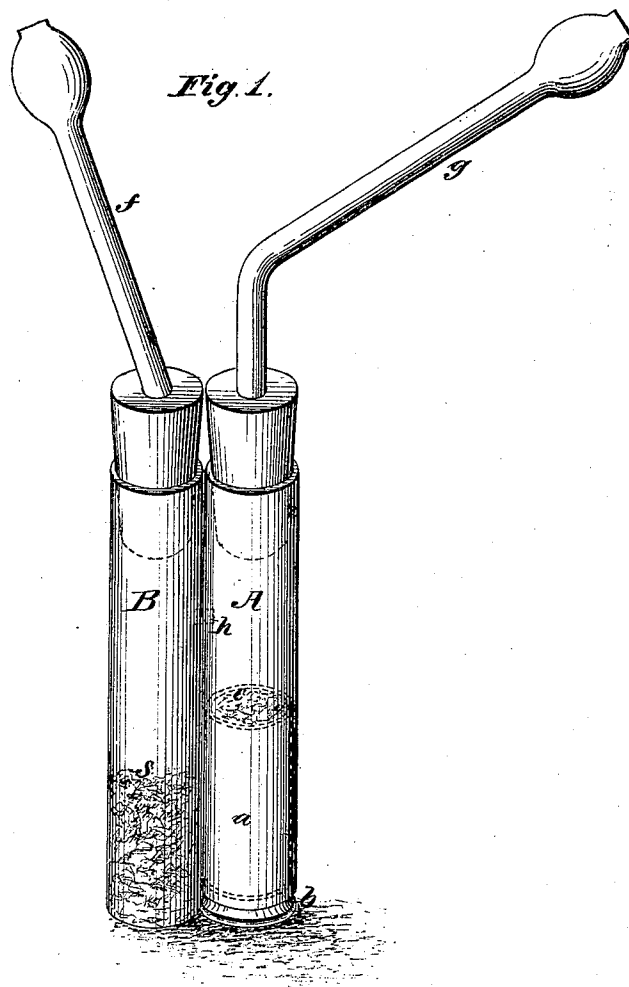


N. I. DONALDSON.

INHALER.

No. 174,724.

Patented March 14, 1876.



Witnesses.

Wm Eccles
M. F. Eccles

Inventor.

Niles I. Donaldson
per Wm M Eccles
his attorney in fact

UNITED STATES PATENT OFFICE.

NILES I. DONALDSON, OF WORCESTER COUNTY, MASSACHUSETTS.

IMPROVEMENT IN INHALERS.

Specification forming part of Letters Patent No. **174,724**, dated March 14, 1876; application filed January 8, 1876.

To all whom it may concern :

Be it known that I, NILES I. DONALDSON, of Worcester county, Massachusetts, have invented certain Improvements in Inhalers, of which the following is a specification:

The nature of my invention consists in so arranging two air-chambers with each other, and with a small detachable reservoir in the bottom of one, that they form a combined inhaler and exhaler at one and the same time, for medical purposes, the detachable reservoir being inserted in the bottom of one of the chambers with a rubber band, and being so arranged that it can be easily displaced at will, and others of the same size and shape, containing different acids, be inserted by the operator. Said detachable reservoirs contain asbestos, or other porous substance, in order to hold the liquid acids, said invention appearing more fully by reference to the accompanying drawing, of which drawing—

Figure 1 is a perspective view.

To enable others skilled in the art to make and use my invention, I will proceed to explain it more fully.

A in the drawing is a common bottle-shaped air-chamber, with a hole in the cork for ingress and egress of air, and to insert a tube, if desired. It is also open at the lower end. *a* is a detachable reservoir filled with asbestos, or other substances not easily decomposed by acids. *b* is a rubber ring, to make the reservoir fit tightly in the bottom of the air-chamber A. I have a number of these containing different acids and compounds to be used. The object of the asbestos is to hold the acids so that they will more readily receive the action of the air, and present a much larger surface to its action, and thus throw off more effectually its gases, and also prevent the liquid acid from running out of the tube and reservoir. The instrument may be conveyed from place to place in the pocket without spilling the acids and other fluids.

B is another large air-chamber of the same size and shape as A, except that it is closed at the bottom, and has fitted in the bottom a small quantity of sponge, or asbestos, to hold the ammoniated substances intact, and more effectually expose it to the action of the air. The bottom of this air-chamber contains ammoniated substances, or other medicated substances, which are intended to be used in connection with the acid-fumes. *f* is a mouth-tube inserted in the cork, at the top of the air-chamber B. *g* is a glass tube with a small bulb end to insert in the nose, eye, or ear, when the instrument is to be used as an exhaler, or when medicated fumes are to be forced out of the instrument into the eye, nose, or ear by the operator. *h* is a small aperture passing from one air-chamber B to A, so as to allow a free mixture of the gases arising from the acid and ammoniated substances or other compounds.

Now, when the operator wishes to use my invention, he can place in the bottom of the air-chamber A and B whatever acid and ammoniated or medical compounds he wishes to inhale or exhale. If he wishes to use it by inhaling, he can draw the fumes through the mouth-tube; if he wishes to force the fumes into the eye, nose, or ear of another, he can blow it through the tube *g*.

Now, what I claim, and for which I ask Letters Patent of the United States, is—

1. A removable, rubber-packed reservoir, containing asbestos in the bottom of one of the duplicate air-chambers of an inhaler, all arranged and for the purposes described.

2. In combination with the removable asbestos-reservoir, the chamber B with sponge connected with the chamber A by the orifice *h*, all as and for the purposes set forth.

NILES I. DONALDSON.

In presence of—

E. PARMER,
WM. M. ECCLES.