

UNITED STATES PATENT OFFICE.

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STEAM OR WATER HEATER.

No. 849,492.

Specification of Letters Patent.

Patented April 9, 1907.

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To all whom it may concern:

Be it known that I, WILLIAM C. OBERLY, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Steam or Water Heaters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the numerals and figures of reference marked thereon, in which—

Figure 1 is a perspective view of my complete device, showing parts broken away. Fig. 2 is a central vertical section of the same. Fig. 3 is a top view of the heater and air-pipes, showing the upper plate removed.

The present invention has relation to steam or water heaters; and it consists in the novel arrangement hereinafter described, and particularly pointed out in the claim.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the lower or base section of the heater, which may be of any desired size, reference being had to the amount of heat designed to be produced. Within the casing or base section 1, or in close proximity thereto, is located the fuel-tank 2, which may be of any suitable construction, inasmuch as the tank within itself forms no particular part of the present invention. From the lower part 3 of the tank 2 leads the supply-pipe 4, which is connected to the burner 5, which burner within itself does not form any particular part of the present invention, except a burner of some kind must necessarily be employed. Directly above the burner 3 is located the flue 6, which flue is surrounded by the lower tapered portion of the water-casing 7, which water-casing is extended upward to produce the upper water-chamber or what might be termed the "upper portion" of one continuous water-chamber.

Within the water-chamber are located the pipes 8 and 9. Pipe 9 is of loop form, communicating at its ends with the flue 6 and extending upwardly therefrom. The pipes 8

communicate with the loop at its upper portion and extend laterally therefrom through the water-chamber casing, as illustrated in Fig. 1. Said pipes 8 and 9 are submerged in the water contained in the water-chamber. Radiating-tubes 11 communicate with the water-chamber and at its upper portion and extend upwardly therefrom.

The object and purpose of providing the tapered casing 7 is to decrease the volume of water in the lower portion of the water-chamber, and thereby provide for better heating the water in the upper portion of the water-chamber, but at the same time utilize the entire amount of radiating-surface of the flue 6.

For the purpose of providing means for regulating the burner from time to time the casing 1 is provided with the door 12 and the casing 7 with the door 13, and for the purpose of providing means for holding the water contained in the chamber 7 the side and top flanges 14^a are provided, which are of course connected to the casing 7 in such a manner that no leakage will take place.

For the purpose of filling the water-chamber from time to time the supply-pipe 14 is provided. The radiator is supplied with the ordinary vent 16. It will be understood that the radiator should be properly covered by the cap or plate 17, which fits over the radiator in the usual manner.

For the purpose of providing a means for removing the fuel-tank 2 from time to time the door 18 is provided. For the purpose of giving proper draft the bottom or lower end of the flue 6 is open, and for the purpose of cutting off the water contained in the water-chamber the top or upper end of the tube is closed.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of a base-section, a water-chamber casing supported thereon, a burner located within said base-section, a vertical flue located over the burner and within the water-chamber and provided with a closed upper end, a draft-pipe of loop form communicating at its ends with the vertical

flue and extending above the same, laterally-
extending offtake-pipes communicating with
said draft-pipe at opposite sides thereof and
at the portion of the loop opposite to the ver-
tical flue, substantially as and for the pur-
pose specified.

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In testimony that I claim the above I have

hereunto subscribed my name in the presence
of two witnesses.

WILLIAM C. OBERLY.

Witnesses:

J. A. JEFFERS,

F. W. BOND.