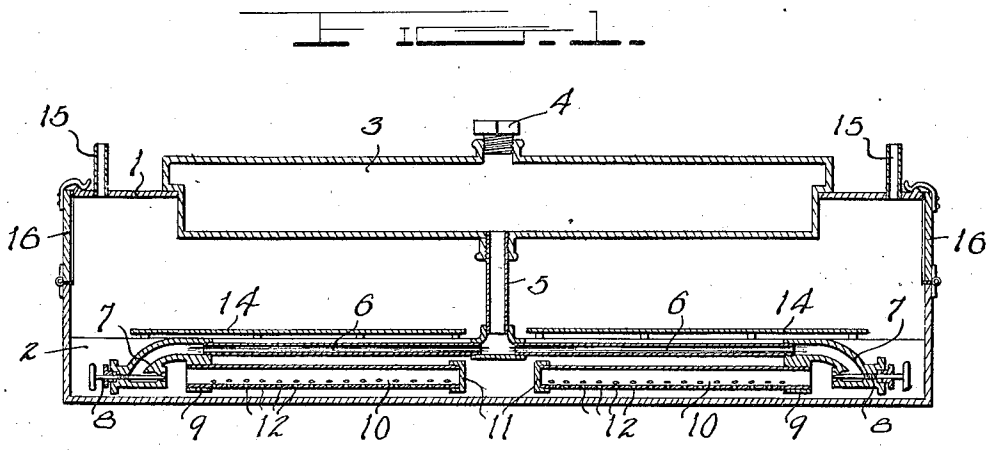
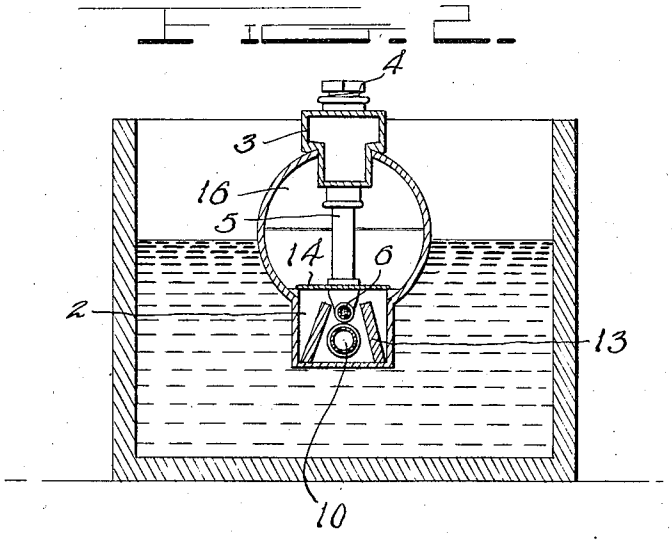
T. G. WISSINGER.

GASOLENE TANK HEATER.

APPLICATION FILED FEB. 20, 1915.

1,156,198. Patented Oct. 12, 1915.





Witnesses

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UNITED STATES PATENT OFFICE.

THEODORE G. WISSINGER, OF LEWISBURG, OHIO.

GASOLENE-TANK HEATER.

1,156,198. Specification of Letters Patent. Patented Oct. 12, 1915.

Application filed February 20, 1915. Serial No. 9,759.

To all whom it may concern:

Be it known that I, THEODORE G. WISSINGER, a citizen of the United States, residing at Lewisburg, in the county of Preble and State of Ohio, have invented certain new and useful Improvements in Gasolene-Tank Heaters, of which the following is a specification.

The present invention relates to certain new and useful improvements in tank heaters, and has for its object to provide a device of this character which embodies novel features of construction whereby a submerged burner is mounted upon and supported by a float so as to rise and fall as the level of the water varies thereby enabling the burner to operate in the most effective manner to heat the water.

Further objects of the invention are to provide a device of this character which is comparatively simple and inexpensive in its construction, which will operate economically and will use but a small amount of fuel, which can be readily taken apart for cleaning or adjustment, and which can be used either on the inside or the outside of a building without danger of fire.

With these and other objects in view, the invention consists in certain novel combinations and arrangements of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a vertical longitudinal sectional view through a tank heater constructed in accordance with the invention. Fig. 2 is a transverse sectional view through the same.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Specifically describing the present embodiment of the invention, the numeral 1 designates a float which may be formed of sheet metal or similar material and is shown as substantially cylindrical in shape. The bottom of the float is formed with a longitudinal pocket 2 extending the full length thereof, the bottom of the pocket being flat and horizontally disposed while the sides of the pocket are flat and vertically disposed. Mounted upon the top of the float is a tank 3 adapted to receive some form of liquid fuel such as gasolene. The bottom of the gasolene tank 3 may be let into the top of the float 1, while the top of the tank is provided with usual filling opening which is normally closed by a plug 4. Extending downwardly from the gasolene tank 3 through the central portion of the hollow float 1 is a fuel supply pipe 5 the lower end of which communicates with horizontally disposed generator tubes 6 which project in opposite directions and are arranged longitudinally with respect to the float. The interior of these generator tubes 6 may be filled with fine wire or the like so as to insure perfect vaporization of the liquid fuel as it passes through the same. The outer end of each of the generator tubes 6 terminates in a nozzle 7 which is offset downwardly and faces rearwardly, said nozzles being controlled by the needle valves 8. Pendent from the outer end of each of the generator tubes 6 is a ring 9 within which one end of a burner tube 10 is fitted, said end of the burner tube being open and arranged directly opposite the nozzle 7 of the generator tube. The opposite end of the burner tube 10 is closed by a removable cap 11, while the lower side of the burner tube is provided with a series of openings 12. The burners and generator tubes 6 are located within the pocket 2 of the float, and heavy iron bars 13 extend longitudinally along the pocket on opposite sides of the burners. These bars 13 are flat and arranged in an upright position so that they converge upwardly. It will also be observed that a horizontal spreader plate 14 is arranged over each of the burners. These spreader plates are spaced from the iron bars 13 and also provide air spaces around the sides thereof so that they will spread the flame without cutting off the supply of air to the burners.

When the burners are in operation, the flames rising therefrom will act upon the generator tubes 6 so as to heat the same and cause any liquid fuel passing therethrough to be thoroughly vaporized. This vaporized fuel will be discharged from the nozzles 7 in the form of jets so as to mix with the air as it jumps across the space between the nozzle and the open end of the burner tube. Combustion will take place within the burner tubes and the flame will pass downwardly through the openings 12 thereof so as to

play upon the bottom of the pocket 2 before rising and acting upon the iron bars 13 and spreader plates 14. The heavy iron bars 13 will assist in holding and radiating the heat while the spreader plates will deflect the flames laterally and cause them to play upon the sides of the float. It will be remembered that the float is formed of sheet metal so that the heat from the burners will be readily absorbed by the water surrounding the float and in direct contact with the thin metal walls thereof.

A ventilator pipe 15 is shown as projecting outwardly from one end of the float so as to provide a free supply of air to the interior of the float without any danger of the water of the tank entering the same. The ends of the float 1 are shown as provided with small doors 16 so that provision is made for obtaining access to the interior of the float for adjusting or cleaning the burners. These small doors 16 may be arranged above the level of the water, although they are preferably provided with packing so as to provide a water tight joint and eliminate any danger of leakage even though the float might be temporarily submerged a little more than normal.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A floating tank heater including a hollow float, a fuel supply tank mounted thereon, a burner arranged in the bottom of the float, a fuel supply pipe leading from the tank to the burner, heavy heat retaining and radiating bars arranged adjacent the burner, and a spreader plate arranged over the burner for causing the flames to act upon the walls of the float.

2. A floating tank heater including a hollow float having a pocket in the bottom thereof, a fuel supply tank mounted upon the float, a burner arranged within the pocket of the bottom of the float, a fuel supply pipe leading from the tank to the burner, heat retaining and radiating bars arranged within the pocket upon opposite sides of the burner, and a spreader plate arranged over the burner for deflecting the flames laterally against the walls of the float.

3. A floating tank heater including a hollow float, a fuel supply tank mounted upon the top of the float, a fuel supply pipe extending downwardly from the tank, a horizontal generator tube communicating with the fuel supply pipe and arranged adjacent the bottom of the float, a nozzle at the end of the generator tube, said nozzle being offset downwardly and facing rearwardly, a burner tube carried by the generator tube and having an open end arranged opposite the nozzle, and spreading means for causing the flames from the burner to act upon the walls of the float.

4. A floating tank heater including a hollow float, a fuel supply tank mounted upon the top thereof, a fuel supply pipe extending downwardly from the tank, a horizontal generator tube communicating with the fuel supply pipe, a nozzle at the end of the generator tube, said nozzle being offset downwardly and facing rearwardly, an arm pendent from the generator tube, a horizontal burner tube mounted upon the arm and having an open end arranged opposite the nozzle, heat retaining bars extending longitudinally along opposite sides of the burner tube, and a spreader plate arranged over the burner for deflecting the flames laterally into engagement with the walls of the float.

5. A floating tank heater including a hollow float having a pocket in the bottom thereof, a fuel supply tank mounted upon the top of the float, a fuel supply pipe extending downwardly from the tank, oppositely extending horizontal generator tubes communicating with the fuel supply pipe, a nozzle carried by the outer end of each of the generator tubes, said nozzles being offset downwardly and facing rearwardly, a horizontal burner tube carried by each of the generator tubes and having an open end arranged opposite the corresponding nozzle, longitudinally disposed heat retaining bars arranged within the pocket at the bottom of the float and extending along opposite sides of the burners, and deflector plates arranged over the burners for directing the flames into engagement with the walls of the float.

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

THEODORE G. WISSINGER.

Witnesses:
H. L. Steck,
C. R. Spitler.