

No. 786,112.

PATENTED MAR. 28, 1905.

M. D. GOOD.

INHALER.

APPLICATION FILED SEPT. 13, 1904.

Fig. 1.

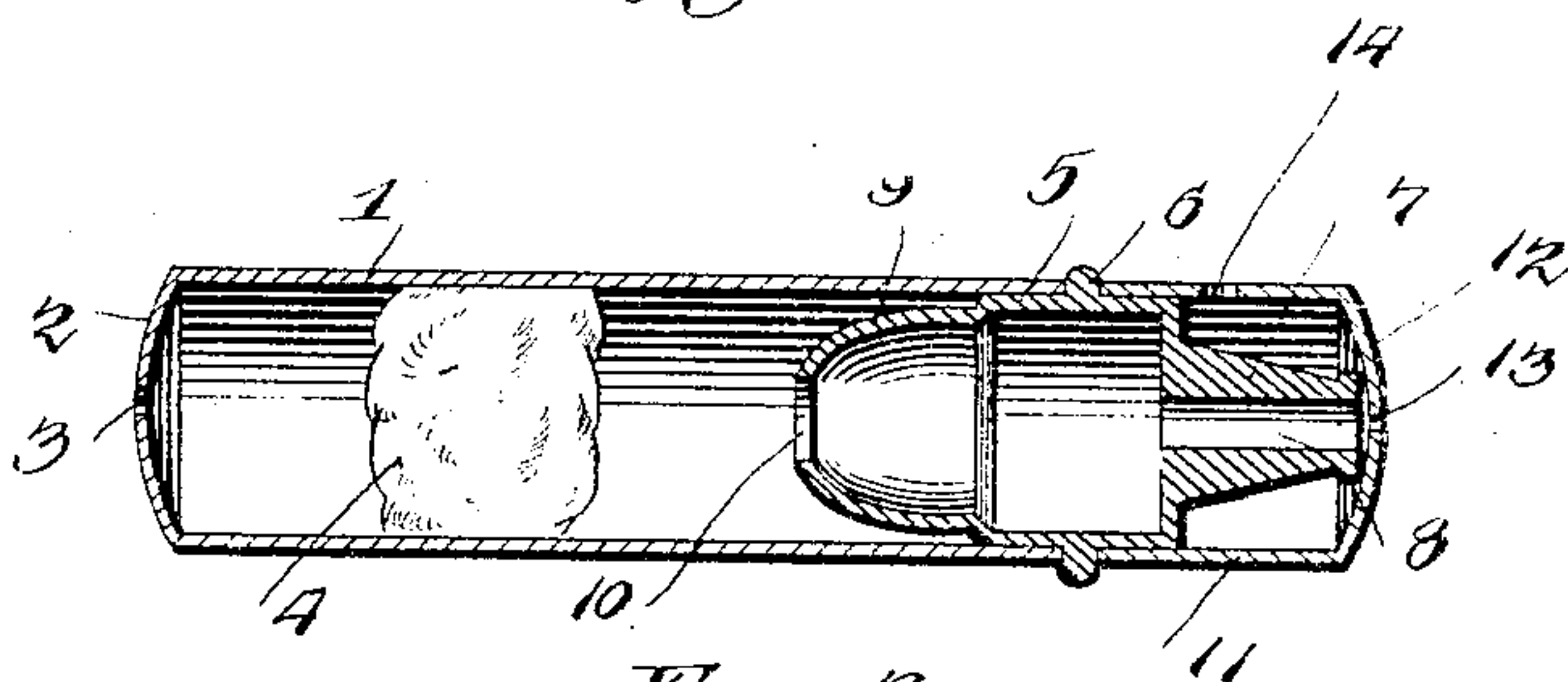


Fig. 2.

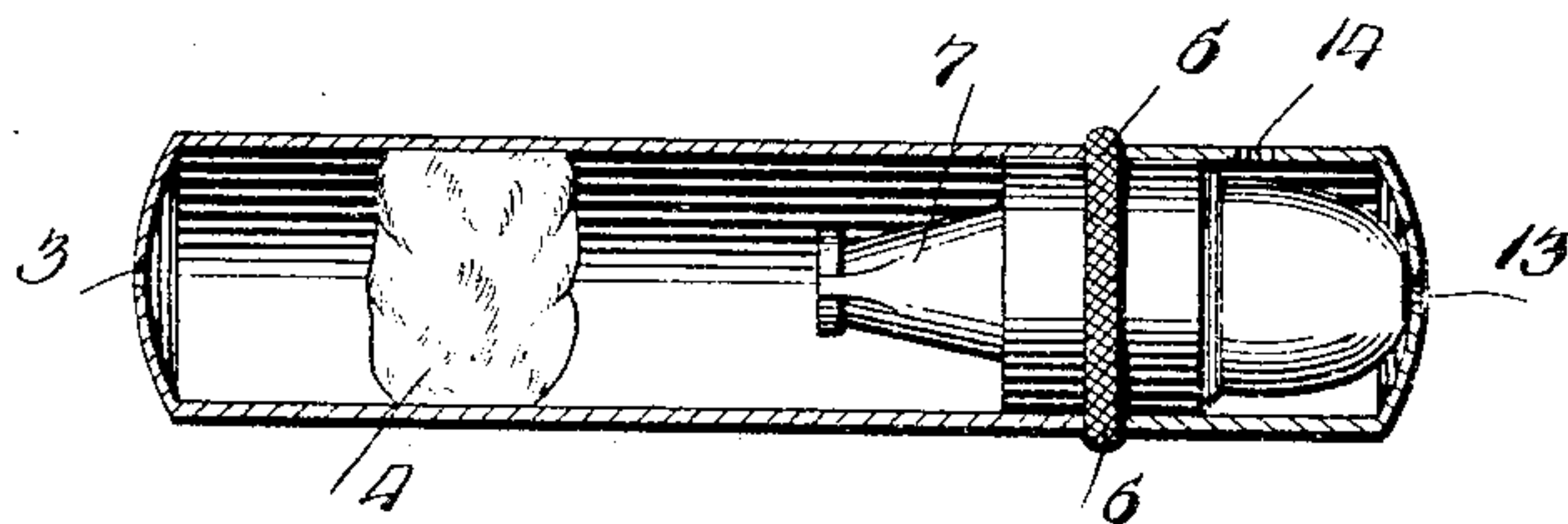


Fig. 3.

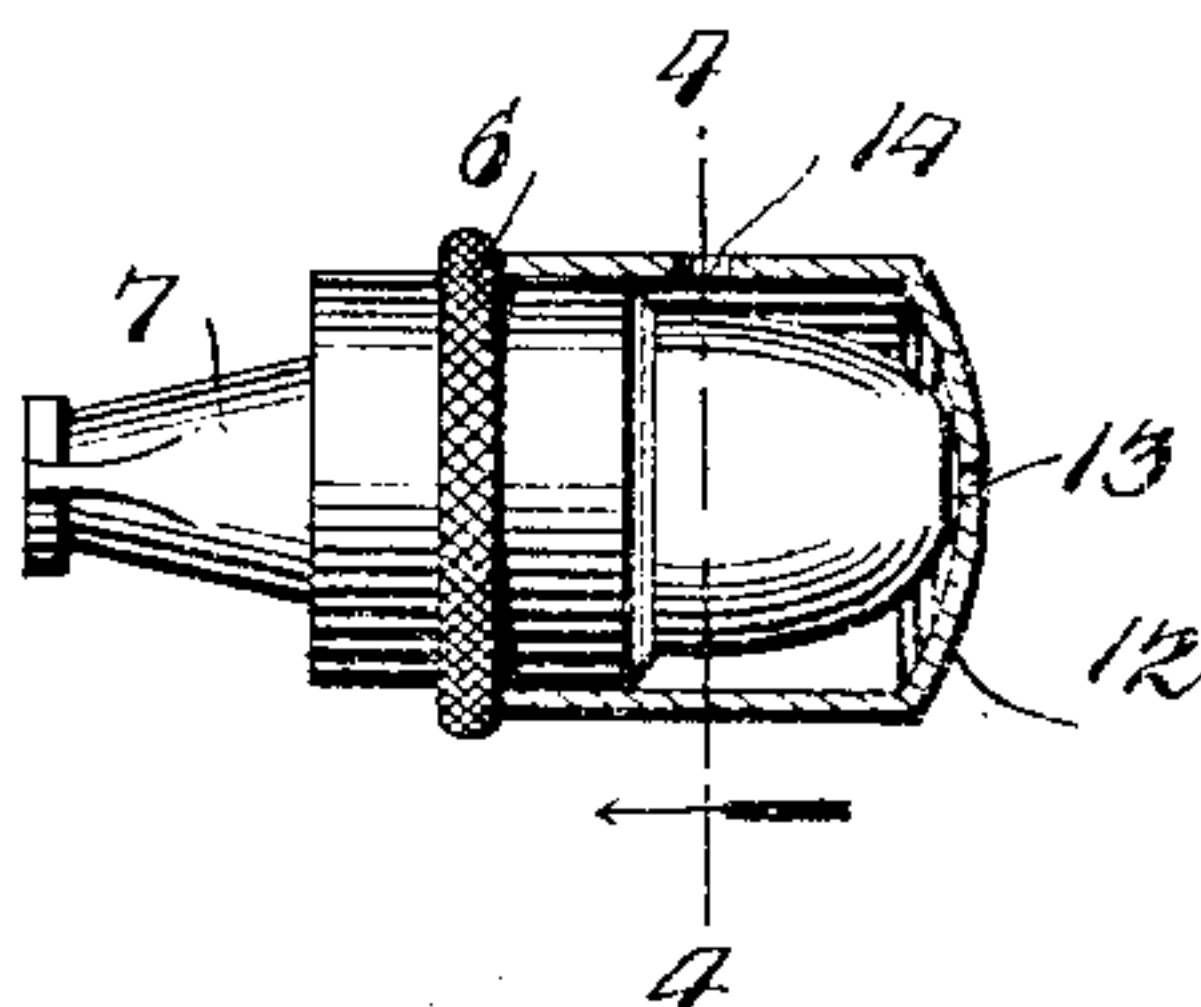


Fig. 4.

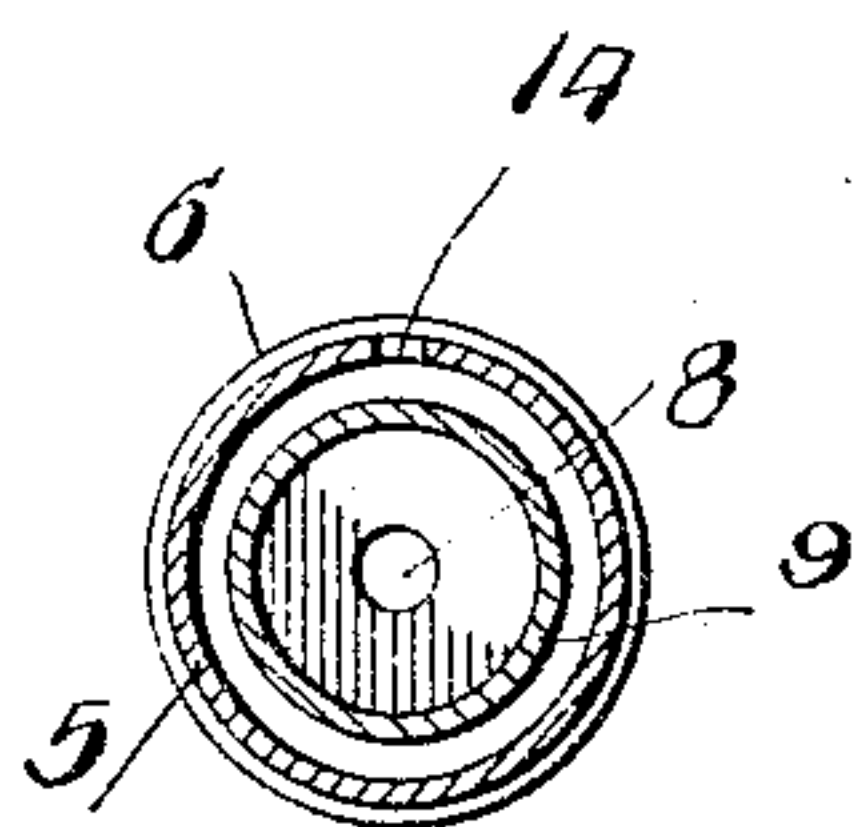
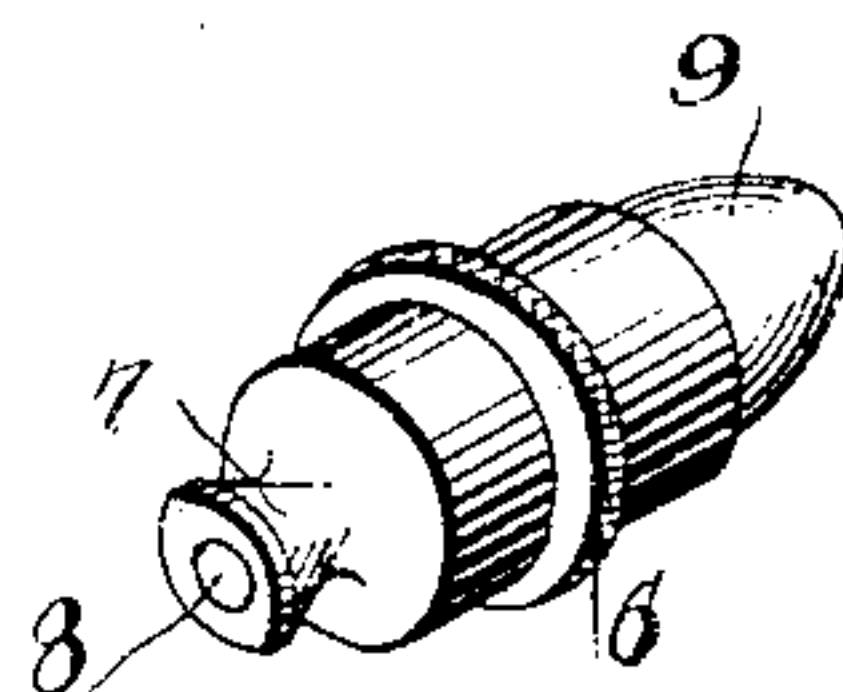


Fig. 5.



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INHALER.

SPECIFICATION forming part of Letters Patent No. 786,112, dated March 28, 1905.

Application filed September 13, 1904. Serial No. 224,291.

To all whom it may concern:

Be it known that I, MILTON D. GOOD, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented new and useful Improvements in Inhalers, of which the following is a specification.

This invention relates to inhalers designed especially for the treatment of nasal, throat, and lung diseases, and has for its object to produce a simple inexpensive device of this character which may be readily prepared for inhaling through the mouth or nostrils and one wherein the nozzle-section of the device may be detached and employed as a breathing-exerciser for purposes of expanding the lungs and chest.

To these ends the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a central longitudinal section through the improved device complete and showing the mouthpiece turned outward. Fig. 2 is a similar view illustrating the nozzle-section reversed and the nose-piece outward. Fig. 3 is a sectional elevation showing the nozzle-section removed and adapted for use as a breathing-exerciser. Fig. 4 is a transverse section taken on the line 4-4, Fig. 3. Fig. 5 is a detail perspective view of the nozzle-section with the cap removed.

Referring to the drawings, 1 designates the body of the device in the form of an elongated tubular member composed, preferably, of aluminium or other non-corrosive material and having at one end a wall 2, provided with a central air-inlet opening or port 3, there being arranged in the body 1, preferably at a point between its ends, a porous element 4, of cotton or other appropriate absorbent material, designed in practice to receive and hold a medicated liquid and to permit free passage of air through the latter.

Adapted for insertion into the open end of the body 1 is a hollow or tubular nozzle-section 5, provided at its longitudinal center with a milled flange or bead 6, extended marginally around the nozzle and constituting a stop or abutment for limiting the entrance of

either end of the nozzle into the body, the nozzle being provided at one end with a mouth-piece 7, having a central opening or passage 8, and at its other end with a hollow and substantially semispherical nose-piece 9, having at its end an opening or passage 10.

Formed to seat over either end of the nozzle 5 is a tubular cap 11 of a diameter corresponding to that of the body 1 and having a normally outer end wall 12, provided with a central opening or perforation 13, which in practice aligns centrally with either of the passages 8 or 10 when the cap is in position on the nozzle, the cap being further provided in its side wall with a lateral air opening or passage 14 for a purpose which will presently appear, attention being here directed to the fact that the nozzle is maintained frictionally seated in the end of the body 1 and is therefore freely removable from the latter.

In practice when the device is to be employed as a breathing-exerciser, the nozzle 5 is removed, as illustrated in Fig. 3, and the cap 11 seated over the nose-piece 9. The mouth-piece 7 is then inserted between the lips and air inhaled therethrough, during which action the air enters freely through the openings 14 and 13. After the lungs have been fully inflated in this manner the air is expelled from the device without removing the mouthpiece 7 from between the lips, and during the exhalation the operator places a finger over and thereby closes the opening 14, whereby the air can escape only through the reduced opening 13, thus rendering the expulsion of the air through the device extremely slow and gradual. It is apparent that the lungs will thus remain inflated for a considerable period of time and be slowly deflated, whereby the breathing exercise will be exceedingly efficacious in expanding the lungs and chest.

When the device is to be employed for treating nasal, throat, or lung diseases, the absorbent material 4 has applied thereto a suitable medicated liquid, and the nozzle 5, with the cap removed, is inserted into the open end of the body 1 with either the mouth-piece 7 or nose-piece 9 projected outward, depending upon whether the inhalations are to be taken through the mouth or nostrils. When

inhaling through the device under these conditions, air enters through the opening 3, passes through the medicated material 4, and thence through the passages 8 and 10 into the mouth
5 or nose of the patient.

From the foregoing it will be seen that I produce a simple, inexpensive device admirably adapted for the attainment of the ends in view and one which may be readily arranged for the various uses of which it is susceptible, it being understood that in attaining these ends minor changes in the details herein set forth may be resorted to without departing from the spirit or scope of the invention.

15 Having thus fully described the invention, what is claimed as new is—

1. In a device of the class described, a hollow body, a removable and reversible nozzle therefor, said nozzle being provided with an
20 air-passage therethrough, and a cap adapted to seat over one end of the nozzle and provided with an air-opening.

2. In a device of the class described, a hollow body, a removable nozzle therefor, said

nozzle having an air-passage therethrough and
25 being provided with a mouthpiece, and a cap adapted to seat over one end of the nozzle and having an air-opening.

3. In a device of the class described, a nozzle having a passage therethrough and a projecting mouthpiece, and a cap adapted to seat
30 over one end of the nozzle and having a lateral opening, said cap being provided in its end wall with an air-opening.

4. In a device of the class described, a tubular body having one of its walls provided
35 with an air-opening, and a nozzle-section having a passage therethrough and adapted to be removably seated in one end of the body, said nozzle being reversible and provided with a
40 mouthpiece and a nose-piece oppositely disposed and extended.

In testimony whereof I affix my signature in presence of two witnesses.

MILTON D. GOOD.

Witnesses:

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M. A. NAYLAND.