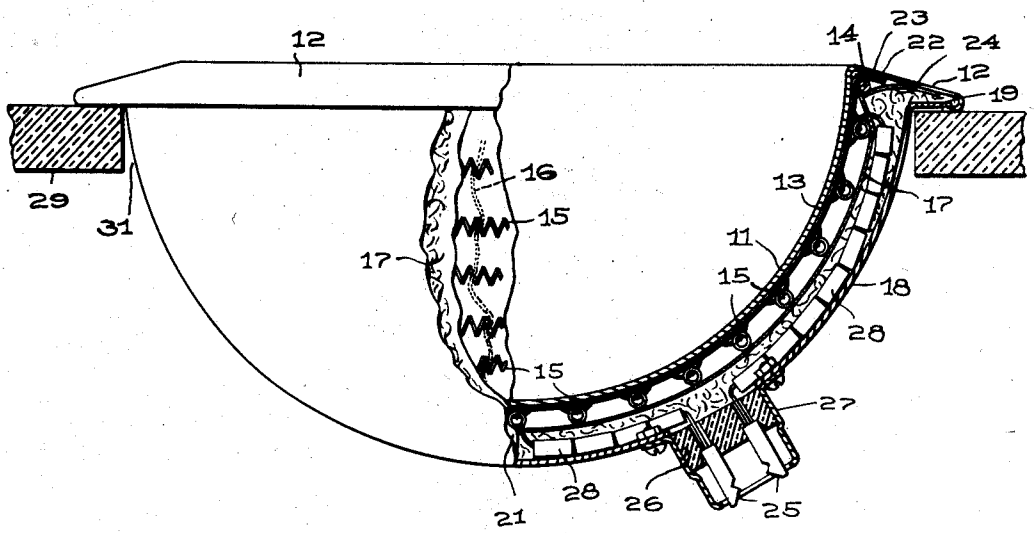
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ELECTRICALLY HEATED CREAM DIPPING KETTLE

Filed July 5, 1922



WITNESSES:

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UNITED STATES PATENT OFFICE.

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ELECTRICALLY-HEATED CREAM-DIPPING KETTLE.

Application filed July 5, 1922. Serial No. 573,010.

To all whom it may concern:

Be it known that I, FRANK THORNTON, Jr., a citizen of the United States, and a resident of Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Electrically-Heated Cream-Dipping Kettles, of which the following is a specification.

My invention relates to electrically-heated devices, and, particularly, to electrically-heated cream-dipping kettles.

The object of my invention is to provide a relatively simple, inexpensive and heat-insulating construction for an electrically-heated cream-dipping kettle.

In practicing my invention, I provide an inner flanged metallic container, of substantially bowl-shape, having a layer of electrical insulating material on its outer surface, held in its proper operative position thereon by a resilient ring located adjacent to the flange. A helically-wound resistor member is held against the insulating material by an insulating lacing-cord, and a layer of insulating material is located outside of said resistor. An outer flanged casing, of substantially bowl shape, is held in its proper operative position relatively to the container by a turned-over edge of the flange of the inner container, heat-insulating material being placed between the outer casing and the outer layer of insulating material.

The single figure of the drawing is a view, partly in front elevation and partly in vertical cross-section, of a device embodying my invention.

An inner metallic container 11, of substantially bowl shape, is provided with an integral annular flanged member 12. A layer of electrical insulating and heat-conducting material 13, of substantially bowl shape, is located in close operative engagement against the entire outer surface of the inner container 11. This layer may be of any suitable or desired material, but I prefer to employ one or two thicknesses of woven asbestos cloth. The insulation 13 is provided with a relatively small integral annular flanged portion 14, for a purpose to be hereinafter set forth in detail.

A heating element for heating the material placed within the inner container may comprise a helically-wound resistor member 15, wound on the outer surface of the layer of insulating material 13, substantially in spiral form to provide a substantially uniform distribution of the heating element upon the inner container. Means for holding the resistor member 15 may comprise a lacing cord 16 of asbestos, which is threaded through turns of the helix of the resistor member 15, and then through the outer or through both layers of asbestos cloth. Woven asbestos cloth is preferred for the electrical insulating material for the reason that it readily permits passing the lacing cord 16 therethrough to hold the resistor member 15 in the desired position against the insulating material. Any desired number of lacing cords 16, located in suitable spaced-apart relation, may be employed.

A layer 17, of heat-insulating material substantially similar to that employed for the inner layers, is placed on the outside of the resistor member 15.

An outer casing 18 comprises a metallic member, of substantially bowl shape and of somewhat larger radius than the inner container to permit locating the same in spaced relation relatively thereto. The member 18 is provided with a relatively small annular integral flanged portion 19. The outer edge of the flanged member 12 of the inner container 11 is spun over after the entire structure has been assembled in order to hold all of the parts and, particularly, the inner container and the outer casing, in proper operative positions relatively to each other.

A layer 21 of a suitable heat-insulating material, such as mineral wool, is placed on the inside of the outer casing 18 to be located between it and the outer sheet 17 of electrical insulating material.

The layer 17 of electrical insulating material is provided with an annular flanged portion 22, which is located immediately adjacent to the flanged portion 14 of the inner layers of electrical insulating material. A resilient ring 23 is located against the flanged portions 14 and 22 to hold the same and the layers 13 and 17 of insulating material by its resilient clamping action against the flanged portion 12 of the inner container. In order to prevent any accidental dislocation of the ring member 23, I provide a plurality of spring clips 24 that are soldered against the under surface of the flanged portion 12 and have their outer ends operatively engaging the ring member 23 to press the same against the flanged portions.

A terminal construction for the heating element comprises a plurality of contact pins 25 that are suitably mounted in, and secured to, an insulating support 26 which is held against the outer casing 18 by a suitable metallic housing member 27. The terminals of the resistor member 15 are brought through suitable electrical insulating beads 28 and have their outer ends suitably connected to the terminal pins 25 in the usual manner. This construction permits the employment of a standard terminal socket (not shown) for operatively engaging the contact pins 25 to permit of energizing the resistor member 15 from the usual supply circuit.

A work table or bench 29 may have provided therein an opening 31 of such size and contour that the assembled kettle may be placed therein and any suitable or desired fastening means may be employed.

The device embodying my invention thus provides a relatively simple and compact heat-insulating structure for an electrically-heated cream-dipping kettle, which is effective to transmit substantially all of the heat to the material contained within the inner container and to prevent the loss of any appreciable amount of heat through the outer surface of the assembled structure.

Various modifications in my invention may be made without departing from the spirit and scope thereof, and I desire, therefore, to be limited only by the scope of the appended claims.

I claim as my invention:—

1. In an electrically-heated utensil, in combination, an outer metallic casing, of bowl shape, and having an annular flange, an inner metallic container, of bowl shape, and having an annular flange, a portion of said flange being spun over the flange of said outer casing, electric-insulating material extending over the entire outer surface of said inner container, a ring, located adjacent to and operatively engaging the flange on said inner container, for holding said electric-insulating material against the outer surface of said inner container, and an electric heating element supported by said insulating material and symmetrically distributed thereon.

2. In an electrically-heated utensil, in combination, an outer metallic casing, of bowl shape, and having an annular flange, an inner metallic container, of bowl shape, and having an annular flange, a portion of said flange being spun over the flange of said outer casing, electric-insulating material extending over the entire outer surface of said inner container, a ring, located adjacent to the flange on said inner container, for holding said electric-insulating material against the outer surface of said inner container, an electric heating element supported by said insulating material and symmetrically distributed thereon, and heat-insulating material between said heating element and said outer casing.

3. In an electrically-heated utensil, in combination, an outer metallic casing, of bowl shape, and having an annular flange, an inner metallic container, of bowl shape, and having an annular flange, a portion of said flange being spun over the flange of said outer casing, electric-insulating material extending over the entire outer surface of said inner container, a ring, located adjacent to the flange on said inner container for holding said electric-insulating material against the outer surface of said inner container, means for holding said ring in its proper operative position adjacent said flange, and an electric-heating element secured to and supported by, said insulating material and symmetrically distributed thereon over its entire surface.

4. In an electrically-heated utensil, in combination, an outer metallic casing, of bowl shape, and having an annular flange, an inner metallic container, of bowl shape, and having an annular flange, a portion of said flange being spun over the flange of said outer casing, a woven sheet of electric-insulating material extending over the entire outer surface of said inner container, and a heating element symmetrically distributed over, secured to and supported by, said electric-insulating material.

5. In an electrically-heated utensil, in combination, an inner and an outer metallic casing, each of substantially bowl shape, means integral with said inner casing for holding the two casings in proper operative position relatively to each other, a woven sheet of electric-insulating material extending over the entire outer surface of said inner casing, means comprising a metal ring operatively engaging said inner casing only for holding said sheet of insulating material against said inner casing, and an electric-heating element symmetrically distributed over, secured to, and supported by, said sheet of electric-insulating material.

In testimony whereof, I have hereunto subscribed my name this 23rd day of June, 1922.

FRANK THORNTON, JR.