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(71) Applicant: **Porzio, Paolo**
10134 Torino (IT)

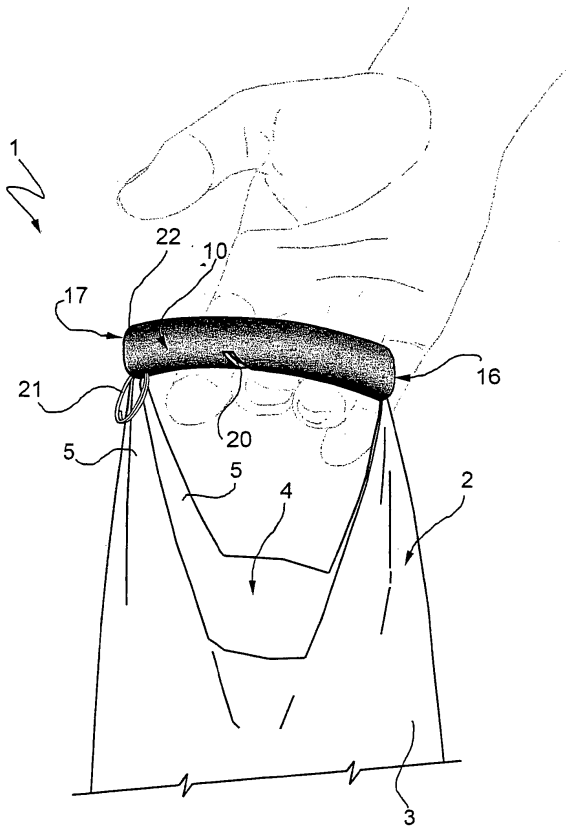
(72) Inventor: **Porzio, Paolo**
10134 Torino (IT)

(74) Representative: **Franzolin, Luigi et al**
STUDIO TORTA
Via Viotti 9
10121 Torino (IT)

(54) Supporting device of at least one flexible material container

(57) There is described a supporting device (1) of at least one flexible material container (2) adapted to contain consumer products; the supporting device (1) comprises a tubular body (10), elongated along an axis (A), graspable by one hand and defining a seat (11) engageable by at least one handle (5) of said container (2); the body (10) comprises in turn a pair of end edges (12, 13) reciprocally adjacent and delimiting said seat (11), and is furthermore displaceable between a first operative configuration, in which the edges (12, 13) withhold the handle (5) inside said seat (11), and a second operative configuration, in which the handle (5) may be removed from said seat (11).

FIG. 1



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Description

[0001] The present invention relates to a supporting device of at least one flexible material container.

[0002] There are known flexible material, e.g. plastic, containers adapted to contain consumer products to allow the carrying thereof.

[0003] Such containers comprise a sheet folded so as to define an accommodation compartment for the consumer products, and a pair of handles protruding from a free end edge of the sheet and graspable by the fingers of a user.

[0004] In a first embodiment, the containers are intended to contain loose products of various kind and are commonly known as shopping bags.

[0005] In a further embodiment, the sheet of the container is shaped so as to maintain its characteristic shape also when the container is empty. In the further embodiment, the container is intended to accommodate a plurality of bottles filled with liquids, specifically water or fruit juice.

[0006] When the containers are particularly heavy, the handles compress the fingers making grasping by the user painful and thus, making difficult the steps of lifting, carrying and resting on the ground of the containers themselves.

[0007] It is felt the need to be able to comfortably and easily lift, carry or rest on the ground such containers, also when they are particularly heavy, without the grasping of the handles of the containers themselves being painful.

[0008] Such a need is particularly felt when the container is of the type intended to contain bottles of liquid and is thus particularly heavy.

[0009] Furthermore, when there are many containers, it is difficult and, in some cases, even impossible to jointly lift, carry or rest on the ground the containers themselves, because there is not enough room for the fingers to hold a high number of handles.

[0010] It is further felt the need to be able to comfortably and easily lift, carry and rest a high number of containers.

[0011] It is the object of the present invention to make a supporting device of at least one flexible material container, which allows to simply and cost-effectively satisfy at least one of the foregoing needs.

[0012] The aforesaid object is reached by the present invention in that it relates to a supporting device of at least one flexible material container, characterized in that it comprises a tubular body, graspable by the fingers of one hand and defining a first seat engageable by at least one handle of said container and also elongated along said axis; said body comprising, in turn, a pair of reciprocally adjacent end edges surrounding said first seat; said body being furthermore displaceable between a first operative configuration, in which said edges withhold said handle within said first seat, and a second operative configuration, in which said handle may be removed from said first seat.

[0013] For a better understanding of the present invention, a preferred embodiment will be described below only by way of non-limitative example, and with reference to the accompanying drawings, in which:

- figure 1 shows a side view of a first configuration of a supporting device of at least one flexible material container, made according to the invention;
- figure 2 shows a side view of second configuration of the supporting device in figure 1;
- figure 3 is a bottom view of the supporting device in figures 1 and 2;
- figure 4 is a top view of the supporting device in figures from 1 to 3;
- figure 5 is a perspective view of the supporting device in figures from 1 to 4;
- figure 6 is a perspective view of a further embodiment of the supporting device according to the present invention;
- figure 7 is a side view of a further embodiment of the supporting device according to the present invention;
- figure 8 is a section taken along line VIII-VIII in figure 7, and
- figure 9 is a top view of the further embodiment of the supporting device according to the present invention.

[0014] With reference to the accompanying figures, numeral 1 indicates a supporting device of at least one container 2 made of flexible material and adapted to contain consumer products.

[0015] In greater detail, the container 2 (figure 1) is made of plastic, and comprises a main portion 3 (only partially shown) consisting of a sheet folded so as to define a open carrying compartment 4 of the consumer products and a pair of handles 5 cantilevered extending from a free end edge of the main portion 3.

[0016] Specifically, the container 2 may be intended to contain loose consumer products or a plurality of bottles filled with liquid, specifically water or fruit juice.

[0017] More precisely, each handle 5 is shaped as a cantilevered arch protruding from a corresponding portion of the free end edge of the main portion 3 so as to define an opening delimited between the handle 5 itself and the aforesaid end edge.

[0018] Advantageously, the device 1 comprises (figures from 1 to 5) a tubular body 10 elongated along an axis A, graspable by a hand and defining a seat 11 engageable by a plurality of handles 5 of corresponding containers 2 (only one of which is shown in figure 1); the body 10 comprises, in turn, a pair of reciprocally adjacent end edges 12, 13 (figures 2, 4 and 5) delimiting the seat 11; the body 10 is, furthermore, displaceable between a first operative configuration, in which the edges 12, 13 withhold the handles 5 inside said seat 11, and a second operative configuration, in which the handles 5 of the containers 2 may be removed from the seat 11.

[0019] In greater detail, the body 10 is essentially cylinder-shaped with axis A, and is formed by molding of an elastically deformable material. Preferably, the body 10 is made of a thermoplastic rubber.

[0020] The body 10 is parallelly elongated to axis A for such a length as to be graspable (figure 4) by a plurality of fingers parallelly aligned to axis A and each folded about the axis A itself.

[0021] The seat 11 is also parallelly elongated to axis A so as to be able to accommodate (figure 1) within a segment of each handle 5 parallelly elongated to axis A. In such manner, the weight of the containers 2 is distributed on a larger surface inside the seat 11 and is no longer concentrated, making the carrying of the containers 2 themselves easier.

[0022] The edges 12, 13 reciprocally face along axis A and are normally arranged in first position, in which the handle 5 is maintained inside the seat 11 (figure 1).

[0023] From such first position, the edges 12, 13 are elastically spreadable (figure 2), e.g. by means of the fingers of a hand, to allow to insert the handles 5 of the containers 2 inside the seat 11 or to remove the handles 5 from the seat 11 itself.

[0024] The edges 12, 13 present corresponding main segments 14 parallel to axis A and corresponding axial end segments 15 slanting to axis A.

[0025] More precisely, the main segments 14 define corresponding generatrixes of the body 10.

[0026] The segments 15 are arranged at an axial end 16 of the body 10 and are slanting with respect to axis A.

[0027] Specifically, the segments 15 of the edges 12, 13 reciprocally diverge and define a recess 18 communicating with the seat 11 therebetween. The recess 18 is adapted to facilitate (figure 2) the spreading of the edges 12, 13 during the steps of inserting or removing the handles 5 into/from the seat 11.

[0028] More specifically, the recess 18 converges towards the axis A, proceeding from the end 16 towards an end 17, opposite to the end 16, of a cylindrical surface defined by the body 10 itself.

[0029] The recess 18 thus presents decreasing dimensions in transverse direction to axis A, proceeding from the end 16 towards the end 17.

[0030] The body 10 further comprises a through seat 20 on opposite side to axis A of the edges 12, 13. The seat 20 crosses the body 10 according to a slanted plane with respect to axis A.

[0031] Such seat 20 is adapted to accommodate a coin so that the device 1 performs the additional function of coin holder.

[0032] Alternatively, seat 20 could be shaped so as to accommodate a plurality of coins.

[0033] In virtue of the presence of the seat 20, the user may keep within reach one or more coins usable to pay for a trolley carrying the containers 2 themselves from an automatic distribution system of the trolleys themselves, without putting the containers 2 on the ground.

[0034] The device 1 further comprises a metallic material ring 21, crossing a hole 22 of the body 10 and adapted to be coupled with a hole of a key so that the device 1 performs the additional function of key case.

[0035] The hole 22 is also arranged on the opposite side of the edges 12, 13 with respect to axis A.

[0036] The operation of the device 1 will be described below from a condition in which the handles 5 of the containers 2 do not engage the seat 11.

[0037] The user elastically spreads (figure 2) the edges 12, 13 by acting on the recess 18 with his or her fingers or by means of the handles 5 of the containers 2 and inserts the handles 5 themselves in the seat 11 itself.

[0038] Once the action of the fingers ceases or once the handles 5 are inserted in the seat 11, the edges 12, 13 elastically return to the first position, withholding the handles 5 themselves inside the seat 11.

[0039] More specifically, once inserted in the seat 11, each handle 5 presents a segment parallelly elongated to axis A accommodated into the seat 11.

[0040] At this point, the user may act on the body 10 to comfortably lift, carry and rest on the ground the containers 2 without the handles 5 directly compressing the user's fingers.

[0041] The user may, similarly, insert the handles 5 of further containers 2 into the seat 11 and comfortably lift, carry and rest on the ground the containers 2 by acting only on the body 10.

[0042] In order to remove the containers 2 from the device 1, the user distances the handles 5 from the seat 11 by spreading the edges 12, 13 and extracting the handles 5 themselves.

[0043] With reference to figures from 6 to 9, numeral 1' indicates as a whole a supporting device according to a further embodiment of the present invention.

[0044] The supporting device 1' is similar to the supporting device 1 and only the differences thereof will be described hereinafter; corresponding or equivalent parts of the joints 1 and 1' will be indicated where possible by the same reference numbers.

[0045] The supporting device 1' differs from the supporting device 1 in that the body 10 defines, in addition to a cylindrical surface graspable by a plurality of fingers parallelly aligned to the axis A, a pair of portions 24' folded about the axis A itself and defining, from opposite parts of the above cylindrical surface, the edges 12, 13.

[0046] Furthermore, the supporting device 1' differs from the supporting device 1 in that it comprises, instead of the seat 20, a seat 20' arranged adjacent to the end 17 of the body 10 and having an opening 23' for coin inserting arranged on the opposite side of the hole 22 with respect to the axis A.

[0047] The seat 20' is blind on opposite side of the opening 23', is parallelly elongated to axis A and lays on a parallel, offset plane vertically arranged with respect to axis A.

[0048] The supporting device 1' differs from the supporting device 1 in that it comprises a further recess 18 arranged at the end 17 and tapered going from the end

17 towards the end 16.

[0049] The operation of the supporting device 1' is identical to that of the supporting device 1 and is not therefore shown in detail.

[0050] From an examination of the features of the device 1, 1' made according to the present invention, the advantages that it allows to obtain are apparent.

[0051] Specifically, the device 1, 1' allows to comfortably carry the containers 2 by simply accommodating the handles 5 of the containers 2 themselves into the seat 11 and carrying the body 10.

[0052] In such manner, the user does not need to directly grasp the handles 5 and therefore the fingers of the user him or herself are not compressed by the handles 5.

[0053] Similarly, the device 1, 1' allows to rest the containers 2 on the ground and to lift the containers 2 themselves again by acting only on body 10 and without the user needing to directly grasp the handles 5.

[0054] The recess 18 is particularly advantageous because it facilitates the spreading of the edges 12, 13 (figure 2) and the insertion of the handles 5 in the seat 11 or the removal of the handles 5 themselves from the seat 11 itself.

[0055] The thermoplastic rubber with which the body 10 is formed makes the device 1, 1' comfortable and easy to carry. More specifically, in virtue of its softness, the thermoplastic rubber prevents the handles 5 from excessively compressing the user's fingers.

[0056] In virtue of the presence of the ring 21 and of the seat 20, 20', the device 1, 1' further allows the user to keep, respectively, a key and coins usable to pay for a carrying trolley from the automatic distribution system of the trolleys themselves in a predetermined, easily reachable position.

[0057] In virtue of the fact that the seat 20' lays on a vertical plane, its conformation is particularly advantageous during the step of molding, because it can be easily made jointly with the supporting device 1'. More specifically, the seat 20' is easily made by inserting an element of corresponding shape into the mould intended to form the supporting device 1'.

[0058] In virtue of the fact that the seat 11 is parallelly elongated to axis A and is engageable by corresponding segments of the handles 5 also parallelly elongated to axis A, the weight of the containers 2 is distributed on a larger surface inside the seat 11 and is not concentrated, making the carrying of the containers 2 themselves easier.

[0059] In virtue of the fact that the body 10 defines a cylindrical elongated surface with respect to axis A for a length so as to be graspable by a plurality of fingers parallelly aligned and folded about the axis A, the device 1, 1' allows to use several fingers to lift the containers 2, thus reducing the effort that the user feels on his or her fingers.

[0060] It is finally apparent that changes and variations can be implemented to the device 1, 1' herein described and illustrated without departing from the scope of protection of the claims.

[0061] Specifically, the body 10 could be made of any other elastically deformable material sufficiently comfortable to be grasped by the hand of a user.

Claims

1. A supporting device (1, 1') of at least one container (2) made of flexible material, **characterized in that** it comprises a tubular body (10) elongated along an axis (A), graspable by the fingers of one hand and defining a first seat (11) engageable by at least one handle (5) of said container (2) and also elongated along said axis (A);
said body (10) comprising, in turn, a pair of reciprocally adjacent end edges (12, 13) delimiting said first seat (11);
said body (10) being further displaceable between a first operative configuration, in which said edges (12, 13) withhold said handle (5) within said first seat (11), and a second operative configuration, in which said handle (5) may be removed from said first seat (11).

2. A supporting device according to claim 1, **characterized in that** at least one of said edges (12, 13) is elastically spreadable by the other from said edges (13, 12) to displace said body (10) from said first to said second configuration.

3. A supporting device according to claim 1 or 2, **characterized in that** said first seat (11) is elongated along said axis (A) for a length such as to be engageable by a segment of said handle (5) elongated along the axis (A) itself.

4. A supporting device according to any claims from 1 to 3, **characterized in that** at least part of said body (10) defines a cylindrical surface coaxial to said axis (A) and elongated with respect to said axis (A) for a length so as to be graspable by a plurality of fingers arranged side-by-side parallelly to said axis (A) itself and each folded about the axis (A) itself.

5. A supporting device according to claim 4, **characterized in that** at least one said edge (12, 13) defines a generatrix of said cylindrical surface defined by said body (10).

6. A supporting device according to claim 4, **characterized in that** said body (10) comprises a pair of portions (24') contiguous to said cylindrical surface, folded towards said axis (A) and defining, on the opposite side of said cylindrical surface, said edges (12, 13).

7. A supporting device according to any preceding

claim, **characterized in that** said edges (12, 13) define, at corresponding axial end segments (15), a recess (18) communicating with said first seat (11) and adapted to facilitate the insertion of said handle (5) of said container (2) inside the seat itself (11).

8. A supporting device according to claim 7, **characterized in that** said recess (18) is arranged at a first axial end (16) of said body (10) and presents, proceeding towards a second axial end (17), opposite to said first end (16) of said body (10), decreasing thicknesses in transverse direction to said axis (A).

9. A supporting device according to any preceding claim, **characterized in that** it comprises a second seat (20, 20') shaped so as to allow to accommodate at least one coin.

10. A supporting device according to claim 9, **characterized in that** said second seat (20, 20') is shaped so as to withhold a single coin.

11. A supporting device according to claim 10, **characterized in that** said second seat (20) crosses said body (10) according to a slanted plane with respect to said axis (A).

12. A supporting device according to claim 10 or **11, characterized in that** said second seat (20) is arranged on opposite side of said end edges (12, 13) with respect to said axis (A).

13. A supporting device according to claim 9 or 10, **characterized in that** said second seat (20') parallelly extends to said axis (A).

14. A supporting device according to claim 13, **characterized in that** said second seat (20') presents an opening (23') arranged on the same side as said end edges (12, 13) with respect to said axis (A).

15. A supporting device according to any preceding claim, **characterized in that** it comprises a ring (21) couplable with a seat of a key.

16. A supporting device according to claim 15, **characterized in that** said ring (21) engages a third seat (22) of said body (10).

17. A supporting device according to any preceding claim, **characterized in that** said edges (12, 13) are made of elastically deformable material.

18. A supporting device according to claim 17, **characterized in that** said edges (12, 13) are made of thermoplastic rubber.

19. A supporting device according to claim 17 or 18, **characterized in that** said entire body (10) is made of elastically deformable material.

20. A supporting device according to claim 19, **characterized in that** said entire body (10) is made of a thermoplastic rubber.

FIG. 1

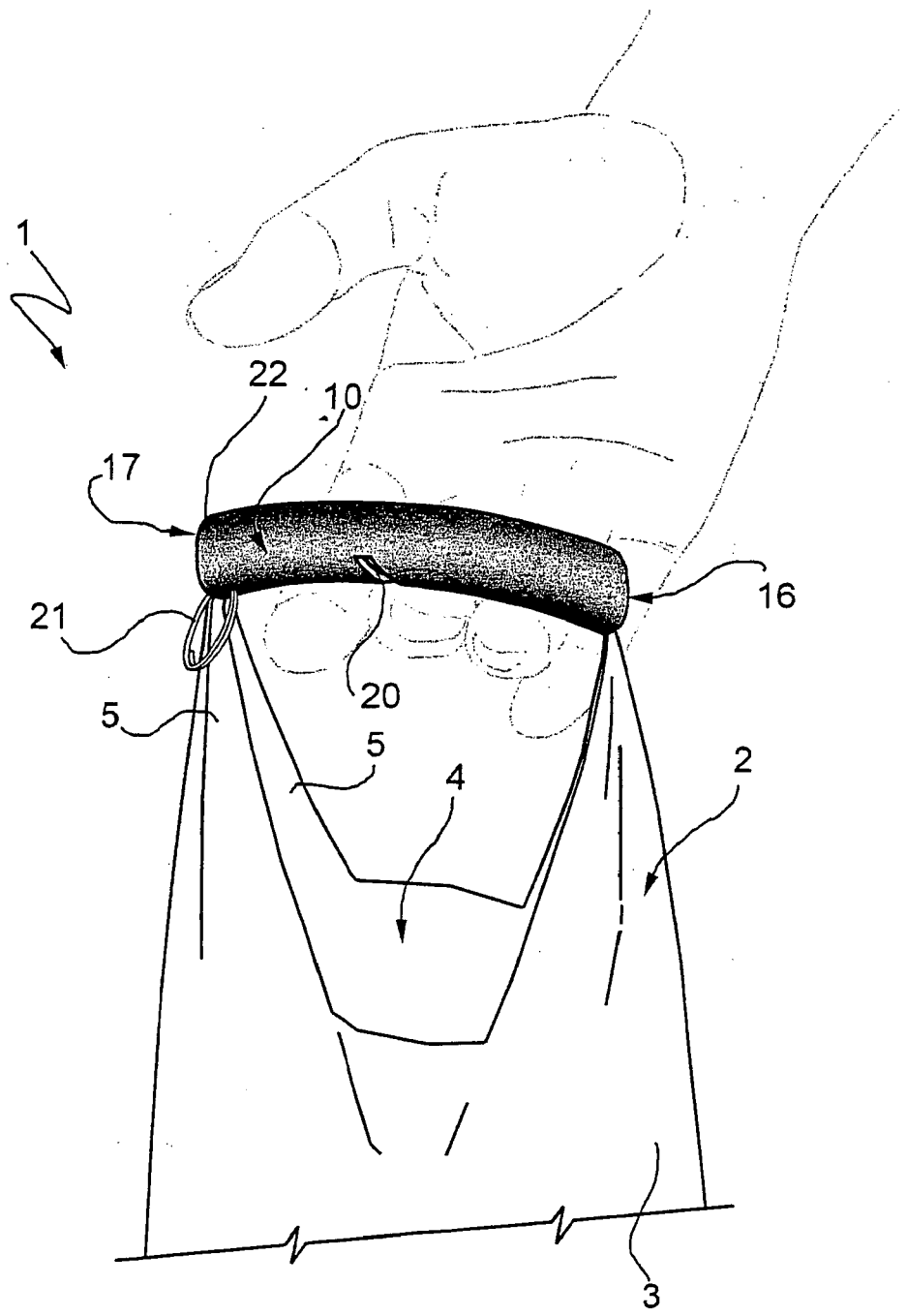


FIG. 2

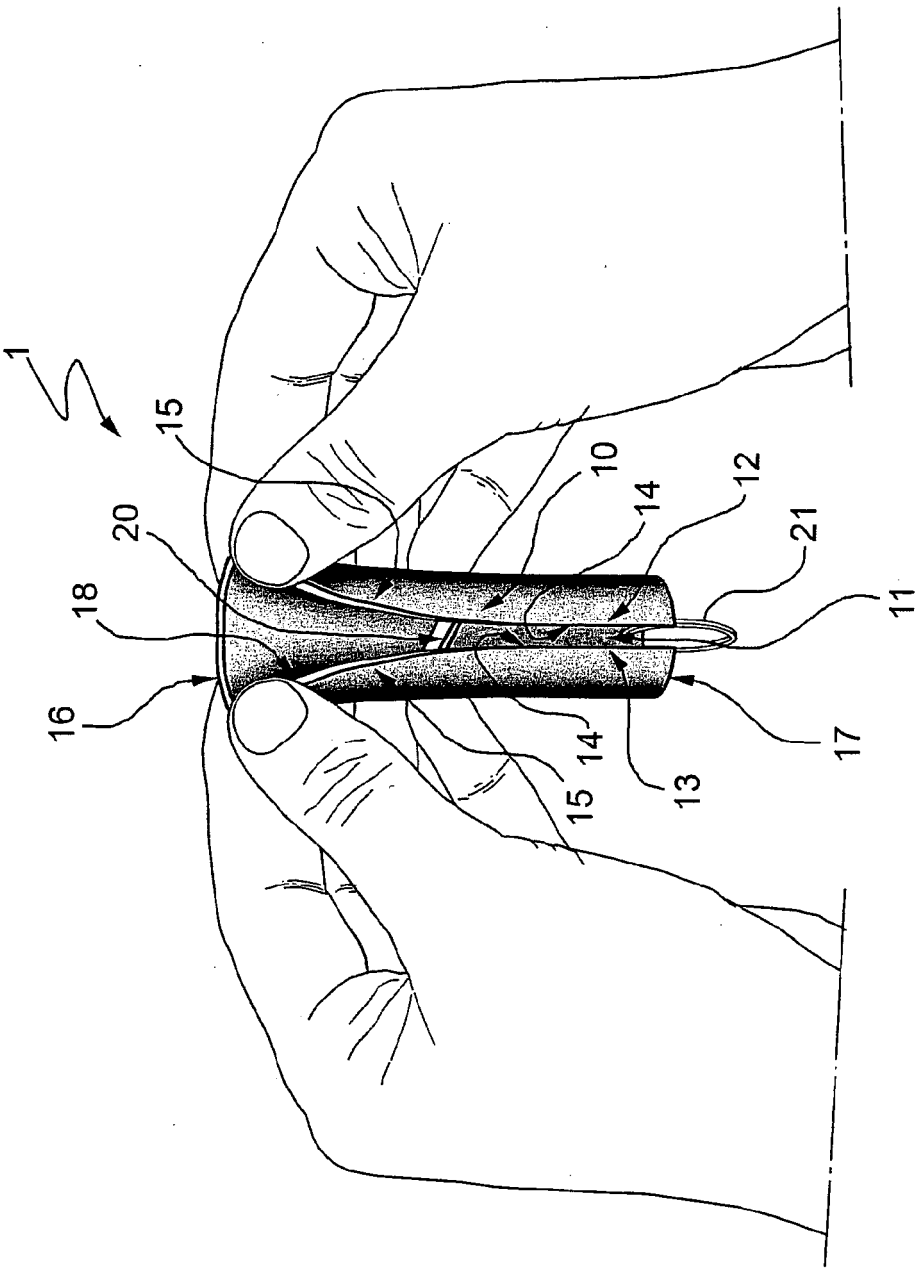


FIG. 3

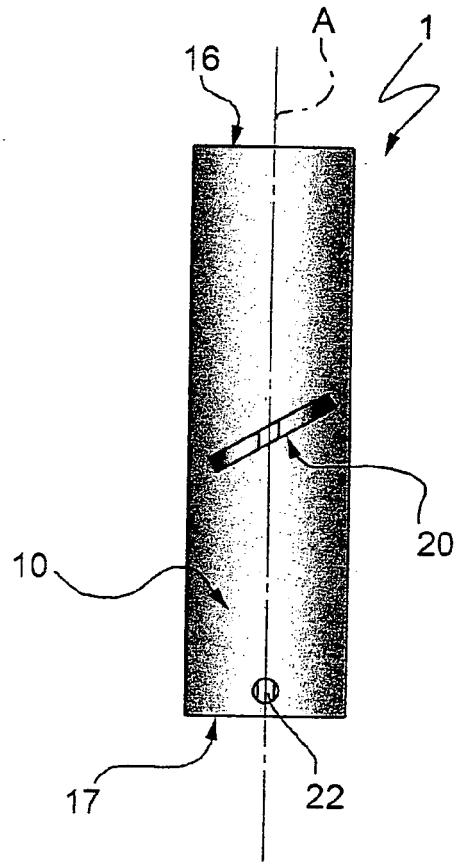


FIG. 4

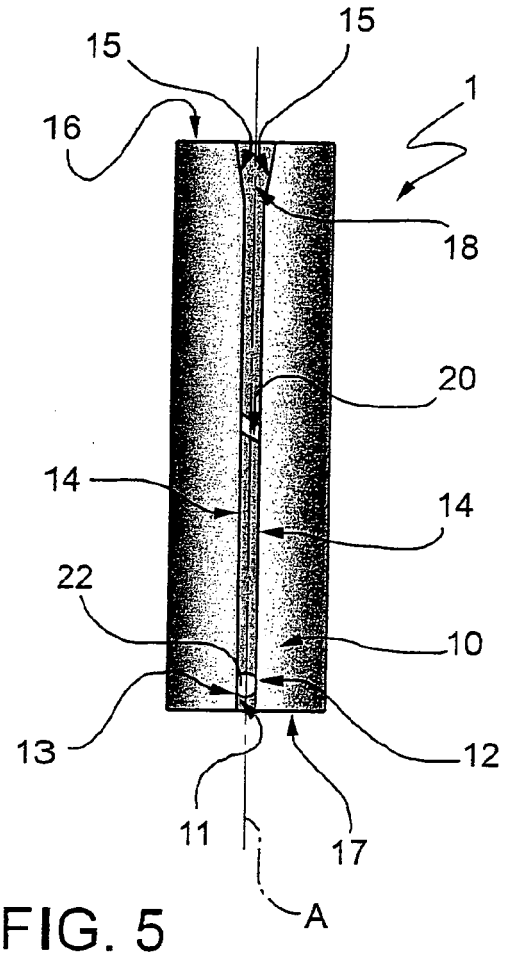


FIG. 5

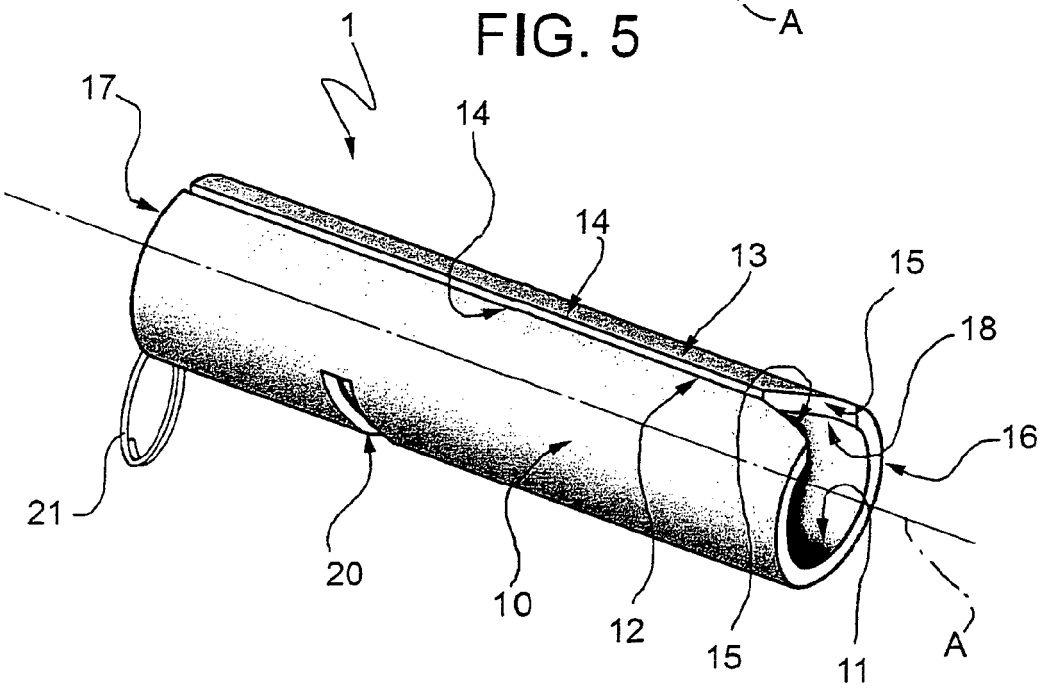


FIG. 8

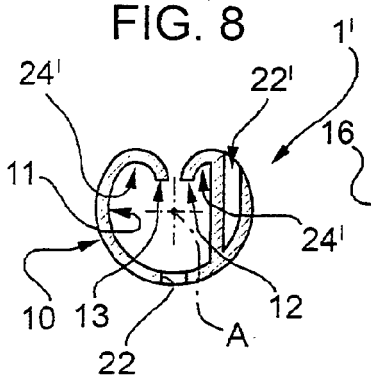


FIG. 7

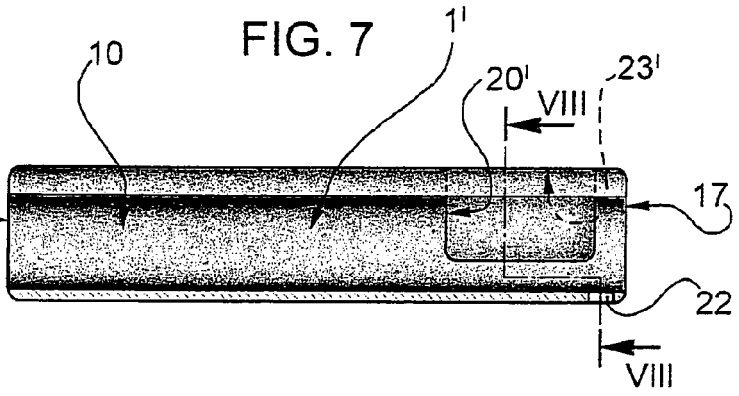


FIG. 9

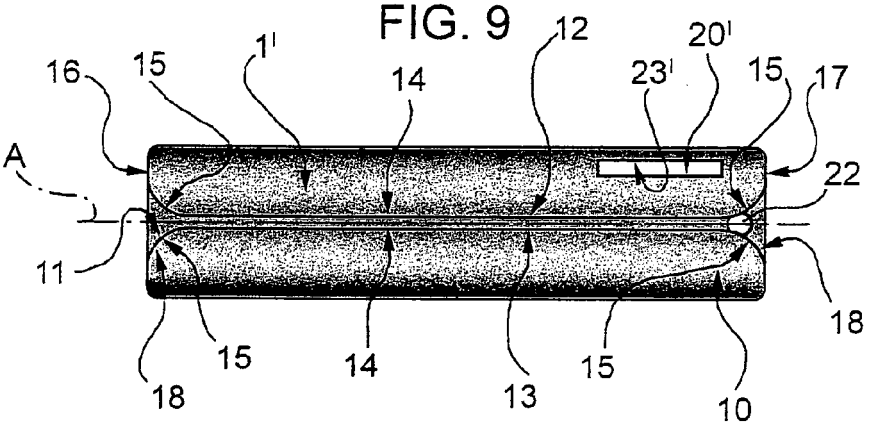
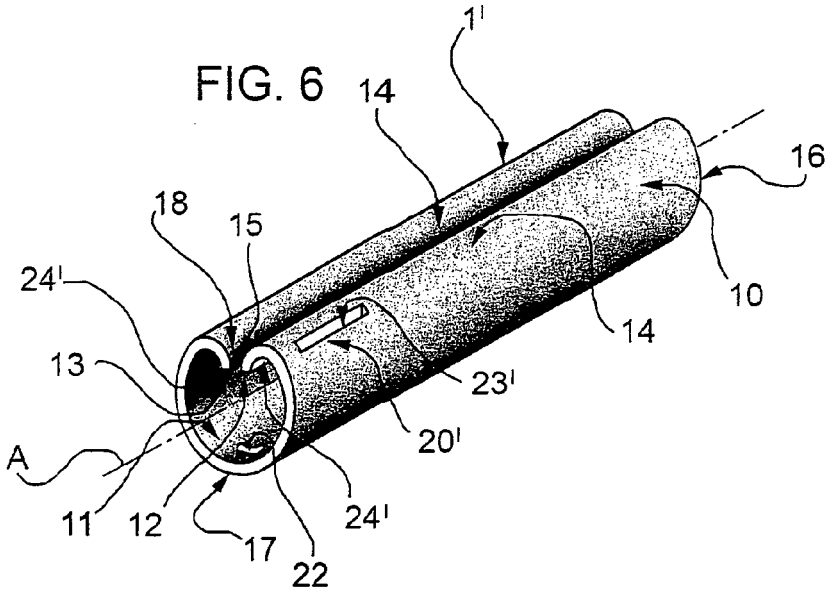


FIG. 6



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EUROPEAN SEARCH REPORT

Application Number
EP 07 42 5483

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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TECHNICAL FIELDS SEARCHED (IPC)

A45F
B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	17 December 2007	Jagusiak, Antony

CATEGORY OF CITED DOCUMENTS

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