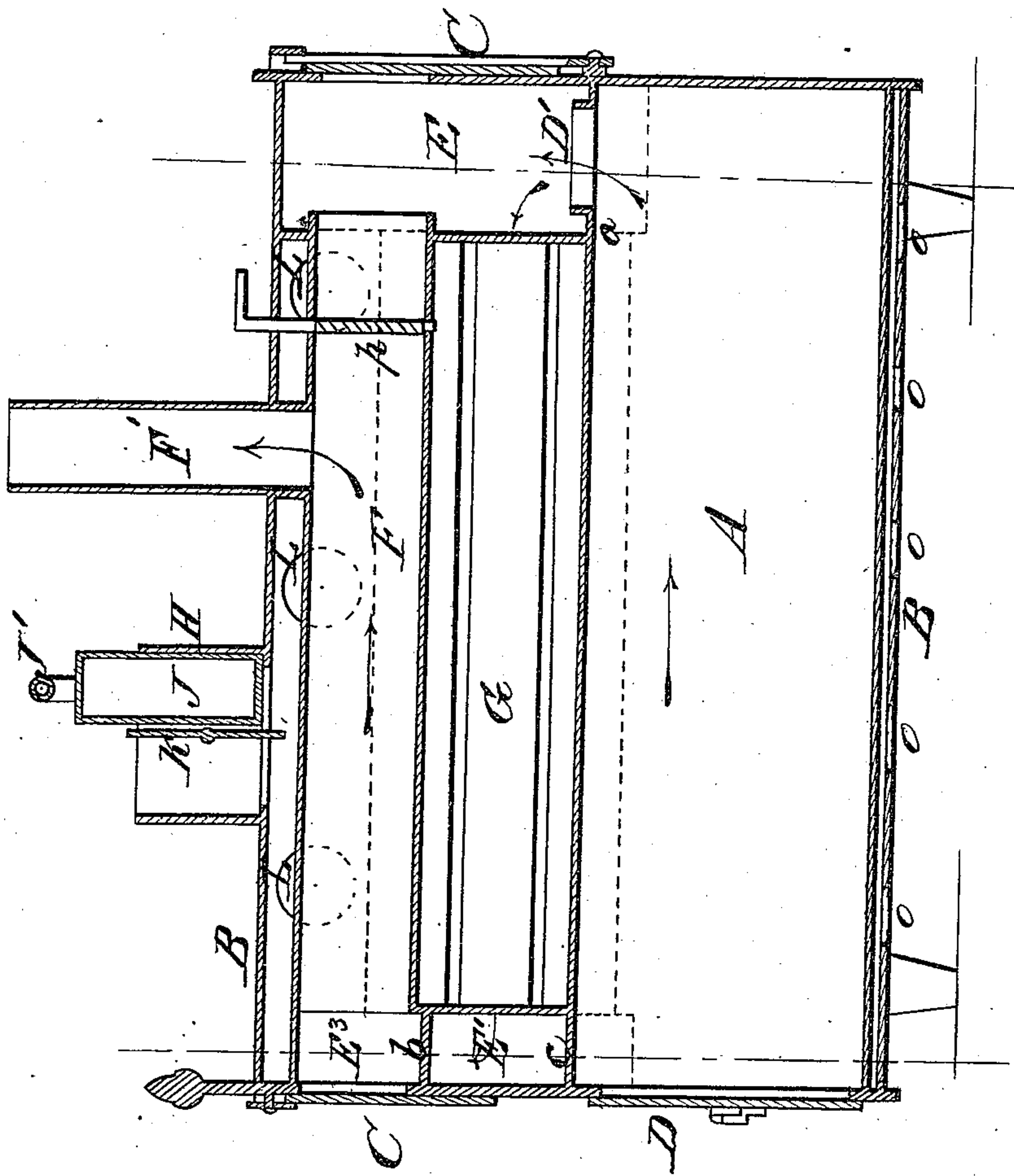
Levi R. Comstock,
Chipman & Son & Co.,
ATTORNEYS

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Fig. 3



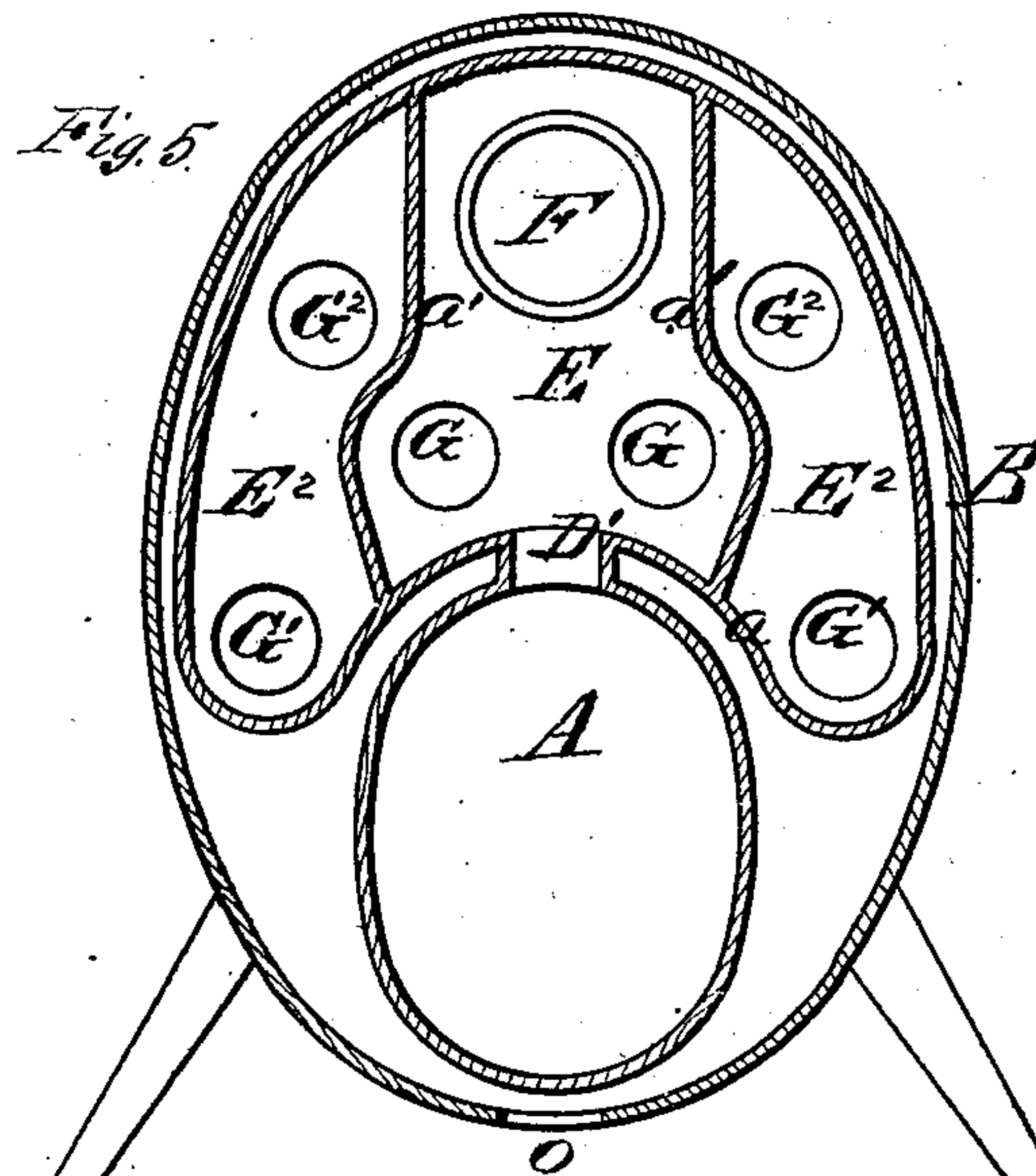
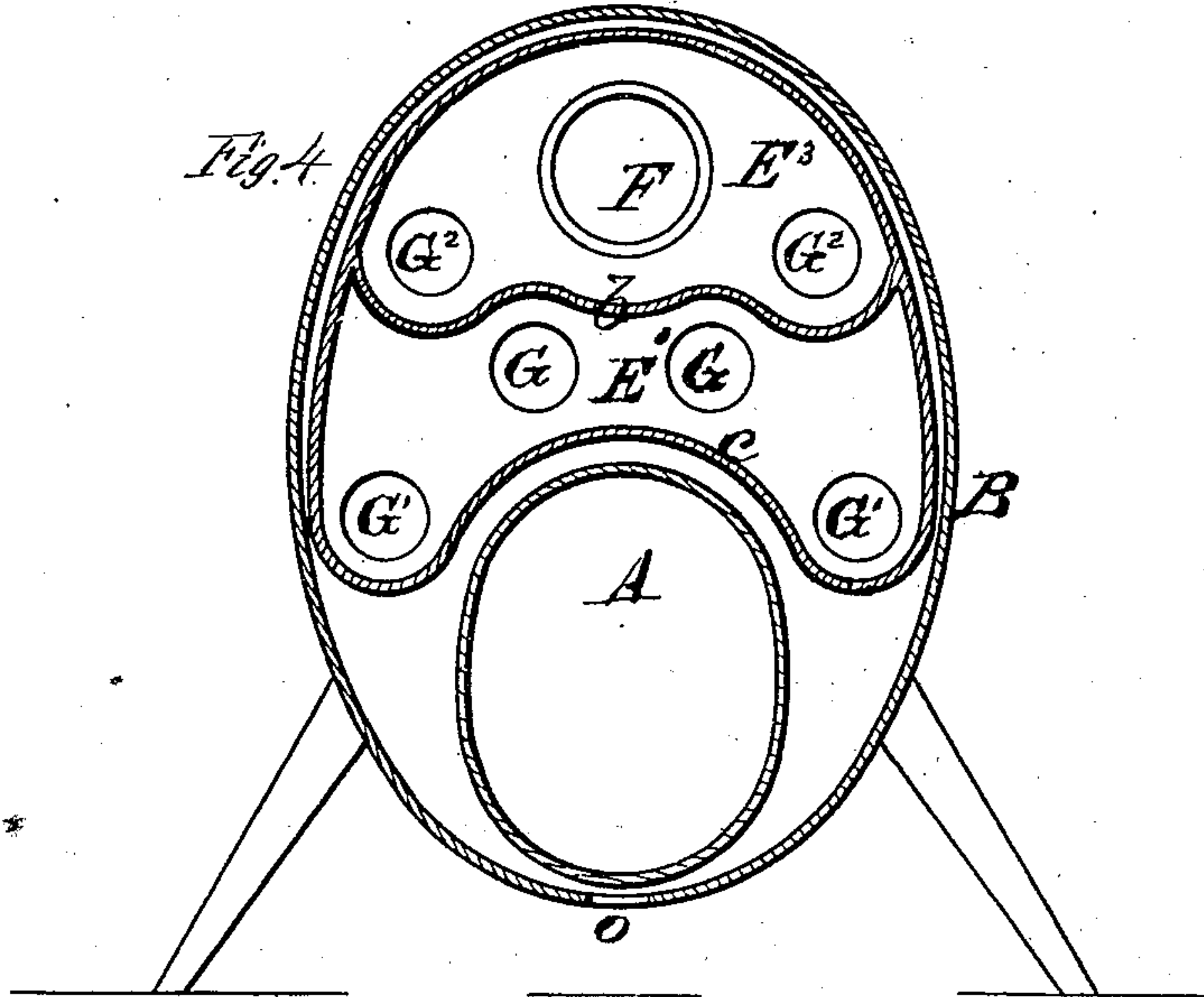
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UNITED STATES PATENT OFFICE.

LEVI R. COMSTOCK, OF RICHMOND, VIRGINIA.

IMPROVEMENT IN STOVES.

Specification forming part of Letters Patent No. **159,797**, dated February 16, 1875; application filed October 10, 1874.

To all whom it may concern :

Be it known that I, LEVI RICHARDSON COMSTOCK, of the city of Richmond, in the county of Henrico and State of Virginia, have invented a new and valuable Improvement in Stoves and Heaters; 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 drawing is a representation of a transverse vertical section of stove and heater. Fig. 2 is a front view of the same; and Fig. 3 is a longitudinal vertical sectional view. Figs. 4 and 5 are transverse sectional views.

This invention has relation to stoves and heaters, which are designed for drying tobacco, and also for all purposes where hot air and radiated heat can be made available.

The nature of my invention consists in a novel arrangement of flues and partitions inside of a casing, in combination with a furnace-chamber and air-inlets, whereby a very large radiating-surface is obtained for heating air, and, at the same time, every facility is afforded for cleaning the flues, as will be hereinafter fully explained.

It also consists in a novel provision for heating water for the purpose of steaming and softening tobacco-leaves, so that they can be properly handled, as will be hereinafter explained.

The following is a description of my improvements :

In the annexed drawings, A designates the furnace of the heater, and B the outer shell, which I prefer to make of an elliptical form, as shown in the drawings. D designates the furnace-door, and D' an outlet for the heated products of combustion, which outlet leads into a chamber, E, communicating with the rear ends of two flues, G G. These flues conduct the products of combustion forward, and deliver them into a chamber, E¹, at the front end of the heater.

From the chamber E¹ the products are carried back through two flues, G¹ G¹, and delivered into chambers E² at the rear end of

the heater. The products are again carried forward through flues G² and delivered into a chamber, E³, from which they enter a large flue, F, and proceed backward nearly to the rear end of this flue, and finally escape through the pipe F'.

The chambers E¹ E³, at the front end of the heater, are formed by the division-plates *b c*, and the chambers E² E², at the rear end of the heater, are formed by the division-plates *a a'*.

When the damper *p*, shown in Fig. 3 near the rear end of flue F, is opened, the products of combustion pass directly off through the pipe F', and do not circulate through the flues.

The front and rear end plates of the heater have holes through them, which register with the several flues, and are of the same diameter as their respective flues, for the purpose of allowing these flues to be conveniently cleaned out. The said holes are closed by hinged doors C C, or, instead of doors, stoppers may be applied.

On top of the heater-case B is a cylindrical outlet, H, for hot air, in which a damper, K, is applied for regulating the escape of hot air. When the damper K is open, a boiler, J, with outlet-pipes J', is applied in H for the purpose of generating steam for moistening tobacco-leaves. On one side of the case B, near the upper end thereof, are several outlet-pipes L, the object of which is to conduct hot air into a tobacco-barn for curing tobacco, and when this process is completed the large damper K is opened and the heat allowed to escape outside of the barn.

In practice, I shall surround the furnace A with flues, and locate the furnace in the center of the cluster of flues. The furnace will be adapted for hard or soft coal or for burning wood, and it will be portable.

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

1. In combination with a furnace, A, and chamber E, the flues G G, communicating with the front chamber E¹, the flues G¹ G¹, with the rear chamber E², and the flues G² G², with the front chamber E³, from which the products of combustion enter and escape through the pipe F, substantially as and for the purpose set forth.

2. In a furnace, the combination of the division-plates *b c*, forming the chambers $E^1 E^3$, at the front end of the heater, and the division-plates *a a' a'*, forming the chambers $E E^2$ at the rear end, substantially as and for the purpose set forth.

In testimony that I claim the above I have

hereunto subscribed my name in the presence of two witnesses.

LEVI RICHARDSON COMSTOCK.

Witnesses:

A. S. JOHNSON,
WM. HALL CREW.