Sept. 27, 1938. L. JAROLL 2,131,560

ELECTRIC VAPORIZER

Filed Feb. 16, 1937

Fig. 3.

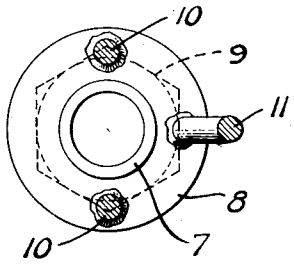


Fig. 2.

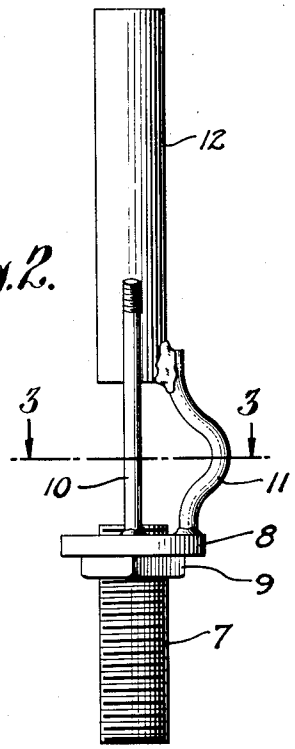


Fig. 1.

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ELECTRIC VAPORIZER

Louis Jaroll, New York, N. Y.

Application February 16, 1937, Serial No. 125,963

2 Claims. (Cl. 219—38)

This invention relates to electric vaporizers and has for its principal objects the provision of a compact, sturdy, attractive and economical construction which is highly efficient, fool-proof and safe to handle and use. Other objects of the invention will hereinafter appear.

In the accompanying drawing in which I have illustrated a preferred embodiment of my invention

Figure 1 is a vertical section partly in elevation;

Fig. 2 is a detail elevation of the central tube in which the heating element is mounted, isolated; and

Fig. 3 is a section taken along the line 3—3 of Fig. 2.

Referring to the drawing and the construction shown therein, the reference numeral 1 designates a tray, preferably of metal, the same being provided with a central dome 2 and a cover 3, the latter having a central hollow boss 4 projecting upwardly therefrom. The tray is supported on a plurality of knobs or feet 5, preferably three in number and spaced approximately 120° apart along the circumference of said bottom. A handle 6 is riveted or otherwise secured to said tray. A pipe section 7 is mounted in said dome and an annular support 8 is adjustably supported on a nut 9 that is threaded on said pipe section. A pair of rods 10 are rigidly mounted in said support 8, the same preferably fitted into apertures formed in said support and brazed or soldered to such support. A curvilinear or crooked rod 11, also similarly secured to said support 8, is rigidly secured at its upper end to a casing 12, being preferably brazed or soldered thereto. At the bottom of said casing, an indent or stop member 12' is struck-up which functions as hereinafter described. A nut 13, which is threaded on the lower end of the pipe 7, serves to retain the tray, its cover and said pipe 7 in the assembled position shown in Fig. 1. The rods 10 serve as a support for a hollow, bell-shaped deflector or heat-radiating hood 15, the top 16 of which is provided with an aperture 17 that is of greater diameter than the outside diameter of said casing 12, said hood being adjustably secured to said rod by positioning and retaining nuts, as shown.

A cup-shaped receptacle 20, having a central sleeve 21, brazed or otherwise secured thereto, is slidably fitted on said casing 12 and a knob 22, which is threaded into the upper end of said sleeve, serves to adjustably support the same on said casing 12. Said receptacle has a flared top flange 23 which serves to dissipate heat from said receptacle by radiation. A resistance heating element 25 is mounted in the casing 12, the same being introduced into the upper end of said casing prior to the mounting of said receptacle on said casing. Said heating element abuts at its lower end against the projection or stop 12' so that when fully inserted in said casing, it will assume the position shown in Fig. 1.

A second bell-shaped deflector 24 is brazed or otherwise rigidly secured to the upper end of the receptacle 20, said deflector being of sufficient length to partially envelop or overlap the upper end of the lower deflector 15.

Said heating element preferably comprises a resistance coil embedded in a heat-refractory, insulation medium, of a type in common use, the same being permanently connected to leads 26 of a lamp cord 27 and the latter being clamped to the bottom of the tray by a clip 28 so as to relieve the leads from tension. A plug 29 that is adapted to be inserted into a socket of an electrical fixture of an ordinary house lighting circuit is secured to the outer ends of said leads.

In lieu of a heating element such as shown, any other suitable type of resistance heating element, such as a cigar type of heating element mounted in a suitable electric socket positioned adjacent the bottom of the tube 12 may be substituted therefor.

As shown, the top apertures in the dome 2 and the hollow boss 4 are of somewhat greater diameter than the pipe 7 and likewise the diameter of the aperture 17 is, as stated, of greater diameter than the external diameter of the casing 12 so as to admit of the ready insertion of said pipe and said casing through the respective apertures during the assembly of the device as wells as to afford an air gap which impedes the conduction of heat from the interior of the vaporizer to the outer surfaces thereof.

My improved vaporizer, especially if employed with a thermostatic or like time switch, is ideally adapted for use in homes, institutions, office buildings, for medication, disinfecting or deodorizing and fumigating purposes and especially for effectively disseminating perfumes, incense and the like throughout the atmosphere of a room or other chamber.

Due to the disposition of the heat-radiating deflectors with respect to the heating element and the liquid receptacle, it is possible to effectively utilize the heat from the heating element without danger of the vaporizer becoming too hot to handle when shifting the position of the

vaporizer to a different location in the same or a different room or to result in the vaporizer becoming a fire hazard even should the same not be equipped with a thermostatic cut-off switch or time switch.

To operate the vaporizer, when assembled, liquid, such as perfume, disinfectant or the like is introduced into the well or receptacle **20** and the plug **29** is inserted into a socket of an electric circuit. If no thermostatic or time switch is employed for interrupting the circuit, it is desirable to periodically disconnect the plug from the circuit after the liquid commences to boil vigorously, say after about one minute, thereby the residual heat stored in the heating element will continue to evaporate the liquid for several additional minutes whereupon the plug is again connected to the circuit.

If a thermostatic switch is employed to control the flow of current through the heating element, it is desirable that the same be so designed or set that the circuit will be automatically closed for a relatively short period of time, say one minute and then will be automatically broken and remain interrupted for a relatively long period of time say five to seven minutes and thereby, owing to the heat distributing or heat-radiating features of the vaporizer, all danger is eliminated, even if all the liquid in the receptacle has evaporated, of the legs or any portion of the shell becoming so hot as to scorch or ignite a support or an object with which the vaporizer contacts; and likewise the handle will never become heated sufficiently to burn the hands of the user should it be desired to shift the vaporizer to a different location.

Various changes from the preferred construction herein illustrated may be made without departing from the spirit of my invention as embraced within the scope of the appended claims.

Having thus described my invention, what I claim and desire to obtain by United States Letters Patent is:—

1. In an electric vaporizer, the combination comprising a base member, a support projecting upwardly therefrom and secured thereto, a resistance heating element carried by said support, a receptacle having a central sleeve adapted to receive at least a portion of said heating element and having a chamber for liquid surrounding said sleeve, a plurality of flared heat-radiating shields disposed vertically on said vaporizer and each shield, other than the bottom shield, overlapping a portion of the shield immediately below it, circuit terminals adapted to connect said heating element with a source of electricity and means for supporting said terminals so as to prevent an undue thrust on the portions of said terminals immediately adjacent the heating element or upon the heating element during the manipulation of plugging into or disconnecting the other end of said leads from a source of electricity.

2. In an electric vaporizer, the combination comprising a tray, the central portion of which is elevated substantially above the level of the adjacent bottom of the tray and said elevated portion having a central aperture, a pipe mounted in said central aperture and projecting upwardly therefrom, a supporting shell secured to said tray and having a hollow upwardly projecting central boss, a support threaded on the upper end of said pipe, said support having a plurality of upwardly projecting supporting arms, a heat-radiating deflector enveloping the upper end of said boss and secured to certain of said arms, said deflector having a central aperture in the top thereof, a tubular casing of smaller external diameter than the diameter of said central aperture in said deflector, said casing being secured to another of said arms and projecting upwardly through said aperture, a liquid receptacle having a central chamber of an internal diameter to snugly receive said casing, means for retaining said receptacle in a predetermined adjusted position on said casing, a second deflector element projecting from the top of said receptacle and an intermediate deflector surrounding the side of said receptacle and also overlapping the top of the first mentioned deflector, a resistance heating element mounted in said casing, means for supporting the same in said casing, a pair of insulated metallic leads connected to said heating element, a common protective covering enveloping both of said leads, means for connecting said leads to a source of electricity so as to permit of current being conducted through said heating element, a clip member adapted to clamp said leads and relieve a portion of said leads adjacent said heating element of strain during the manipulation of said leads while plugging the same into or disconnecting the same from a source of electricity.

LOUIS JAROLL.