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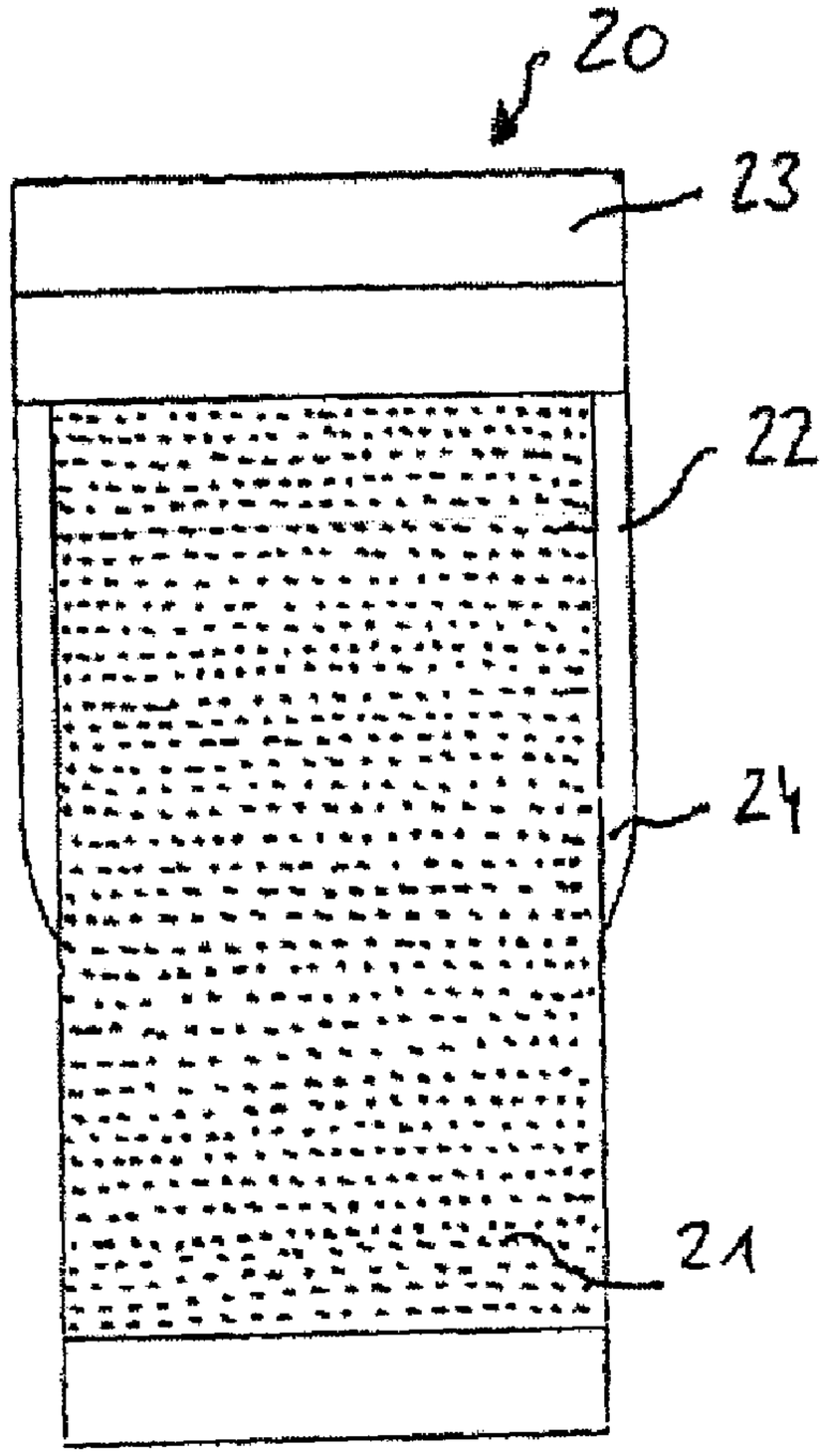

(57) Abrégé/Abstract:
An infusion unit with a bag part containing an infusion material, preferably tea leaves, and a handle that is connected to the bag part is specified. Such an infusion unit is to be improved in such a way that it is suitable for preparing high-quality infusion beverages,

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especially for street vending. To this end, the invention proposes that the handle be a plate-type element, preferably made of paper, cardboard or plastic, to which the bag part is fastened directly in such a way that, viewed in a direction of the elongate extension of the handle, it is arranged between opposite ends of the handle such that when the handle and bag part are tilted about 90° from one another, the handle extends to both sides beyond a point of connection of the handle to the bag part.

ABSTRACT

An infusion unit with a bag part containing an infusion material, preferably tea leaves, and a handle that is connected to the bag part is specified. Such an infusion unit is to be improved in such a way that it is suitable for preparing high-quality infusion beverages, especially for street vending. To this end, the invention proposes that the handle be a plate-type element, preferably made of paper, cardboard or plastic, to which the bag part is fastened directly in such a way that, viewed in a direction of the elongate extension of the handle, it is arranged between opposite ends of the handle such that when the handle and bag part are tilted about 90° from one another, the handle extends to both sides beyond a point of connection of the handle to the bag part.

Infusion Unit

The invention relates to an infusion unit comprising a bag part that contains an infusion material, preferably tea leaves, and a handle that is connected to the bag part.

Infusion units of this type are known, for example, in the form of traditional tea bags. With traditional tea bags, finely shredded tea material is contained in a bag part. The bag part is sealed around its entire periphery, and on the upper side of the bag part, a small cardboard or paper tab is attached via a pull string as a handle piece. Tea bags of this type are widely used to prepare tea in individual portions and in pots. Usually, such tea bags are loaded with a fill quantity of 3.5 to 5.0 g, this fill quantity being suitable for preparing one cup of tea using said tea bag. If, however, such a tea bag is used to prepare, for example, a mug of tea (compared with an approximately 150 ml cup, a mug holds approximately 200 to 300 ml), the quantity of tea contained in the tea bag is insufficient.

Furthermore, the tea contained in traditional tea bags is finely crushed, and its quality is usually far below that of a loose tea made

from high-quality tea leaves.

Especially for "street vending", it is necessary to prepare tea rapidly, so that bagged tea or tea bags are always used in these cases to prepare tea.

Due to the disadvantages described above, however, the tea prepared using tea bags of this type does not always satisfy the demands of consumers in terms of quality, so that street vendors are able to sell only small numbers of tea beverages.

It is a goal of the applicant to make it possible for street vendors to also offer high-quality tea beverages, which approach or are equal to the quality of teas prepared at home or in good teahouses. In addition, it should be possible to prepare the tea rapidly, as is critical in street vending.

Especially, it should be possible to use an infusion unit specified in the invention in combination with disposable drinking cups equipped with lids.

The listed goals or the objects to be understood therein are achieved according to the infusion unit of the present invention and advantageous further improvements described for this infusion unit.

Certain exemplary embodiments provide an infusion unit comprising: a bag part containing an infusion material; a handle attached to the bag part, wherein the handle is a plate-type element, to which the bag part is directly fastened in such a way that, viewed in a direction of the longest extension of the handle, it is positioned between opposite ends of the

handle such that when the handle and the bag part are tilted about 90° from one another, the handle extends to both sides over a point at which the handle is connected to the bag part; and a fold extending centrally over the entire length of the handle along the direction of the longest extension of the handle.

In the latter position, the bag part and the handle consequently together form a "T" shape, wherein it is not imperative that the two sections of the cross member of the "T" be of equal lengths.

The infusion unit according to the invention is especially suited for holding loose, whole tea leaves, thereby creating the prerequisite for preparing a high-quality tea. However, the infusion unit of the invention is not limited to tea as the infusion material; in principle other infusion materials, such as bits of fruit, for example, or similar materials, can also be used. The arrangement of the bag part on the handle, according to the invention, makes it possible to reliably use the handle as a "stopper" when the bag part is hung inside a container for the purpose of preparing the infusion beverage, in that, for example, the two projecting parts of the handle are placed on a rim of the container opening, or are inserted into a lid constructed specifically for use in conjunction with the infusion unit of the invention, in a manner to be described in greater detail with reference to the exemplary embodiment.

The bag part can be made of a cellulose material or any other porous material suitable for the preparation of infusion beverages, especially nylon.

According to an advantageous further improvement (claim 2), the bag part is fastened to the handle eccentrically between the opposite ends, viewed along the elongate extension of said handle. In a further variant (claim 3), an arrangement is preferred that divides the handle in its elongate extension in a ratio of approximately 1 to 3. This type of arrangement of the bag part on the handle is of particular advantage especially with the preferred, provided combination of the infusion unit with a lid for a disposable drinking cup specifically designed for this purpose.

A further embodiment that is advantageous in this connection is specified in claim 4. In this embodiment, the handle is essentially rectangular in its basic shape, wherein the end of the handle that lies most distant from the point at which the handle is connected to the bag part is rounded. This rounding of the end of the handle facilitates insertion of the same into a receptacle slit, or makes it possible to place this end on a correspondingly shaped support surface for fastening the infusion unit in a "brewing position".

An infusion unit configured as described in claim 5, in which a handle for the bag part is created by folding over one end of the handle and gluing one end of the bag part between two surfaces of the handle, which are situated one on top of another as a result of the folding, provides a particularly simple and stable construction of the infusion unit of the invention, especially the point at which the handle and the bag part are connected. Rather than gluing, the end of the bag part can also be fastened in the fold of the handle in some other way, for example via stitching.

Another further improvement (claim 6) provides that the folded section of the handle forms a gripping section for grasping the infusion unit. This end is doubled as a result of folding, which also serves to stabilize it, forming a more stable gripping section than at the other end of the handle.

Preferably, the handle is wider in a lateral dimension, measured crosswise to the direction of the elongate extension, than the bag section fastened to it, and in this direction projects beyond the bag part on both sides. This advantageous further improvement specified in claim 7 makes it possible to position the handle on a support or guide surface in the area in which the bag part lies. The bag unit is advantageously a flat bag (claim 8). This flat bag is preferably arranged with its elongate extension crosswise to the elongate

extension of the handle, and is fastened to the handle in this orientation.

Preferred dimensions of the infusion unit are specified in claim 9. According to this claim, the bag unit is approximately 100 mm - 130 mm long, and approximately 50 mm wide. The handle is approximately 80 mm long and approximately 54 mm wide, with the first end that extends beyond the point at which the bag part is connected to the handle part being approximately 20 mm long and the second extending end being approximately 60 mm long.

Finally, a further advantageous embodiment of the invention (claim 10) provides that a fold extends in the direction of the elongate extension of the handle, approximately centered over the entire length of the latter. The advantage of this fold is that the infusion unit of the invention can be used, for example, to brew an infusion beverage in a mug, without the risk that the infusion unit placed in the mug will slip completely into the mug when liquid is poured over it. To accomplish this, the handle of the infusion unit is pressed together slightly along the fold, so that, rather than the flat, planar shape, it is approximately triangular in cross section. The longer section of the handle then hangs over the rim of the mug. The angled shape allows the handle to better fit the round outer edge of the mug, making it harder for it to slip in.

Further advantages and characterizing features of the invention are revealed in the following description of an exemplary embodiment, with reference to the attached set of figures. The figures show:

Fig. 1 a first exemplary embodiment of an infusion unit of the invention, in a view from a first side,

Fig. 2 the infusion unit of the invention from Fig. 1, in a view from the side that is opposite the first side,

Fig. 3 a view of a bag part of an infusion unit of the invention,

Fig. 4 a view of a blank for the handle according to the first exemplary embodiment of the infusion unit of the invention,

Fig. 5a through 5c a preferred use of the infusion unit of the invention, in combination with a specially designed lid for a disposable drinking cup,

Fig. 6 a representation of a second exemplary embodiment of an infusion unit according to the invention, comparable to that of Fig. 1,

Fig. 7 a representation of the infusion unit shown in Fig. 6, comparable to that of Fig. 2, and

Fig. 8 a view of a blank for the handle according to the second exemplary embodiment, comparable to that of Fig. 4.

In the figures, each of which schematically illustrates the described exemplary embodiment, equivalent elements are designated by the same reference symbols. The representations in the figures do not serve to limit the scope of the invention, nor does the following description of the exemplary embodiment; the scope of the invention is defined solely by the patent claims. The following description of the exemplary embodiments is intended solely for purposes of explanation and to improve understanding of the invention.

In the figures, an infusion unit of the invention is generally designated by the numbers 20 or 120. The infusion unit is generally comprised of a handle 22 or 122 and a bag part 21 in the form of a flat bag fastened directly to said handle. The bag part 21 is filled with an infusion material, preferably loose tea leaves. The bag part 21 is made of a nylon material. The bag part 21 is produced by cutting off a

section of a tubular continuous band, closing one side of the bag part 21 with a row of stitching 28, filling it with the infusion material and closing the opposite end of the bag part 21 with another row of stitching 29. The dots at the center section of the bag part 21 are used to indicate that the nylon material is porous, to enable penetration of the same by an infusion liquid, for example hot water. In this manner it is ensured that the infusion material will come in contact with the infusion liquid, allowing it to act on said material to create an infusion beverage.

The handle 22 or 122 is made of a flat material, especially thin cardboard.

In Fig. 4, a blank for a first exemplary embodiment of the handle 22 is shown. There it is apparent that a fold designated by the number 25 extends crosswise to the handle 22, with grooves 26 and 27 being provided to each side of the fold 25. To attach the handle 22 to the bag part 21, in the areas between the fold 25 and the grooves 26 and 27, adhesive is applied to an upper side of the blank for the handle 22. A crosswise edge of one end of the bag part 21 is then placed on the fold 25, and the blank is folded along the fold 25 and bent around the bag part 21. In this manner, the bag part 21 is glued to the handle 22.

In Fig. 8, an alternative embodiment of a handle 122 is shown. This also has a fold 125 that extends crosswise to the handle 122. This exemplary embodiment lacks grooves that would correspond to the grooves 26 and 27 represented in the exemplary embodiment of Fig. 4. Instead, this embodiment has a fold 128 that extends in the lengthwise direction of the handle 122 (i.e. in the direction of its elongate extension). This fold extends perpendicular to the first fold 125 and lies approximately at the center of the handle 122, viewed across its width. The fold 128 is also indicated in Fig. 6 and 7, in which an exemplary

embodiment that is equipped with the handle 122 shown in Fig. 8 (infusion unit 120) is illustrated. The fold 128 provides a more secure positioning of the infusion unit of the invention when it is used for brewing an infusion beverage in a mug or a similar container. In such cases the handle 122 can be bent along the fold 128, and thereby "angled". In this position, it can be better adjusted to fit the outer shape of a mug or similar container, and, when hung over the rim of the mug to hold the bag part 21, will tend not to slip into the mug or the other brewing container when a brewing liquid is poured over the contents of the bag part 21.

The manner in which the bag part 21 is connected to the handle 122 is similar to what was described above in reference to the exemplary embodiment of Figures 1, 2 and 4. Here again, by folding one end of the handle 122 along the fold 125, an overlapping area is created, in which one end of the bag part 21 is glued.

As is apparent, especially, from Fig. 1 and 2 or 6 and 7, respectively, the handle 22 or 122 is wider than the bag part 21, wherein the bag part 21 is arranged centered on the handle 22 or 122, so that an edge of the handle 22 or 122 of approximately equal width projects on each side of the bag part 21. With this arrangement, in connecting the bag part 21 to the handle 22 or 122, the two surfaces of the handle 22 or 122, at least in the extended area of the handle 22 or 122, are glued directly to one another, which adds to the sturdiness of this attachment.

With the above-described connection between the bag part 21 and the handle 22 or 122, the handle 22 or 122 forms a supporting section 24 or 124 and a shorter gripping section 23 or 123, for two extending sections that extend beyond the point at which the handle 22 or 122 is connected to the bag part 21, the cardboard material of the handle 22

or 122 being doubled in said gripping section due to the folding along the fold 25 or 125. The supporting section 24 or 124 has a rounded end, the background of which will be described in greater detail in what follows.

The bag part 21 is not centered on the handle 22 or 122, i.e. the section 23 or 123 and the supporting section 24 or 124 are of unequal lengths. In the exemplary embodiments, the gripping section 23 or 123, measured up to the point of connection with the bag section 21, is approximately 20 mm long, and the supporting section 24 or 124 has a correspondingly measured length of approximately 60 mm. The point of connection between the bag part 21 and the handle 22 or 122 therefore divides the latter in a ratio of approximately 1 to 3. In the exemplary embodiment shown, the bag part 21 is approximately 50 mm wide, and the handle is approximately 54 mm wide. With this, the overhang of the handle 22, viewed in a crosswise direction, is approximately 2 mm to both the right and the left of the bag part. The bag part is approximately 110 mm long.

In Fig. 5a through 5c, a preferred use of the infusion unit of the invention is illustrated in conjunction with a lid 1 for a disposable drinking cup.

The lid 1 has a base plate 2, which during use is turned toward the drinking cup, and a cover 3 arranged above the base plate 2. Between this base plate 2 and the cover 3, and within a peripheral side panel 4, a receptacle space 5 is formed. Approximately at the center of the base plate 2, an essentially rectangular opening 6 is provided, and in the cover 3 or between the cover 3 and the rim of the lid 1, a slit-type opening 7 is provided in the area near the rim. This slit-type opening 7 is covered by a tab 13 that is part of the cover 3. In the area opposite the slit-type opening 7, the base plate 2 forms a support surface 10.

The infusion unit 20 or 120 of the invention is especially well suited for use in combination with this lid 1, to enable preparation of a relatively high-quality infusion beverage, especially tea, for fast-food street vending. To accomplish this, first the infusion unit 20 or 120 of the invention is threaded into the lid 1. This is shown in Fig. 5a and 5b. With the gripping section 23 or 123, the infusion unit of the invention is guided through the opening 6 in the base plate 2 of the lid 1, so that the gripping section 3 [*sic*] passes through the slit-type opening 7. The gripping section 23 or 123, and thereby the handle 22 or 122, is then drawn far enough through the slit-type opening 7 that the supporting section 24 or 124 can be pulled through the opening 6 into the receptacle space 5 of the lid 1. The handle 22 or 122 is then tilted and pushed back into the receptacle space until the supporting section 24 or 124 of the handle 22 or 122 rests on the support surface 10. Because the entire lid 1 is circular in shape, and therefore the support surface 10 also has a partially circular outer contour, the supporting section 24 or 124 has a rounded outer edge, as described above.

In the position shown in Fig. 5b, when the lid 1 or the unit formed by the lid 1 and the infusion unit 20 or 120 is placed on a drinking cup filled with an infusion liquid, the infusion unit 20 or 120 of the invention can reach into the infusion liquid, thereby acting to prepare an infusion beverage.

After a predetermined period of infusion time, the bag part 21 of the infusion unit 20 or 120 must be removed from the infusion liquid. This can be accomplished in the combination of the infusion unit 20 or 120 of the invention represented in Fig. 5c. When the infusion period has ended, the gripping section 23 or 123 of the handle 22 or 122 is grasped and pulled in the direction of the arrow shown in Fig. 5c. The bag part 21 is thereby removed from the infusion liquid, and is

pulled through the opening 6 into the receptacle space 5. With this, the bag part 21 is compressed and "wrung out" as a result of pressure between the base plate 2 and the supporting section 24 or 124 of the handle 22 or 122. If the gripping section 23 or 123 or the handle 22 or 122 is pulled as far as it will go out of the slit-type opening 7, the bag part 21 of the infusion unit 20 or 120 of the invention is almost completely held in the receptacle space 5, in any case enough that it is no longer in contact with the infusion liquid in the drinking cup. In this manner, further influence of the bag part or the infusion material in the bag part on the infusion liquid is prevented. If the bag part 21 contains tea, the tea beverage prepared in the drinking cup is thereby prevented from becoming excessively bitter from brewing too long.

The infusion unit of the invention is not limited in its use to the interaction with the lid 1 described in Fig. 5a to 5c, and can also be used without such a special lid to prepare infusion beverages in beverage containers. The variants shown in Figures 6 through 8 are especially suited for this.

List of Reference Symbols

1	Lid
2	Base plate
3	Cover
4	Side panel
5	Receptacle space
6	Opening
7	Opening
10	Support surface
13	Tab
20; 120	Infusion unit
21	Bag part
22; 122	Handle
23; 123	Gripping section
24; 124	Supporting section
25; 125	Fold
26	Groove
27	Groove
28	Closure stitching
29	Closure stitching
128	Fold

Claims

1. An infusion unit comprising:
a bag part containing an infusion material;
a handle attached to the bag part, wherein the handle is a plate-type element, to which the bag part is directly fastened in such a way that, viewed in a direction of the longest extension of the handle, it is positioned between opposite ends of the handle such that when the handle and the bag part are tilted about 90° from one another, the handle extends to both sides over a point at which the handle is connected to the bag part; and
a fold extending centrally over the entire length of the handle along the direction of the longest extension of the handle.

2. The infusion unit according to claim 1, wherein the infusion material is tea leaves.

3. The infusion unit according to claim 1 or 2, wherein the plate-type element is made of paper, cardboard or plastic.

4. The infusion unit according to any one of claims 1 to 3, wherein the bag part is fastened to the handle eccentrically between the opposite ends when viewed in the longest extension of the handle.

5. The infusion unit according to claim 4, wherein the point at which the handle is connected to the bag part divides the handle in the direction of its longest extension in a ratio of approximately 1:3.

6. The infusion unit according to any one of claims 1 to 5, wherein the handle has a rectangular basic shape, wherein the distant end of the handle from the point of connection of the handle to the bag part is rounded.

7. The infusion unit according to any one of claims 1 to 6, wherein the bag part is fastened to the handle by folding over one end of the handle and gluing one end of the bag part between two surfaces of the handle which rest on one another as a result of the folding.

8. The infusion unit according to claim 7, wherein the folded over section of the handle forms a gripping section for grasping the infusion unit.

9. The infusion unit according to any one of claims 1 to 8, wherein the width of the handle in a direction at right angles to the longest extension is wider than the bag part fastened to it, and in this direction extends on both sides beyond the bag part.

10. The infusion unit according to any one of claims 1 to 9, wherein the bag part is a flat bag.

11. The infusion unit according to any one of claims 1 to 10, wherein the bag part is approximately 100 mm – 130 mm long and approximately 50 mm wide, and the handle is approximately 80 mm long and approximately 54 mm wide, wherein the first end that extends beyond the point of connection of the bag part to a gripping part is approximately 20 mm long, and the second extending end is approximately 60 mm long.

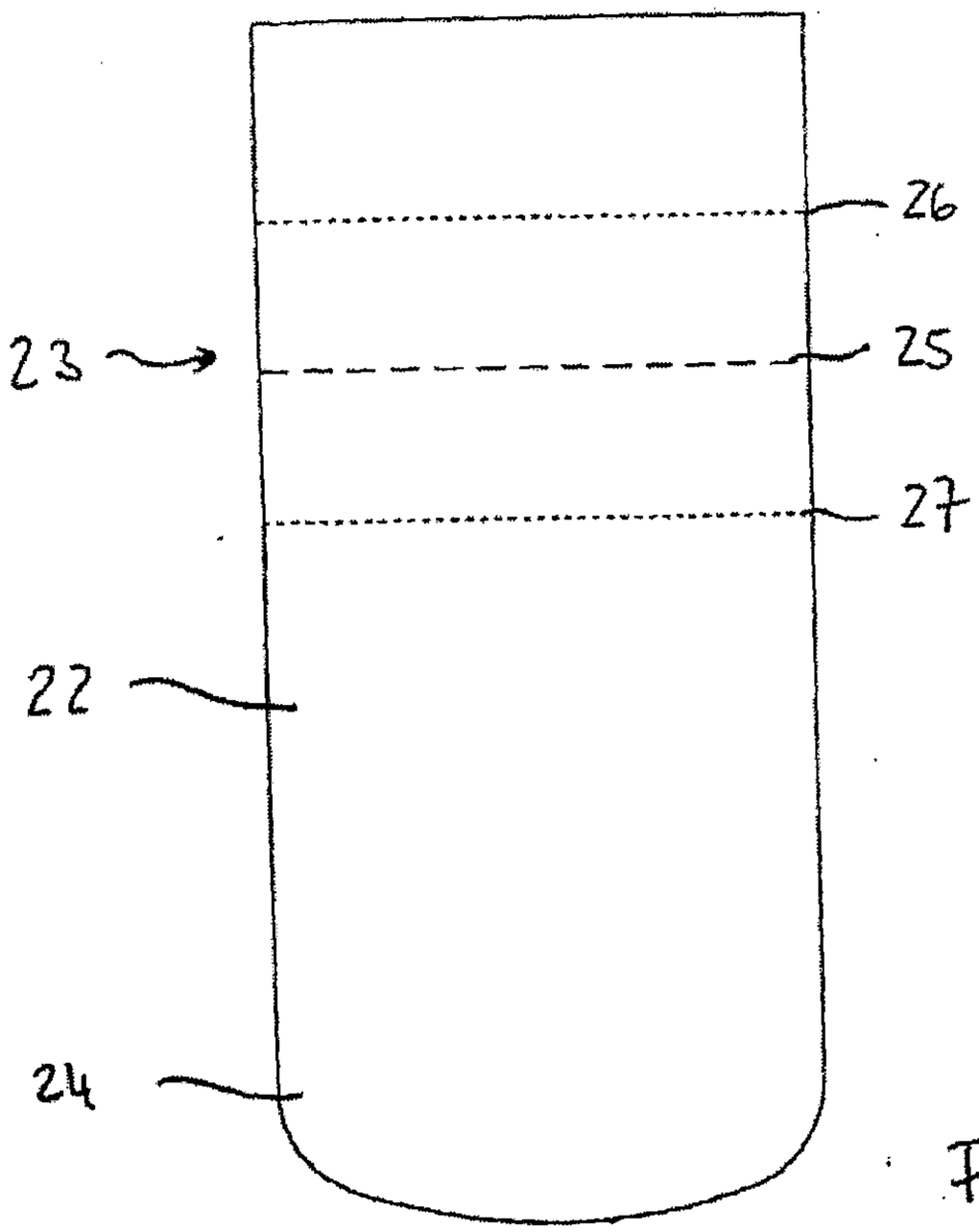


Fig. 4

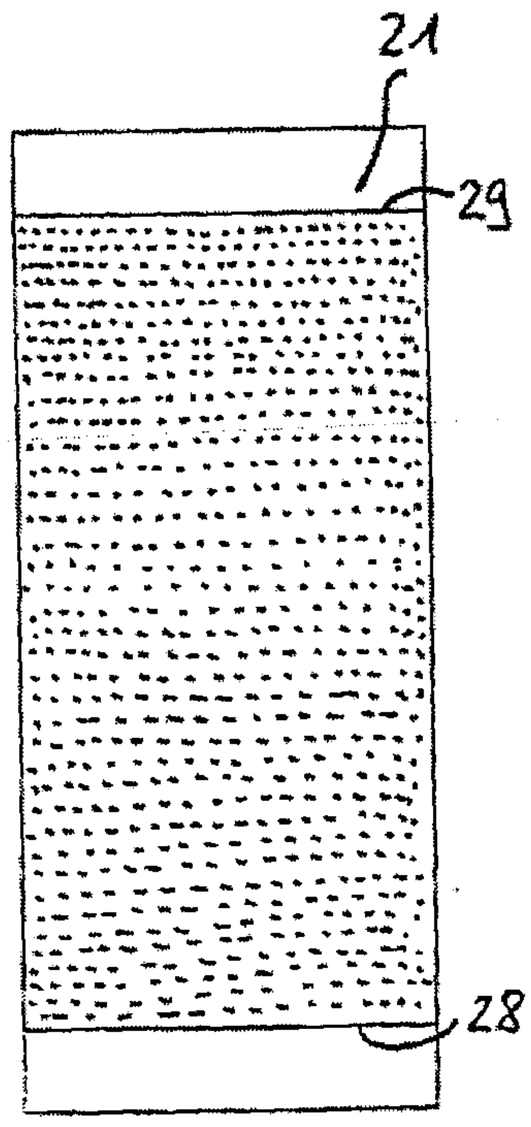


Fig. 3

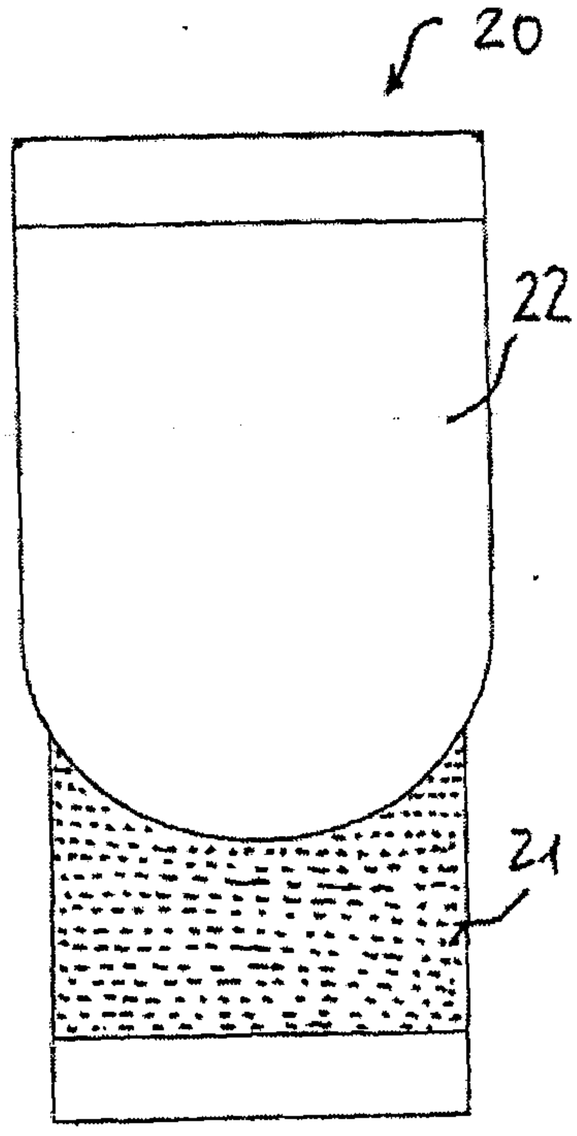


Fig. 1

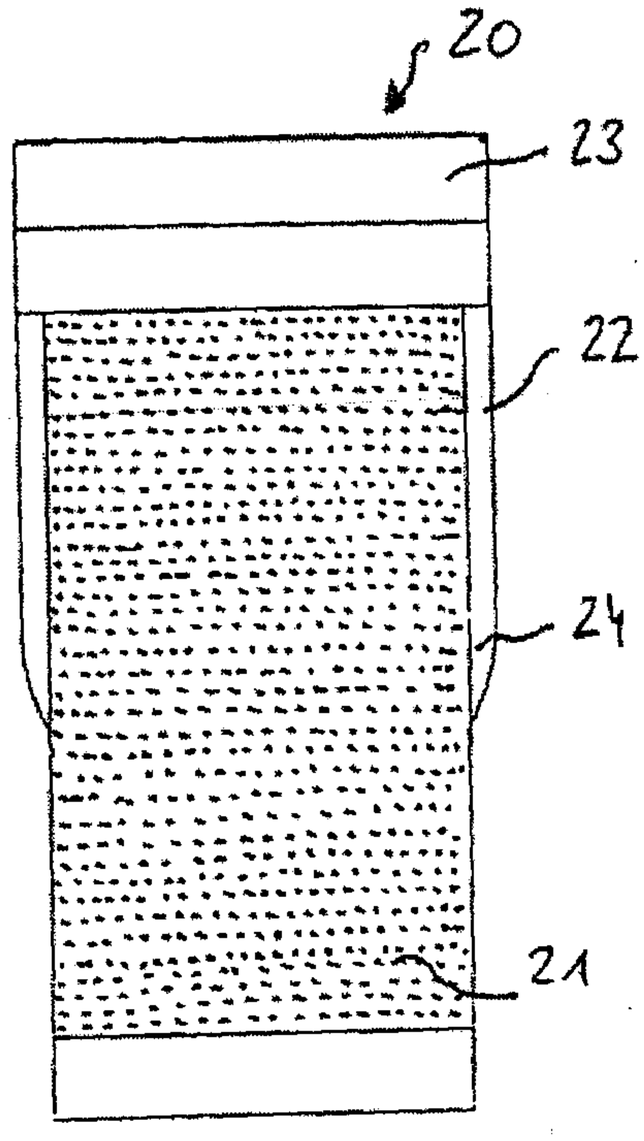


Fig. 2

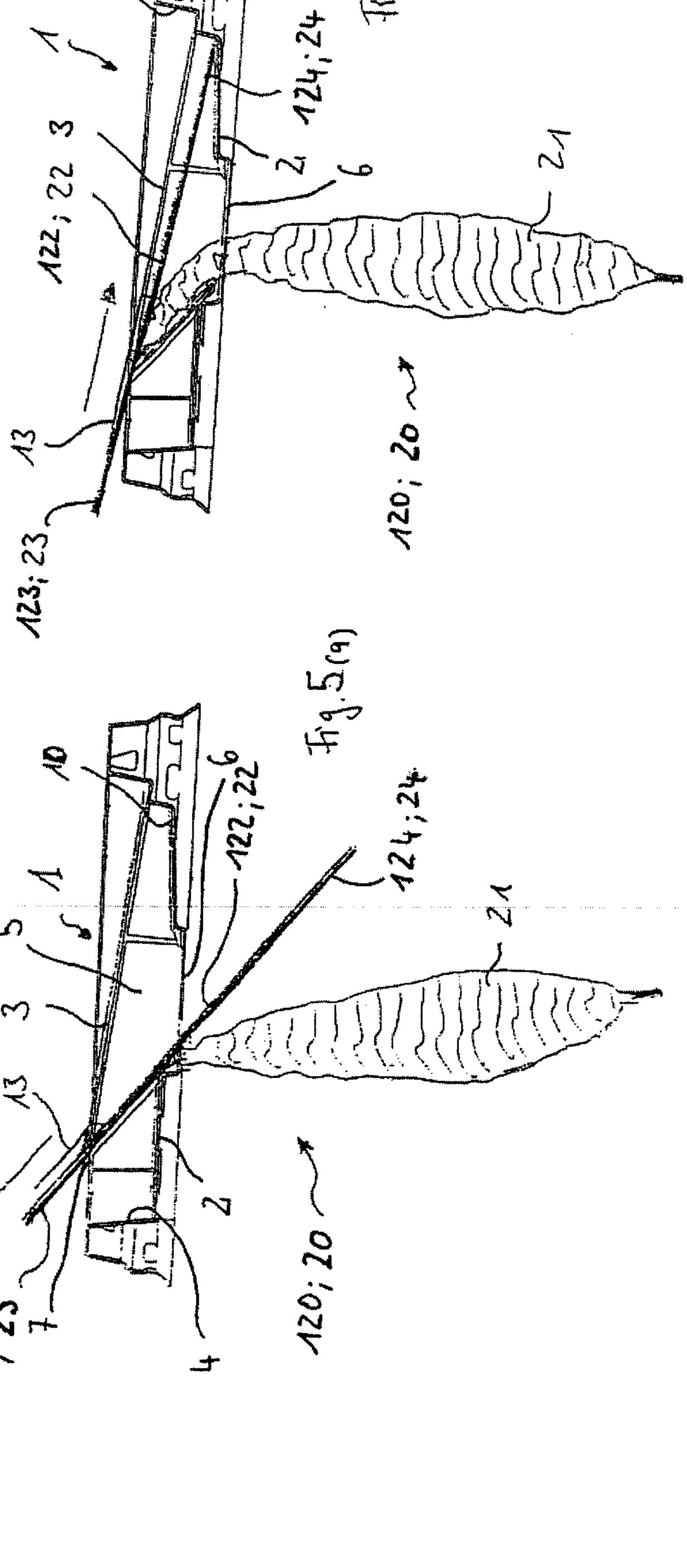


Fig. 5 (a)

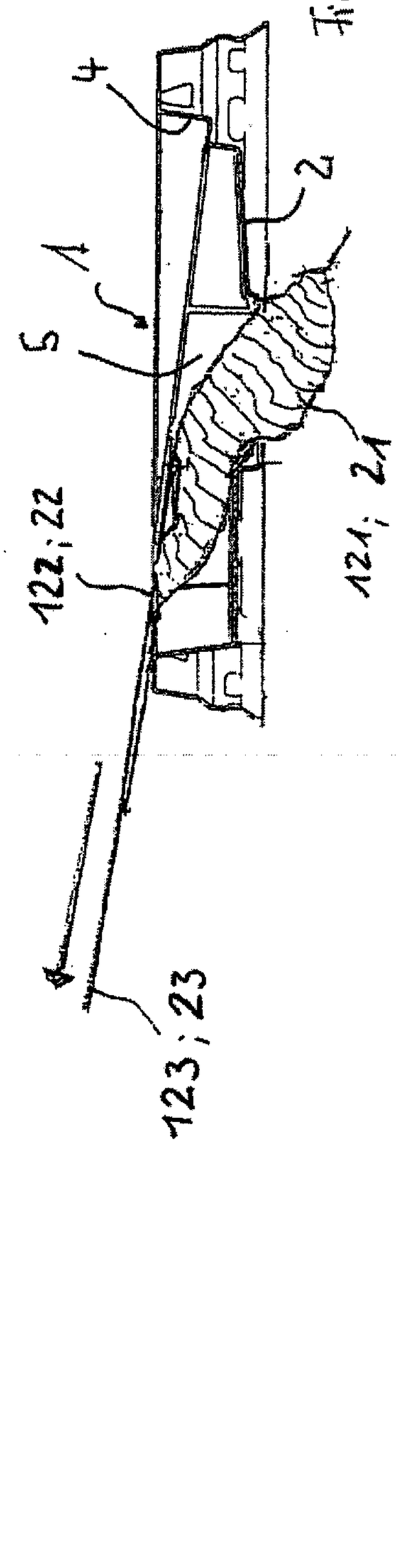


Fig. 5 (c)

Fig. 5 (b)

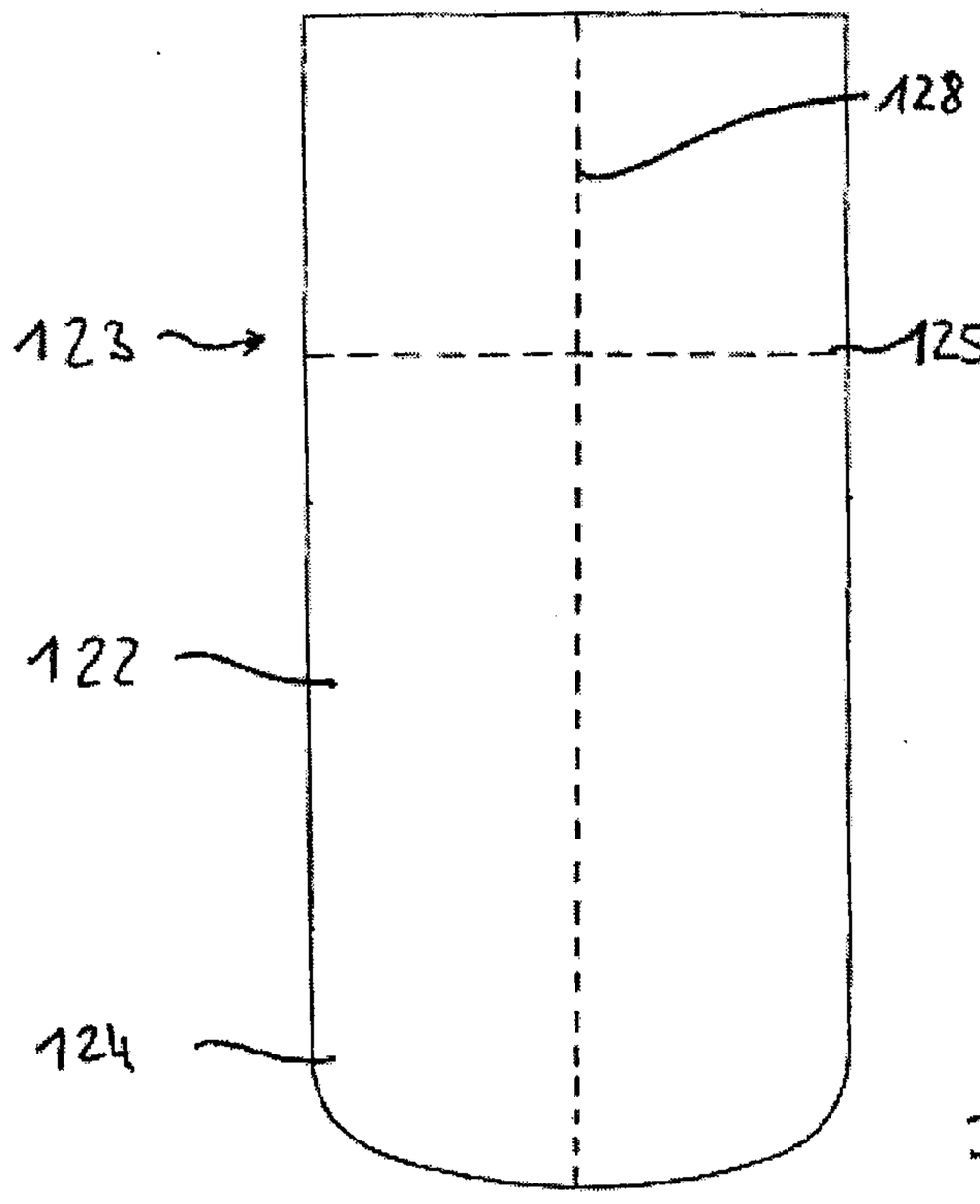


Fig.8

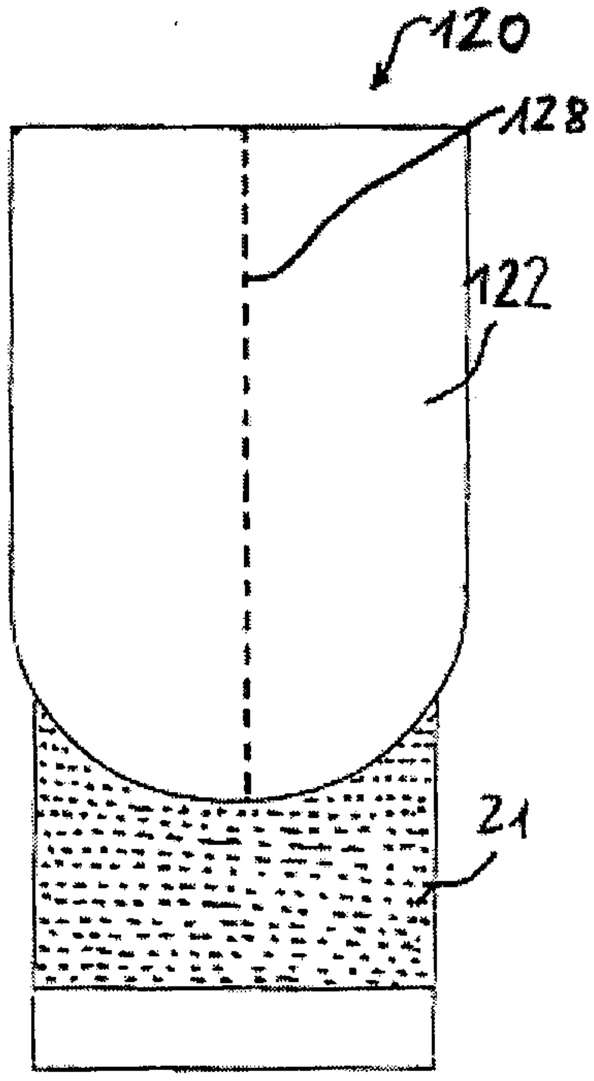


Fig. 6

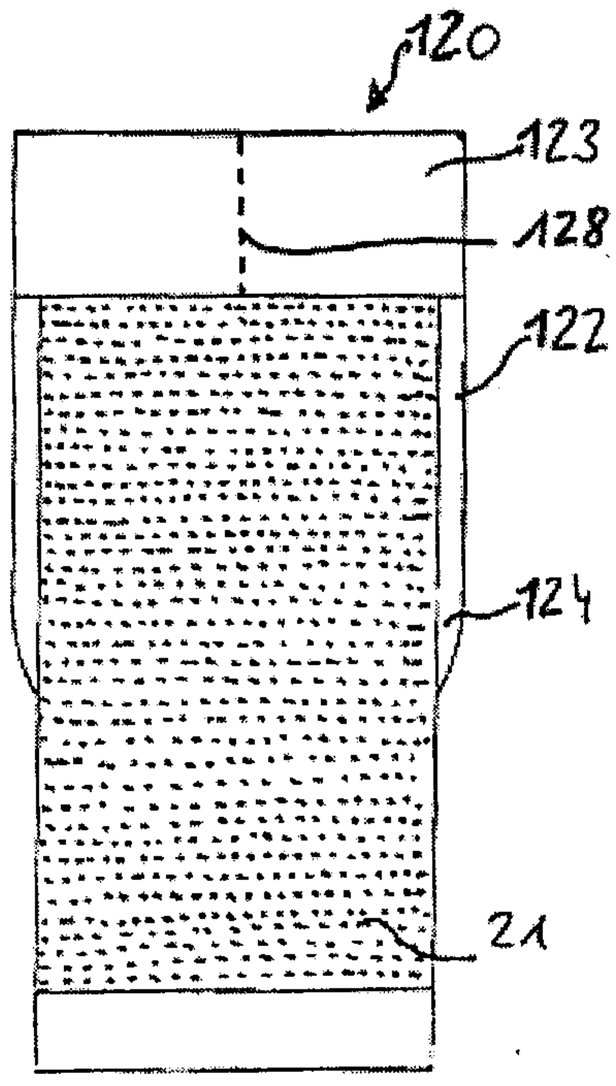
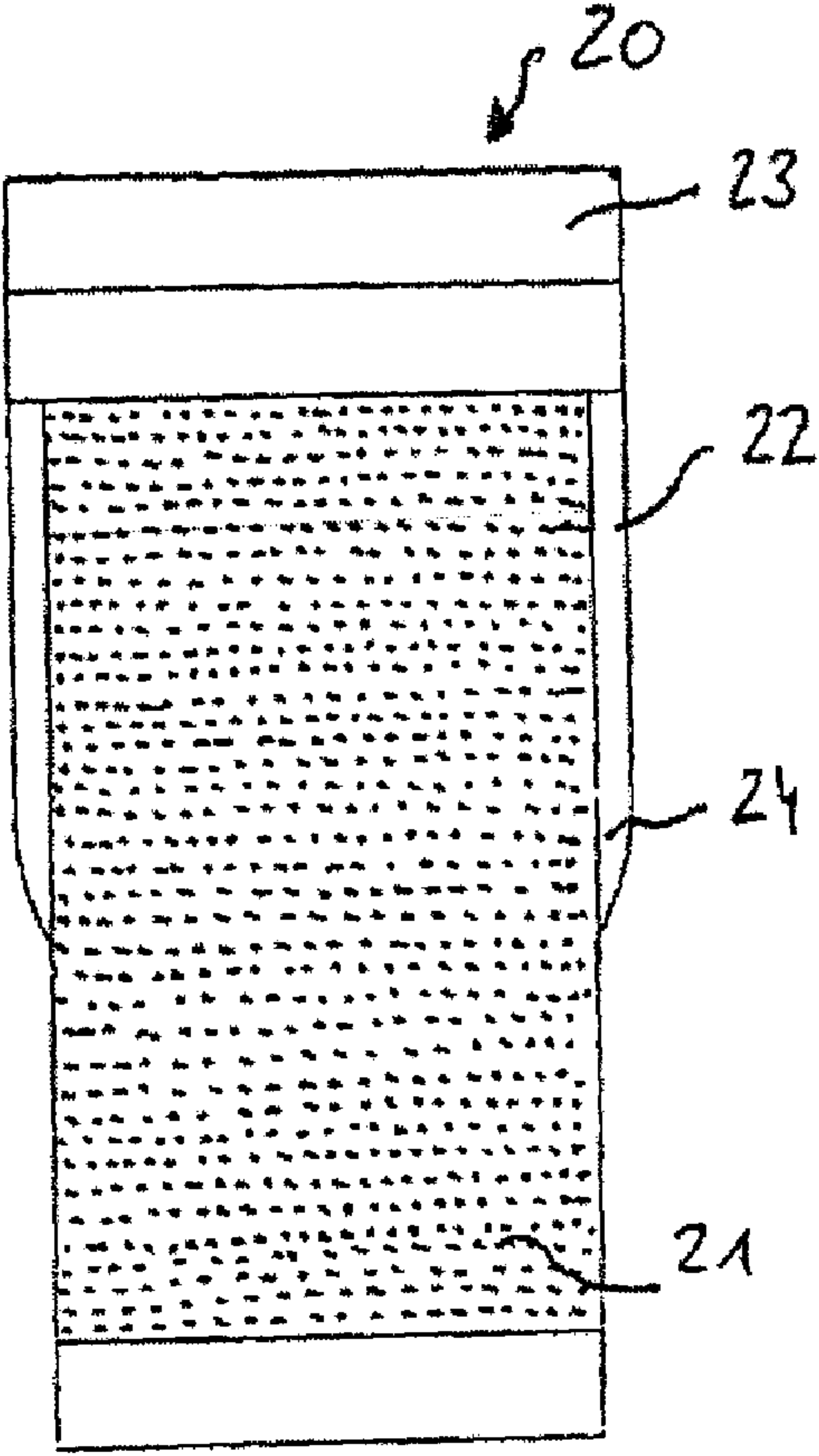


Fig. 7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