T. E. WILLIAMS & M. B. BAILEY.

GAS THIMBLE.

APPLICATION FILED DEC. 30, 1916.

1,239,150. Patented Sept. 4, 1917.

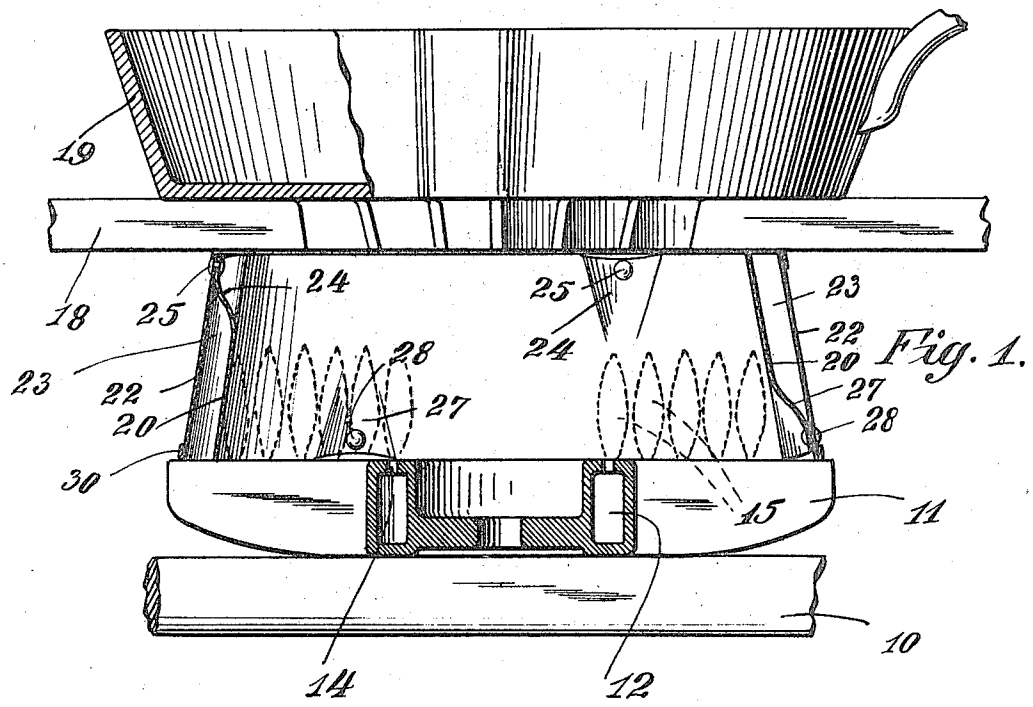

Fig. 1.

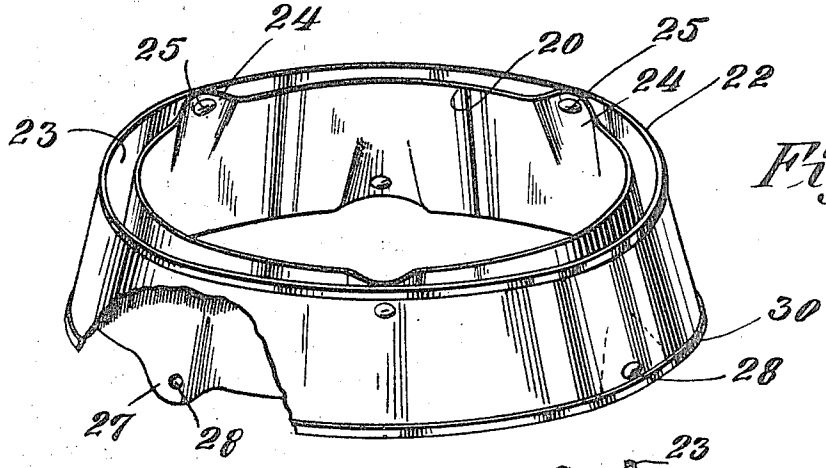

Fig. 2.

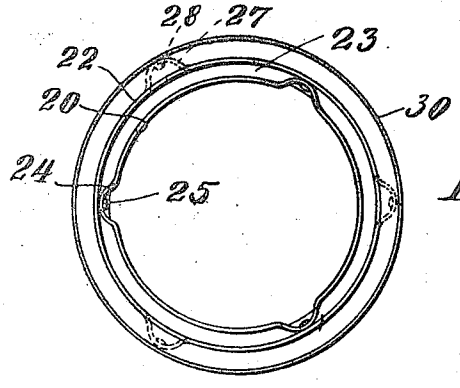

Fig. 3.

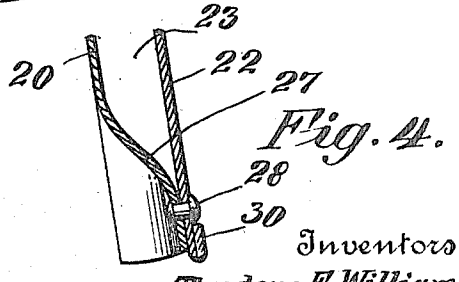

Fig. 4.

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GAS-THIMBLE.

1,239,150. Specification of Letters Patent. Patented Sept. 4, 1917.

Application filed December 30, 1916. Serial No. 139,718.

To all whom it may concern:

Be it known that we, THEODORE E. WILLIAMS and MARCUS B. BAILEY, citizens of the United States, and residents of New York, in the county and State of New York, have invented certain new and useful Improvements in Gas-Thimbles, of which the following is a specification.

This invention relates to improvements in gas thimbles, and particularly to types used in connection with multiple burners as used on kitchen stoves, ranges and like heating devices.

The principal object of the invention is to provide means whereby the frames are concentrated and prevented from dissipating their heat laterally or otherwise whereby gas or oil is consumed without performing its function in the stoves or ranges.

A second object is to provide such thimbles or rings in forms which may be readily applied to any form of burner, the apparatus occupying no space which would be otherwise used, it being disposed below the plate upon which the cooking vessel is supported, and finally, to provide such devices in forms which may be cheaply manufactured, and which are durable in their nature.

These and other objects are attained by the novel construction and combination of parts hereafter described and shown in the accompanying drawing, forming a material part of this specification, and in which:—

Figure 1 is a vertical sectional view taken through a ring and indicating its application to an ordinary burner.

Fig. 2 is a perspective view of the thimble or ring in detail, the parts being broken away to disclose its construction.

Fig. 3 is a plan view of the same drawn to a smaller scale, and

Fig. 4 is an enlarged, fragmentary sectional view showing the arrangement of parts.

In the drawings, the gas supplying tube 10 is shown as engaged with the burner 11, the same being of hollow construction having an annular recess 12 provided with small openings 14 through which the gas is allowed to rise to the flames 15, the burner being of any of the ordinary forms of construction.

Above the burner at a suitable distance is a grate or perforate plate 18 so arranged that the rising heat impinges upon the lower side or bottom of the vessel 19.

It is a well-known fact, however, that the flames have a tendency to dissipate a large portion of their heat and to avoid this loss is the principal object of the invention.

To accomplish this purpose, rings are used, having double walls, the inner element 20 being preferably formed like the frustum of a cone, and encircling this ring is a second ring 22, of similar shape inclosing between the two an annular space 23, through which air may circulate freely, or the space may be filled with non-conducting material, as asbestos; the inner and outer walls of the ring 20 and 22 are joined together at different points, three being here shown, the material of the inner ring is bent outwardly, forming ears 24, secured by rivets 25 to the outer ring 22, similar ears 27 being formed at the bottom and held by rivets 28 to the lower edge of the outer ring, as will be clearly evident, or other forms of connections used.

In addition, the lower edge of the outer ring is preferably turned reëntrantly forming a bead 30 by which the construction is materially stiffened.

In operation, it being understood that the diameter of the conical thimble is in accord with the size of the burner the thimble is placed over the burner so that its upper end clears the grate or plate 18, the gas turned on and lighted in the ordinary manner by inserting a match or the like through the openings in the grate. The heat then rises and is materially guided by the inner member to the central portion of the vessel and prevented from becoming over-heated by the circulation of air rising in the space 33. Obviously, each burner may be provided with rings suited to their size.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is:—

1. In a device of the class described, a pair of spaced concentric rings formed of imperforate sheet metal, and means for securing said rings together both of said rings being open at the top and bottom.

2. In a device of the class described, in combination, a pair of portable plate rings, each presenting open conic frustums, having straight imperforate walls, means for securing said rings rigidly together, and a rein-

forcing element formed with the outer of said rings.

3. In a device of the class described, an endless imperforate band formed to resemble a conic section, a second imperforate band arranged interiorly of the first named band, ears formed with said second band at the top and bottom thereof, said ears being bent outwardly and contacting with the inner surface of said outer band, means for rigidly engaging said ears to said outer band, and a reinforcing element formed with said outer band, both of said bands being wholly open at the top and bottom and constituting a portable structure.

In testimony whereof we have signed our names to this specification.

THEODORE E. WILLIAMS.
MARCUS B. BAILEY.