May 20, 1930. A. ANDRIULLI 1,759,774

ELECTRIC WATER HEATER

Filed Nov. 15, 1928 2 Sheets-Sheet 1

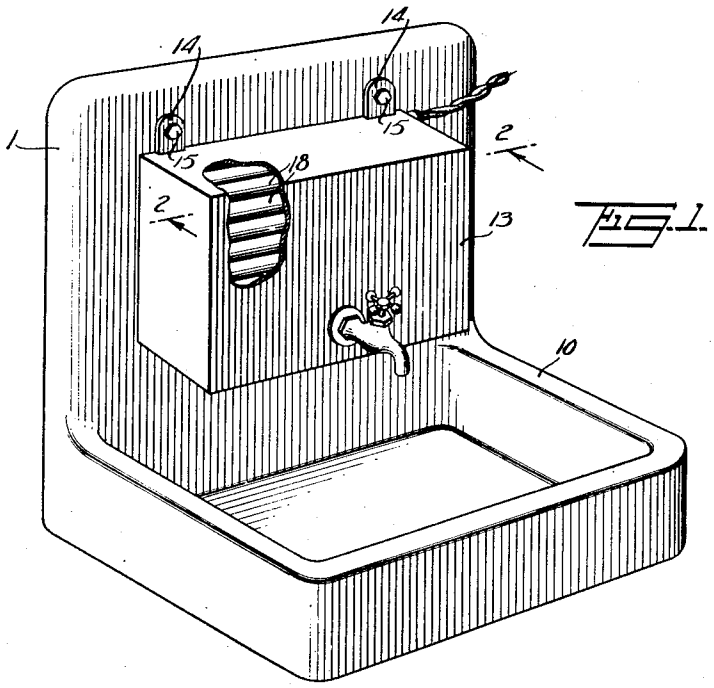
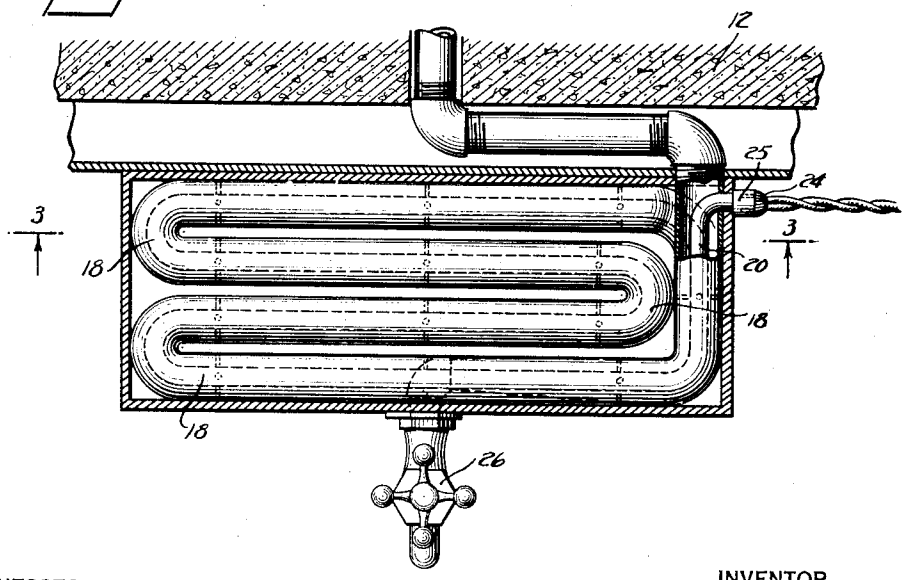


FIG. 1.

FIG. 2.



WITNESSES

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FIG. 3.

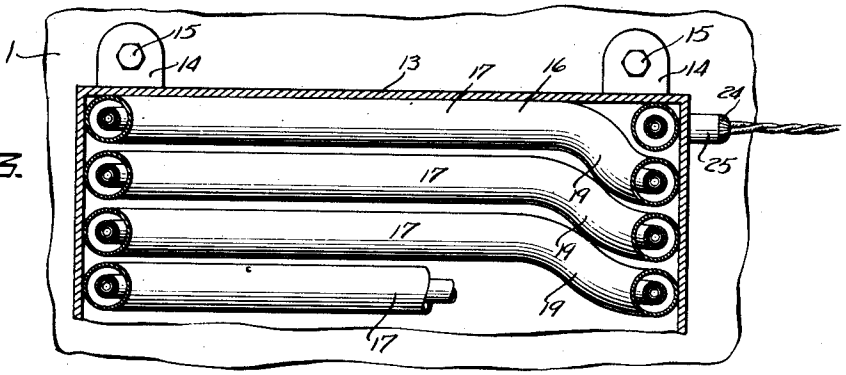


FIG. 4

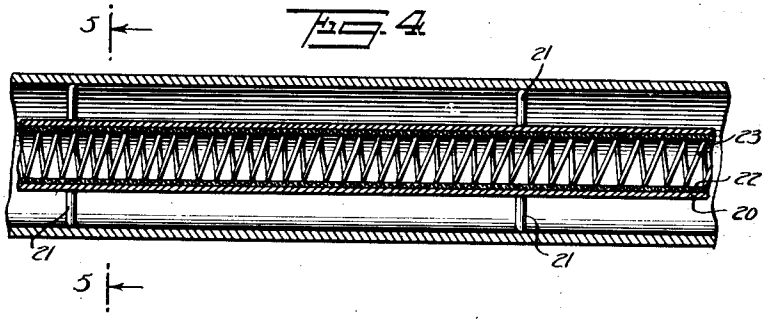
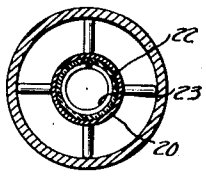


FIG. 5.



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ELECTRIC WATER HEATER

Application filed November 15, 1928. Serial No. 319,658.

This invention relates to electric water heaters.

It is among the objects in the present invention to provide a device of the character set forth adapted for being readily associated with and removed from a sink or other similar kitchen or household fixture.

It is the further object of the invention to provide a device of the character set forth, constituting a self-contained electrically energized water heater, in which a coil is provided, within which a heating element is positioned whereby the passage of water through the coil brings it into successive contact with various portions of the heating element.

The invention includes the provision of a faucet associated with the outlet end of the coil whereby the passage of the water therefrom may be suitably controlled. The invention also includes the provision of a casing, within which the coil is positioned, and which is provided with attaching members whereby the device may be conveniently positioned upon the vertical portion of the sink or other receptacle.

Numerous other objects and features of the present invention will be apparent from the consideration of the following specification taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of one form of my present invention with a portion of the container broken away to disclose the position of the coils therein;

Figure 2 is a horizontal sectional view taken as indicated by the lines 2—2 of Figure 1;

Figure 3 is a vertical sectional view taken as indicated by the lines 3—3 of Figure 2;

Figure 4 is a sectional view through a portion of the coil and the heating element thereunder; and

Figure 5 is a sectional view taken on lines 5—5 of Figure 4.

Referring more particularly to the drawings, the invention is adapted for association with a sink or other suitable fixture 10 which includes a vertically extending portion 11 adapted for attachment to a wall as indicated at 12 in Figure 2. The form of my invention illustrated includes a receptacle 13, substantially rectangular in cross section provided with a pair of apertured vertically extending ears 14 protruding from the top thereof and adapted to receive therethrough suitable fastening means such as threaded members 15. With the receptacle 13 there is provided a coil 16 preferably formed of a plurality of vertically lying sections 17, each section being doubled upon itself to provide U-bends 18 as indicated in Figure 2. Each section thus provides for the conduction of water therethrough in such a manner as to provide for the passage of water the total length of the receptacle four times. Each of the sections 17 is associated with the next adjacent lower section through a provision of the downwardly turned extremities 19 associated with the outlet portion of each section.

For heating the water during its passage through the coil 16, there is provided a heating element including a metallic casing 20 extending through the entire length of the coil 16 and being supported for spaced relation with respect to the sides thereof by the provision of spacing elements 21. Within the metallic casing 20 there is provided an insulating wall 22 therefor preferably formed of asbestos or similar insulation material which is adapted to support in insulated relation to the casing 20 a heating element 23 preferably in the form of a coiled resistance wire. Electrical energy is supplied to the element 23 through an electrical connecting plug 24, receivable within a suitable socket 25 of the receptacle 13. It will be readily understood that the return circuit for the element 23 may be provided by grounding the end of the coil farthest from the socket 25 to the metallic casing 20 which may be associated with one of the conductors of the plug 24.

The lower portion of the front of the receptacle 13 is provided with an aperture through which the discharge end of the coil 16 protrudes, and to which is secured a suitable faucet or other flow-controlling valve 26.

From the foregoing it may readily be seen

that a suitable supply of cold water may be secured from the faucet 26 and through the coil 16 when the resistance element 23 is unenergized and that when it is desired to secure heated water, the plug 24 may be inserted within the socket 25 thus energizing the element 23 the heat of which is dissipated through the insulation 22 casing 20 and utilized for raising the temperature of the water passing through the coil, the result of which being a discharge of heated water from the faucet 26. It will be readily understood that the degree of temperature of the water discharged may be suitably regulated by regulation of the faucet 26 or by regulation of the amount of electrical energization applied through the plug 24.

From the foregoing it may readily be seen that the invention provides a novel improved electrical water heating device which may be readily applied and removed from a standard plumbing fixture and which is simple in structure and operation, and admirably suited for economical manufacture. It is to be understood that only one form of the present invention is here illustrated but that the invention may undergo numerous changes and modifications, and that the full use of equivalents may be resorted to without departing from the spirit or scope thereof as outlined in the appended claims.

I claim:

1. A device of the character described including a receptacle, a water conducting coil within said receptacle having a disharge end protruding therethrough, a faucet associated with said discharge end, a casing within said coil, a heat generating electrical resistance within said casing and spacing means for retaining said casing in spaced relation from said coil.

2. A device of the character described including a receptacle, a water conducting coil within said receptacle having a disharge end protruding therethrough, a faucet associated with said discharge end, a casing within said coil, a heat generating electrical resistance within said casing, spacing means for retaining said casing in spaced relation from said coil and means for supplying electrical energy to said resistance.

3. A device of the character described including a receptacle, a water conducting coil within said receptacle having a discharge end protruding therethrough, a faucet associated with said discharge end, a casing within said coil a heat generating electrical resistance within said casing, spacing means for retaining said casing in spaced relation from said coil, and means for supplying electrical energy to said resistance, said means including a double contact plug and socket fixture.

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