

J. W. GUIMONT.
WATER HEATER.
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Patented Dec. 31, 1912.

1,048,827.

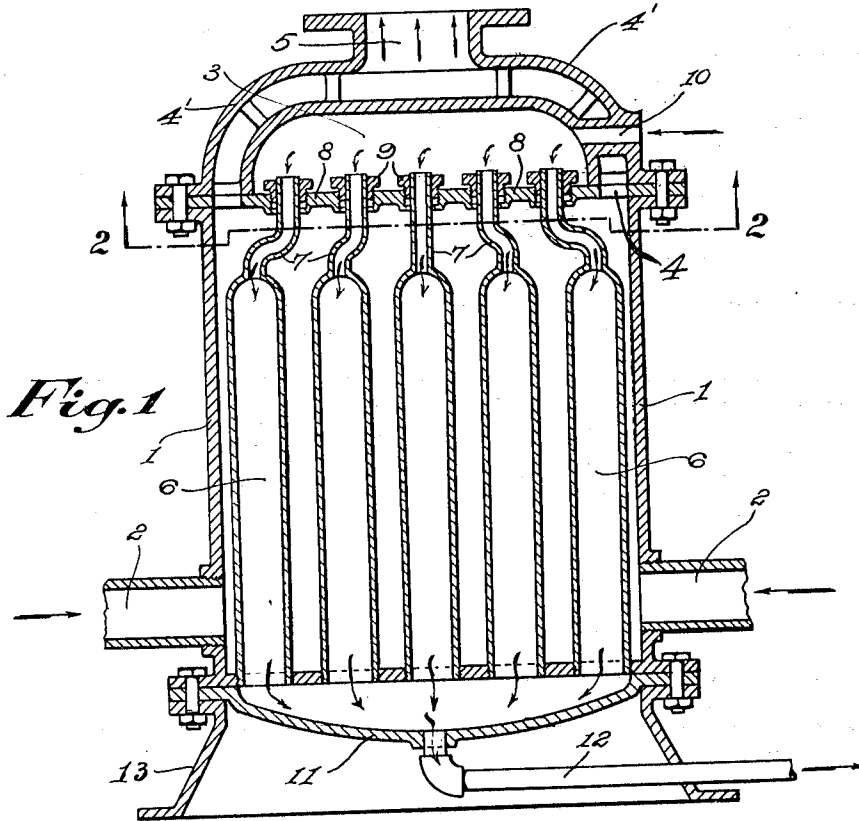


Fig. 1

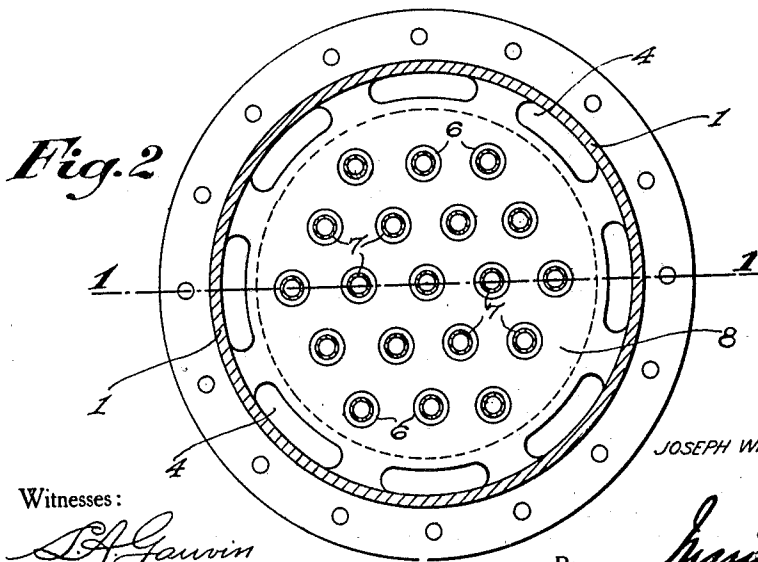


Fig. 2

Witnesses:

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JOSEPH WILLIAM GUIMONT, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO JOSEPH ALDERIC RAYMOND, OF MONTREAL, CANADA.

WATER-HEATER.

1,048,827.

Specification of Letters Patent. Patented Dec. 31, 1912.

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To all whom it may concern:

Be it known that I, JOSEPH WILLIAM GUIMONT, a subject of the King of Great Britain, residing at Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Water-Heaters; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention to be hereinafter described relates to water heaters.

In order to more clearly disclose the construction, operation, and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings like reference characters designate the same parts.

In the drawings: Figure 1 is a central, vertical, cross section through the heater on line 1—1 of Fig. 2; and Fig. 2 is a horizontal cross section on line 2—2 of Fig. 1, looking in the direction of the arrows.

Referring to the drawings in detail, 1 indicates the body of the heater provided with inlets 2 in the lower part of its side wall for water, air, or other fluid and having a plurality of openings in its base or bottom wall. To the upper end of this body is securely bolted or otherwise attached a head formed with a large inner compartment 3 and an outer inclosing shell or jacket 4'. The lower edge of the jacket is open to communicate with the upper end of the body 1, by way of accurate openings 4 in a plate 8, hereinafter described. The upper end or top of the jacket 4' is provided with an outlet 5. Securely seated in the openings of the base are a plurality of large vertically arranged heating tubes 6 each considerably contracted at its upper end and terminating in a short pipe or tube 7 of greatly reduced cross sectional area. The upper end of each tube 7 is seated in an opening in a plate 8 clamped between the head and body 1. A collar 9 threaded into a cooperating socket in the plate 8 surrounds the projecting end of each tube 7 and keeps it in proper position. A passage or flue 10 leads through the shell 4', and the intervening space between it and chamber 3, and communicates with chamber 3 at any desired point, to permit

the flow of fluid to and from the compartment 3 and heating tubes 6. The heating fluid passes downwardly through tubes 6, into the space formed between the lower end of body 1 and a concave plate 11, and exhausts through pipe 12. The plate 11 is clamped between the lower end of the body and the upper edge of the base 13 and may be readily removed so that a heating burner may be substituted.

The result of the above described construction and arrangement is that the greatest possible proportion of the heat is utilized.

It is thought that the operation and use of the invention will be clear from the preceding detailed description.

Changes may be made in the construction, arrangement, and disposition of the several parts of the invention without in any way departing from the field and scope of the same, and it is meant to include all such within this application wherein only a preferred form has been disclosed.

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

1. In combination, a heater body provided with an inlet in the lower part of its side and having a plurality of openings in its base, a head provided with a large inner compartment and an outer inclosing jacket spaced therefrom and provided with an outlet leading from said jacket, means for clamping said head upon said body, a plate clamped between said head and said body, a plurality of tubes having their opposite ends seated, respectively, in said plate and in the aforesaid base, and a passage leading through said jacket and into said compartment.

2. In combination, a heater body provided with an inlet in the lower part of its side wall and having a plurality of openings in its base, a head provided with a large inner compartment and an outer inclosing jacket spaced therefrom and provided with an outlet leading from said jacket, means for clamping said head upon said body, a plate clamped between said head and said body, a plurality of tubes having their opposite ends seated, respectively, in said plate and in the aforesaid base, a passage leading through said jacket and into said compartment, and a concaved plate removably secured to said base and provided with an exhaust passage.

3. In combination, a heater body provided with an inlet in the lower part of its side wall and having a plurality of openings in its base, a head provided with a large inner compartment and an outer inclosing jacket spaced therefrom and provided with an outlet leading from said jacket, means for clamping said head upon said body, a plate clamped between said head and said body, a plurality of tubes having their opposite ends seated, respectively, in said plate and in the aforesaid base, said tubes being of uniform diameter from their lower toward their upper ends and terminating in short tubes of very greatly reduced diameter, and a passage leading through said jacket and into said compartment. 15

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOSEPH WILLIAM GUIMONT.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."