

F. KUHN & F. E. SHAILOR.
ELECTRICALLY HEATED GLUE POT.
APPLICATION FILED APR. 12, 1915.

1,170,170.

Patented Feb. 1, 1916.

Fig. 1.

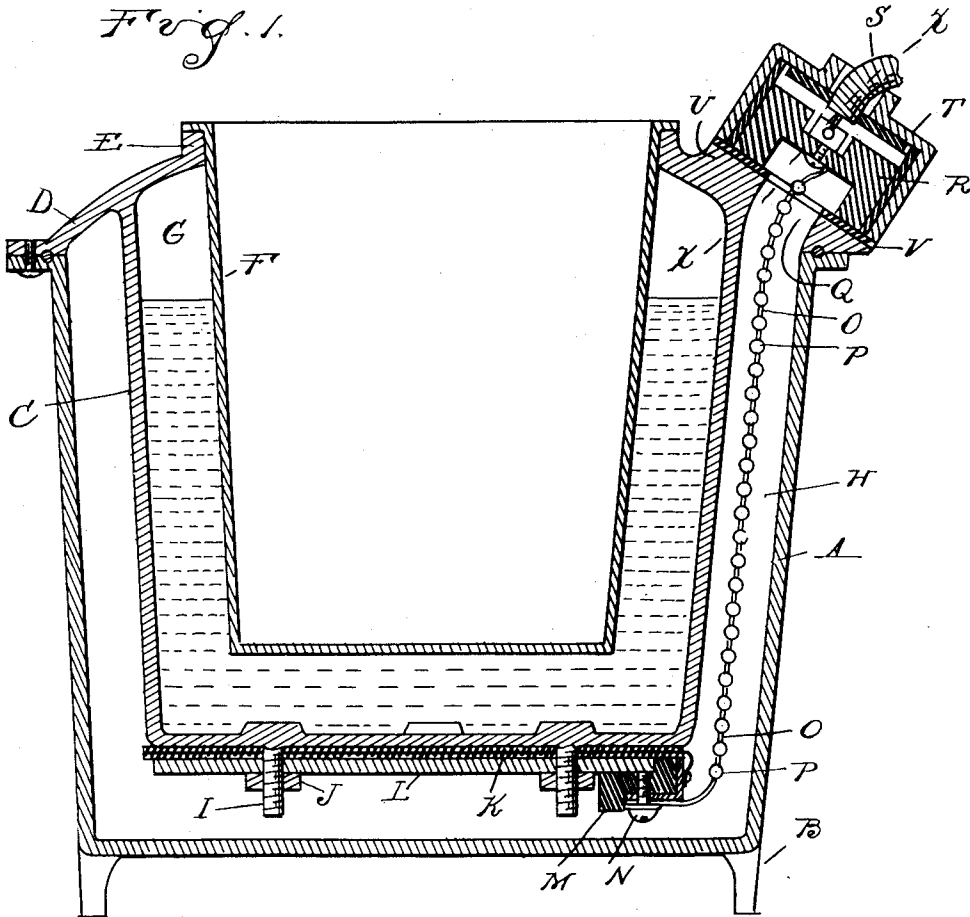


Fig. 2.

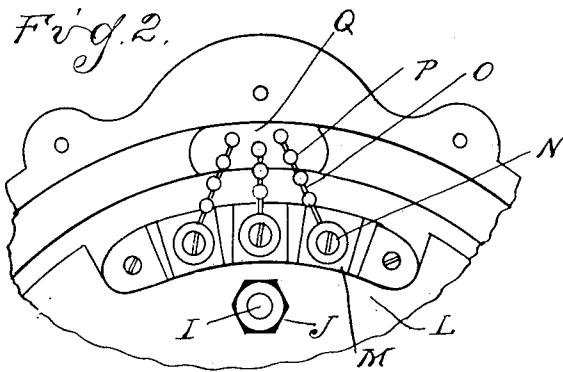
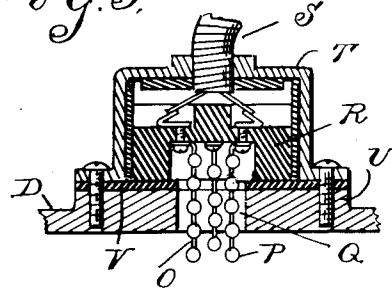


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRANK KUHN AND FRANK E. SHAILOR, OF DETROIT, MICHIGAN, ASSIGNORS TO
AMERICAN ELECTRICAL HEATER COMPANY, OF DETROIT, MICHIGAN, A COR-
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ELECTRICALLY-HEATED GLUE-POT.

1,170,170.

Specification of Letters Patent.

Patented Feb. 1, 1916.

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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 Electrically-Heated Glue-Pots, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to heating apparatus of that type in which the material to be heated is placed in an inner vessel surrounded by a water chamber, through the medium of which the heat is distributed and regulated.

It is the object of the invention to obtain a construction adapted to be electrically heated, and more particularly it is an object to obtain a simple and efficient construction of apparatus for use as a glue pot.

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

In the drawings: Figure 1 is a vertical central section through the apparatus; Fig. 2 is a bottom plan view of a portion of the water-holding receptacle showing the electric heater applied thereto; and Fig. 3 is a section on line $x-x$ Fig. 1.

A is an outer vessel formed with bottom, side walls and preferably with supporting legs B.

C is an inner vessel spaced from the walls and bottom of the outer vessel A and having formed integral therewith a top flange D. This top flange extends outward and is bolted or otherwise secured to the top of the vessel A. There is also an inwardly-extending flange E which forms the support for the innermost vessel F. Thus the three vessels A C and F are arranged parallel to each other and are connected at the top, while the sides and bottoms are spaced. The space G between the innermost vessel F and vessel C forms the water chamber, while the space H between the vessel C and outer vessel A forms a sealed air chamber operating as a heat insulation.

To equip this apparatus with electrical heating means the vessel C has secured to its bottom, preferably cast therein, a series of studs I, which are threaded for the engagement of nuts J.

K is an insulated electric heating unit

placed against the bottom of the vessel C and clamped thereto by a heat-distributing plate L which is secured by the studs I and nuts J.

M is an insulator block which is secured to the bottom of the vessel C, and to which the terminals from the heating unit are led. This block supports the binding screws N, which are connected to the conductors O, the latter extending upward through the air space H and being insulated preferably by beads P strung thereon. The flange D is cut-away at Q for the passage outward of these conductors, and an insulator terminal block R is mounted upon the outer face of the flange for connection with external flexible conductor cord S. T is a metallic housing for the block R, which is secured to a boss U on the flange D, preferably with a gasket V therebetween to form a liquid-tight seal.

With the construction described, the electrical part of the apparatus is thoroughly protected where there can be no danger of short circuiting from any cause, such for instance as the boiling over of the pot. This is due to the fact that the vessel C is impermeable, and as it is formed integral with the flange D there is no opportunity for leakage of water into the chamber H. Furthermore, the housing T which incloses the insulator terminal block R has a liquid-tight joint with the boss U on the flange D, and as this housing extends up above the rim of the pot it will exclude water from the terminals.

What we claim as our invention is:—

1. The combination with a vessel for holding liquid to be heated, of an outwardly-extending flange integral with said vessel, an outer casing surrounding said vessel and secured to said flange, an electric heater secured to the bottom of said vessel in the space between the same and the bottom of the outer casing, terminal connections for said heater passing outward through an aperture in said flange, said flange being provided with a boss and a housing for said terminal connections secured to said boss and above said flange forming a liquid-tight seal with said boss.

2. The combination with a vessel for containing liquid to be heated, of an outwardly-extending flange integral with said vessel at

the upper end thereof, an outer casing surrounding said vessel and spaced therefrom, secured to the under face of said outwardly-extending flange, an electric heater clamped 5 to the bottom of said vessel and housed in the space between the same and the bottom of the outer casing, terminal connectors passing from said heater upward through the space between the same and the outer 10 case and outward through an aperture in said flange, an insulator block mounted on said flange through which said terminal connectors pass, and a housing of inverted cup-shaped form inclosing said insulator 15 block and secured to said flange with a liquid-tight seal.

3. The combination with a vessel having integral with its upper end an outwardly and inwardly extending annular flange, a 20 casing surrounding said vessel and spaced therefrom, secured at its upper end to said outwardly-extending flange, an inner vessel supported upon said inwardly-extending flange and depending within said first-mentioned vessel, studs depending from the bot- 25 tom of said first-mentioned vessel, an electric heater clamped to the bottom of said vessel by said studs, terminal connections from said heater passing upward through

the space between said vessel and outer casing and outward through an aperture in 30 said outwardly-extending flange, a terminal block above said flange, and a housing for inclosing said terminal block mounted upon said flange, forming a sealing joint there- 35 with.

4. The combination with a vessel having integral with its upper end an outwardly and inwardly extending annular flange, a casing surrounding said vessel and spaced 40 therefrom, secured at its upper end to said outwardly-extending flange, an inner vessel supported upon said inwardly-extending flange and depending within said first-mentioned vessel, an electric heater secured to 45 the bottom of said first-mentioned vessel, and terminal connections from said heater passing upward through the space between said vessel and outer casing and outward through an aperture in said outwardly-ex- 50 tending flange.

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

FRANK KUHN.

FRANK E. SHAILOR.

Witnesses:

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