March 17, 1936. R. MODICA 2,034,113

POCKET NOSE AND THROAT ATOMIZER

Filed April 27, 1934

Fig. 1.

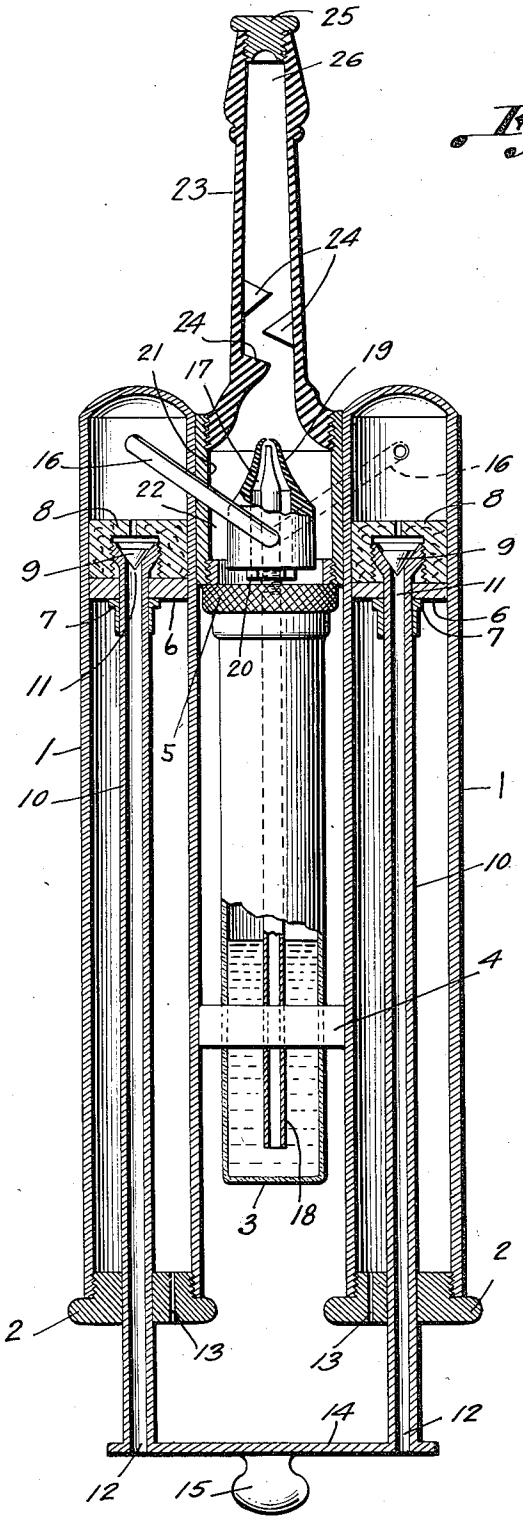
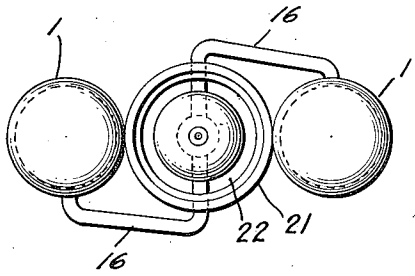



Fig. 2.




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# UNITED STATES PATENT OFFICE

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## POCKET NOSE AND THROAT ATOMIZER

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Application April 27, 1934, Serial No. 722,819

2 Claims. (Cl. 299—88.5)

The invention relates to improvements in medicinal atomizers of the type adopted to be carried in a vest pocket or in a hand bag; and the objects of the improvements are, first, to provide a compact nose and throat atomizer which can be readily carried in a vest pocket or hand bag without danger of the fluid contents therein leaking out, or the parts becoming useless by reason of lodgment of dirt or dust therein; second, to provide an atomizer reclaiming excess fluid sprayed into inhaling tube; third, to provide an atomizer construction in which, a glass fluid container may be conveniently refilled with medicament; fourth, to provide an atomizer especially arranged whereby the parts are readily cleansed; fifth, to provide an atomizer whereby a comparatively small quantity of medicament is used to produce a large volume of vapor.

Further and more specific objects, features and advantages will more clearly appear from the detailed description given below, taken in connection with the accompanying drawing which forms part of the specification and which illustrates one form of the invention in which; Figure 1, is a vertical section of the entire device in a semi-closed position; Figure 2, is a plan view with the inhaling tube removed.

As shown in Figure 1, air chambers 1, preferably secured together in parallel position and, if molded of aluminum, rubber, or like material integrally formed, are each provided with centrally apertured caps 2, screw-threaded or otherwise secured in their open, lower ends, the top of the air chambers being permanently closed. The medicament container 3, preferably secured and also protected by brace 4, in parallel position between air chambers 1, being constructed of glass with metal screw-threaded collar 5.

Leather discs 6, seated on collars 7, with leather cup washers 8, surmounting conical valve member 9, are attached to hollow piston rods 10, so as to form an inwardly opening valve closure over an opening 11, into the diametrically disposed air inlet ducts 12.

Pistons 6, and 8, combined, are manually operated by pull and push motion of hollow piston rods 10, extending through the centrally apertured caps 2, provided with exhaust ducts 13.

The hollow piston rods 10, are secured at their lower ends by a cross member 14, upon which is attached hand grip 15.

Air tubes 16, communicating with air pocket 17, surrounding atomizing tube 18, within spray spout 19, to convey compressed air from air chambers 1, to air pocket 17, to provide suction drawing medicament through atomizing tube 18, developing spray and vapor.

The atomizing tube 18, is preferably screw-threaded or otherwise permanently secured to central portion of inner wall of housing 21, allowing openings or ducts 22, as shown in Figure 2, for return of excess spray to medicament container 3.

Lock nut 20, is screw-threaded and attached to screw-threaded section of atomizing tube 18, to provide for adjustment and regulation of spray from aperture of spray spout 19.

The inhaling tube 23, is screw-threaded at base or otherwise removably secured into the aperture of housing 21, and is especially constructed with internal projections 24, to intercept excess spray which is later condensed and washed back into medicament container 3.

A cap 25, is preferably screw-threaded or otherwise removably secured to aperture 26.

I am aware that prior to my invention, atomizers and pocket atomizers have been made with the customary rubber bulb air pressure and also with reciprocal piston action. I, therefore, do not claim such devices broadly; but

I claim;

1. An atomizer comprising parallel cylinders, a tubular valve-controlled piston within each cylinder, a liquid chamber removably supported intermediate the cylinders, an atomizing tube within the liquid chamber, a nozzle surmounting the outlet end of the tube, a member embracing the liquid chamber and serving to connect the cylinders and an air conduit leading from the top of each cylinder to said atomizing nozzle.

2. An atomizer comprising spaced cylinders, a valve-controlled piston device within each cylinder, a liquid chamber disposed intermediate the cylinders, a support for and having removable connection with said chamber, said support being carried by and serving as a spacing connector for the cylinders, an atomizing tube carried by said support and projected into the chamber, an atomizing nozzle carried by the support and surrounding the outlet end of the tube, air tubes connecting each cylinder with the interior of the atomizing nozzle, and a supplementary nozzle carried by and intermediate the cylinders and projecting beyond the same, said supplementary nozzle being provided with internal baffle walls for interference with the spray from the first named atomizing nozzle.

ROY MODICA.