

1,415,098.

C. H. KLEIN.
HEATER FOR SOLDERING COPPERS.
APPLICATION FILED FEB. 11, 1921.

Patented May 9, 1922.

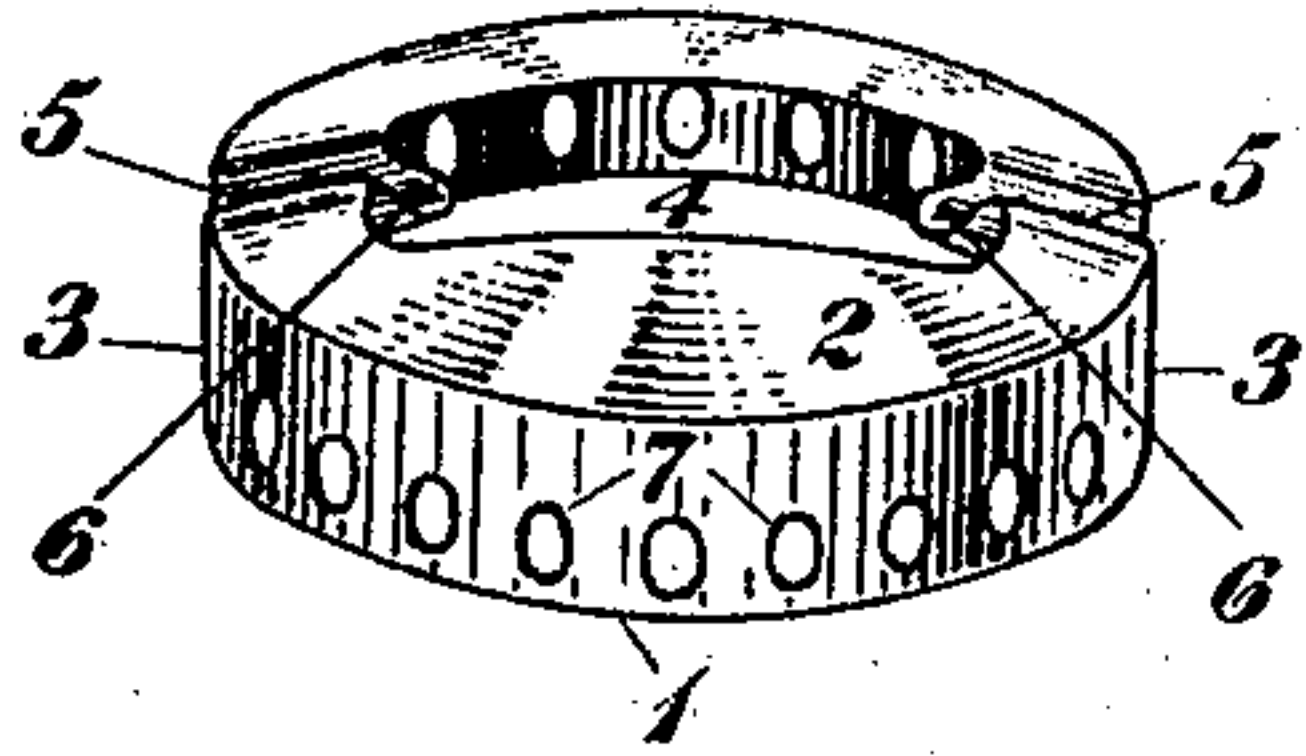


Fig. 1

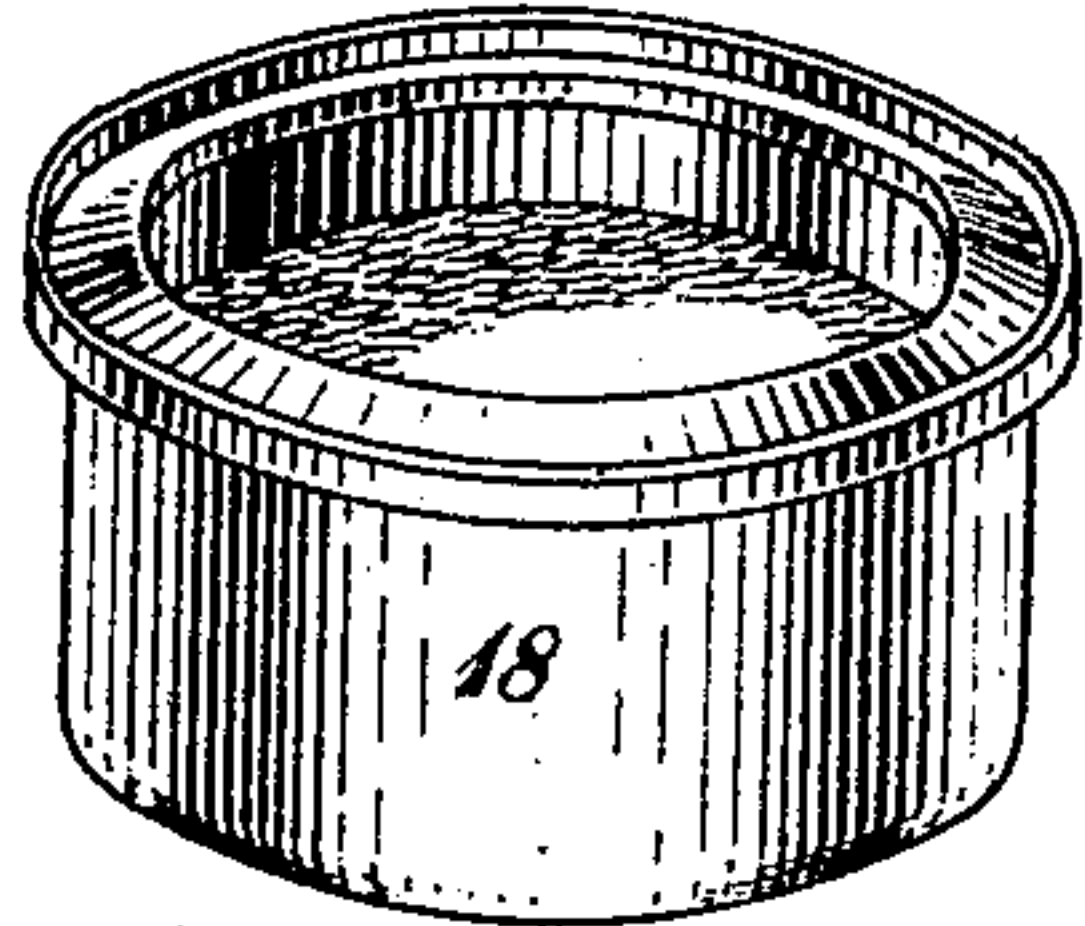


Fig. 2

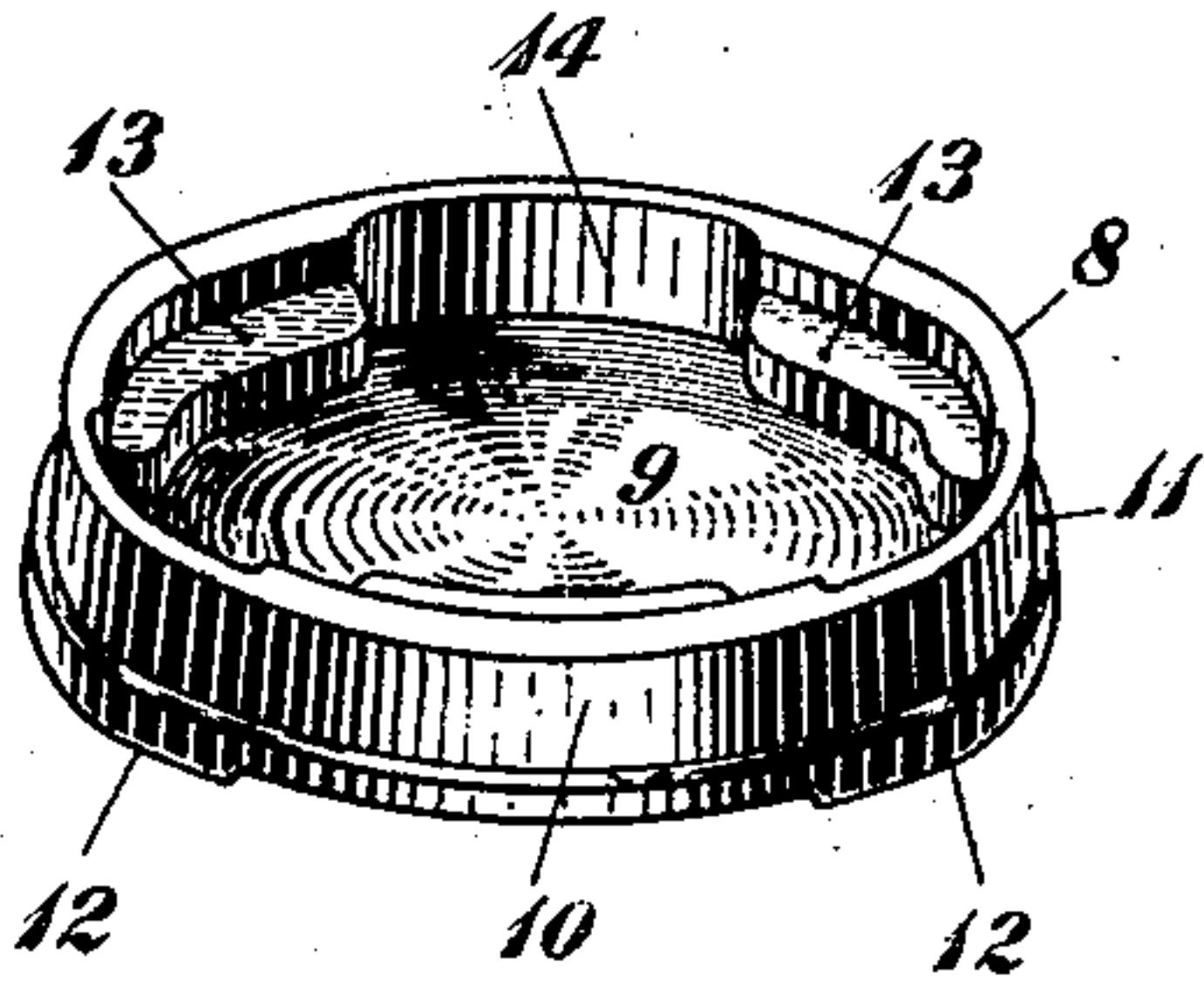


Fig. 3

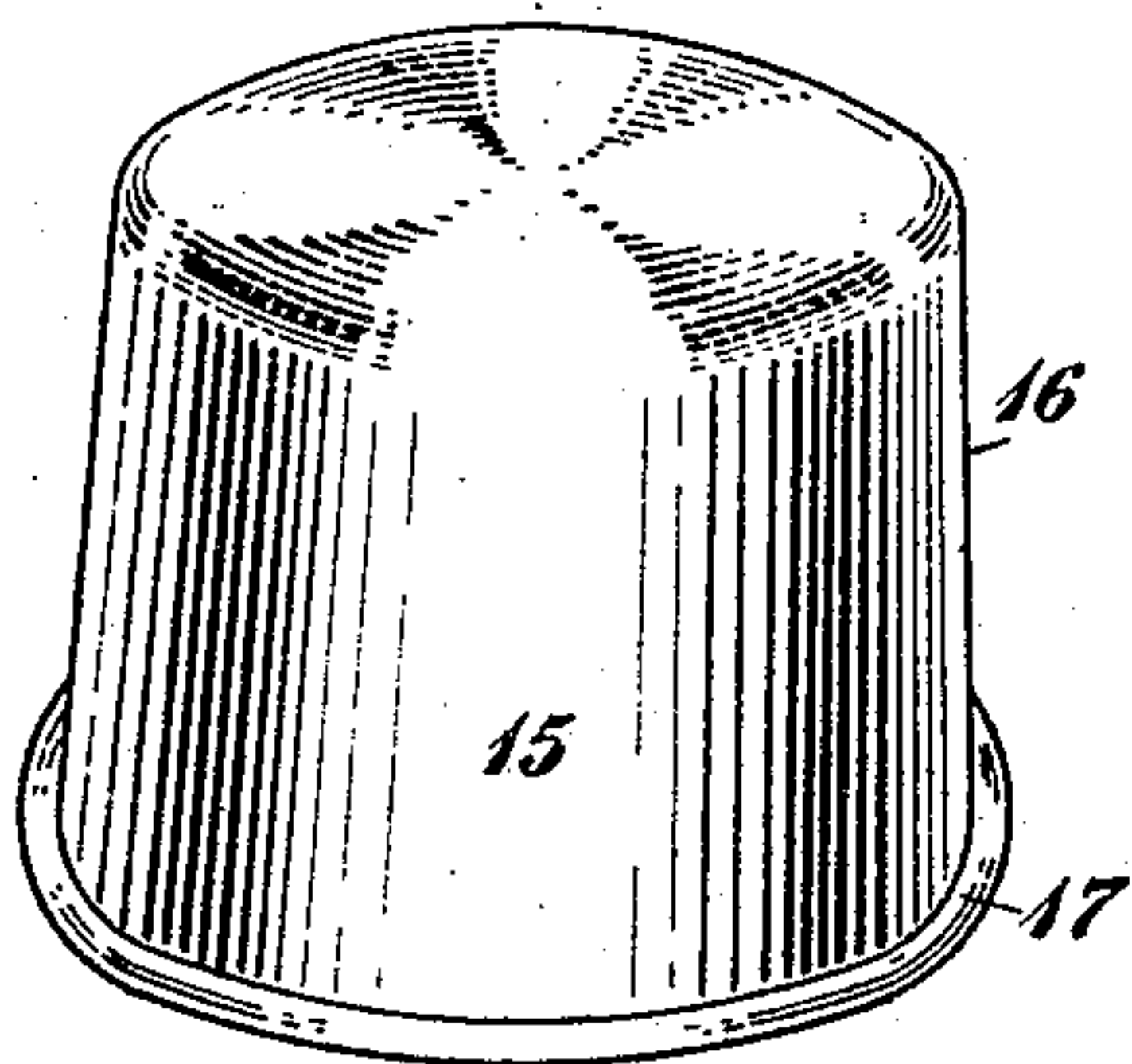


Fig. 4

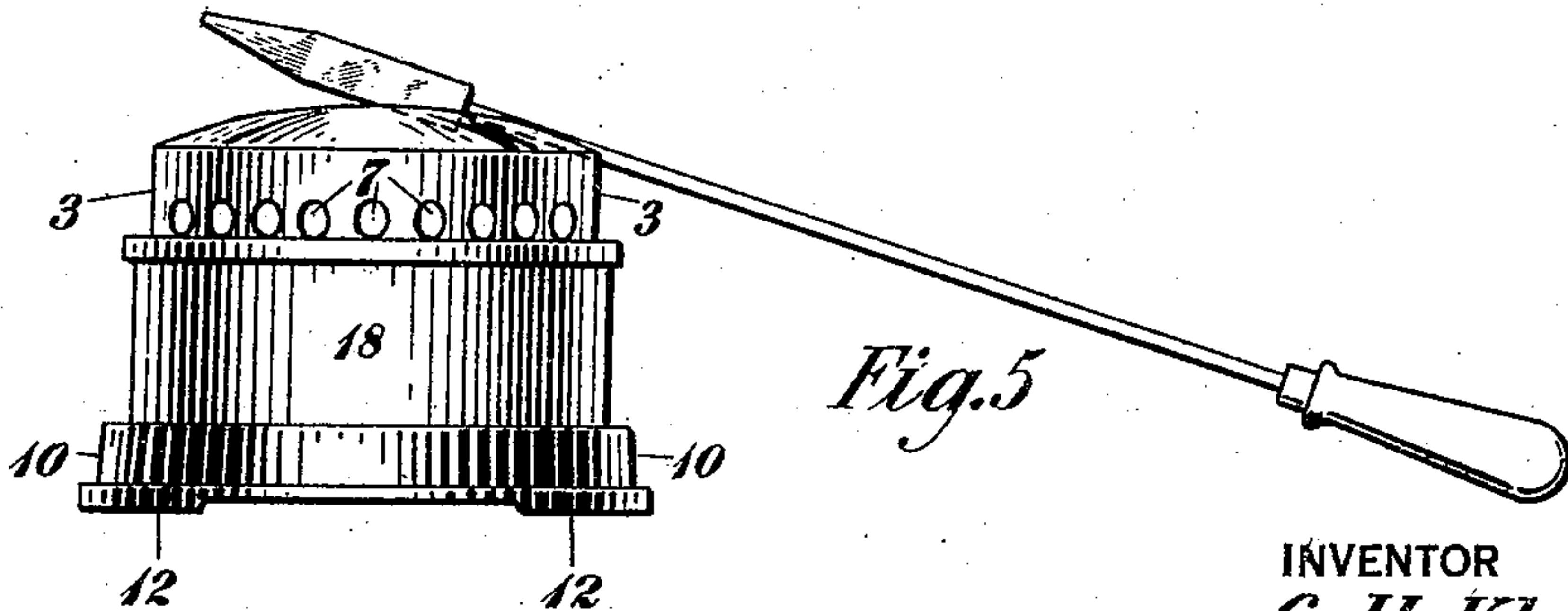


Fig. 5

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UNITED STATES PATENT OFFICE.

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HEATER FOR SOLDERING COPPERS.

1,415,098.

Specification of Letters Patent.

Patented May 9, 1922.

Application filed February 11, 1921. Serial No. 444,254.

To all whom it may concern:

Be it known that I, CHARLES H. KLEIN, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain Improvements in Heaters for Soldering Coppers, of which the following is a specification.

This invention relates to improvements in torches or heaters for use in connection with certain classes of heating fuel, and more particularly for use with containers of the mercantile article known as solidified alcohol.

In the use of torches for the purpose of heating soldering coppers or like implements, accidents such as fires frequently occur due to the alcohol, kerosene or other inflammable liquid contained in said torches, flooding out therefrom, or due to the upsetting of the torches. In other cases the varnish of cabinet work has been damaged by the solvent action of the liquid by the accidental spilling thereof from the torches. Further objections to said torches are that there is considerable waste attending the transfer of the liquid from its original container as well as the evaporation of said liquid. Accordingly, it is one of the objects of the present invention to provide a torch or heater which will overcome the disadvantages above mentioned, as well as incorporate said burner with additional novel features, whereby economy and efficiency may be effected as will hereinafter appear.

In the accompanying drawing which illustrates one embodiment of the invention, Figure 1 is a perspective view of the burner detached; Fig. 2 is a perspective view of the fuel receptacle in which the solidified alcohol is contained; Fig. 3 is a perspective view of a stand adapted to hold the fuel receptacle; Fig. 4 is a perspective view of the cover which fits over the burner and engages the tapered sides of the stand shown in Fig. 3, and Fig. 5 is an elevation of the assembled parts which comprise the heater.

The invention will be now more fully understood from the following detailed description.

In the drawing, the numeral 1 represents a burner-member which is preferably of the configuration shown, it being hollow and having a rounded top 2 and an annular side-wall 3. The side-wall 3 terminates at the bottom in an edge adapted to be

seated on the upper rim-surface of an open can or container of solidified alcohol, such as is indicated in Fig. 2, it being understood that the usual top or closure member of the can has first been removed. A central opening or burner-hole 4 of substantially rectangular form is provided in the top 2 and in said top on the shorter sides of the burner-hole 4 are formed grooves 5, 5. These grooves extend from the outer edge of the top 2, and terminate in prongs 6, 6 which extend into the burner-hole and either of said grooves with its associated prong provide a seat for a soldering copper. Two series of apertures 7 are provided in the side-wall 3 parallel with the longer sides of the rectangular burner-hole 4, there being a space between the end of each series. It is preferable that the central aperture of each series be of the largest area, and that each succeeding aperture on either side thereof shall be of a decreasing area, the terminating apertures being the smallest of the series. The apertures 7 serve as air-inlets through which a draft is produced so as to force the issuing flame from the fuel in the receptacle 18 in a central longitudinal direction against the sides of the soldering coppers. Thus when an iron is seated in either groove and associated prong, the flame emitted through the burner-hole 4 will encircle it.

The stand 8, shown in Fig. 3, is preferably made of material which is a poor heat conductor and which is non-inflammable, such as bakelite or the like. The stand is provided with a base-portion 9 having an upwardly tapered side-wall 10, about the bottom of which extends a peripheral flange 11. Supports 12 are disposed in spaced relation about the edge of the underside of the base-portion 9, while supports 13 upon which the fuel receptacle 18 rests, are disposed about the upper-side of the base 9 and inner portion of the side-wall 10 in such manner that their vertical positions about the edge of said base will be different from the positions of supports 12. Cut-away portions 14 are provided on the inner surface of the wall 10 between the supports 13 to permit the entrance of air to the space beneath the fuel receptacle. The arrangement of the supports 12 and 13 and cut-away portions 14, in the manner indicated, allow a maximum air circulation

beneath the fuel receptacle 18 and base 9, and also beneath the stand and the surface on which it is supported, so that any heat conveyed to said supporting surface when the heater is in operation will be of negligible character and no damage will result therefrom.

The cover 15 shown in Fig. 4 is preferably of the configuration indicated, and is adapted to fit over the burner-member and fuel-container. It has a tapered wall 16 adapted to register with the tapered sidewall 10 of the stand 8 and co-operate therewith in providing an air-tight enclosure whereby the fuel within the receptacle is prevented from disintegrating, due to the evaporation of the alcohol, thus making unnecessary the removing and replacing of the usual friction top cover of the fuel receptacle. The cover 15 when applied as outlined above also functions to extinguish the flame issuing from the burning fuel. A beaded-edge 17 which is provided at the bottom of the cover maintains the rigidity between the cover and stand.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described and delineated invention, will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What is claimed is:

1. A device for heating soldering coppers comprising a burner-member for fuel receptacles having a flame-emitting opening of substantially rectangular form, a groove in said burner-member at either end of said opening, and means co-operating with each groove for providing separate seats for said coppers.

2. A device for heating soldering coppers

comprising a burner-member for fuel receptacles having a flame-emitting opening of substantially rectangular form, a groove in said burner-member at either end of said opening, and a prong extending into said opening and co-operating with each groove for providing separate seats for said coppers.

3. A device for heating soldering coppers comprising a burner-member for fuel receptacles having a flame-emitting opening of such contour that the issuing flame therefrom will conform to the shape of said coppers, a groove in said burner-member at either end of said opening, means co-operating with each groove for providing separate seats for said coppers, and air-inlets comprising a series of apertures of varying dimensions disposed at either side of said opening.

4. The combination of a heater having a stand for fuel receptacles, said stand having a tapered wall, a burner-member therefor, an opening in said burner-member for providing egress for the issuing flame of the fuel, and a cover for said heater for extinguishing said flame and co-operating with the tapered wall of said stand to provide an air-tight enclosure for the fuel.

5. The combination of a heater for soldering coppers having a stand for fuel receptacles, said stand having a tapered wall, a burner member for said receptacles having an opening of substantially rectangular form for providing egress for the flame issuing from the fuel, and a cover for extinguishing said flame and adapted to register with the tapered wall of said stand to provide an air-tight enclosure for the fuel and a unitary and portable structure for the heater.

In testimony whereof I have signed my name to this specification this 9th day of February 1921.

CHARLES H. KLEIN.