W. W. SAILE & H. E. GANIARD.

ATOMIZER.

APPLICATION FILED JULY 24, 1917.

1,269,122. Patented June 11, 1918.

Fig. 1.

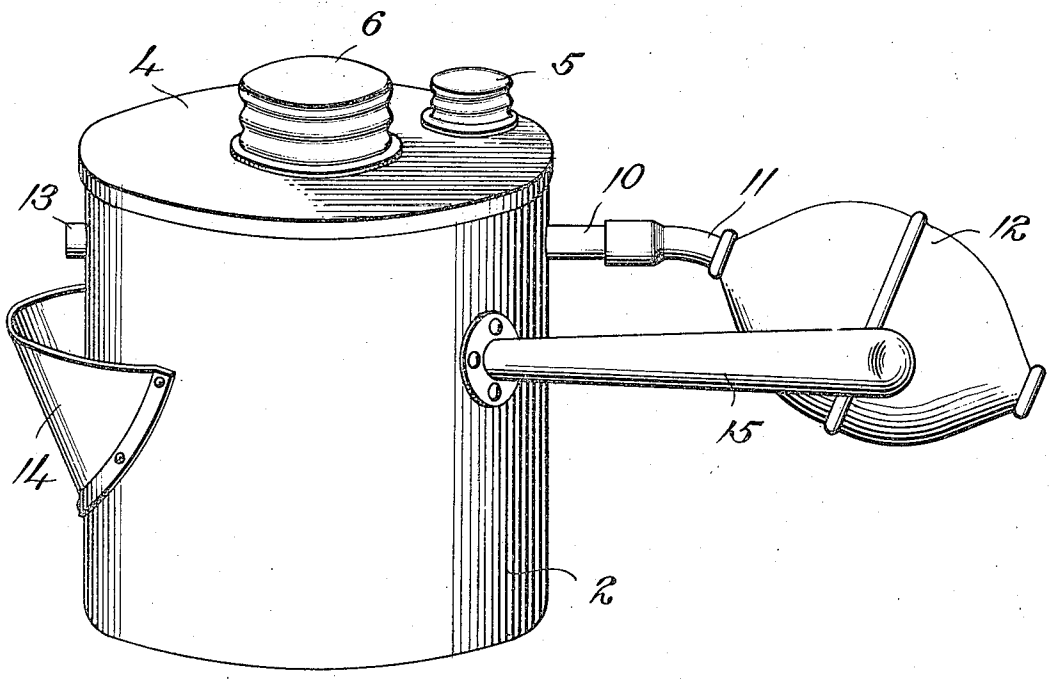
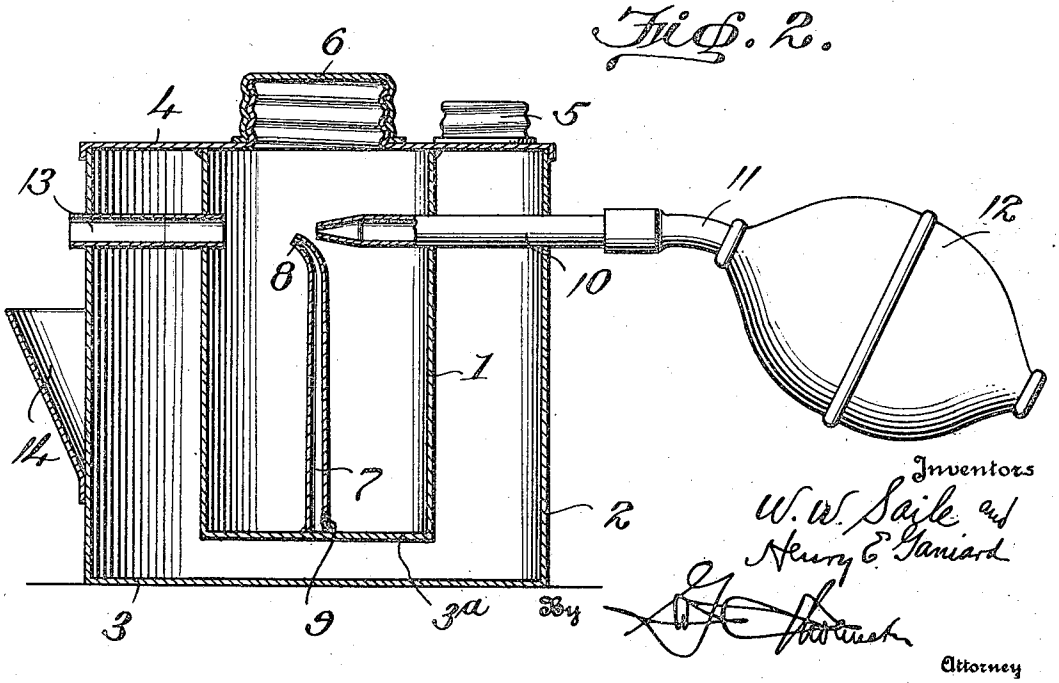


Fig. 2.



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ATOMIZER.

1,269,122. Specification of Letters Patent. Patented June 11, 1918.

Application filed July 24, 1917. Serial No. 182,549.

To all whom it may concern:

Be it known that we, WILL W. SAILE and HENRY E. GANIARD, citizens of the United States, residing at Le Roy, in the county of Genesee and State of New York, have invented certain new and useful Improvements in Atomizers, of which the following is a specification.

The invention provides an atomizer designed chiefly for the treatment of burns, wounds, abrasions of the skin, and other similar troubles adapted to be relieved and advantageously treated by remedies sprayed thereon in a warm condition.

The invention consists of an atomizer embodying an inner receptacle to receive the medicament, an outer receptacle for containing hot water or other liquid in heated condition, a tube disposed within the inner receptacle and in communication at its lower end therewith, an air pipe extending through the two receptacles and having its inner end disposed to direct a jet of air across the delivery end of the tube, a discharge pipe extending through the two receptacles and across the space formed between them with its inner end in line with the air jet to receive the same, a drip cup exterior to the outer receptacle to catch particles of the medicament not sufficiently vaporized to be carried along with the jet, and means for creating a blast of air through the air pipe.

The invention will be described at length hereinafter and particularly claimed, and an embodiment thereof is illustrated in the accompanying drawing, in which,

Figure 1 is a perspective view, and

Fig. 2 is a vertical, central longitudinal section thereof.

Corresponding and like parts are referred to in the following description and indicated in both views of the drawing by the same reference characters.

The atomizer comprises an inner receptacle 1 and an outer receptacle 2, the inner receptacle being adapted to receive the medicament or liquid employed for treating the burn, wound, or other part of the body requiring treatment. The outer receptacle 2 is designed to contain hot water or other heated liquid so as to warm the solution or medicament contained in the inner receptacle 1. The receptacles preferably have a concentric arrangement so as to equalize the space formed between the two shells, whereby the medicament may be uniformly heated. The bottoms 3 and 3^a of the receptacles may be attached thereto in any way. The top 4 is common to both receptacles and the shells forming the bodies thereof may be connected to such top in any manner. Openings are provided in the top 4 leading into spaces inclosed by the receptacles. Caps or suitable closures 5 and 6, cover such openings and admit of the receptacles being supplied, the one with hot water and the other with the medicament or solution to be delivered in a spray upon the part to be treated. The closures 5 and 6 may be of any formation and preferably consist of screw caps fitted to collars applied to the top 4 in line with the openings formed therein.

A tube 7 is disposed within the receptacle 1 and is preferably connected at its lower end to the bottom 3^a and its upper end is contracted and deflected to form a nozzle 8. An opening 9 is formed in a side of the tube 7 near its lower end to establish communication between such tube and the receptacle, whereby the contents of the inner receptacle may pass readily therefrom into the tube to be delivered in the form of a spray when the device is in service.

The air pipe 10 extends through the walls or shells of the receptacles 1 and 2, and terminates at its inner end at one side of the nozzle 8 in such a position as to deliver a jet of air across the delivery end of such nozzle whereby a suction is created within the tube 7 to cause the contents of the receptacle 1 to pass through the tube 7 and mingle with the air jet to be vaporized thereby. The outer end of the air pipe 10 projects a short distance beyond the outer side of the receptacle 2 and has one end of a short tube 11 fitted thereto. The other end of such tube having a bulb or other air blast creating device applied thereto.

The discharge pipe 13 extends through the walls of the receptacles 1 and 2, and its inner end opens into the receptacle 1 in line with the delivery ends of the tube 7 and air pipe 10, so as to receive the atomized jet. The discharge pipe 10 extends across the space formed between the walls of the receptacles and is adapted to be maintained in heated condition by reason of the hot water or other heated liquid contained in the receptacle 2, thereby heating the spray and insuring the medicament being applied to the part to be treated in heated condition

so as to attain the best results. The air pipe 10 and discharge pipe 13 are in line with the extremity of the nozzle 8 between them. The discharge pipe 13 is of such ample proportions as not to retard the jet and yet admit of the same being delivered upon the part to be treated in vaporized form. The outer end of the discharge pipe 13 projects a short distance beyond the outer receptacle 2, thereby admitting of any drippings clearing the side of the outer receptacle.

A drip cup 14 is provided upon the outer side of the receptacle 2 in line with the delivery end of the discharge pipe 13 so as to catch drippings and prevent the same from dropping upon the clothing or table and floor covering.

For convenience in manipulating the atomizer, a handle 15 is applied to a side of the outer receptacle 2 and may be of any material which will prevent burning the hand. When using the device, hot water or other liquid is supplied to the outer receptacle 2, that is, to the annular space confined between the walls or shells of the receptacles 1 and 2. The medicament is supplied to the inner receptacle 1 and may be of any nature. The device is especially adapted for applying a preparation of waxy nature since heat is essential to keep the same in a sufficiently fluid condition to admit of its delivery in the form of a spray or vapor. The wound, burn or other affected part to be treated is cleansed and dried or otherwise prepared to render the same aseptic and in condition for treatment, after which the bulb is manipulated to cause a blast of air to be delivered through the pipe 10, with the result that a portion of the preparation is caused to pass from the receptacle 1 through the tube 7 and is vaporized by coming in contact with the air jet, said jet passing through the discharge pipe 13 and being delivered upon the affected part.

By having the bottom 3^a of the inner receptacle spaced from the bottom 3 of the outer receptacle, the hot water contained in the outer receptacle may reach the bottom of the inner receptacle and thereby serve to more quickly heat the preparation contained in the inner receptacle.

What we claim is:—

An atomizer, comprising inner and outer concentric receptacles, the bottom of the inner receptacle being spaced from the bottom of the outer receptacle, a top common to both receptacles and closing the upper ends thereof and formed with openings leading into the respective receptacles, closures for such openings, a suction tube disposed within the inner receptacle and having a lower inlet near the bottom thereof, an air pipe supported in the walls of both receptacles and projecting beyond the same and having its inner end terminating adjacent the upper end of the suction tube to direct a blast of air across the delivery end thereof, and a discharge pipe supported in the walls of both receptacles and extending across the space formed between them, such pipe being in line with the delivery ends of the suction tube and air pipe.

In testimony whereof we affix our signatures.

WILL W. SAILE.
HENRY E. GANIARD.