

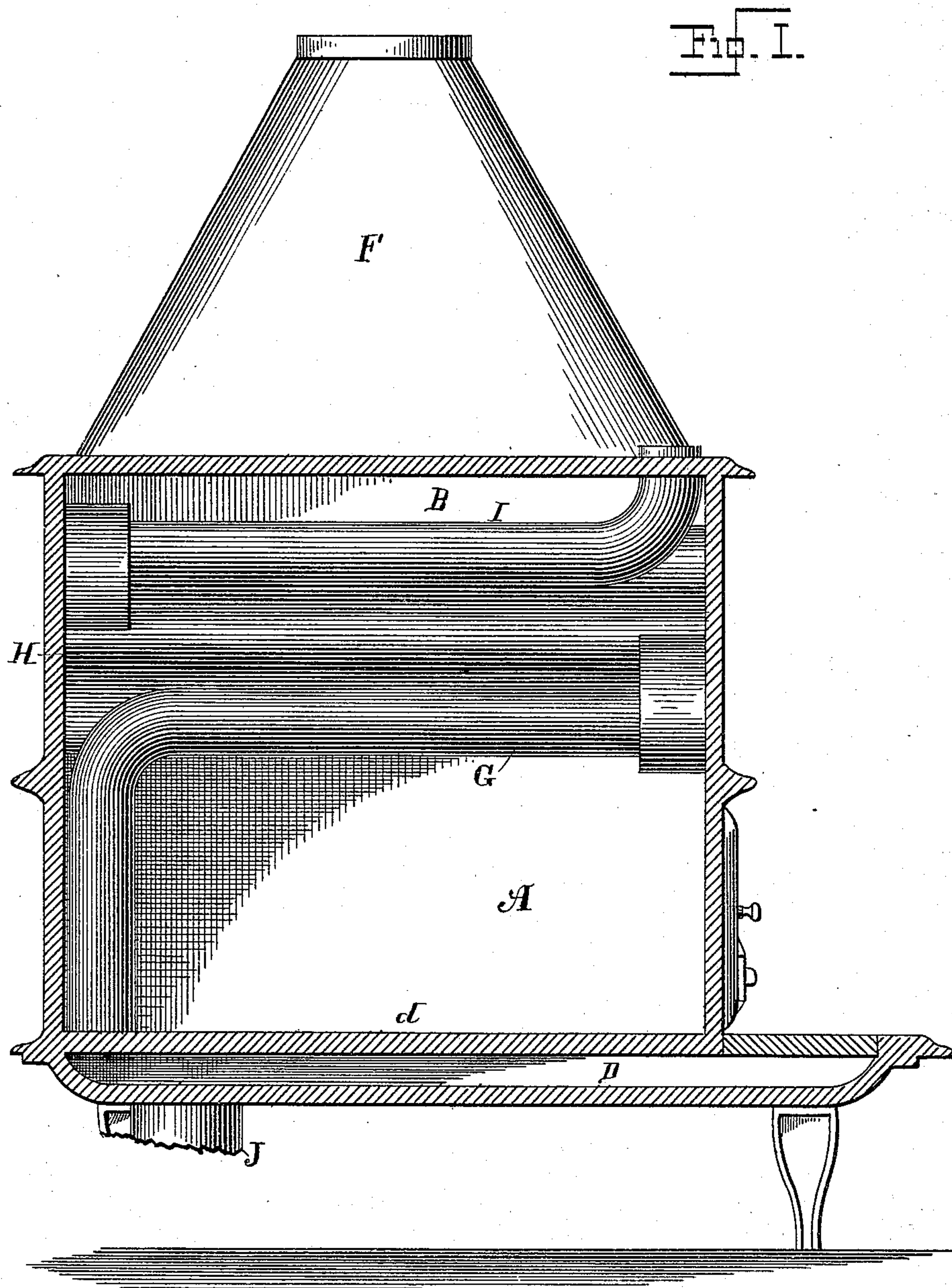
(No Model.)

5 Sheets—Sheet 1.

W. W. TOWNE.  
HEATING STOVE.

No. 543,360.

Patented July 23, 1895.



WITNESSES

Geo. W. Kayboys.  
Chas. V. Bidgood.

INVENTOR

William Wallace Towne  
By *Thos. G. B. B. B.*  
Attys.

(No Model.)

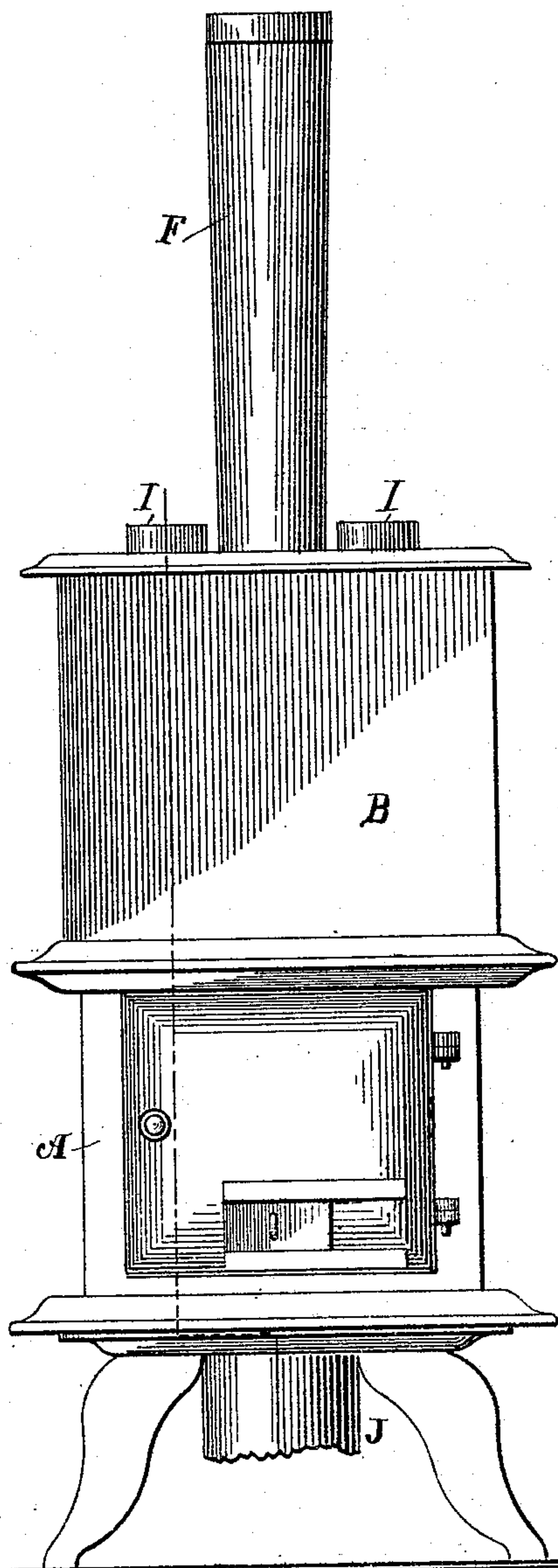
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FIG. II



WITNESSES

*Geo. W. Mayhew*

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*By Augustus*

*Attys*



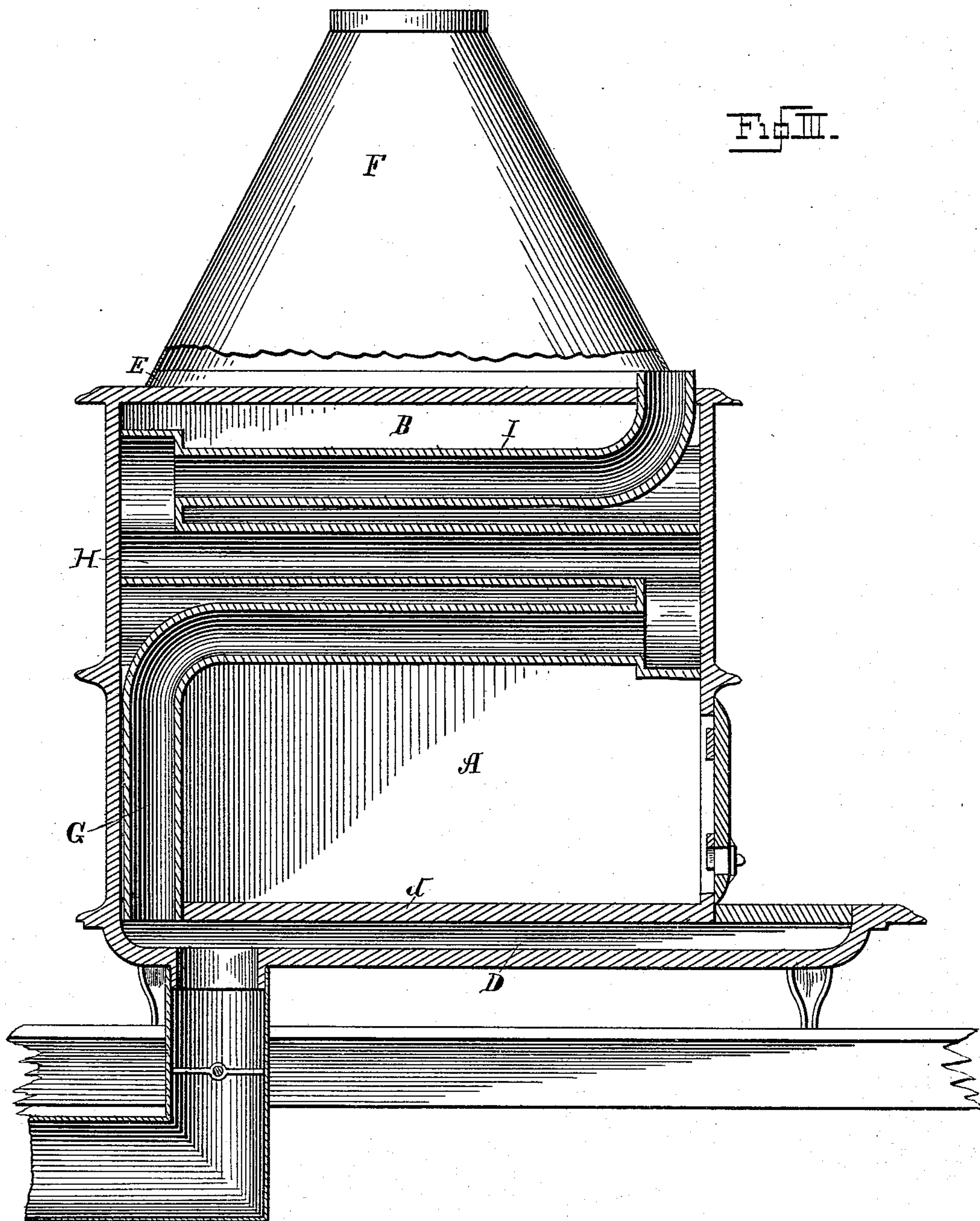
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WITNESSES

Geo. W. Vaylath Jr.  
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(No Model.)

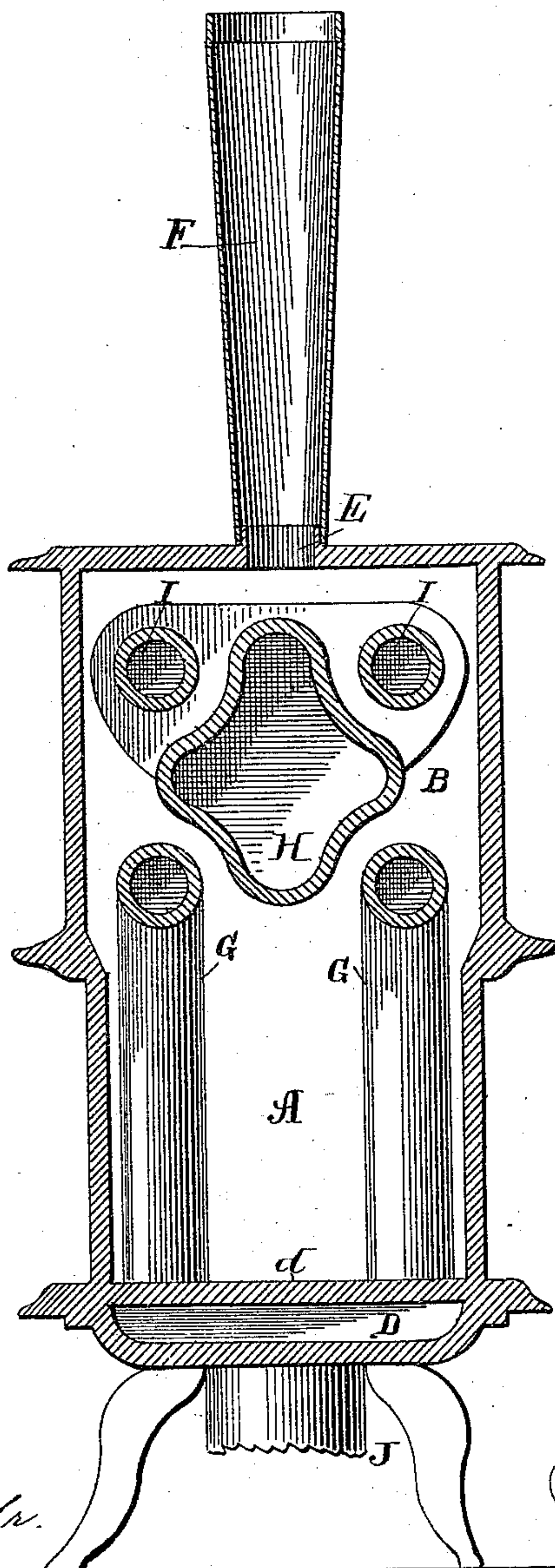
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FIG. IV.



WITNESSES  
Geo. W. Naylor Jr.  
An. v. Bidgood

INVENTOR  
William Wallace Towne  
By  
[Signature]  
Att'y

(No Model.)

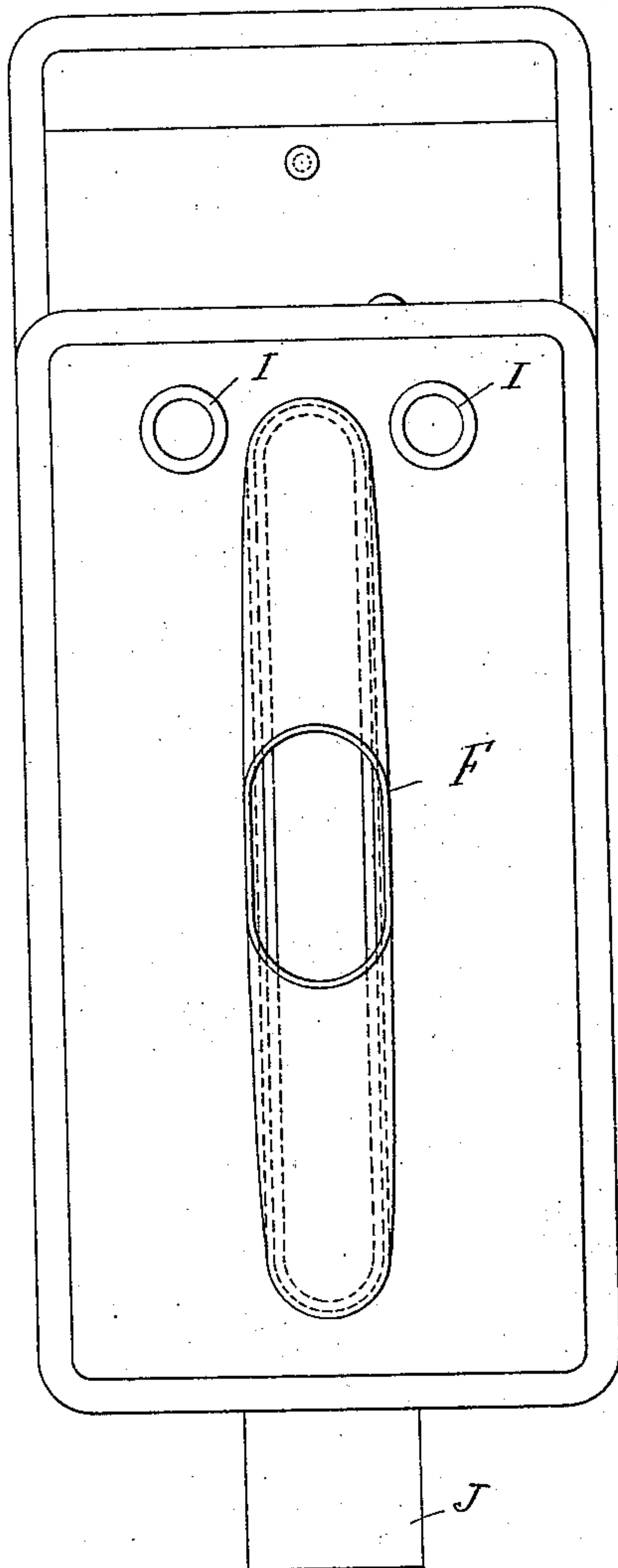
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Fig V



WITNESSES

*J. V. Bridgman*  
*C. M. Ott*

INVENTOR

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By

*Amos W. Towne*

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# UNITED STATES PATENT OFFICE.

WILLIAM WALLACE TOWNE, OF DANVILLE, CANADA.

## HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 543,360, dated July 23, 1895.

Application filed July 5, 1894. Serial No. 516,633. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM WALLACE TOWNE, a subject of the Queen of Great Britain, residing at Danville, county of Richmond, Province of Quebec, Canada, have invented certain new and useful Improvements in Heating-Stoves, of which the following is a specification.

The object of my invention is to provide a heating-stove that will be more efficient than those now in common use, in which cold air is brought from the outside and heated in its passage through the stove, and may then be used in heating the apartment in which the stove is placed, or may be conducted to another apartment. This arrangement does not interfere with the heating capacity of the outer surfaces of the stove, as will hereinafter be shown.

Referring to the accompanying drawings, which form a part of this specification, Figure I is a side elevation of my improved stove, part being broken away to show the interior. Fig. II is a front view of the same. Fig. III is a transverse section on the line X X, Fig. I. Fig. IV is a transverse section on the line y y, Fig. I. Fig. V is a top view of the stove.

The stove consists of two main portions—the lower portion A, adapted to receive the fuel, and the upper portion B, containing the tubes and hot-air chamber. The lower portion A is provided with the usual fuel-door and damper. The stove has a false bottom *d*, forming a cold-air chamber D under the whole of the stove. The smoke exit consists of an opening E running centrally the whole length of the top of the stove. This opening is long and narrow and is provided with a stovepipe F in the shape of a flattened inverted funnel, which communicates with the ordinary stovepipes.

At the back of the stove in the lower portion A are two tubes G. These tubes, which communicate with the chamber D, one on either side, rise vertically into the upper portion B. Then they turn and pass along horizontally to the front of the stove, where they communicate with a chamber H, where two more tubes I communicate with it and pass along horizontally to the front of the stove and pass out through the top. As will be seen from the section, these tubes do not touch

the sides, but a space is left for the flames and the products of combustion to pass around. The chamber H is of such a cross-section that it conforms to the space between the four tubes G G I I, but leaving a free passage for the products of combustion all around the tubes and the said chambers. The cold air is brought from the outside through the tube J, which is provided with a damper *j* and communicates with the chamber D. With the ordinary stove now in use the air for the combustion of the fuel is drawn from the windows and doors, creating a cold draft along the floor; but by discharging air already warmed by its passage through the stove into the room this is obviated, as there will be more than enough pure warm air discharged into the room than will be used by the fuel.

The operation of my stove is as follows: The cold air being admitted through the pipe J, passes into the chamber D, thence through the tubes G into the chamber H. From this chamber it passes through the tubes I either into the apartment in which the stove is placed or into another apartment.

By the peculiar construction of the smoke exit the products of combustion are evenly distributed and in their passage up are thrown against the sides of the stove, as shown by the arrows in Fig. III, instead of, as in the ordinary stove, rushing right to the smoke-pipe at the back, thus giving increased efficiency to the stove.

At the forward end of the stove will be seen on the top of the hearth, Figs. I, III, and V, a removable plate, which covers an opening into the lower air-chamber. By removing this cover and opening draft-holes in the fire-door, part of the air for combustion may be taken from this lower air-chamber, owing to the direction of the air-currents setting toward the fire under these conditions in preference to going into the hot-air tubes.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a stove, the combination of the air chamber D at the bottom of the stove forming a false bottom for the fire chamber or hearth A and having an air inlet beneath it the large horizontal air chamber H at the upper part of the stove having four concave sur-



faces as shown, the air pipes G, G leading from the lower air chamber D at the rear of the stove and inside of the fire chamber up to a point adjacent to the air chamber H; 5 thence forward parallel with its lower concave sides to the front of the stove and there making connection with said air chamber H and the upper air discharge pipes I, I making connection with said air chamber H at the 10 rear of the stove and running parallel with its concave sides to the front thereof and discharging above the stove, substantially as set forth.

2. In a stove, the combination of an air 15 chamber at the bottom of the stove, extended

forward beneath the hearth, an opening thereinto through the hearth, a removable cover for said opening, a second air chamber extending the entire length of the stove above the fire, horizontal and vertical air tubes connecting the two air chambers and passing out 20 through the top of the stove, an inlet to the lower air chamber, and a smoke outlet in the form of a narrow opening extending the whole length of the stove.

WILLIAM WALLACE TOWNE.

Witnesses:

C. C. BROWN,  
A. E. LEE.