May 22, 1923. 1,455,969

J. A. RAYDER

EMBALMING FLUID ATOMIZER

Filed April 9, 1921

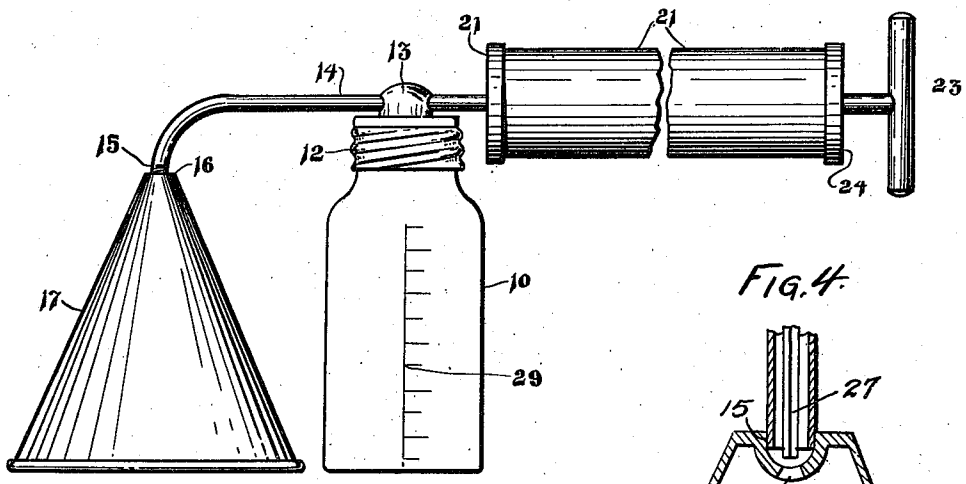


Fig. 1.

FIG. 4.

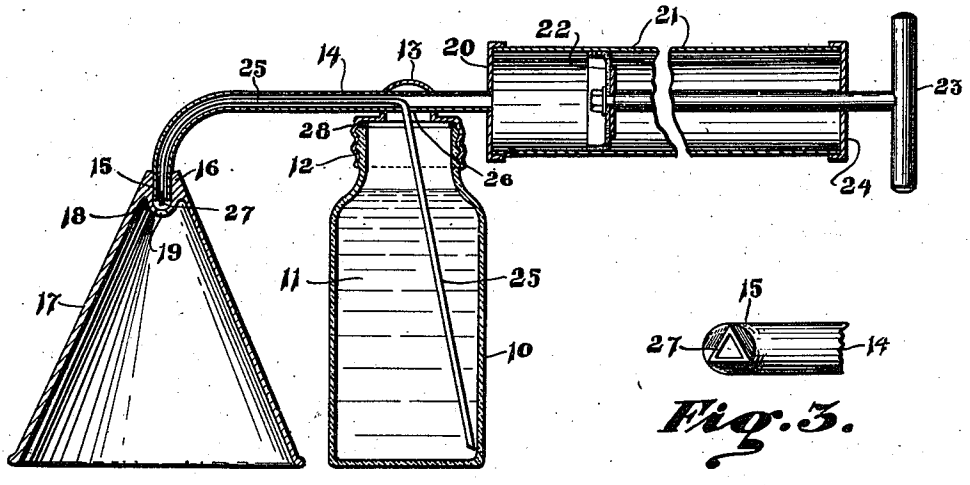


Fig. 3.

Fig. 2.

Joseph A. Rayder
INVENTOR

BY Victor J. Evans
ATTORNEY

WITNESS:

Patented May 22, 1923. 1,455,969

UNITED STATES PATENT OFFICE.

JOSEPH A. RAYDER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE NECROSAN CO., INC., OF NEW YORK, N. Y.

EMBALMING-FLUID ATOMIZER.

Application filed April 9, 1921. Serial No. 459,905.

To all whom it may concern:

Be it known that I, JOSEPH A. RAYDER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Embalming-Fluid Atomizers, of which the following is a specification.

This invention relates to atomizers and more particularly to devices such as are usually employed by undertakers for spraying or injecting fluid onto or into the arteries and veins of a corpse for the purpose of preservation. Specifically my invention is essentially—though not absolutely—devised for atomizing an embalming fluid such as "Necrosan" which is diffused over discolored or partly decomposed bodies whereby they are restored to life-like appearance.

The main object of my invention is to provide a novel form of atomizer whereby the embalming fluid is thoroughly atomized and directed over the body or affected parts of the corpse and absorbed thereby without wastage.

Another object of this invention is the provision of an atomizer of the type referred to having a nozzle which insures a more uniform action due to the fact that the compressed air or gas is peculiarly diffused around or about the discharge outlet for the embalming fluid.

A still further object of my invention is to provide a simple, cheap andeffective atomizer for use by undertakers whereby considerable economy and a saving in time and labor are effected.

With the foregoing objects in view and others which will later on be more apparent as this description proceeds, my invention consists essentially in the novel features of construction, combination and arrangement of parts hereinafter fully described and more specifically defined by the appended claim.

In the further disclosure of the invention reference is to be had to the accompanying sheet of explanatory drawings constituting a part of this specification and in which like characters of reference designate the same or corresponding parts in all the views.

Figure 1 is a side view of an atomizer embodying my improvements.

Figure 2 is a central vertical section through the same; and

Figure 3 is a fragmentary enlarged detail of the atomizer nczzle.

Fig. 4 is a fragmentary sectional detail view on an enlarged scale of the spreader and the fluid and air carrying pipes.

Referring more particularly to the views the numeral 10 designates a vessel or container for the embalming fluid 11, such as "Necrosan", and it is preferably made of glass or similar transparent material in the form of a jar fitted with a metal screw stopper or cap 12 having a "hump" or raised part 13 in the top thereof, which is traversed by a tube 14 having one end elbowed and externally screw threaded at 15 to receive the correspondingly threaded end 16 of an inverted funnel shaped spreader 17. It is to be particularly noted that this spreader 17 is provided in its inner end with a hemispherical cup shaped or concavo-convex part 18 having a central aperture 19 for the purpose hereafter explained.

Securely attached to the other end of the pipe 14 by screw threading or other appropriate means is one end 20 of an air pump 21 which is fitted with a plunger 22 operable by a rod and handle 23 extending through the other end 24 of said pump.

Axially arranged within the aforesaid pipe 14 is a fine metallic tube 25 the inner end whereof projects through a slot or opening 26 provided for the purpose in the pipe 14 where it is supported transversely of the hump or raised part 13 of the stopper or cap 12 and it is downwardly extended towards the bottom of the vessel or container 10 as shown. The outer end of this tube 25 is projected slightly beyond the end of the elbow and to project into the concavo-convex part 18 of the spreader or diffuser 17, and it is fashioned to have an approximately triangular cross-section terminal 27 as clearly shown by Figure 3 whereby the embalming fluid 11 when forced therethrough is directed about the inner surface of said concavo-convex part 18 and initially atomized before being forced by the air under pressure through the central aperture 19. This feature I claim to be of considerable importance in that it ensures the thorough atomization of the embalming fluid before it is directed by the spreader or diffuser 17 on to the affected parts of the body to be treated. A leather or other appropriate washer 28 is interposed between

the top of the vessel or container 10 and the inside of the stopper or cap 12 to ensure a liquid and airtight joint.

A graduated scale 29 is preferably provided on the vessel or container 10 so that the requisite amount of embalming fluid can be accurately gaged to meet different conditions.

Assuming that all the parts are assembled as shown and it is desired to treat a body with the embalming fluid 11, the atomizer is grasped in one hand with the spreader or diffuser 17 held over the part to be treated whilst the pump 21 is operated by the handle 23 being slowly reciprocated. It will be readily seen that the air compressed in the container or vessel 10 will be partly expelled through the pipe 14 and at the same time draw the embalming fluid 11 through the tube 25, the jet of said fluid flowing out of the triangular terminal 27 being broken up by the compressed air in the concavo-convex part 18 and expelled through the central aperture 19 in a thoroughly atomized condition.

From the foregoing description and an examination of the drawings it will be readily seen that by my invention I provide a convenient and effective portable atomizer for use by undertakers and others for embalming purposes, and it will also be seen that the invention is susceptible of slight modification to adapt it for larger or smaller sizes, and it is hereby intended to include such reasonable modifications as fairly fall within the scope of the appended claim.

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

An atomizer for embalming fluids comprising an air pump, a reservoir for the embalming fluid, a cap for said reservoir having an upwardly extending-portion, a cone shaped spreader having an internal hemispherical chamber near the apex thereof, an air pipe passing through said upwardly extending portion of the reservoir having one end connected to said air pump and the other end connected to said spreader, and a fluid carrying pipe having a triangular internal cross section, one end of said fluid carrying-pipe terminating within said hemispherical chamber and the other end thereof extending into the reservoir.

In testimony whereof I affix my signature.

JOSEPH A. RAYDER.