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R. R. FISHER, SR

2,802,928

VAPORIZER UNIT

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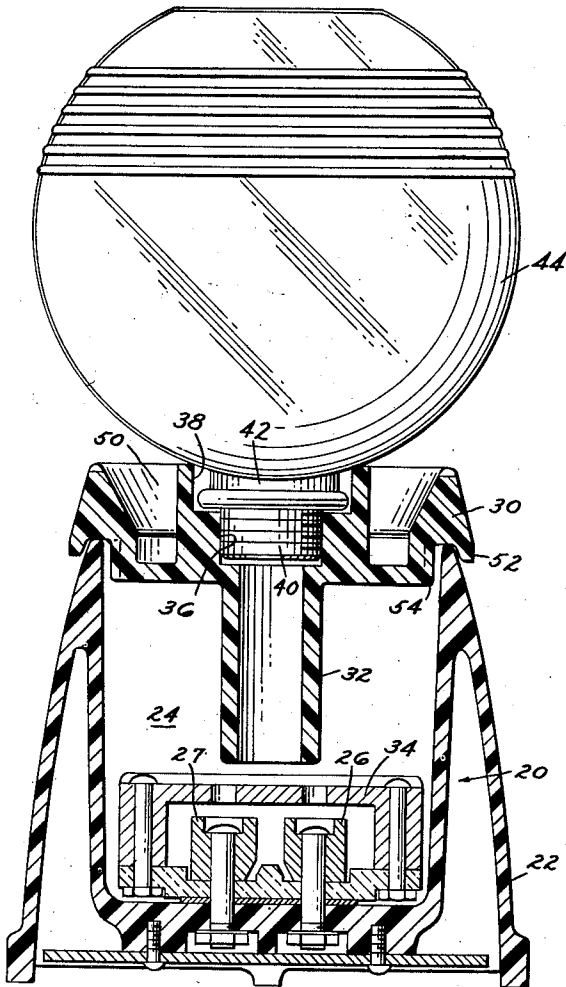


FIG. 1

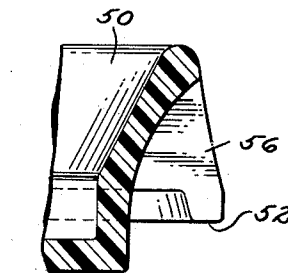


FIG. 3

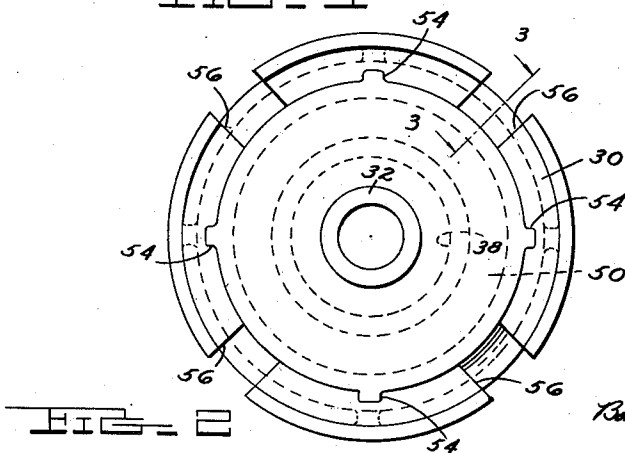


FIG. 2

INVENTOR.
ROY R. FISHER SR.
BY

Ramus, Kuehls, Laughlin & Reich
ATTORNEYS

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VAPORIZER UNIT

Roy Robert Fisher, Sr., Paris, Ky., assignor to Electric Steam Radiator Corporation, Paris, Ky., a corporation of Kentucky

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6 Claims. (Cl. 219—40)

This invention relates to a vaporizer unit and particularly to a small unit for use especially in homes or sick rooms where steam is required in the treatment of asthma, head colds or bronchial colds, croup and the like.

It is an object of the invention to provide a small, compact and stable unit which can be used as a bottle warmer and also which has an unusual capacity for liquid storage when used as a vaporizer.

Another object is the provision of a storage unit for the vaporizer which is positioned in a manner to maintain a cool temperature on the unused water so that the device may be readily handled even during operation.

Another object of the invention is provision of an annular medicant reservoir which co-operates with the liquid container to cause even and outward distribution of medicant vapors which are carried to the atmosphere by a rising cloud of effluent steam generated by the device.

Other objects of the invention, including the relative dimensions to provide stability and neat appearance, will be apparent in the following description and accompanying claims.

Drawings supplement the disclosure, and the various views thereof may be briefly described as:

Figure 1, a sectional view of the operating device showing the liquid reservoir container in position.

Figure 2, a bottom view of the liquid reservoir holder.

Figure 3, a sectional view line 3—3 of Figure 2.

Referring to the drawings, there is shown in Figure 1 a standard bottle warmer unit 20 such as fully disclosed in United States Patent No. 2,555,229 to Roy R. Fisher, issued May 29, 1951. This unit has an outer supporting wall 22 and an inner well 24 in which is mounted at the bottom, spaced carbon electrodes 26 and 27 which are suitably connected to lead wires to receive voltage supply. The top of the base bottle warmer unit is annular and narrowed to support a mushroom shaped body member 30 having a hollow stem portion 32 depending into the well 24 to a point just above the bottle support plate 34.

Above the stem the central portion of the body is recessed at 36 and 38 to provide space for the neck 40 and throat portion 42 of a globular bottle 44. The neck 40 is preferably threaded into the recess 36, although it may be pressed in to provide mechanical union between the parts.

Around the central portion of the body 30 is formed an annular recess or reservoir 50 for medicant which has a relatively thin bottom wall to allow heat from the well 24 to warm and vaporize the prescribed medicant, such as menthol crystals, pine oil, and the like. The outer edge of the body 30 has an overhanging lip 52 which centers unit 30 on the device and spacers 54 allow steam formed in the well 24 to reach four upward ports 56 (Figure 3). These ports permit steam to pass upwardly in an annular merging cloud which rises around the container 44.

It will be noted that the body member 30 is maintained in position by gravity. The stem 32 projects deep enough into the well 24 that any tendency to rock the upper

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assembly out would be blocked by contact of the stem with the walls of the well. Also, the water level of the well during vaporization is quite near the top of the device, governed by the bottom of the neck of the bottle 44. Thus, the bottom unit is weighted for stability when in operation as a vaporizer.

In operation, the unit 20 can, of course, be used as a bottle warmer for nursery bottles in the usual manner with a water level just above the plate 34. When a quantity of steam is desired, the top assembly is filled with water and inverted over the well 24. Water can be added to the well before this to provide a greater over-all quantity. The level will be governed by closing of neck opening 40, shutting off admission of atmospheric pressure to the interior of the bottle. Steam from the electrodes will rise to the surface of the heated water and pass upwardly out of the ports 56. Vapors from the medicant will rise from the reservoir 50 and be directed outwardly by the contour of the container 44, where they will merge with the steam and be distributed evenly in the room.

I claim:

1. In a combination bottle warmer and vaporizer which comprises a base unit having an open-topped well surrounded by an annular rim, and a steam generating unit in the bottom of said well, a combination water supply holder and medicant chamber which comprises an open-centered annular body having a downwardly depending supply tube and recesses thereabove for receiving and holding the neck and throat portion of a globular supply container in inverted position, an annular outside recess surrounding the central portion of said body for receiving a medicant, lip portions outside said annular recess extending over the annular wall of said well, circumferentially spaced, upwardly extending openings formed in said lip projecting up toward said bottle and extending into said well, and circumferentially spaced means around said central portion between said openings to space the walls thereof from the interior walls of said well, exposing said spaced openings to the interior of said well.

2. In a combination bottle warmer and vaporizer which comprises a base unit having an open-topped well surrounded by an annular rim, and a steam generating unit in the bottom of said well, a combination water supply holder and medicant chamber which comprises means loosely resting on said annular rim having an outside annular recess for receiving a medicant, a relatively thin wall separating said medicant recess from the interior of said well, and passageways formed in the central portion of said means designed to support and retain an inverted fluid reservoir container to feed water to said well, and said means being shaped at its supporting edge to provide upwardly extending steam outlets spaced circumferentially around said annular rim.

3. A device as defined in claim 2 in which a liquid supply container is supported and retained by the recesses of said means, said container being globular in shape to present an outwardly flaring surface above said medicant recess and said steam outlets.

4. A device as defined in claim 2 in which a combination stabilizing and feed tube depends from said means into said well to direct liquid from said passageways to the bottom of said well, said tube being dimensioned to contact a side wall of said well when said means is tipped on said base unit.

5. In a steam generator and medicant vapor device having a well-shaped body portion with a steam generator unit in the bottom thereof and presenting an upwardly extending annular rim, and a cover to support an inverted container, a liquid reservoir device and medicant supply holder supported on said unit which comprises a circular open-centered body portion having a depending tube on one side centrally thereof and a depending lip on said

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same side overhanging and spaced outwardly from the supporting edge of said unit, one or more recesses formed in said lip to allow transfer of steam from said unit to the surrounding atmosphere.

6. A device as defined in claim 5 in which an annular recess is formed in said outer side of said means for receiving and holding a supply of medicant which will be warmed by the steam in said unit.

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References Cited in the file of this patent

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2,576,110	Fisher	Nov. 27, 1951