

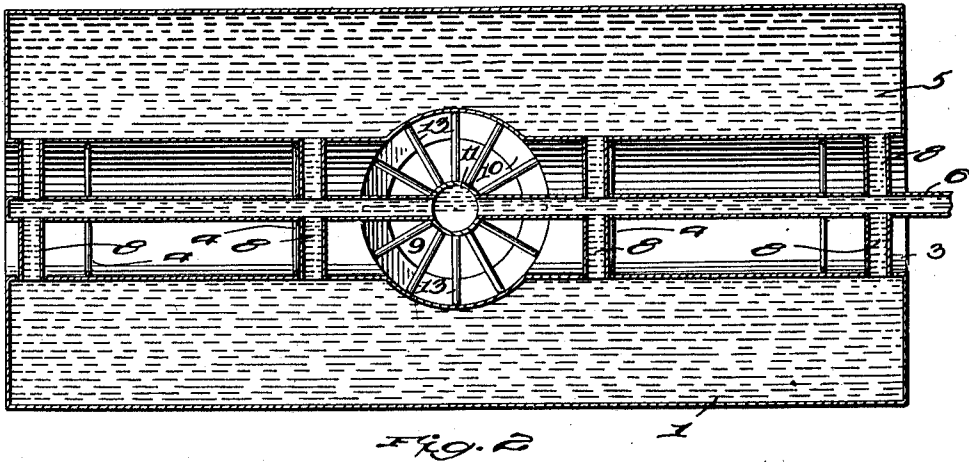
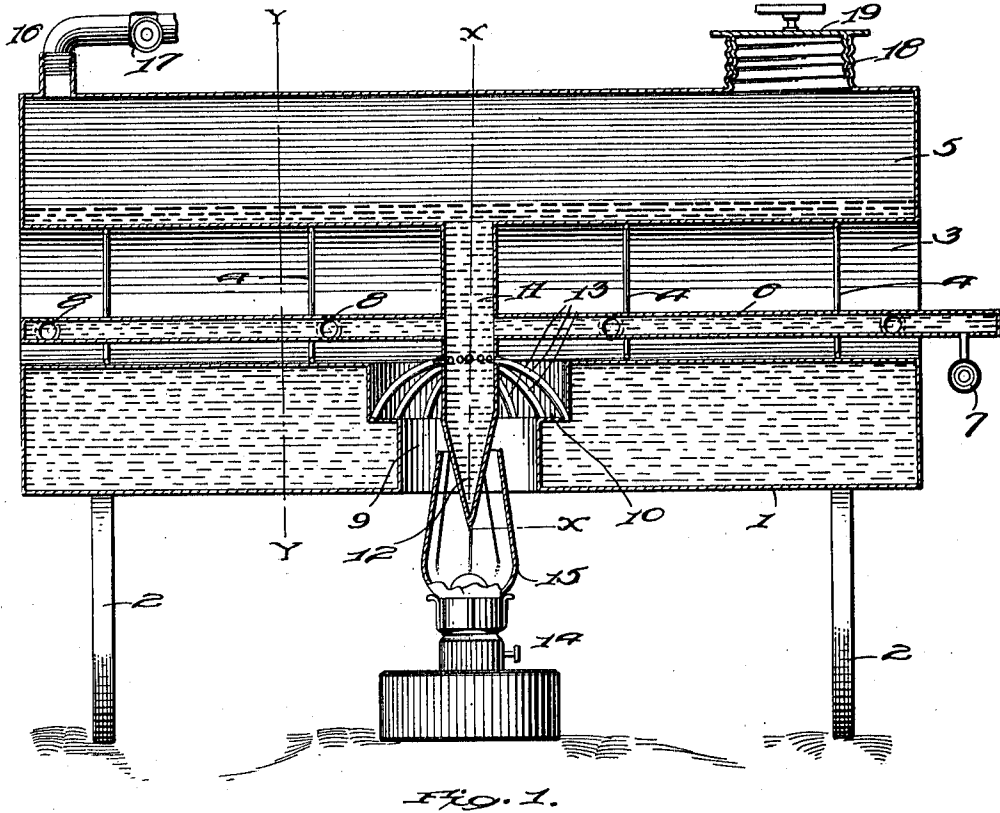
F. GUAY.
BOILER.

APPLICATION FILED MAY 24, 1911.

Patented May 21, 1912.

2 SHEETS-SHEET 1.

1,026,800.



Witnesses
J. M. Lee
E. W. Cady

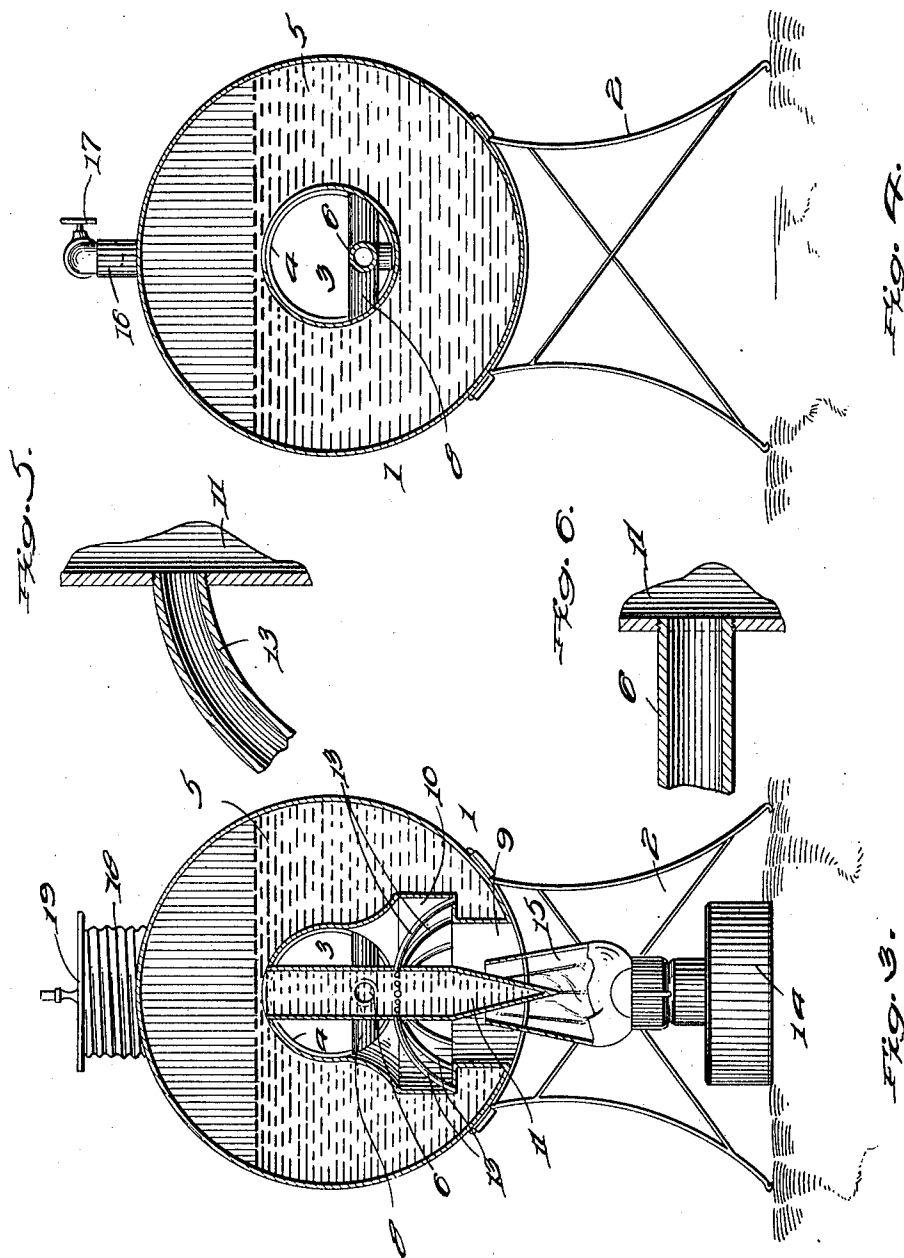
Inventor
Felix Guay.
By *E. C. Vrooman,*
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BOILER.

Patented May 21, 1912.

2 SHEETS—SHEET 2.

1,026,800.



WITNESSES ·

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UNITED STATES PATENT OFFICE.

FELIX GUAY, OF MICHIGAMME, MICHIGAN.

BOILER.

1,026,800.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed May 24, 1911. Serial No. 629,117.

To all whom it may concern:

Be it known that I, FELIX GUAY, a native of French Canada, residing at Michigamme, in the county of Marquette and State of Michigan, have invented certain new and useful Improvements in Boilers, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to domestic boilers and has special reference to that class of domestic boilers which are adapted to be heated by a lamp.

15 The invention has for its object to provide an improved domestic boiler of this kind so constructed and arranged that the heat from the flame of the lamp will be so radiated as to thoroughly heat the water in the boiler.

20 Referring to the accompanying drawings:—Figure 1 is a view in longitudinal section of a boiler constructed in accordance with this invention. Fig. 2 is a plan view thereof in longitudinal section. Fig. 3 is a view in cross section on the line X—X, Fig. 1. Fig. 4 is a view in cross section on the line Y—Y, Fig. 1. Fig. 5 is an enlarged detail view in section of a portion of the boiler and one of the water circulating pipes connected therewith. Fig. 6 is an enlarged detail view in section of a portion of the boiler and the water circulating pipes connected therewith.

35 In carrying out the invention a cylindrical boiler 1 of suitable size is provided which is mounted upon suitable supports 2. The boiler is formed with a central enlarged longitudinal tube 3 extending from end to end of the boiler and open at its ends and braced by suitable braces such as the rods 4. The tube 3 forms an annular chamber 5 in the boiler which encircles the longitudinal tube 3. Extending through the tube 3 is a pipe 6 which projects slightly from one end of the tube 3 and which has at its projecting end a supply pipe 7 for supplying water to the boiler. The pipes 8 each open into the pipe 6 and also have their ends open into the annular chamber 5. The lower portion of the boiler is provided with a tubular passage way 9 having an enlarged step shaped upper end 10 which opens into the tube 3. Projecting through the passage way 9, the enlarged upper end 10 and across the pipe 3 is a tube 11 opening at its upper end into the upper part of the boiler and formed with

a tapering closed lower end 12. Projecting from the sides of the pipe 11 in the step shaped upper end 10 of the passage way 9 are a number of curved water circulating pipes 13 communicating with the pipe 11 and opening into the lower portion of the annular chamber 5. The boiler constructed and arranged as hereinbefore set forth is heated by means of a lamp 14, the tapering lower end of the pipe 11 projecting into the chimney 15 of the lamp. The top of the boiler is provided with a pipe 16 for the escape of steam which is controlled by a valve 17 in said pipe. The top of the boiler is also provided with a short vertical tubular projection 18 closed by a screw cap 19 which may be removed when it is desired to ascertain the amount of water in the boiler.

75 The lamp 14 being lighted, the heat from the flame thereof will heat the water in the lower end of the pipe 11 and the heat passing up from the upper end of the chimney 15 will pass over the pipes 13 and by means of the air circulating upward from the passage way 9 together with the air passing through the tube 3 will be carried over the pipe 6 and across pipes 8, thereby heating the water circulating through the same as well as heating the tube 3 and thereby heating the water in the annular chamber 5 surrounding said tube. It will be seen therefore that by means of the construction and arrangement of the boiler as herein set forth, the heat from the lamp will be completely utilized to thoroughly heat the different parts of the boiler exposed thereto as well as the water circulating pipes arranged in the path of the heated air as it passes through the several passage ways in the boiler.

95 A boiler of this construction is especially adapted to be used in rooms of houses.

What I claim is:—

1. A horizontal boiler formed with a longitudinal tube extending from end to end thereof and open at each end and forming an annular chamber in the boiler, a vertical tubular air passage way extending across the lower portion of said annular chamber and opening at its upper end into said tube and at its lower end into the open air, a tube extending across said horizontal tube and through said vertical passage way and open at its upper end and closed at its lower end, and branch water circulating pipes located in the longitudinal tube and in the vertical passage way and communicating with said

vertical tube and with the annular chamber in the boiler.

2. A horizontal boiler formed with a longitudinal tube extending from end to end thereof and open at each end and forming an annular chamber in the boiler, a vertical air passage way extending from the bottom of said longitudinal tube and opening into the open air, a tube closed at its lower end depending from the upper side of said longitudinal tube and opening into the boiler and projecting across said longitudinal tube and through said vertical passage way, and branch water circulating pipes connecting said vertical tube with the boiler.

3. A horizontal boiler having a longitudinal tube extending from end to end of the boiler and open at each end and forming an annular chamber in the boiler, a vertical tubular air passage way connecting said tube with the open air beneath the boiler,

a vertical tube opening at its upper end into the boiler and depending from the upper side of the longitudinal tube and across the same and through the vertical air passage way and formed with a closed tapering lower end, a longitudinal pipe extending through said longitudinal tube and having cross pipes connecting it with the annular chamber in the boiler, means for supplying water to said longitudinal pipe, said longitudinal pipe opening into said vertical tube, and water circulating pipes located in said vertical air passage way and communicating with the vertical tube and with the annular chamber in the boiler.

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

FELIX GUAY.

Witnesses:

G. J. SCHWENDEMAN,
CHARLES F. DIEDRICH.

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