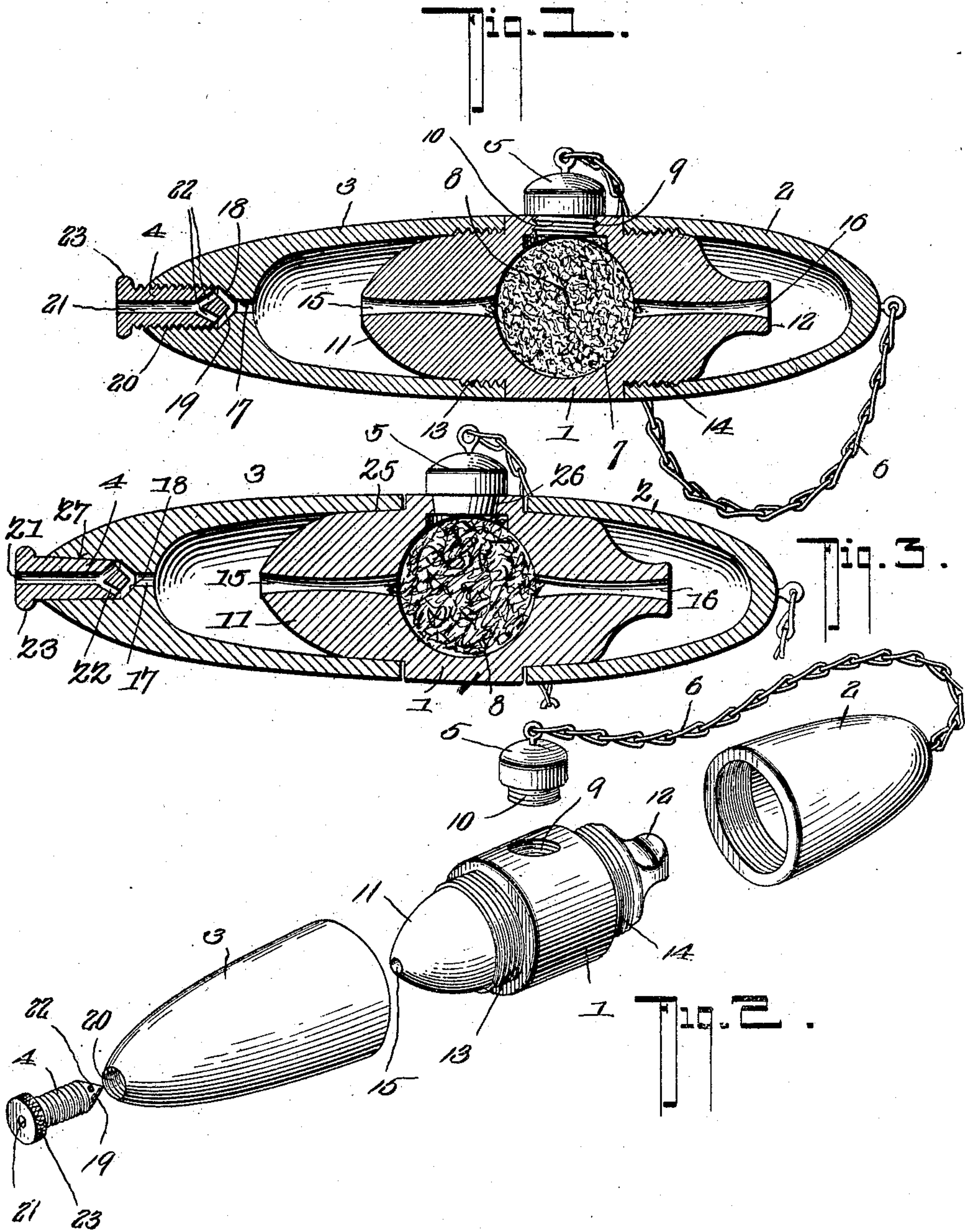


No. 795,866.

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J. R. SPANOGLE.  
INHALER.

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# UNITED STATES PATENT OFFICE.

JOSHUA R. SPANOGLE, OF ATHENA, OREGON.

## INHALER.

No. 795,866.

Specification of Letters Patent.

Patented Aug. 1, 1905.

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*To all whom it may concern:*

Be it known that I, JOSHUA R. SPANOGLE, a citizen of the United States, residing at Athena, in the county of Umatilla and State of Oregon, have invented a new and useful Inhaler, of which the following is a specification.

This invention relates generally to inhalers, and more particularly to one of that class adapted to be carried in the pocket of the user.

The object of the invention is to provide an inhaler which shall be constructed and operated in such manner as to cause direct and positive application of the medicament to the affected part and in which the strength of the medicament may be tempered by varying the amount of air entering with it.

A further object is to provide an inhaler which shall have independent parts for application to the nose and mouth of the user, such parts being shaped in such manner as to insure the greatest comfort and highest efficiency in use.

A further object is to provide an inhaler in which the parts shall be so constructed and combined as to preclude loss of the medicament when not in use or the entrance of any extraneous matter into the ducts and air-supply ports, thereby to retain the device in a thoroughly sanitary condition at all times.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of an inhaler, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, there is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof.

In the drawings, Figure 1 is a view in vertical longitudinal section through an inhaler constructed in accordance with the present invention, showing all the parts assembled and as they appear when the article is to be carried in the pocket. Fig. 2 is a perspective view exhibiting the parts of the inhaler separated. Fig. 3 is a view in vertical longitudi-

nal section through a slightly-modified form of the invention.

The inhaler comprises a body or medicament holder 1, a sealing cap or closure 2, an air-supply cap or closure 3, an air-controlling valve 4, combined with the latter cap, and a plug or closure 5, combined with the holder and permanently connected with the sealing-cap 2 by a suitable flexible connection, such as a chain 6. The body, as well as the two caps, are herein exhibited as circular in cross-section; but it is to be understood that they may be otherwise exteriorly shaped without departing from the scope of the invention. The body is provided with a chamber 7, in this instance shown as circular in form, although it may be otherwise contoured to contain a filling of cotton 8 or other suitable absorbent material to receive the medicament, which may be of any character suited to the requirements present. One side of the body is provided with a threaded orifice 9, which communicates with the chamber 7 and is normally closed by a reduced threaded portion 10 of the plug 5, thereby to prevent escape, and thus waste of the medicament by evaporation. This orifice also furnishes a convenient means for supplying the medicament to the filling 8. The terminals of the body are reduced, as clearly shown in Fig. 2, one end 11 being cone-shaped and being adapted to be inserted within the nose and the other end 12 being transversely flattened and grooved to be grasped between the teeth or lips of the user, and by making these two parts of different shape there will be no danger of the same end being used for treatment of nasal and bronchial complaints. The reduced portions of the body are threaded at 13 and 14, respectively, and these threaded portions are adapted to be engaged interchangeably by either of the caps 2 or 3, which are internally threaded for the purpose, it being understood that when treatment is through the nose the cap 2 will close the end 12 of the body, and vice versa when treatment is through the mouth. Extending from the chamber 8 throughout the terminal portions of the body are ducts 15 and 16, through which the medicated air passes in the use of the article. These ducts are herein shown as provided with flaring terminals and constricted intermediate portions; but it is to be understood that, if preferred, they may be of the same cross-diameter throughout.



The cap 3 is provided at one end with a duct 17, which communicates with an approximately V-shaped seat 18, the latter to be engaged by the cone-shaped end 19 of the air-controlling valve 4, the latter being externally threaded to engage internal threads formed in a seat 20 in the end of the cap. The valve is provided throughout a greater portion of its length with a channel 21, which communicates with two branch channels 22, and these latter are designed to supply air as requisite to the duct 17. To facilitate turning of the valve, the latter is provided with a knurled or roughened head 23, as clearly shown in Fig. 2. By the employment of this valve the amount of air supplied along with the medicament through either end of the body may be regulated at will, and this air-regulating means is of great value, as under different conditions the quantity of air supplied with the medicament should vary, and by the arrangement shown this may readily be accomplished. When the valve is seated, its cone end 19 will positively close entrance to the interior of the cap.

Instead of combining the caps and plug 5 with the medicament-holder by threaded connections, as shown, and also the valve 4 by a like connection with the cap 3 all these parts may be held frictionally combined, as shown in Fig. 3, in which ordinary smooth or friction joints are employed, as at 24, 25, 26, and 27, respectively.

It will be seen from the foregoing description that although the device of this invention is exceedingly simple of construction that it combines in a ready and practical

manner all of the essentials requisite to the provision of a thoroughly effective device, and moreover that by its use a more direct, and thus effective, application of the medicament may be secured than with inhalers in general use.

Having thus described the invention, what is claimed is—

1. An inhaler comprising a body having a chamber for holding a medicament and means for sealing the same, said body being provided with terminals adapted for treating nasal and bronchial troubles, and interchangeable caps engaging the terminals, one of the caps being provided with an air-supply valve.

2. In an inhaler, the combination with a medicament-holder, of a cap or closure therefor having one end provided with a duct and a seat, and a channeled valve engaging the seat and operating to control the supply of air through the duct.

3. In an inhaler, a body provided with a chamber and means for sealing the same, and with ducts communicating with the chamber, and with threaded terminals, and interchangeable caps adapted for threaded connection with the terminals, one of the caps operating as a sealing means, and the other having an air-supply-controlling valve combined therewith.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSHUA R. SPANOGLE.

Witnesses:

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