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(54) Title: PORTABLE SHEET PRODUCT DISPENSER

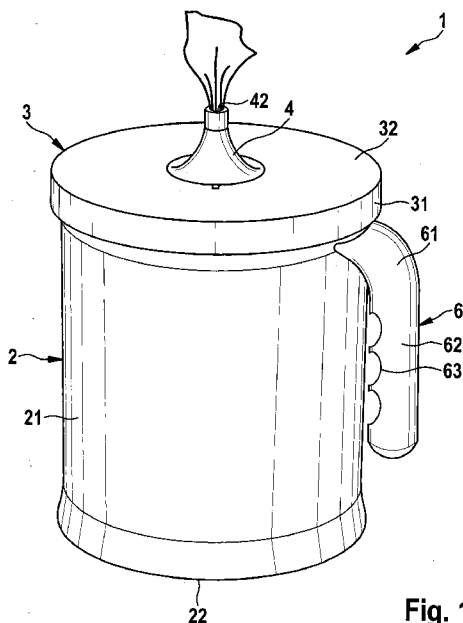


Fig. 1a

(57) Abstract: The invention relates to a portable sheet product dispenser (1) for dispensing a strip of sheet product, comprising a container for accommodating a source (5) of sheet product a dispensing piece (4) to be removably inserted into an opening (33) of the container in at least two different states, said states being reversible, wherein in a one state the dispensing piece (4) protrudes outwardly from the container such that a dispensing opening (42) is elevated from an outer surface of the container, wherein in another state the dispensing piece (4) protrudes inwardly into the container, and wherein the dispensing piece (4) has a base portion (41) to be inserted into the opening (33) with two orientations so that the base portion (41) is held into the opening in form-fit or force-fit manner. The dispensers (1) allow providing a dispensing opening so that withdrawal of a sheet product is facilitated. Furthermore, the portable dispenser (1) can be set into a compact configuration to gain space during delivery and transportation.

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PORTABLE SHEET PRODUCT DISPENSER

FIELD OF THE INVENTION

An aspect of the invention relates to sheet product dispensers and in particular to portable sheet product dispensers with a dispensing opening. Such dispensers find a particular, though non exclusive, application in dispensing sheet products.

BACKGROUND OF THE INVENTION

Portable sheet product dispensers are well known in the art. Portable sheet product dispensers are generally used for dispensing sheet products such as absorbent tissues, wipes, paper towels or sheets made of any other absorbent or non-absorbent material.

For example, document WO 2006/009859 discloses a water-resistant absorbent towel dispenser including a container with an exterior handle. A top side includes a finger-accessible opening through which absorbent towels may be withdrawn. The top wall of the dispenser may be convex in an upward direction but is flexible to enable it to be depressed when two or more dispensers are stacked vertically so as to come into load bearing contact with the towel supply.

In document US 2009/0302052 a container for storing a sheet product is disclosed. The container housing is substantially cylindrical and the outer surface has a retention formation configured to engage an attachment apparatus. A lid portion of the container includes a sheet product retainer to prevent a partially dispensed sheet product from falling back into the container. The lid portion includes a retention tap configured to prevent a lid of the lid portion from separating completely from the container.

Document WO 2008/025980 discloses a container for dispensing wipes through a dispensing nozzle. The container has a housing for accommodating a source of wipes. On one end of the housing a dispensing nozzle is provided which is formed with a resilient aperture through which wipes can be withdrawn from the housing. The resilient aperture is expandable to allow withdrawal of wipes therethrough but is biased towards a contracted state. In use a wipe can be withdrawn through the dispensing nozzle and be separated

by rupturing the perforation connecting the wipe to the next adjacent wipe with the nozzle expanding as required to allow passage of the wipe through the nozzle aperture.

However, these dispensers are not satisfactory because withdrawal of a sheet product is uneasy, and/or they are bulky.

SUMMARY OF THE INVENTION

It is an object of the present invention to propose a portable sheet product dispenser that overcomes the above mentioned drawbacks. In particular, it is an object of the present invention to provide a portable sheet product dispenser having a dispensing opening for facilitating withdrawal of a sheet product. Furthermore, it is an object of the present invention that the portable dispenser is compact to gain space during delivery and transportation.

According to one aspect, a portable sheet product dispenser for dispensing a strip of a sheet product is provided. The dispenser comprises:

- a container for accommodating a source of sheet product;
- a dispensing piece (4) to be removably inserted into an opening (33) of the container in at least two different states, said states being reversible

wherein in a one state the dispensing piece (4) protrudes outwardly from the container such that a dispensing opening (42) is elevated from an outer surface of the container,

wherein in another state the dispensing piece (4) protrudes inwardly into the container, and

wherein the dispensing piece (4) has a base portion (41) to be inserted into the opening (33) with two orientations so that the base portion (41) is held into the opening in form-fit or force-fit manner.

One idea of the portable sheet product dispenser is to provide a separately formed dispensing piece which can be attached to the container. The dispensing piece is configured to be inserted into an opening, such that the dispensing piece protrudes either inwardly into or outwardly from the container. In a dispensing state, the dispensing piece protrudes in an outward direction from the container of the portable sheet product dispenser. In the dispensing state, the portable sheet product dispenser can be used for

withdrawal of sheet products. In another transportation state, the dispensing piece protrudes inwardly into the housing. This allows two dispensers being vertically stacked onto each another.

Further, the container may include a cylindrical housing with a loading opening for loading a source of sheet product and a closure element for closing the loading opening of the housing, wherein the closure element is attachable onto the housing so that it can be removed for loading the source of sheet product into the container. In particular, the opening of the container may be provided in the closure element.

Furthermore, the cylindrical housing may have an open end which forms the opening, wherein the closure element is configured to close the one end, wherein the closure element has a planar outer surface which is perpendicular to the axis of the cylindrical housing when attached to the housing.

The dispenser may be loaded with a sheet roll as the source of sheet product, wherein the sheet roll is a coreless centerfeed roll, wherein the housing has means configured to hold the sheet roll in a press-fit manner.

Particularly, the housing may have one of a concave bottom part at one end opposite to the loading opening, an indentation of a side wall of the housing and an angular shape, in particular a hexagonal shape.

A handle may be attached at the container, wherein the handle is L-shaped so that one leg of the handle is in parallel with a side wall of the cylindrical housing. This allows an easy handling of the dispenser and further the dispenser can be hooked onto vertical arranged boards and the like if a free hand is needed.

A support hole may be provided to allow insertion of a downwardly oriented handle of a spray bottle. In particular, the support hole may be formed outside a circumferential edge of the container.

According to another aspect, an arrangement is provided that comprises a wall holder with a base part for mounting at a wall and two arms extending from the base part and the above portable sheet product dispenser, wherein the housing has a circumferential edge which has two opposite grooves, wherein the arms are configured to receive the circumferential edge so that the arms engage the grooves and the portable sheet product dispenser is

supported by the wall holder.

Moreover, the arms may be biased so that they are pressed toward the circumferential edge when the portable sheet product dispenser is held between the arms.

5 BRIEF DESCRIPTION OF THE DRAWINGS

The present invention is illustrated by way of examples and not limited to the accompanying drawings, in which like references indicate similar elements:

- 10 - Figures 1a and 1b show a perspective and an explosion view of a portable sheet product dispenser, respectively;
- Figures 2a to 2c shows illustrations of the insertion of the dispensing piece into the lid opening in different states;
- Figures 3a and 3b show the process of loading the portable sheet product dispenser with a sheet source;
- 15 - Figures 4a to 4c show measures to hold the sheet roll within the housing of the portable sheet product dispenser;
- Figures 5a and 5b show a wall mount for the portable sheet product dispenser to use the portable dispenser as a fixed dispenser with a bottom-side dispensing nozzle; and
- 20 - Figures 6a and 6b show further embodiments of the portable sheet product dispenser with means for holding a spray bottle.

DETAILED DESCRIPTION OF THE INVENTION

25 The following detailed description should be read with reference to the drawings. The drawings depict exemplary embodiments and are not intended to limit the scope of the invention.

Figures 1a and 1b illustrate a portable sheet product dispenser in a perspective view and in an explosion view, respectively.

30 The dispenser 1 has a container with a cylindrical housing 2 which has a side wall 21 and a bottom portion 22 which closes a first end of the cylindrical housing 2. A second end of the cylindrical housing 2 is open and can be closed by a lid 3 or cover, respectively (closure element), to form a closed container for storing a source of a sheet product.

The side wall 21 and the bottom portion 22 of the housing 2 can be

formed as an integral element, i.e. by known molding and extrusion techniques. The housing 2 may include a center portion 23 that is recessed relative to the bottom portion 22 and a portion close to the second end. The center portion 23 may have a smooth surface or may be embossed with lettering and/or design for decorative or marketing purposes.

The lid 3 is formed as a separate element and can be attached to the second end of the housing 2, such that it closes the respective end of the housing 2 to form the container. The lid 3 has a substantially planar lid surface 32 which is perpendicular to the longitudinal axis of the cylindrical housing 2. The lid surface 32 is encompassed by a circumferential edge 31 which extends perpendicular from the lid surface 32. Substantially, the circumferential edge 31 defines an inner cross-section which is slightly larger than the outer cross-sectional area of the cylindrical housing such that the lid 3 can be attached onto the housing 2.

The lid 3 may be attached to the housing 2 in various manners. For instance, it may be attached through the use of a peripheral outer thread 25 close to the second end of the housing 2 and a corresponding inner thread (not shown) in the circumferential edge 31 of the lid 3. Alternatively, the lid 3 may be attached to the housing 2 by the use of complementary circumferential grooves and beads enabling the circumferential edge 31 of the lid 3 to be snapped onto the side wall 21 of the housing 2. Other alternatives to attach the lid 3 onto the housing 2 can be thought of.

The lid 3 can be removed so that the interior of the housing 2 is fully opened for loading with a source of a sheet product, such as a sheet roll 5. The sheet roll 5 may be made of absorbent or non-absorbent material of a woven or non-woven type. The sheets may be used as wipes, paper towels, toilet paper, cleaning tissues and the like. The individual sheets may be sized as desired to accommodate the many uses of the towels. Furthermore, perforation lines may be formed to allow the user to tear off a sheet after the perforation line has left the dispensing piece 4.

In the center of the lid surface 31 of the lid 3, an opening 33 is provided to receive a dispensing piece 4 which is formed as a separate element. The dispensing piece 4 is shown as a substantially cone-shaped nozzle. However different shapes and designs of the dispensing piece are possible. It has been

found that dispensing pieces that protrude from the lid surface allow a greater degree of angles to withdraw the sheet product from the dispenser so that the use of such a dispenser is greatly improved.

As shown in the Figs 1a and 1b, the dispensing piece 4 is formed as a
5 cone-shaped dispensing nozzle with its outer side surface being concave-shaped. The dispensing piece 4 includes a base portion 41 by which the dispensing piece 4 can be inserted into the opening 33 of the lid 3 to be held therein. Furthermore, the dispensing piece 4 has a dispensing opening 42 at an end opposite from the base portion 41 through which the sheets of the
10 sheet product can be withdrawn. The base portion 41 has a shape that allows it to be held within the lid opening 33, so that the lid surface 32 and the base portion 41 are substantially arranged in a coplanar manner.

In order to fixate the dispensing piece 4 in the lid opening 33, a mounting arrangement is provided. In the present embodiments, the base
15 portion 41 is provided with one or more noses 43 that can be inserted into respective grooves 34 of the lid 3 at the edge of the lid opening 33. The grooves 34 substantially extend in an axial direction of the housing 2 from the lid surface 32 until respective stops 35, so that the noses 43 are stopped at the stops 35 when the dispensing piece 4 is inserted into the lid opening 33.
20 The stops 35 serve to prevent the dispensing piece 4 from being pushed into the interior of the container.

It may be provided that the noses 43 and the grooves 34 are configured to provide a form-fit or force-fit attachment, so that the dispensing piece 4 provides a securely mounted dispensing opening 42 for the dispenser 1,
25 when in use without being removed from the lid opening 33 when a sheet is withdrawn from the dispenser 1. The mounting arrangement is configured so that the dispensing piece 4 can only be removed from the lid opening 33 when a specific pulling force is applied onto it.

The noses 43 are arranged at the circumferential edge of the base
30 portion 41 in a symmetrical manner. The grooves 34 at the edge of the lid opening 33 are arranged correspondingly, so that each nose 43 can be put into a respective groove 34. As shown in the configuration states of Figures 2a to 2c, due to the symmetrical arrangement of the noses 43 the dispensing piece 4 can be inserted into the lid opening 33 such that the cone-shaped

dispensing piece 4 protrudes outwardly from the lid 3 in a dispensing state (Fig. 2a) and can be inserted into the lid opening 3 such that the dispensing nozzle 4 protrudes inwardly into the housing 2 (Fig. 2b), so that no protrusion on the lid surface 32 remains (Fig. 2c) and a planar surface is obtained.

5 In a transportation state, the dispensing piece 4 is inserted into the lid opening 33 as shown in Fig. 2c, so that the dispensing piece 4 protrudes inwardly into the housing 2 and provides a substantially planar surface of the lid 3. Hence, the dispensers 1 can be vertically stacked onto one another by placing a bottom portion 22 of one dispenser 1 onto the planar surface of
10 another dispenser 1. The vertical stacking of dispensers may be useful for a space efficient storing in packing boxes for storage, shipment and display.

The housing 2 as depicted on Figs. 1a and 1b is provided with a handle 6 to facilitate transport and use of the dispenser 1. The handle 6 is formed to extend beyond the side surface of the housing 2. The handle 6 has
15 an L-shape with a short leg 61 and a long leg 62, wherein the short leg 61 is integrally attached to the housing 2 preferably close to the thread 25 by means of which the lid 3 is to be attached. The long leg 62 may be of a tubular shape.

The long leg 62 is spaced from the side wall 21 of the housing 2 and
20 substantially extends in parallel thereto along the axial direction of the cylindrical housing 2. The distance between the side wall 21 of the housing 2 and the long leg 62 is set such that the long leg 62 can be gripped by hand. To provide a better grip, the long leg 62 can be provided with indentations 63 opposite the side wall 21 for fingers to grasp. For example, the distance
25 between the side wall 21 of the housing 2 and the long leg 62 of the handle 6 may range from about 1.5 to 3 cm.

The end of the long leg 62 remote from the short leg 61 is open, i.e. not attached to the housing 2. Hence, it facilitates hanging the dispenser 1 onto a substantially vertical board or plate-like object just by inserting an upper edge
30 of the board between the long leg 62 of the handle 6 and the housing 2. Furthermore, the "open" handle 6 allows the cylindrical side wall 21 of the housing 2 to be simply provided with a printed label already supplied in a closed ring by shifting it from the bottom portion 22 over the cylindrical housing 2.

In Figures 3a and 3b, the process of loading a sheet source 5 into the dispenser 1 is illustrated. In a first step shown in Fig. 3a a sheet roll as the sheet source is put into the open housing 2. The sheet roll 5 is preferably a paper roll, in particular a center-feed roll, wherein the roll 5 is not provided with a central core, so that a free end in the center portion of the roll 5 is accessible. The sheet roll 5 is positioned with its axis extending coaxially with the axis of the cylindrical housing 2. The sheet roll 5 is dispensed from its center to its circumference. The sheet roll 5 may be of any size to fit within the housing 2 of the dispenser 1.

As shown in Fig. 3b, to guide the free end through the dispensing opening 42 it can be fed firstly through the lid opening 33 before the lid 3 is attached onto the housing 2. After the lid 3 is then attached to the housing 2, the free end of the strip 51 is then fed through the dispensing piece 4 from the base portion 41 to the dispensing opening 42.

To ensure that the sheet roll 5 has minimum collapsing it might be useful to compress the sheet roll 5 along its cylindrical surface and to hold it such that its axial direction is substantially held in place. Hence, figures 4a to 4c show different structuring of the housing 2 which allow fixing of the sheet roll 5 within the housing 2. As shown in Figure 4a, the bottom portion 22 can be arranged outwardly concave, so that a center part of the bottom portion 22 is pressed onto one end of the cylindrical sheet roll 5 inside the housing 2 thereby holding the sheet roll 5 between the bottom portion 22 and the lid 3. This supports the sheet product such that a collapsing of the sheet roll 5 is prevented.

As shown in the housing 2 of Figure 4b, recesses 26 and indentations can be provided in the side wall 21 of the housing 2 that protrude inwardly and provide an inner diameter or cross-section of the housing 2, respectively, that is equal to or less than the diameter of the sheet roll 5 to be inserted, so that the sheet roll 5 is compressed and thereby held securely within the housing 2.

Figure 4c shows a cylindrical housing 2 having an angular e.g. hexagonal cross-section, so that side planes are formed which are configured to press against the outer circumference of the sheet roll 5 thereby holding the sheet roll 5 in place.

Since the dispenser 1 may be used in environments where moisture, dirt and debris are prevalent, a water resistant design is preferred for the dispenser 1 to exclude moisture and dirt from intruding into the interior of the dispenser 1. The housing 2 is preferably made of plastic and can be
5 manufactured by blow molding, injection molding and the like and may be formed with the handle 6 as an integral product to increase the water tightness of the dispenser 1. The lid 3 may be molded separately and may be made of the same or similar materials as the housing 2.

As shown in Figures 5a and 5b, a wall holder 10 can be provided which
10 can be attached to a wall and which provides a base part 12 and two support arms 11 which extend substantially perpendicular from the base part 12 of the dispenser holder 10. The circumferential edge 31 of the lid 3 may have at least two opposite concave-shaped portions or has an encompassing concave-shaped groove. The support arms 11 are configured such that the
15 dispenser 1 can be attached by pushing the lid 3 between the two support arms 11 (Fig. 5a). The support arms 11 are biased against the lid 3 so that the support arms 11 are widened and the lid 3 is accommodated between the arms 11. The arms 11 are then held within the concave groove around the circumferential edge 31 of the lid 3 and prevent the dispenser 1 from falling
20 out of the wall holder 10.

When the dispenser 1 is pushed onto the wall holder 10 in a bottom-up position (Fig. 5b), the dispensing piece 4 protrudes downward from the lid 3, so that a wall-supported dispenser 1 can be obtained which allows for withdrawing sheets without the need to have the dispenser 1 grasped all the
25 time. The wall holder 10 allows removal and replacement of the dispenser 1 at will.

As shown in further embodiments of Figures 6a and 6b, a support hole 7 can be provided to hold e.g. a spray bottle 8 at the dispenser 1. The spray bottle 8 usually has a spray bottle handle 81 which can be inserted into the
30 support hole 7 so that by grasping the dispenser 1 the spray bottle 8 can also be carried without using an extra hand. Also the spray bottle 8 can be easily removed for use. The support hole 7 can be either included in the handle 6 wherein on the upper side of the short leg 61 a circular opening is formed in which the spray bottle handle 81 can be inserted. Alternatively, a ring element

72 can be provided which protrudes sideways from the lid 3 e.g. by means of a beam 71 connecting the ring element 72 and the lid 3. The lid 3, beam 71 and ring element 72 can be integrally formed.

CLAIMS

1) Portable sheet product dispenser (1) for dispensing a strip of a sheet
5 product, comprising:

- a container for accommodating a source (5) of sheet product;
- a dispensing piece (4) to be removably inserted into an opening (33) of the container in at least two different states, said states being reversible

wherein in a one state the dispensing piece (4) protrudes outwardly from
10 the container such that a dispensing opening (42) is elevated from an outer surface of the container,

wherein in another state the dispensing piece (4) protrudes inwardly into the container, and

wherein the dispensing piece (4) has a base portion (41) to be inserted
15 into the opening (33) with two orientations so that the base portion (41) is held into the opening in form-fit or force-fit manner.

2) Portable sheet product dispenser (1) according to claim 1, wherein the container includes a cylindrical housing (2) with a loading opening for loading a source (5) of sheet product and a closure element (3) for closing the
20 loading opening of the housing (2), wherein the closure element (3) is attachable onto the housing (2) so that it can be removed for loading the source (5) of sheet product into the container.

3) Portable sheet product dispenser (1) according to claim 2, wherein the opening (33) of the container is provided in the closure element (3).

4) Portable sheet product dispenser (1) according to claims 2 and 3,
25 wherein the cylindrical housing (2) has an open end which forms the opening (33), wherein the closure element (3) is configured to close the one end, wherein the closure element (3) has a planar outer surface (32) which is perpendicular to the axis of the cylindrical housing (2) when attached to the
30 housing (2).

5) Portable sheet product dispenser (1) according to one of the claims 1 to 4, wherein the dispenser (1) is loaded with a coreless centerfeed sheet roll (5) as the source of sheet product, wherein the housing (2) has means configured to hold the sheet roll (5) in a press-fit manner.

6) Portable sheet product dispenser (1) according to claim 5, wherein the housing (2) has one of a concave bottom portion (22) at one end opposite to the loading opening, an indentation (26) of a side wall (21) of the housing (2) and an angular shape, in particular a hexagonal shape.

5 7) Portable sheet product dispenser (1) according to one of the claims 1 to 6, wherein a handle (6) is attached at the container, wherein the handle (6) is L-shaped so that one leg (62) of the handle (6) is in parallel with a side wall of the cylindrical housing (2).

8) Portable sheet product dispenser (1) according to one of the claims 1
10 to 7, wherein a support hole (7) is provided to allow insertion of a downwardly oriented handle of a spray bottle (8).

9) Portable sheet product dispenser (1) according to claim 8, wherein the support hole (7) is formed outside a circumferential edge of the container.

10) Arrangement comprising:

15 - a wall holder (10) with a base part (12) for mounting at a wall and two arms (11) extending from the base part (12);

- the portable sheet product dispenser (1) according to one of the claims 1 to 9, wherein the container has a circumferential edge (31) which has two opposite grooves,

20 wherein the arms (11) are configured to receive the circumferential edge (31) so that the arms engage the grooves and the portable sheet product dispenser (1) is supported by the wall holder (10).

11) Arrangement according to claim 10, wherein the arms (11) are biased so that they are pressed toward the circumferential edge (31) when
25 the portable sheet product dispenser (1) is held between the arms (11).

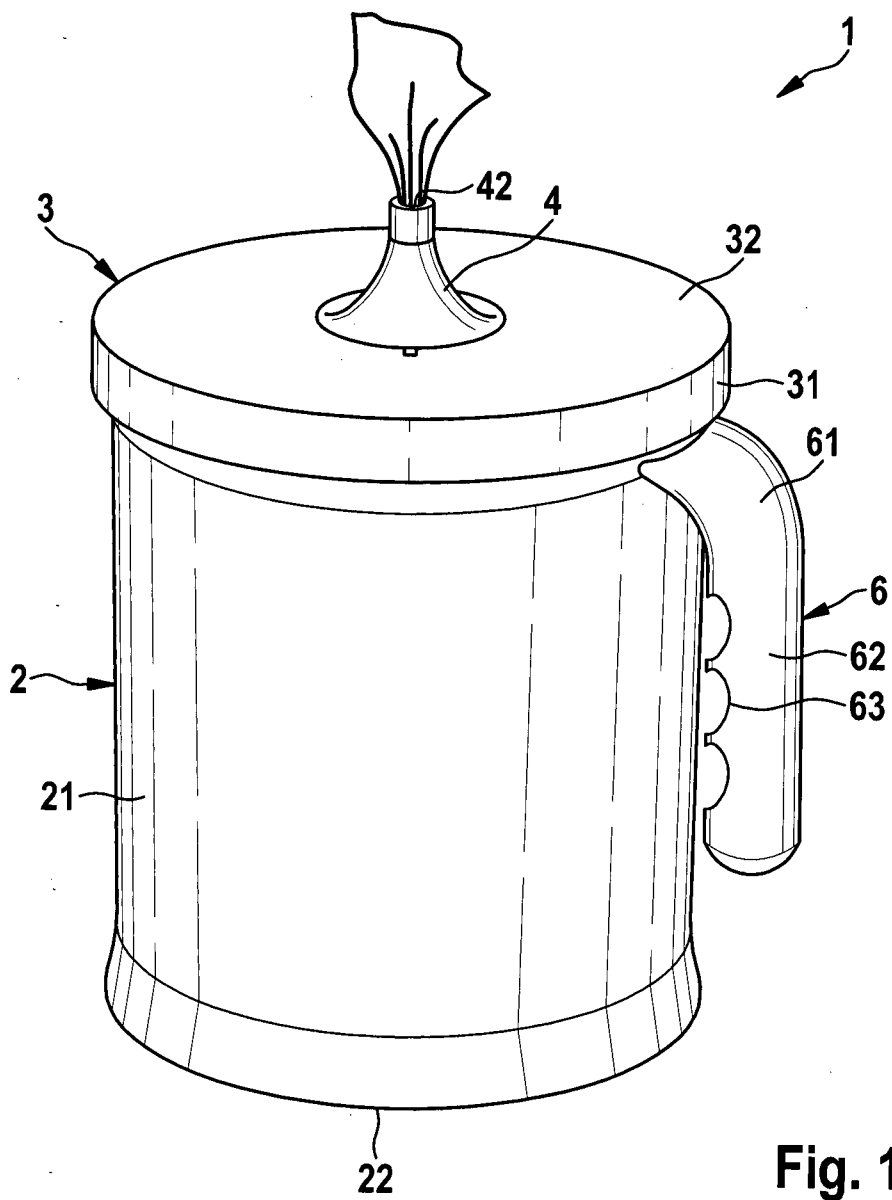


Fig. 1a

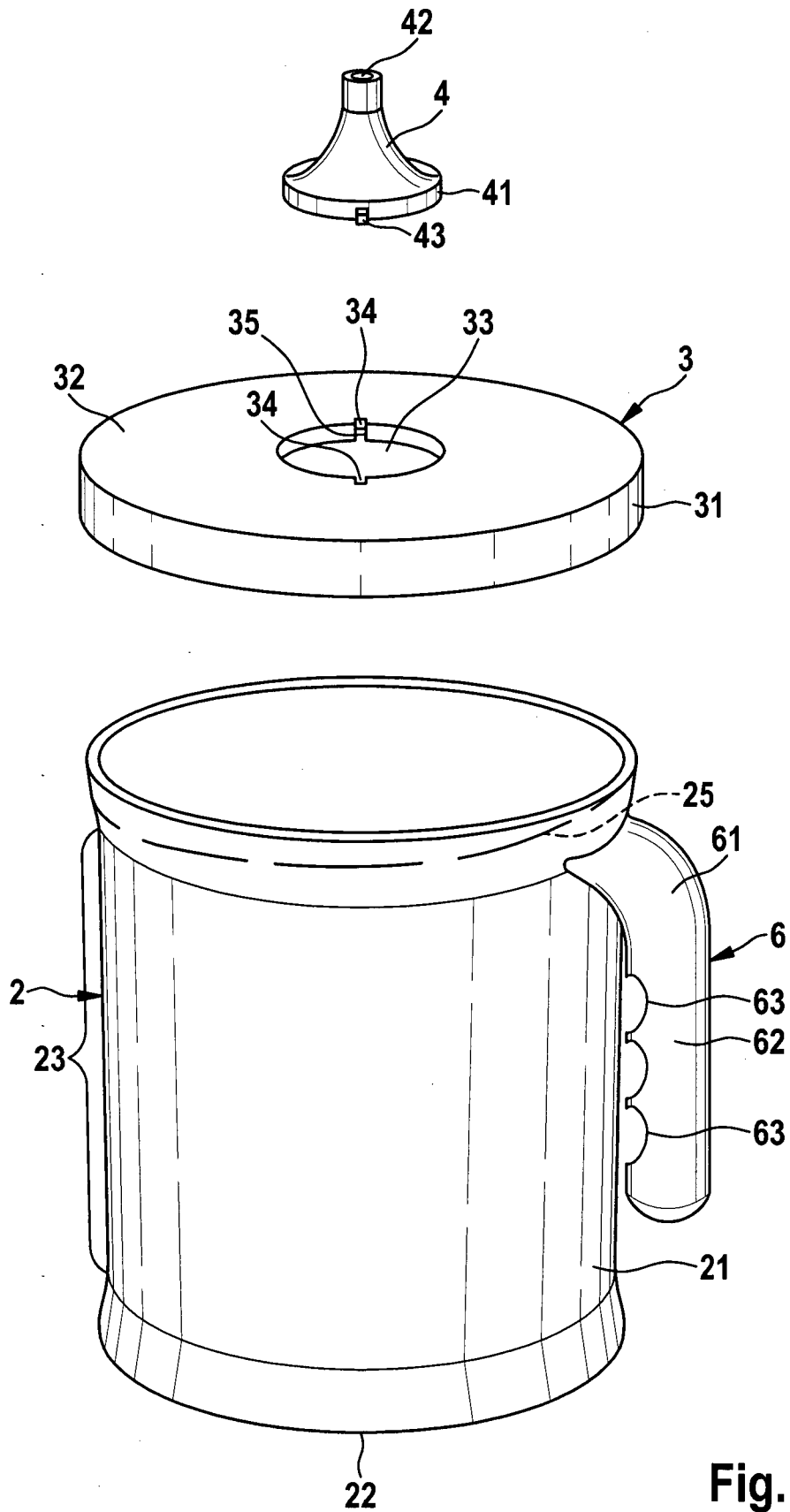


Fig. 1b

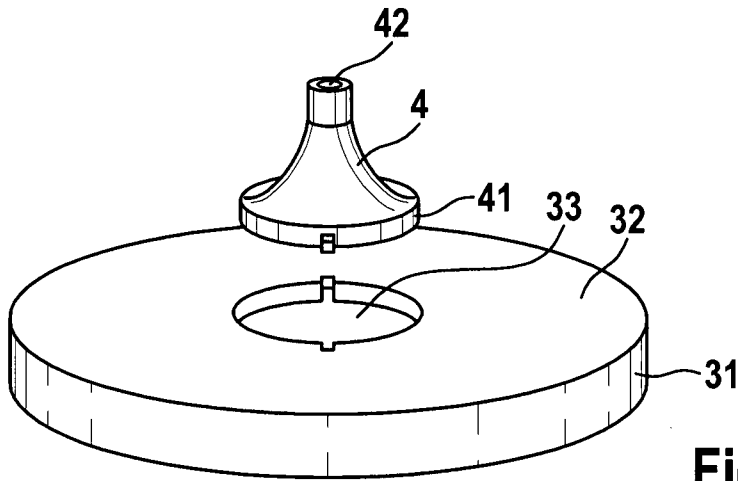


Fig. 2a

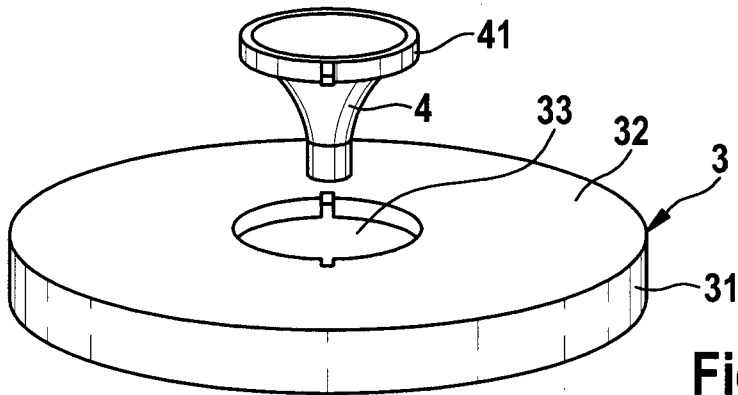


Fig. 2b

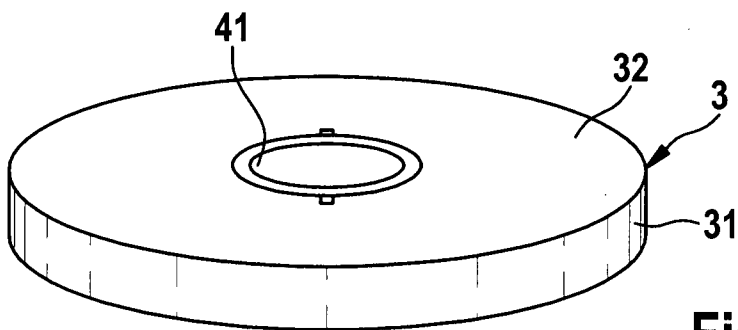


Fig. 2c

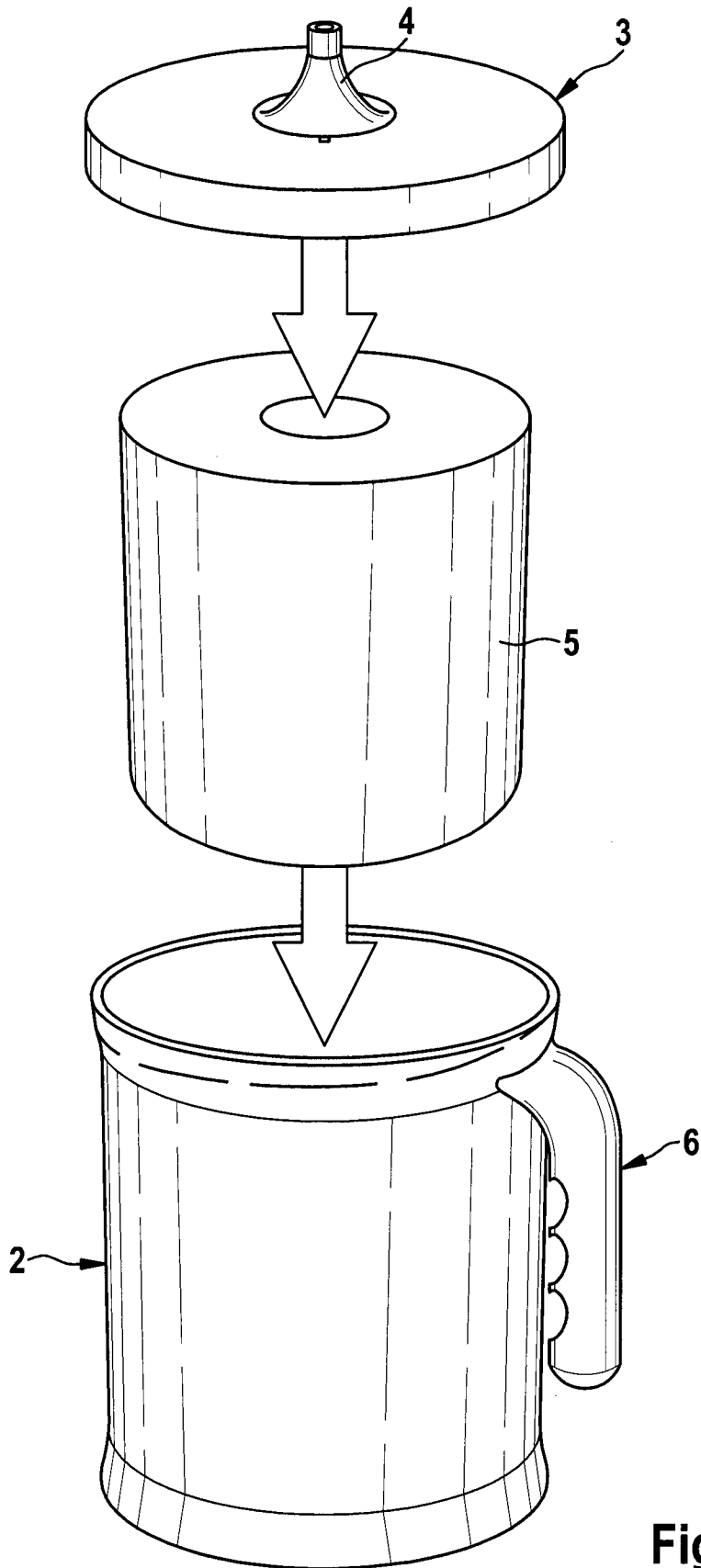


Fig. 3a

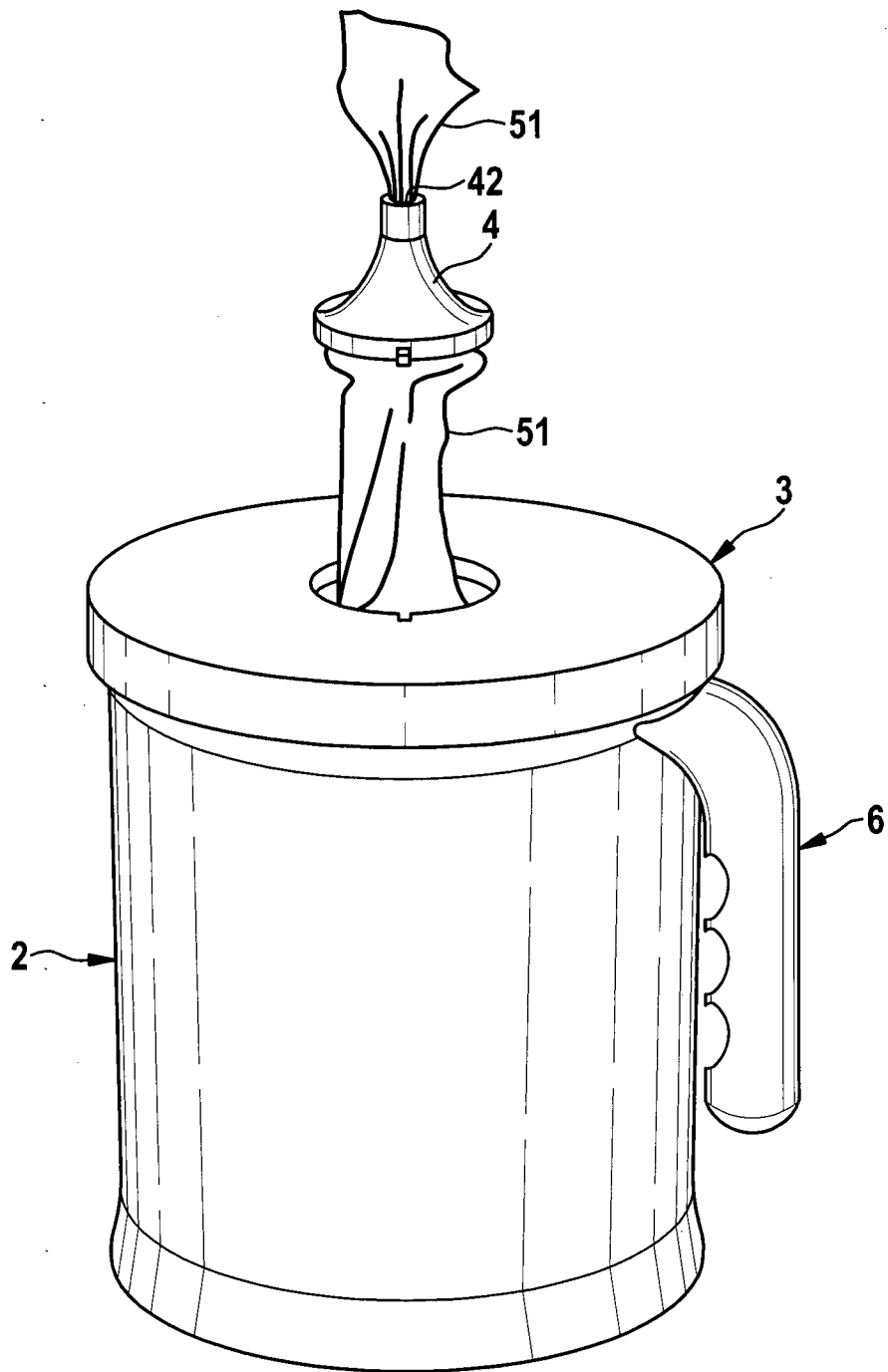


Fig. 3b

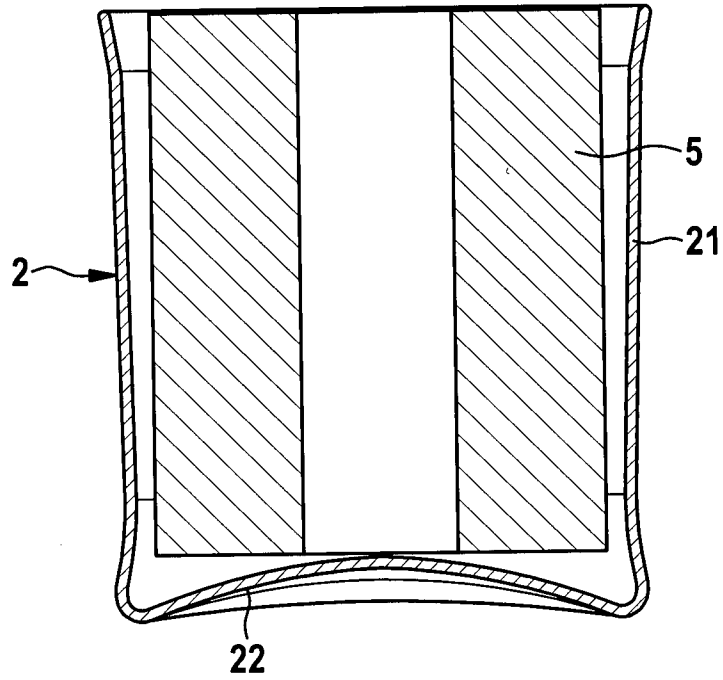


Fig. 4a

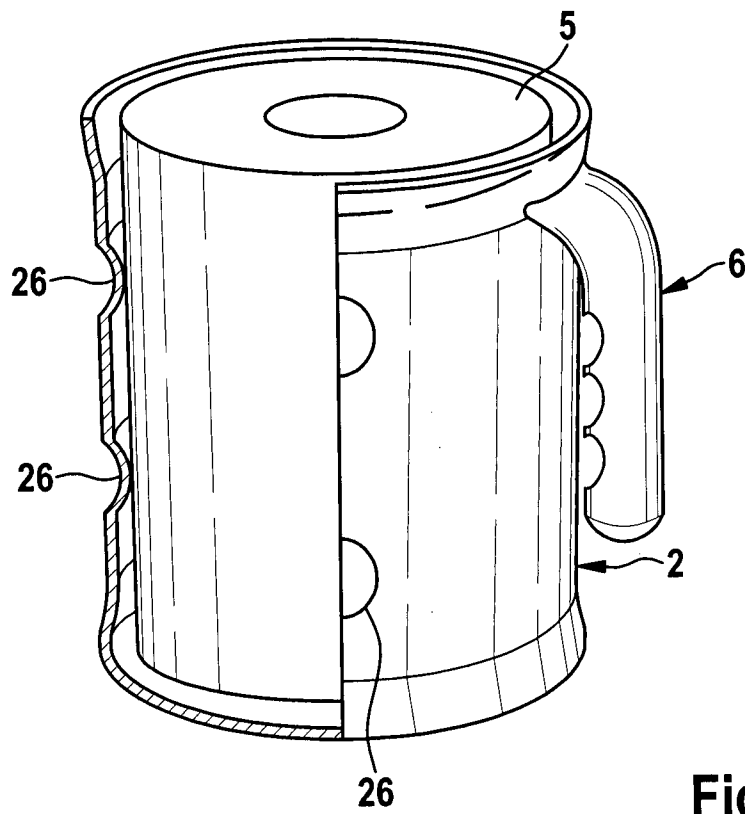


Fig. 4b

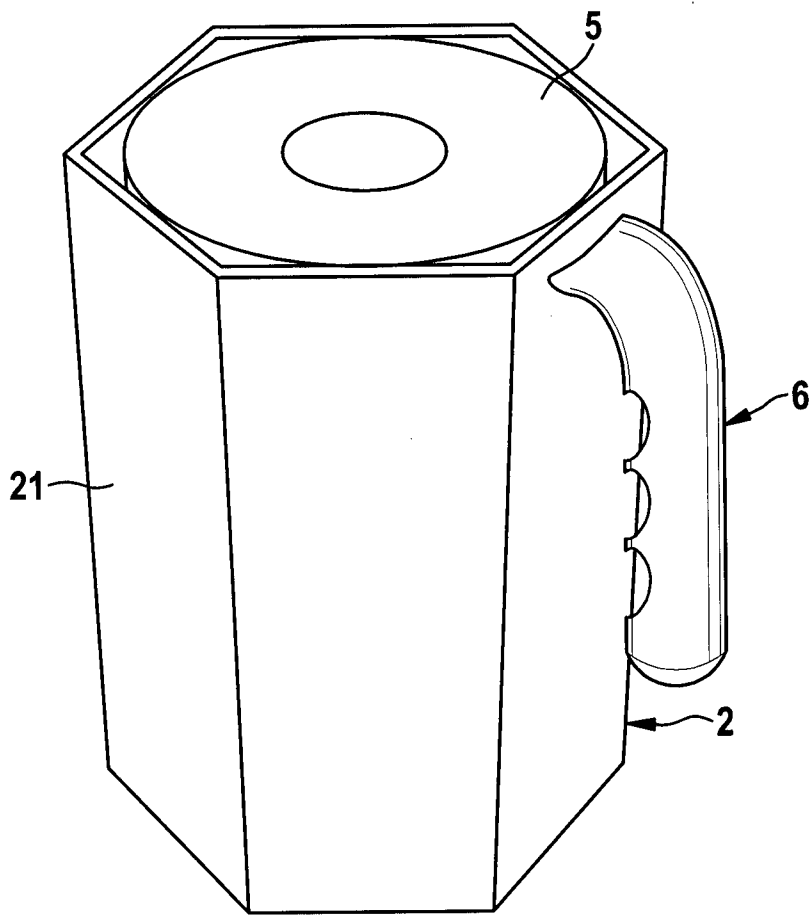
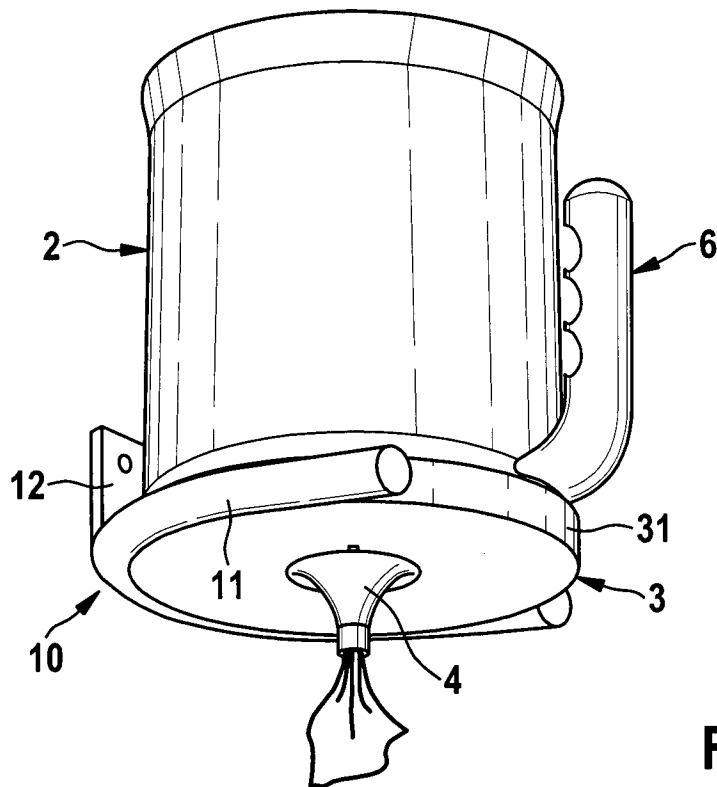
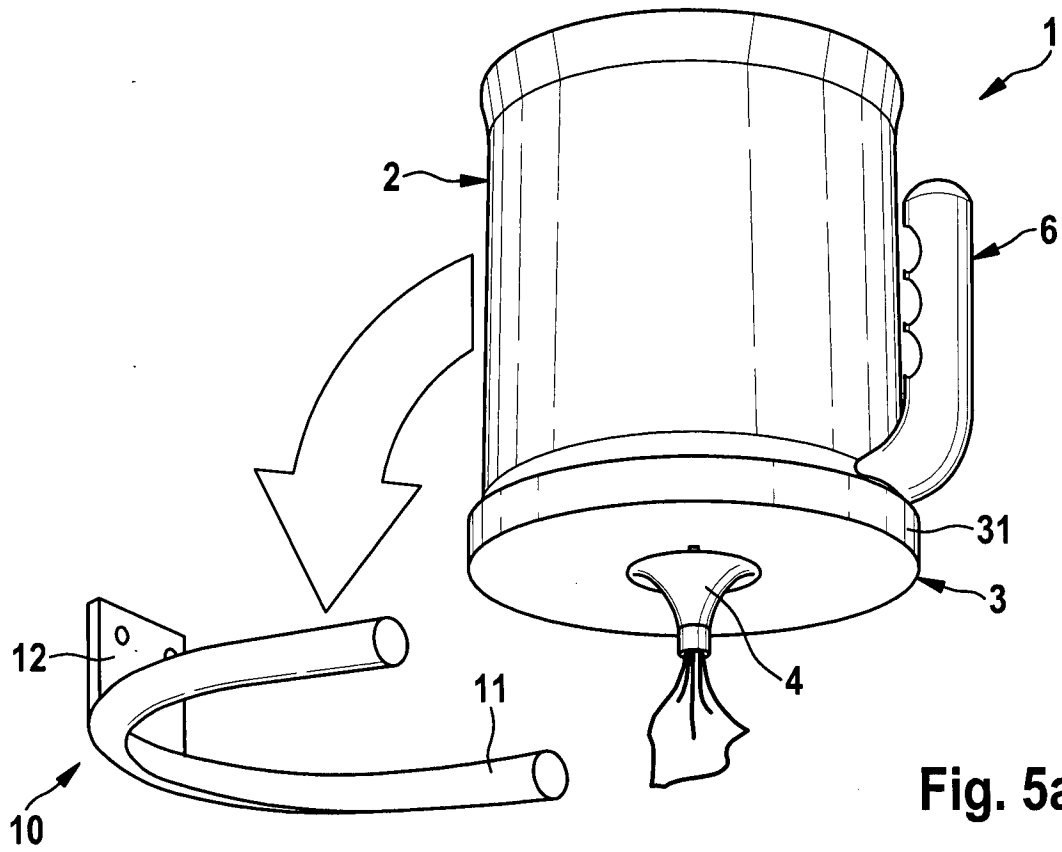


Fig. 4c



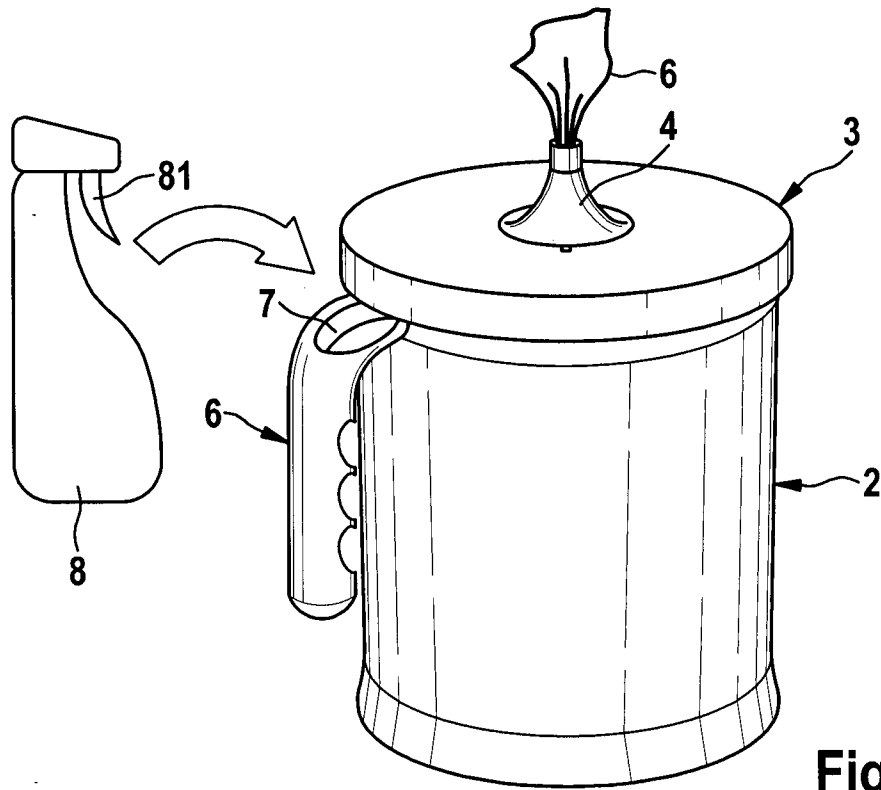


Fig. 6a

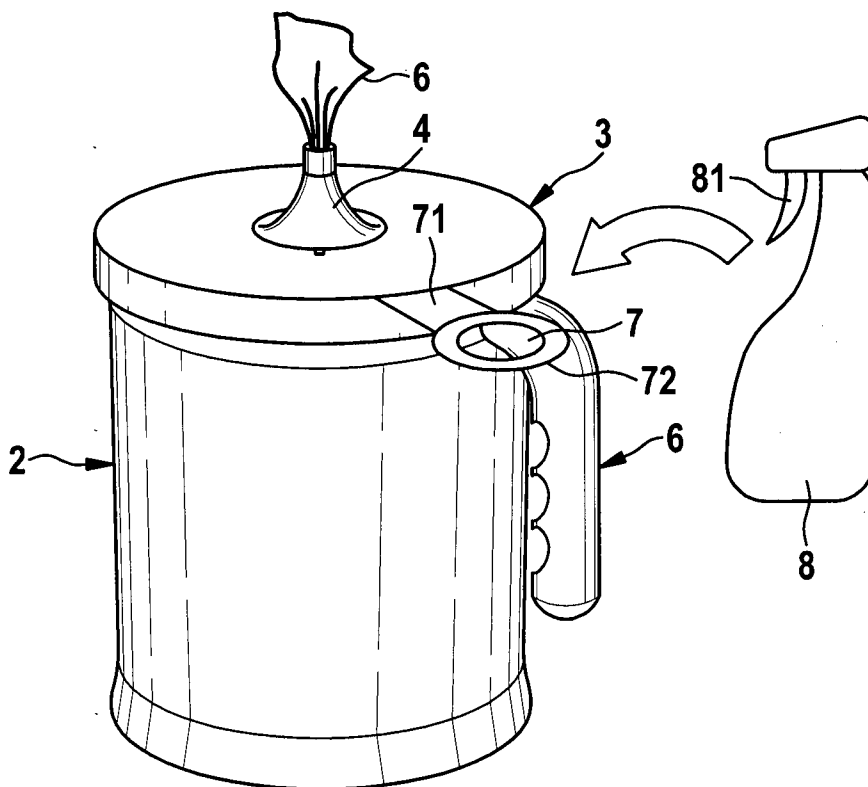


Fig. 6b