

(No Model.)

A. C. BARLER.
OIL STOVE.

No. 548,739.

Patented Oct. 29, 1895.

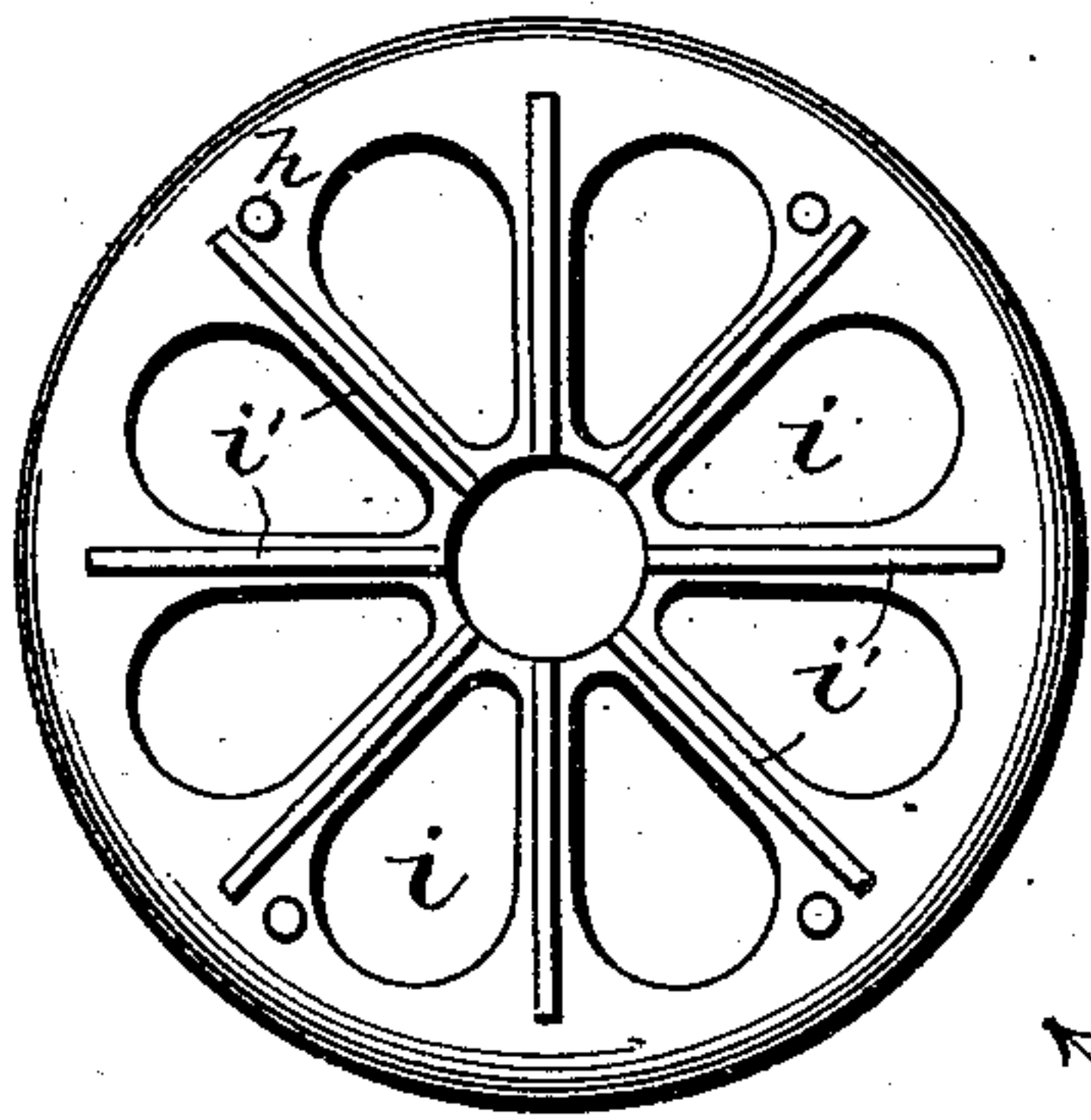


FIG. 2.

FIG. 1.

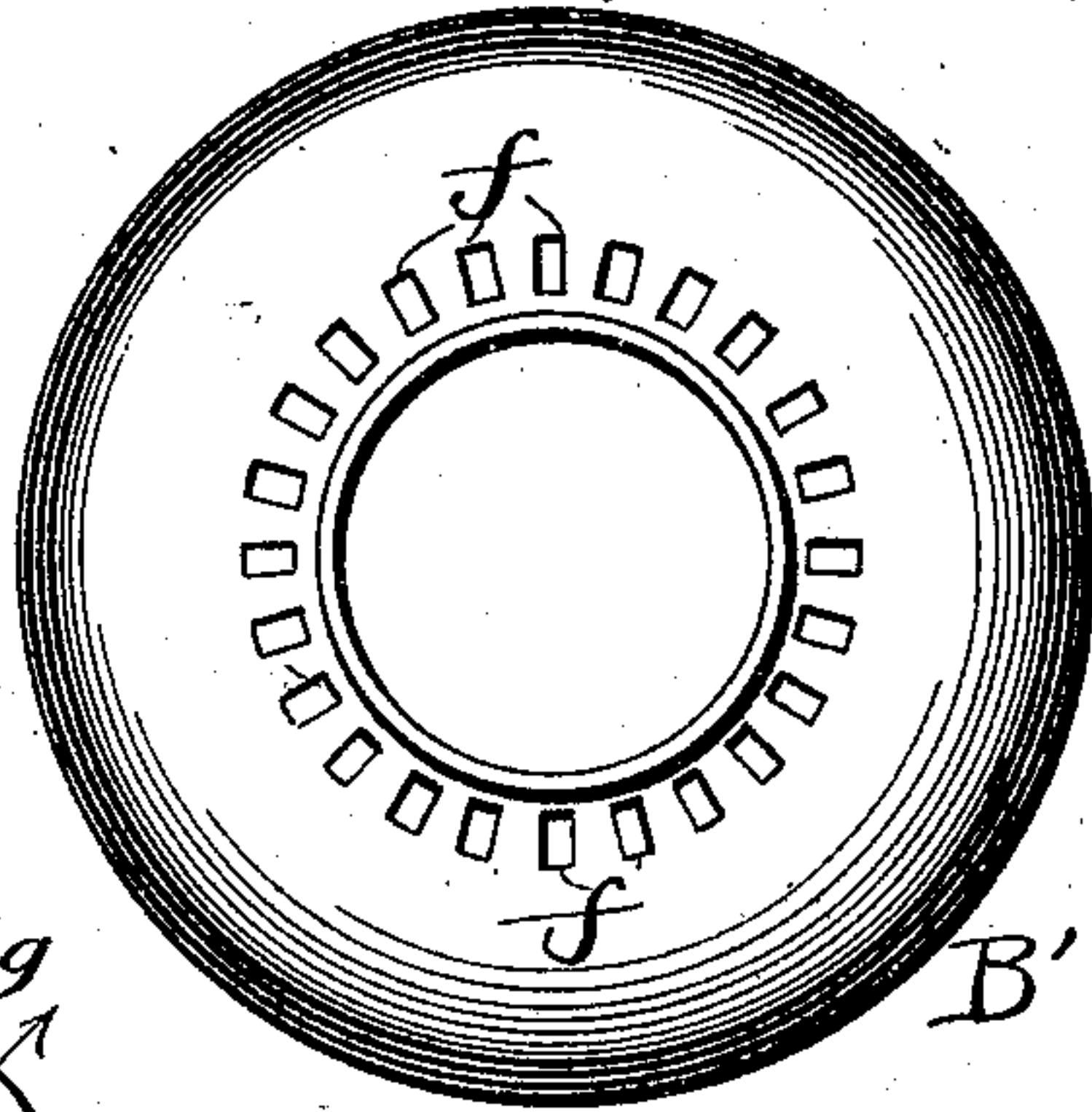


FIG. 3.

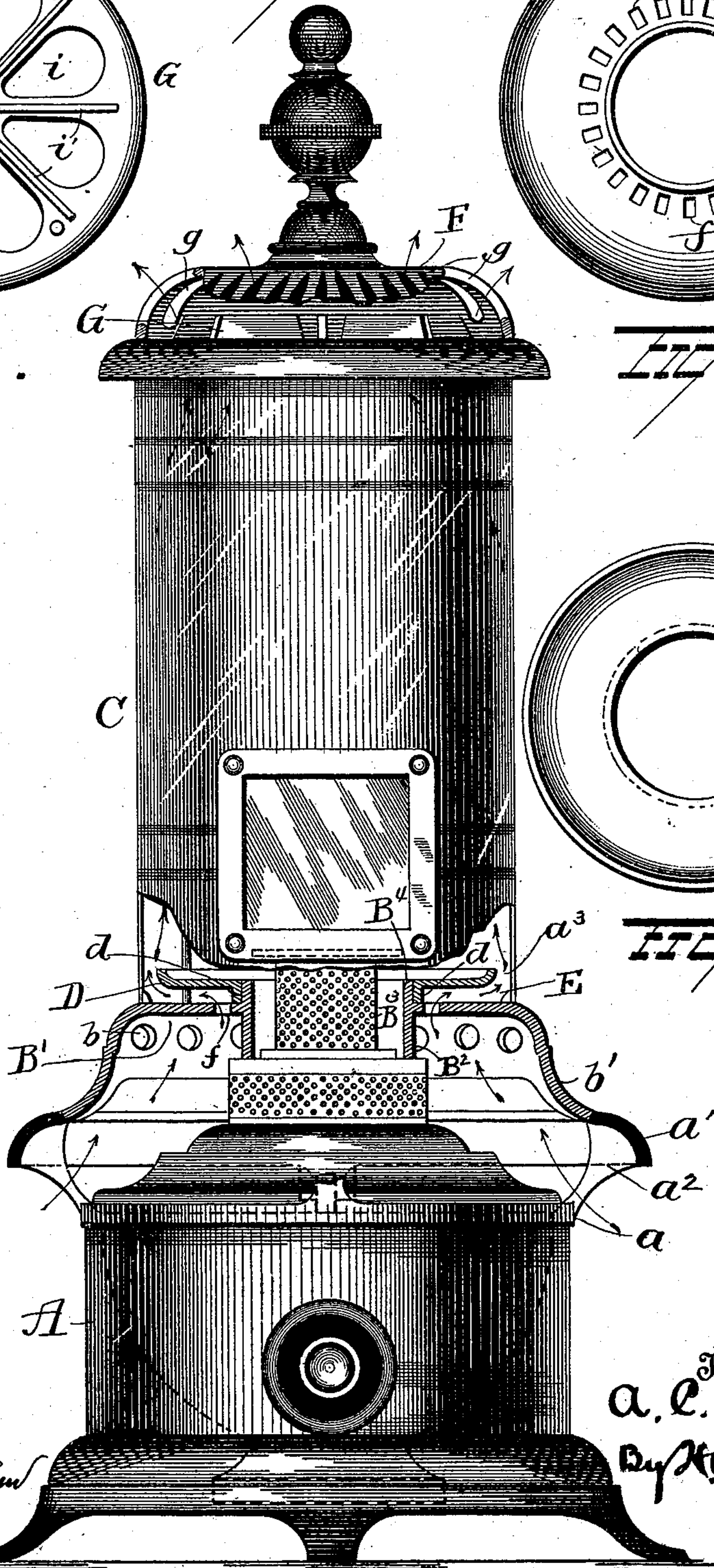


FIG. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

AUGUSTUS C. BARLER, OF CHICAGO, ILLINOIS.

OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 548,739, dated October 29, 1895.

Application filed May 21, 1894. Serial No. 511,981. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS C. BARLER, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Oil-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in oil-stoves.

An object is to construct an oil-stove in such manner that fresh air will be made to enter the drum at points near the wick-tube and be caused to enter the combustion-chamber at points distant from the wick-tube.

A further object is to produce an oil-stove which shall be so constructed that the oil tank or reservoir will not be unduly heated by radiating heat from the castings between said oil tank or reservoir and the burner.

A further object is to produce an oil-stove which shall be simple in construction and efficient in all respects in the performance of its functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation, partly in section, illustrating my improvements. Figs. 2, 3, and 4 are detail views.

A represents a suitable base adapted for the reception of an oil tank or reservoir of any desired form of construction, and at the upper portion of said base portion a ring a is secured and adapted to support a rail a' by means of interposed legs or supports a^2 , said ring a being also adapted to support the oil tank or reservoir. Disposed above the rail a' is a ring B, made with a number of perforations b , said ring being supported by legs b' , (made integral therewith,) which at their lower ends rest on the rail a' or the rail-brackets. The ring B is made with an internal annular plate B' , which constitutes the bottom of a heating-drum C, and from said annular plate an annular flange B^2 depends

and encircles a portion of the wick-tube B^3 , said annular plate being also made with an upwardly-projecting annular flange B^4 in the same plane as the flange B^2 . Disposed above the plate B' is an annular plate D, provided at its inner edge with an annular depending flange d , which rests on the plate B' , thus producing a space E between said plates, and the periphery of the plate D is preferably upturned and terminates in proximity to the wall of the drum. The plate B' at points in close proximity to the depending flange B^2 is made with perforations f , through which cool fresh air passes, said air finding its way to said perforations through the open space between the oil tank and the heating-drum and through perforations in the ring B between the rings B and a and between the latter and the ring a . After passing through the perforations f , the air flows through the space between the plates B' and D and becomes heated, said air escaping from the space E through opening a^3 between the periphery of the plate D and the wall of the drum, and after passing up through the drum escapes in a highly-heated state at the top thereof, the heated air leaving the stove through slots or openings g , made in a cap or cover F.

By the construction and arrangement of parts above described it will be seen that the cool fresh air will be made to enter the bottom of the drum at points in close proximity to the flame, that in passing through the space or chamber E between the plates B' and D it will become highly heated, and that it will enter the combustion-chamber of the drum at points removed a distance from the flame, thus not interfering in any degree with the proper combustion of the flame. It will also be seen that after the fresh air has thus entered the drum it will mix with the heated air from the flame at a proper distance above the same (becoming superheated) and a strong flow of hot air out of the top of the stove will result; and, again, it will be seen that as the cool air is made to pass through or between the castings between the drum and the oil-tank said castings will be prevented from assuming such temperature as to unduly affect the oil-tank by heat radiating therefrom. The heat of the flame naturally causes a suc-

tion of air through the openings $f a^3$, giving to my improved construction the advantage of a circulating heater.

The drum is hinged to the base portion by means of a hinged connection between one of the legs b' and a lug at or on the rail a' .

At the upper end of the drum C a spider G is located and held in place by means of rods h , secured at one end to said spider and at the other end to the plate B', said spider being composed of a disk having openings i and ribs i' , alternating with said openings.

My improvements are simple in construction and effectual in all respects in the performance of their functions.

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

1. In a stove, the combination with a burner, and a drum, of a plate extending horizontally in the lower end of the chamber with a space formed between its outer edge and the wall of the drum, and the bottom of the drum having air holes in proximity to the burner, substantially as set forth.

2. In a stove, the combination with a burner, and a drum at the bottom of which is located a perforated plate, of a plate disposed horizontally above the perforated plate, said horizontally disposed plate extending nearly to the wall of the drum and adapted to discharge the air entering the space close to the

drum, and an air space between said perforated plate and the oil fount of the burner, substantially as set forth.

3. In a stove, the combination with a drum and a burner and open castings below said drum, of a plate in the bottom of the drum having perforations in close proximity to the burner for the passage of fresh air entering through said open casting, a plate disposed above said perforated plate so as to produce a space between said plates, said space being adapted to permit the escape of air between the periphery of the upper plate and the wall of the drum, substantially as set forth.

4. In a stove, the combination with a burner and a drum, of an annular plate at the bottom of said drum and having perforations at its inner edge, flanges at the inner edge of said plate projecting at right angles thereto, an annular plate disposed above the first-mentioned plate and having an annular depending flange resting thereon, said plates being disposed so as to leave a space between them having an outlet at the periphery of the upper plate, substantially as set forth.

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

AUGUSTUS C. BARLER.

Witnesses:

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