

No. 706,309.

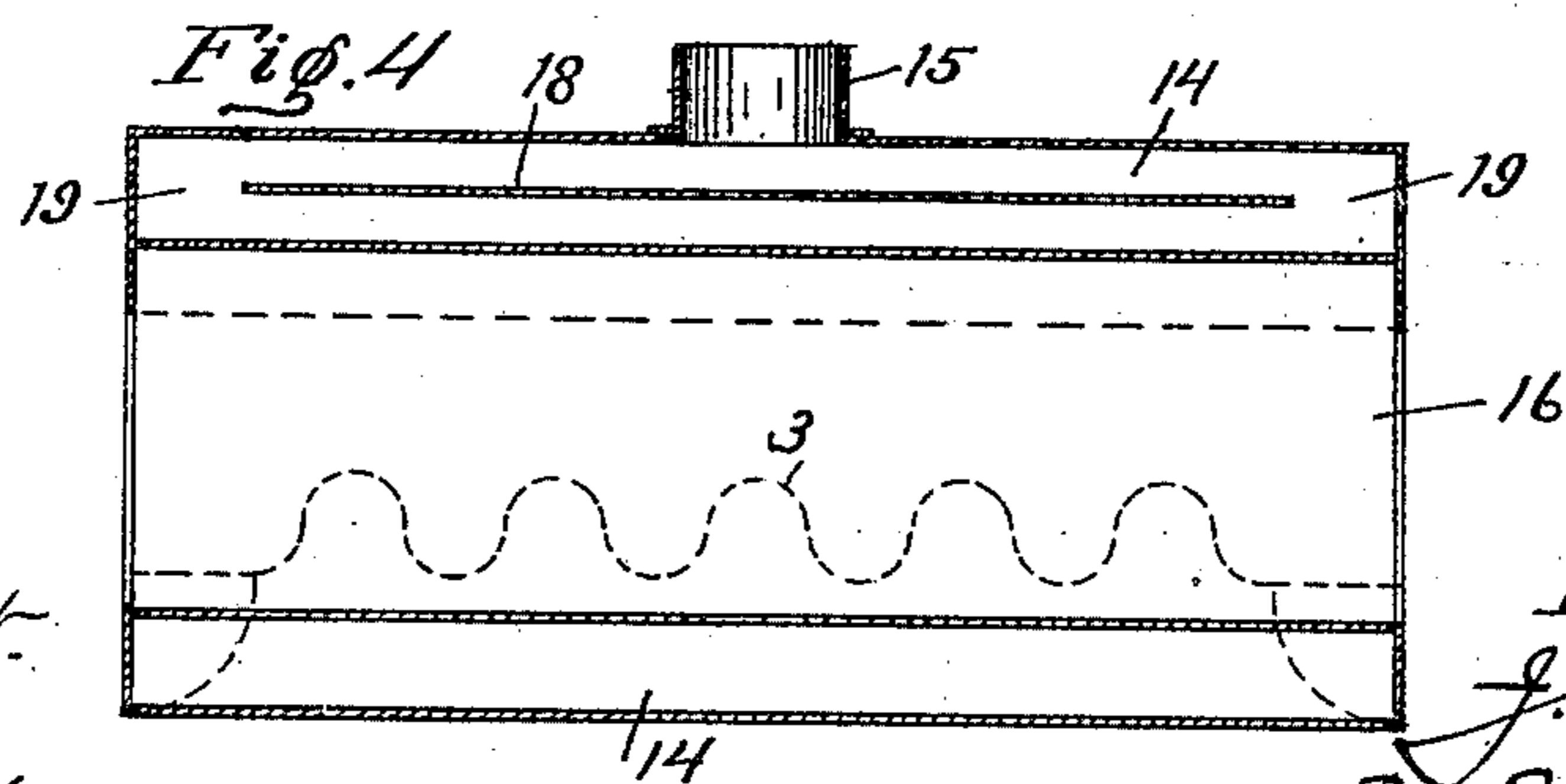
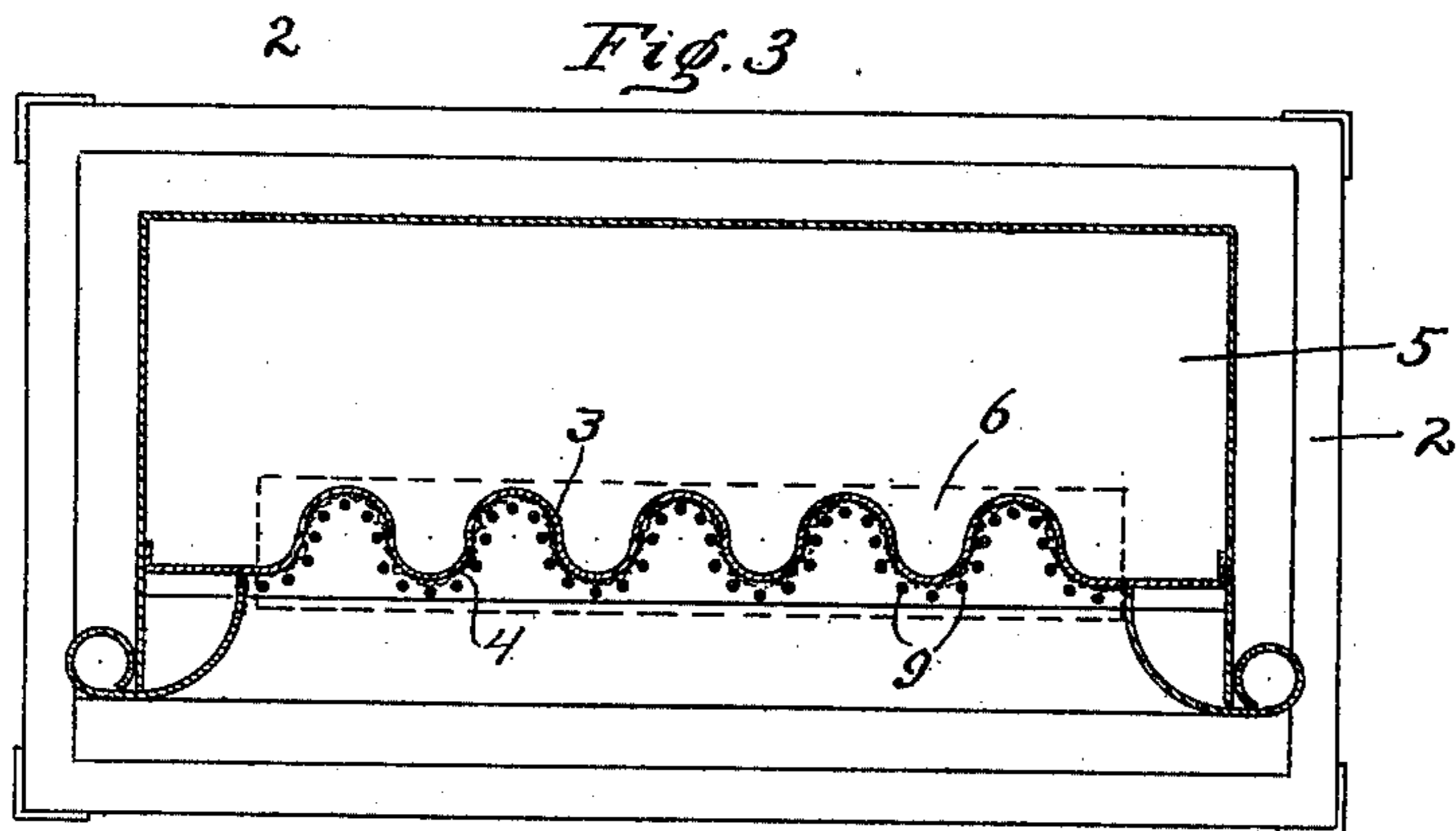
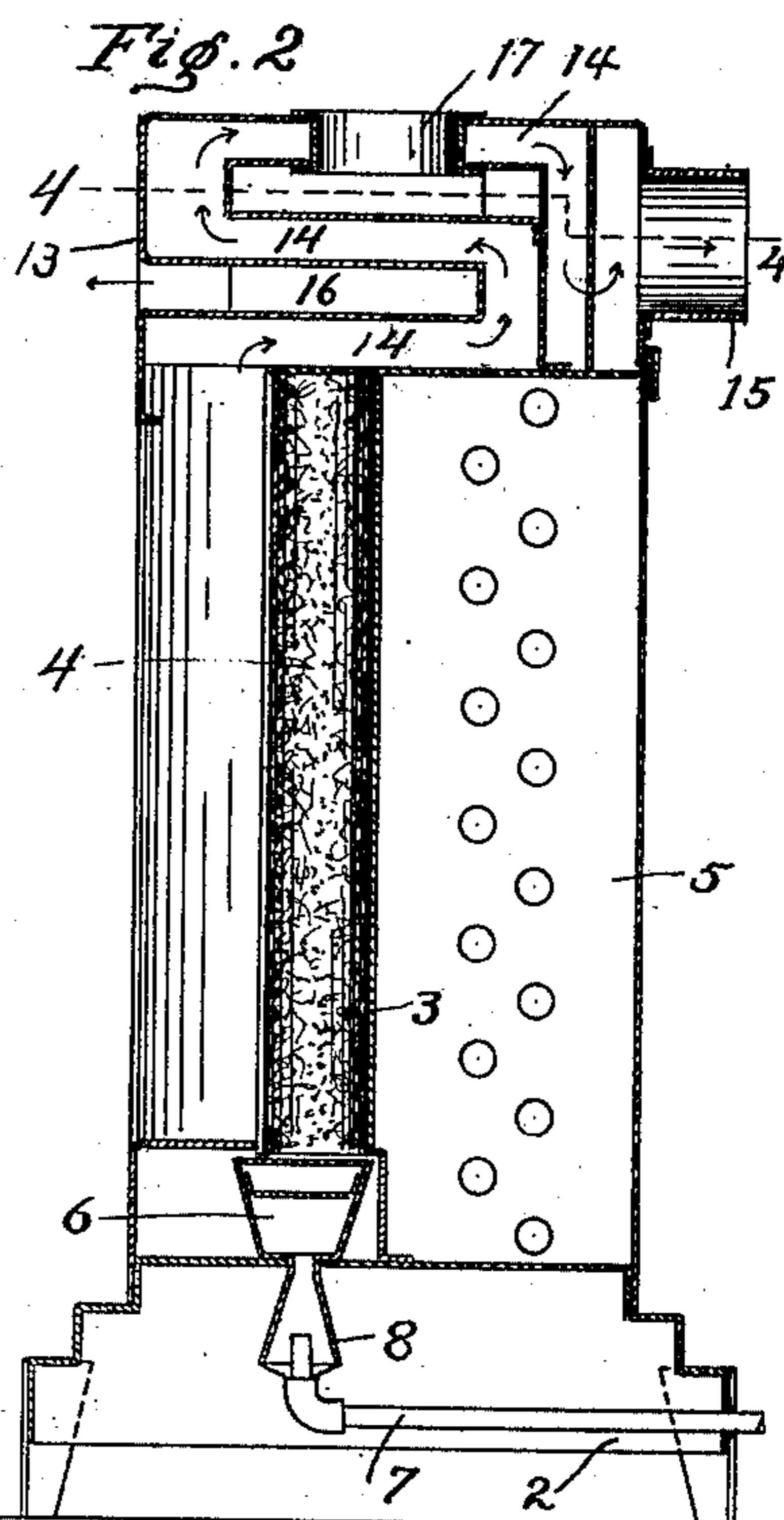
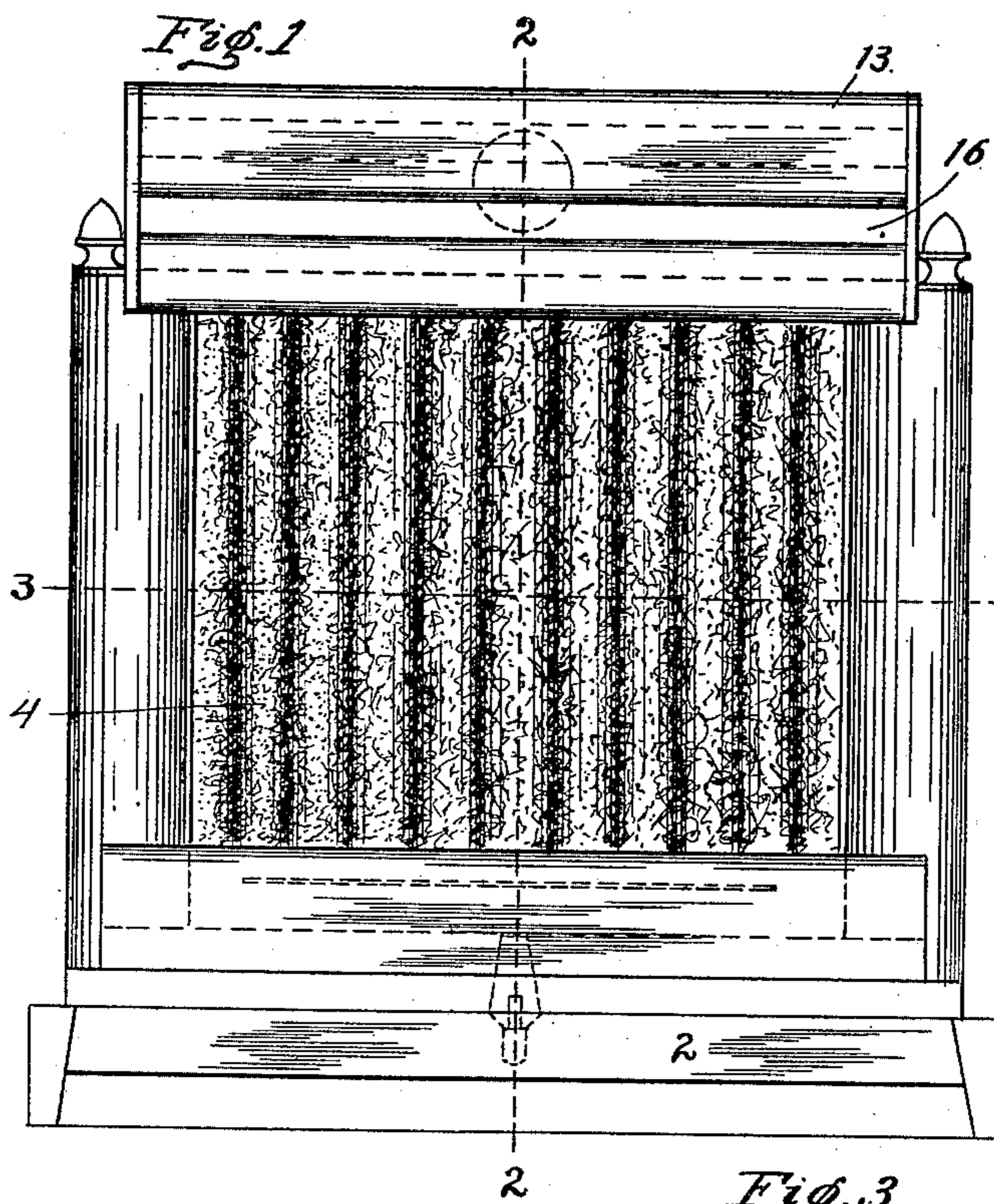
J. C. FORSTER.  
GAS STOVE.

Patented Aug. 5, 1902.

(Application filed Jan. 25, 1902.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.  
Fred H. Sweet.  
H. A. Horn.

Inventor.  
J. C. Forster  
By J. M. Nesbit  
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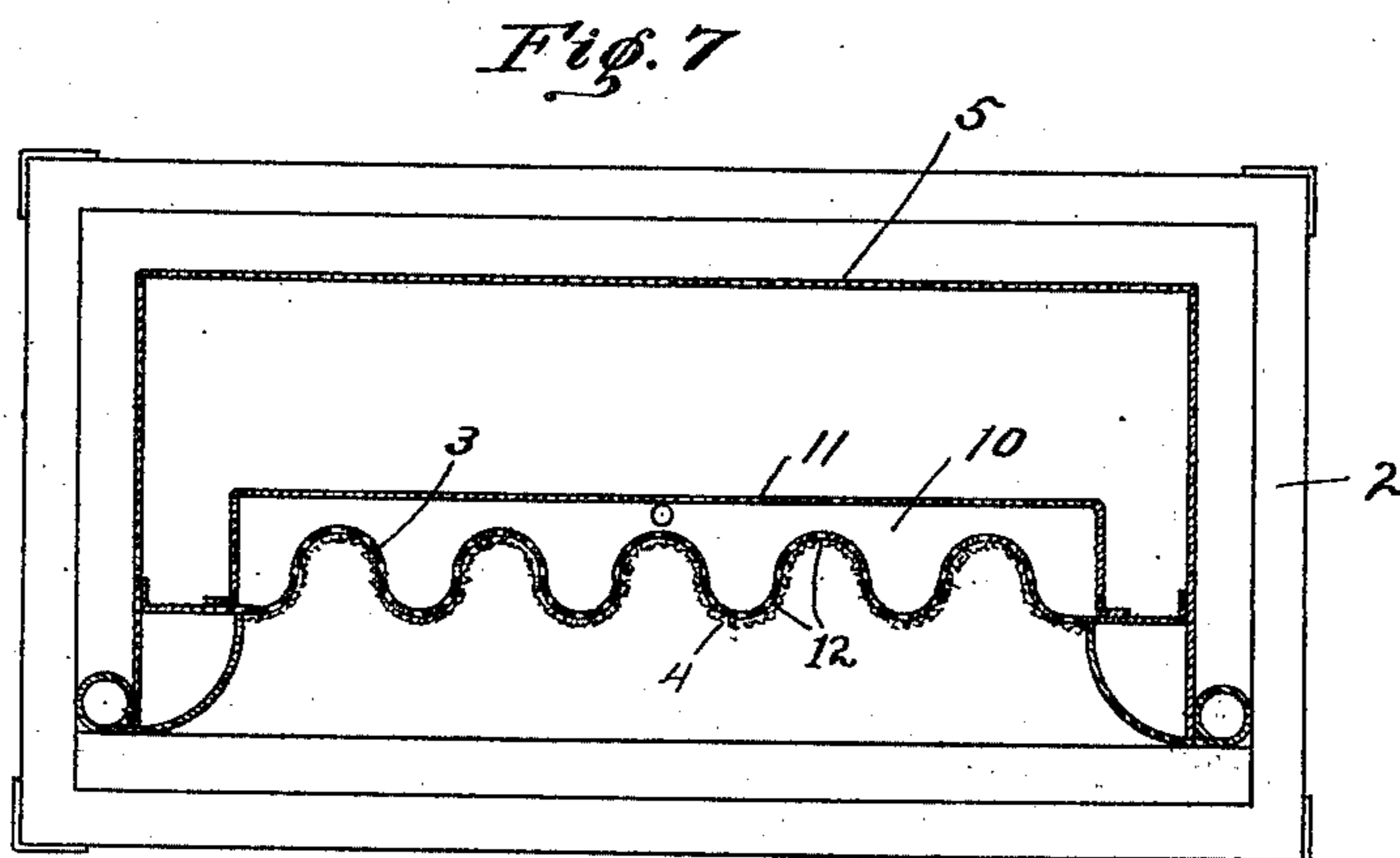
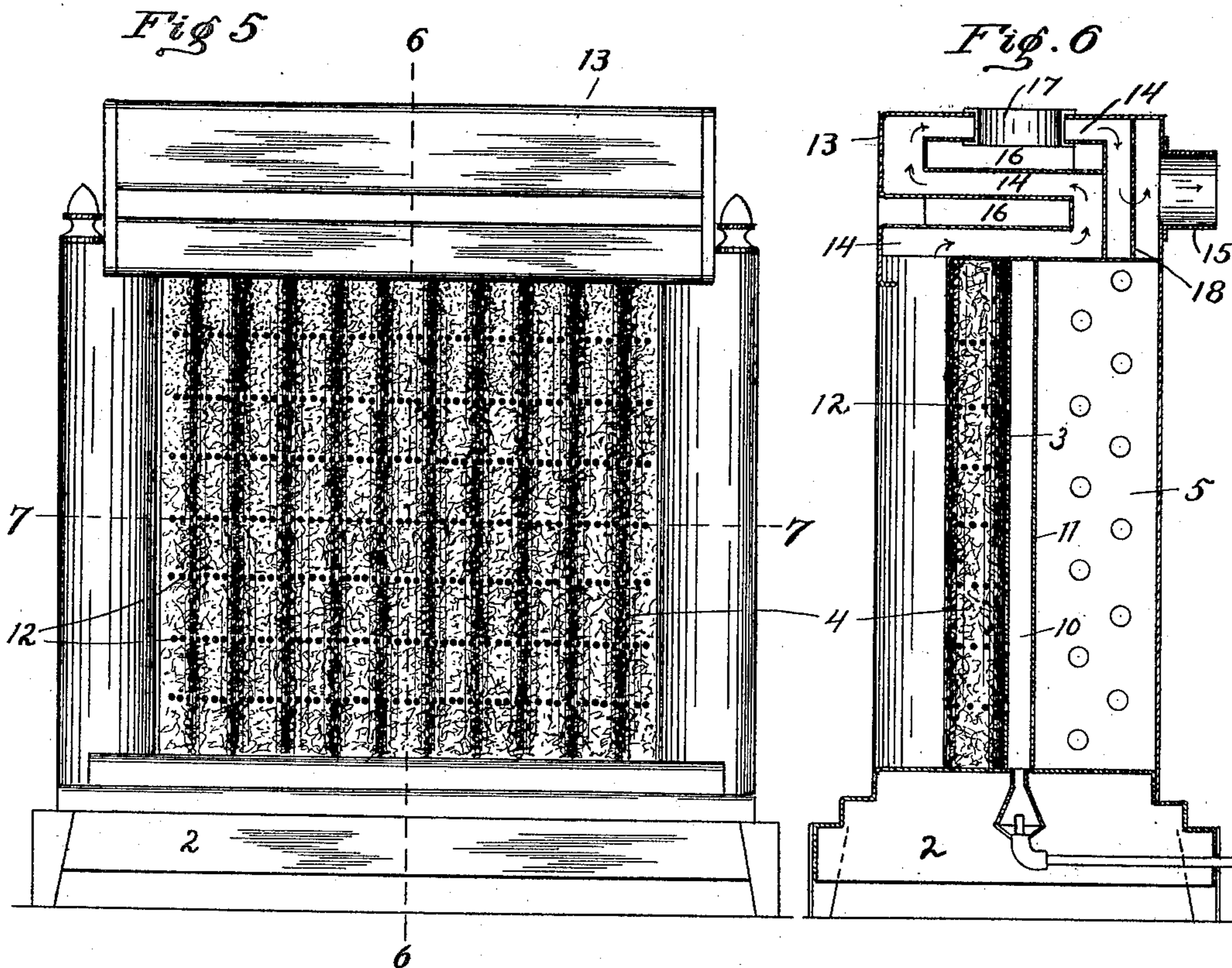
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(Application filed Jan. 25, 1902.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOHN C. FORSTER, OF PITTSBURG, PENNSYLVANIA.

## GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 706,309, dated August 5, 1902.

Application filed January 25, 1902. Serial No. 91,194. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. FORSTER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Gas-Stoves, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The object of this invention is to provide a compact gas-stove of simple and inexpensive construction having large heating, generating, and radiating capacity.

15 In the accompanying drawings, Figure 1 is a front elevation of a base-burner stove embodying my improvements, and Fig. 2 is a vertical sectional view on line 2 2 of Fig. 1. Figs. 3 and 4 are sectional plan views taken on lines 3 3 and 4 4, respectively, of Fig. 2. 20 Fig. 5 is a front elevation of a surface-burner stove constructed in accordance with my invention. Figs. 6 and 7 are sectional views taken on lines 6 6 and 7 7, respectively, of Fig. 5.

25 Referring to the drawings, and particularly to Figs. 1, 2, and 3, illustrating the base-burner type of stove, 2 indicates the stove-base, and 3 the upright vertically-corrugated fire-board, provided with the usual asbestos covering 4. Behind the fire-board is the perforated heat-radiating chamber 5, of which the fire-board constitutes the front wall. Beneath the fire-board is the horizontally-elongated base-burner 6, provided with the usual 35 gas connection 7 and mixer 8. The gas-emitting perforations 9 in the top surface of the burner are arranged in a winding or serpentine line to conform to the shape of the fire-board, thus causing the latter, or rather the lower portion thereof, to be completely covered by the upwardly-burning jets of flame. Thus a compact burner of large capacity is provided and with it an equally compact fire-board, which diffuses or radiates the heat in 45 a most economic and effective manner.

50 In applying my improved fire-board to stoves of the surface-burner type (illustrated in Figs. 5, 6, and 7) a gas-chamber 10 is formed by wall or partition 11 immediately at the rear of the vertically-corrugated fire-board,

and the latter, constituting the front wall of said chamber, is suitably perforated at 12 for the emission of gas, which discharges uniformly through all portions of the vertically-corrugated surface, so that the spread of flame is even over all portions of the fire-board and is in no wise interrupted by the irregular surface of the latter.

While in the preferred embodiments of the invention the fire-boards are formed of corrugated sheet or plate metal, it will be understood that it embraces all forms of fire-boards of whatever material having irregular areas, whereby large amounts of heat may be generated and effectually radiated in heat-producers of very compact construction.

My improved drum-like top or upper structure 13 is applicable alike to the base and surface-burner types, being arranged immediately above the fire-board and forming top of rear chamber 5. Formed in this top is the winding horizontally-elongated duct 14, open immediately over the outer surface of the fire-board, for conducting the products of combustion to flue connection 15. From its lower end said duct extends rearward, then forward, and again rearward, inclosing the two horizontal air-heating passages 16, which open through the ends of the drum-like upper structure, whereby the heat from the said products is thoroughly radiated. To facilitate circulation, a thimble 17 may extend downwardly from the top surface to the upper passage 16. In the rear portion of duct 14 an elongated vertical deflector 18 is arranged in front of flue 14, open only at the ends at 19, whereby the passage of the products of combustion is made still more circuitous or indirect, and thereby augmenting the volume of heat radiated by the drum-like upper structure.

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

1. In a gas-stove, a fire-board having a vertically-corrugated fire-surface, and a gas connection having gas-emitting openings arranged complementary to the said corrugated fire-surface.

2. In a gas-stove, a fire-board having a ver-

5 tically-corrugated fire-surface, and a horizontal burner positioned transversely of the fire-board at the base thereof, said burner being formed with gas-emitting openings arranged in a winding or serpentine course complementary to the said corrugated fire-surface.

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

JOHN C. FORSTER.

Witnesses:

J. M. NESBIT,  
MARGARET HUGHES.