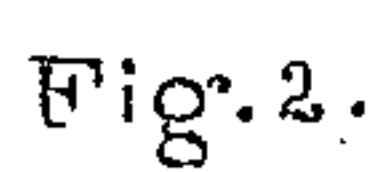
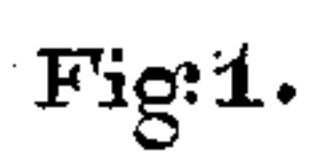


**Inhalers.**

Patented July 22, 1873.



INVENTOR:

INVENTOR:  
Samuel J. Shaw

# UNITED STATES PATENT OFFICE.

SAMUEL J. SHAW, OF MARLBOROUGH, MASSACHUSETTS.

## IMPROVEMENT IN INHALERS.

Specification forming part of Letters Patent No. **141,175**, dated July 22, 1873; application filed June 28, 1873.

*To all whom it may concern:*

Be it known that I, SAMUEL J. SHAW, of Marlborough, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Vaporizing-Inhalers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings forming a part of this specification, and in which—

Figure 1 represents a top or plan view of so much of a vaporizer as is necessary to illustrate my improvements. Fig. 2 represents a side view, and Fig. 3 represents a vertical central section of the same.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it in detail.

In the drawings, the part marked A represents a wide-mouthed bottle, having a cork or stopper, B, held in place by means of plaster of Paris, (shown at *a*,) or any other suitable material, and which renders the bottle air-tight. A glass tube or socket, *b*, similar to the neck of a bottle, is placed in one position of cork or stopper B, and in this socket *b* is placed a cork or stopper, *c*, which latter is perforated to admit and hold the curved end of the mouth-tube C. A glass tube or bottle-like receptacle, D, is secured in the stopper B, the upper open end of which projects somewhat above the top of the stopper, while the lower end is perforated to receive the upper end of tube E, which is secured in place by an air-tight packing of plaster, *d*, or other suitable material. The lower end of tube E projects down to the bottom of the bottle A. Within the upper part of the tube E is placed a small bottle, or other suitable acid-receptacle, *e*. A stopper or valve, F, is arranged to close upon the outside of a hole in the stopper B, which communicates or leads into the bottle A.

The operation is as follows: The bottle or receptacle A being filled with water or other suitable liquid to the proper height, and the acid or vaporizing inhalent placed in the small open-mouthed bottle or other receptacle *e*, the end of the tube C is now placed in the

mouth, and air is drawn in through the open end of the tube D, and over the open end of the acid-bottle *e*, the vapor from which mingles and mixes with the air, and both are drawn down through the tube E, and thence through tube C into the lungs, and from which it is or can be expelled through the nasal passages.

The great difficulty in all similar devices has been the liability of air being forced or blown into the tube C, and the water or other liquid in the receptacle A forced up into the acid-receptacle *e*. To prevent this many plans have been devised. Valves have been placed in the tubes to prevent the ingress of air through the mouth-tube, and in some instances a three-way-tube device has been employed in place of the tube C; and in which latter case a valve was combined with one of the ends of said tube device, which was upon the outside of the bottle to let the air escape in case it should be blown into the mouth-tube. This last-named plan is complicated; and, besides, it is one which renders it difficult to make tight joints, while the former plans are expensive, and the action of the acid upon the valves and their seats soon renders their action imperfect and unreliable.

To obviate all of these and other objections, I make an independent opening, G, through the stopper, and combined therewith a stop or valve, F, upon the outside of the stopper B.

By this arrangement, it will be seen that in case air is blown into the mouth-tube C valve F will open immediately and allow it to escape from the receptacle A, thereby preventing the water or other liquid from being forced up the tube D into the acid bottle or receptacle *e*.

As the valve is on the outside of the stopper, and independent of either of the tubes, it is not liable to get out of order, nor is it liable to be injured by the acids. Then, again, it furnishes an opening through which water or other liquid can be turned into the bottle A, thus obviating the necessity of removing the cork or stopper which holds the mouth-tube C when the bottle A is to be filled.

It will be understood that the action of the



air, when the vapor is drawn through the pipes D and C, tends to close valve or stop F, and keep it closed during the operation.

Having described my improved vaporizing-inhaler, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

The combination, with the receptacle A, in-

gress-tube D, mouth-tube C, and stopper B, of an independent opening, G, and stop or valve F, substantially as and for the purpose set forth.

SAMUEL J. SHAW.

Witnesses:

CARRIE M. SHAW,

EDWARD F. JOHNSON.