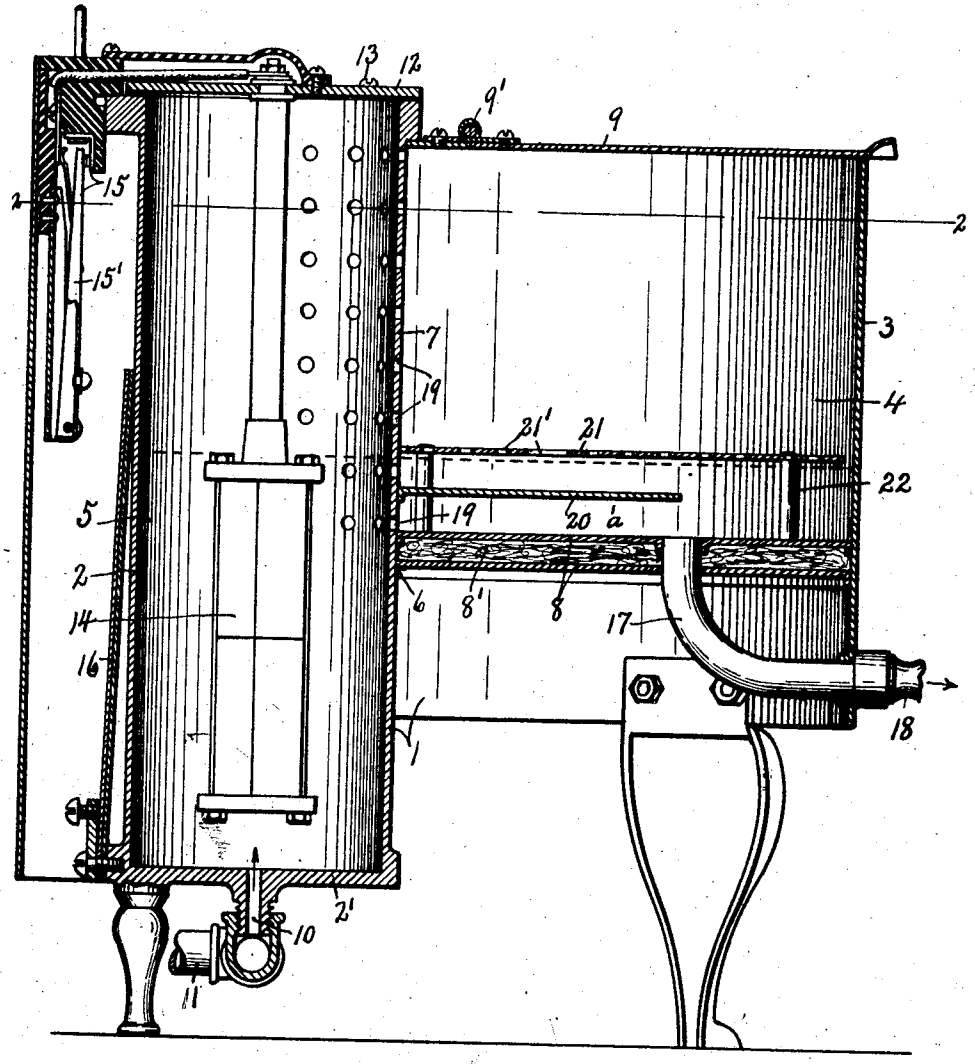
March 1, 1927. 1,619,146

A. MARTIN

COMBINED WATER HEATER AND STERILIZING APPARATUS

Filed Dec. 8, 1924



WITNESS
H. W. Kinsel

INVENTOR
A. Martin
BY Denison & Thompson
ATTORNEYS

Patented Mar. 1, 1927. 1,619,146

UNITED STATES PATENT OFFICE.

ALPHONSE MARTIN, OF OGDENSBURG, NEW YORK, ASSIGNOR OF FIFTY-ONE ONE-HUNDREDTHS TO MAX KATZMAN, OF OGDENSBURG, NEW YORK.

COMBINED WATER HEATER AND STERILIZING APPARATUS.

Application filed December 8, 1924. Serial No. 754,618.

This invention relates to a combined water heater and sterilizing apparatus adapted to be used more particularly by barbers, dentists, and other users requiring frequent supplies of relatively small quantities of hot water and steam for shaving, laving, moistening and sterilizing purposes.

The main object is to provide a compact and easily portable container with intercommunicating chambers, one of which is adapted to receive the water to be heated and contains an electrically heated element for imparting the necessary heat to the water therein while the other contains means for supporting articles to be moistened or sterilized by the heated water or steam from the receiving chamber.

Another object is to provide the sterilizing chamber with a perforated plate or tray, adapted to receive and support the articles to be moistened or sterilized above the normal level of the water which may be transferred to the sterilizing chamber from the heating chamber, thus permitting the excess water adhering to or held in saturation by, said articles to drain into the underlying portion of the sterilizing chamber.

Other objects and uses relating to the specific parts of the apparatus will be brought out in the following description.

In the drawings:—

Figure 1 is a vertical sectional view of an apparatus embodying the features of my invention.

As illustrated, this apparatus comprises an upright container —1—, consisting of cylindrical shells, —2— and —3—, one of which as —3— is of relatively large diameter to form what may be termed a sterilizing chamber —4—, the other chamber —2— being of greater vertical length than the shell —3— to extend some distance below and above the bottom and top thereof and forms what may be termed a water receiving chamber —5—.

The shell —3— is provided in one side with a lengthwise recess —6— of substantially circular cross section corresponding to the diameter of the shell —2— which it is adapted to receive so that substantially one-half of the portion of the shell —2— adjacent the shell —3— extends into the last named shell.

In other words the portion of the shell —2— which is embraced by the adjacent portion of the shell —3— constitutes a partition wall —7— which is perforated to establish intercommunicating passages between the chambers —4— and —5— and between the bottom wall as —8— and the top wall as —9— of the chamber —3—.

The bottom 2′ of the shell —2— is provided with an inlet —10— adapted to be connected by a pipe —11— to any available source of water supply from which water may be fed into the chamber —5— where it is adapted to be heated in a manner presently described.

The upper end or top —12— of the shell —2— is secured in place by screws —13— and serves as a part of the support for an electric heater —14—.

This heater is similar to that set forth in my pending application Serial Number 751,065, filed November 20, 1924 and is also suspended from the top —12— in a similar manner to be partly or completely immersed in the water in the chamber —5—.

Electric current may be supplied to the heater —14— from any available source and may be controlled by the temperature of the water in the chamber —5— through the medium of an electric switch —15— and a thermostatic bar —16— constructed and arranged in a manner similar to that set forth in my pending application above referred to except that the outer jacket for the shell —2— is omitted.

The bottom —8— of the sterilizing chamber —4— is disposed in a horizontal plane some distance above the bottom —9— and also some distance below the top —12— of the shell —2— and is provided with an outlet pipe —17— leading to a faucet —18— from which the hot water may be drawn in small quantities as needed.

As previously explained the partition —7— between the chambers —4— and —5— is perforated as indicated at —19— to allow the hot water and steam to pass from the chamber —5— into the sterilizing chamber —4— to be used for moistening towels and similar articles used by barbers and also for sterilizing tools and similar objects used by barbers, dentists or others who may find use for a device of this character.

The perforations —19— extend from the bottom —8— to the top —9— of the sterilizing chamber —4— and therefore the water in the chamber which is heated by the

heater —14— is allowed to pass into the chamber —4— as soon as it reaches the level of the upper surface of the bottom —8—.

A baffle plate —20— is secured to the partition —7— above the lowermost perforations —19— and extends therefrom into the chamber —4— in spaced relation to the bottom —8— and is preferably circular in plan but of considerably less diameter than the interior diameter of the chamber —4— to form passages for the stem between its marginal edge and walls of the shell —3—.

A perforated plate —21— having legs —22— is loosely supported in a horizontal plane upon the bottom —8— of the chamber —4— so as to underlie the baffle plate —20— in vertically spaced relation thereto.

This perforated plate —21— is also circular and of substantially the same cross-sectional area as the interior of the chamber —4— except as to a slight clearance around the marginal edges thereof to permit it to be removed through the top of the shell —3— when the cover —9— is opened.

The water level in the chamber —4— indicated by the dotted line, is maintained just below the baffle plate —20— by any suitable means not necessary to herein illustrate or describe while the baffle serves to prevent the direct upward passage of the steam resulting from the heating of the water in the chamber —4— and allows such steam to pass upwardly around the marginal edges of the baffle plate and thence through the perforations as —21'— of the plate —21— for moistening or sterilizing any articles which may be placed upon said plate.

The bottom —8— of the chamber —4— is provided with heat-insulating material 8' to prevent sudden cooling of the hot water which may pass from the heating chamber —5— into the chamber —4— and also reduces the liability of condensation of the steam which may be generated as a result of the heating of the water.

The top —9— of the sterilizing chamber —4— is hinged at 9' to permit it to be swung upwardly and laterally for opening the top of the chamber and permitting articles to be placed through the opening upon the perforated tray —21— preparatory to moistening or sterilizing after the lid —9— has been returned to its closed position.

Operation.

As previously stated water may be admitted through the inlet —10— to the heating chamber —5— until it reaches the level indicated by dotted lines where the level may be maintained by any suitable means.

During this influx of the water into the heating chamber —5— it is heated by the electric heater —14— to any desired degree according to the adjustment of the thermostatic bar —16— and when it exceeds that degree the bar —16— will be deflected by the heat imparted thereto to engage and operate the movable switch as —15'— for breaking the circuit through the heater, the degree of temperature being maintained automatically by the operation of the thermostatic bar —16— it being understood member —15'— is self-closing when released by the withdrawal of the thermostatic bar —16— therefrom as for example when the temperature of the water in the chamber —5— drops below the predetermined degree mentioned.

Under these conditions hot water escapes through the perforations —19— below the baffle plate —20— and into the chamber —4— across and upon the bottom —8— while the steam rises around the marginal edges of the baffle plate and escapes upwardly through the perforations in the plate —21—.

It, therefore, follows that any towels, tools, or other articles which may be placed upon the tray —21— will be subjected to moisture or sterilization or to both moisture and sterilization by the steam escaping upwardly through the perforations in the plate —21— and that moistening and sterilizing may be continued indefinitely for the same articles or repeated with other articles as may be desired.

In other words the maintenance of the hot water and steam at the desired temperature within the chamber —4— renders the apparatus available at all times for moistening and sterilizing purposes.

On the other hand if relatively small quantities of water for shaving and other purposes are required it is simply necessary to open the faucet —18— and to discharge the water therefrom into any receptacle provided for that purpose.

What I claim is:—

1. A combined water heater and sterilizing apparatus comprising an upright cylindrical water heating chamber having a water inlet at its lower end and its upper end closed, a heater supported from the closed upper end of the heating chamber above the water inlet, and a sterilizing chamber embracing a portion of one side of the heating chamber above the lower end of the heater, the portion of the heating chamber embraced by the sterilizing chamber being perforated to permit the passage of steam from the heating chamber to the sterilizing chamber.

2. A combined water heater and sterilizing apparatus comprising an upright cylindrical water heating chamber having a water inlet at its lower end and its upper end closed, a heater supported from the closed upper end of the heating chamber

above the water inlet, a sterilizing chamber embracing a portion of one side of the heating chamber above the lower end of the heater, the portion of the heating chamber embraced by the sterilizing chamber being provided with a series of perforations arranged one above the other for intercommunication between said chambers, and a perforated plate loosely mounted in the sterilizing chamber in a horizontal plane above the lowermost perforations.

3. A combined water heater and sterilizing apparatus comprising an upright cylindrical water heating chamber having a water inlet at its lower end and its upper end closed, a heater supported from the closed upper end of the heating chamber above the water inlet, a sterilizing chamber embracing a portion of one side of the heating chamber above the lower end of the heater, the portion of the heating chamber embraced by the sterilizing chamber being provided with a series of perforations arranged one above the other for intercommunication between said chambers, a perforated plate loosely mounted in the sterilizing chamber in a horizontal plane above the lowermost perforations, and a horizontal baffle plate extending laterally from the perforated side of the heating chamber between the perforated plate and bottom of the sterilizing chamber and of less area than the interior of the sterilizing chamber to allow the upward passage of the water and steam around one edge thereof.

In witness whereof I have hereunto set my hand this 24th day of Nov., 1924.

ALPHONSE MARTIN.