

No. 641,656.

Patented Jan. 16, 1900.

W. G. TAYLOR.

WATER HEATER AND BURNER THEREFOR.

(Application filed July 8, 1899.)

(No Model.)

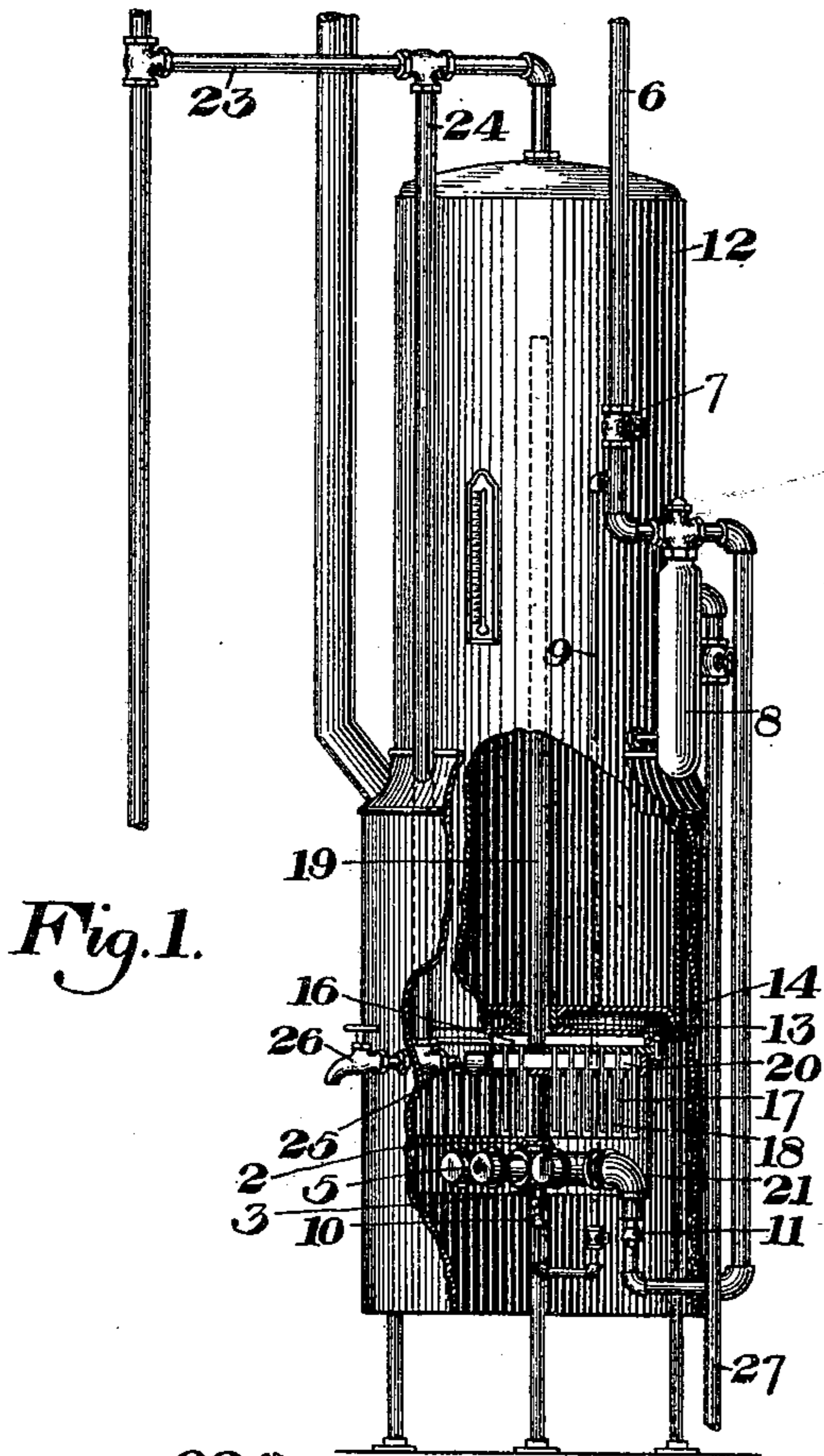


Fig. 1.

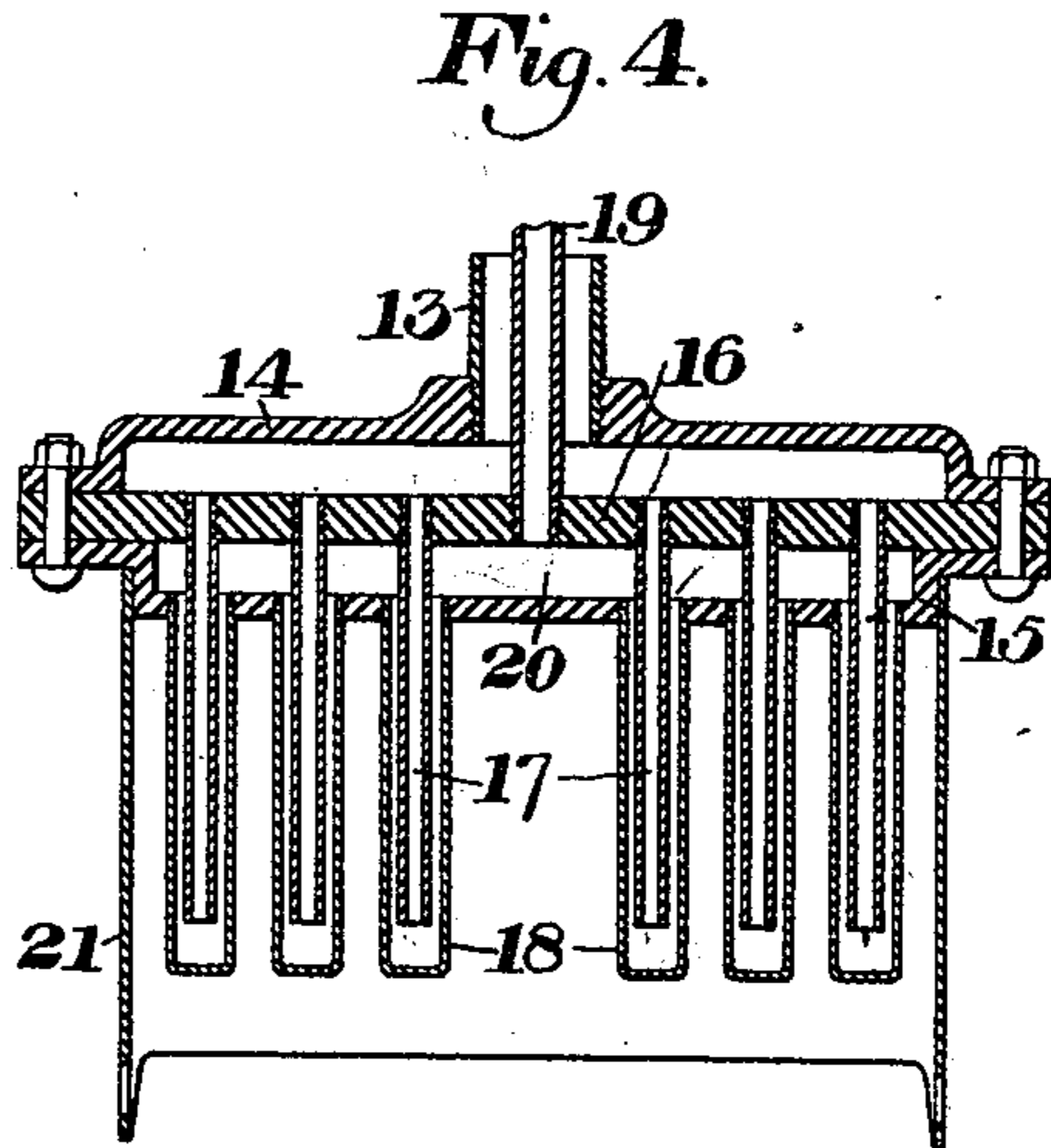


Fig. 4.

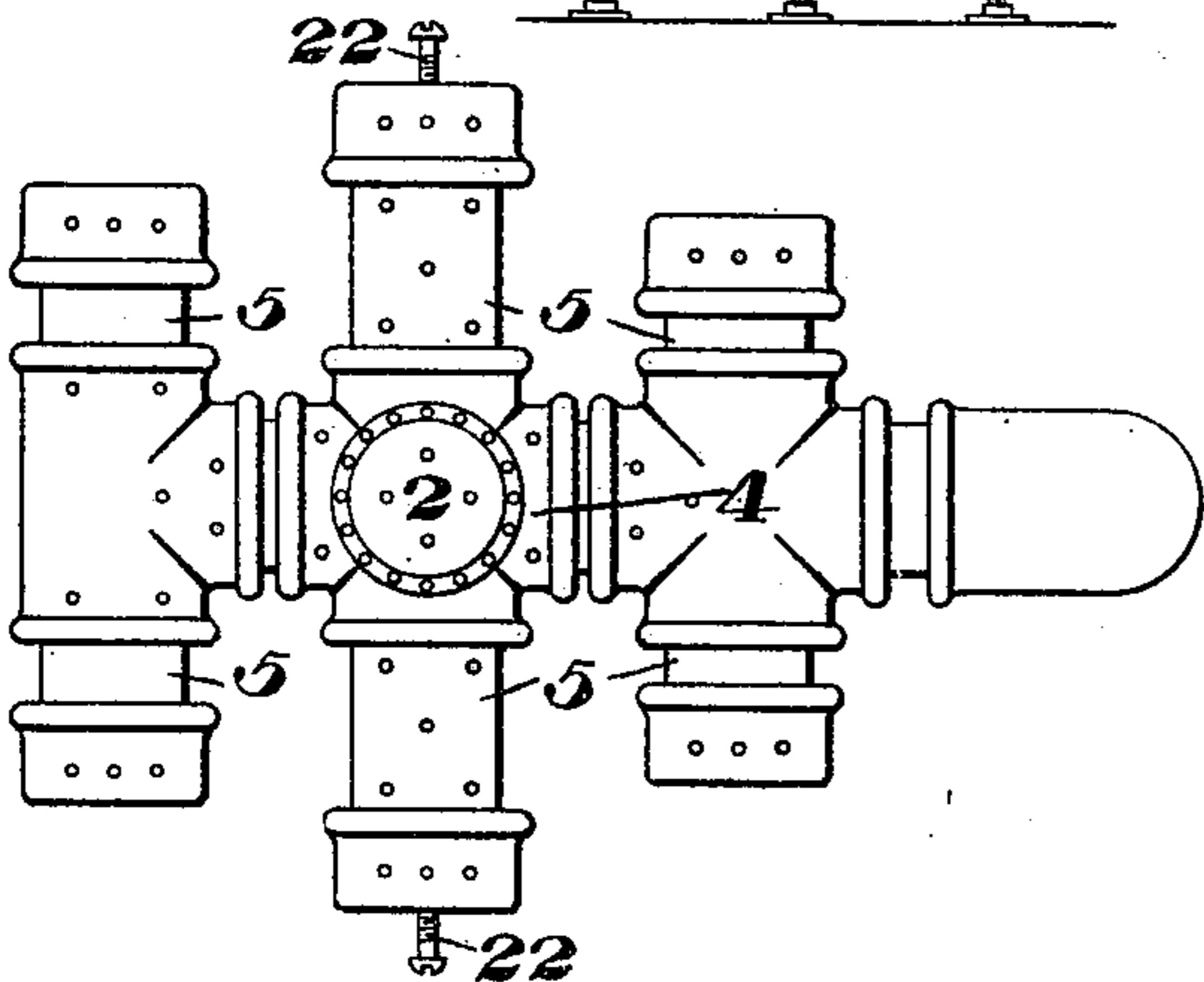


Fig. 2.

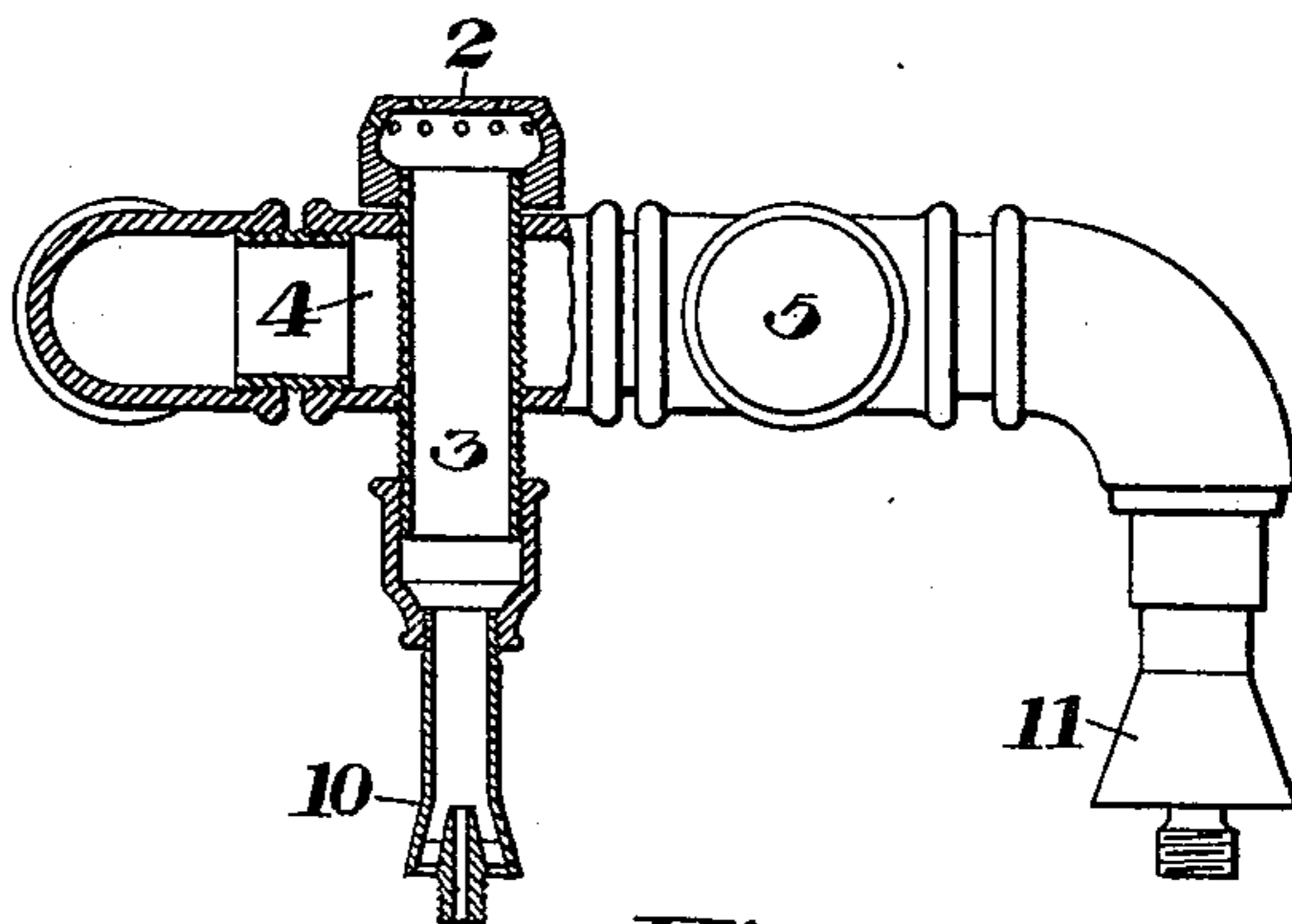


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM G. TAYLOR, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE
TAYLOR BURNER AND ELECTRO-PLATING COMPANY, LIMITED, OF SAME
PLACE.

WATER-HEATER AND BURNER THEREFOR.

SPECIFICATION forming part of Letters Patent No. 641,656, dated January 16, 1900.

Application filed July 8, 1899. Serial No. 723,230. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. TAYLOR, of
Pittsburg, in the county of Allegheny and
State of Pennsylvania, have invented a new
5 and useful Improvement in Water-Heaters
and Burners Therefor, of which the following
is a full, clear, and exact description, refer-
ence being had to the accompanying drawings,
forming part of this specification, in which—
10 Figure 1 is a side elevation, partly broken
away, showing my improved water-heater and
burner. Fig. 2 is a top plan view of the
burner. Fig. 3 is a side elevation of the
same, partly in section; and Fig. 4 is a cen-
15 tral vertical section, on a larger scale, of a
drop-tube attachment of the heater.

My invention relates to water-heaters and
the burners used in connection therewith and
is designed to improve the action of heaters
20 having drop-tubes and a central circulating-
pipe by providing a new arrangement of
burners to coact therewith.

In the drawings, 2 represents a pilot-light
burner having a stem 3, which extends
25 through the center of a main burner, consisting
of a body portion 4, with branches 5, which
extend therefrom, these parts having upper
perforations forming a burner which sur-
rounds the centrally-located pilot-light
30 burner. It will be noted that the pilot-light
burner is separate and distinct from the main
burner, but forms practically a part thereof,
and is of sufficient size to materially heat the
water in the heater and keep it at a uniform
35 temperature when no water is being drawn
from it.

6 is the gas-supply pipe, having a regulat-
ing-valve 7 and provided with a right-angled
bend containing a valve controlled by a ther-
40 mostat located in a water-barrel 8. The sup-
ply-pipe 9 for the pilot-light burner leads
from between the valve 7 and the thermostat-
controlled valve to the mixer 10 for the pilot-
light burner. The main gas-supply pipe 6
45 leads to the mixer 11 at one end of the main
burner.

This heater consists of a cylindrical body
or shell 12, having centrally screwed to its
lower head a short tube-section 13. To the
50 lower end of this tube-section is secured a head

14, which is bolted to a lower head 15, with
an intervening diaphragm or partition 16.
The partition is provided with a series of tubes
17, open at both ends and which extend down-
wardly into the drop-tubes 18, secured in the 55
lower head. A central circulating-tube 19
opens into the chamber 20, between the dia-
phragm and the lower head, and extends up-
wardly within the heater-body. A depend-
ing shield 21 is secured to the lower head and 60
surrounds the drop-tubes, which tubes are ar-
ranged in annular series, leaving an open cen-
tral space which is entered by the flame of
the central pilot-light burner. This burner
being located immediately below the circu- 65
lating-tube 19 acts directly upon the water
entering this tube, and when no water is be-
ing drawn off—as, for instance, during the
night—it will keep the water at an even tem-
perature while the main burner is shut off. 70
The burners are supported by depending
wires secured to the shield 21 and engaging
screws 22 in the side portions of the main
burner.

The hot-water-outlet pipe 23 leads from the 75
top of the heater-body, and a branch pipe
24 connects the outlet with a short pipe 25,
leading directly into the chamber 20. The
outer end of the pipe 25 is provided with a
spigot 26, by which hot water may be immedi- 80
ately drawn from the heater.

When in operation, the thermostat con-
trols the flow of gas to the main burner, cut-
ting off the supply of gas when the tempera-
ture reaches a certain limit and allowing gas 85
to flow to the main burner when a house-
spigot is opened and water enters the heater
through a supply-pipe 27, leading to the water-
barrel 8, the lower end of which is connected
to the heater-body. The gas-supply to the 90
pilot-light being independent of the thermo-
stat will constantly furnish gas to the pilot-
light burner, which conveys heat to the water
in the central portion of the chamber 20 and
which will pass upwardly through the circu- 95
lating-tube 19.

The advantages of my invention result
from the peculiar relation of the pilot-light
burner and main burner to the drop-tubes
and the circulating-pipe.

Many changes may be made in the form and arrangement of the pilot-light burner and the main burner, as well as the other parts, without departing from my invention.

5 I claim—

1. A water-heater having drop-tubes depending from its bottom, a central circulating-pipe, a main burner located beneath the drop-tubes, and a pilot-light burner in the center
10 of the main burner and having a separate source of supply; substantially as described.

2. A water-heater, having drop-tubes, depending from the lower head, with an open

central space in the central portion of the head, a central circulating-pipe over the said
15 space, a main burner located beneath the drop-tubes, and a pilot-light burner arranged centrally to direct its flame into the central space of the lower head; substantially as described.
20

In testimony whereof I have hereunto set my hand.

WILLIAM G. TAYLOR.

Witnesses:

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G. B. BLEMMING.