

A. P. Lighthill,
Inhaler.
N^o 47,434. Patented Apr. 25, 1865.

Fig: 2.

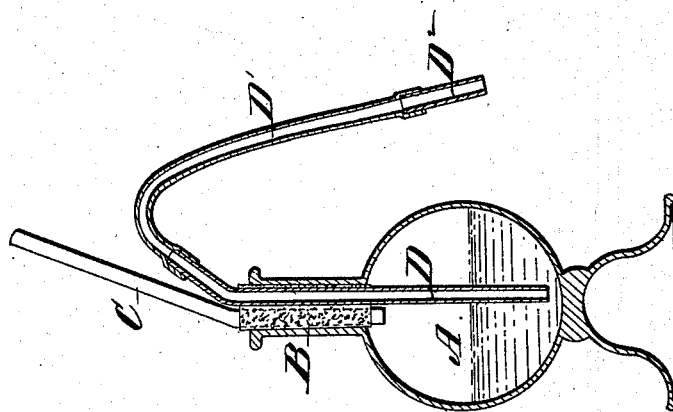
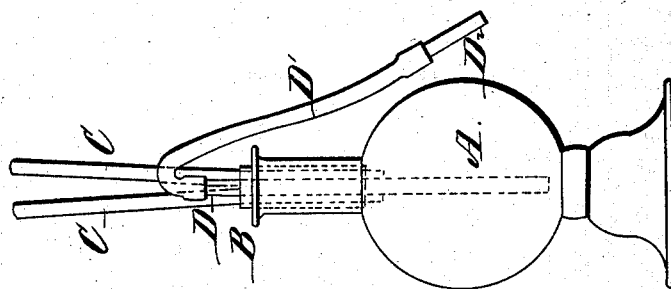


Fig: 1.



Witnesses:
Fredrick Curtis
W. C. Fisher

Inventor:
Augusto Perham Lighthill
by his attorney
R. W. Eddy

UNITED STATES PATENT OFFICE.

AUGUSTO P. LIGTHILL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR INHALING VAPORS.

Specification forming part of Letters Patent No. 47,431, dated April 25, 1865.

To all whom it may concern:

Be it known that I, AUGUSTO PONHAM LIGTHILL, M. D., of Boston, in the county of Suffolk and State of Massachusetts, have invented a new or improved exhalation apparatus to be employed in the cure or alleviation of catarrh, or in the application of medicated vapor to the nasal or aural passages; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a front elevation, and Fig. 2 a vertical section, of it.

In such drawings, A denotes a bottle, which may be constructed of glass or other suitable material, glass being what I generally prefer for its construction. A cork or stopper, B, inserted in the neck or mouth of the bottle, has three tubes, C C and D, inserted in it and extending above it, in manner as represented in Fig. 1. The two tubes C C are the vapor-ducts for the nostrils. They extend through the cork or stopper, open into the interior space of the bottle, and terminate at a short distance below the lower surface of the cork. The third tube—viz., D—should pass through the cork and extend nearly down to the bottom of the interior space of the bottle, the said tube being open at each extremity. A flexible or india-rubber pipe, D', having a suitable mouth-piece or short glass tube, D², fitted to or into one end of it, has inserted in its other end the upper part of the tube D, the connections between the tubes D, D', and D² being air-tight. Instead of these tubes, one single tube, either flexible or inflexible, may be used; but the apparatus, when made with the flexible tube D', or the same and the mouth-piece D², will operate to better advantage, or is decidedly more convenient for use than when the blast-tube is in one piece and inflexible.

In the use of this apparatus a medicament or liquid is to be supposed to be within the bottle A, and to stand therein at any altitude above the lower end of the pipe D. Under these circumstances the party who may use the apparatus should not only insert the tubes

C C within his nostrils, but should take the mouth-piece D² into his mouth or between his lips. Now, by blowing air from his lungs into the tube D' such air will pass into and through the tube D and the liquid within the vessel A, and will vaporize more or less of the liquid. The air charged with the medicated vapor will be blown through the tubes C C and into and up the nostrils or through the nasal passages, and so as to deposit the vapor on the mucous membranes thereof.

From the above it will be seen that the apparatus operates by exhalation of the air from the lungs of the patient, and not by inhalation, or by drawing air into the nose by the usual process of inhalation.

In catarrhal affections of the nasal passages inhalation of vaporized air into them has a tendency to cause the pus or mucus deposits therein to be drawn into the throat, where such pus or mucus is liable to increase the disease. This is to be avoided, if possible, and to this end the exhalation apparatus is to be preferred, as by the effort made in the use of it by the patient to expel the air from his lungs the medicated vapor will be driven up the nose and against the diseased membranes or surfaces, with little or no tendency to affect the natural discharge of the pus or mucus—viz., through the nostrils.

I would remark that instead of two nostril-pipes, C C, but one may be used, but the apparatus will be better and more convenient when constructed with two of them. So with one vent-pipe and with a sufficiently long flexible pipe, D', the apparatus may be used by a patient for blowing vaporized air into either of his ears, in order for the cure or alleviation of disease thereof. It may also be used for the treatment of disease in other of the ducts or passages of the body.

I claim—

The exhalation apparatus, substantially as and for use in manner as described.

A. P. LIGTHILL.

Witnesses:

R. H. EDDY,
WM. R. LANE.