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(54) **Smokeless tobacco product**

(57) A smokeless tobacco product (20) comprises a permeable outer pouch (22), which contains a filling (24), and at least one permeable inner pouch (26), which is located in the outer pouch (22) and contains a filling. Preferably, the filling of the inner pouch comprises aroma particles (28). Generally, constituents from the filling of the inner pouch (e.g. flavourants from aroma particles) are released with some delay when the product (20) is used in oral consumption.

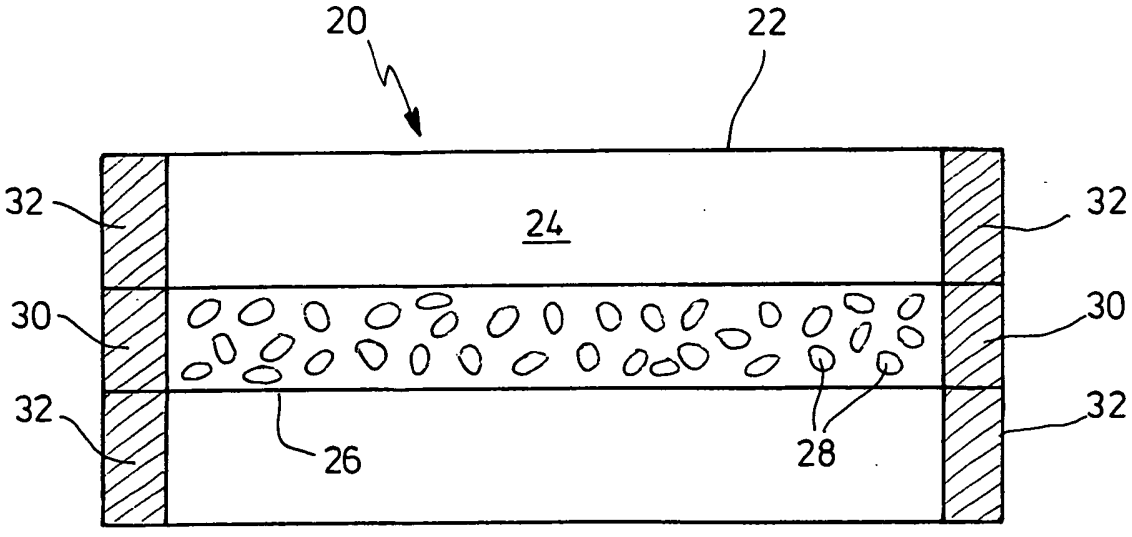

FIG. 2

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Description

[0001] The invention relates to a smokeless tobacco product which can be used like a conventional snus pouch.

[0002] Usually, a snus pouch is made from a permeable sheet material like non-woven viscose and encloses a filling of shredded tobacco particles. Such snus pouch is placed between a consumer's upper lip and gum, whereupon substances contained in the tobacco particles are released under the action of saliva and moisture, migrate through the walls of the pouch and are taken up by the consumer.

[0003] US 2010/0018541 A1 discloses a smokeless tobacco product, which includes a moisture-permeable pouch. The pouch is made from a bottom portion and a top portion, which are sealed along their common edge, e.g. by heat-sealing or the application of a suitable adhesive. A solid tobacco material is disposed within the pouch. A similar product is known from WO 2010/014506 A2.

[0004] A pouched non-tobacco product is known from US 2007/0095356 A1. It comprises a non-tobacco flavourful material enveloped by a liner, which is contained in a pouch having a longitudinal seam and transverse seams. The liner reduces the tendency of the non-tobacco flavourful material to stain the pouch. Moreover, the liner may include flavourants within the liner.

[0005] EP 2 449 894 A1 discloses an oral tobacco product comprising a pouch containing tobacco particles as well as a piece of string which includes a flavourant. The piece of string is disposed inside the pouch. The purpose of this flavour string is to release flavourants at the beginning of use of the pouch to create an initial effect, because the action of the active constituents of the tobacco in the consumer's body is delayed. The object of the invention is to provide a smokeless tobacco product, which can be used like a conventional snus pouch and which creates an additional taste after some time of use.

[0006] This object is achieved by a smokeless tobacco product having the features of claim 1. Advantageous versions of the invention follow from the dependent claims.

[0007] The smokeless tobacco product according to the invention comprises a permeable outer pouch, which contains a filling, and at least one permeable inner pouch, which is located in the outer pouch and contains a filling.

[0008] Preferably, the filling of the outer pouch comprises tobacco particles, e.g. shredded tobacco particles or tobacco particles as included in conventional snus. In addition to the tobacco particles, the filling of the outer pouch can comprise non-tobacco particles. It is conceivable, however, that the filling of the outer pouch does not contain tobacco and/or that the product does not contain tobacco at all.

[0009] When the product is consumed in the usual manner by placing the outer pouch between upper lip and gum, constituents of the filling of the outer pouch are released when the filling gets moist or wet and penetrate the permeable walls of the outer pouch. So far, the product behaves like a conventional smokeless tobacco product or snus article. It takes some time until the moisture in the outer pouch reaches the inner pouch and enters into the inner pouch through the permeable walls thereof. When that happens, ingredients in the filling of the inner pouch will interact with the moisture so that active constituents (e.g., flavourants) are released and migrate through the walls of the inner pouch and of the outer pouch to the consumer. In that way, the consumer will realize the effect (e.g., the aroma or flavour) after some delay, which provides an additional experience.

[0010] Examples for non-tobacco particles in the outer pouch are crushed vanilla husks, coffee powder, corn pistils, shredded herbs, flowers (e.g., lavender flowers) and/or spices as well as blends thereof. Such non-tobacco particles have a characteristic taste. Generally, blends of tobacco particles and non-tobacco particles in smokeless tobacco products are known in the art. Non-tobacco particles of these kinds can also be used if the filling of the outer pouch does not contain tobacco particles.

[0011] Preferably, the total weight of the filling of the outer pouch is in the range of from 0.3 g to 1.3 g or in the range of from 0.5 g to 0.9 g (i.e. tobacco and/or non-tobacco particles, without the inner pouch).

[0012] The filling of the inner pouch can comprise non-tobacco particles, aroma particles and/or tobacco particles. Generally, an inner pouch can be completely or partially filled.

[0013] In advantageous embodiments of the invention, the filling of the inner pouch comprises aroma particles. In the following, aroma particles are considered to be, but are not limited to, spray-dried aromas, freeze-dried aromas, aroma granules or natural hackled herbs/spices or mixtures thereof. Another kind of aroma particles are capsules filled with an aroma and/or an aroma carrier, e.g. mint oil.

[0014] In the following, several possibilities for embodiments of aroma particles in the inner pouch are considered in more detail.

[0015] In advantageous embodiments, the aroma particles comprise aromatic granules (aroma granules, i.e. granules with flavour). Such granules can be based, e.g., on sugars, on maltodextrines or on starchs, and also on other solid carriers suitable for oral consumption. Suitable granules can be produced by means of conventional processes such as extrusion, spray granulation, compression, etc. The material of the granules (carrier material) can be provided with one or more than one aroma (flavourant), e.g. by blending prior to extrusion. The aromas or flavourants can be natural products or synthetic products. The preferred range of sizes of the granules is 0.6 mm to 5 mm, in particular 1 mm to 3 mm, wherein suitable values also depend on the shape of a granule (e.g. spherical, oval, rod-like) and on the overall size of the inner pouch.

[0016] At least part of the aroma particles can comprise

a coating. A coating has the effect of a retarded or delayed release of aroma or flavourants from the coated aroma particles. To this end, the coating should dissolve, decompose or melt when moisture or an elevated temperature reaches the aroma particles so that the aromas can be released afterwards. Suitable coatings can contain, e.g., fats, hardened oils, hydrocolloids, starches, carboxymethyl cellulose or mixtures or blends of such substances. The desired delay may be adjusted, e.g., by the composition and/or the thickness of the coating.

[0017] The aroma particles of the inner pouch may also comprise natural aromatic particles, for example herbs such as mint leaf, eucalyptus, sage, herb blends, coffee powder, granulated forms of coffee powder, liquorice powder, granulated forms of liquorice powder, tea, tea blends, spices such as ginger, clove, etc., or mixtures or blends of such natural aromatic particles.

[0018] Any blends of aromatic granules, coated aromatic granules and/or natural aromatic particles as aroma particles in the inner pouch are conceivable as well.

[0019] Preferably, the total weight of the particles in the inner pouch is in the range of from 0.01 g to 0.9 g or in the range of from 0.03 g to 0.5 g or in the range of from 0.05 g to 0.3 g. The amount of particles, particularly aroma particles, can be adjusted using criteria like intensity of taste, size and density of the aroma particles and available space for the inner pouch.

[0020] The outer pouch can be designed like the pouch of a conventional snus product. Preferably, it comprises a fabric material, e.g. non-woven viscose. Other fabric materials, e.g. woven or non-woven fabrics, with natural or synthetic fibres or with regenerated cellulose other than viscose, and permeable paper materials are conceivable as well. Another possibility for the material of the outer pouch is a perforated film.

[0021] In advantageous embodiments of the invention, the outer pouch is designed as a tube with sealed end sides. Here and in the following, the term "tube" is used for a shape having a closed circumferential line, like a hose or a flattened hose. At both end sides, the tube is closed. Preferably, the outer pouch comprises a tube made of fabric sheet material closed (in circumferential direction) by at least one longitudinal seam and having two end sides sealed by a transverse seam each. For example, the outer pouch can be made by folding a single layer of sheet material about a centre line to form a double layer, and later the edges of the double layer are sealed together, the seam opposite to the fold line being the longitudinal seam. It is also possible to start with two single sheets placed on top of each other, which are connected at two longitudinal seams and at the transverse seams. Or a tube having a longitudinal seam like a conventional cigarette paper wrapper is flattened and closed at both end sides.

[0022] The design of the product will become more evident by means of the description of embodiments further below. Generally, the outer pouch can be manufactured like the pouch of a conventional snus product, and its dimensions can also be the same as or similar to the dimensions of the pouch of a conventional snus product. The outer pouch is finally closed after the filling and the inner pouch (or the inner pouches) have been put into the outer pouch.

[0023] The inner pouch can be made from the same materials as discussed with respect to the outer pouch. Moreover, the inner pouch can be designed in the same way or in a similar way as the outer pouch.

[0024] The outer pouch can have typical dimensions of conventional snus pouches, e.g., in the range of from 32 mm to 38 mm in length and 12 mm to 15 mm in width for a small snus pouch and of from 32 mm to 38 mm in length and up to 25 mm in width for a large snus pouch.

[0025] The inner pouch is smaller than the outer pouch and can have dimensions, e.g., in the range of from 8 mm to 38 mm in length and 5 mm to 13 mm in width for a small snus pouch and of from 8 mm to 38 mm in length and 5 mm to 23 mm in width for a large snus pouch.

[0026] If more than one inner pouch is used, the inner pouches can be designed in the same way or in different ways. Moreover, the material and the design of the inner pouch may influence the delay period until the consumer realizes the active constituents from the particles (e.g., flavourants from the aroma particles) contained in the inner pouch.

[0027] The inner pouch can be moveable within the outer pouch. In this case, a free motion of the inner pouch is only impeded by the filling in the outer pouch.

[0028] In other embodiments of the invention, the inner pouch is fixed to the outer pouch. For example, both the outer pouch and the inner pouch can be designed as a tube with sealed end sides, as described before, wherein the respective end sides of the outer pouch and the inner pouch are aligned to each other and sealed by common transverse seams. That means, the inner pouch and the outer pouch have about the same length (measured in parallel to the longitudinal seams) so that the transverse seams of the inner pouch overlap with the transverse seams of outer pouch. In this way, e.g., the transverse seams of both the inner pouch and the outer pouch can be bonded in one step. Moreover, the inner pouch is fixed in the outer pouch via the transverse seams.

[0029] The position of the inner pouch in the outer pouch may influence the temporal development of the taste the consumer of the product experiences. If the position is closer to an edge of the outer pouch, the path of the flavourants through the filling of the outer pouch is shorter, which might result in a faster experience, compared to a position of the inner pouch closer to a centre line of the outer pouch.

[0030] It is also conceivable that at least one inner pouch comprises more than one compartment, e.g. compartments separated by a welded or glued seam. The compartments of that inner pouch (or at least two of the compartments in case there are more than two) can comprise the same kind of filling. Alternatively, all fillings of that inner pouch can be different. Similarly, the outer

pouch can comprise more than one compartment, e.g. compartments separated by a welded or glued seam. Each compartment of the outer pouch may contain no inner pouch, one inner pouch, or more than one inner pouch. Moreover, the compartments of the outer pouch (or at least two of the compartments in case there are more than two) can comprise the same kind of filling. Alternatively, all fillings of the compartments of the outer pouch may be different. The application of compartments may influence the taste of the product and its temporal development.

[0031] A further possibility is aroma applied to the inner pouch and/or the outer pouch, e.g. to the pouch material.

[0032] In summary, it follows that the taste and the temporal development of the taste of the smokeless tobacco product according to the invention can be designed and determined in multiple ways.

[0033] In the following, the invention is further described by means of embodiments. The drawings show in

Figure 1 a schematic top view onto a first embodiment of the smokeless tobacco product according to the invention and

Figure 2 a schematic top view onto a second embodiment of the smokeless tobacco product according to the invention.

[0034] Figure 1 illustrates a first embodiment of the smokeless tobacco product, which is designated by reference numeral 1.

[0035] The smokeless tobacco product 1 comprises an outer pouch 2, which contains a filling 4. In the embodiment, the outer pouch 2 is made from non-woven viscose material, and the filling comprises cut tobacco particles. So far, the smokeless tobacco product 1 corresponds to a conventional snus product for oral consumption.

[0036] Inside the outer pouch 2, there are two inner pouches 6 and 7, which are filled with aromatic granules 8 and herbs 9, which serve as aroma particles. The inner pouches 6 and 7 are also made from non-woven viscose.

[0037] The outer pouch 2 is manufactured from a single layer of viscose material, which is folded about a fold line 10, which results in a double layer. This double layer is sealed along a longitudinal seam 12 (hatched) and two transverse seams 14 (at the end sides; hatched) by means of an edible glue or by means of welding.

[0038] The inner pouches 6 and 7 are each made from a tube of non-woven viscose, in which a longitudinal seam (not shown in Figure 1) is designed like the longitudinal seam in a conventional cigarette paper wrapper. At the end sides, the inner pouches 6 and 7 are closed by means of glued or welded transverse seams 16 (hatched).

[0039] The inner pouches 6 and 7 as well as the filling 4 are put into the outer pouch 2 before the outer pouch 2 is finally closed. In principle, the inner pouches 6 and 7 can freely move within the outer pouch 2, but any movement is largely impeded by the filling 4.

[0040] Figure 2 shows another embodiment of the smokeless tobacco product, which is designated by reference numeral 20.

[0041] The smokeless tobacco product 20 comprises an outer pouch 22 containing a filling 24. In this embodiment, the filling 24 consists of a blend of crushed tobacco particles and vanilla husks.

[0042] An inner pouch 26 contains aromatic granules 28 serving as aroma particles, which are coated with a layer of fat.

[0043] In the smokeless tobacco product 20, both the outer pouch 22 and the inner pouch 26 are formed from a flattened tube in which a longitudinal seam is designed like the seam of an ordinary cigarette paper wrapper. Both tubes have about the same length. The inner pouch 26 is placed in the outer pouch 22 along the centre axis of the outer pouch 22. The ends of the inner pouch 26 are closed by means of transverse seam areas 30 (hatched), and the ends of the outer pouch 22 are closed by means of transverse seam areas 32 (hatched) and, again, the transverse seam areas 30. In the embodiment, an edible glue is used for sealing the seam areas 30, 32. Thus, in the transverse seam areas 30, the material of the inner pouch 26 is provided with glue from both sides. In practice, manufacturing does not cause problems because the material of the outer pouch 22 and the inner pouch 26 is permeable and soaks the glue. As before, non-woven viscose is used as the material for the outer pouch 22 and the inner pouch 26. Suitable glues or other sealing techniques than gluing (e.g. melt-bonding, welding) are well known in the art.

[0044] A consumer places the smokeless tobacco product 1 or 20 between the upper lip and the gum. Initially, the smokeless tobacco product behaves like a conventional snus product. After some time, however, when moisture and/or heat have reached the inner pouch, the flavourants in the aroma particles are released and penetrate the walls of the inner pouch and the outer pouch so that they can be perceived by the consumer. In the smokeless tobacco product 20, the granules 28 are coated with fat. The fat melts when warming up in the consumer's mouth so that the flavourants of the granules 28 are released after some delay.

[0045] In other embodiments, which are not shown in the figures, the inner pouch(es) and/or the outer pouch of the smokeless tobacco product are divided into more than one compartment, i.e. by means of transversal seams. The compartments of the inner pouch(es) can contain the same filling or different fillings. Similarly, the compartments of the outer pouch can contain the same filling or different fillings. The compartments provide an additional means for designing the taste of the product and to influence the temporal development of its effect.

[0046] As already indicated further above, there are many different possibilities for aroma particles which can be used with the smokeless tobacco product.

[0047] In the following, some examples for the contents of the outer pouch and the inner pouch are given. In these examples, the smokeless tobacco product comprises one inner pouch.

[0048] In a first example, the outer pouch is filled with 0.5 g of a tobacco blend, e.g. a conventional snus tobacco, and the inner pouch is filled with 0.2 g of strawberry-flavoured granulate, wherein the granules are based on a maltodextrine.

[0049] In a second example, the outer pouch is filled with 0.5 g of a tobacco blend plus 0.2 g of mint leaf, and the inner pouch is filled with 0.2 g of mint-flavoured granules.

[0050] In a third example, the outer pouch is filled with 0.6 g of a tobacco blend, and the inner pouch is filled with 0.3 g of a mix of spices (salt/pepper/rosemary).

[0051] In a fourth example, the outer pouch is filled with 0.5 g of a tobacco blend plus 0.15 g of granulated coffee, and the inner pouch is filled with 0.3 g of microcapsules or capsules filled with water, as known in the art. A water-soluble flavourant can be added to the water, but a filling with plain water is conceivable as well. In the latter case, the water can serve to moisture the contents of the outer pouch when the shells of the capsules are broken.

Claims

1. Smokeless tobacco product, comprising

   - a permeable outer pouch (2; 22), which contains a filling (4; 24), and
   - at least one permeable inner pouch (6, 7; 26), which is located in the outer pouch (2; 22) and contains a filling (8, 9; 28).

2. Smokeless tobacco product according to claim 1, **characterised in that** the filling (4; 24) of the outer pouch (2; 22) comprises tobacco particles.

3. Smokeless tobacco product according to claim 1 or 2, **characterised in that** the filling (24) of the outer pouch (22) comprises non-tobacco particles.

4. Smokeless tobacco product according to claim 3, **characterised in that** the non-tobacco particles comprise particles selected from the following list: crushed vanilla husks, coffee powder, corn pistils, shredded herbs, flowers, spices, blends thereof.

5. Smokeless tobacco product according to anyone of claims 1 to 4, **characterised in that** the filling (8, 9; 28) of the inner pouch (6, 7; 26) comprises particles selected from the following list: non-tobacco particles, aroma particles, tobacco particles.

6. Smokeless tobacco product according to anyone of claims 1 to 5, **characterised in that** the filling (8, 9; 28) of the inner pouch (6, 7; 26) comprises aroma particles (8, 9; 20) which comprise aromatic granules (8; 28), preferably at least one species selected from the following list: granules based on a sugar, granules based on a maltodextrine, granules based on starch, granules based on a flavoured carrier, granules based on a carrier containing natural flavour.

7. Smokeless tobacco product according to claim 6, **characterised in that** at least part of the aroma particles (28) comprises a coating, wherein the coating preferably contains at least one of the substances selected from the following list: fats, hardened oils, hydrocolloids, starch, carboxymethyl cellulose.

8. Smokeless tobacco product according to anyone of claims 1 to 7, **characterised in that** the filling (8, 9) of the inner pouch (6, 7) comprises aroma particles (8, 9) which comprise natural aromatic particles (9), preferably at least one species selected from the following list: herbs (9), mint leaf, eucalyptus, sage, herb blends, coffee powder, granulated coffee powder, liquorice powder, granulated liquorice powder, tea, tea blends, spices, ginger, clove, mixtures of natural aromatic particles, blends of natural aromatic particles.

9. Smokeless tobacco product according to anyone of claims 1 to 8, **characterised in that** the outer pouch (2; 22) comprises a fabric material, preferably non-woven viscose.

10. Smokeless tobacco product according to anyone of claims 1 to 9, **characterised in that** the outer pouch (2; 22) is designed as a tube with sealed end sides.

11. Smokeless tobacco product according to claim 10, **characterised in that** the outer pouch (2; 22) comprises a tube made of fabric sheet material closed by at least one longitudinal seam (12) and having two end sides sealed by a transverse seam each (14; 30, 32).

12. Smokeless tobacco product according to anyone of claims 1 to 11, **characterised in that** the inner pouch (6, 7; 26) comprises a fabric material, preferably non-woven viscose.

13. Smokeless tobacco product according to anyone of claims 1 to 12, **characterised in that** the inner pouch (6, 7; 26) is designed as a tube with sealed end sides.

14. Smokeless tobacco product according to claim 13, **characterised in that** the inner pouch (6, 7; 26) comprises a tube made of fabric sheet material closed by at least one longitudinal seam and having two end sides sealed by a transverse seam (16; 30) each.

15. Smokeless tobacco product according to anyone of claims 1 to 14, **characterised in that** the inner pouch (6, 7) is moveable within the outer pouch (2).

16. Smokeless tobacco product according to anyone of claims 1 to 14, **characterised in that** the inner pouch (26) is fixed to the outer pouch (22).

17. Smokeless tobacco product according to claim 16, **characterised in that** both the outer pouch (22) and the inner pouch (26) are designed as a tube with sealed end sides, wherein the respective end sides of the outer pouch (22) and the inner pouch (26) are aligned to each other and sealed by common transverse seams (30, 32).

18. Smokeless tobacco product according to anyone of claims 1 to 17, **characterised by** aroma applied to at least one of the following items: inner pouch, outer pouch.

19. Smokeless tobacco product according to anyone of claims 1 to 18, **characterized in that** at least one inner pouch comprises more than one compartment, wherein each compartment of that inner pouch comprises one of the properties included in the following list: filled with the same kind of filling as another compartment of that inner pouch, filled with a different kind of filling compared to the other compartments of that inner pouch.

20. Smokeless tobacco product according to anyone of claims 1 to 19, **characterized in that** the outer pouch comprises more than one compartment, wherein each compartment of the outer pouch comprises one of the properties included in the following list: filled with the same kind of filling as another compartment of the outer pouch, filled with a different kind of filling compared to the other compartments of the outer pouch, containing no inner pouch, containing one inner pouch, containing more than one inner pouch.

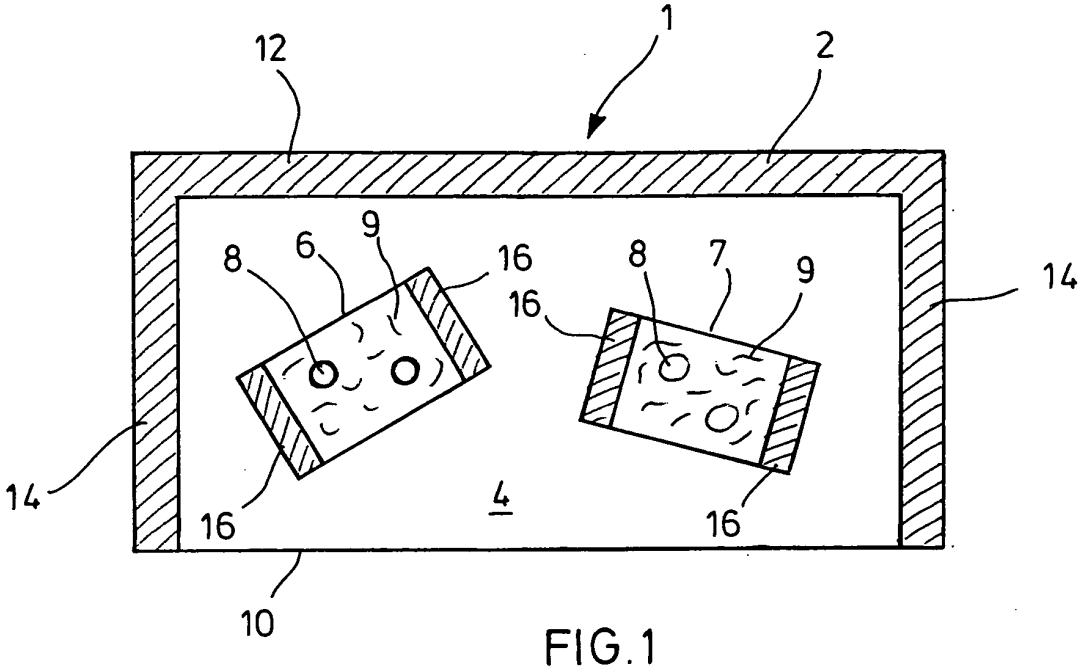

FIG.1

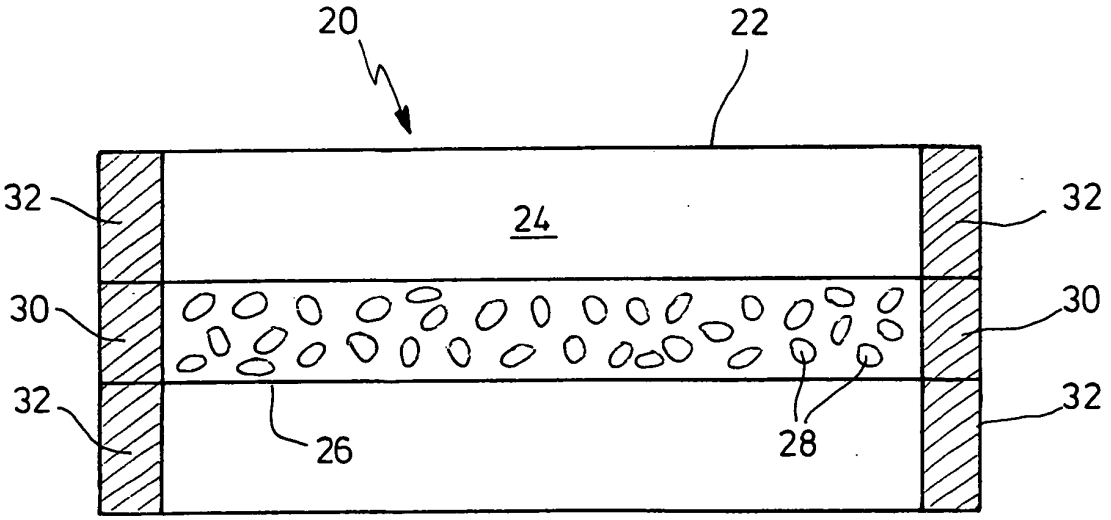

FIG.2

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EUROPEAN SEARCH REPORT

Application Number
EP 12 00 7639

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TECHNICAL FIELDS SEARCHED (IPC)

A24B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	12 April 2013	Kock, Søren

CATEGORY OF CITED DOCUMENTS

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EPO FORM 1503 03.82 (P04C01)

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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