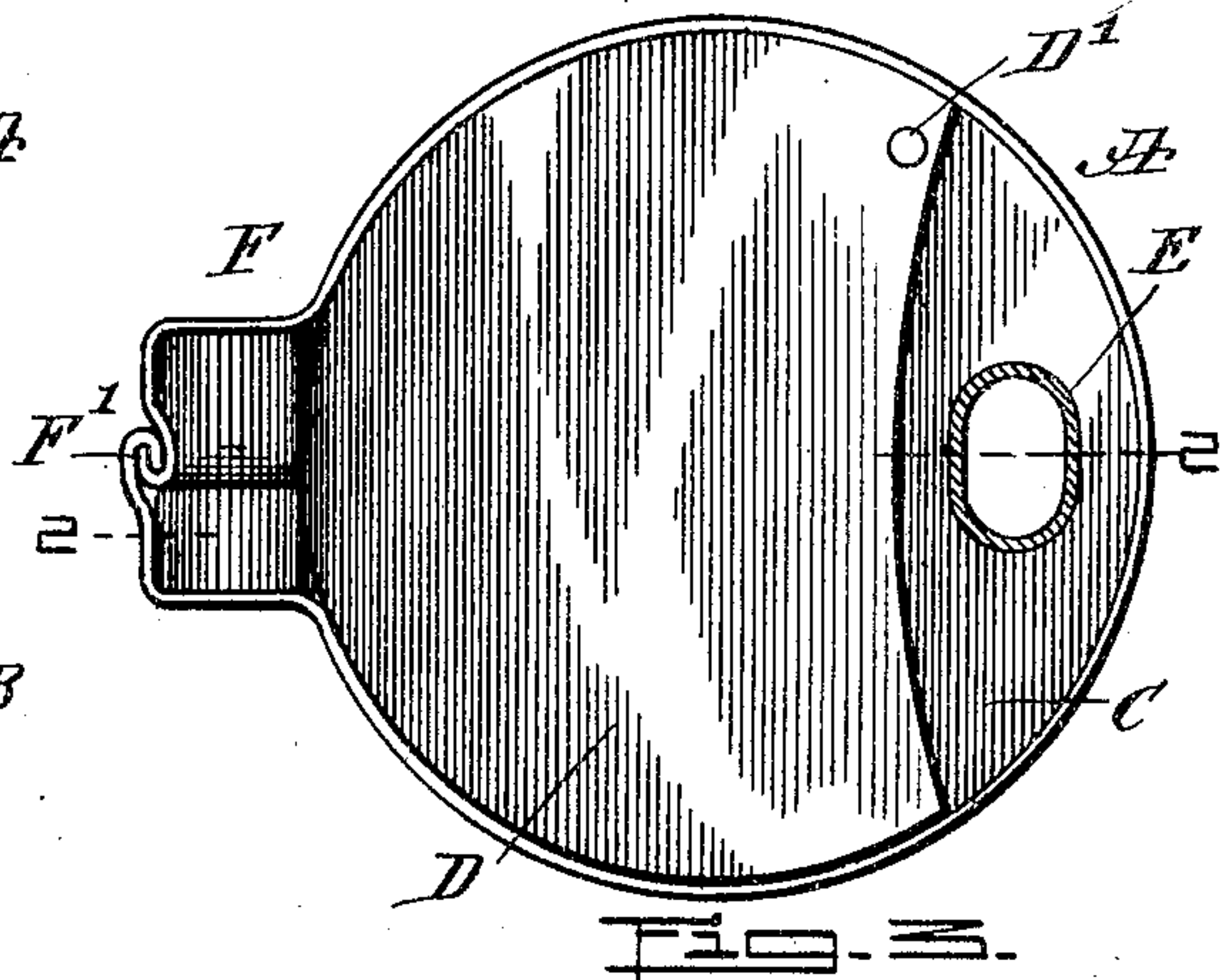
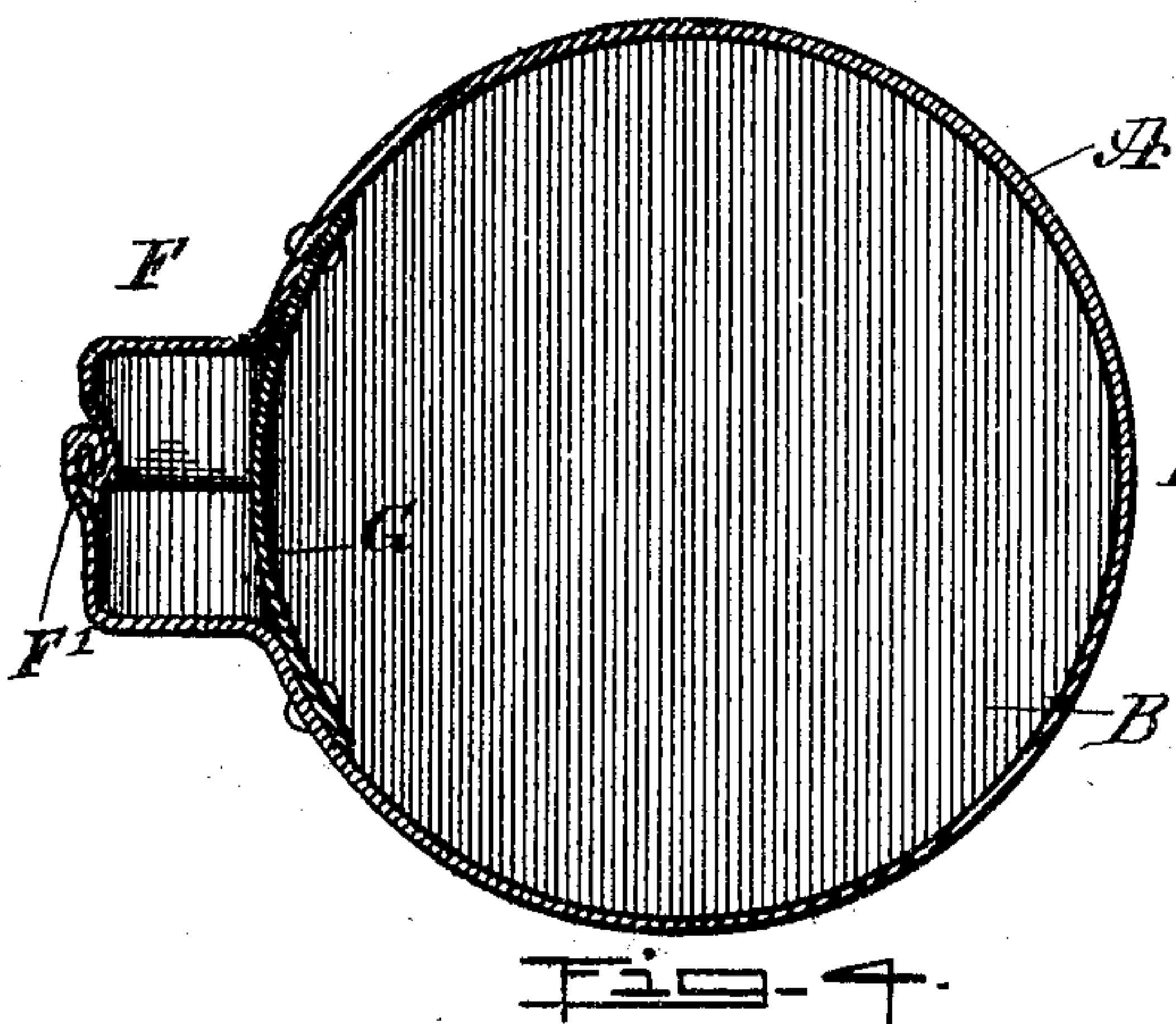
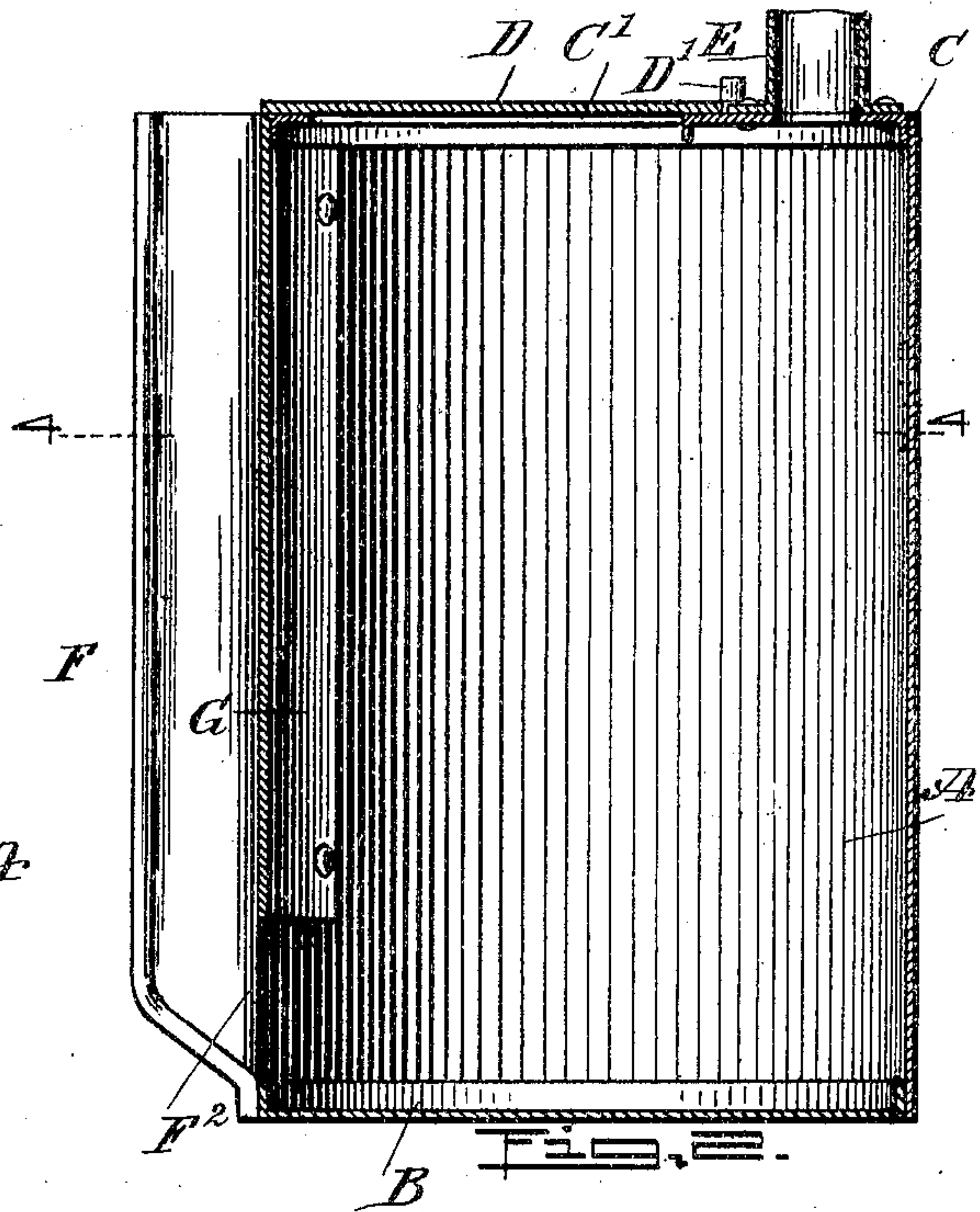
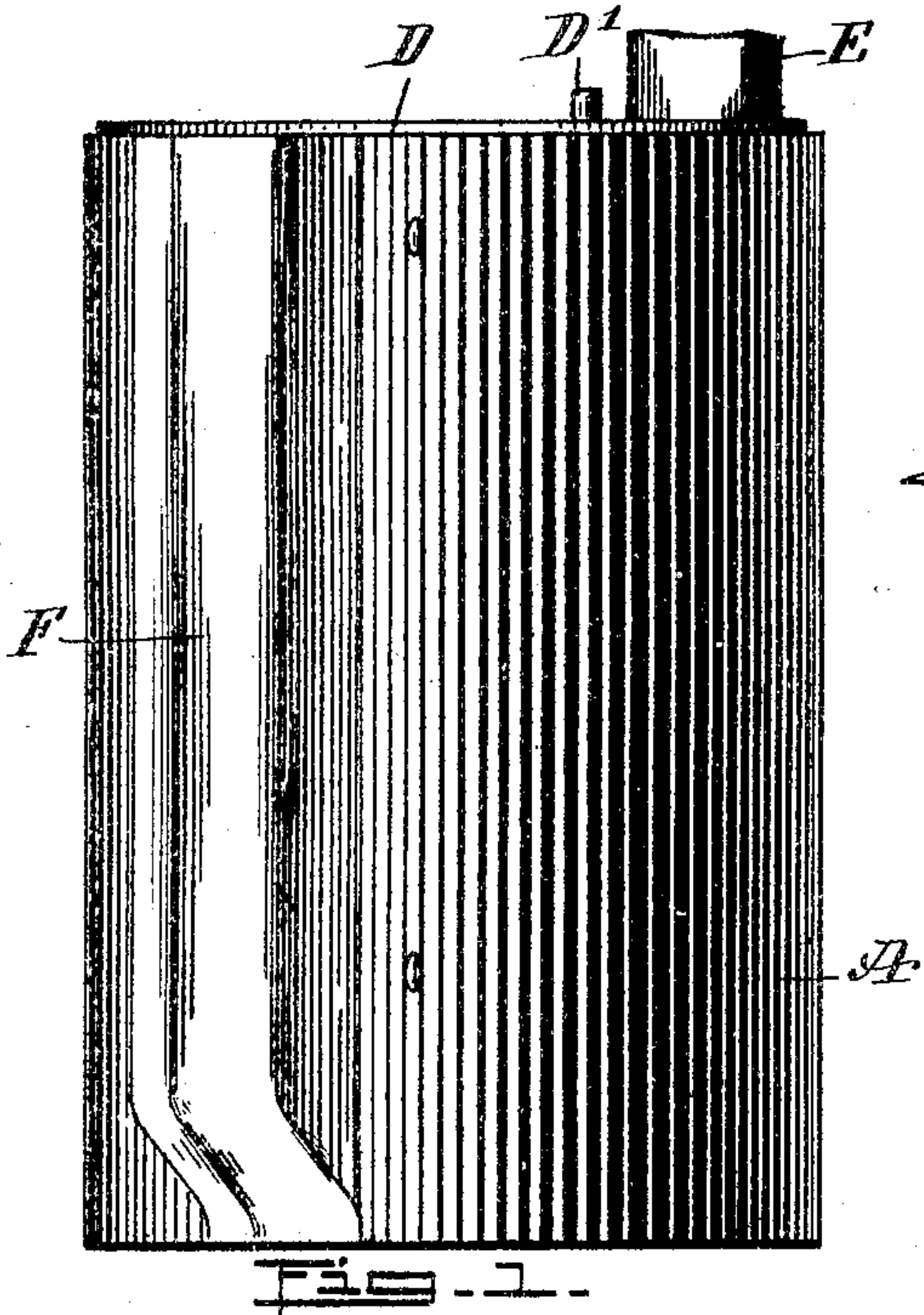


No. 794,593.

PATENTED JULY 11, 1905.

W. DIXON.
TANK HEATER.

APPLICATION FILED MAY 28, 1904.



WITNESSES:
C. A. Jarvis
Geo. H. Hester

INVENTOR
Walter Dixon
BY *Wm. H. Hester*
ATTORNEYS

UNITED STATES PATENT OFFICE.

WALTER DIXON, OF KIMBALL, MINNESOTA, ASSIGNOR TO HIMSELF AND
CHARLES W. DIXON, OF KIMBALL, MINNESOTA.

TANK-HEATER.

SPECIFICATION forming part of Letters Patent No. 794,593, dated July 11, 1905.

Application filed May 28, 1904. Serial No. 210,189.

To all whom it may concern:

Be it known that I, WALTER DIXON, a citizen of the United States, and a resident of Kimball, in the county of Stearns and State of Minnesota, have invented a new and Improved Tank-Heater, of which the following is a full, clear, and exact description.

The invention relates to the care of live stock, and more particularly to heaters for use in stock-tanks to prevent the contents thereof from freezing in cold weather.

The object of the invention is to provide a new and improved tank-heater arranged to prevent the seam of the heater-body from coming in direct contact with the burning fuel, to prevent the seam from becoming leaky, and at the same time providing a space within the heater-body unobstructed by the draft-flue to provide ample space for the burning fuel.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement. Fig. 2 is a sectional side elevation of the same on the line 2 2 of Fig. 3. Fig. 3 is a plan view of the same, and Fig. 4 is a sectional plan view of the same on the line 4 4 of Fig. 2.

The circular body A of the tank-heater is provided with the usual bottom B and the top C, having an opening C' adapted to be closed by a cover D, hinged at D' on the top C to permit of conveniently swinging the cover into an open position for introducing the desired fuel into the heater and for closing the opening C' after the fuel is introduced into the heater.

On the top C at one side of the cover D is arranged a chimney E for carrying off the smoke and gases, and on one side of the body A is arranged an air-draft flue F, extending vertically, for conducting the air from the outside to the bottom of the heater-body A

to supply the air necessary for the proper combustion of the fuel. By arranging the draft-flue F on the outside of the body A the latter remains wholly unobstructed on the inside to accommodate a large amount of fuel.

The air-flue F has its outside formed integrally with the circular body A, as plainly illustrated in the drawings, the said body and outside of the flue being made of one single piece of sheet metal, the ends of which are formed with interlocking flanges or lap-riveted to form a seam or joint F' at the outside of the flue and closed by solder, rivets, or the like, asbestos or other packing being placed between the members of the seam or joint, which latter does not come directly in contact with the burning fuel in the heater-body A. The inside of the flue F is formed by a separate piece of sheet metal G, extending from the top of the body A to within a distance of the bottom B thereof, so as to leave an entrance-opening F² for connecting the lower end of the flue F with the lower portion of the body A. The separate inner side G of the flue is riveted or otherwise secured to the body A, as plainly illustrated in the drawings.

From the foregoing it will be seen that the burning fuel within the body A does not come directly in contact with the seam F', located on the outside of the flue, and hence this seam is not liable to become leaky, as is so frequently the case with heaters now constructed, in which the flue extends from the inside of the heater-body and the seam of the latter is in direct contact with the burning fuel. It is understood that as long as the level of the water in the stock-tank is close up to the upper end of the heater there is not much danger of the solder melting in case the seam is in direct contact with the burning fuel; but in case the water gets low in the stock-tank then the burning fuel is liable to melt the solder and the seam becomes leaky, as is so frequently the case in tank-heaters as heretofore constructed. With my improvement above described the seam F' is removed from direct contact with the burning fuel, and hence the seam is not liable to become leaky, whether the level of the water in the tank is high or low.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A tank-heater, consisting of a circular body having a top and bottom, the top having
5 an opening therein, a horizontally-swinging cover for said opening, a smoke-flue in the top at one side of the cover, and an air-draft flue outside of the body, the outer wall of the flue being integral with the body and its inner wall
10 formed of a curved plate fixedly secured to the inner surface of the body and extending from the top to within a short distance of the bottom of the body, said flue being small in comparison with the body and having its bot-
15 tom inclined downwardly and inwardly to the bottom of said body, substantially as herein shown and described.

2. A tank-heater, comprising a circular body

closed at the top and provided with a smoke-flue, and with an air-flue on the outside of the
20 body, the outer wall of the flue being integral with the body and its inner wall formed of a curved plate fixedly secured to the inner surface of the body and extending from the top to within a short distance of the bottom, said
25 flue being small in comparison with the body and having its bottom inclined downwardly and inwardly to the bottom of said body, substantially as described.

In testimony whereof I have signed my name
30 to this specification in the presence of two subscribing witnesses.

WALTER DIXON.

Witnesses:

HENRY A. BICKLUND,
P. L. ARMS.