

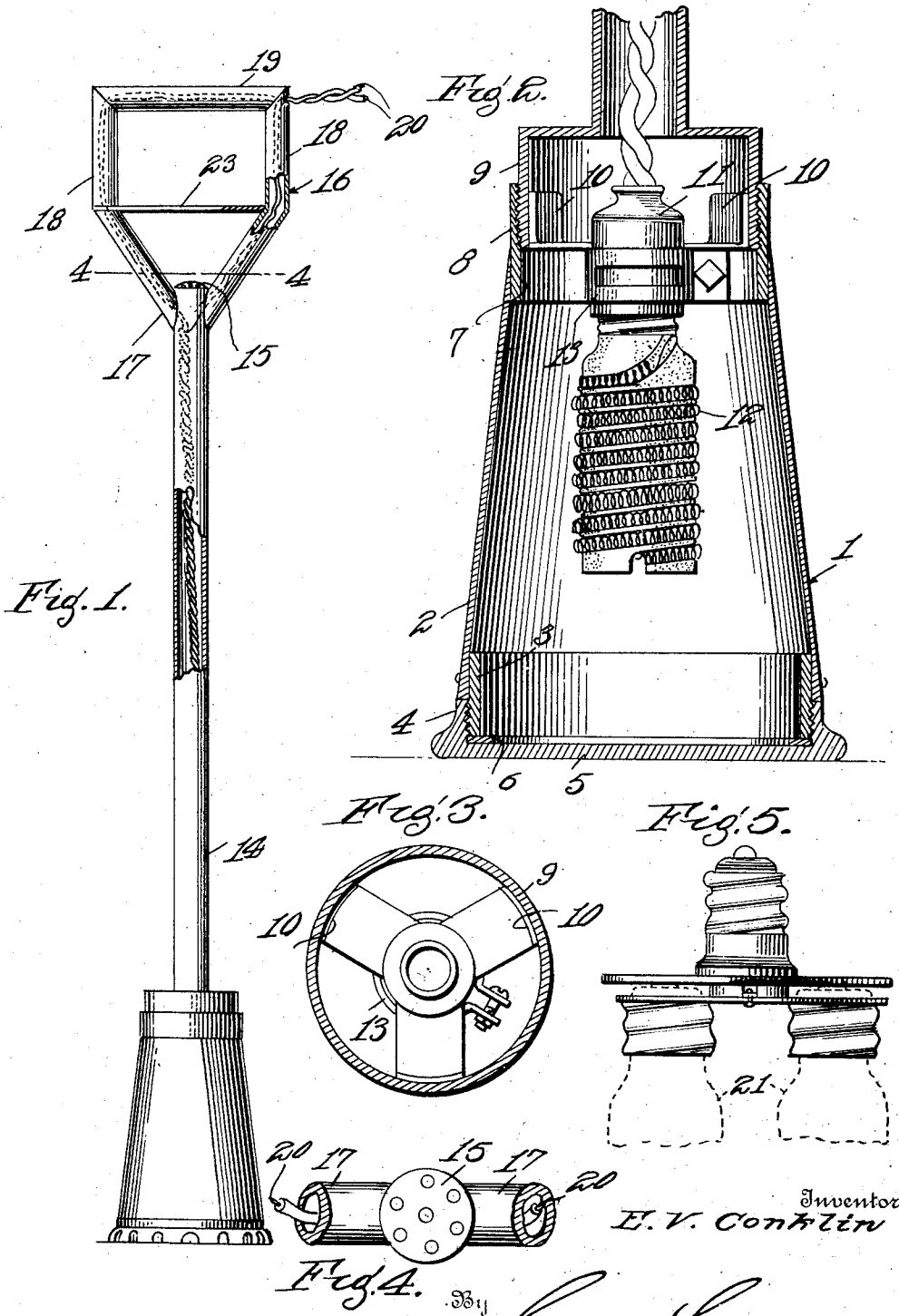
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ELECTRIC HEATER

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# UNITED STATES PATENT OFFICE

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ELECTRIC HEATER

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The present invention is directed to improvements in electric heaters.

The primary object of the invention is to provide a device of this character so constructed that it can be immersed in a quantity of water to effectively and quickly heat the same.

Another object of the invention is to provide a device of this character primarily designed for heating water although not necessarily limited to such use since it can be used for various purposes wherein it is desired to quickly heat a mass or liquid.

Another object of the invention is to provide a device of this character so constructed that one or more heating units may be used in connection therewith.

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

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 drawing, in which:

Figure 1 is a side elevation of the device.

Figure 2 is an enlarged vertical sectional view through the heating chamber.

Figure 3 is a transverse section through the housing.

Figure 4 is a sectional view on the line 4-4 of Figure 1.

Figure 5 is a detail view of a multiple socket which may be used in connection with the device.

Referring to the drawing, 1 designates the heating chamber which comprises a cylinder, preferably of tapered formation, said cylinder being formed from copper and having mounted in its lower end a ring 3, said ring being partly extended from the lower end of the cylinder 2 and being exteriorly threaded for engaging the rim 4 of the closure cap 5, there being a washer 6 interposed between the lower end of the ring and the bottom of the cap in order to prevent leakage.

In the upper end of the cylinder 2 is se-

ured a band 7 which is interiorly threaded, as at 8, for threaded engagement with the housing 9, said housing having mounted therein brackets 10 which support the socket 11, and it is to this socket that the heating unit 12 is removably mounted, there being a resilient clamp 13 associated with the socket to positively maintain the heating element engaged therein. The housing has formed integral therewith the lower end of the tube 14, the upper end of which is closed by a perforated cap 15.

Fixed to the upper end of the tube 14 is a handle 16 which consists of inclined side members 17 which are connected with vertical members 18 which, in turn, are connected by a cross top bar 19. The handle structure is hollow so that the current conducting wires 20 may be passed therethrough and down through the tube 14 for connection with the socket 11. The conductor wires are covered with fire-proof insulating material.

In Figure 5 is illustrated a multiple socket engaging member so that two heating units, as indicated in dotted lines at 21, may be attached to the socket 11 when desired. It will, of course, be understood that the number of heating units may be optional and may be of any standard make or size.

By providing the tube 14 at its upper end with the perforated cap 15, the excess heat may be discharged from the heating chamber, and in order to protect the hands of the operator, a deflecting plate 23 is supported by the handle immediately above the perforated cap.

Since the cap 5 can be readily removed, the heating unit may be removed or replaced as occasion may require, and should the socket become in any way inefficient, the housing 9 may be conveniently removed so that repairs may be easily made.

From the foregoing, it is thought that the operation and many advantages of the herein described 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 heater of the class described comprising a cylinder, a housing threaded in the upper end of the cylinder for detachable connection therewith, a tube rising from the housing and having a handle carried thereby, a socket mounted within the cylinder, circuit wires leading through the handle and tube and connected with the socket, and a cap removably engaged with the lower end of the cylinder.

2. A heater of the class described comprising a cylinder having a cap detachably connected with its lower end, a housing having threaded engagement with the upper end of the cylinder, a tube rising from the housing, a handle supported by the upper end of the tube, said tube having a perforated cap thereon, a deflecting plate carried by the handle, and circuit wires passable through the handle and tube, and a socket mounted within the cylinder and connected with the circuit wires.

3. A heater of the class described comprising a cylinder, a ring fixed in the lower end of the cylinder, a cap threaded upon the ring, a band fixed to the upper end of the cylinder, a housing threaded in the band, brackets carried by the housing, a socket supported by the brackets, a heating unit engaged in the socket, a tube rising from the housing, a handle connected with the tube, and circuit wires leading through the handle and tube and connected with the socket.

4. A heater of the class described comprising a cylindrical heating chamber, a tube connected with the heating chamber, a heating unit mounted in the chamber, a handle carried by the upper end of the tube, said tube having a perforated cap in its upper end, a deflecting plate carried by the handle, and circuit wires leading through the handle and tube and connected with the heating element.

In testimony whereof I affix my signature.

ELIAS V. CONKLIN. [L. S.]

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