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I. BLECHMAN

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VAPORIZING DEVICE

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Fig. 1.

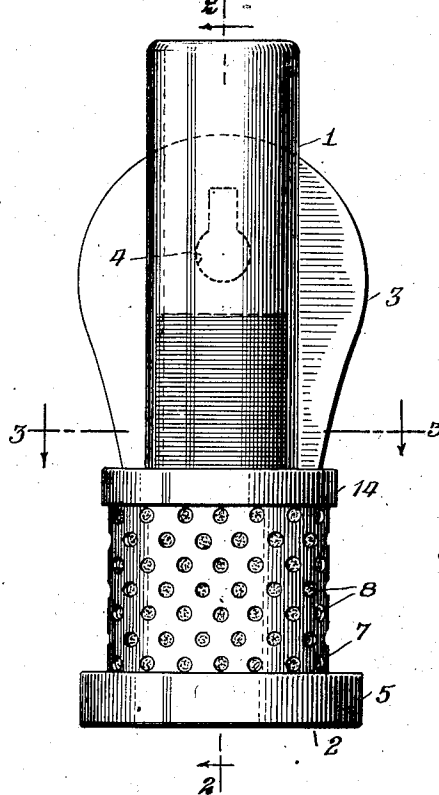


Fig. 2.

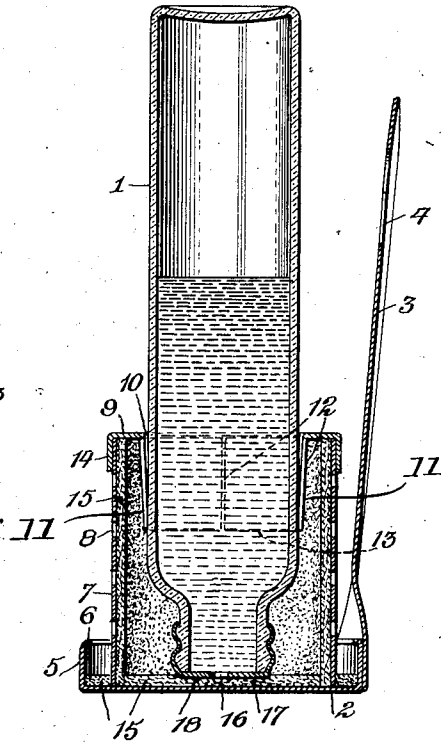
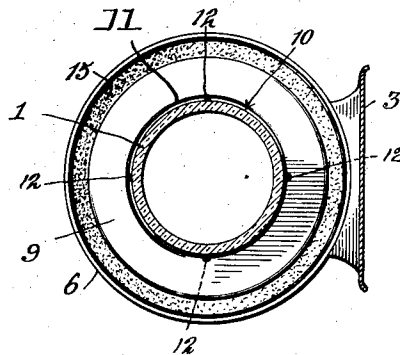


Fig. 3.



WITNESSES

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VAPORIZING DEVICE

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The present invention relates to devices for discharging volatile liquids to a surface exposed to the atmosphere which vaporizes the liquids and charges the air with fumes.

5 An object of the invention is to provide a device of this nature with a vaporizing medium having inherent power of conducting and regulating the flow of the liquid to the atmosphere.

10 Another object in view is the provision of a device of this kind with a vaporizing medium which produces a positive flow of the liquid until the vaporizing medium is saturated and which operates as a seal to prevent
15 further discharge when the medium is in saturated condition. As one of the principle uses of the present invention is to provide a device which may be hung in a closet to impregnate the air therein with insecticide
20 fumes to kill or destroy moths or other insects in garments hung in the closet, it is important that the flow of the liquid in the device shall not be greater than the amount that is evaporated, as any leakage or over-
25 flowing of the liquid might stain the garments.

The present invention therefore seeks to provide a device in which the flow of the liquid is automatic and which is dependent
30 upon the rate of evaporation.

Still another object in view is the provision of such a device with improved means for holding the container for the liquid.

35 With these and other objects in view, the invention consists of certain novel features of construction and arrangement of parts which will be more fully described and claimed hereinafter.

40 The invention is shown in the accompanying drawings in which:

Fig. 1 is a view in elevation of a device embodying the invention;

Fig. 2 is a vertical sectional view on line 2/2 of Fig. 1;

45 Fig. 3 is a cross-sectional view on line 3/3 of Fig. 1.

50 In the embodiment of the invention illustrated in the accompanying drawings, a bottle or container 1 for the liquid is supported in an inverted condition in a cup 2, to which

is rigidly secured a plate 3 having a key hole slot 4 for engagement with a screw or nail for supporting or hanging the device on the wall.

The cup 2 has a shallow wall 5, the edge or 55 rim 6 of which is inturned slightly to prevent seepage of the liquid over the edge of the cup. An upstanding circular wall 7 provided with openings or perforations 8 to expose the vaporizing medium within to
60 the atmosphere is secured continuously about its base to the bottom of the cup within the wall 5. The circular wall 7 is provided with a cover 9 having a flanged central opening 10 in which the bottle or container is positioned
65 and held in inverted condition on the bottom of the cup. The flange 11 depending from the opening 10 is slotted at 12 to provide resilient arcuate sectors 13 which converge toward their lower end to engage and firmly
70 hold the bottle in position. The cover 9 is provided with an outer rim 14 arranged to forcibly fit about the top of the circular wall 7 to hold the cover in place yet permitting it to be removed if found desirable. 75

Within the chamber formed by the cup 2, the circular wall 7 and the cover 9, the bottom and side walls thereof are provided with a layer of absorbent material 15, such as felt or other similar material, having the capillary property of absorbing and conducting
80 the liquid from the bottom of the chamber upwardly throughout the material, whereby it is exposed to the atmosphere through the openings 8. The absorbent material 15
85 serves the purpose of taking up the liquid as it seeps from the opening 16 in the top of the inverted bottle until the said material is saturated. When this takes place the absorbent material and the layer of liquid in the material in the bottom of the cup operates as a
90 seal to prevent air entering the bottle, thus stopping further flowing of the liquid until the liquid in the absorbent material about the inside of the circular wall 7 is vaporized. 95
It is to be understood, therefore, that when the absorbent material 15 has become saturated with the liquid, the flow of the liquid will thereafter depend upon the evaporation taking place through the openings 8; as the 100

evaporation proceeds the absorbent material 15 takes up more of the liquid, thereby rendering the operation continuous.

The bottle or container 1 may be filled with any desired volatile material, as for instance, a deodorizing fluid, if it is desirable to deodorize a room, or an insecticide fluid if the device is to be hung in a closet to create fumes to kill moths or other insects.

The bottle and the liquid therein may be an ordinary commercial product which before inserting in the holder is provided with the stopper 17 having the small opening 16, through which the liquid may seep and be absorbed by the absorbent material.

The stopper 17 is provided with a flat top surface 18 which is embedded in the absorbent material in the bottom of the cup when the bottle is in inverted position therein. Thus, only so much of the liquid as can be absorbed by the absorbent material will seep through the opening 16.

The bottom of the cup 2 adjacent the wall 5 may also be provided with a layer of absorbent material which will receive the liquid from the absorbent material within the chamber through the openings 8 in the circular wall 7.

The device may be constructed of any preferred metal which will not be attacked by the liquid and in order to support the same rigidly on the wall the back 3 may have its side edges rounded as shown in Fig. 3, thereby strengthening the back.

From the foregoing it is apparent that the present invention provides a new and improved vaporizing device which insures a positive flow of the liquid and which flow is dependent upon the ability of the atmosphere to evaporate the material. While the device is shown in the preferred form it is obvious that changes and modifications may be made in the structure disclosed without departing from the spirit of the invention, as for instance, the sectors 13 extend upwardly instead of depending as shown in the drawings, and the absorbent material 15 may be any spongy material having capillary properties.

Having described my invention I now claim:

1. A vaporizing device comprising a base, a circular wall having openings therein, said wall being secured to the said base, a cover fitting upon the top of said wall, said cover having an opening therein and converging sectors depending from said opening arranged to receive and resiliently hold a bottle, absorbent material on the bottom of the base and a layer of absorbent material about the interior of the circular wall and exposed through the openings in the said wall, an inverted bottle positioned in said cover and held in upright condition on the absorbent material on the base and an opening in the

upper end of said bottle permitting the liquid therein to seep through to the absorbent material.

2. A vaporizing device comprising a support, an enclosed wall having openings therein secured to said support, a cover having a depending flange arranged to forcibly fit about the top of said wall, said cover having an opening and converging arcuate sectors formed about the said opening, absorbent material on the bottom of the support and about the interior of the circular wall and an inverted bottle having an opening in its top positioned in the opening in the cover and held in engagement with the absorbent material on the bottom of the base by the said converging sectors.

3. A vaporizing device comprising a support, said support having an outside upstanding wall, an enclosed wall continuously secured at its base to the said support within the outside wall, said enclosed wall having perforations therethrough and below the said perforations, the said enclosed wall being liquid tight, a cover fitting upon the top of the enclosed wall, an opening in said cover having depending sectors, a bottle positioned in said opening and being held in position on the said support by said sectors, an opening in said bottle adapted to permit the contents of the bottle to escape and absorbent material in the said enclosed wall adapted to take up the said liquid.

4. A vaporizing device comprising a support having an upstanding wall, an inner wall secured at its base to the said support and enclosed within the wall of said support, said inner wall having perforations therethrough, a cover fitting upon the top of the inner wall, an opening in said cover having resilient sectors, a bottle positioned in said opening and held in position on the said support by said sectors, an opening in said bottle adapted to permit the contents of the bottle to escape and absorbent material in the said inner wall adapted to take up the said contents.

5. A vaporizing device comprising a support, said support having an upstanding wall, an enclosed wall secured at its base to the said support within the said upstanding wall, said enclosed wall having perforations therethrough, a bottle held in inverted position on the said support, an opening in the bottle adapted to permit the contents of the bottle to escape, absorbent material in the said enclosed wall adapted to take up the said contents, and means arranged on the top of said enclosed wall resiliently holding the said bottle in position on the support.

6. A vaporizing device comprising a cup-shaped base, an apertured wall secured at its lower end to the said base and spaced from the edge thereof, inturned resilient flange portions at the upper end of said wall ar-

ranged and adapted to receive and resiliently support a bottle, absorbent material in said cup-shaped base embracing the exterior of said wall, additional absorbent material continuously disposed interiorly of said wall
5 upon the base and wall, an inverted bottle for the liquid to be vaporized positioned within said wall and held by the inturned resilient flange portions in contact with the
10 absorbent material upon the base, and an opening in the bottle adjacent the absorbent material permitting the liquid therein to seep through the absorbent material.

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