Aug. 25, 1931. L. WALLER 1,820,514

ELECTRIC HEATER FOR WASHING MACHINES

Filed May 13, 1929

Fig. 1.

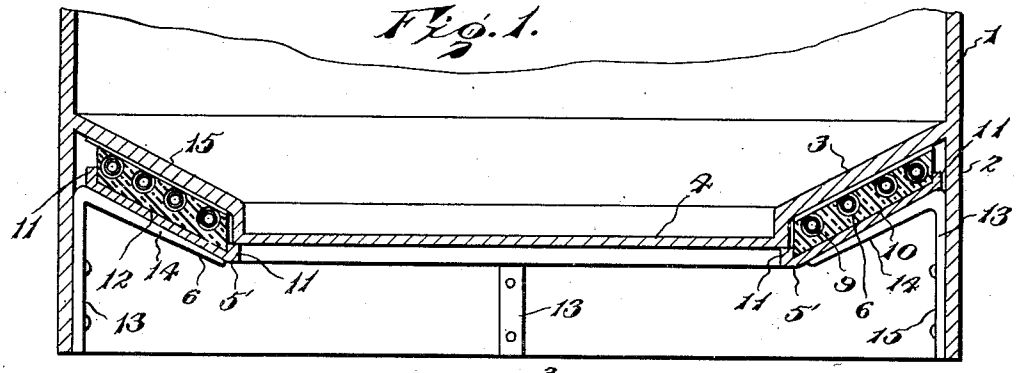


Fig. 2.

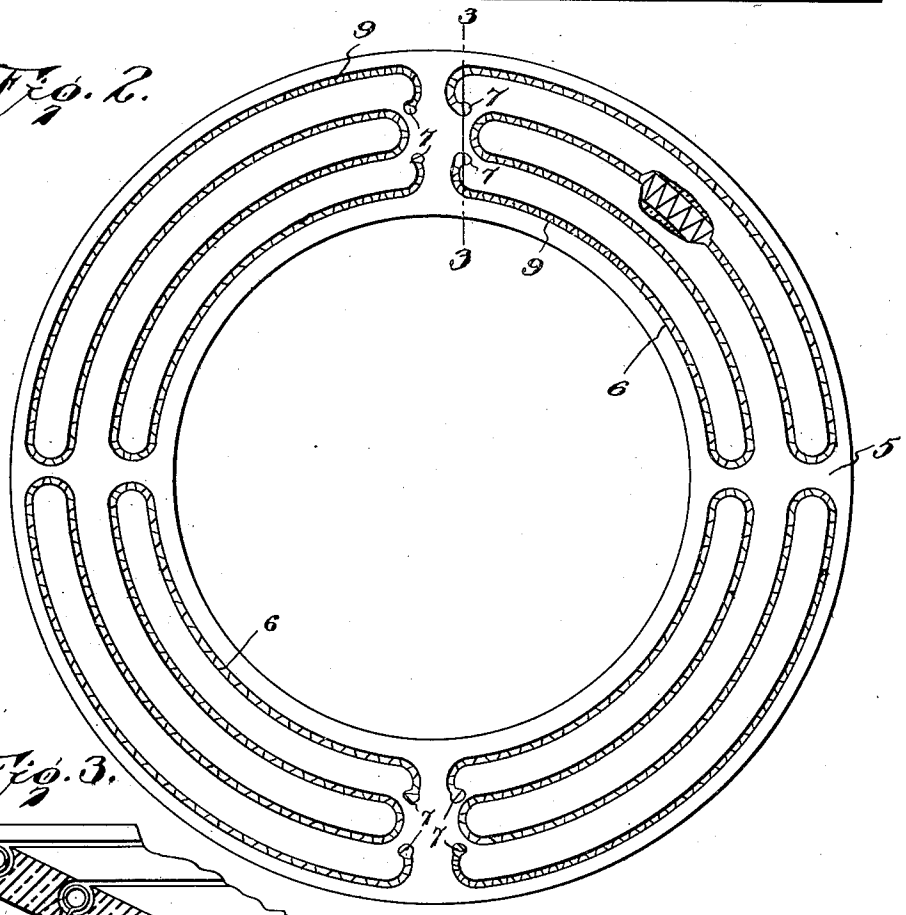
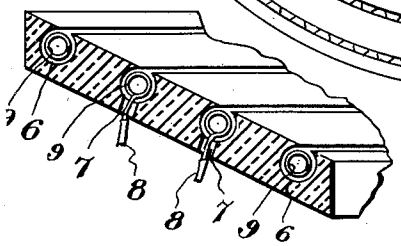


Fig. 3.



Inventor

L. Waller

By Lacey & Lacey, Attorneys

Patented Aug. 25, 1931 1,820,514

UNITED STATES PATENT OFFICE

LEROY WALLER, OF MACOMB, ILLINOIS

ELECTRIC HEATER FOR WASHING MACHINES

Application filed May 13, 1929. Serial No. 362,730.

The present invention is directed to improvements in electric heaters for washing machines.

The primary object of the invention is to provide a device of this character so constructed and arranged that it can be conveniently attached to a conventional form of washing machine in order that the water therein can be heated and maintained at any desired temperature.

Another object of the invention is to provide a device of this character which is simple in construction, efficient in operation, durable, and one which can be manufactured at a small cost.

Another object of the invention is to provide novel means for securing the heater in proper position with respect to the bottom of the washing machine in order that it will quickly and effectively heat the water in the machine.

With these and other objects in view, this invention resides in the novel features of construction, formation, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a fragmentary vertical sectional view through the lower part of a conventional form of washing machine.

Figure 2 is a top plan view of the heater ring.

Figure 3 is a sectional view on the line 3—3 of Figure 2.

Referring to the drawings, 1 designates a portion of a washing machine tub having an annular skirt 2, the bottom of said tub, in this instance, including a sloping wall 3 and a depressed central section 4.

The heater comprises a ring 5 formed from porcelain or other suitable insulating material, said ring being inclined upwardly from its opening 5′ and at an angle corresponding to the slope of the wall 3, the purpose of which will later appear.

The ring 5 is provided with a plurality of independent circuitous channels 6, four of which are illustrated. Each set of channels have their terminals communicating with openings 7—7 formed for accommodating the connectors 8—8 leading from a suitable switch (not shown) for conducting electrical energy to the resistance coils 9 mounted in the respective channels.

It will be observed, upon reference to Figure 1 of the drawings, that the opening 5′ of the ring will receive the section 4 of the bottom of the tub in order that the ring will be properly positioned with respect to the wall 3.

A sheet metal ring 10 is provided and is equipped with marginal flanges 11 to provide a channel 12 for receiving the ring 5.

A plurality of brackets 13 are provided and include inclined arms 14 and vertical arms 15, the former being adapted to engage the ring 10 to hold the ring 5 in proper position while the arms 15 are bolted to the inner side of the skirt 2. To eliminate any possibility of a short circuit, a mica ring 16 is interposed between the upper face of the ring 5 and the wall 3 of the tub.

All of the coils 9 are energized when it is desired to quickly heat the water in the tub, after which one or two may be maintained energized to keep the water at a proper temperature.

From the foregoing, it will be apparent that a heater constructed in accordance with my invention can be cheaply manufactured and is constructed and arranged in such manner that it can be easily and quickly applied to a washing machine or removed therefrom, when desired.

What is claimed is:

1. In combination with a tub having the central portion of its bottom depressed, and the outer portion upwardly and outwardly inclined and having a skirt depending from the outer part of the bottom, a channel ring supported by the skirt and inclined upwardly and outwardly to conform to the outer inclined portion of the bottom and coacting therewith to enclose a space, of an electric ring heater disposed in said space and inclined upwardly and outwardly.

2. A tub having the central portion of its bottom depressed and the outer portion upwardly and outwardly inclined and hav-

ing a skirt depending from the outer edge of the bottom, brackets secured to the skirt and having inwardly and downwardly inclined arms, a channel ring supported upon the inclined arms of the brackets in spaced relation to the outer inclined portion of the bottom, and an electric ring heater on the channel ring and enclosed in the space formed between it and the outer portion of the bottom.

In testimony whereof I affix my signature.

LEROY WALLER. [L. S.]