June 13, 1944. W. P. PERNHALL 2,351,226

ATOMIZER

Filed Sept. 27, 1943

FIG. 1.

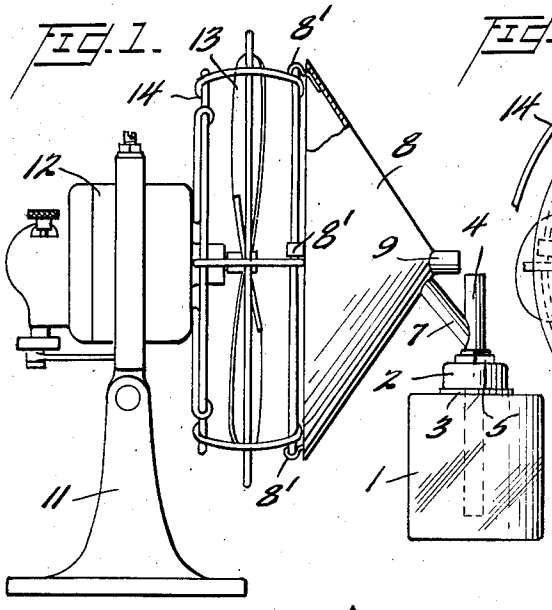


FIG. 2.

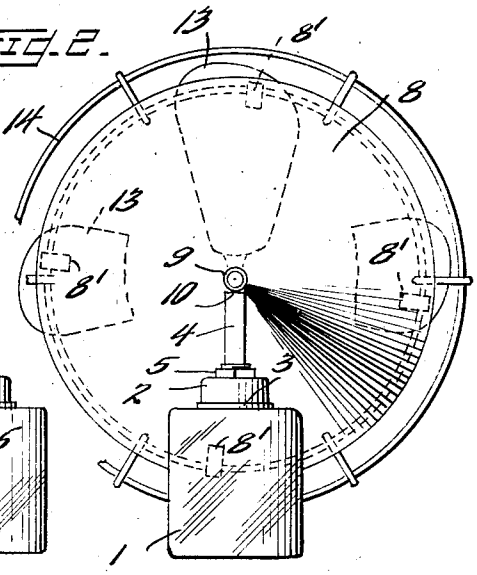
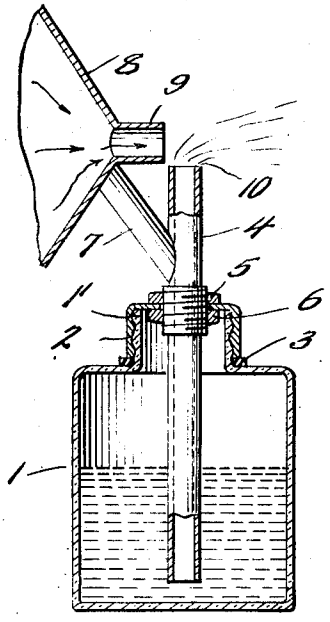


FIG. 3.



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ATOMIZER

William P. Pernhall, Atlantic City, N. J.

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1 Claim. (Cl. 261—30)

My invention relates to new and useful improvements in atomizers and more particularly to an atomizer and hood that is designed to be quickly and readily attached to an electric fan guard, so that the air put in motion by the fan blades will be concentrated and confined within the hood, the nozzle of which extends over a tube extending down into a container, so that the air and liquid in the container will be entrained and blown into the room.

Still another object of the invention is to provide an atomizer in which may be placed a disinfectant, insecticide, or deodorant; or on the other hand a liquid may be placed in the atomizer that will purify, sweeten or perfume or scent the room.

Still another object of the invention is to provide an atomizer that is exceedingly simple in construction and may be readily and quickly attached to the guard of an electric oscillating fan so that the air may be quickly purified or sweetened as desired.

Still another object of the invention is to provide an exceedingly simple form of atomizer wherein the air from an ordinary electric fan will provide the necessary means for forcing the spray out in the air rather than using an atomizer on which there is a bulb or pump.

With these and other objects in view, the invention consists in certain new and novel arrangement and combination of parts as will be hereinafter more fully described and pointed out in the claim.

Referring now to the drawing showing a preferred embodiment:

Fig. 1 is a side elevational view showing the improved atomizer as secured to the guard of an electric fan;

Fig. 2 is a front view thereof; and

Fig. 3 is an enlarged sectional view showing a fragmentary portion of the cone which is to be attached to the fan guard.

Referring now more particular to the several views and for the moment to Fig. 3, there is shown a container 1 having preferably a threaded neck 1'. There may also be seen a gasket 3 so that the bottle may be screwed tightly into the metal cap 2 which cap is supported on a threaded tube 4 and held in position by the upper lock nut 5 and the lower nut 6.

This is the preferable construction as the lower portion of the tube could then be shortened or lengthened depending on the depth of the container. However, it will be understood that rather than using lock nuts as shown, the cap might be soldered on the tube if so desired.

Secured near the upper end of the tube 4 by solder or otherwise is the metal support 7 which in turn is secured to a hood in the form of a cone 8, which may be of plastic, metal, cardboard or any other desired material which is relatively light in weight.

Here it is to be understood that the hood is preferably cone shaped but it might be in the shape of a pyramid or any other desired shape that would confine and force the air under pressure through the nozzle thereof.

About the periphery of the cone may be seen a plurality of clamps 8' which may be of a flexible metal so that they in turn may be clamped or bent about the wire guard 14 that is generally supplied with an electric fan.

At the apex of the cone may be seen the nozzle 9 that is in close proximity to the upper end 10 of the tube 4 which it will be remembered extends into the container 1.

In Fig. 1 I have shown an oscillating electric fan standard 11 with its motor 12, fan blades 13 and its wire guard 14 and also the atomizer as clamped in operative position in front of the guard.

The operation will be readily understood. Briefly, if it is desired to spray a disinfectant into the room it will simply be necessary to unscrew the container 1 from its cap, pour in the desired liquid, screw the container tightly up within its cap, and then place the cone in front of the fan guard and bend the small clamps 8' in a holding position.

The fan may then be started and the air from the blades will be concentrated within the cone and as it is blown across the top 10 of the tube 4, the air and liquid will be entrained in the form of a fine spray and forced into the room.

It will be understood that my improved atomizer is capable of a number of applications as it may not only be used in a room to purify the air or scent the air, but it may easily be used with alcohol in a sick room or might be used in closets where clothes are stored to spray an insecticide into the closet to prevent moths from getting into the clothes, etc.

Finally it will be understood that although I have shown a threaded cap, the cap might be provided with an internal rubber gasket so that a bottle can be forced up into the cap rather than threaded therein.

Many other slight changes might be also made

without departing from the spirit and scope of the invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

An atomizer including a vertically extending entraining tube, a cap secured to said tube, a container fitted within the cap and the lower portion of said tube extending into said container, a relatively large imperforate hood, a nozzle formed in the apex of the hood, an angular support for the hood also formed on said entraining tube just above the said cap to so position the hood that the nozzle will extend directly in front of the upper end of the entraining tube, the bottom of the container extending in a plane slightly below the lower edge of the hood, fastening means formed on the outer periphery of the hood and adapted to clamp the hood to the outer periphery of the guard of an oscillating fan, the bottom of the container adapted to extend in a plane slightly above the base of the oscillating fan, the base of the container being flat, whereby the said container will be self-supporting when not clamped to the said fan guard.

WILLIAM P. PERNHALL.