No. 844,097. PATENTED FEB. 12, 1907.

Y. Q. CALDWELL.

INHALER.

APPLICATION FILED AUG. 7, 1906.

Fig. 1.

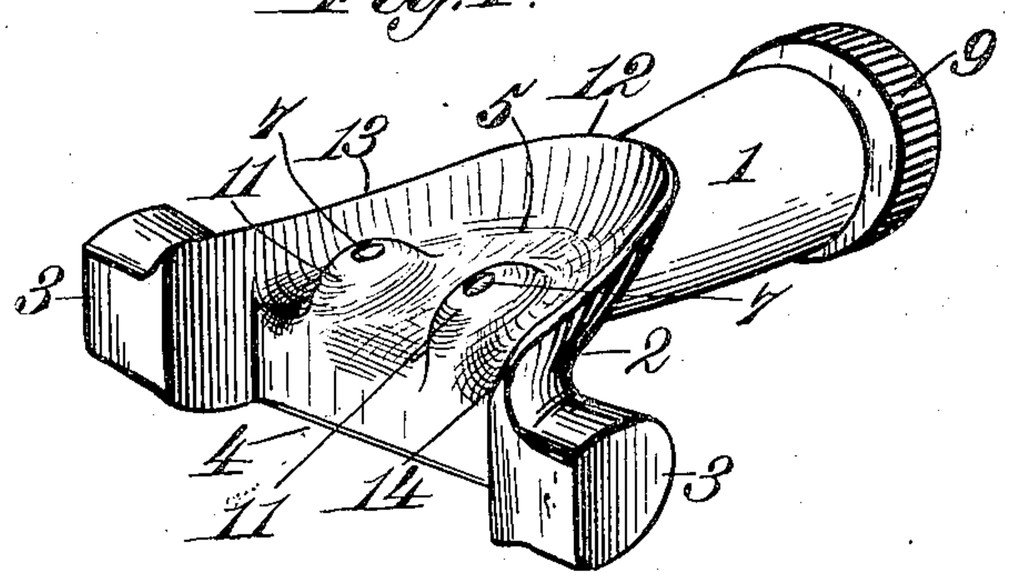


Fig. 2.

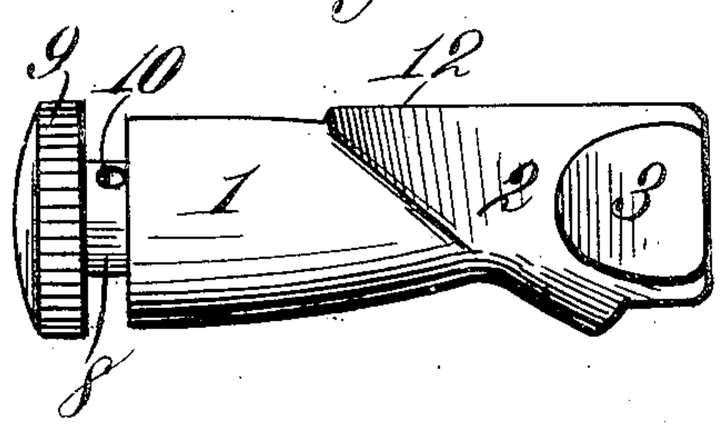


Fig. 3.

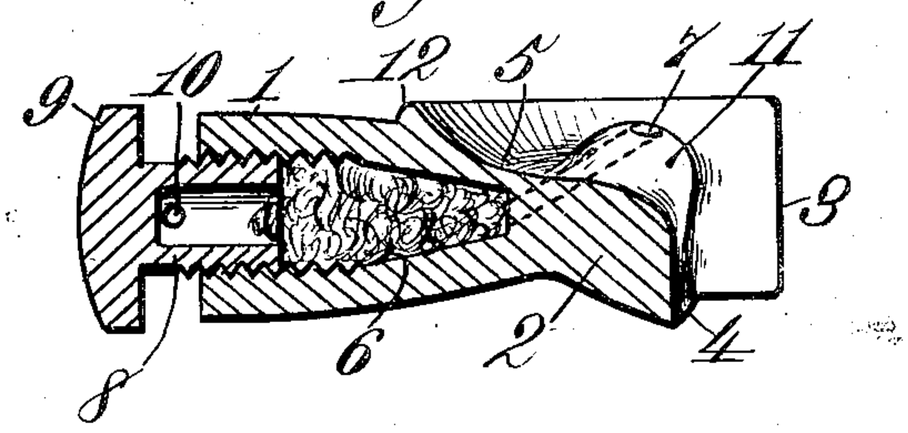


Fig. 4.

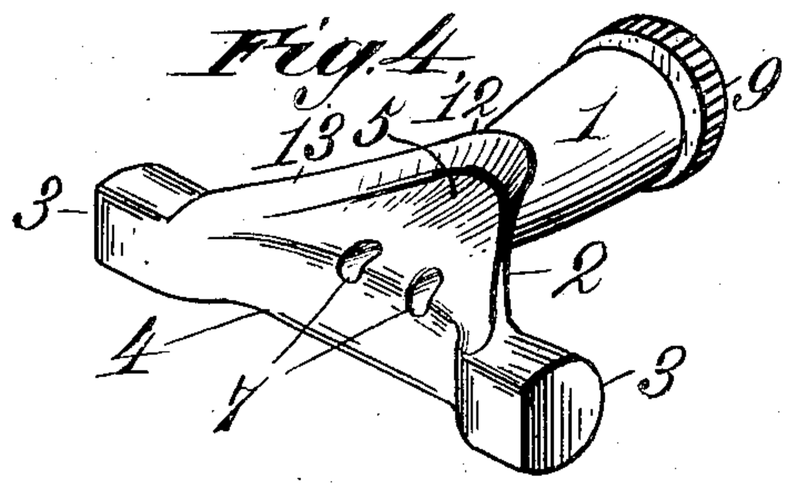
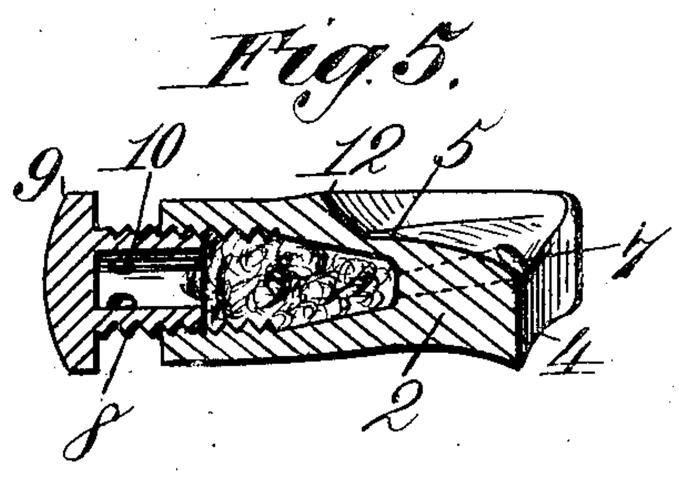


Fig. 5.



Witnesses.
Robert Ewell,
H B Keeler

Inventor.
Yancey Q. Caldwell.
By
James L. Norris
Atty.

UNITED STATES PATENT OFFICE.

YANCEY Q. CALDWELL, OF PARIS, TENNESSEE.

INHALER.

No. 844,097. Specification of Letters Patent. Patented Feb. 12, 1907.

Application filed August 7, 1906. Serial No. 329,566.

To all whom it may concern:

Be it known that I, YANCEY Q. CALDWELL, a citizen of the United States, residing at Paris, in the county of Henry and State of Tennessee, have invented new and useful Improvements in Inhalers, of which the following is a specification.

This invention relates to inhalers for the application of medicaments through the naris for treatment of the nasal cavities and general organization thereof, including the membranes and the throat and lungs, by forcing an inhalent through the naris, and thus increase the range of treatment.

The inhaler is simple and effective in its construction and may be conveniently applied and when in use fully excludes the inhalation of the surrounding air by the patient.

The inhaler embodies, essentially, but two parts—the body and the closure at the lower end of the body, the said closure remaining intact with the body, except at such times when it is necessary to replenish the chamber formed in the body with a medicated inhalent. The one extremity of the inhaler is shaped to closely fit against the nose and upper lip, and all air, except that which passes through the medicated chamber, is shut off from the patient. In the use of the inhaler the patient is not subjected to the least inconvenience or discomfort, and when it is desired to dispense with the application of the improved device it may be conveniently disposed in the vest-pocket by the user in view of the compact form and minimized proportions of the several parts embodied in the inhaler organization. In view of the fact that the inhaler is composed of but two essential parts cleansing operations can be readily pursued with respect thereto, and such material will be used in the construction of the parts as to render the inhaler strong and durable and especially adapting it for use by small children.

In the drawings, Figure 1 is a perspective view of an inhaler embodying the features of the invention. Fig. 2 is an elevation of the inhaler looking toward the side opposite that shown by Fig. 1. Fig. 3 is a section through the inhaler. Fig. 4 is a perspective view of a slightly-modified form of the inhaler. Fig. 5 is a section through the inhaler shown by Fig. 4.

Similar numerals of reference are employed to indicate corresponding parts in the views.

Referring to both forms fo the inhaler, the numeral 1 designates a cylindrical stem of considerable diameter, continuing into a laterally-extended body 2 at one extremity, the body being provided with oppositely-projecting arms 3, which are partially intersected by a cavity 4. The body 2 at one side of the inhaler is formed with a cavity 5, corresponding to the contour of the human physiognomy defined by the lower portion of the nose. The cylindrical stem has a chamber 6 formed therein for the reception of absorbent material adapted to receive a liquid inhalent or medicament, or may receive medicated powder or any other material desired to be administered to a patient by the use of the inhaler. A pair of apertures or openings 7 extend through opposite sides of the center of one terminal of the cavity 5 and communicate at their lower portions with the chamber 6, said cavities being so positioned as to be effective in delivering medicated air or powder from the chamber 6 to the nostrils. A screw-threaded closure or plug 8 is adjustably mounted in the free end of the stem 1 and is provided with a milled head 9 for operating the same to regulate the admission of air to the said chamber. The body of the plug is hollow, and communicating with the interior thereof are a plurality of apertures 10, which are exposed more or less to the exterior air by the adjustment of the plug. The cavity 4 provides for the reception of the upper lip, and when the inhaler is applied and pressed closely against the upper lip the nostrils will be completely closed so far as inhaling the adjacent air is concerned and will be over the openings 7, and by this means the inhalations will ensue solely through the chamber 6, and thus insure a full administration of the medicament desired to be brought into contact with the nasal organization and throat, as well as the lungs, to allay inflammation and benefically treat other diseased organs of the nose and throat.

The arms 3 are particularly essential in the application of the inhaler in view of the fact that by pressing against the outer sides thereof a firm contact will ensue between the nose and upper lip and the surfaces of the cavities 5 and 4. The outer parts of the arms 3 are rounded to avoid inconvenience in engagement therewith. The arms and the remaining parts of the inhaler, including the stem 1 and body 2, have a T-shaped contour, and the object sought in this particular instance is to

provide means at one extremity of the inhaler for securing a perfect application thereof and without requiring the stem 1 to be held by either hand, particularly adjacent to the plug, and which would have a tendency to obstruct the entrance of air through the body of the plug into the chamber 6. Either one or both hands may be used in holding the inhaler applied, but pressure will be exerted in either instance against the outer sides of the arms, as hereinbefore stated, the main object being to exclude the entrance of air into the nostrils from any other point except through the apertures or openings 7.

Thus far both forms of the inhaler shown in the drawings are precisely the same in structure, the particular difference being that the inhaler shown by Figs. 1, 2, and 3 is formed with nostril-plugs 11 at the inner part of the cavity 5, said inhaler-plugs having the apertures or openings 7 continued therethrough, and said apertures or openings inclining inwardly and downwardly to the adjacent end of the chamber 6. Furthermore, in both forms of the inhaler a rim 12 surrounds the cavity 5, said rim being more pronounced in the form of the inhaler shown by Figs. 1, 2, and 3 and continuing into an outer curved member 13 and extending inwardly to the inner surfaces of the arms 3, as at 14. The cavities 4 and 5 in the forms of the inhaler illustrated by Figs. 1, 2, and 3 are also deeper than the similar cavities of the inhaler shown by Figs. 4 and 5.

The improved inhaler may be readily charged with absorbent material and medicaments by removing the plug, and it will be understood that any form of inhalent desired to be used may be introduced in the chamber.

Any material may be employed in the construction of the inhaler; but for many purposes hard wood or vulcanized rubber will be preferred, wood being easily worked to the shape shown, and therefore more economical in the cost of manufacture than if the device was made of rubber.

When not in use, the plug may be closed against the free end of the stem 1, and thus materially obstruct the evaporation of the medicament in the chamber 6.

The improved inhaler in both forms is exceptionally convenient for use and will always be ready for immediate application.

Changes in the proportions, dimensions, and minor detai!s may be resorted to without departing from the spirit of the invention.

Having thus described the invention, what is claimed is—

1. An inhaler comprising a chambered stem and arms disposed in planes at right angles thereto, the body of the inhaler between the stem and arms being laterally projected and having on one side a nose-cavity projecting over the stem and provided with apertures opening therethrough and in communication with the chamber of the stem, the arms being intersected at the inner edge portion thereof by a lip-cavity, and an apertured plug adjustably fitted in the free extremity of the stem to control the admission of air to the chamber.

2. An inhaler having an upper cavity adjacent to one extremity shaped to receive the lower part of the nose, and arms projecting in opposite directions intersected at the inner edge portion thereof by a lip-receiving cavity, the lip-receiving cavity continuing into the upper nose-receiving cavity, a chambered stem projecting from the inhaler and provided with adjustable air-admitting means, the nose-receiving cavity being provided with apertures communicating with the chambered stem.

3. An inhaler comprising a body with a chambered stem projecting therefrom and arms extending from the opposite extremity in planes at right angles to the stem, the upper side of the body having a nose-receiving cavity extending longitudinally over the stem and the arms intersected at their inner portions by a lip-cavity continuing into the nose-receiving cavity, the nose-cavity being surrounded by an upstanding rim and having apertures opening therethrough and in communication with the chambered stem, and a hollow plug adjustably fitted in the free end of the stem and provided with apertures to admit air to the said stem, the arms serving as means for closely pressing the cavitied portions of the inhaler against the upper lip and nose.

4. An inhaler having a body with a chambered stem projecting therefrom and provided with adjustable means in the free end thereof for controlling the admission of air thereto, the opposite end of the body having arms laterally extending in planes at right angles to the stem and intersected by a lip-receiving cavity at the inner edge portion thereof, the upper portion of the inhaler having a nose-receiving cavity continuous with the lip-receiving cavity and nostril-plugs therein, said plugs projecting upwardly within the nose-receiving cavity adjacent to the lip-receiving cavity and provided with inwardly and downwardly inclined apertures communicating with the chambered stem.

5. An inhaler comprising a longitudinal body including a chambered stem, the body having at one extremity arms disposed in planes at right angles thereto and projecting outward equally therefrom, one side of the body of the inhaler having a nose-cavity formed therein and extending in the direction of the length of said body, and the latter between the arms at the inner edge being also formed with a lip cavity or recess which continues into the nose-cavity, the chambered

stem projecting beyond the termination of the nose-cavity and having an open free end, inwardly and downwardly inclined ducts being formed in the body and opening at opposite extremities respectively through the nose-cavity and the inner terminal of the chamber of the stem, the outlets of the ducts of the nose-cavity being close to the lip-cavity, and an apertured plug adjustably fitted in the free extremity of the stem to control the admission of air to the inhaler.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

YANCEY Q. CALDWELL.

Witnesses:
A. B. MITCHUM,
W. N. BOOHAM.