O. P. BARBER.

Inhaler.

No. 199,140. Patented Jan. 15, 1878.

Fig. 1.

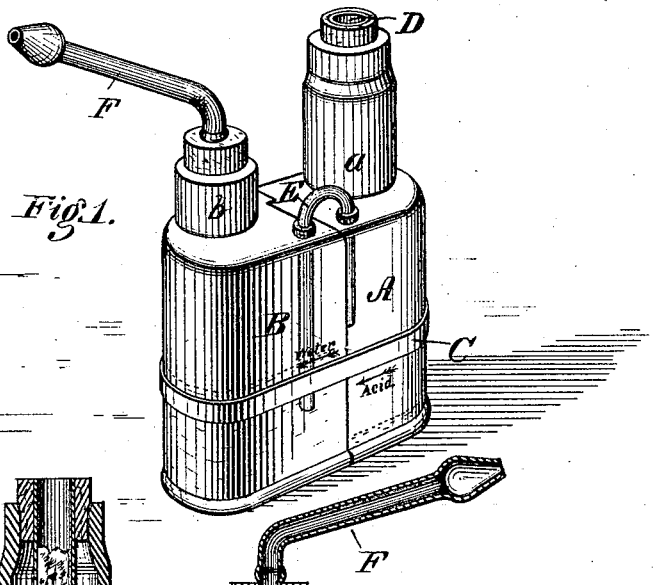


Fig. 2.

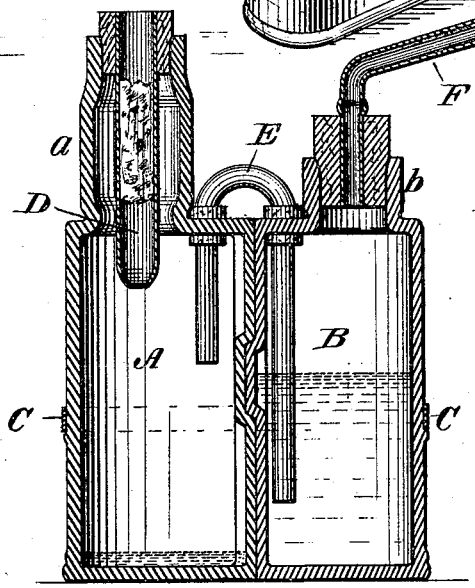
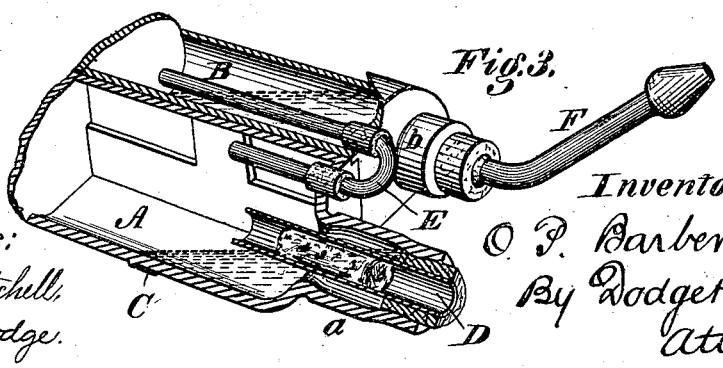


Fig. 3.



Witnesses:
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Will N. Dodge.

Inventor:
O. P. Barber.
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UNITED STATES PATENT OFFICE.

OLIVER P. BARBER, OF SAGINAW, MICHIGAN, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO CHARLES H. PATTERSON, OF CHICAGO, ILLINOIS, AND JOSHUA TUTHILL, OF SAGINAW, MICHIGAN.

IMPROVEMENT IN INHALERS.

Specification forming part of Letters Patent No. **199,140**, dated January 15, 1878; application filed December 8, 1877.

To all whom it may concern:

Be it known that I, OLIVER P. BARBER, of Saginaw, in the county of Saginaw and State of Michigan, have invented certain Improvements in Inhalers, of which the following is a specification:

My invention relates to that class of inhalers in which acid and alkali vapors are combined and passed through a wash-chamber to remove the impurities, &c.; and the improvements consist in constructing the chambers to fit directly against each other, and uniting them by a detachable coupling; in providing the chambers with outlet-mouths at one side, and a communicating tube on the other, in order that the contents of either chamber may be emptied out without causing the passage from one chamber to the other, or the escape from the other; in suspending the acid chamber or tube within the top of the alkali-chamber in such manner that the chamber may be inverted without danger of the acid passing into the alkali-chamber.

Figure 1 represents a perspective view of my apparatus; Fig. 2, a longitudinal vertical section of the same; Fig. 3, a view illustrating the device in an inverted position, showing the action of the parts.

A and B represent two glass vessels or chambers, preferably alike in form and size, each made in one piece, with a neck at the upper end, to admit of its being readily filled and emptied. The two vessels have their sides flattened or otherwise shaped, in order that they may be fitted snugly and closely against each other, side by side, as shown. Around the outside of the two chambers or bottles I place a band, C, by which they are held firmly and solidly together, but which may be readily removed with the fingers to admit of the chambers being separated when they are to be cleansed, or when for other reasons it may be desired to separate them.

In order to prevent the sliding or shifting of the two chambers in relation to each other, their adjacent faces will be provided with vertical and transverse ribs, or other suitable interlocking elevations and depressions.

In order to facilitate the application and adjustment of the band, the vessels or bottles will be provided with external ribs or lips, to serve as stops for the band to rest upon.

In order that there may be no doubt or mistake in charging the vessels, one has the word "Acid" and the other the word "Water" cast thereon, and on each a mark is also cast, to indicate the height which the fluid is to have therein. While it is preferred to make the vessels of a semicircular or approximate form in cross-section, and to apply the band around them, as shown, it is manifest that they may be varied in form, and the application of the fastening modified. The vessel or chamber A, which is to contain the acid, has suspended through a cork in its neck an alkali tube or chamber, D, open at both ends, but with its lower end contracted in size, as shown. The tube or chamber is suspended, it will be seen, freely and independently within the chamber or bottle A, in such manner that when the vessel is inverted for the purpose of discharging the water the acid will flow down around the outside of the tube D, in the manner shown in Fig. 3, the end of the tube remaining constantly above the level of the acid, in such manner that the latter is retained closely within the vessel and prevented from entering the alkali-tube. The alkali-tube will be provided with a filling of sponge or other absorbent material. The two vessels A and B are connected by a tube, E, extending at its ends through holes in their tops, which holes are bushed or lined with cork, rubber, or other packing, to insure a tight joint.

The tube E extends, as shown, below the level of the fluid in vessel B, but not below that of the acid. Into the top of vessel B, I insert an inhaling-tube, F, as shown.

The instrument or apparatus is charged by introducing a proper amount of acid into chamber A, pure water into chamber B, and saturating the filling-in chamber D with the alkali.

Upon applying suction to the tube F atmospheric air is caused to pass through the alkali in chamber E, and thence over the surface of the acid in chamber A, and then through the tube D into chamber B, where it is compelled to pass through the water, by which it is thoroughly washed and cleansed, and the excess

of acid or alkali and any existing foreign matters or impurities removed. The resultant vapor, pure, cool, and pleasant to the taste, issues through the tube F.

The necks *a* and *b*, it will be noticed, are located at or near one side of the bottles or chambers, and the communicating tube E near the opposite side. This arrangement admits of the two vessels being inverted to pour off the contents of either one without danger of the fluid in one vessel passing through the tube into the other.

I am aware that it is old to retain alkali in a sponge in a tube of an inhaler, and I lay no claim thereto.

Having thus described my invention, what I claim is—

1. In an inhaler, the combination of two glass vessels, A B, constructed to fit solidly together, and a removable band encircling and uniting said vessels, as shown.

2. An inhaler-body consisting of the two vessels or bottles provided with interlocking surfaces, and secured together by means of the encircling band, substantially as shown.

3. In an inhaler, the alkali-chamber suspended freely within the acid-chamber, and provided with a filling of absorbent material to retain the alkali, as shown, whereby the inversion of the inhaler is permitted without causing the escape or admixture of the acid and alkali.

4. The vessels A B, having the necks or mouths located at or near one side, and the communicating tube located at or near the other side, substantially as and for the purpose set forth.

OLIVER P. BARBER.

Witnesses:
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