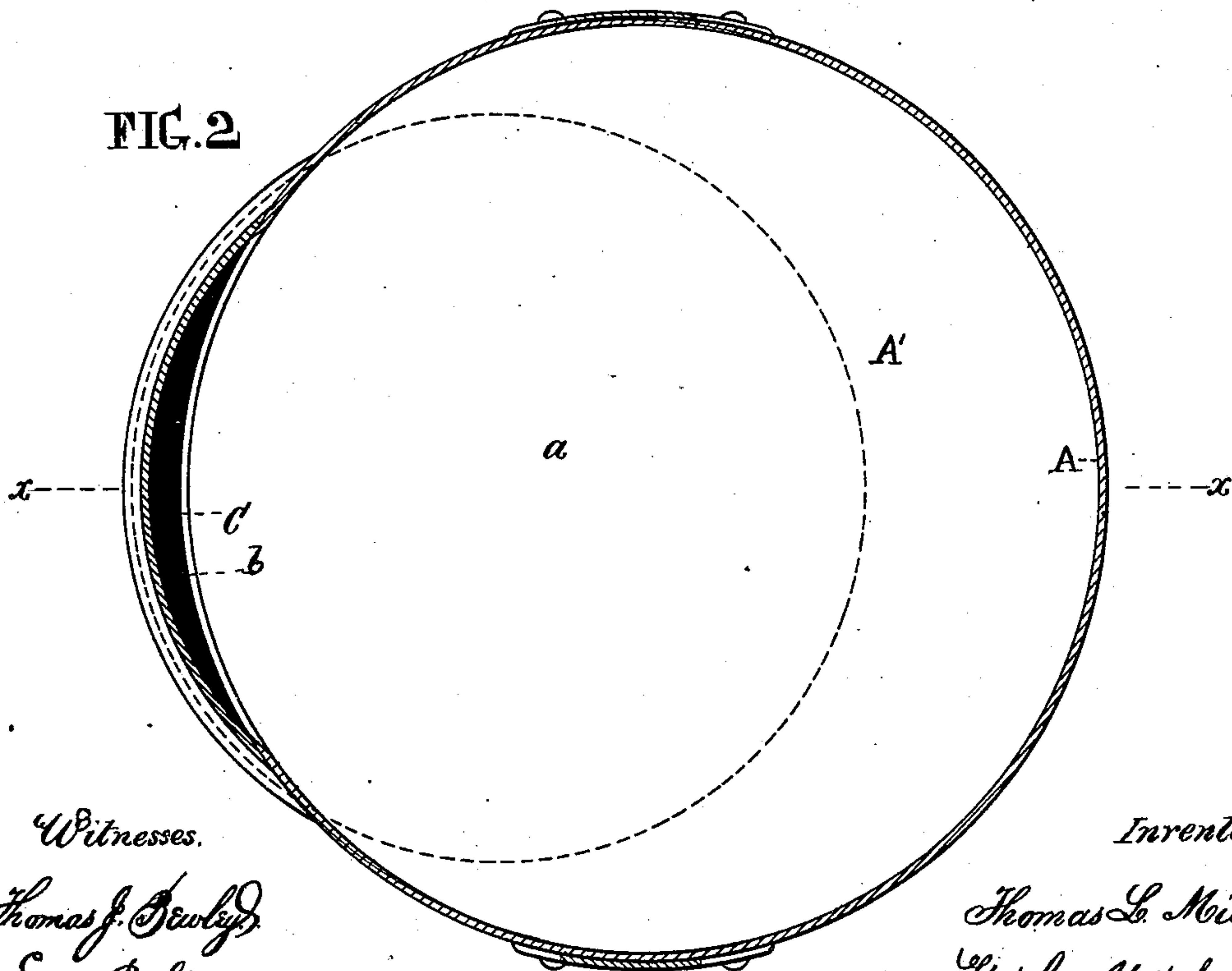
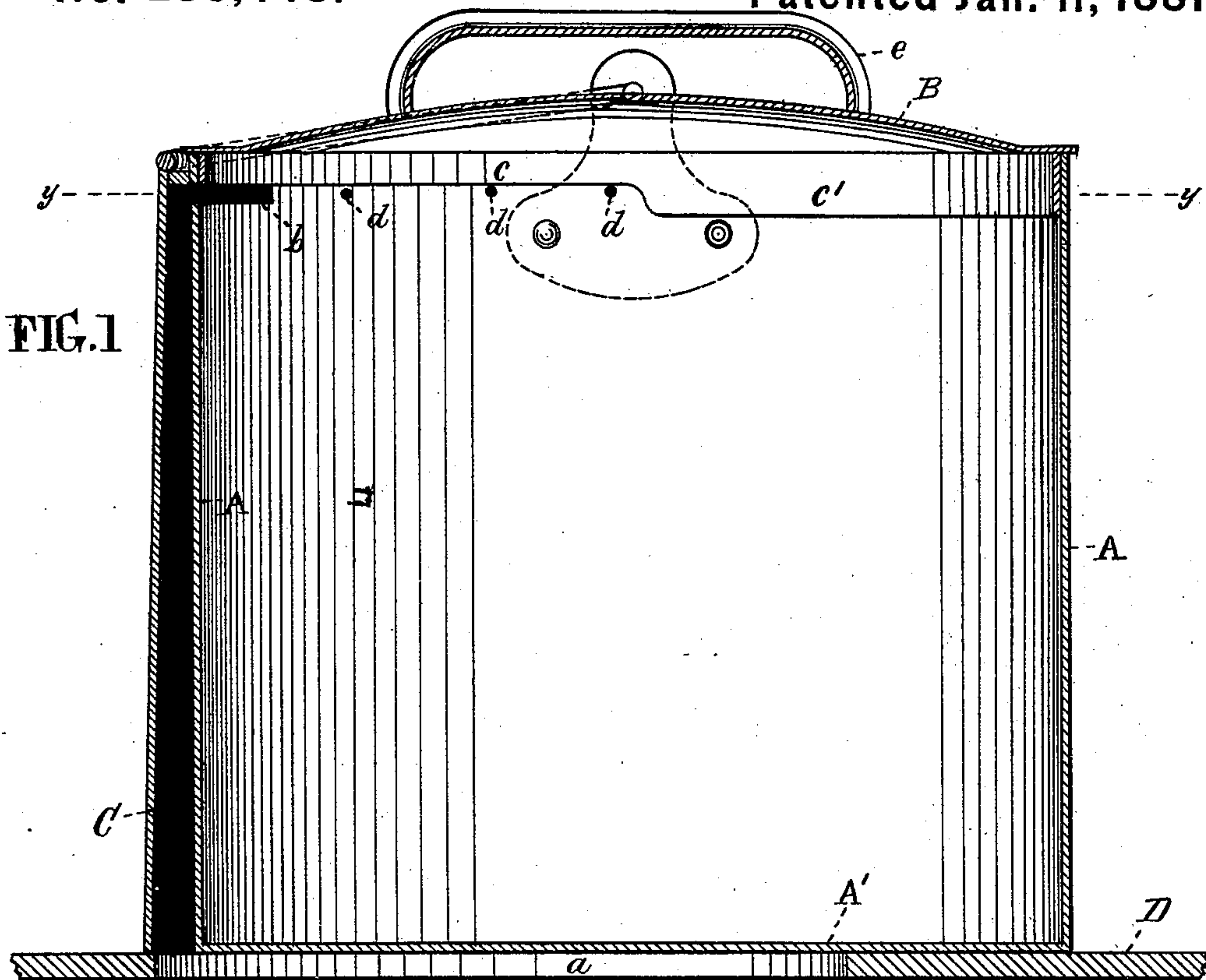


(No Model.)

T. L. MILLER.
Culinary Boiler.

No. 236,448.

Patented Jan. 11, 1881.



Witnesses.
Thomas J. Dewey,
Edw. P. Greene

Inventor
Thomas L. Miller.
per Stephen Ustick atty

UNITED STATES PATENT OFFICE.

THOMAS L. MILLER, OF BURLINGTON, NEW JERSEY, ASSIGNOR OF ONE-HALF TO FRANCIS F. WESTPHAL, OF SAME PLACE.

CULINARY BOILER.

SPECIFICATION forming part of Letters Patent No. 236,448, dated January 11, 1881.

Application filed November 27, 1880. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. MILLER, a citizen of the United States, residing at Burlington, in the county of Burlington and State of New Jersey, have invented a new and useful Improvement in Culinary Boilers, of which the following is a specification.

My invention consists in the combination, with a boiler having a vertical flue on its outside and communicating with the upper part thereof by an opening in the wall of the boiler for carrying off condensed vapor therefrom, of a peculiarly-formed cover for opening and closing said opening, and also opening and closing air-ingress openings, as hereinafter described.

In order, before the water becomes heated, to prevent a draft downward through said flue of cold air, which is admitted into the upper part of the boiler for condensing the vapor and gases accumulating therein, which draft would cool the surface of the water and retard the boiling, the cover is provided with a flange that fits the interior surface of the boiler, the said flange having a widened part at one side in such a manner that when said part is brought contiguous to the above-mentioned opening of the wall it will close it, and thus cut off the communication between the interior of the boiler and said flue; and when the cover is arranged in the reverse position, with the narrow part of the flange at the opening, the latter will be uncovered and admit the downward passage of the condensed vapors and gases to the fire-chamber. The cover is arranged with the wide part of the flange in connection with said opening until the evaporation has about commenced, and perforations in the wall for the admission of air are likewise covered by the flange at the same time. Then the position of the cover is reversed to open the flue and air-admission perforations.

In the accompanying drawings, which make a part of this specification, Figure 1 is a vertical section at the broken line *xx* of Fig. 2. Fig. 2 is a horizontal section at the line *yy* of Fig. 1.

Like letters of reference in both figures indicate the same parts.

A represents the wall of my improved boiler, and A' its bottom. B is the cover, and C a vertical flue on the outside of the wall A, the outer surface of the wall forming the inner side of the flue. The flue is open at its lower end, so as to communicate with the boiler-hole *a* of the top plate D, of a stove or range, but is closed at its extreme upper end, and has an open communication with the interior of the boiler by means of the opening *b* in the wall A. The cover B has a flange, which at one side, *c*, extends only as far as the opening *b*, but at its opposite side, *c'*, as seen in the drawings, the flange is wide enough to cover the opening when brought into connection therewith. Beneath its narrow part *c* there are perforations *d* through the wall A, for the admission of a sufficient amount of cold air to condense the vapors and gases which collect in the upper part of the boiler, so that they may descend into the fire-chamber through the flue C.

The operation is as follows: When the boiler is placed in position, as shown in the drawings, the cover B is so arranged as to bring the wide part *c'* of its flange into connection with the opening *b* of the wall A of the boiler, to cut off the communication between the interior of the boiler and the flue C, and thus check the draft of cold air into the boiler, which, falling on the surface of the water, would retard the boiling operation. When the vapors are sufficiently formed to take up the cold air which then flows through the perforations *d* the position of the cover B is reversed, so as to bring the narrow part *c* of the flange to the opening *b* of the wall, and thus open the flue C, whereby the condensed vapors and gases, by their gravity, are caused to pass down through the flue and through the boiler-hole *a* into the fire-chamber, where they commingle with the products of combustion and pass off therewith into the chimney or smoke-flue.

In order to facilitate the arrangement of the cover B in either position, the handle *e* is in line with the middle of the parts *c* and *c'* of its rim.

I claim as my invention—

1. The cover B, having a flange with a narrow part, *c*, and widened part *c'*, in combina-

tion with the wall A of the boiler, having an opening, *b*, whereby to open and close the communication between the interior of the boiler and the flue C, substantially in the manner
5 and for the purpose set forth.

2. The cover B, having a flange with a narrow part, *c*, at one side and a wide part, *c'*, at its opposite side, in combination with the wall

A of a boiler having air-admission openings or perforations *d*, for opening and closing them, 10 substantially as described.

THOMAS L. MILLER.

Witnesses:

STEPHEN USTICK,
THOMAS J. BEWLEY.