

No. 736,898.

PATENTED AUG. 18, 1903.

E. O. WHITTINGTON.
HEATING APPARATUS FOR TANKS.

APPLICATION FILED MAY 2, 1903.

NO MODEL.

Fig. 1.

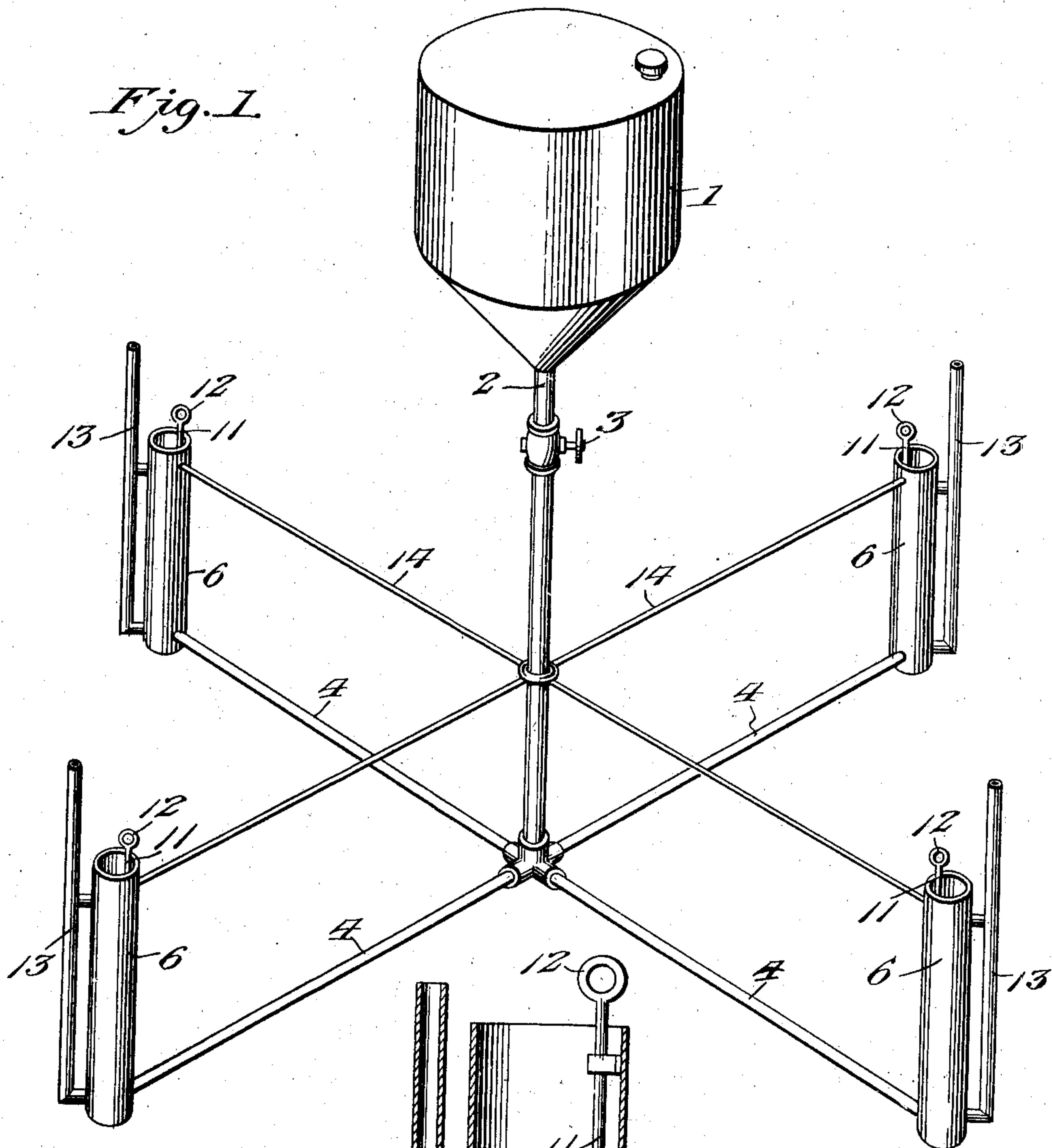
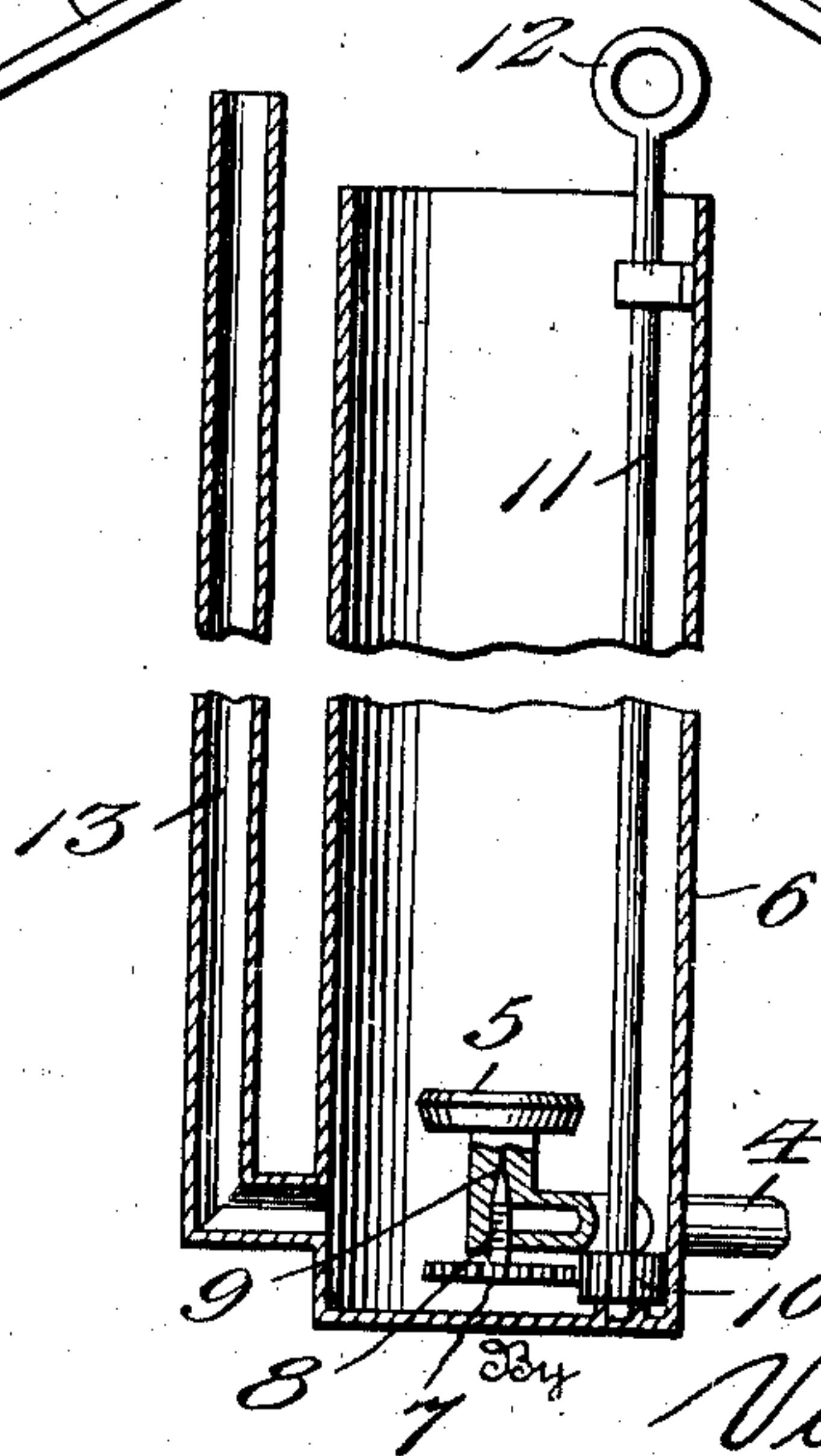


Fig. 2.



Witnesses

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HEATING APPARATUS FOR TANKS.

SPECIFICATION forming part of Letters Patent No. 736,898, dated August 18, 1903.

Application filed May 2, 1903. Serial No. 155,345. (No model.)

To all whom it may concern:

Be it known that I, ELMER O. WHITTINGTON, a citizen of the United States, residing at Oxford, in the county of Johnson and State of Iowa, have invented new and useful Improvements in Heating Apparatus for Tanks, of which the following is a specification.

My invention relates to new and useful improvements in heating apparatus for tanks. Its object is to provide an apparatus of this character which is simple, light, and durable, and which may be readily placed within a tank and will quickly heat the water therein.

The invention consists in providing a reservoir-tank for oil, and from the bottom of this tank projects a discharge-pipe communicating at its lower end with a series of laterally-extending distributing-pipes. Each distributing-pipe has a burner at its outer end which is arranged in a water-tight cylinder, the height of which is greater than the depth of the water in the tank in which the apparatus is to be placed. Novel valve-operating mechanism is arranged in each of the cylinders, and air-supply pipes extend downward into these cylinders so as to supply oxygen to the burner.

The invention also consists in the novel construction, combination, and arrangement of the several parts, which will be more fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved heating apparatus, and Fig. 2 is an enlarged section through one of the cylinders and showing the means for operating the valve of the burner.

Referring to the figures by numerals of reference, 1 is an oil tank or reservoir, from the bottom of which extends a discharge-pipe 2, which may have a suitable valve 3 therein. Extending laterally from the lower end of the pipe 2 are a number of distributing-pipes 4, each of which has a burner 5 at its outer end, and said burner is inclosed by a water-tight cylinder 6, the height of which is greater than the depth of the water in the tank in which the apparatus is adapted to be placed.

A gear 7 is secured to the stem 8 of the valve 9 of the burner, and this gear meshes with another gear 10, journaled in any suitable

manner within the cylinder and having a revoluble rod 11 extending from the center thereof to a point outside the cylinder, where it is provided with a handle 12, by means of which the rod 11 and the gears may be rotated. An air-inlet pipe 13 extends downward to a point adjacent the bottom of the cylinder and opens thereinto, so as to supply the burner with a sufficient amount of oxygen to support combustion. Brace-rods 14 are fastened to the pipe 2 in any suitable manner and to the upper ends of cylinders 6.

To use the apparatus herein described, valve 3 is opened and oil will flow downward through pipe 2 and distributing-pipes 4 to the burners 5, where it may be ignited. The air entering the bottoms of the cylinders through the pipes 13 will be sufficient to support combustion, and it is obvious that the cylinders 6 will be heated to high temperatures and the water surrounding them will also be heated. When for any reason it is desired to extinguish one or more of the flames, it is merely necessary to turn the rod 11 so as to transmit rotary motion therefrom to the valve 9 through the gears 7 and 10. It will of course be understood that by increasing the number of cylinders 6 the water in the tank in which the apparatus is placed will be heated more rapidly, also, by raising the apparatus and turning it within the tank the operation of heating will be expedited.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes and alterations as may fairly fall within the scope of my invention.

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

1. In an apparatus of the character described, the combination with a fuel-containing tank having a valved discharge-pipe extending therefrom, of distributing-pipes extending laterally from the discharge-pipe, a burner upon each distributing-pipe, a water-tight cylinder inclosing the burner, and an

air-inlet opening into the bottom of the cylinder and extending from a point above said cylinder.

2. In an apparatus of the character described, the combination with a fuel-tank having a valved discharge-pipe extending therefrom; of laterally - extending distributing-pipes communicating with the discharge-pipe, burners at the outer ends of the distributing-pipes, water - tight cylinders inclosing the burners, air-inlet pipes extending downward and opening into the bottoms of the cylinders, and means extending above the cylinders for operating valves in the burners.

3. In an apparatus of the character described, the combination with a fuel-tank having a discharge-pipe extending therefrom, of laterally-extending distributing-pipes upon the discharge-pipe, burners at the outer ends of the distributing-pipes, water-tight cylinders inclosing the burners, air - inlet pipes opening into the bottoms of the cylinders and

extending to points above the cylinders, a valve within each burner, a gear for rotating the same, a second gear journaled adjacent to said burner, the two gears meshing, and an operating-rod revoluble with the second gear and extending to a point above the cylinder.

4. In an apparatus of the character described, the combination with a fuel-tank having a valved discharge-pipe extending therefrom; of laterally - extending distributing-pipes upon the discharge-pipe, journals at the outer ends of the distributing-pipes, water-tight cylinders inclosing the burners, air-inlet pipes opening into the bottoms of the cylinders, and brace-rods connecting the cylinders with the discharge-pipe.

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

ELMER O. WHITTINGTON.

Witnesses:

MILO J. WHITTINGTON,
FRANK HARRIS.