Dec. 29, 1925. 1,567,957

M. B. KESSELMAN

LIQUID VAPORIZER AND DISTRIBUTOR

Filed Jan. 18, 1924

Fig. 1.

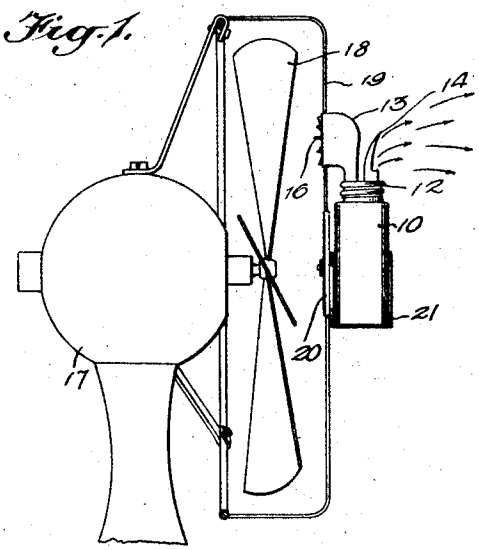



Fig. 4.

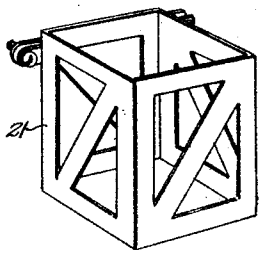



Fig. 3.

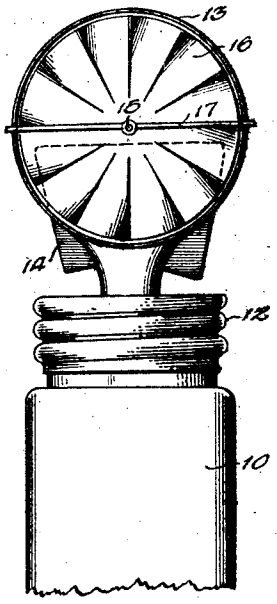
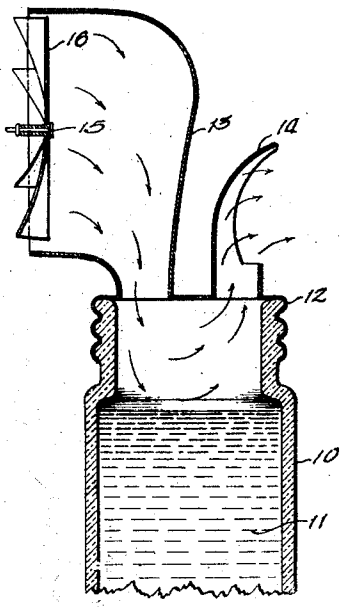



Fig. 2.




WITNESSES

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# UNITED STATES PATENT OFFICE.

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## LIQUID VAPORIZER AND DISTRIBUTOR.

Application filed January 18, 1924. Serial No. 637,146.

*To all whom it may concern:*

Be it known that I, MICHAEL B. KESSELMAN, a citizen of Russia, and a resident of the city of New York, borough of the Bronx, county of Bronx, and State of New York, have invented new and useful Improvements in Liquid Vaporizers and Distributors, of which the following is a full, clear, and exact description.

This invention relates to liquid vaporizers and distributors primarily designed for use with fans.

The general object of this invention is the provision of a vaporizer, for mounting in air currents, provided with means for receiving and compelling the flow of air therethrough.

This object is accomplished by providing a container for carrying the fluid to be vaporized, mounting on the container inlet and outlet air ducts for directing the flow of air through the container, and locating in the inlet air duct a wind wheel for compelling the flow of air through said ducts and container.

This and other objects of the invention will be more clearly understood from the following detailed description and accompanying drawings.

Figure 1 is a side elevation of the head of a fan showing the vaporizer mounted thereon;

Figure 2 is a vertical section through the vaporizer showing its construction;

Figure 3 is a rear elevation of the vaporizer showing the wind wheel;

Figure 4 is a perspective view of a casing provided for mounting the vaporizer.

Referring to the above-mentioned drawings, the invention includes a container 10 for carrying any fluid 11 that it is desired to vaporize. Mounted on the container 10 is a cap 12 carrying two air ducts 13 and 14 which extend through the cap. The air duct 13 is substantially L-shaped and the upper end is large as compared with the lower end so that it receives a considerable volume of air when placed in air currents. The outlet duct 14 is designed to project the air currents forward from the atomizer and is so constructed as to offer little resistance to the passage of the air. Thus these two air ducts which communicate with the container 10 form a means for directing currents of air through the container.

When an air duct similar in construction to 13 is mounted in an air current the air entering the duct forms eddies and a considerable portion of the air passes out of the duct through the same opening by which it entered. This cuts down the efficiency of a vaporizer provided with such air ducts. In order to overcome this difficulty the inventor mounts in the air duct 13 on an axle 15 a wind wheel 16. This axle 15 is carried by a bar 17 attached to the air duct 13. The wind wheel is of ordinary construction and, when a current of air is directed into the air duct 16, is rotated. Air forced into the duct 13 through the wind wheel 16 is prevented from escaping by the latter and is compelled to pass through the container 10 and duct 14. The air thus forced through the container assists in vaporizing the fluid 11, carries it through the air duct 14 and distributes it in the atmosphere.

Referring to Figure 1, a fan head 17 carrying the ordinary fan vanes 18 is disclosed. A cage 19 having a name plate 20 in line with the axle carrying the fan vanes 18 is attached to the fan head. In order to mount the vaporizer on the fan a casing 21 is provided for mounting on the name plate 20. In constructing the casing 21 it is made small so that it does not obstruct the currents of air distributed by the fan. This casing is shaped to receive the container 10 and serves to support the air duct 13 in the current of air developed by the fan.

When a vaporizer of this type is mounted on the fan certain of the air currents developed by the fan are received by the air duct 13. These currents on passing into the air duct revolve the wind wheel 16 and the latter prevents eddies developed in the duct 13 from forcing the air back out through the opening by which it entered. This wheel also assists in driving the air through the container 10 and duct 14. Air forced through the container 10 assists in vaporizing the fluid 11 and carries the vaporized liquid out through the duct 14, distributing it in the atmosphere. Such a vaporizer may be used for distributing perfume, disinfectant or any other fluid it is desired to vaporize and distribute through the atmosphere in any room or building.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention, I do not limit

myself strictly to the exact details herein illustrated since manifestly the same can be considerably varied without departing from the spirit of the invention as defined in the appended claims.

Claims:

1. A liquid vaporizer and distributor adapted to be connected to an electric fan, comprising a receptacle having an open top, a cover removably connected to the top, said cover having an air inlet adapted to receive air blown from the fan discharging downwardly into the receptacle, and an air outlet discharging upwardly from the receptacle, and a wind wheel in said inlet.

2. A liquid vaporizer and distributor adapted to be connected to an electric fan, comprising a receptacle, an air duct communicating with an opening in the top of the cover and having its smaller end connected to the cover and its larger inlet end at a point removed from the cover and adapted to receive a draft of air from the electric fan, a wind wheel in said inlet end of the air inlet duct, and an air outlet nozzle communicating with the cover and having a flared outer end.

3. In combination with a fan, a receptacle located centrally on the fan, a container removably mounted in the receptacle, a removable cover on the container, said container having an air inlet through which air is forced from the fan downwardly upon the surface of the liquid in the container, a wind wheel in said inlet, said container having an outlet through which air and vapor pass, said inlet and outlet constituting projections integral with the cover.

MICHAEL B. KESSELMAN.