No. 868,401. PATENTED OCT. 15, 1907.

J. H. BOYES.

WATER HEATER.

APPLICATION FILED FEB. 5, 1907.

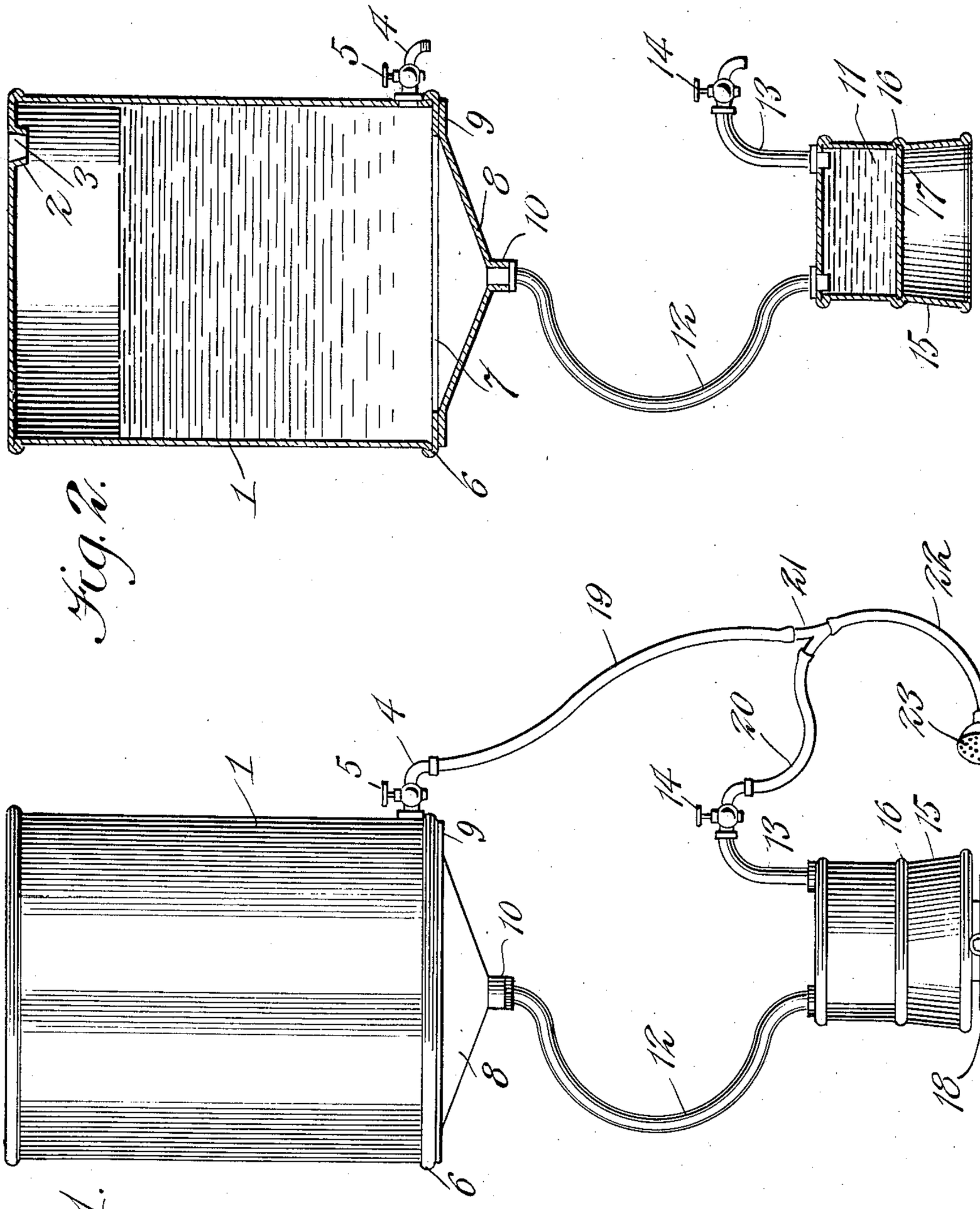

Fig. 1.

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WATER-HEATER.

No. 868,401. Specification of Letters Patent. Patented Oct. 15, 1907.

Application filed February 5, 1907. Serial No. 355,860.

To all whom it may concern:

Be it known that I, JOHN H. BOYES, a citizen of the United States, residing at Alba, in the county of Antrim and State of Michigan, have invented new and useful Improvements in Water-Heaters, of which the following is a specification.

This invention relates to an improved water heating apparatus adapted to be used in barber shops and other places where it is desirable to keep constantly on hand a supply of hot water; said apparatus being especially intended and adapted to be used in localities that are not provided with a water works system.

The invention has for its object to provide a device of this class having a tank or reservoir of considerable capacity and a boiler or heater of relatively small capacity, the contents of which may be constantly kept at a sufficient degrees of heat by means of a lamp or heating device of small size which may be kept constantly burning at a very moderate expense.

Further objects of the invention are to simplify and improve the construction and operation of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing, Figure 1 is a side elevation of a water heating apparatus constructed in accordance with the principles of the invention, showing the same provided with a shampooing attachment. Fig. 2 is a vertical sectional view showing the apparatus without the shampooing attachment.

Corresponding parts in both figures are denoted by like characters of reference.

A tank 1 is provided, which should be of sufficient capacity to hold an ample supply of water. The top of said tank has a filling aperture 2 which is normally kept closed by a plug or stopper 3; near the lower end of the tank is a discharge spout 4 having a valve 5. The bottom of the tank comprises an annulus 6 which is beaded upon the lower edge of the body of the tank, and extends inward beneath the tank, said annulus having a large opening or aperture 7; upon the underside of the annulus 6 is secured a funnel-shaped bottom member 8 having at its upper edge an outward extending circumferential annular flange 9 which is directly secured in any suitable manner upon the underside of the annulus 6; said funnel shaped member also includes the centrally disposed discharge spout 10.

The boiler 11 which is used in connection with the tank consists of a vessel of relatively small capacity, the top of which is connected by a duct or pipe 12 with the discharge spout 10 of the tank or reservoir. The heating vessel or boiler 11 has a discharge spout which is preferably in the shape of a goose neck 13 having a valve 14.

The vessel 11 is provided with a downward extending annular flange 15 which is preferably integral with the side walls of said vessel, forming a downward continuation or extension of the same; said side walls being provided intermediate their upper and lower ends with an annular bead 16 wherein the bottom 17 is fitted.

In practice, the tank or reservoir 1 is to be supported at a suitable elevation to give the requisite head to the contents of the boiler, the connecting pipe or duct 12 being of any desired length. The boiler is to be supported in such a manner as to permit a heater consisting of a lamp 18 to be introduced beneath the bottom thereof. The flame from the lamp 18 will impinge directly upon the underside of the bottom 17 of the boiler, the contents of which will thus be quickly heated; the annular flange 15 incloses an air space which, by the flame of the lamp, is constantly kept at a high temperature, thus keeping the contents of the boiler in a constantly heated condition. As the contents of the boiler is discharged through the spout or goose neck 13, it is replaced by the comparatively cool water from the tank 1, and in this manner constant supply of hot water may be maintained. The comparatively cool water may be drawn, when needed, from the tank 1 through the faucet 4. The contents of the tank 1, which is supported in an elevated position, will cause the contents of the boiler to be discharged with the desired degree of force; the discharge of said contents being to some extent assisted by the pressure developed in the boiler.

In Fig. 1 of the drawings has been shown a shampooing attachment consisting of a Y, the legs of which are provided with flexible members 19 and 20 connected respectively with the faucet 4 and with the discharge spout 13; the third branch of the Y, which latter is designated 21, has a flexible member 22 terminating in a rose 23, through which a spray of water may be discharged; the temperature being regulated, as may be desired, by causing any desired proportion thereof to pass from the boiler.

From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood. Its extreme simplicity enables it to be manufactured and marketed at a moderate expense, and there is no liability of its getting out of order from any cause. The construction of the tank or reservoir is such as to insure strength and durability, and the heater or boiler, being of relatively small capacity, will enable the water sup-

ply to be heated quickly and constantly by an ordinary lamp, at a trifling expenditure of fuel. No attention is required beyond keeping the tank supplied with water and the lamp with oil.

Having thus fully described the invention, what I claim is:—

1. In a water heating device, a tank or reservoir having a bottom comprising an annulus beaded upon the lower edge of the body of the tank and extending inward beneath the latter, and a funnel shaped bottom member having at its upper edge an outward extending annular flange secured upon the underside of said annulus, said funnel shaped bottom member being provided with a centrally disposed downward extending discharge pipe.

2. In a water heater, a tank supported at an elevation and having a valved discharge spout near its lower end and a bottom including a funnel shaped member provided with a downward extending discharge spout, a boiler consisting of a closed vessel having a downward extending annular flange and provided with a valved goose neck extending from the top thereof, a duct connecting the top of the boiler with the discharge spout at the bottom of the tank, and a Y having flexible members connected with the valved discharge spouts of the tank and the boiler, respectively the third branch of the Y having a flexible member terminating in a rose or spraying member.

In testimony whereof, I affix my signature in presence of two witnesses.

JOHN H. BOYES.

Witnesses:
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