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(54) **PORTABLE DISINFECTING MEANS FOR THE RIMS OF GLASSES, CUPS AND IMPLEMENTS**

(57) The invention relates to a portable disinfecting apparatus for the rims of glasses, cups and utensils. It is an instrument that has a small bottle containing a disinfectant, which impregnates, by means of a sprayer, a hook-shaped brush for cleaning the rim of the glass, cup or other utensils (such as knives, spoons or forks) when the user is in a restaurant or hotel/catering establishment. The portable disinfecting apparatus for rims of glasses, cups and utensils is able to prevent infections by microorganisms that are on the rims of the glasses and cups or on the utensils when they are not properly cleaned and dried, or have not been used in a long time. (Fig. 1)

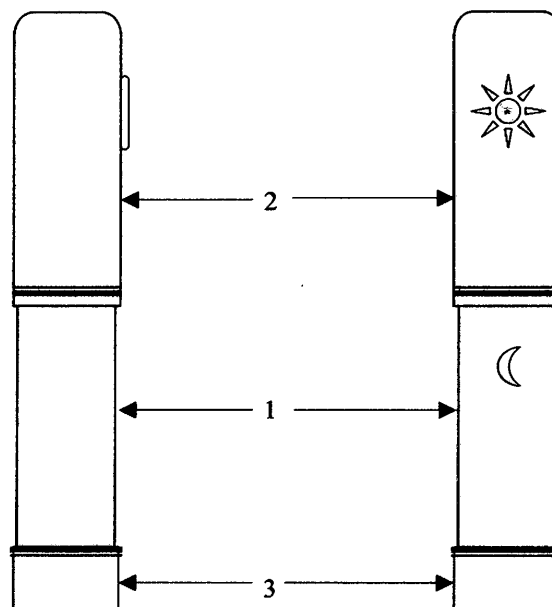


Fig. 1

Description

TECHNICAL FIELD

[0001] In a world of unstoppable demographic expansion in which it is becoming increasingly easier to travel to and from countries with a tropical climate and with relative health and **"cleanliness"** of dining utensils, or very relative depending on the establishment, I found it appropriate and convenient to create the portable disinfecting apparatus for the rims of glasses, cups and utensils for disinfecting those that are to be used. Nowadays, even if the cleanliness of the establishment is trustworthy, that will not suffice due to the high risk of diseases caused by moisture and temperature, which can be transmitted precisely on said rim of cups or glasses if they are not properly cleaned and disinfected.

[0002] If we look at the cleanliness of glasses and cups, we see that after they are "cleaned", in some establishments they are placed "upside down" (with the rim facing downwards) on clothes (it is also true that in some establishments they are wiped with a dishcloth in order to polish them) and therefore it must be considered that the germs that have been eliminated by the detergent in the dishwasher (in establishments that wash the glasses this way) **can once again appear on the rims of the glasses or cups due to the moisture and the temperature**, as well as the characteristics of the aforementioned dishcloth under the glasses or cups. This is one of the causes of certain infections, such as "cold sores", etc., and other national and non-national diseases, if other continents are involved.

[0003] Due to this daily observation, I felt the need to design a pocket-size portable disinfecting apparatus so that the user can disinfect the rims of glasses or cups (and also spoons, etc.) **on site** if they consider that they have **not been** suitably cleaned.

STATE OF THE ART

[0004] Although I have reviewed the instrumentation for preventive sanitary use, I have not found any portable disinfecting apparatus for the rims of glasses, cups and utensils that disinfect by merely spraying on them a disinfectant of medicinal use, which at the same time is also a good germicide, and that when applied to the rim of the glass, cup and utensils to be used, disinfects them in a safe way for the user.

GENERAL DESCRIPTION OF THE DISINFECTING APPARATUS

[0005] The portable disinfecting apparatus for the rims of glasses, cups and utensils is a small instrument that can be carried in one's pocket or in a woman's purse, as the dimensions thereof are just slightly bigger than a **lip-stick** and it is made up of two bodies: the **cylindrical body** and its **cover**.

Cylindrical body

[0006] The cylindrical body is a plastic tube that in its lower part has a small bottle containing the disinfectant, which enters the tube through the lower part and couples to the sprayer by means of the rubber sealing cap on the neck. Subsequently, the bottom screw cap is placed, the small bottle being inside the cylindrical body (lower part), and on the upper part it has the hook-shaped cleaning brush that cleans the rims of the glass or cup. The aforementioned hook-shaped cleaning brush is connected to the sprayer by means of a flexible Teflon tube, through which the disinfectant reaches the upper part of the previously mentioned hook-shaped cleaning brush with which the bristles of the hook-shaped cleaning brush are impregnated with the sprayed disinfectant, resulting in the disinfection of the rim when the utensil is rubbed by the hook-shaped cleaning brush.

[0007] The small bottle is made of a thin, disposable plastic and, in the extraction thereof, **it is perforated** by two pins that stick into it, thereby preventing it from being reused.

The cover

[0008] **The cover**, which covers the cylindrical body, is a hollow cylinder (tube) with a circular slit that fastens it to the aforementioned cylindrical body to cover the hook-shaped cleaning brush for disinfecting the glass or cup, as well as to protect it.

[0009] The hook-shaped cleaning brush has an angle of inclination of 20° for facilitating the use on the rim of the glass or cup. The hook-shaped cleaning brush is fastened by a screw that is extractable for the purposes of removing the hook-shaped cleaning brush from its location and cleaning it or replacing it.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010]

Fig. 1) General view of the portable disinfecting apparatus for rims of glasses, cups and utensils.

Fig. 2) Front and side view of the disinfecting apparatus, open.

Fig. 3) Inner front and side view of the disinfecting apparatus, open.

Fig. 4) Rear and side view of the disinfecting apparatus, open.

Fig. 5) Inner rear and side view of the disinfecting apparatus, open.

Fig. 6) Exploded view of the disinfecting apparatus, open.

Fig. 7) Detailed view of the cleaning brush.

Fig. 8) View of the use of the disinfecting apparatus, on the cup or glass.

Fig. 9) View of the use of the disinfecting apparatus, on utensils.

Fig. 10) View of the small bottle that contains the disinfectant.

Fig. 11) View of the opening of the bottom cap for extracting the small bottle, perforating it.

BRIEF DESCRIPTION OF THE PIECES

[0011]

1 Cylindrical body.

2) Cover.

3) Threaded bottom cap.

4) Hook-shaped cleaning brush

5) Fastening screw of the hook-shaped cleaning brush (4).

6) Extraction valve.

7) Small bottle made of thin plastic.

8) 1st Flexible Teflon tube

9) 2nd Rigid Teflon tube

10) Concavity from which the extraction valve (6) button protrudes.

11) Abutment against which the hook-shaped brush (4) rests.

12) Cup for demonstrating the functioning of the apparatus.

13) Utensils for demonstrating the functioning of the apparatus.

14) Rubber sealing cap.

15) Steel pins.

16) Soft rubber base.

17) Thread in the lower part of the cylindrical body (1).

18) Vertical channel in the small bottle (7) made of thin plastic.

19) Vertical profile that enters the channel (18).

20) Half-round gap for the location of the hook-shaped cleaning brush (4).

SPECIFIC DESCRIPTION OF THE DISINFECTING APPARATUS

[0012] The portable disinfecting apparatus for rims of glasses, cups and utensils is an instrument made up of: a **cylindrical body** (1), which is a plastic or aluminium tube, and a **cover** (2) made of the same material.

[0013] The **cylindrical body** (1) has the hook-shaped **cleaning brush** (4) on the inside and **upper part** thereof, which is fastened by the **screw** (5) when it is placed in the half-round **gap** (20) and rests against the **abutment** (11). The hook-shaped **cleaning brush** (4) has an angle of inclination of 20° with respect to the vertical axis of the instrument for facilitating the rubbing of it on the rim (Fig 8 and 9).

[0014] Furthermore, on the **upper part** it has: the **1st flexible Teflon tube** (8), which transports the disinfectant from the **extraction valve** (6) to the hook-shaped **cleaning brush** (4), the **concavity** (10) from which the **extraction valve** (6) button protrudes and where the user must use

their finger to spray the disinfectant in the hook-shaped **cleaning brush** (4), which is made up of **plastic bristles**.

[0015] In the lower part the instrument has: the **small bottle** (7) made of thin plastic, which contains the disinfecting liquid, and, coming out of the lower part of the **extraction valve** (6), which is inside the aforementioned **small bottle** (7) made of thin plastic, is the **2nd rigid Teflon tube** (9) that sucks the disinfectant when the button of the aforementioned **extraction valve** (6) is pressed.

[0016] The neck of the **small bottle** (7) made of thin plastic is sealed with a **rubber sealing cap** (14), and on one side it has a **vertical channel** (18) where the **vertical profile** (19) enters when it is placed inside the instrument, with the aim of **preventing it from rotating** when the **threaded bottom cap** (3) is pressed upwards against it.

[0017] The **cylindrical body** (1), on the lower part thereof, has the **threaded bottom cap** (3) which is screwed into the **thread** (17) of the lower part of the aforementioned **cylindrical body** (1) and the **threaded bottom cap** (3) has two **steel pins** (15) that have the following function: rotating the **threaded bottom cap** (3) to the right, and the **threaded bottom cap** (3) presses the **small bottle** (7) of thin plastic inside the instrument; and when the **threaded bottom cap** (3) is turned to the left, it extracts the **small bottle** (7) of thin plastic but sticks the **pins** (15) thereof into the **small plastic bottle** (7) and deforms the plastic and perforates the **small bottle** (7) made of thin plastic so that it is **not refilled** with any disinfectant. As such, the **small bottle** (7) made of plastic material is **disposable**, with the aim of protecting the user from possible skin burns (Fig. 10 and 11).

[0018] The **cover** (2) is a plastic or aluminium tube that has the function of protecting the **cylindrical body** (1) and couples to the aforementioned **cylindrical body** (1) by means of an inner **circular slit** on the lower part of the aforementioned **cover** (2).

WAY OF USING THE DISINFECTING APPARATUS

[0019] Although the way of using the disinfecting apparatus is obvious, the instructions for the use thereof emphasize that the disinfectant must be sprayed before putting the apparatus on the rim of the glass or cup, for the purposes of impregnating the bristles of the hook-shaped **cleaning brush** (4) before placing it on the rim of the cup so as to prevent the drink, as well as other utensils, from being contaminated with the disinfectant.

Claims

1. A portable disinfecting apparatus for rims of glasses, cups and utensils, which is an instrument that allows a disinfectant to be sprayed on a brush that couples to the rim of the glass, cup or utensil that is going to be used and is made up of two parts: a **cylindrical body** (1) and the **cover** (2) thereof.

A **cylindrical body** (1) that has on its inside: a

hook-shaped cleaning brush (4), an extraction valve (6), a small bottle (7) made of thin plastic, a rubber seal cap (14), a threaded bottom cap (3) that has two steel pins (15), a 1st flexible Teflon tube (8), a 2nd rigid Teflon tube (9) and, **on the outside**, a fastening screw (5) and an abutment (11).

A cover (2), which is a hollow cylinder (1) that attaches to the cylindrical body (1) by means of an inner circular slit, which is located on its lower part.

2. The portable disinfecting apparatus for rims of glasses, cups and utensils, according to claim 1, is **characterised by** the fact it has: a hook-shaped cleaning brush (4), **secured inside a half-round gap (20) by means of a fastening screw (5)** and an abutment (11) **that is on the front part of the** cylindrical body (1).
3. The portable disinfecting apparatus for rims of glasses, cups and utensils, according to claims 1 and 2, is **characterised by** the fact it has: an extraction valve (6) **located inside a concavity (10) which is on the rear part of the** cylindrical body (1) **and is connected to a small bottle (7) of thin plastic by means of a second rigid Teflon tube (9) and on the front** part to a hook-shaped cleaning brush (4) by means of a first flexible Teflon tube (8).
4. The portable disinfecting apparatus for rims of glasses, cups and utensils according to claim 1, is **characterised by** the fact that: the cylindrical body (1) **has a thread (17) on the lower part** of the cylindrical body (1) in order to screw the threaded bottom cap (3), which has two steel pins (15) on the **inner side thereof**.
5. The portable disinfecting apparatus for rims of glasses, cups and utensils according to claims 1 and 3, is **characterised by** the fact that: the cylindrical body (1) **has a vertical profile (19) on the inner side of its wall** that enters into a **vertical channel (18)**, which the small plastic bottle (7) has **on the outer side of its wall**.
6. The portable disinfecting apparatus for rims of glasses, cups and utensils according to claims 1, 3 and 5, is **characterised by** the fact that: the small bottle (7), made of thin plastic, has a rubber seal cap (14) **on its neck**.

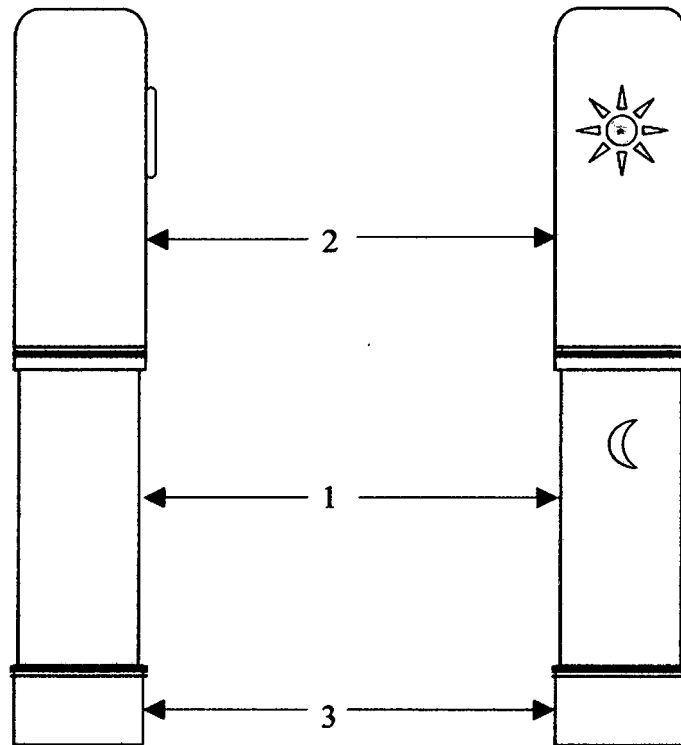


Fig. 1

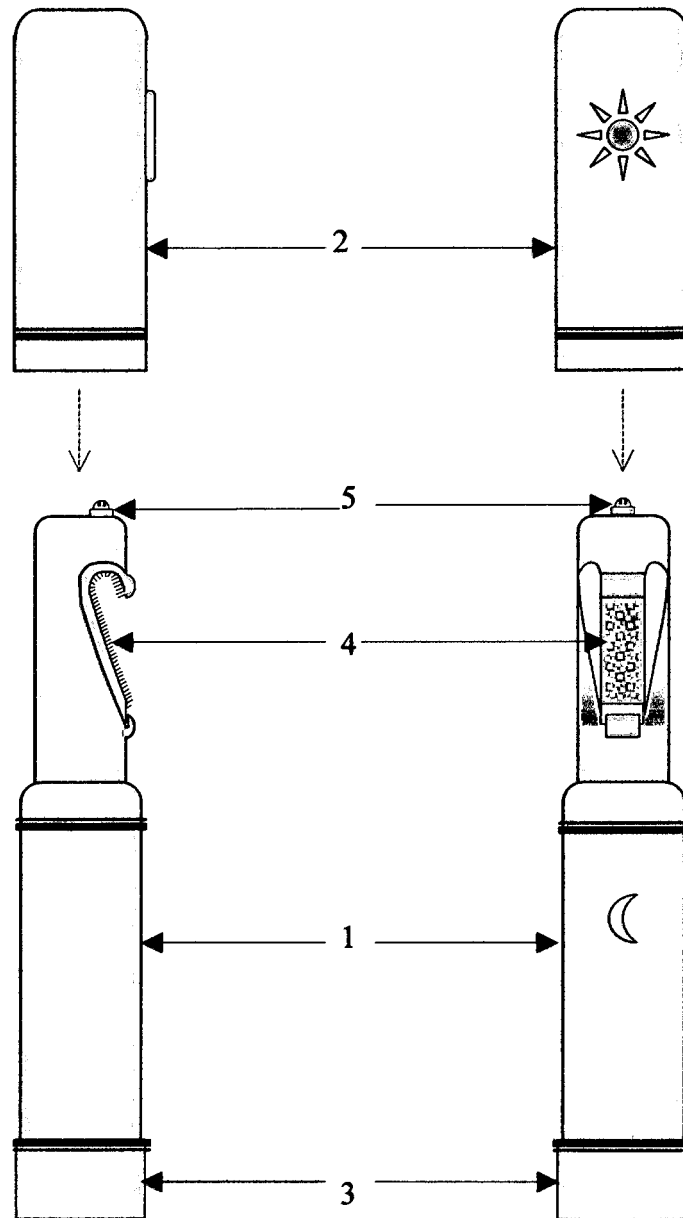


Fig. 2

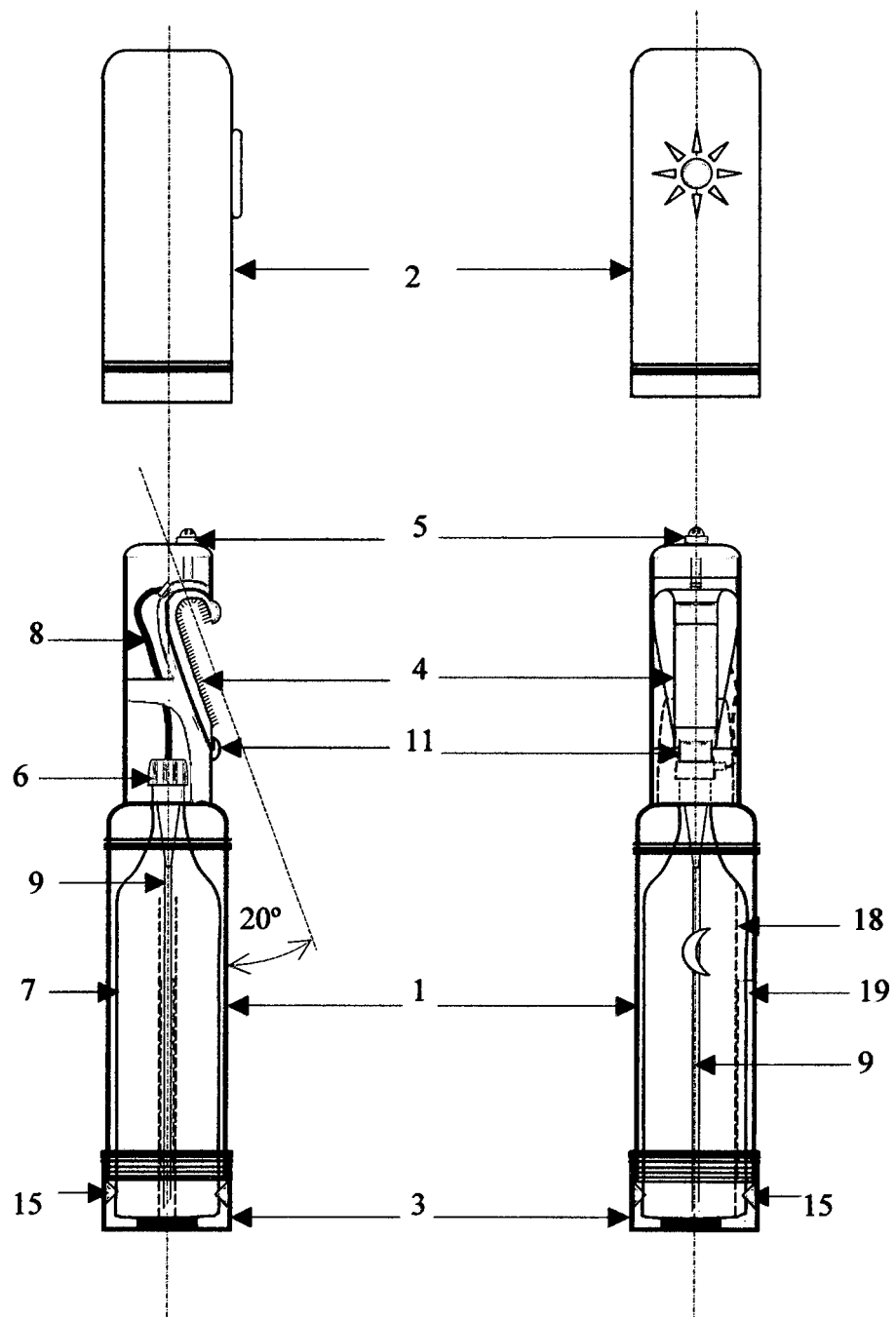


Fig. 3

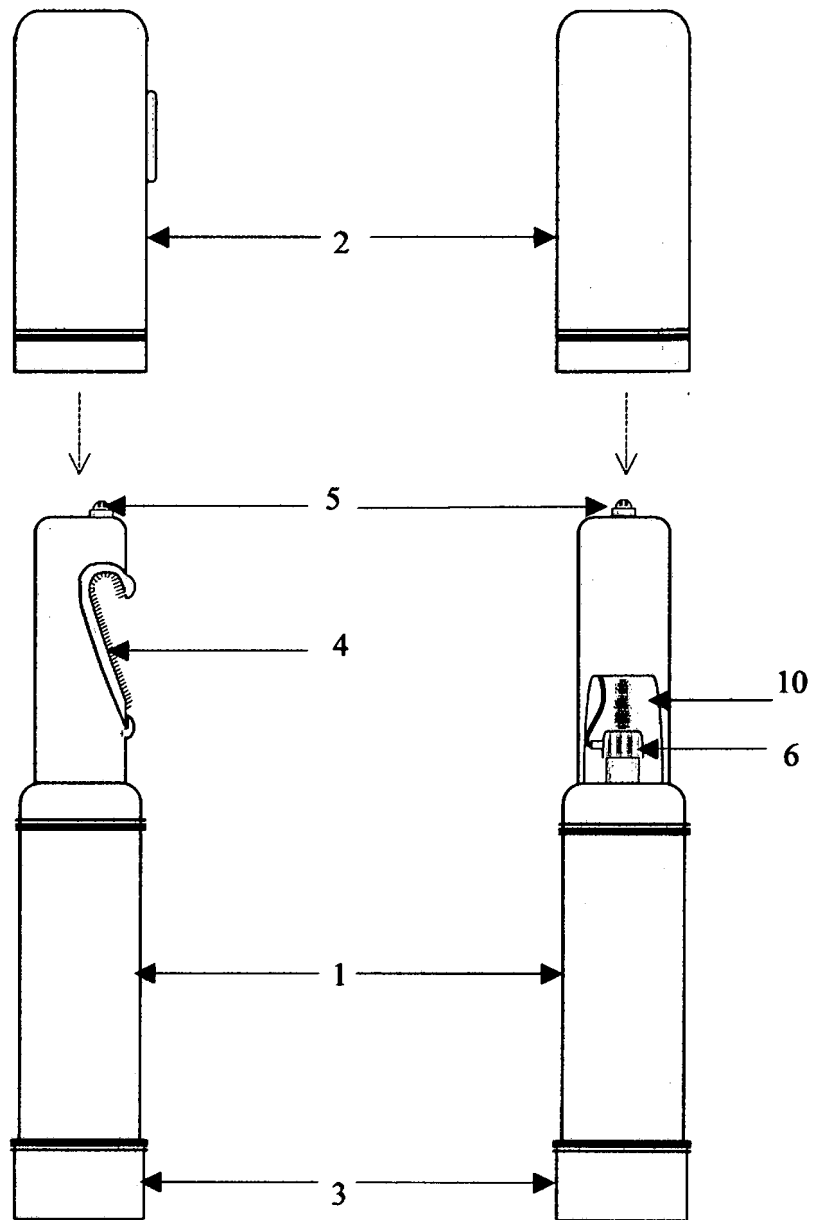


Fig. 4

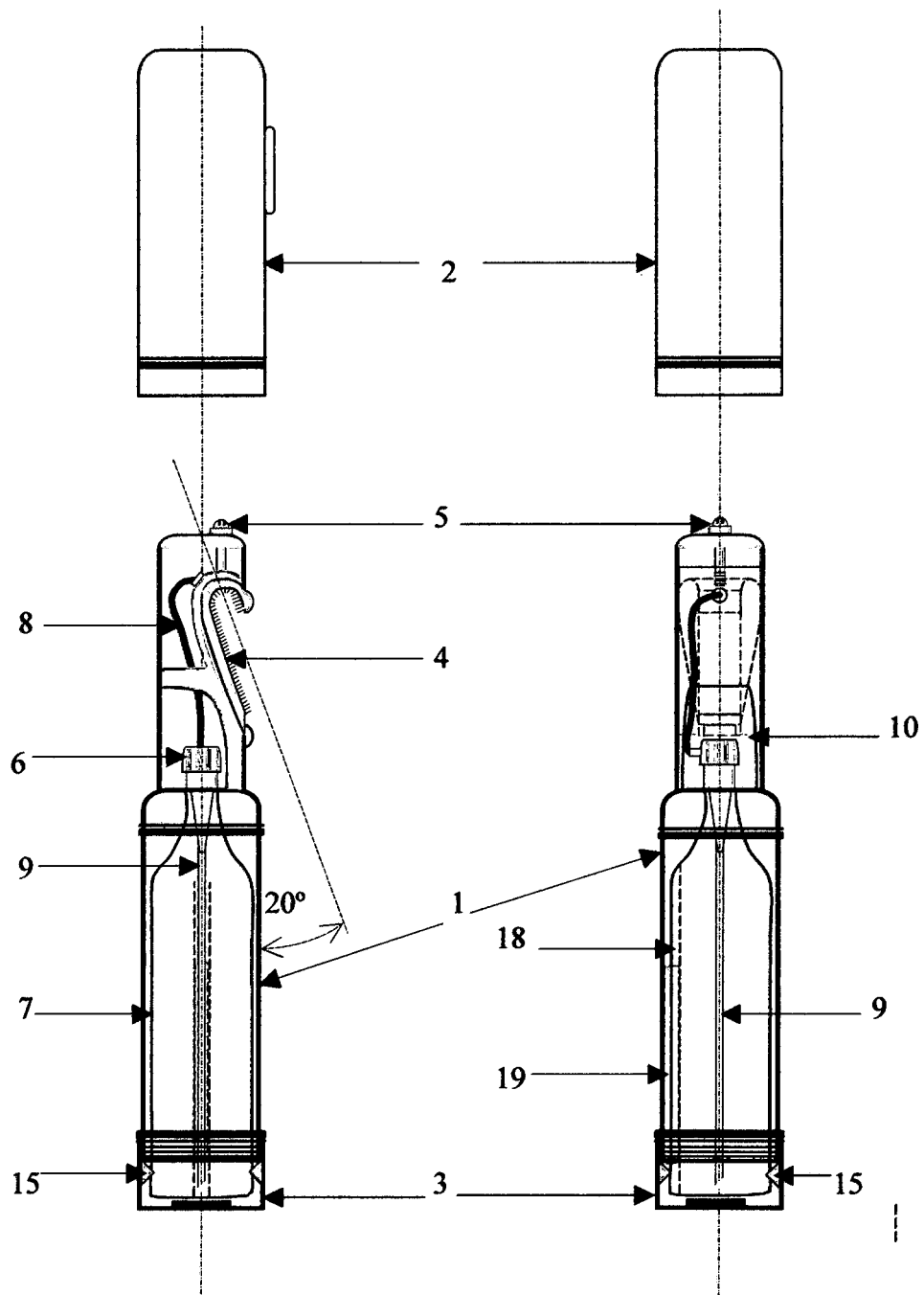
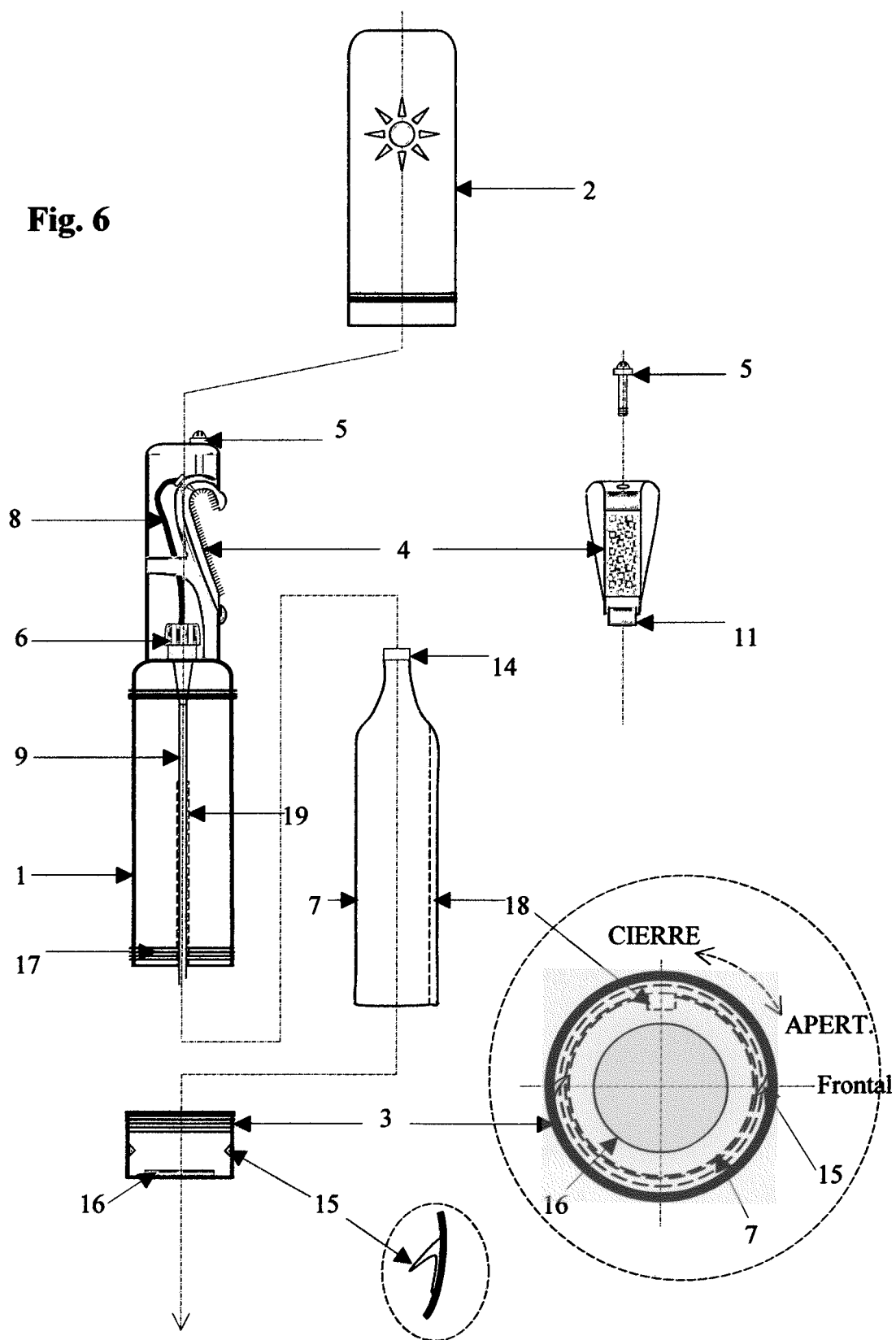


Fig. 5

Fig. 6



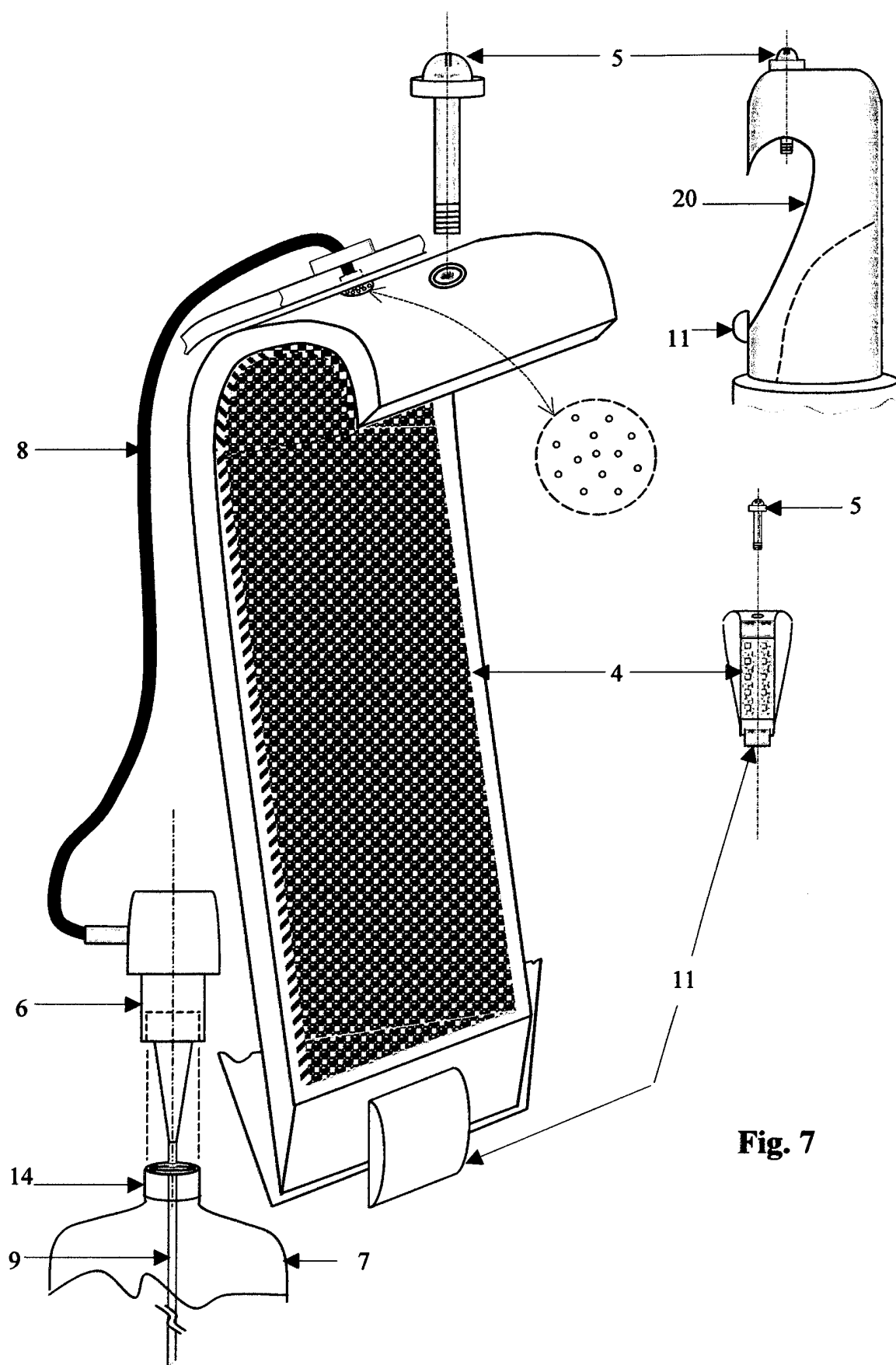


Fig. 7

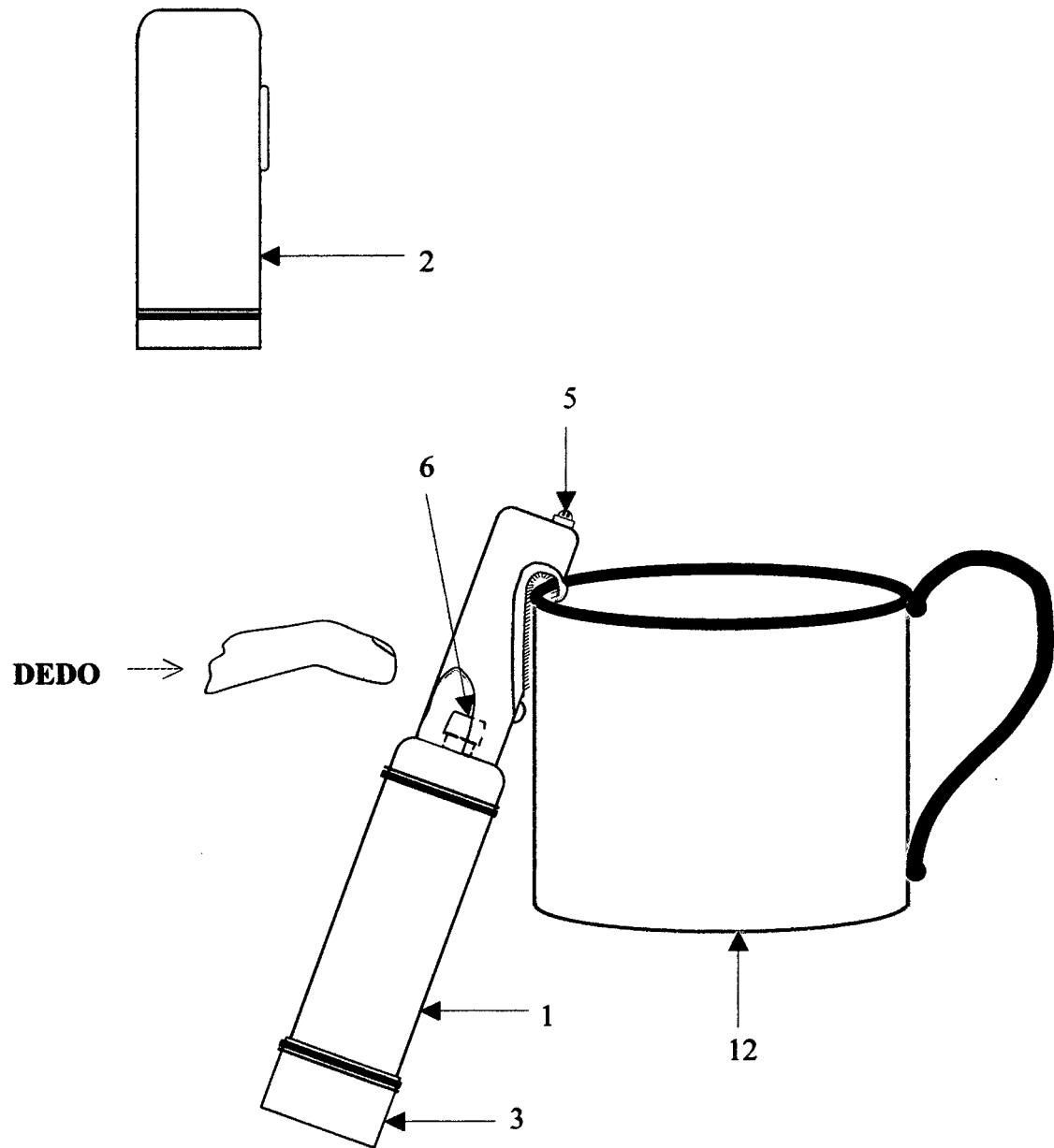
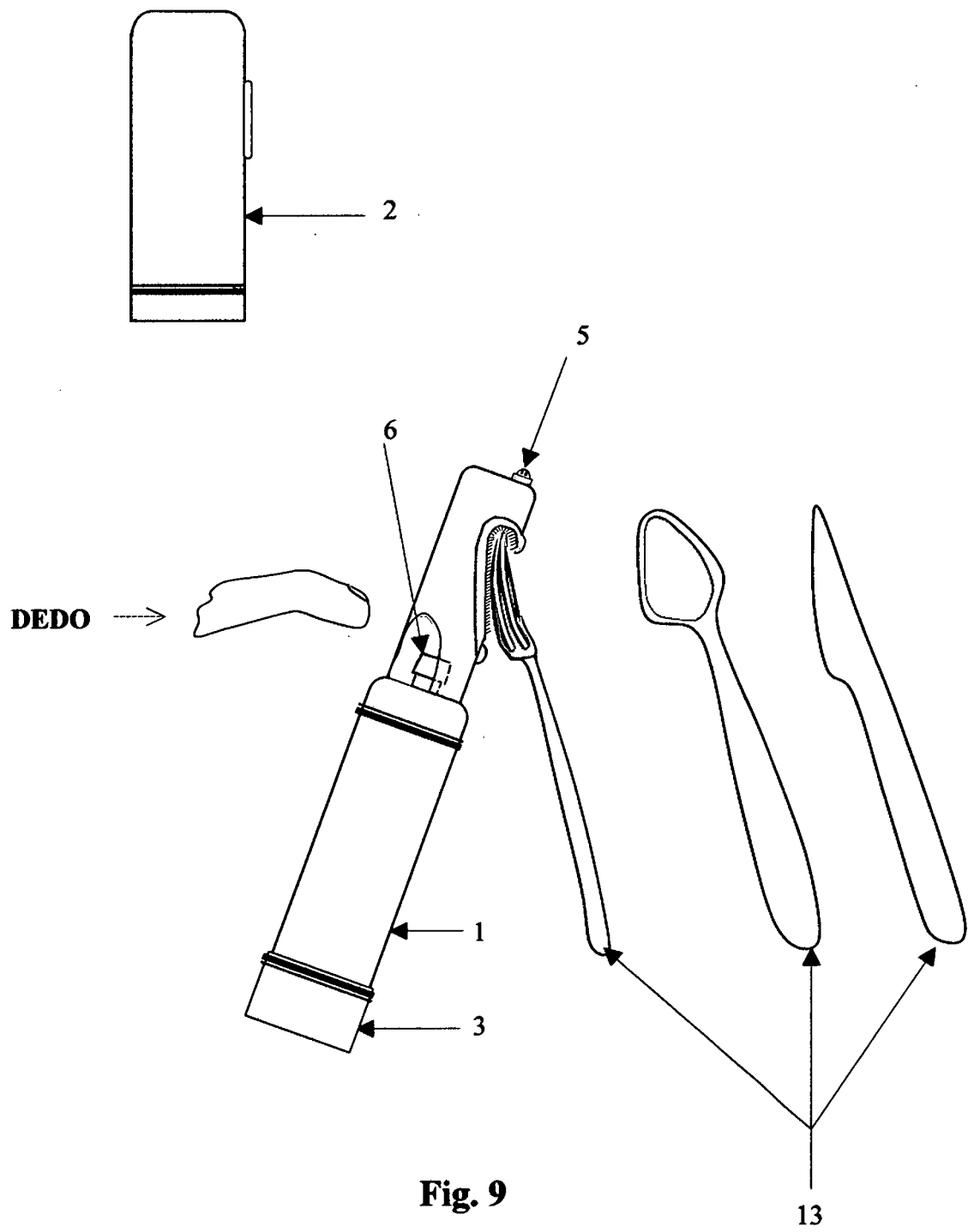


Fig. 8



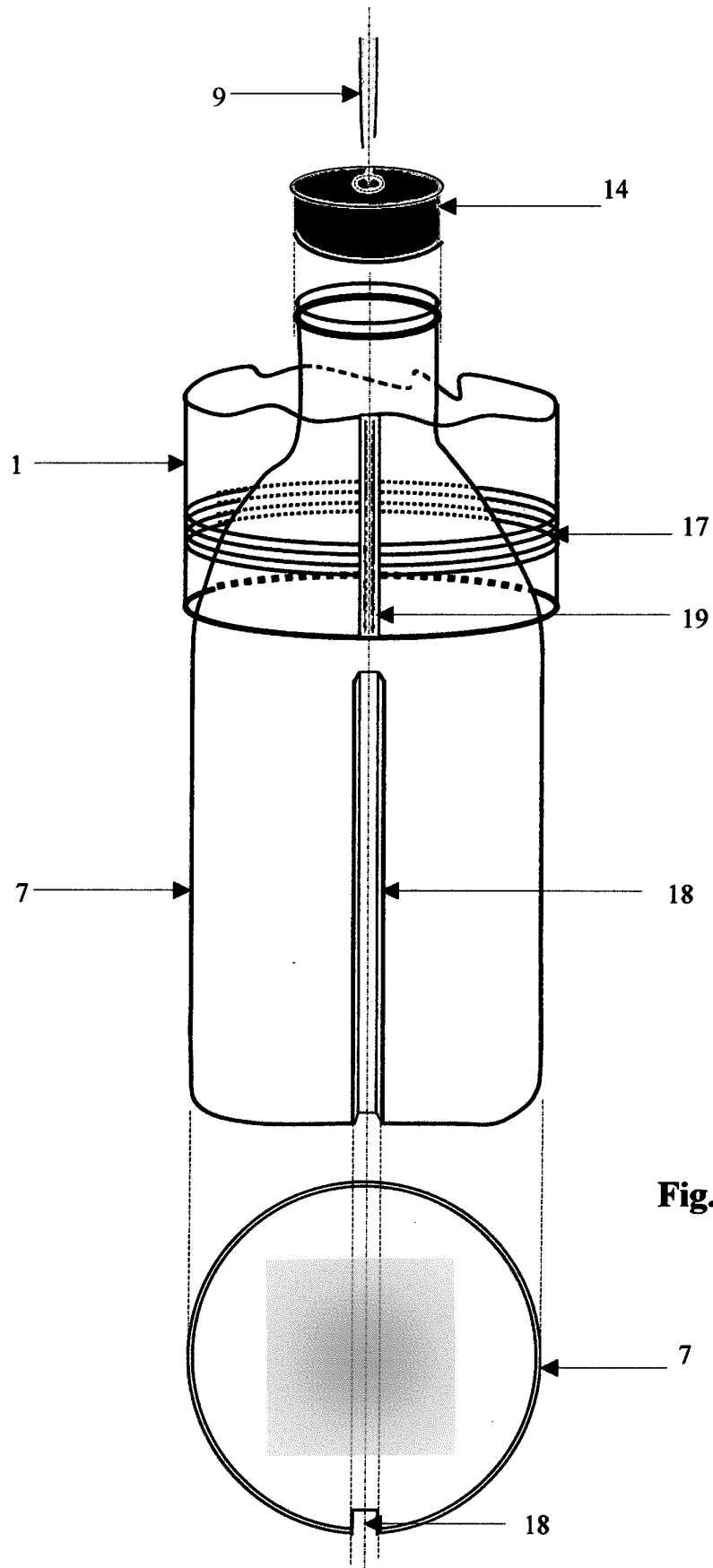


Fig. 10

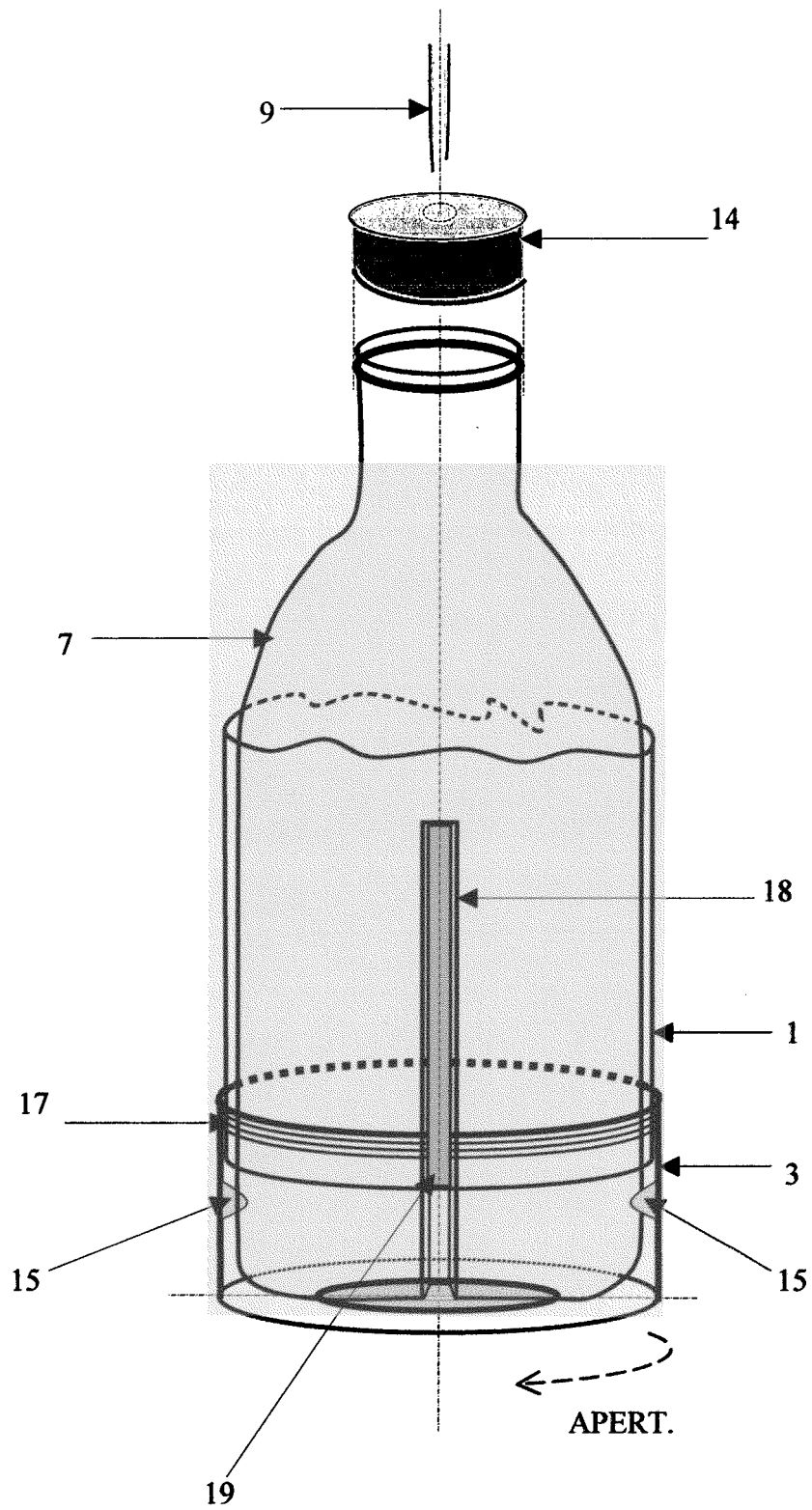


Fig. 11

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2017/000025

A. CLASSIFICATION OF SUBJECT MATTER

A46B11/00 (2006.01)

B65D83/14 (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A46B, B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, INVENES, WPI, INTERNET

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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A	US 2002111283 A1 (ARGENTIERI ANDREA ET AL.) 15/08/2002, figure 1, figure 3 ; paragraphs [216 - 217]; paragraph [221];	1-6
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A	US 2015297876 A1 (LOCKWOOD ROBERT ET AL.) 22/10/2015, figure 1, figure 11; paragraphs [21- 23]; paragraph [39];	1-6
A	US 2007071535 A1 (YOUNG JAMES V ET AL.) 29/03/2007, figure 1; paragraphs [15 - 16]; paragraphs [18 - 20];	1-6
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☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search
30/03/2017Date of mailing of the international search report
(03/05/2017)

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

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Information on patent family members

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