

No. 745,601.

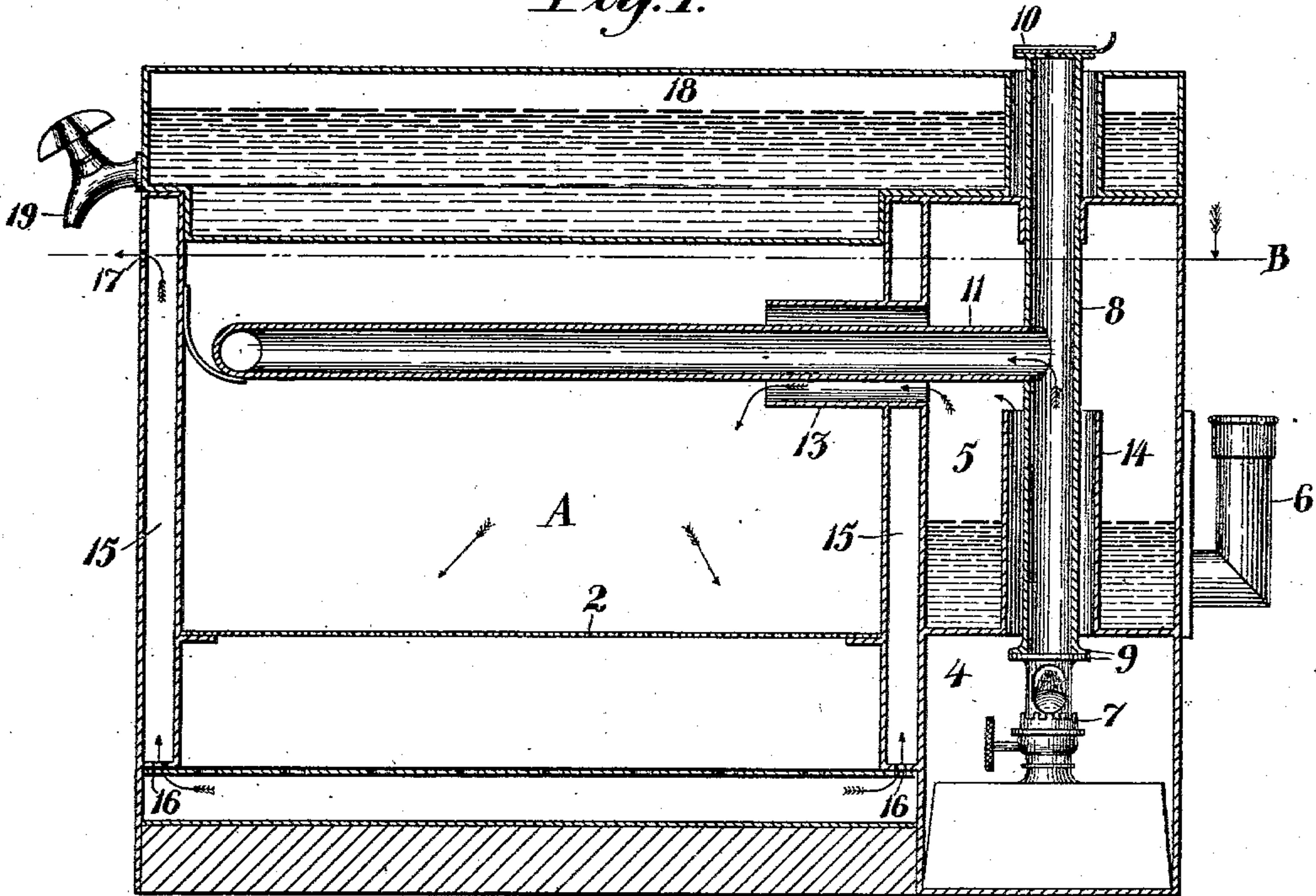
PATENTED DEC. 1, 1903.

L. L. GROSS.  
STERILIZING AND DRYING APPARATUS.

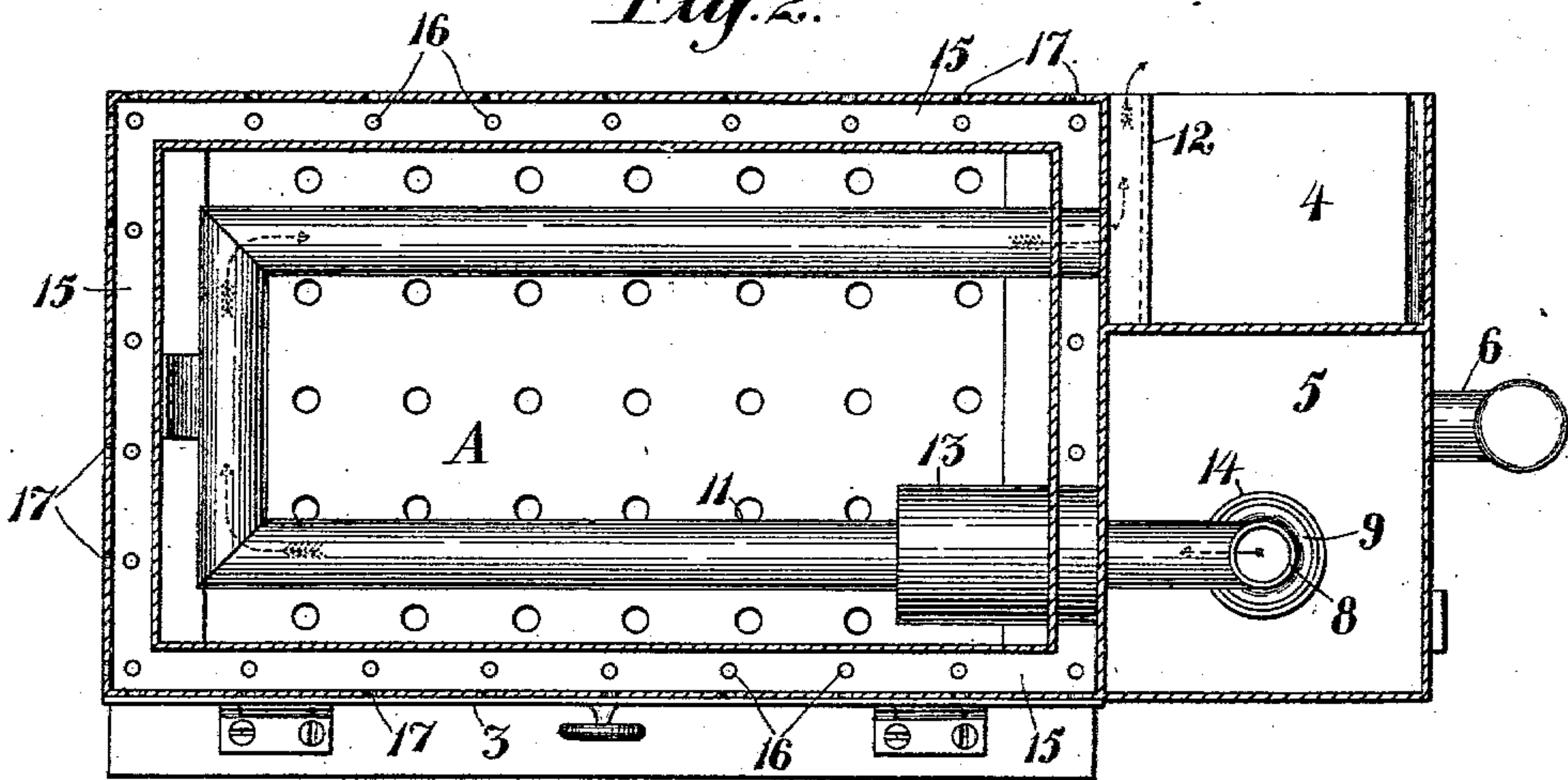
APPLICATION FILED APR. 15, 1903.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



Witnesses:

F. G. Fliedner  
J. H. Morse

Inventor,  
Ludwig L. Gross.  
By Geo. H. Strong.  
att'y



# UNITED STATES PATENT OFFICE.

LUDWIG L. GROSS, OF PETALUMA, CALIFORNIA.

## STERILIZING AND DRYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 745,601, dated December 1, 1903.

Application filed April 15, 1903. Serial No. 152,700. (No model.)

*To all whom it may concern:*

Be it known that I, LUDWIG L. GROSS, a citizen of the United States, residing at Petaluma, county of Sonoma, State of California, have invented an Improvement in Sterilizing and Drying Apparatus; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an apparatus which is especially designed for sterilizing and drying implements of various descriptions, such as razors, barbers' tools, surgical implements, and the like.

It consists of a chamber having a screen or other equivalent surface formed within it adapted to receive the implements to be treated and circulating-pipes through which air and the vapor of any suitable antiseptic or sterilizing substance may be passed and brought into contact with the implements within the chamber.

The apparatus is also provided with a chambered cover adapted to contain water which is heated therein and which may be withdrawn therefrom whenever needed.

It also comprises details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of my apparatus. Fig. 2 is a horizontal section taken on the line B.

It is the object of my invention to provide an apparatus convenient for the use of barbers, surgeons, and the like where implements are constantly in use which it is desired to sterilize and keep in an aseptic condition.

As here shown, A is a chamber of suitable size and having a horizontal wire-mesh or equivalent network diaphragm 2, upon which the tools or instruments may be laid by opening a door 3 at the side of the chamber. At one end of the chamber is a second chamber 4, separated from the first one by a vertical partition, and above this chamber is a chamber 5, adapted to contain any suitable or desired antiseptic, such as formalin, corrosive sublimate, or other equivalent substance.

6 is a tube through which the chamber 5 may be filled and may be provided with a

gage-glass to show the amount contained within the chamber.

Within the chamber 4 is a lamp or equivalent heater 7, which may be slipped horizontally into the chamber and removed therefrom, the top of the lamp-chimney connecting with a vertical tube 8 when it is slipped into place, as by suitable engaging flanges, as at 9. This pipe extends upwardly and may have a valve or damper-closed escape at the top, as at 10.

At a suitable point above the chamber 5 a branch pipe 11 connects with the pipe 8, and this extends into the chamber A and is there bent around, as shown, and after making a sufficient number of turns within the chamber it is connected with an escape pipe or flue, as at 12. This pipe or passage carries the heated air, which also heats the air or vapor contained within the chamber A passing downwardly through the screen 2 and the articles contained thereon, thus furnishing heat enough to dry the articles if damp and applying the sterilizing vapor as follows: The upper part of the chamber 5 which contains the liquid has a pipe or passage 13 surrounding and concentric with the pipe 11 where the latter passes into the chamber A. The pipe 13 is in open communication with the upper part of the chamber 5, and as the pipe 8 passes through a surrounding pipe 14, which extends up through the chamber 5, sufficient heat is produced to vaporize the liquid, and the vapor passing out through the passage 13 is delivered into the passage A and sufficiently heated in conjunction with air, which may also pass up through the pipe 14 and mix with the sterilizing vapor. In order to produce the proper circulation, the walls of the chamber A are made double, as shown at 15; but the inner walls do not extend entirely to the bottom of the chamber, being closed within a short distance of the bottom and having holes, as at 16, opening up into the space between the walls, so that there will be a downward movement of the heated vapor and air from the pipe 13 passing through the tools or implements on the screen 2, thence passing up through the holes 16, and outwardly through other holes, as at 17, made through the top of the chamber.



The top of the vertical pipe 8 being provided with the damper or cover 10, may also have a hole of small size made in it, into which curling-irons or similar implements can be introduced to be heated when desired.

The top of the chamber A is provided with a shallow chambered cover 18, the depth of this chamber being sufficient to hold a considerable quantity of water, and it is provided with a faucet or draw-off cock, as at 19. The heat within the chamber and the heat passing up through the passage 8 will be sufficient to keep this water at such a temperature that it will be useful for surgical operations or for use by barbers for shaving purposes.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A sterilizing and drying apparatus consisting of a plurality of chambers located side by side, one of said chambers having a screen or grid adapted to receive the implements to be treated, the second chamber having a heater, a conducting flue or chimney leading upwardly from said heater and closable at the top, a branch leading from said flue into the first-named chamber and connecting with a heating-coil within said chamber.

2. A sterilizing and drying apparatus for surgical and tonsorial instruments consisting of a plurality of chambers, one having a screen or grid adapted to receive the implements, and a door connecting therewith, and a heating-coil in the upper part of the chamber, double surrounding walls having openings into the chamber at the bottom, and outwardly at the top, whereby a circulation may be produced, a heater located in the second chamber having a branch connecting with the coil of the first chamber, and a surrounding pipe or passage through which heated air or vapor is admitted directly into the first chamber.

3. A sterilizing and drying apparatus for

surgical and tonsorial instruments consisting of a plurality of chambers, one having a screen or grid in the lower part for the support of the instruments, the second having a heater located in the lower part, a chamber containing an aseptic liquid located above the heating-chamber, a flue leading upwardly from the heater having a branch extending into and connecting with a coil in the first-named chamber, a surrounding concentric passage through which the vapor of the aseptic liquid is conducted into the sterilizing-chamber, a double wall surrounding said chamber and having openings connecting the bottom of the intermural space with the bottom of the chamber, and escape-openings outwardly from the top of said space.

4. An apparatus for sterilizing and drying instruments consisting of a plurality of chambers, one containing a heater and a container for the aseptic liquid located above the heater, a flue passing from the heater through said chamber and having a surrounding concentric pipe or passage, a second flue connecting with the first-named flue, and with a coil located in the sterilizing-chamber, and a surrounding concentric passage by which vapor from the aseptic liquid may pass mixed with air into the sterilizing-chamber, draft-openings connecting with the bottom of the chamber whereby the sterilizing and drying air and vapor will be drawn downwardly through the instruments contained in said chamber, a door opening into the side of the chamber, and a hollow water-containing cover removably fitted upon the top of the two chambers.

In witness whereof I have hereunto set my hand.

LUDWIG L. GROSS.

Witnesses:

S. H. NOURSE,  
JESSIE C. BRODIE.