

No. 745,711.

PATENTED DEC. 1, 1903.

J. F. & F. O. ADAMS.

GAS STOVE.

APPLICATION FILED JUNE 19, 1903.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 1.

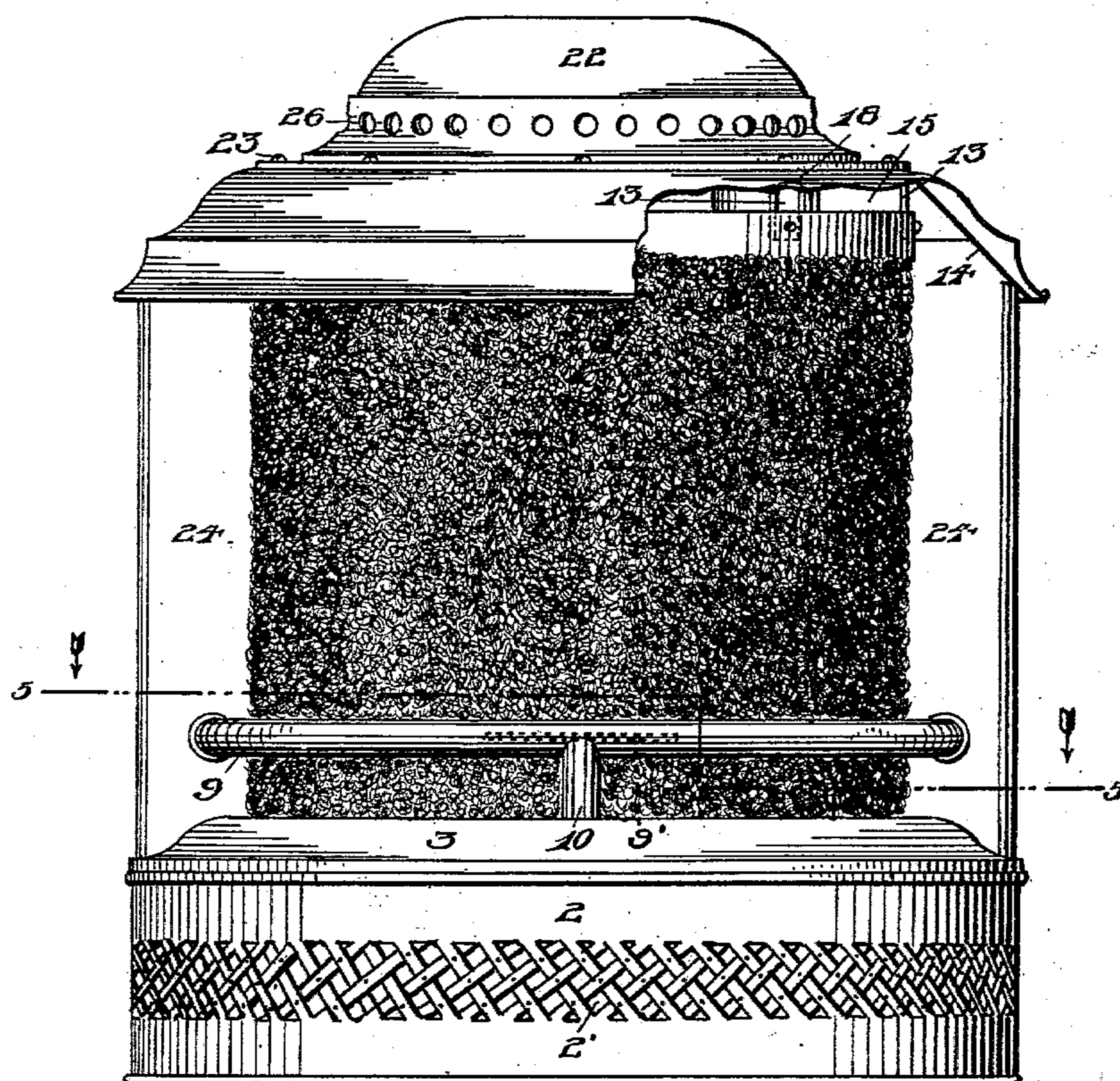
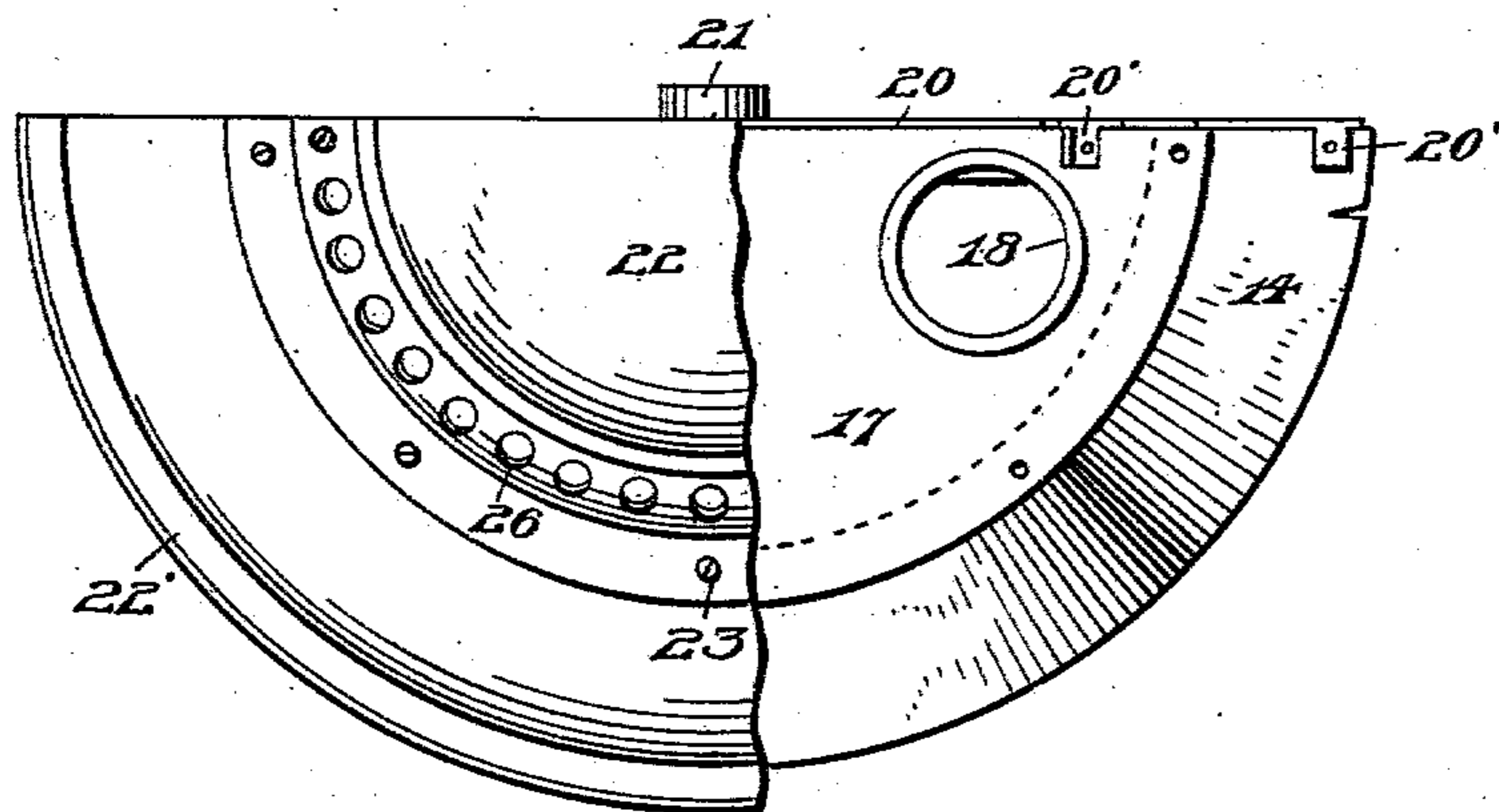


Fig. 2.



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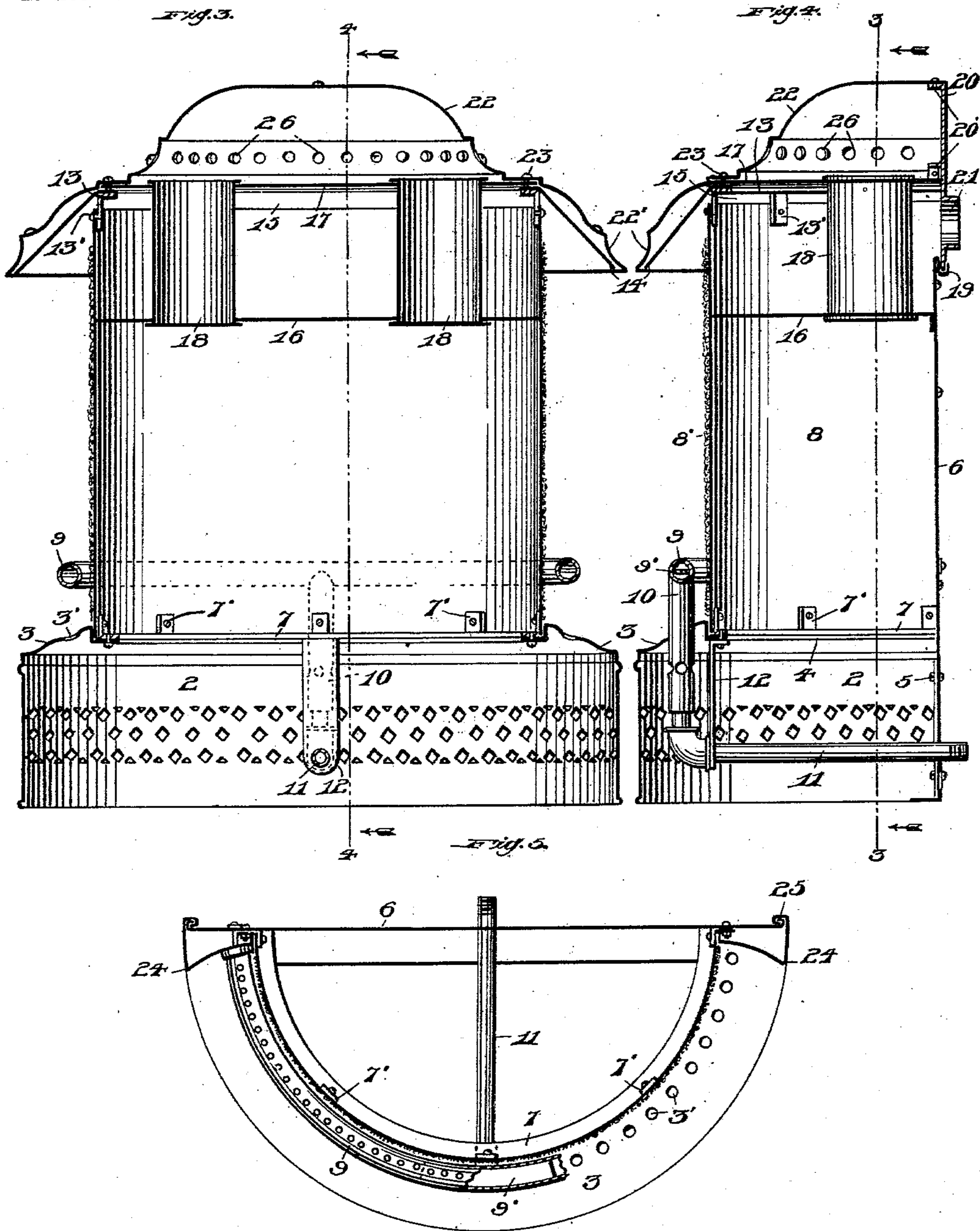
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3 SHEETS—SHEET 2.



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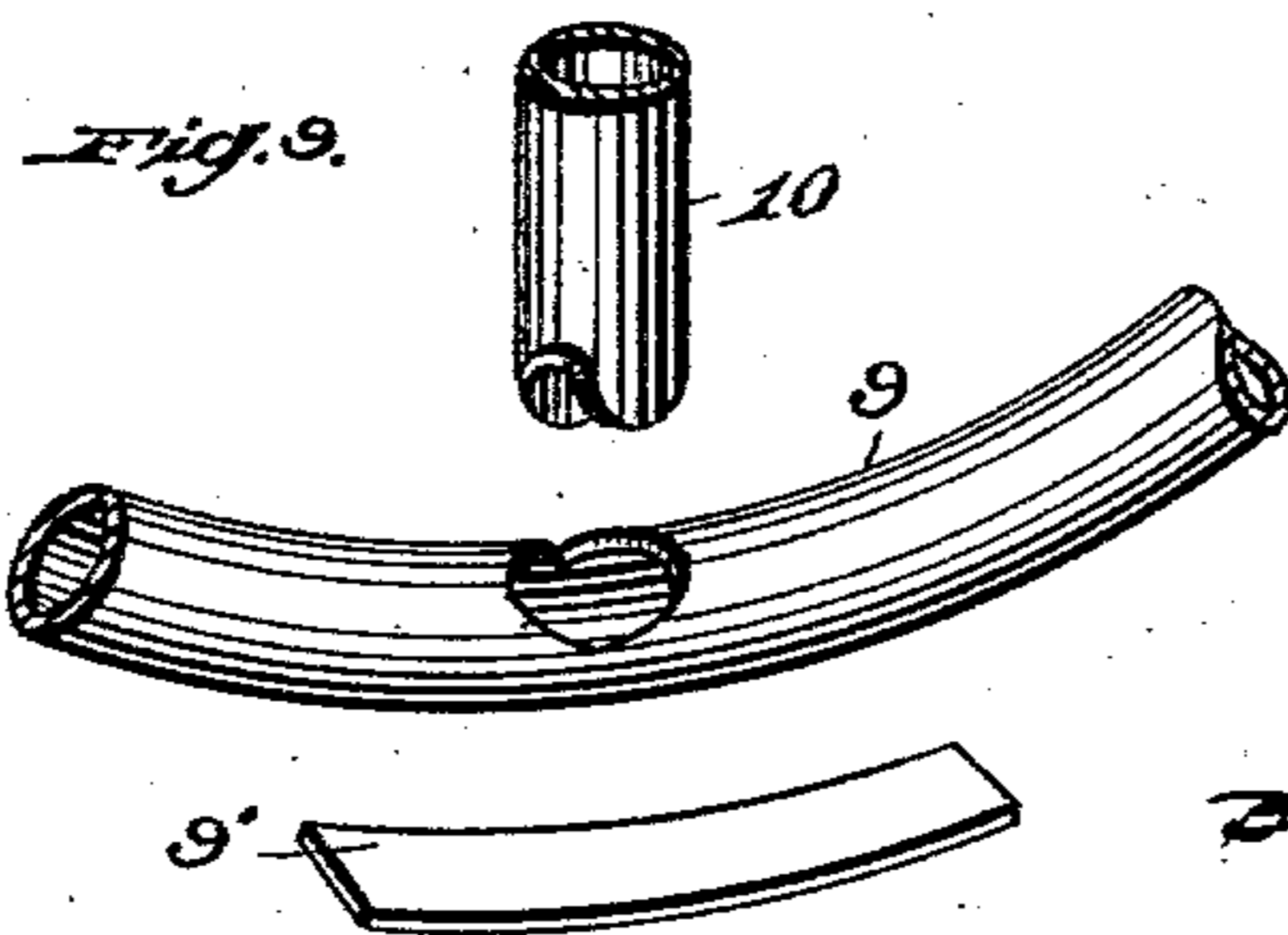
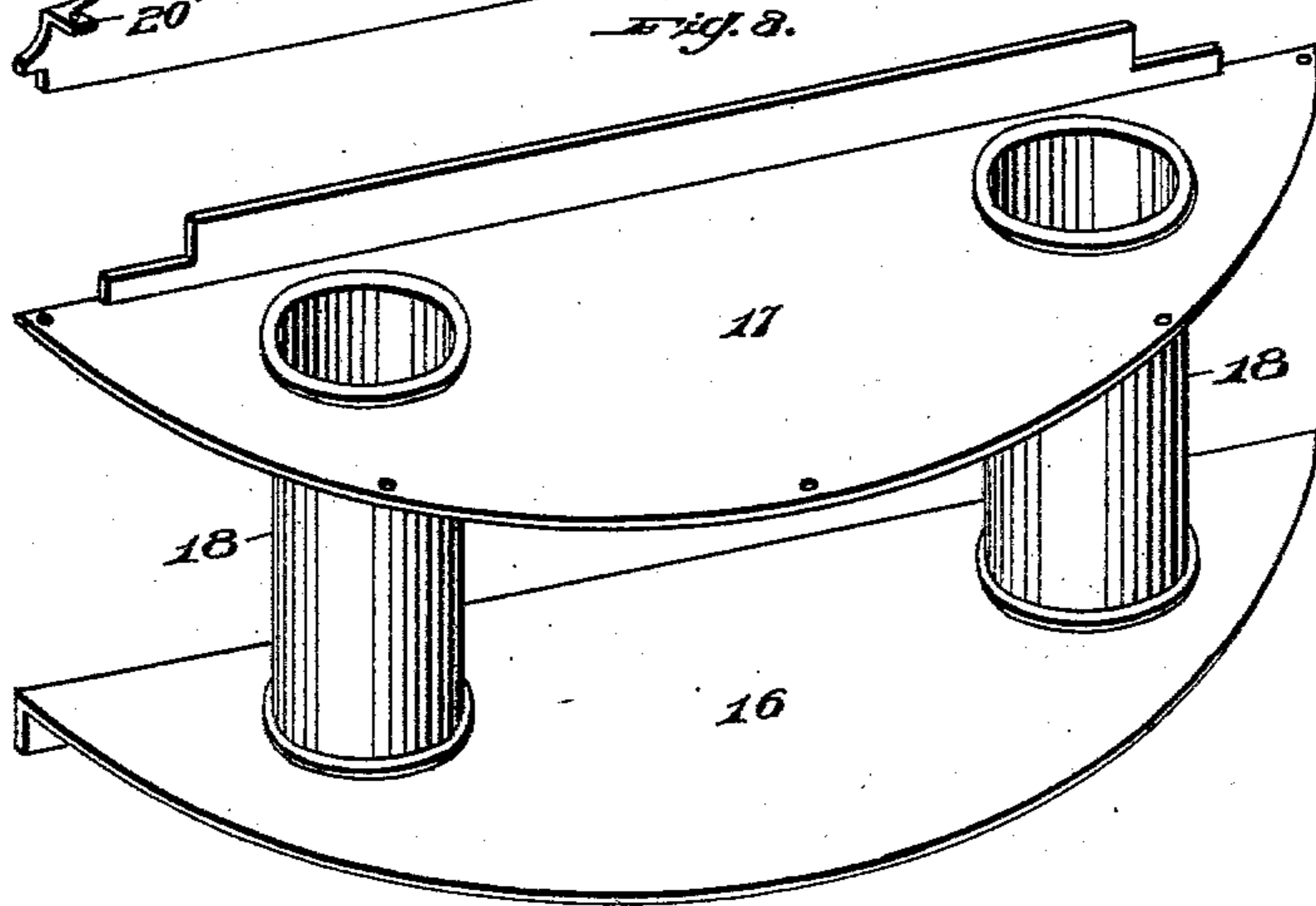
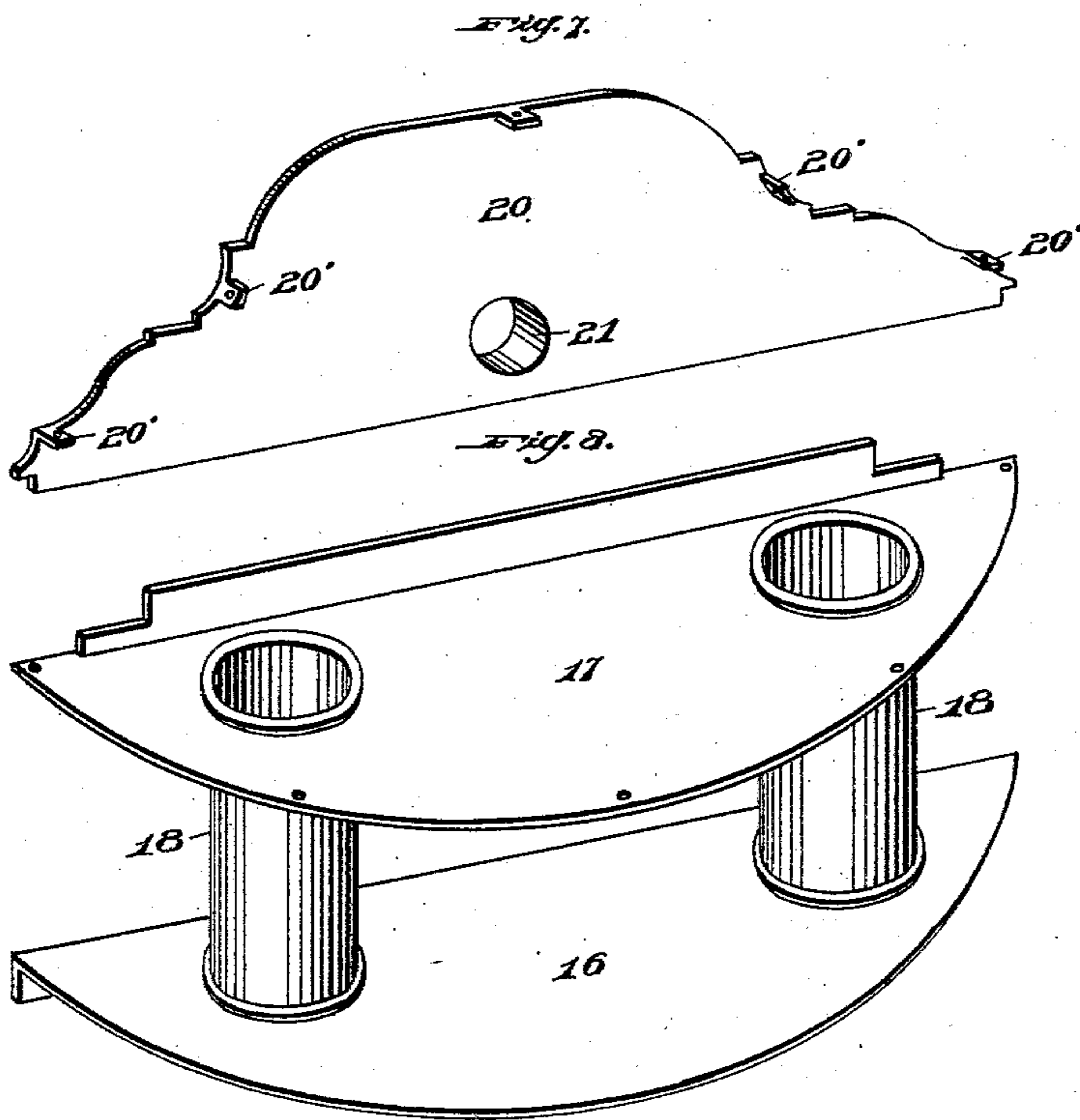
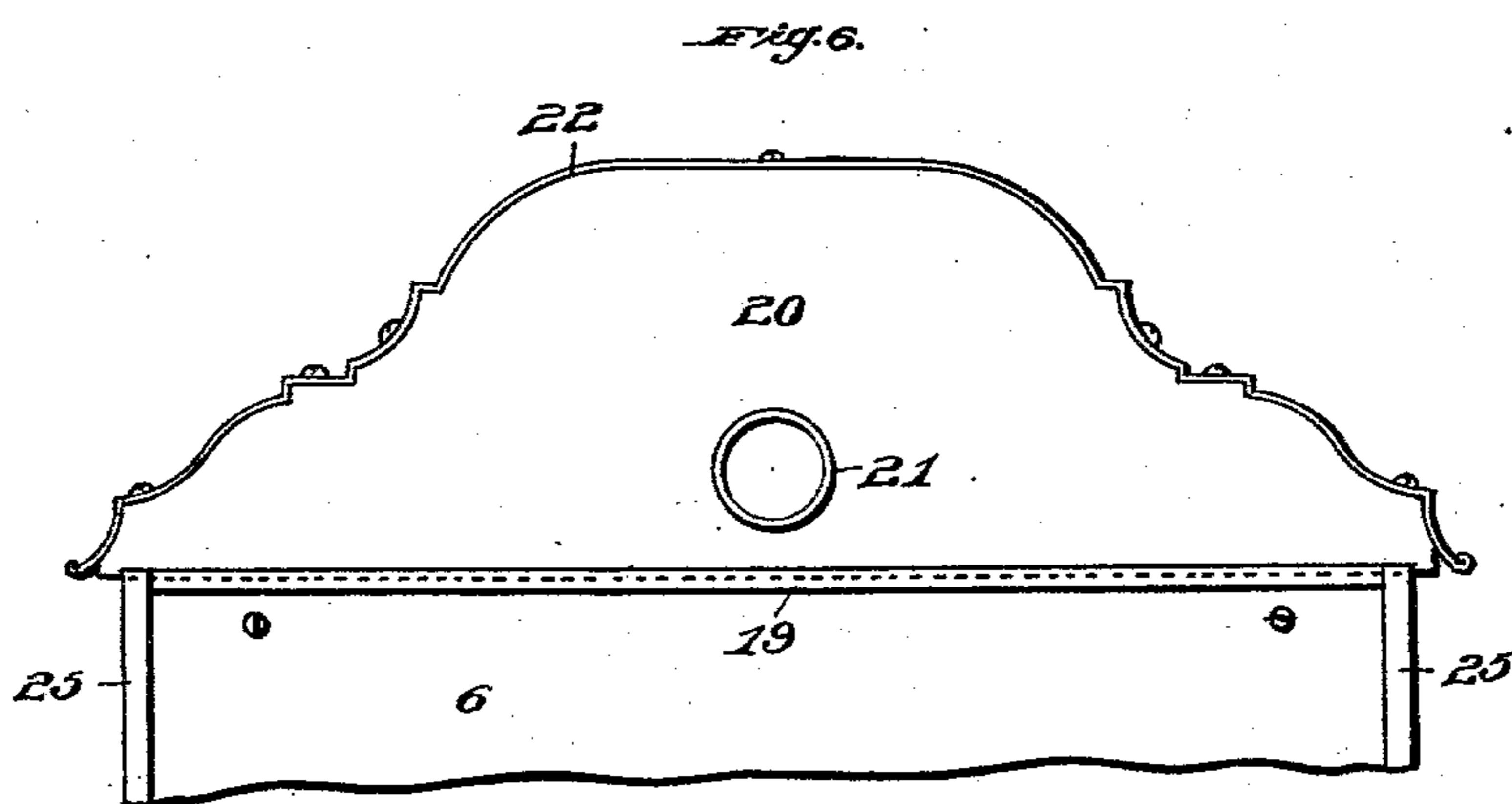
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GAS STOVE.

APPLICATION FILED JUNE 19, 1903.

NO MODEL.

3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

JULIUS F. ADAMS AND FRIEDERICH O. ADAMS, OF ALLEGHENY,
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GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 745,711, dated December 1, 1903.

Application filed June 19, 1903. Serial No. 162,214. (No model.)

To all whom it may concern:

Be it known that we, JULIUS F. ADAMS and FRIEDERICH O. ADAMS, citizens of the United States, residing at Allegheny, 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.

This invention relates to gas-stoves, and has particular reference to the type of stove shown in patent to Adams and Donaldson, December 3, 1901, No. 688,051.

One object is to improve the arrangement or position of the burner.

Another object is to provide a product drum or chamber of novel design.

Still a further object is to simplify and improve the general construction of the stove, particularly its upper, lower, and back portions.

In the accompanying drawings, Figure 1 is a front elevation of a stove embodying our improvements, a portion of the top or crown being broken away. Fig. 2 is a top plan view, partly in section. Fig. 3 is a vertical longitudinal sectional view on line 3 3 of Fig. 4. Fig. 4 is a vertical cross-sectional view on line 4 4 of Fig. 3. Fig. 5 is a sectional plan view on line 5 5 of Fig. 1. Fig. 6 is a rear elevation of the upper portion of the stove. Fig. 7 is a detail view of the upper back plate. Fig. 8 is a similar view of the drum-forming structure. Fig. 9 is a detail view of the burner.

The invention is here embodied in a stove of semicircular design; and it consists of a curved sheet-metal base 2, having the inwardly-flaring top portion 3, which terminates in the curved horizontal flange 4. In the front of the base is open-work panel 2', and at the rear the base ends unite at 5 with the sheet-metal back plate 6. Secured to flange 4 is the curved cast-metal plate 7, having upwardly-projecting lugs 7', to which is secured the lower end of the forwardly-curved fire-board 8, provided with the usual asbestos covering 8'.

9 designates the curved tubular burner positioned adjacent the fire-board and slightly

above base-flange 3, the latter being formed with a row of perforations 3' immediately beneath the burner to afford a direct upward supply of air thereto. The burner is secured by being brazed to the mixer-stem 10, which extends through flange 3 and which unites with supply-pipe 11, the latter being sustained by hanger 12 and the stove-back. With the burner slightly above the perforated base it is afforded a direct upward supply of air.

9' is a deflecting-plate brazed to the interior of the burner and positioned centrally over the stem 10, said plate affording an even distribution of gas throughout the burner. The deflector is curved in conformity with the burner and is inserted through the burner-bottom opening, to which stem 10 connects.

Raised slightly above the upper end of fire-board 8 is the curved cast-metal plate 13, having depending lugs 13', to which the fire-board is secured, and projecting forward and downward from this plate over the upper end of the fire-board is the curved and inclined deflector 14, which directs the products through opening 15, formed by plate 13 and the top extremity of the fire-board.

A product-receiving chamber is formed within the stove by two horizontal partition-plates 16 and 17, rigidly connected by vertical tubes 18. Lower plate 16 exactly fits the space between the stove-back and fire-board, while plate 17 rests on and is secured to curved cast plate 13, so that said partition-plates, in conjunction with the vertical members of the stove-frame, form a chamber of which passage 15 constitutes the entrance for the products passing from the fire-board.

Back plate 6 terminates between partitions 16 and 17 and is formed at its upper edge with the bent-up groove 19, in which is supported the vertical cast-metal plate 20, having flue connection 21. Said plate completes the rear wall of the drum and extends thereabove and at its top edge is shaped to form the top outline of the stove and at said edge has lateral lugs 20', to which is secured the edge of the ornamental top or crown 22, formed preferably of sheet-brass. The top is of semi-dome form and has an annular flat surface

immediately over cast plate 13, to which it is secured by screws 23, the arrangement being such that said screws also serve to secure deflector 14. The lower portion of the ornamental top forms a skirt 22', which extends
5 over and obscures deflector 14.

The forwardly-curved fire-board terminates between the ornamental columns 24 at either side of the stove, said columns being formed,
10 preferably, of sheet-brass and are secured to the edges of back plate 6 by vertical seams 25.

The stove-top is perforated at 26, and with the base open, as shown, there is ample provision for air to circulate through the stove
15 and become heated, especially as it courses through tubes 18 of the product-chamber.

A stove of the form here shown and described is very substantial and durable and at the same time comparatively inexpensive, the parts being of simple construction and of the smallest possible number. The base and fire-board, being of sheet metal, are liable to become distorted under constant wear and intense heat when unprovided with stiffening
20 means, which in the present structure is provided in the form of plate 7, which serves to permanently unite said parts and preserve their form. In like manner the upper portion of the stove, including the top of the fire-board, is reinforced by plate 13. The cast
30 back plate 20 provides a convenient flue connection without seaming, and its top edge may be cast to conform to the shape of the top which fits thereover—a formation that would be difficult and more costly in sheet
35 metal.

It will be understood that many features of our invention may be embodied in stoves differing in shape from that here shown without departing from the spirit thereof.
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We claim—

1. In a gas-stove, an upright semicircular sheet-metal fire-board, a back plate to which the vertical edges of the fire-board are secured, and curved horizontal plates defining the shape of the fire-board and to which the same is secured.
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2. In a gas-stove, an upright frame including a fire-board and a back, horizontal plate 13 to which the upper end of the fire-board is secured, horizontal partition-plate 17 secured to plate 13, tubes 18 depending from plate 17, plate 16 at the lower ends of the tubes and fitting the interior of the frame, the space between plates 16 and 17 being open for the admission and discharge of products.
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3. In a gas-stove, a frame including an upright fire-board, horizontal plate 13 to which the upper end of the fire-board is secured, deflector 14 and top 22 secured to said plate, the top having skirt 22' overhanging deflector 14.
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4. In a gas-stove, an upright frame including a fire-board, horizontal plate 13 to which the upper end of the fire-board is secured, deflector 14 and top 22 secured to said plate,
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plate 17 secured to plate 13, tubes 18 depending from plate 17, and plate 16 secured to tubes 18 and fitting the interior of the frame, the space between plates 16 and 17 being open
70 for admission and discharge of products.

5. In a gas-stove, an upright frame having a fire-board, two horizontal separated partitions removably positioned within the upper portion of the frame and forming the top and bottom walls of a chamber of which the frame forms the side walls, and air-tubes traversing the chamber, the chamber being open for admitting and discharging products.
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6. In a gas-stove, a frame, two horizontal partition-plates, one above the other, said plates adapted to removably fit the interior of the frame with means for securing them, the frame being open in the plane of the space between the partitions for the admission and discharge of products.
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7. In a gas-stove, an upright frame including a fire-board and a back, a product-chamber within the frame and open to the fire-board, and a plate removably uniting with and forming a vertical continuation of the frame-back, said plate constituting the back wall of the product-chamber.
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8. In a gas-stove, a base, upright frame members rising therefrom including a fire-board and a back, a product-chamber within the frame and open to the fire-board, a plate removably uniting with and forming a vertical continuation of the frame-back, and a top or crown secured to said plate and to the fire-board.
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9. In a gas-stove, a base, upright frame members rising therefrom including a fire-board and a back, said back formed at its upper end with a groove, a plate adapted to rest in the groove and form a vertical continuation of the back, and a top or crown secured to said plate.
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10. In a gas-stove, a sheet-metal base having a backwardly-turned top portion, a rigid metallic plate secured to and sustained by the edge of the backwardly-turned portion, and a fire-board secured to the plate.
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11. In a gas-stove, a forwardly-curved sheet-metal base having a backwardly-extending top portion, a correspondingly-curved rigid metallic plate secured to and sustained by the backwardly-turned portion, a back, and a forwardly-curved fire-board secured at its lower end to the said plate.
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12. In a gas-stove, a sheet-metal base having a backwardly-extending top portion formed at its inner edge with a horizontal flange, a rigid metallic plate secured to said flange, and a fire-board secured to and rising from said plate.
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13. In a gas-stove, the combination of a horizontally-curved tubular burner, a deflector-plate curved to conform to the burner interior and secured therein, and a gas-supply tube secured to the burner beneath the plate.
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14. In a gas-stove, the combination of a

5 horizontally-curved tubular burner having a bottom opening, a supply-pipe having a brazed connection with the burner at said opening, and a deflector-plate curved to conform to the burner interior and insertible through said bottom opening of the burner and brazed therein centrally above the opening.

In testimony whereof we affix our signatures in presence of two witnesses.

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