W. E. DUNKLE.

CULINARY VESSEL.

APPLICATION FILED OCT. 19, 1916.

1,243,823. Patented Oct. 23, 1917.

Fig. 1

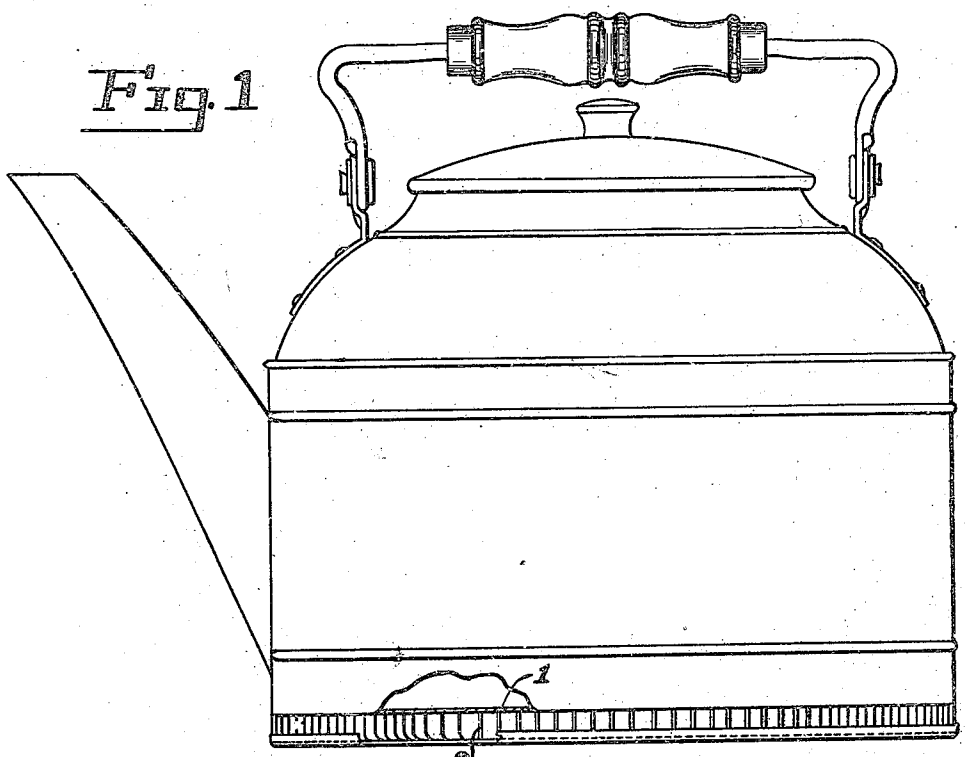


Fig. 2

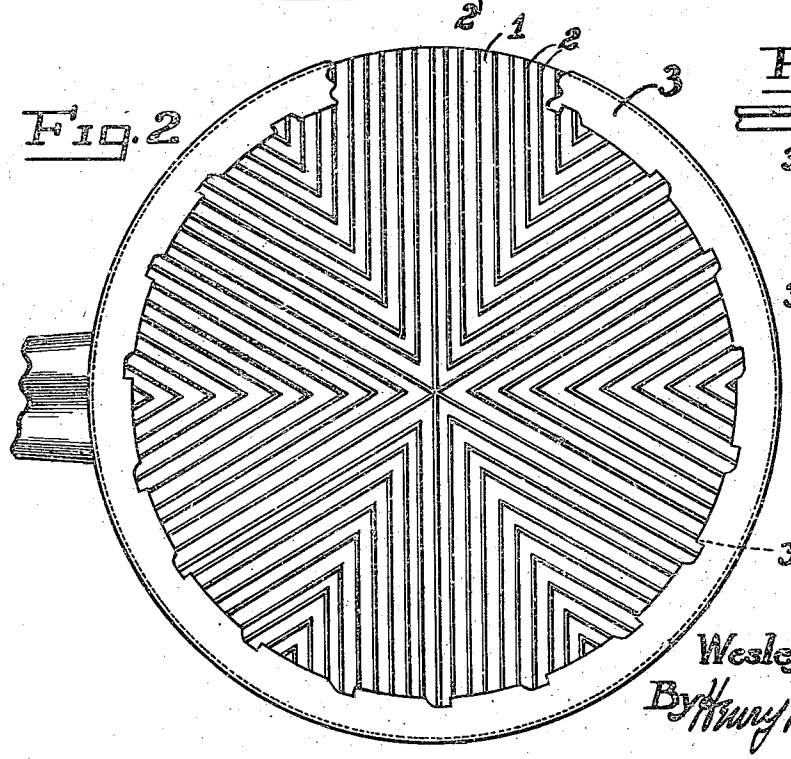


Fig. 3

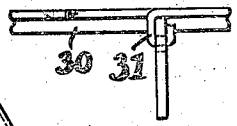
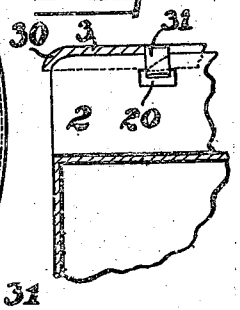


Fig. 4



Inventor

Wesley E. Dunkle

By Henry L. Reynolds.

Attorney

UNITED STATES PATENT OFFICE.

WESLEY E. DUNKLE, OF SEATTLE, WASHINGTON.

CULINARY VESSEL.

1,243,823. Specification of Letters Patent. Patented Oct. 23, 1917.

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To all whom it may concern:

Be it known that I, WESLEY E. DUNKLE, a citizen of the United States, and resident of the city of Seattle, county of King, and State of Washington, have invented certain new and useful Improvements in Culinary Vessels, of which the following is a specification.

My invention relates to culinary vessels and consists of a construction which is designed to facilitate greater absorption and transferring of the heat from the heating gases to the contents of the vessel.

While the device is more particularly intended for use upon culinary vessels, it is evident that it may be applied to any kind of vessel which is used for heating liquids or semiliquids.

My invention consists of the novel parts and combinations of parts which will be hereinafter described and then particularly defined in the claims.

In the accompanying drawings I have shown my invention as applied to a tea kettle, the construction of the novel parts being of the character which I now prefer to use.

Figure 1 is an elevation of a tea kettle having my invention applied thereto.

Fig. 2 is a bottom plan view of the tea kettle with a portion of the guard band around the edge thereof broken away.

Fig. 3 is an end view of one of the heat-absorbing blades, with a section of the guard band showing the manner of connecting these two parts together.

Fig. 4 is a section of a corner of the kettle showing the guard band in section and a different view of the means for securing this band in place.

It is well known that heat may be radiated or absorbed, as the case may be, at a higher rate and efficiency by providing the metal surfaces with projecting vanes or fingers. These projections transfer heat to the body of the plate by conduction, and become also more highly heated than it would be possible to heat the main body of the plate.

To make practical use of this principle I provide the bottom 1, of a vessel which is intended for holding liquids or semiliquids, with a series of vanes or ribs 2. These, preferably project at right angles to the bottom and also preferably extend in a direction from the outer periphery inward.

The object of this position is to provide channels extending from the inner portions of the bottom to the outside, through which the heating gases may flow and escape without obstruction. To secure this latter result I prefer to maintain the outer ends of these channels open for the free escape of the gases. At the same time I prefer to provide a protective ring which extends about the outer periphery or corner of the vessel and thus protects the outer corners of the vanes 2 to prevent their deformation. Such a ring 3 has herein been shown. This ring is preferably given a slight upward roll or turn at its outer edge, as is indicated at 30, in Fig. 4. The outer extremities of the vanes 2 should be rounded to conform to the curvature of the outer edge of ring 3.

To secure this ring in place I have provided a certain number of the vanes or ribs 2, with holes 20, so positioned that they may be entered by fingers 31, which are cut from the inner edge of the ring 3 and are bent down and laterally to pass through holes 20 in the vanes and then turned upwardly enough to prevent their removal, after the manner clearly shown in Figs. 3 and 4. Any other feasible means for securing the rings in place may be employed. Such a ring acts as a guard to prevent deformation of the vanes by contact of the corner of the kettle with the stove or other object. Without such protection the outer ends of the vanes would become bent and deformed.

One feature of my device which is of practical importance and which I desire to employ, is the smooth inner surface of the kettle bottom combined with the vanes projecting from the outer surface of the bottom. Also the positioning of the vanes upon the bottom such that they extend from the outer edge inward and have a free discharge passage at the outer ends of the channels thus formed. For a vessel thus employed, it is essential that the inner surface be smooth so that it may be easily cleaned. For this reason it is impossible, for this class of use, to have a bottom which is fluted so as to form channels upon the inner surface as well as the outer.

It is, of course, understood that projecting fingers would give a like advantageous

result although I do not consider such construction as desirable as vanes, as the latter are more practical to manufacture and to use and I believe them to secure better results.

What I claim as my invention is:

1. A culinary utensil having a system of heat-absorbing ribs projecting from the lower side of its bottom, and extending from the periphery inward and a protective band underlying and extending about the outer ends of said ribs, and leaving the outer ends of the channels between the ribs freely open.

2. A culinary utensil having a system of heat-absorbing ribs projecting from the lower side of its bottom, and extending from the periphery inward and a separate, horizontally placed protective band secured beneath the outer ends of said ribs and having interlocking engagement with certain of the ribs.

3. A culinary utensil having a system of heat-absorbing vanes projecting downwardly from the bottom and from the outer edge inwardly, certain of said vanes having holes therein near their lower edge and outer end, and a protective ring under the outer ends of the vanes having tongues turned downward and entering said holes in the vanes.

Signed at Seattle, Washington, this 11th day of October, 1916.

WESLEY E. DUNKLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."