

No. 608,386.

Patented Aug. 2, 1898.

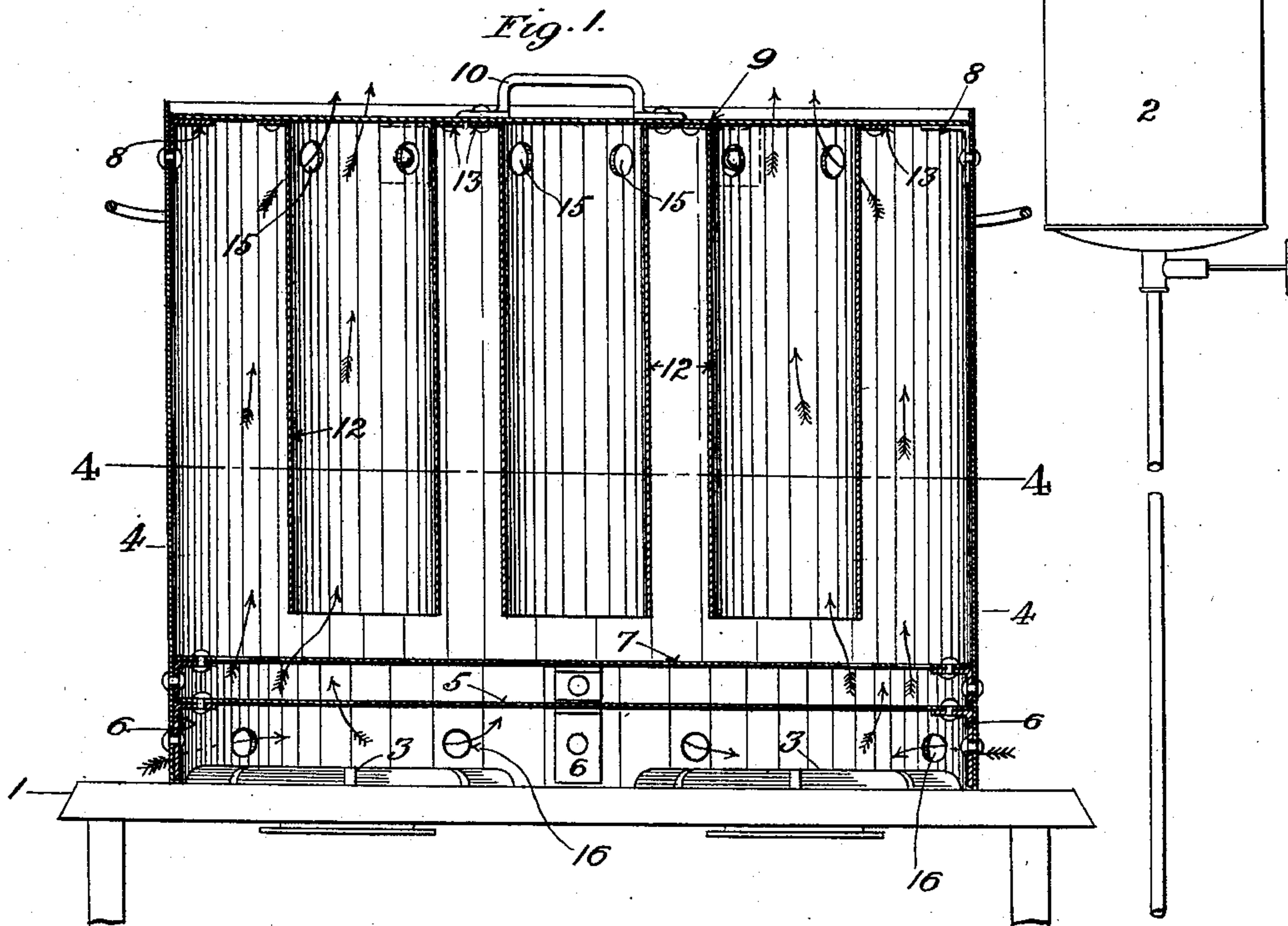
C. B. TOURVILLE.

HEATING DRUM.

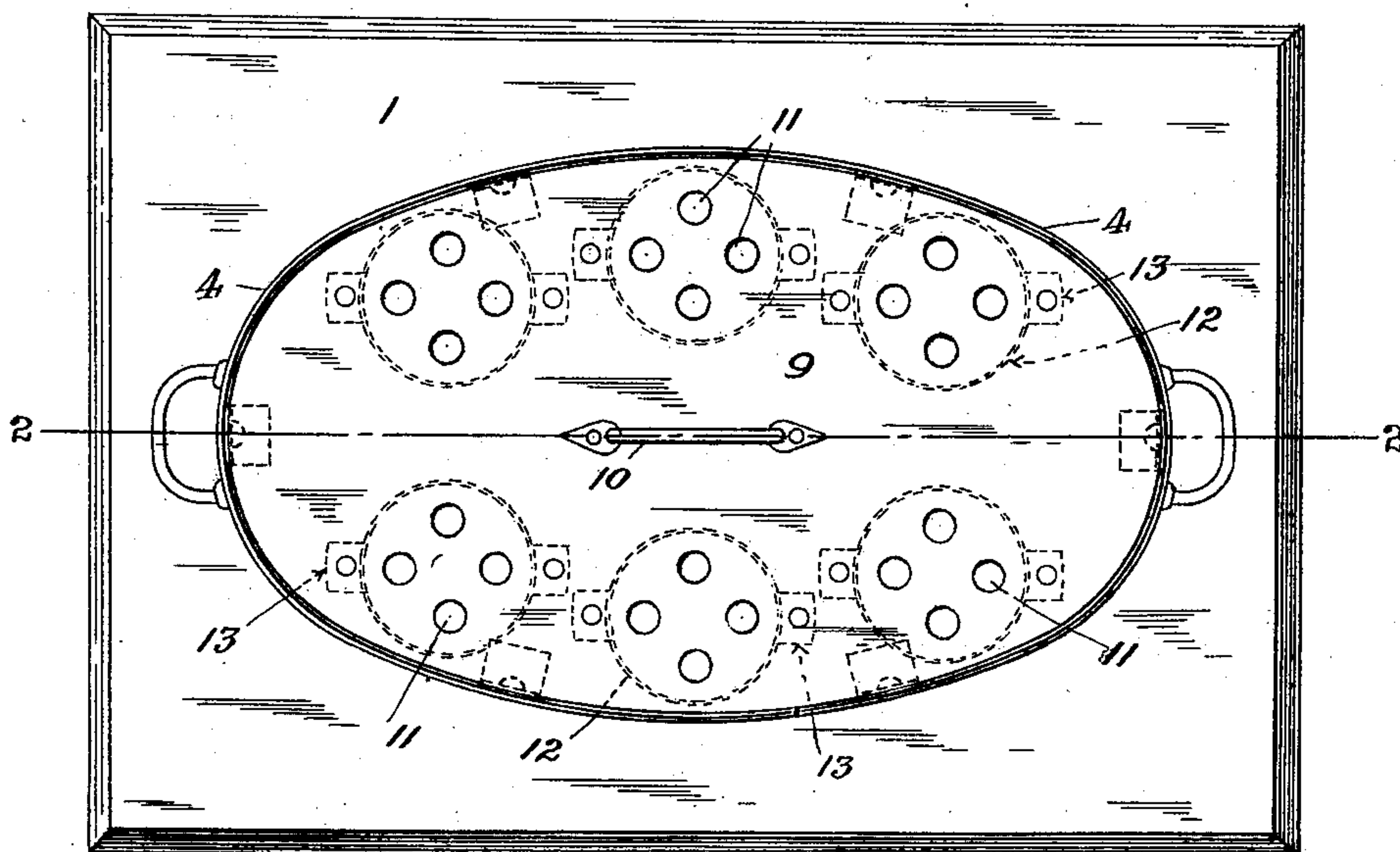
(Application filed Dec. 20, 1897.)

(No Model.)

2 Sheets—Sheet 1.



*Fig. 2.*



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2 Sheets—Sheet 2.

Fig. 3.

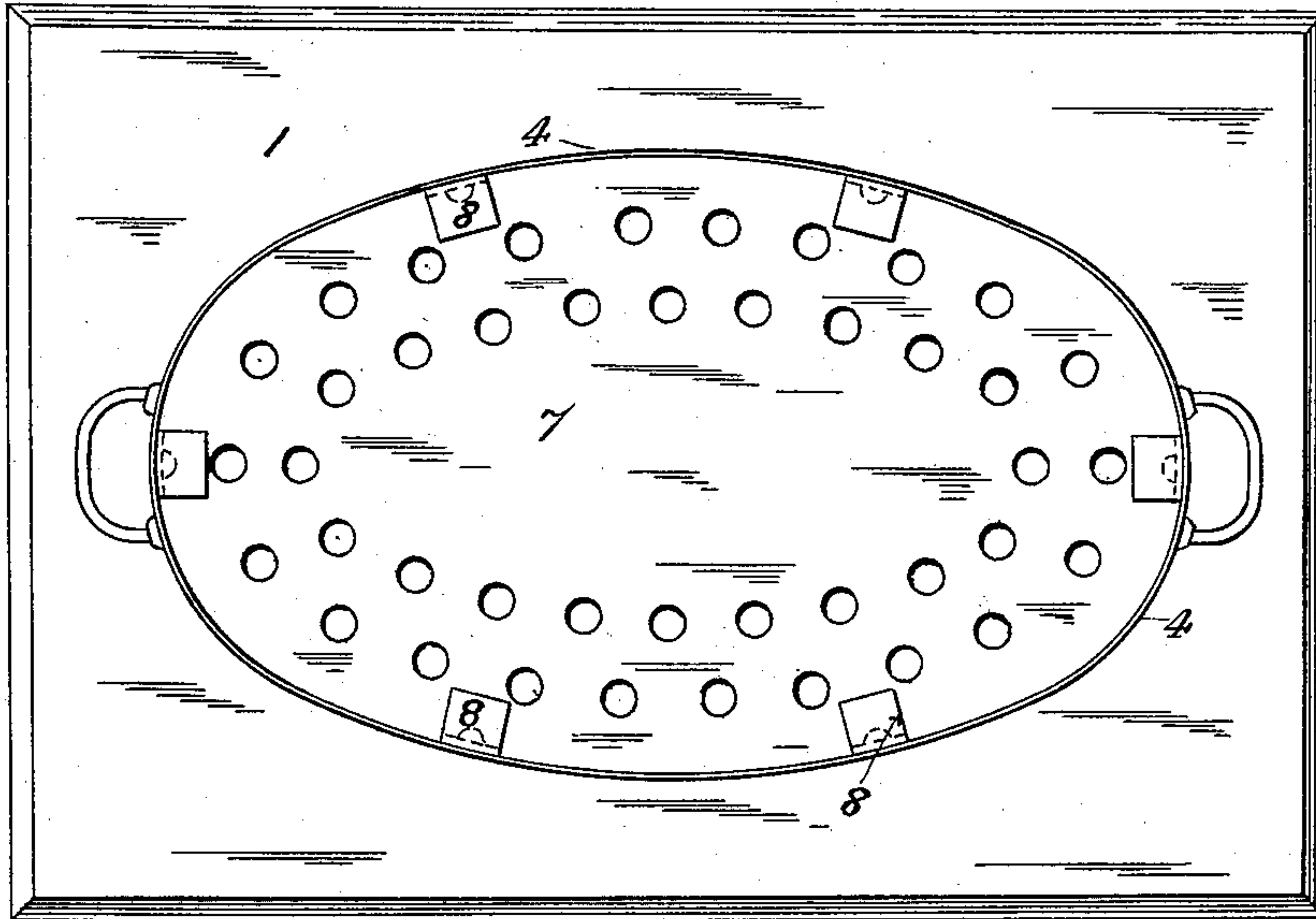


Fig. 4.

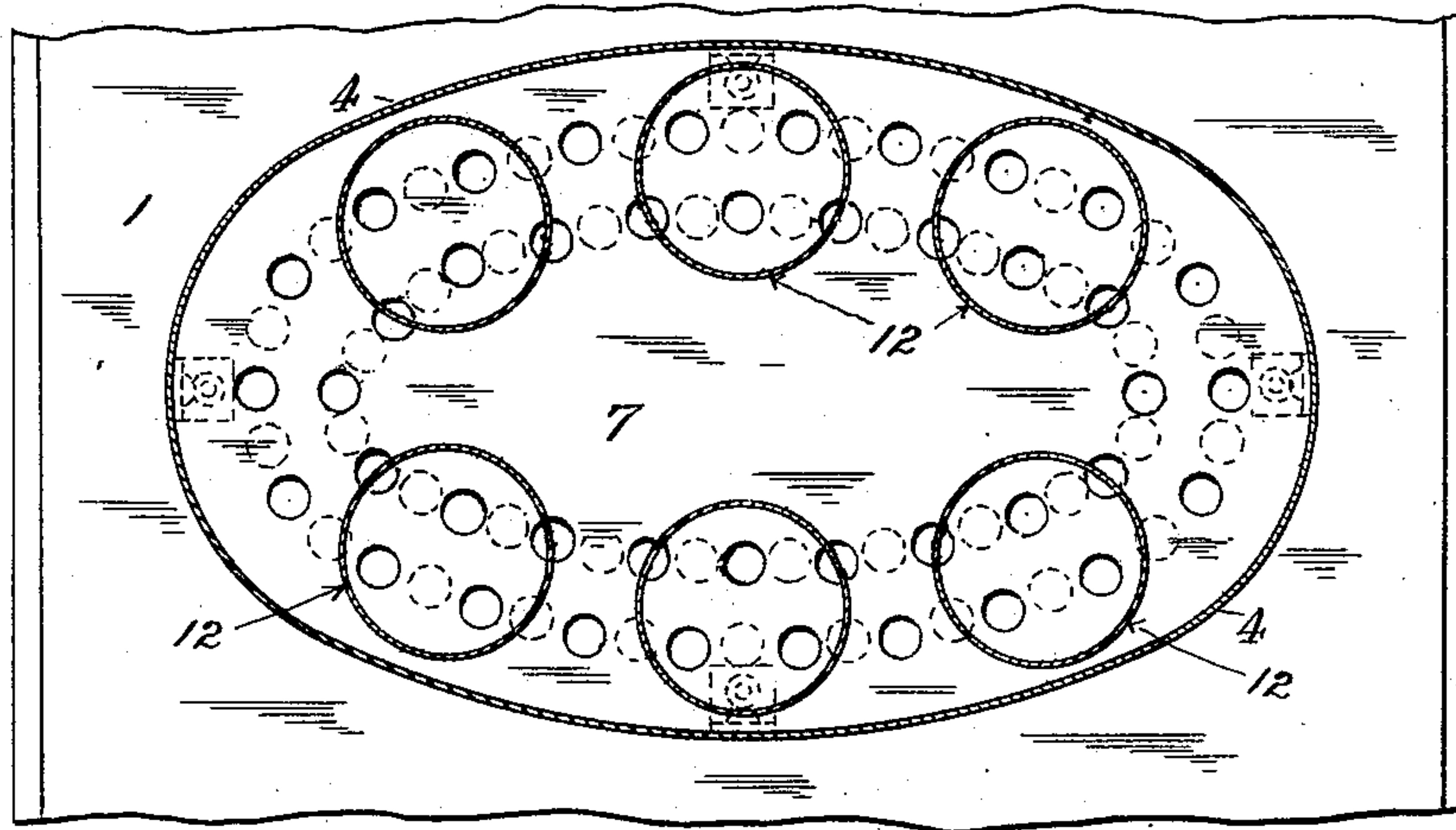
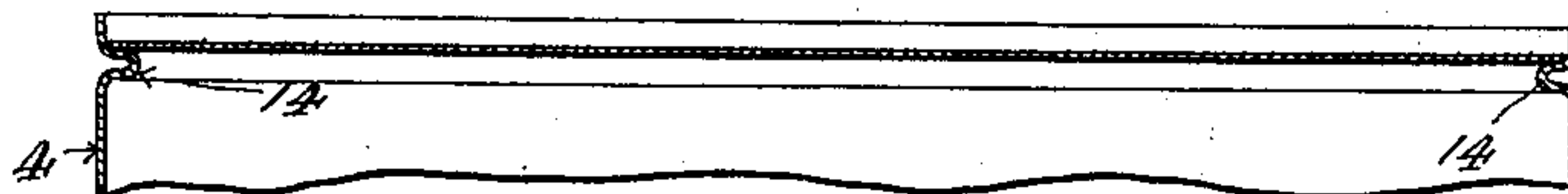


Fig. 5.



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# UNITED STATES PATENT OFFICE.

CHARLES B. TOURVILLE, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF  
TO MICHAEL TULLY, OF SAME PLACE.

## HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 608,386, dated August 2, 1898.

Application filed December 20, 1897. Serial No. 662,628. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES B. TOURVILLE, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Heating-Drums, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in heating-drums; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a middle vertical longitudinal section of the drum, taken on line 2 2 of Fig. 2, showing, however, the air-tubes on either side of the section-line in section and the handles in elevation. Fig. 2 is a top plan view of the drum. Fig. 3 is a top plan view with the cover-plate and tubes carried thereby removed. Fig. 4 is a horizontal section on line 4 4 of Fig. 1, and Fig. 5 is a sectional detail showing a modified form of the means for supporting the cover-plate.

The object of my invention is to construct a drum which may be placed over the flame of the burners in a gas or gasolene stove, whereby the heat imparted to the drum is radiated into the room and whereby there is induced such a circulation of air to and from the drum as to insure a rapid and thorough rise in the temperature of the air throughout the room.

In detail the device may be described as follows:

Referring to the drawings, 1 represents the upper portion of a gasolene-stove, and 2 the tank supplying the hydrocarbon to the burners 3 thereof. Adapted to be superposed over the burners 3 is a drum 4, against the medial solid portion of the perforated bottom 5 of which the flames are adapted to impinge, the said bottom being secured to the walls of the drum a suitable distance above the lower edge thereof by means of angle-pieces 6, riveted, respectively, to said bottom and vertical walls of the drum. Secured in like manner and at a suitable distance above the bottom is a perforated intercepting-plate 7, the

perforations of the latter breaking joint with those of the bottom 5. (See Fig. 4.) Adapted to rest and detachably supported on the horizontal members of a series of angular brackets 8, secured to the inner surface of the walls of the drum, adjacent to the upper edge thereof, is a cover-plate 9, provided with a handle 10. From the under surface of the cover-plate and in position to communicate with the series of openings 11 formed therein depend a number of tubes 12, the lower ends of the tubes being substantially in alinement with the openings of the bottom and raised a slight distance above the intercepting-plate 7. The tubes are secured to the cover-plate by means of the arms or strips 13, forming an integral part of the metal of which the tubes are constructed, the said arms being bent at right angles to the tubes and riveted to the cover-plate. As a substitute for the supporting-brackets 8 I may form or press in the metal of which the drum is composed an inner peripheral circular flange or bead 14, as seen in the modification in Fig. 5.

Disposed along the peripheral wall of each tube, adjacent to its juncture with the cover-plate, are a series of openings 15, establishing communication between the outer air and the space immediately adjacent to the inner surface of the vertical walls of the drum. As best seen in the drawings, the preferred form of the cross-section of the drum is elliptical, the tubes 12 and the openings with which they communicate following in a general way the elliptical disposition of the walls of the drum, although any other form of drum (circular or polygonal) would come within the spirit of my invention. Disposed along the vertical walls of the drum in a line adjacent to the lower edge thereof are a series of air-induction openings 16, serving to admit air from without the drum into the space below the raised bottom 5 thereof, whereby perfect combustion is insured for the flame coming from the burner, and at the same time a draft is induced from different portions of the room toward the drum, thus minimizing the time within which the thorough heating of the room is effected. The hot-air currents circulate substantially as indicated by the arrows, the overheating of the walls of the



drum being avoided by reason of the openings 15, which serve to conduct the hot air from the space immediately in contact with the walls of the drum outwardly and make  
5 room for a fresh supply of air.

The object of the intercepting-plate 7 is to retard somewhat the too-rapid escape of the products of combustion, thus giving the drum ample time to become thoroughly heated and  
10 radiate the heat imparted thereto to the surrounding atmosphere.

It is obvious, of course, that slight changes might be effected in the present construction without departing from the spirit of my in-  
15 vention.

Having described my invention, what I claim is—

1. A heating-drum adapted to be placed over a flame, and having a perforated bottom  
20 normally raised a suitable distance above the lower edge of the vertical walls of the drum, a cover for the drum, a series of tubes depending from the cover and having the lower free ends raised a suitable distance above the  
25 bottom, a series of openings being formed in the cover and in communication with the discharge ends of the tubes, the vertical walls of the drum being provided with air-induction openings leading to the space below the  
30 raised bottom, substantially as set forth.

2. A heating-drum adapted to be placed over a flame, a perforated bottom forming a part of the drum and normally raised a suitable distance above the lower edge of the ver-  
35 tical walls of the drum, a perforated intercepting-plate located a suitable distance above the bottom, the perforations of the latter be-

ing out of alinement with those of the plate, a cover-plate for the drum provided with per-  
forations, tubes communicating with the per- 40 forations depending from the inner surface of the cover-plate and reaching to within a suitable distance of the intercepting-plate, a series of openings being formed in the peripheral walls of the tubes adjacent to the cover- 45 plate, the walls of the drum having a series of air-induction openings, leading to the space below the raised bottom, substantially as set forth.

3. In a heating-drum, a drum proper, a per- 50 forated bottom raised above the lower edge of the peripheral walls thereof, a perforated cover-plate for the drum, and a series of tubes depending from the cover and establishing communication between the interior of the 55 drum and the outer air through the perforations of the cover, the lower ends of the tubes being removed a suitable distance above the bottom, substantially as set forth.

4. In a heating-drum, a drum proper, a bot- 60 tom raised above the lower edge of the same, the said bottom having a solid portion against which the flames are adapted to impinge, a series of openings formed adjacent to the outer edge of the bottom, and a series of tubes alin- 65 ing with said openings, the tubes communicating with openings formed in the top of the drum, substantially as set forth.

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

CHARLES B. TOURVILLE.

Witnesses:

EMIL STAREK,  
MICHAEL TULLY.