

Patented Feb. 1, 1916.

1,170,169.

Fig. 1.

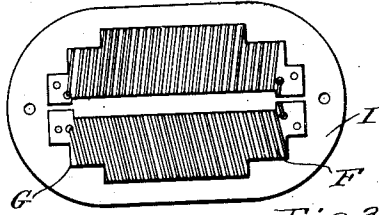


Fig. 3.

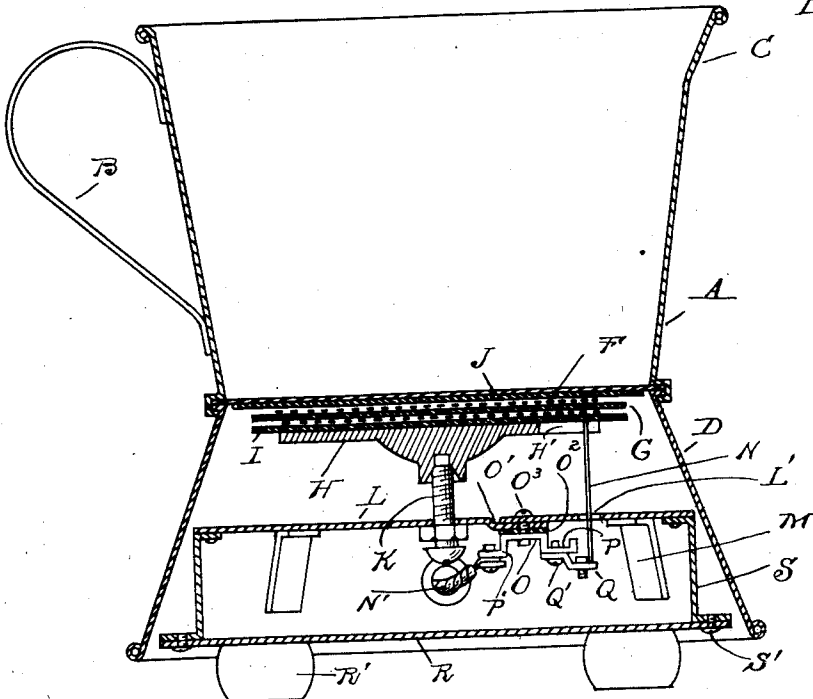


Fig. 4.

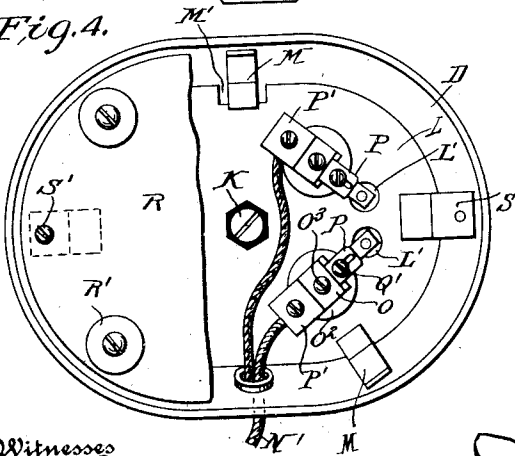
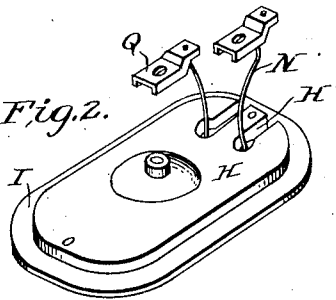


Fig. 2.



Inventors

Frank Kuhn
Frank E. Shailor

Attorney

Witnesses

W. H. Ford
James A. Barry

By *William H. Ford*
Attorney

UNITED STATES PATENT OFFICE.

FRANK KUHN AND FRANK E. SHAILOR, OF DETROIT, MICHIGAN, ASSIGNORS TO
AMERICAN ELECTRICAL HEATER COMPANY, OF DETROIT, MICHIGAN, A COR-
PORATION OF MICHIGAN.

ELECTRICAL FOOD-WARMER.

1,170,169.

Specification of Letters Patent.

Patented Feb. 1, 1916.

Application filed April 19, 1915. Serial No. 22,407.

To all whom it may concern:

Be it known that we, FRANK KUHN and FRANK E. SHAILOR, citizens of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Electrical Food-Warmers, of which the following is a specification, reference being had therein to the accompanying drawings.

It is the object of the invention to obtain a construction of electrically heated utensil which is adapted for heating infants' food and for other similar purposes.

To this end the invention comprises the construction as hereinafter set forth.

In the drawings: Figure 1 is a vertical central section through the food warmer; Fig. 2 is a perspective view of the heating unit detached; Fig. 3 is a bottom plan view thereof; and Fig. 4 is a bottom plan view of the outer casing partly broken away.

A is a vessel of cup form, preferably provided with a handle B and with a nose C for pouring. Below the cup proper is a skirting D, which forms a chamber for inclosing the electric heater and terminal connections.

The electric heater is preferably formed of a resistor F wound upon an insulator core G, such as a strip of mica, and secured to a backing and clamping plate H, with an interposed sheet I of mica or other insulation. Another sheet of mica J is placed on the bottom of the cup A, and the resistor is clamped thereagainst by the plate H. To facilitate the assembly of the parts, the plate H is clamped by a single central clamping screw K, which engages a threaded bearing in a plate L forming the partition in the compartment with the skirting D. This plate L is secured by engagement with lugs M projecting inward from the skirting on opposite sides, an entrance slot M' in the plate being provided for engagement with one of the lugs. Thus by tilting the plate it may be passed above the lugs on one side of the skirting, while the lug on the opposite side is passed through the entrance slot M' and then engaged by a slight lateral movement of the plate. The screw K may then be adjusted to bear against the plate H and to clamp the same and the heating unit against the bottom of the vessel. The ter-

minals N of the resistor are adapted to pass outward through apertures H' in the plate H and alined apertures L' in the plate L. These terminals are then connected to the flexible connector cord N' which passes through the skirting D below the partition L. The attachment is formed through the medium of connector plates O, preferably struck out from sheet metal and secured upon embossed portions O' of the plate L with insulator washers O² therebetween, insulator screws O³ clamping said plates to said embossed portions. The plates O are further provided with portions P and P' for respectively connecting with the resistor and conductor cord.

Q are terminal contacts which are connected to the terminal ends N of the resistor and are secured to the portions P by clamping screws Q', the arrangement being such that the contacts Q may be first connected with the resistor, and in the assembling of the parts may be passed through the apertures L' in the plate L. These contacts may then be secured to the connector plates O and adjusted so as to hold the resistor terminal free from contact with any of the metal parts which would cause a short circuit. To complete the structure, a bottom plate R having supporting feet R' is secured near the lower edge of the skirting, being preferably attached to depending brackets S upon the plate L. Screws S' secure the plate R to the brackets S, and thus all of the exposed contacts are housed within the skirting and there is nothing which can cause a short circuit. Furthermore the plates L and R, together with the intermediate air chambers, will form a heat insulation, preventing injury to the stand or support on which the device may be placed.

What we claim as our invention is:—

1. A food warmer, comprising a cup-shaped receptacle having a skirting at the lower end thereof forming a chamber beneath the bottom, a flat electrical heating unit lying adjacent to the bottom of said receptacle, a partition extending between the sides of said skirting beneath said heater, means mounted on said partition for clamping said heater against the bottom, a bottom plate secured to and spaced from said partition, and electrical terminal connections in the space between said partition

and bottom plate and surrounded by said skirting.

2. The combination with a cup-shaped receptacle having a depending skirting, of an electrical heater adjacent to the bottom of said receptacle, a partition parallel to said bottom and beneath the same, lugs upon said skirting with which said partition is detachably slidably engaged, clamping means mounted on said partition for holding said heater in contact with said bottom, terminals from said heater passing through apertures in said partition, and terminal connections mounted on said partition and connected to said terminals.

3. The combination with a cup-shaped receptacle having a depending skirting, of an electrical heater adjacent to the bottom of said receptacle, a parallel partition, lugs upon said skirting with which said partition is detachably engaged, means on said partition for clamping said heater to said bottom, a lower partition or false bottom, electrical terminal connections inclosed in the space between said partitions, and terminals on said heater passing through apertures in said first-mentioned partition detachably engaging said terminal connections.

4. The combination with a cup-shaped receptacle having a depending skirting, of a plate extending across between the sides of said skirting parallel to said bottom, lugs projecting inward from said skirting with which said plate is detachably engageable, an electrical heater adjacent to the bottom of said receptacle, means mounted on said plate for clamping said heater against said receptacle, terminals on said heater pass-

ing through apertures in said plate, insulated terminal plates mounted on said plate beneath the same, detachable connections between said terminals and said terminal plates, a flexible connector attached to said terminal plates and passing outward through said skirting, and a false bottom for said skirting inclosing said terminals.

5. The combination with a receptacle having a depending skirting, of an electrical heating unit, a clamping plate to which said unit is attached, a plate detachably secured by a substantially lateral movement to said skirting extending beneath said heater, clamping means on said plate for holding said heater against the bottom of said receptacle, and terminal connections mounted on said plate and detachably engaging said heater.

6. The combination with a receptacle having a depending skirting, of an electrical heater, an apertured clamping plate to which said heater is attached, an apertured plate detachably secured to said skirting extending beneath said heater, clamping means on said last-mentioned plate for holding said clamping plate against the bottom of said receptacle, and terminal connections extending through the apertures in said plates, engaging said heater and detachably mounted on said plate secured to the skirting.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK KUHN.
FRANK E. SHAILOR.

Witnesses:

HARRY W. LUYCK,
OSCAR ECKLIFF.