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VAPORIZING DEVICE

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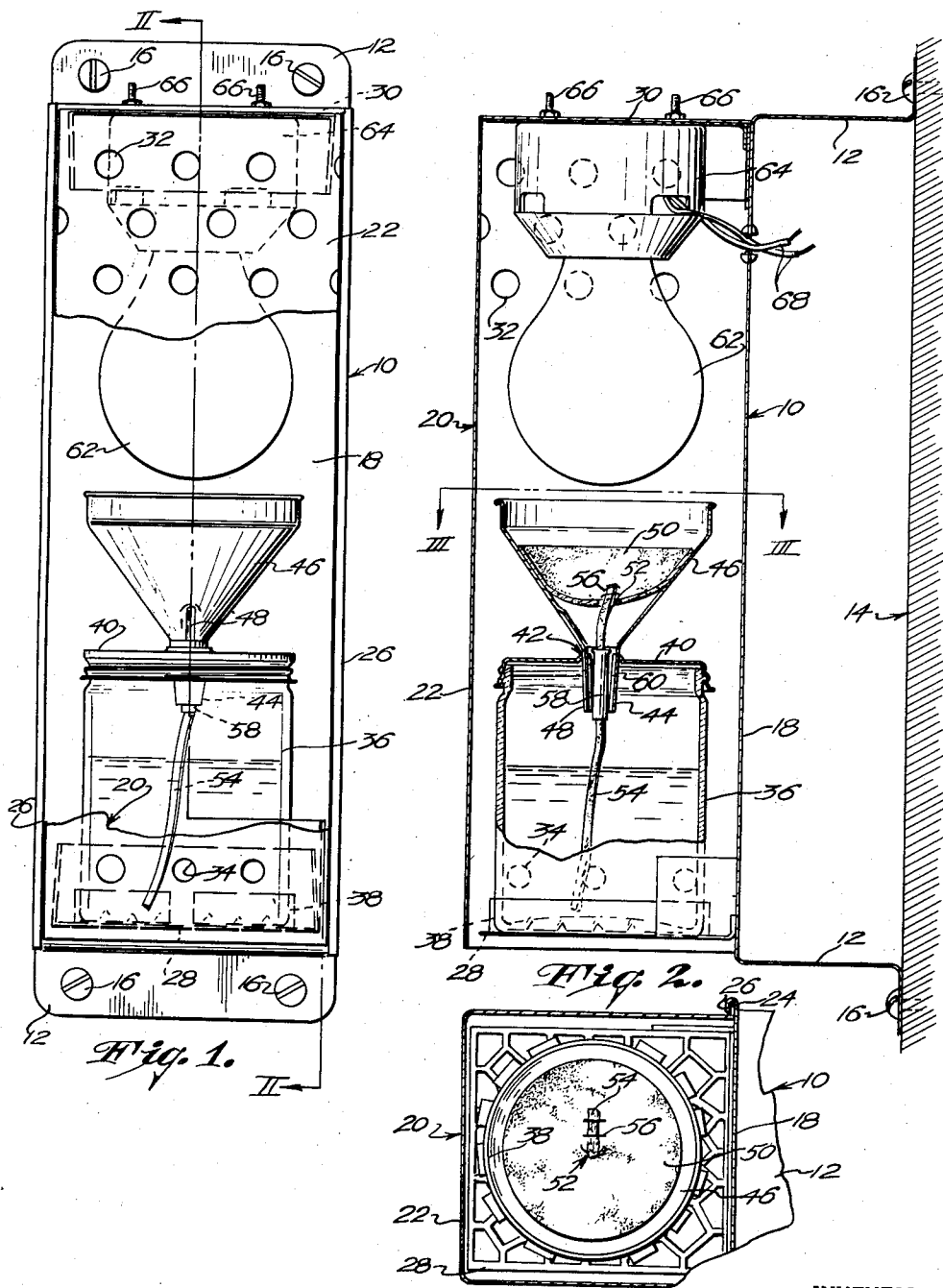


Fig. 3.

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VAPORIZING DEVICE

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3 Claims. (Cl. 21—120)

This invention relates to a vaporizing device and has for its primary object the provision of a simple, inexpensive, easily maintained unit for vaporizing virtually any material whether used for deodorizing purposes, to control air-borne bacteria and viruses or otherwise.

It is the most important object of the present invention to improve upon the vaporizer disclosed in my co-pending application Serial No. 482,050, filed January 17, 1955, now abandoned, this being a continuation in part of said co-pending application.

Another important object of this invention is the provision of an electrical vaporizer employing a heat producing lamp as in my aforesaid application, but utilized in an improved manner to heat the liquid contained in an absorbent element that is maintained saturated with such liquid.

A further object of the instant invention is to provide a vaporizer wherein the material to be vaporized is conveyed to an absorbent element and the latter maintained in a saturated condition by capillary attraction from a container for the material.

Other objects include the way in which the heat emanating from the electric lamp is condensed within a funnel-like member that is in turn lined with the aforementioned absorbent element; the manner of conveying the liquid from a container to the absorbent element in the funnel member through use of a wick; and important details of construction to be made clear as the following specification progresses.

In the drawing:

Fig. 1 is a front elevational view of a vaporizing device made in accordance with my present invention showing the same with the cover section partially broken away;

Fig. 2 is a cross sectional view taken on irregular line II—II of Fig. 1; and

Fig. 3 is a transverse cross sectional view taken on line III—III of Fig. 2.

As best seen in Fig. 2 of the drawing, the vaporizing device chosen for illustration of the novel principles of the instant invention is preferably in the nature of a wall bracket and to this end, a U-shaped bracket 10 has its legs 12 attached to a wall or the like 14 through suitable fasteners 16 and its vertical bight 18 disposed to form the back of a hollow body broadly designated by the numeral 20. The remaining parts of the container include a cover section 22 that is U-shaped transversely as seen in Fig. 3 and provided with outturned ears 24 slidable within channel tracks 26 of bracket 10, or particularly bight 18, so that the cover section 22 may be readily removed by lifting the same upwardly until the ears 24 clear the tracks 26. Tracks 26 may be closed at the lowermost ends thereof to limit the extent of downward movement of the cover section 22.

A foraminous bottom 28 and a similar top 30, both attached to the bight 18, complete the body 20 and the cover section 22 is preferably provided with a plurality of openings 32 and a number of openings 34.

The bottom 28 is adapted to support a suitable con-

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tainer 36 for material to be vaporized and the container 36 is held in place with respect to the bottom 28 by an annular upstanding flange 38 secured to the bottom 28.

Container 36 has a removable lid 40 provided with a central perforation 42 within which is removably disposed spout end 44 of an open-top funnel 46 and held in place by frictional engagement with the lid 40. An indentation 48 in the funnel 46 and extending downwardly along the spout portion 44 thereof presents an air vent for the container 36.

Funnel 46 is lined therewithin by an absorbent diffusion element 50 that is initially circular and provided with a central opening 52 through which extends an elongated wick 54. Wick 54 is attached directly to the element 50 by suitable fasteners 56 and extends through a tube 58 held within the spout portion 44 of funnel 46 by any suitable packing 60 surrounding the tube 58 within the spout 44. From the tube 58 wick 54 extends into the liquid within the container 36.

It is now apparent that by capillary attraction the liquid will be drawn from the container 36 and conveyed upwardly by the wick 54 to the absorbent element 50 which is thereby kept saturated with such liquid.

Vaporization is accomplished through any suitable source of heat and to this end there is provided a heat producing lamp 62 provided with a conventional glass bulb enclosure and disposed within the hollow body 20 above the open top of funnel 46 and extending into a conventional socket 64 that is in turn mounted on the lower face of top 30 through use of fasteners 66. The socket 64 is connected with a source of electrical energy by conductors 68.

While the lamp 62 is shown disposed above the uppermost extremities of the funnel 46 its proximity to the absorbent element 50 may be varied to suit the desires of the manufacturer.

It is now apparent that the liquid in container 36 will be continuously vaporized by the action of the heat rays emanating from the lamp 62 and being directed to the saturated element 50.

The vaporizer may be easily and quickly serviced by simply removing the cover section 22 thereby rendering the container 36 accessible. The funnel shaped receptacle 46 need not be removed for refilling the container 36, instead the cap 40 is removed and replaced without disconnecting the funnel 46 and the lid 40. Upon choosing proper materials for producing the various parts of the vaporizer, which will not be adversely affected by the action of the liquids being vaporized, the device will last indefinitely and the only replacement will be in the lamp 62 and, of course, in refilling the container 36.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A vaporizing device comprising a hollow body provided with a number of openings and having a top and a foraminous bottom; an electric lamp socket secured to said top; a lamp in said socket and depending therefrom, the lamp having a substantially spherical bulb; an open top liquid container resting on said bottom and spaced below the bulb in alignment therewith; a detachable lid secured to the container in covering relationship to said open top thereof and provided with a central perforation; a funnel between the bulb and the container and provided with a large, open, upper end immediately below and aligned with the bulb, and a small, lower, tubular spout end extending through the perforation into the container; an absorbent element partially lining the funnel therewithin between said open end and said spout end of the funnel, said element having a concave uppermost face and a central opening; and an elongated wick secured to said face, extending through said central opening, thence

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downwardly through said spout end, and terminating within the liquid in said container, the lamp, the socket, the container and the funnel all being within the body.

2. The invention of claim 1, there being a tube in said spout end of the funnel receiving the wick, and packing surrounding the tube within said spout end for holding the tube in place.

3. The invention of claim 2, said spout end being tightly fitted in said perforation and having an indentation at the perforation presenting an air vent for the container.

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