

F. KUHN & F. E. SHAILOR.
ELECTRIC HEATER.
APPLICATION FILED JUNE 11, 1914.

1,154,411.

Patented Sept. 21, 1915.

Fig. 1.

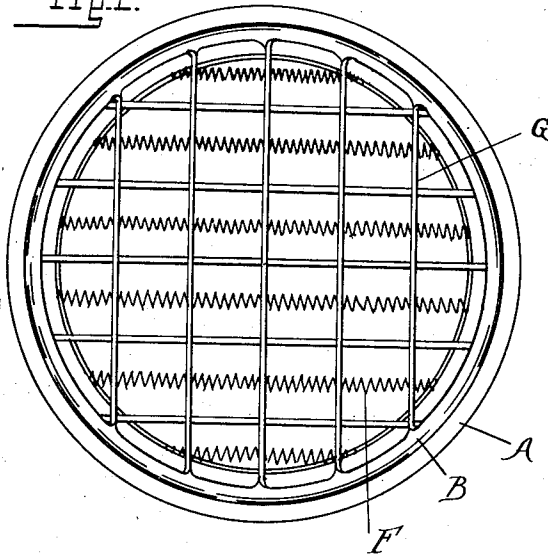


Fig. 2.

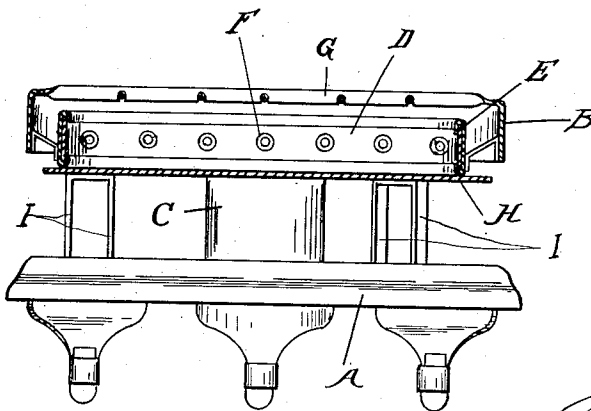
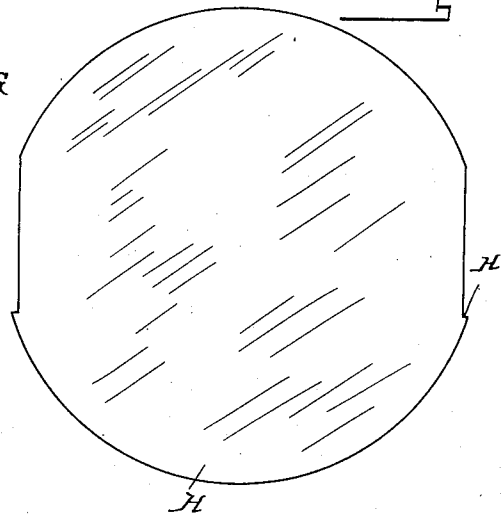
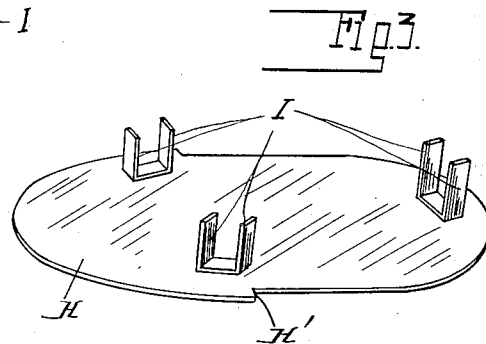


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANK KUHN AND FRANK E. SHAILOR, OF DETROIT, MICHIGAN; SAID SHAILOR
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ELECTRIC HEATER.

1,154,411.

Specification of Letters Patent.

Patented Sept. 21, 1915.

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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 Electric Heaters, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to electric heaters of that type designed for use for various cooking operations, and the invention comprises the novel construction as hereinafter set forth.

In the drawings: Figure 1 is a plan view of the heater; Fig. 1^a is a view showing the reflector plate removed but in position for engagement with the heater; Fig. 2 is a vertical cross section through the heater; and Fig. 3 is a perspective view of the reflector plate detached.

A is a suitable base, above which is arranged an annular frame B supported upon a pair of spaced legs C.

D is an electrical heating unit within the frame B, preferably comprising an insulator ring E and naked resistor coils F extending back and forth across said ring.

G is a grating arranged across the top of the annular frame E and serving to support the toast or other food to be heated.

With the construction as thus far described, the heat radiated from the resistor F will pass both upward and downward. The space between the ring B and the base A is sufficient to provide access to the downwardly radiated heat from the resistor F, so that toasting or broiling operations may be performed below as well as above the resistor. This adds to the capacity of the heater, and by making the upper face of the plate A a heat-reflecting surface, injury to the table or support is prevented. Where, however, the upwardly-radiated heat alone is utilized there is danger of an over-heating

of the base, and furthermore, the efficiency is not as great as where the heat-reflecting surface is placed nearer to the resistor.

With the present improvement the heater is adapted for use as either a double or a single-faced resistor, by the provision of a removable reflector plate arranged above the base and adjacent to the lower edge of the ring B. This reflector plate H is preferably formed of sheet metal having a bright upper surface; and depending legs I, welded or otherwise secured to the lower face of said plate, serve to support it above the base A, as shown in Fig. 2. Thus when the plate H is in position the downwardly-radiated heat from the resistor is intercepted and reflected directly upward to reinforce the upwardly-directed rays from the resistor. Whatever heat is absorbed by the plate H and is radiated downward therefrom will be intercepted by the base plate A, and thus overheating of said base or the table upon which it is supported will be prevented.

The plate H may be inserted between the supporting legs or standards C, for the ring B and shoulders H' on opposite sides of the plate, adapted to abut against said standards, serve to position the parts. Thus the heater is adapted for either throwing all of the heat upward or where desired for using both the upward and downward radiation, it being merely necessary in the latter case to withdraw the plate H.

What we claim as our invention is:—

1. In an electric heater, the combination with a base, a ring spaced there above, spaced standards for supporting said ring upon said base and a heating unit extending across within said ring, of a removable reflector plate insertible between said standards and legs upon said reflector plate for supporting the same from said base substantially in the plane of the lower edge of the ring.

2. In an electric heater, the combination with a base, a ring spaced there above,

spaced standards for supporting said ring
upon said base and a heating unit extending
across within said ring, of a removable re-
flector plate insertible between said stand-
ards and legs upon said reflector plate for
5 supporting the same from said base sub-
stantially in the plane of the lower edge of
the ring, said reflector plate having shoul-
ders on its opposite sides adapted to abut

against said standards to properly position 10
the parts.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

FRANK KUHN.

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Witnesses:

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