

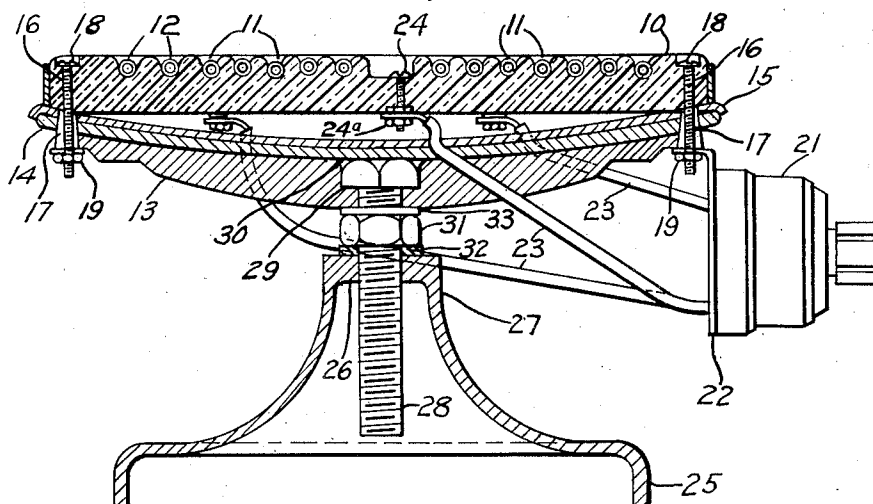
Oct. 30, 1923.

1,472,201

J. C. WOODSON

ELECTRICAL HEATER FOR COFFEE URNS

Filed Oct. 20, 1921



WITNESSES:

A. G. Schiefelbein

H. M. Riebel

INVENTOR

James C. Woodson.

BY

Wesley S. Carr

ATTORNEY

Patented Oct. 30, 1923.

1,472,201

UNITED STATES PATENT OFFICE.

JAMES C. WOODSON, OF MANSFIELD, OHIO, ASSIGNOR TO WESTINGHOUSE ELECTRIC PRODUCTS COMPANY, A CORPORATION OF MICHIGAN.

ELECTRICAL HEATER FOR COFFEE URNS.

Application filed October 20, 1921. Serial No. 509,129.

To all whom it may concern:

Be it known that I, JAMES C. WOODSON, a citizen of the United States, and a resident of Mansfield, in the county of Rich-
land and State of Ohio, have invented a new
and useful Improvement in Electrical Heaters
for Coffee Urns, of which the following
is a specification.

My invention relates to electrically heated
apparatus and particularly to electric
liquid heaters and it has for its object to
provide an adjustable electric heating unit
for coffee urns.

In practising my invention, I provide a
refractory plate having spiral grooves in
its upper surface in which is located a heli-
cal resistor. A supporting member having
a concave upper surface has a heat-insulat-
ing member located in the concave face and
a concave reflector located on said heat-in-
sulating member, and is provided with means
for securing the refractory plate against
the concave surface of the reflector. The
supporting member is provided with a ver-
tically adjustable mounting on a base.

The single figure of the drawing is a view,
in vertical cross section, of a heating unit
embodying my invention.

A refractory plate 10 which may be of any
suitable or desired contour but which will
usually be substantially circular, is pro-
vided, in its upper surface, with a plurality
of substantially spiral grooves 11. A re-
sistor member 12, preferably formed of a
resistor wire wound into a helix, is located in
the grooves 11 which are of such form, in
lateral cross section, as to permit of suitably
retaining the resistor 12 therein.

A supporting member 13, having substan-
tially the same contour as the plate 10, is
provided with a concave upper surface, in
which is located a plate 14 of a suitable
heat-insulating material, such as asbestos,
so shaped as to conform to the upper sur-
face of the supporting member. A metallic
reflector 15 is located on the outside of the
plate 14 and may have its inner surface
highly polished to reflect a large proportion
of the heat radiated against it from the
lower surface of the plate 10. A plurality
of holes 16 are provided in the plate 10
which register with holes 17 provided in the
reflector member 15, the plate 14 and the
supporting member 13, to permit of locating
therein a plurality of screw bolts 18 pro-

vided with nuts 19 to suitably clamp the three
members in proper operative positions rela-
tively to each other.

A suitable control switch 21 is mounted
on a plate 22 which may be secured against
the member 13 by one of the screw bolts 18 to
support the switch 21 from the member 13. A
plurality of leads 23 extend from the switch
21 to suitable points on the plate 10, being se-
cured thereagainst and to the resistor 12 by
means of screw bolts 24 and nuts 24* to elec-
trically connect the resistor to a supply-cir-
cuit conductor (not shown) to permit of
energizing the resistor to obtain various de-
grees of heat, in a manner well known in
the art.

A hollow base 25 is provided with a lower
extended flange portion to be located on
a supporting surface and an upwardly ex-
tending portion terminating in a horizontal
top 26 in which is located a screw threaded
opening 27. A screw threaded stud 28 has
its upper end extending through and secured
against the supporting member 13 by means
of a head 29 which is located in a suitable
depression 30 in the upper surface of the
member 13. A locking nut 31 is located on
the stud 28 above the top portion 26, a
washer 32 being placed between the nut and
the top and another washer 33 being placed
above the nut. This construction permits of
vertically adjusting the assembled heating
unit on the base 25 to cause the upper sur-
face of the plate 10 to operatively engage, or
be located closely adjacent to, the under
surface of a coffee urn of a commercial type
and of securely locking it in such position.

The device embodying my invention pro-
vides a heating unit having means for re-
flecting heat which may be radiated from its
lower surface and for reducing the flow of
heat through said reflecting member to a
supporting member and it provides also a
heating unit which may be easily and quick-
ly adjusted in a vertical direction.

Various modifications may be made in the
device embodying my invention without de-
parting from the spirit and scope thereof
and I desire that only such limitations shall
be placed thereon as are imposed by the prior
art or are specifically set forth in the ap-
ended claims.

I claim as my invention:

1. In an electric heater, in combination, a
refractory member, a resistor located in said

refractory member, a supporting means for said refractory member, means for reducing the flow of heat from said resistor to said supporting means, a base, and means for adjustably mounting said supporting means on said base.

2. In an electric heater, in combination, a heating element, a supporting means therefor, means for reducing the flow of heat from said heating element to said supporting means, a switch for said heating element mounted on said supporting means, a base, and means for adjustably mounting said heating element, supporting means and switch on said base.

3. In an electric heater, in combination, a heating element, a reflector beneath said element, a means for supporting said heating element and reflector, a heat-flow reducing means interposed between said reflector and said supporting means, a base, and a vertically-adjustable means for mounting said supporting means on said base.

4. In an electric heater, in combination, a horizontally extending plane heating element, means beneath said element for reflecting upwardly heat radiated against said means, a support for said reflecting means and said heating element, a heat-insulating means located between said reflecting means and said support, a base, and a vertically adjustable means for mounting said support on said base.

5. In an electric heater, in combination, a horizontally extending plane heating element, a support therefor located beneath said element, heat-reflecting and heat-insulating means interposed between said element and said support, a switch for said heating element supported by said supporting means, a base, and a vertically adjustable means for mounting said support on said base.

In testimony whereof, I have hereunto subscribed my name this 15th day of Oct. 1921.

JAMES C. WOODSON