E. KATZINGER.

FURNACE.

APPLICATION FILED DEC. 17, 1908.

975,531. Patented Nov. 15, 1910.

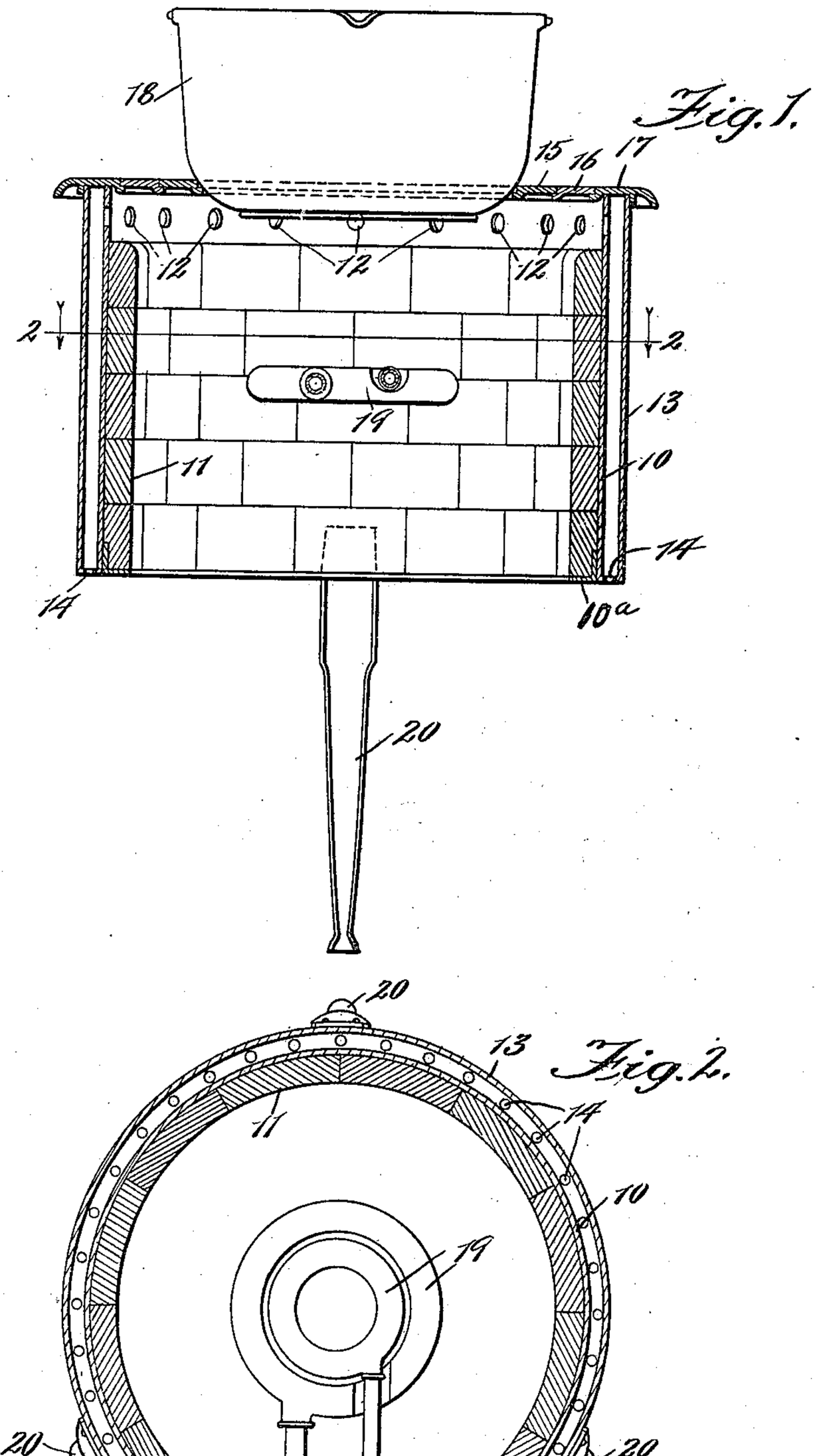

Fig. 1.

Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD KATZINGER, OF CHICAGO, ILLINOIS.

FURNACE.

975,531. Specification of Letters Patent. Patented Nov. 15, 1910.

Application filed December 17, 1908. Serial No. 467,923.

To all whom it may concern:

Be it known that I, EDWARD KATZINGER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Furnaces, of which the following is a specification.

This invention relates to improvements in furnaces and more particularly portable furnaces adapted for confectioners' use.

Heretofore in furnaces of this character the heat radiated from the outer surface of the furnace has not only been wasted but passes up into the face of the operator, thereby not only causing considerable inconvenience to the operator but renders it impossible for him to stand close to the furnace when there is considerable heat therein, with any degree of comfort.

To overcome these objections and to provide improved means for collecting and directing the heat radiated from the surface of the furnace back into the furnace to assist in heating the kettle and to prevent the heat from being directed against the operator are the primary objects of this invention.

A further object is to provide an improved device of this character which will be simple, durable and cheap in construction and effective and efficient in operation.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing, illustrating an embodiment of the invention and in which—

Figure 1 is a vertical sectional view of a portable furnace constructed in accordance with the principles of this invention. Fig. 2 is a sectional view on line 2—2 of Fig. 1.

Referring more particularly to the drawing, the numeral 10 designates an annular member forming the body of the furnace, which may be constructed of any suitable material and may be of any desired configuration. The top of the furnace is open and arranged within the body portion is the usual fire brick lining 11. This lining 11 is supported from the annular member 10 in any suitable manner such as by means of a support 10^a secured to the annular member, or, if desired, this support may be formed integral with the member. The lining preferably terminates short of the top of the body of the furnace and passing through the body above the fire brick are a plurality of apertures or openings 12.

Surrounding the furnace and spaced any desired distance therefrom is a shell or jacket 13 which may be supported in position in any desired or suitable manner and is of a height substantially equal to the height of the body of the furnace. This shell or jacket has communication with the atmosphere through suitable openings 14 at the bottom of the jacket whereby the air will enter the space formed between the jacket and the outer surface of the body of the furnace.

A plurality of concentric rings 15, 16, 17, are provided which form a closure for the top of the body of the furnace. One or more of these rings are adapted to be removed to provide a suitable opening for supporting the kettle 18.

If desired, the upper end of the shell or jacket 13 may be spaced from the upper end of the body of the furnace and the outermost ring 17 of the closure may extend over the space formed between the shell or jacket and the wall of the furnace to form a closure therefor.

With this improved construction, it will be apparent that when the burner 19 within the furnace is lighted, the heat therefrom will be directed against the kettle 18 in the usual manner. The heat radiated from the outer surface of the furnace will be confined within the space between the shell and the surface of the furnace and will rise within the space and will be directed through the apertures or openings 12 into the furnace and against the kettle 18. As the heat rises in this space and passes through the apertures or openings 12, the outside air will be entrained or drawn into the space which will keep the shell or jacket cool and prevent the heat from being radiated or directed against the operator and thereby permit the operator to stand in close proximity to the furnace.

The furnace may be supported in any desired or suitable manner, preferably by means of the supporting legs or standards 20.

In order that the invention might be fully

understood the details of the foregoing embodiment thereof have been thus specifically described, but

What is claimed as new is—

1. A furnace of the character described, comprising a casing having an open bottom and formed of spaced annular members of uniform height and having their lower extremities integrally connected, a lining for the furnace, means for supporting the lining from the inner annular member, said lining terminating short of the top of the last said member, the latter being provided with openings therethrough above the lining to form communication between the space between the annular members and the interior of the furnace, an annular member resting upon the top of the first said members to form a closure for the space therebetween, and also a support for a receptacle, means for supporting the furnace and a source of heat within the casing, the space between the first said annular members having communication with the outside atmosphere adjacent the bottom of the casing.

2. A furnace of the character described, comprising a casing having an open bottom and formed of spaced annular members of uniform height and having their lower extremities integrally connected, a lining for the furnace, means for supporting the lining from the inner annular member, said lining terminating short of the top of the last said member, the latter being provided with openings therethrough above the lining to form communication between the space between the annular members and the interior of the furnace, an annular member resting upon the top of the first said members to form a closure for the space therebetween and also a support for a receptacle, means for supporting the furnace, the connecting portion of the first said annular members being provided with openings to form communication between the space between the members and the atmosphere through the bottom of the casing and a source of heat within the casing.

3. A furnace of the character described comprising a casing having an open bottom and formed of spaced annular members of uniform height and having their lower extremities integrally connected, a lining for the furnace, means for removably supporting the lining from the inner annular member, said lining terminating short of the top of the last said member, the latter being provided with openings therethrough above the lining to form communication between the space between the annular members and the interior of the furnace, an annular member resting upon the top of the first said members to form a closure for the space therebetween, a plurality of annular members coöperating with the last said annular member for varying the size of the opening in the top of the furnace, and a source of heat within the casing, the connecting portion of the first said annular members being provided with openings therethrough to form communication between the space between the members and the atmosphere through the bottom of the casing.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 15th day of December A. D. 1908.

EDWARD KATZINGER.

Witnesses:

M. W. Cantwell,

Francis A. Hopkins.