June 30, 1931. C. KELLER 1,812,207

ATOMIZER ATTACHMENT FOR VACUUM CLEANERS

Filed Aug. 19, 1927

Fig. 2.

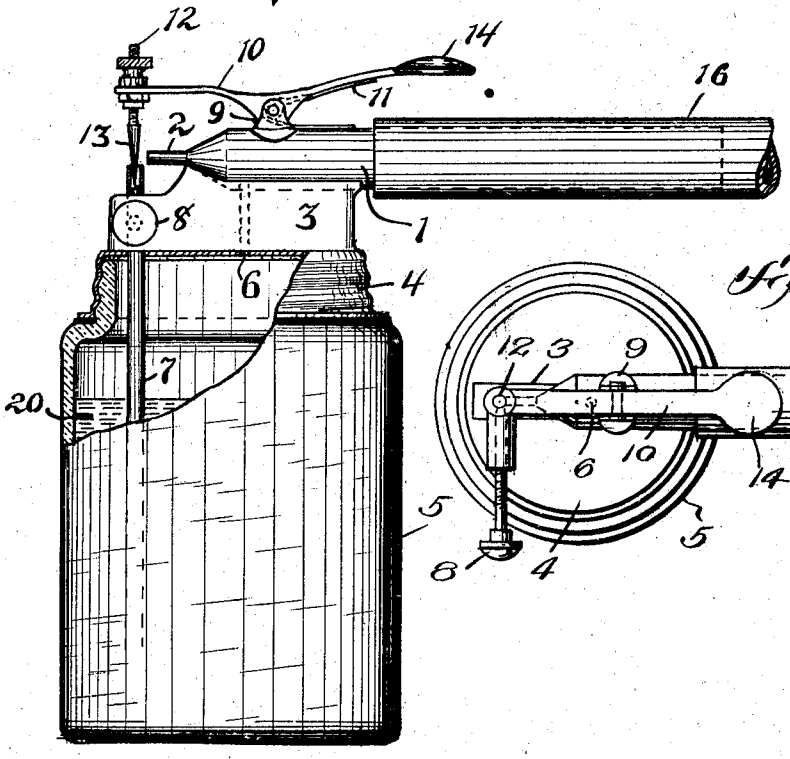


Fig. 1.

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ATOMIZER ATTACHMENT FOR VACUUM CLEANERS

Application filed August 19, 1927. Serial No. 214,042.

This invention relates to improvements in atomizers for vacuum cleaners, and the object thereof is to provide in connection with a vacuum cleaner of usual construction, a device by which air pressure derived from the vacuum cleaner may be utilized to apply atomized liquid upon objects to be treated therewith. The character of the liquid is immaterial to the invention, but may be such as liquid disinfectants, cleansing fluids, insecticides or coloring matter in liquid form.

This object is accomplished by the construction illustrated in the accompanying drawings, in which:—

Fig. 1 is a plan view of an atomizer in which the invention is embodied; and Fig. 2 is a side elevation projected from Fig. 1, a portion being broken away.

The characters appearing in the description refer to parts shown in the drawings and designated thereon by corresponding characters.

The invention consists of an atomizer attachment in conjunction with a vacuum cleaner, the atomizer comprising a tubular handle 1, the forward end of which is reduced in size to form a nozzle 2, the tube being mounted upon a base block 3, which block is superimposed upon and permanently fixed to the lid 4 of a vessel 5. An air duct 6 extends through the lid, base, and into the tubular member 1 for the admission of air from the member into the vessel.

A discharge tube 7 is mounted in the base 3, its upper end projecting to a point adjacent the outer end of the nozzle 2, and its lower portion extends down through the lid into the vessel 5 to a point adjacent the bottom thereof, and a regulating valve 8 is provided for controlling the discharge of liquid from the vessel through said tube. Upon the top of the tubular handle is mounted a bracket 9 in which is pivoted a lever 10 that is actuated in one direction by a spring 11. The forward end of said lever has adjustably mounted in connection therewith a stem 12 with an elongated tapering lower end, which end constitutes a valve 13 that projects into and normally closes the upper end of the discharge tube 7, and is withdrawn from said tube by said lever when the thumb-piece 14 on the rear end of the lever is depressed.

The atomizing device is connected with a vacuum cleaner of the usual type (not shown), there being a hose 16 into one end of which is positioned the extending end of the tubular handle 1, the other end of the hose being connected with the outlet of the fan chamber of the vacuum cleaner. The particular manner of attachment of the hose to the outlet is immaterial, as any suitable arrangement may be employed whereby the discharge of air from the fan chamber of the cleaner enters the hose and is conveyed thereby to the tubular handle.

In the operation of the invention the air supplied to the handle through the hose under pressure from the vacuum cleaner passes from the tube 1 through the duct 6 and is also discharged in a jet from the nozzle 2 past the upper end of the discharge tube 7. The pressure of air in the vessel causes the liquid 20 in the vessel, when the valve 13 is raised, to pass up through the tube into the path of the air that is discharged from the nozzle, so that the liquid becomes atomized and carried by the force of the air jet in a more or less definite direction. By manipulating the valve 8 the rate of discharge of the liquid through the tube may be regulated. The atomizing device may be carried about by grasping the handle and the atomized liquid is applied to objects by depressing the thumb-piece 14 to such extent as to allow the escape of liquid from the tube 7, the rate of discharge being more or less according to the extent the valve 13 is raised, which rate is also limited by adjustment of the valve 8.

What I claim is:—

1. An atomizer comprising a vessel having a removable lid; a base superimposed upon said lid; a discharge tube disposed within said vessel, its upper end extending through and projecting above said base; a tubular member positioned on said base and having a nozzle disposed at approximately right angles to the upper end of the discharge tube, there being an air duct extending through said lid and base into said tubular member; an adjusting valve for regulating the flow through

said discharge tube; an operating valve extending into and normally closing the discharge end of said discharge tube, said valve independent of said adjusting valve having operating means therefor; and a hose connection for supplying air under pressure to said tubular member.

2. An atomizing device comprising a vessel for containing the material to be atomized; a liquid discharge tube extending from within the lower part of the vessel through the top thereof and provided with a valve for regulating the flow of liquid therethrough; a tubular member having a nozzle positioned on said vessel with its nozzle spaced from and directed at approximately right angles across the upper end of said discharge tube, there being an air duct connecting said vessel and tubular member; and an operating valve extending into and normally closing the discharge end of said liquid discharge tube, disposed in front of the tip of said nozzle, and having an operating lever in connection therewith for its support and by which it is actuated independently of the other valve.

In testimony whereof I affix my signature.

CHARLES KELLER.