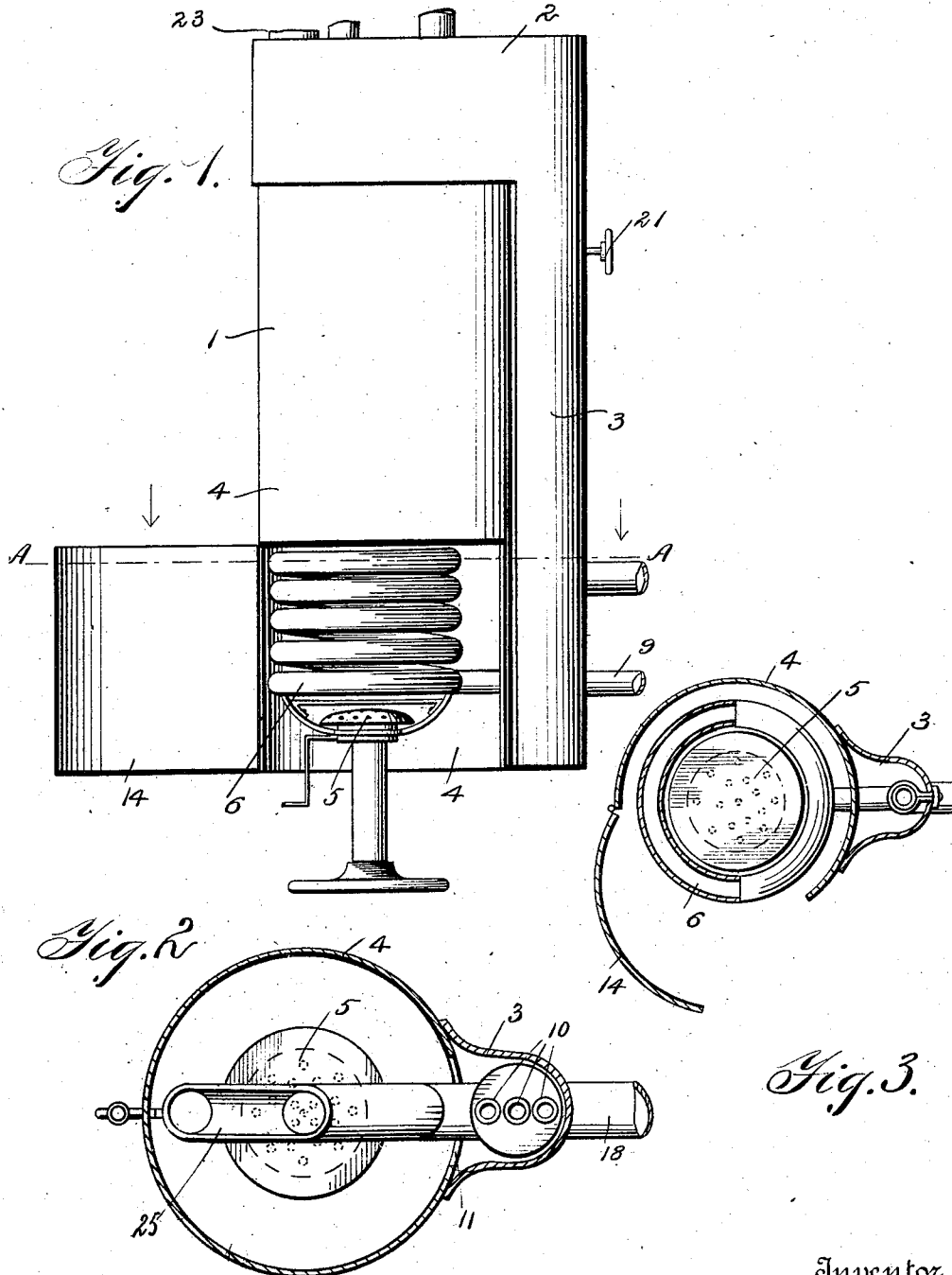


M. E. OGDEN.
WATER HEATING DEVICE.
APPLICATION FILED JAN. 4, 1911.

1,014,170.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 1.



Witnesses
M. P. McKee
E. M. Gillespie

Inventor
M. E. Ogden
Attorney

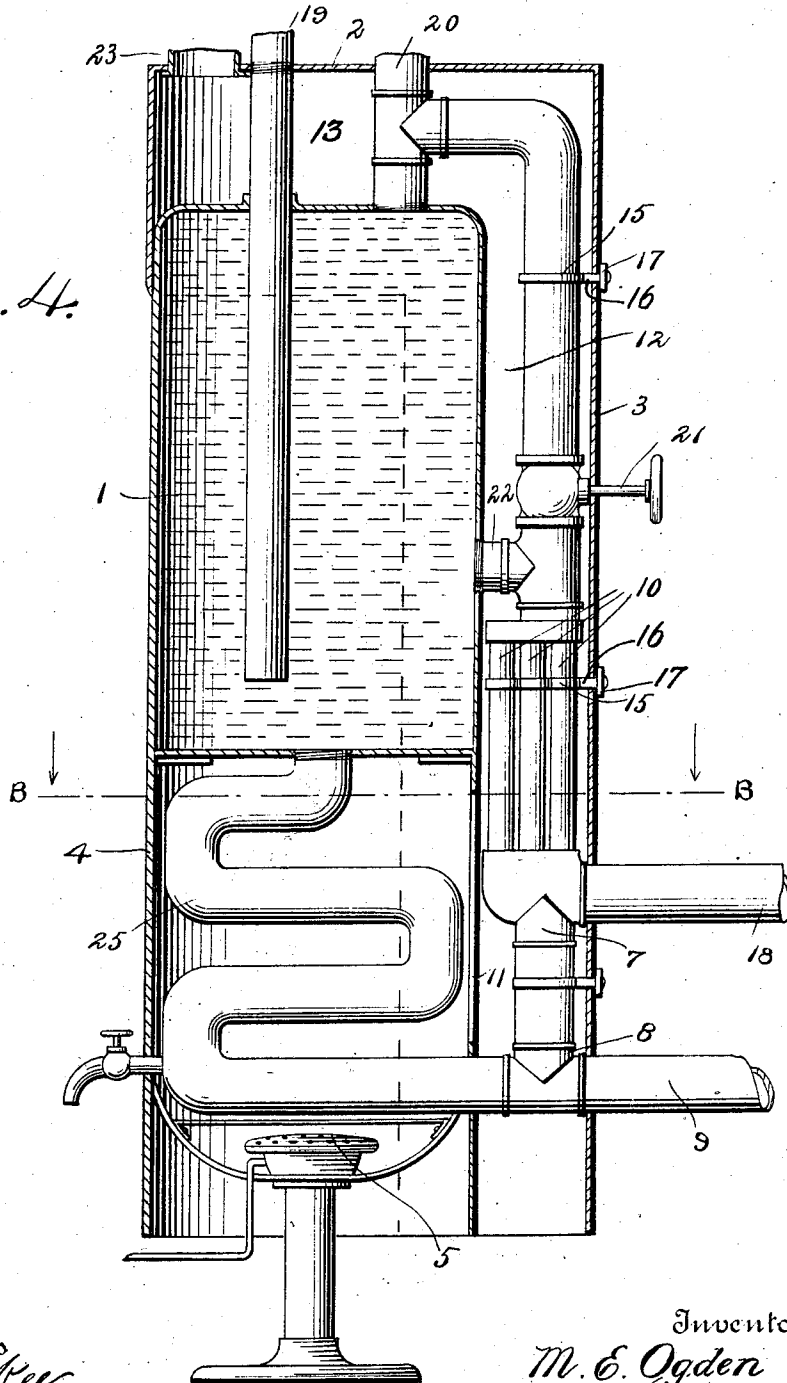
M. E. OGDEN.
WATER HEATING DEVICE.
APPLICATION FILED JAN. 4, 1911.

1,014,170.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 2.

Fig. 4.



Witnesses
M. P. McKee
L. M. Gillespie

Inventor
M. E. Ogden
Per J. W. H. H. H. H. H.
Attorney

UNITED STATES PATENT OFFICE.

MANCELIA E. OGDEN, OF NEWARK, NEW JERSEY.

WATER-HEATING DEVICE.

1,014,170.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed January 4, 1911. Serial No. 800,739.

To all whom it may concern:

Be it known that I, MANCELIA E. OGDEN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Water-Heating Devices, of which the following is a specification.

This invention relates to improvements in water heating devices and has for its object to so construct a heater that water may be very rapidly heated.

Another object of the invention is to so arrange the heater for water boilers that every particle of caloric from the gas burner thereof will be utilized to heat the water contained in the boiler.

With the above and other objects in view, I have invented the water heater illustrated in the accompanying drawings, in which,

Figure 1 is an elevational view of the device, Fig. 2 is a transverse sectional view therethrough, taken on the line B—B of Fig. 4, looking down, Fig. 3 is a transverse sectional view taken on the line A—A of Fig. 1, and Fig. 4 is an enlarged vertical sectional view of a slightly modified form of the invention.

Referring to the accompanying drawings, 1 is a water boiler having a hood 2, which has a depending portion 3. The cylindrical wall 4 extends below the bottom of the boiler proper to inclose the heater 5 and the coils 6. The depending part 3 of the hood covers the pipes 7, the bottom 8 of which rests upon the cold water pipe 9, leading to a water back and is fixedly secured thereto. The pipe 7 is divided into a number of branches 10 of a smaller size so that the supply of water will pass through all of them. This division of these supply pipes greatly increases the heating surface as the heated air passes through the opening 11 into the flue 12 formed by the depending portion 3, and is held close to the pipes thereby. The heat then passes into the drum 13 formed by the hood 2 and tends to keep the water in the upper part of the boiler from becoming cooled. The portion 4 of the boiler cylinder is provided with a door 14 by means of which the heater 5 may handily be gotten at to light. The edges of the depending portion 3 are held closely to the boiler by

means of the collars 15 passed around the pipes 10, each of said collars having a threaded stud 16 which projects through the wall of said depending portion and is provided with a nut 17.

18 is the hot water pipe from the water back of a range.

19 is a cold water supply pipe for the boiler and 20 a hot water outlet pipe.

A valve 21 is to cut off the water circulation above the boiler connection 22, when the water is being heated by means of the heater 5 instead of by a range.

A draft opening 23 is located in the hood 2 at a point remote from the flue 12, so that the heat must pass over the top of the boiler before passing from the hood.

Figs. 2 and 4 show a slightly modified form of the device, the difference being that instead of the coil 6 over the heater 5, a sinuous pipe 25 is used.

I claim and desire to secure by Letters Patent.

1. A boiler having depending walls with an opening therein a heater inclosed by said walls, a hood on the top of said boiler, said hood having a depending portion on one side thereof to form a flue, said flue communicating with said opening.

2. A boiler having depending walls with an opening therein a heater inclosed by said walls, a flue adjacent said walls on one side thereof, said opening communicating with said flue.

3. A boiler having depending walls with an opening therein a heater inclosed by said walls, a flue adjacent said walls on one side thereof, said opening communicating with said flue, said flue terminating in a drum over the upper part of said boiler.

4. A boiler having depending walls with an opening therein a heater inclosed by said walls, a flue adjacent said walls on one side thereof, said opening communicating with said flue, said flue terminating in a drum over the upper part of said boiler, and water circulation pipes located in said flue.

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

MANCELIA E. OGDEN.

Witnesses:

GEORGE A. DOUGLAS,
J. TRACY HORTON.