

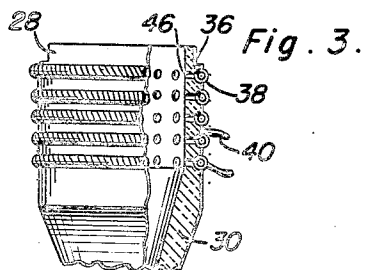
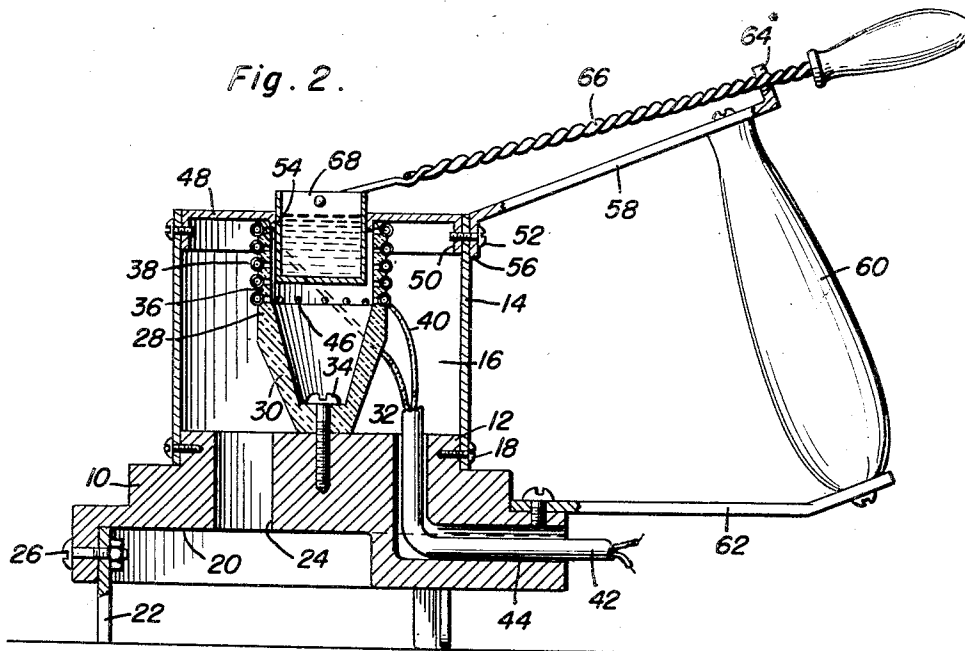
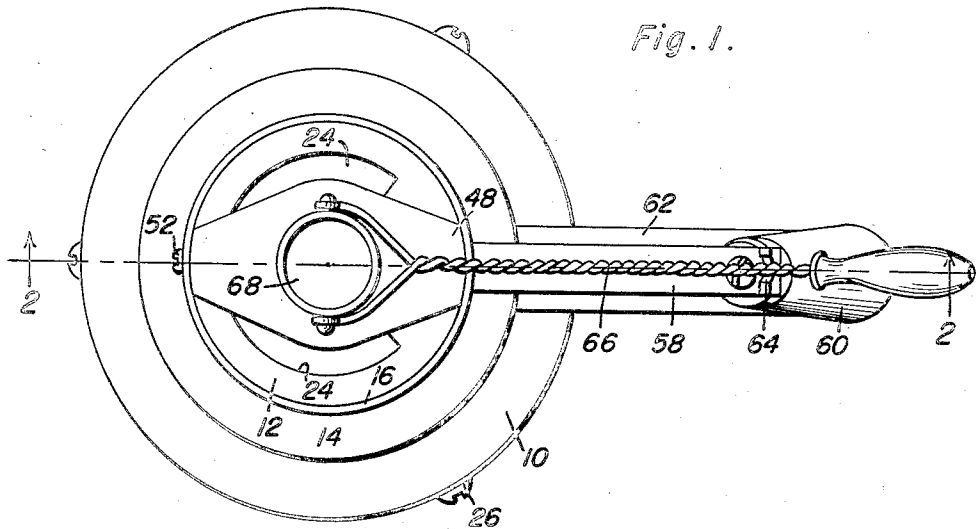
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ELECTRICIAN'S SOLDER DIPPER HEATER

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ELECTRICIAN'S SOLDER DIPPER HEATER

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3 Claims. (Cl. 219-44)

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This invention relates to new and useful improvements in electrical heating devices and the primary object of the present invention is to provide a portable heater for electricians' solder dippers.

Another important object of the present invention is to provide a solder dipper heater including a heating chamber, a dipper receiving bowl and embodying novel and improved means for heating the bowl for effectively and efficiently melting solder placed in a dipper that is retained in the bowl.

A further object of the present invention is to provide a solder dipper heater including a means for holding a dipper in position to the electrically heated dipper receiving bowl carried by the heater so that the dipper may be quickly and readily removed in a convenient and safe manner for use.

A still further aim of the present invention is to provide an electrician's solder dipper holder and heater that is simple and practical in construction, strong and reliable in use, small and compact in structure, neat and attractive in appearance, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a top plan view of the present invention and showing a dipper applied thereto;

Figure 2 is a longitudinal vertical sectional view taken substantially on the plane of section line 2-2 of Figure 1; and,

Figure 3 is a view showing the heating element used in conjunction with the present invention, partly in elevation and partly in section.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents the base of the instant construction having a reduced upper end 12 that receives a cylindrical shield 14, defining a heating chamber 16.

Fasteners 18 extend through the shield 14 and into the portion 12 to retain the said shield in position to the base.

The lower surface of the base 10 is provided with a recess 20 that receives the upper end portions, of a plurality of circumferentially spaced

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supporting feet or lugs 22 of preferably hard fiber material. The feet support the base in an elevated position with respect to a supporting structural element so that air may pass under the base, into the recess 20, through a vertical bore 24 formed in the base and hence into the heating chamber 16. The feet 22 are detachably secured to the base 10 by bolts and nuts or like fasteners 26.

The numeral 28 represents a refractory clay or porcelain cup or bowl having a tapered or frusto-conical lower portion 30. The portion 30 includes a lower wall 32 that bears upon the upper surface of the portion 12 and the wall 32 receives a fastener 34 that extends into the portion 12 for holding the bowl relative to the base.

The outer periphery of the bowl 28 is provided with a plurality of recesses 36 that receive heating wires or coils 38 of preferable nickel-chrome alloy. The coils 38 are connected together and to circuit wires 40, and the wires 40 as well as the insulated covering 42 for the wires 40 extend through a passage 44 provided in the base and to a suitable source of electric current.

A plurality of openings 46 are formed in the bowl 28 and these openings communicate with and intersect the recesses 36 so that heat from the coils 38 will pass through the openings 46 and into the interior of the bowl.

Mounted in the upper end of the shield 14 is a diametrically disposed combined baffle and support plate 48 having downturned ends 50 that are secured to the walls of the shield by fixtures 52. The central enlarged portion of the plate 48 is provided with an opening and the edges defining this opening are turned downwardly as at 54 to yieldingly grip the upper edge of the bowl 28 thereby supporting the bowl and preventing endwise movement thereof.

Secured to the shield 14 by one of the fasteners 52, is the angulated end portion 56 of an upwardly and outwardly projecting arm 58 that is fixed to one end of a handle or hand grip 60. The lower end of the hand grip is secured to a brace arm 62 that is removably carried by the base 10.

The free outer end of the arm 58 is turned upwardly and is notched as at 64 to receive the shank 66 of a dipper having a cup 68 that is positioned in the bowl 28.

In view of the foregoing description taken in conjunction with the accompanying drawing it is believed that a clear understanding of the device will be quite apparent to those skilled in this art.

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A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. An electric heating device comprising a base, supporting feet carried by the base, a shield rising from the base and being hollow to define a heating chamber, a combined baffle, guard and support mounted in said chamber, a bowl disposed in said chamber and detachably secured to said base, means for heating said bowl including an electric heating wire embracing said bowl, and means for supporting a dipper in said bowl, said combined baffle, guard and support having an opening therein in registry with said bowl, the edges defining said opening being turned downwardly and positioned in said bowl, said bowl including a plurality of annular recesses in its outer periphery receiving said heating wire, said bowl also having a plurality of openings intersecting said recesses and providing heat passages.

2. An electric heating device comprising a base, a cylindrical shield rising from the base, a hollow bowl supported on the base and having an upper open end, an elongated member disposed diametrically of said shield and terminally secured to said shield, said member having an opening therein in registry with said bowl, a flanged portion at the edge defining said opening and received in the upper open end of said bowl, means for heating the bowl, said member constituting a shield, a baffle and a support, and means for supporting a dipper in said bowl, said supporting means including a vertically inclined arm attached to said shield and having a notch lug at one end, a hand grip depending from said arm,

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and a brace arm securing the hand grip to the base.

3. An electric heating device comprising a base, a cylindrical shield rising from the base and being hollow to define a heating chamber, a cylindrical bowl disposed within said chamber and axially of said cylindrical shield, an electric heating wire embracing said bowl, said bowl including a plurality of annular recesses in its outer periphery receiving said heating wire, said bowl also having a plurality of radial openings intersecting said recesses and providing heat passages, said bowl including an inwardly tapered lower end secured to said base, and means supporting the bowl centrally of and within the chamber said means including a plate attached to and disposed diametrically of said shield, said plate having a central opening in registry with said bowl and a continuous flange depending from said plate about said central opening and received in the upper end of said bowl.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
756,242	Kuhn	Apr. 5, 1904
887,923	Crandall	May 19, 1908
1,242,687	Harth	Oct. 9, 1917
1,351,478	Kain et al.	Aug. 31, 1920
1,414,494	Arntfield	May 2, 1922
1,666,831	Pandolfo	Apr. 17, 1928
1,952,445	Ludwig	Mar. 27, 1934
2,425,199	Navon	Aug. 5, 1947

FOREIGN PATENTS

Number	Country	Date
148,458	Germany	Feb. 20, 1904
157,897	Switzerland	Jan. 2, 1933