O. A. HOLLIS.

STERILIZING CABINET.

APPLICATION FILED APR. 4, 1914.

1,223,490.

Patented Apr. 24, 1917.

2 SHEETS—SHEET 1.

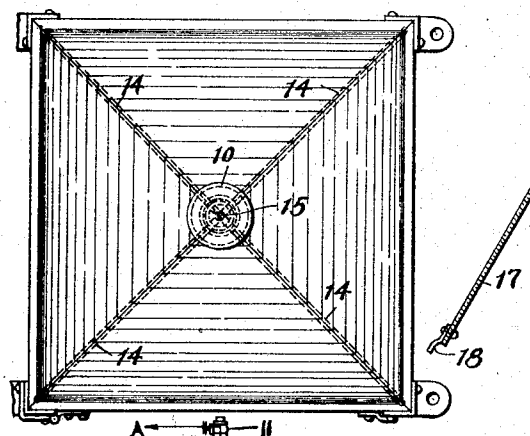


FIG. 4.

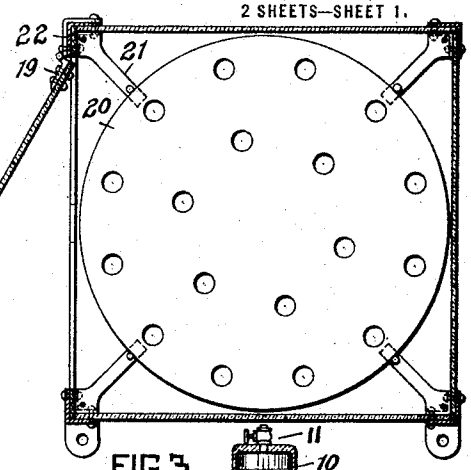


FIG. 3.

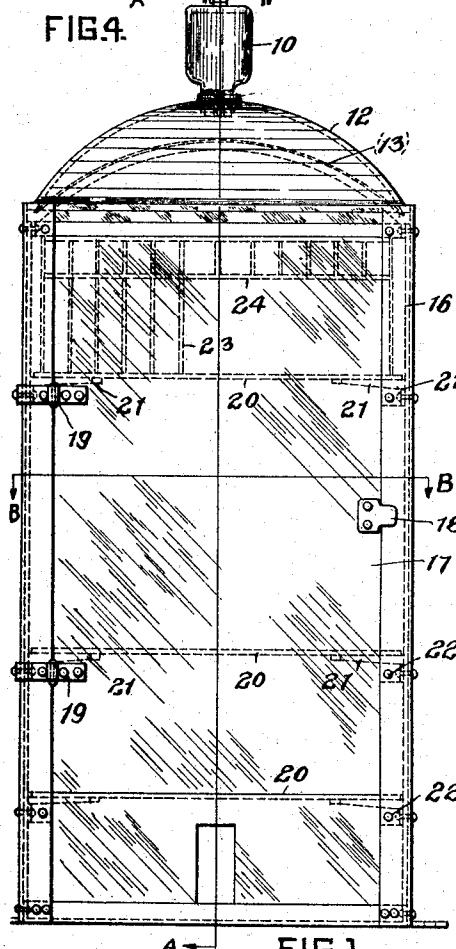


FIG. 1.

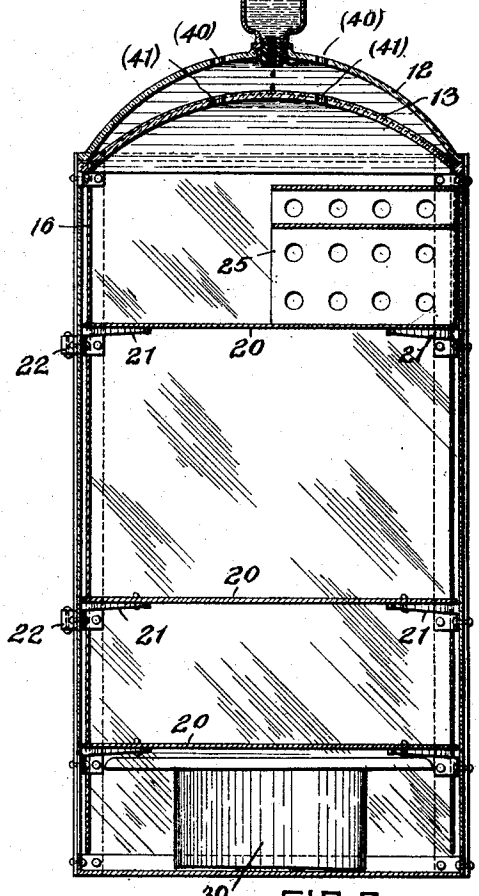


FIG. 2.

WITNESSES.

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Jo. Baily Brown

INVENTOR:

Otis A. Hollis,

by F. W. H. Clay.

his ATT'Y.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

O. A. HOLLIS.

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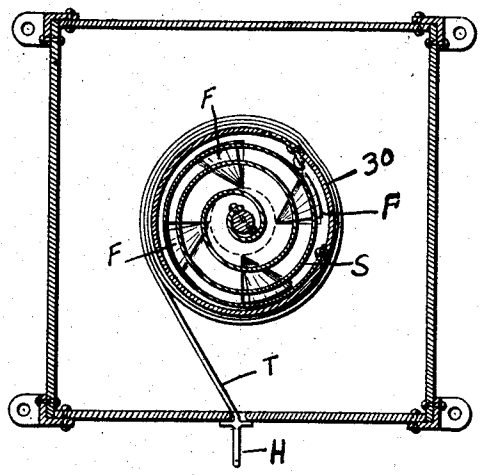


FIG.- 6

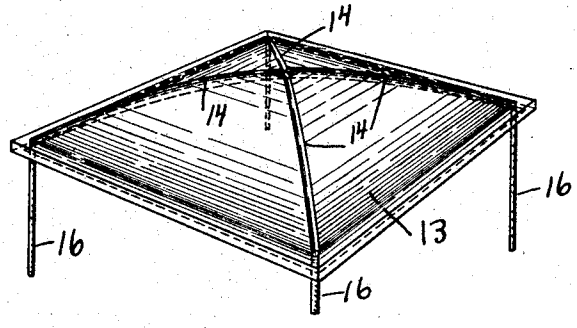


FIG.- 5

WITNESSES.

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UNITED STATES PATENT OFFICE.

OTIS A. HOLLIS, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO HOLLIS STERILIZING EQUIPMENT COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF DELAWARE.

STERILIZING-CABINET.

1,223,490. Specification of Letters Patent. Patented Apr. 24, 1917.

Application filed April 4, 1914. Serial No. 829,528.

To all whom it may concern:

Be it known that I, OTIS A. HOLLIS, a citizen of the United States, residing at Pittsburgh, in the State of Pennsylvania, have invented a certain new and useful Sterilizing-Cabinet, of which the following is a specification.

My invention relates to a container for instruments which have to be sterilized, or disinfected, after use, and my principal object is to provide such apparatus in a form which will be perfectly sanitary and convenient, and which will allow observation of the articles inside the cabinet as well as the process of sterilization without opening any doors.

These and other objects are accomplished by means of a cabinet built according to this specification.

Figure 1 is a front elevation of my device; Fig. 2 is a partial vertical section through the cabinet on the lines A, A, of Fig. 1; Fig. 3 is a horizontal section through the line B, B, of Fig. 1; Fig. 4 is a plan view; Fig. 5 is a perspective of the glass plate 13 showing grooves and wicks; and Fig. 6 shows details of means for circulating air.

In the case of the use of instruments upon the human body, such for instance as surgical appliances, barbers' tools, etc., a due regard for sanitation requires that all such instruments be thoroughly sterilized, or disinfected, before being used upon another human being, in order to prevent contagion. There are a great many instruments which can not be boiled and which it is inconvenient to soak in a sterilizing solution. My cabinet consists of a tightly closable case, having compartments wherein various kinds of instruments and tools may be stored, while the atmosphere inside the cabinet is charged to the point of saturation with some strong sterilizing agent, such as formaldehyde. The case is made of glass so that the operator may observe from the outside exactly where each instrument is situated on the inside, and where he must reach for it in taking it out. Consequently there is no necessity for opening the door of the cabinet for more than an instant at any time. Also the use of glass doors and panels enables the person upon whom the instruments are to be used to see that they are in fact being sterilized. This construction also enables the distribution of the sterilizing agent to be observed and adjusted by observation from the outside of the cabinet. Glass is one of the most sanitary materials of which a container can be made, and my cabinet is designed throughout so that there are no joints or cracks which may not be easily reached for thorough cleansing.

The details of construction of my cabinet are as follows:

At the top a glass reservoir 10 is provided, having a valve 11 whereby the flow of liquid from the reservoir may be adjusted. This receptacle is detachable for refilling. The top 12 of the cabinet to which the reservoir is attached is made of one piece, having four curved sides, as shown in Fig. 4. Beneath the top 12 is a second glass plate 13 of similar shape, having grooves 14 down the ridges formed at the junctions of the four surfaces. The point 15 in the glass plate 13 is situated exactly under the outlet from reservoir 10. This point is constructed so as to divide a drop of liquid striking its apex, and distribute it partly down each of the grooves 14. Therefore there will be a flow of liquid down each of the grooves 14 to the corners of the cabinet. Extending from the end of the grooves at each corner of the cabinet, downward to the bottom thereof, are fabric wicks 16. Thus the disinfecting liquid drops from the reservoir 10, flows down the groove 14 and is taken up by the wicks 16 and carried by capillary attraction throughout their entire length. From the surfaces of the wicks the liquid evaporates, and so saturates the air inside the cabinet with its disinfecting vapor. The front of the cabinet consists of a glass door 17, with a latch 18, and hinges 19; shelves 20, being perforated glass plates, raised on brackets 21 which are bolted in above the angle irons 22 which retain the wall plates of the cabinet. I may make any number and variety of smaller compartments by sub-partitions such as 23, 24, 25, etc. These would be for the purpose of holding razors or other small instruments.

A volatile liquid may be chosen as the disinfectant, and would properly diffuse itself in the form of vapor throughout the cabinet. But in order to insure uniform distribution, I provide at the bottom of my

cabinet a roller 30 which has a fan attachment E. This roller has inside it a spring S. A tape or string T is attached to this roller with a handle H at the outside. By catching the handle and pulling the string out to its end, the roller is made to operate the fan, and when the string is released the spring reverses the roller and winds it up again. Thus by simply pulling out a string and releasing, a current of air is fanned upward through the compartments, the perforated shelves, etc.

This fan device is especially adapted for use in cabinets designed for barber shops and in such case the barber's strop may be fastened to the roller 30, and whenever he strops his razor he thereby causes a circulation of air throughout his sterilizing cabinet. In order to aid in this forced circulation, and to provide ventilation, I may provide holes in the top plate of my cabinet, as at (40), (41).

Many advantages and conveniences of this form of container will be apparent to those familiar with such devices.

Having thus described my invention and illustrated its use, I claim:

1. In a cabinet, the combination of a reservoir at the top, a plate beneath said reservoir having grooves therein to distribute a liquid delivered in single drops from said reservoir onto said plate, wicks adapted to take up the liquid from the grooves and to expose it to evaporation throughout the cabinet.

2. In a container cabinet, a glass reservoir at the top thereof, means to regulate the flow of a liquid therefrom to the interior of the cabinet, and vertical wicks whereby to expose the liquid to evaporation throughout the cabinet, substantially as described.

3. A disinfecting cabinet comprising a chamber, a vessel of liquid disinfectant carried on top of the chamber, means for regulating the flow out of the containing chamber and for distributing it to the four corners of the cabinet, and a series of downflow wicks to carry the disinfecting liquid down through the corners of the cabinet, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

OTIS A. HOLLIS.

Witnesses:
FRED'K STAUB,
JO. BAILY BROWN.

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