(No Model.)

J. D. AVERELL.

INHALER.

No. 432,782. Patented July 22, 1890.

Fig. 1.

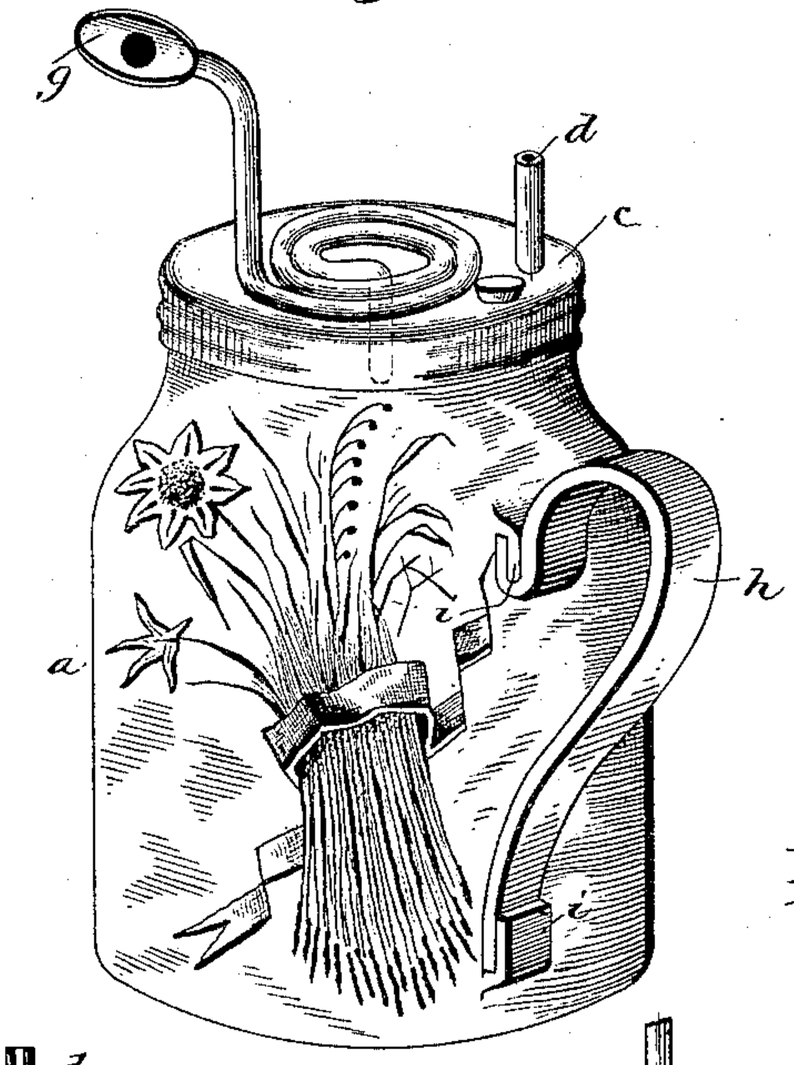


Fig. 2.

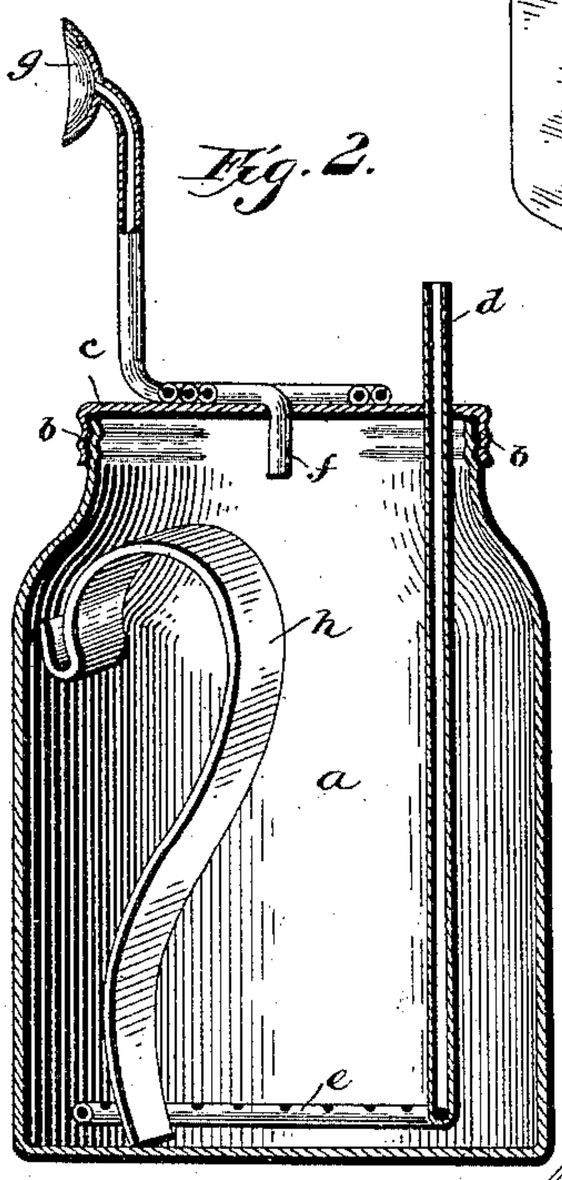


Fig. 3.

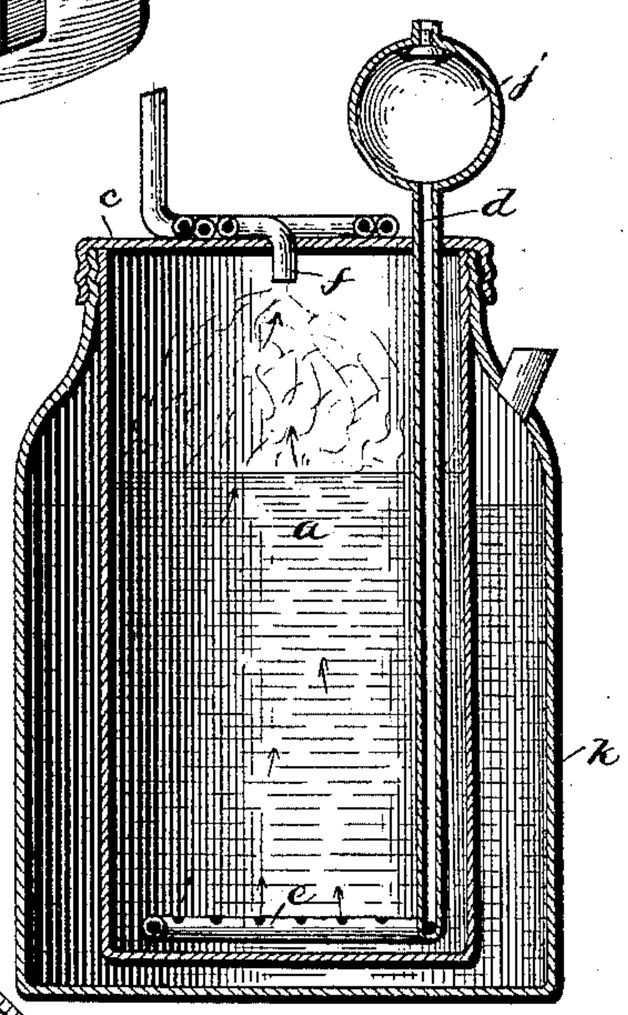
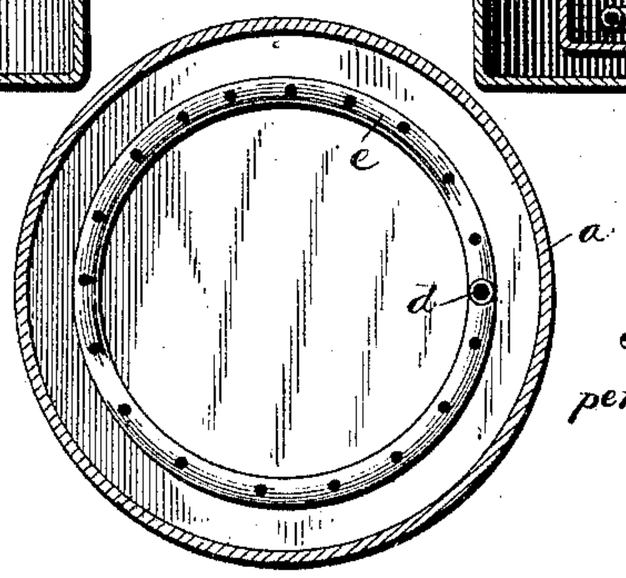


Fig. 4.



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INHALER.

SPECIFICATION forming part of Letters Patent No. 432,782, dated July 22, 1890.

Application filed October 5, 1889. Serial No. 326,105. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. AVERELL, of Manchester, in the county of Ocean and State of New Jersey, have invented certain new and useful Improvements in Inhaling Devices for Vaporized Air, &c.; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in inhalers.

The object of the invention is to provide a cheap and effective apparatus for conveying antiseptic or other curative remedies to the seat of disease in such a finely divided or vaporized state that the full curative properties of the remedies will be felt without irritation to the affected parts, but which will immediately soothe and ease the same.

These objects are accomplished by and my invention consists in the peculiar method and in certain novel features of construction and combinations of parts hereinafter set forth, and particularly pointed out in the claims.

Referring to the accompanying drawings, which illustrate an apparatus for carrying out the method, Figure 1 is a perspective view of the device. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a similar view of a modified construction. Fig. 4 is a cross-section.

In the drawings, the reference-letter *a* indicates an air or vacuum tight bottle or vessel of convenient size to be held in the hand. This closure can be of any suitable or convenient shape and composed of any material—such as glass, metal, &c.—and can be open at the top and provided with a cap or top to close the same, or can be permanently closed at both ends and provided at the upper end with a suitable number of apertures, as hereinafter set forth. Where a vessel open at the top is used, the mouth of the vessel is screw-threaded and provided with a packing-ring *b* on its upper edge, and a screw-threaded top *c* screws upon said open end and tightly seals the same. A tube *d*, open at its outer end at the exterior of the vessel, extends down through the top or cover of the same to the bottom of the vessel, and is there provided with a hollow perforated ring *e* to evenly and thoroughly distribute and diffuse the air passing down the tube *d* throughout the body of liquid in the vessel *a*. A vapor-exit tube *f* also extends through the top or cover of the vessel, and has at its lower end an opening into the interior of the vessel a short distance below the cover, and the outer end of this tube is extended a distance above or beyond the cover, and on its outer end is provided with a suitable perforated mouth-piece *g*, as shown. Air-tight joints are formed where these tubes pass through the top of the vessel. If the vessel and tubes are composed of glass, the glass may be ground at the joints to make them tight.

When it is desired to use the apparatus, the vessel is partially filled with warm or hot water, and a suitable quantity of the remedy to be used—such as oil of tar or turpentine, carbolic acid, &c.—is dropped into the water in the vessel. The vessel is then tightly sealed by screwing on the top or sealing the filling-aperture. The water in the vessel should be of such temperature that it will easily vaporize, and also vaporize or partially vaporize the medicine placed in the same and warm the vapors to a soothing degree. The patient then places the mouth-piece in his mouth and draws or sucks in through the tube *f*, the lower end of which opens above the liquid in the vessel, thereby drawing the air from the vessel and creating a partial vacuum therein above the liquid, whereby the air is forced down through the air-supply tube *d* and out at the perforation in the ring *e* into the liquid, through which it passes and is drawn into the mouth of the patient heavily laden with the healing-vapors from the medicine in the water, which are thereby conveyed directly to the throat, lungs, or passages of the head. The air drawn up through the water and medicine becomes heavily laden and thoroughly impregnated with the vapors or minute particles of the medicine, which, by reason of the heated water, is of a warm soothing temperature. The advantages of such a method as this are clearly obvious.

The warm healing-vapors are carried directly to the seat of disease and the affected parts are immediately soothed by the same.

The vessel is provided with a handle *h*, as shown, by which it can be easily held. This handle can be secured either permanently or detachably in any suitable manner, as by lugs *i*. If a glass vessel is used, it can be inclosed in an outer metallic casing.

The vessel can be filled, if permanently closed at both ends, through a funnel extending through an aperture in the top of the vessel. If the patient is too weak to suck the air through the water, means can be attached to the fresh-air pipe to force the air through, such as a rubber bulb *j*.

The handle *h* is preferably removably secured to the vaporizing-vessel, and when the vessel is not being used and is stored away the handle can be placed inside of the vessel, as shown in Fig. 2.

In Fig. 3 a construction is shown which can be employed where the vaporizing-vessel is formed of glass. As a glass vessel cannot generally with safety be held over a lamp or gas-burner to heat the water therein, in this figure the glass vessel is shown suspended within and from the top of an inclosing normally-inclosed metallic vessel *k* to contain water, and thus form a water-jacket around the vaporizing-vessel. This jacket can be provided with a filling-aperture, as shown.

The suction-pipe is shown as constructed of flexible material and coiled upon the top of the vessel, so that it can be elongated and the mouth-piece lifted to the mouth.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The herein-described inhaler, consisting of an air-tight vessel having a screw-top provided with packing and a pair of apertures, a pair of hooked lugs on the exterior of said vessel, a removable handle to be locked to the vessel by said lugs and adapted to be placed within the vessel when packed, an air-pipe extending down into the vessel through one of said top apertures and provided with a perforated distributing-ring at its lower end at the bottom of the vessel, and the coiled suction-pipe passing through the other top aperture and provided at its outer end with a mouth-piece, all arranged and operating as set forth.

2. The herein-described inhaler, consisting of an outer inclosing water-jacket and an air-tight vessel suspended therein and closing the top thereof, a screw-cover for said vessel, an air-pipe extending down into said vessel through the top thereof and at its lower end at the bottom said vessel provided with the endless perforated distributing-ring, the air pump or bulb on the outer end of said pipe to force the air out through said ring, and the suction-pipe extending through said top and opening into the top of the vessel and coiled on top of the vessel and provided with a mouth-piece at its outer end, all arranged and operating as set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

JOHN D. AVERELL.

Witnesses:
O. E. DUFFY,
LAURA E. AVERELL.