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(71) Applicant *(for all designated States except US)*: **AS-MOPAK B.V.** [NL/NL]; Keizersveld 99, NL-5803 AP Venray (NL).

(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: **VAN HAREN, Melchior, Lambertus, Carolus** [NL/NL]; Roerzicht 8, NL-6041 XX Roermond (NL).

(74) Agents: **DOHMEN, Johannes, Maria, Gerardus** et al.; Algemeen Octrooi- en Merkenbureau, P.O. Box 645, NL-5600 AP Eindhoven (NL).

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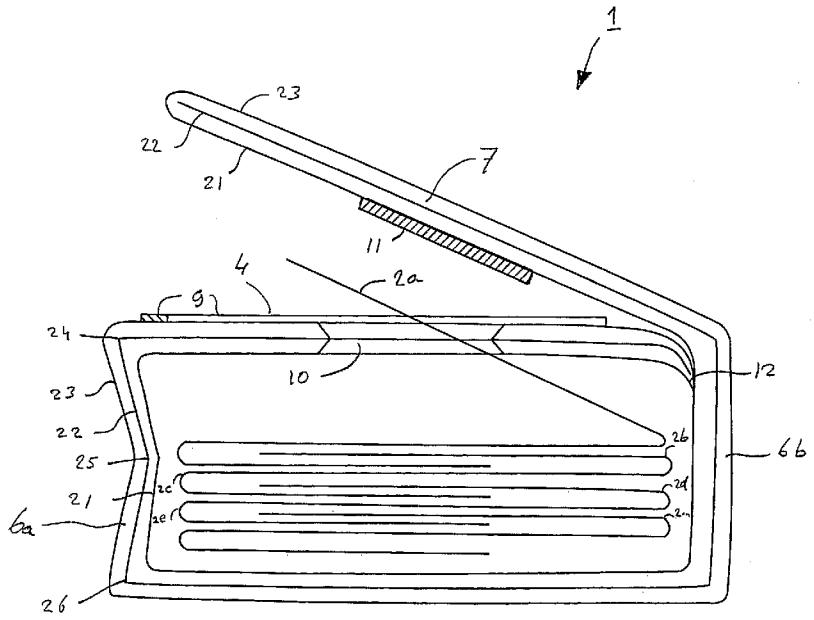
(54) **Title:** PACKAGE FOR MOIST TISSUES



(57) **Abstract:** The invention relates to a package (1) for moist tissues (2) , such as baby tissues or refreshing tissues, comprising a liquid-tight bag (3) sealed all around, which is provided with a dispensing opening (10) and closure means (7) for repeatable closure of the dispensing opening, wherein said bag is built up of a material suitable for carrying information and wherein the layers (21, 22, 23) at least partially overlie each other substantially freely.

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Package for moist tissues.

DESCRIPTION

The present invention relates to a package for moist tissues, comprising a liquid-tight bag sealed all around, which is provided with a dispensing opening and closure means for repeatable closure of the dispensing opening, said bag being built up of at least one liquid-tight first layer and a second layer of a material suitable for carrying information.

French patent application FR 2 803 579 describes a bag for conditioning wet tissues, for example, which tissues, folded into an interleaved stack, are contained in said bag. The bag is made of a single film comprising a number of layers, with an inner layer of polyethylene, an intermediate barrier layer of aluminium and an outer layer of PVC, PP or PET capable of being printed.

A drawback of the known package becomes apparent upon manufacture thereof. There are essentially two principles for providing information on the printable outer layer of the package. The information may be provided when the package is being filled, when it is known what information is to be provided on the second layer. The advantage of this is that it is not necessary to order and keep a separate stock of pre-printed material for each product-brand combination to be packaged. Such a method renders the production process complex, however, since measures need to be taken when printing the package to prevent the moisture from the moist tissues adversely affecting the process of providing information, usually by printing. Moreover, the printing capacity will be limited by the maximum production rate of the packaging process, or conversely, which has an adverse effect on the efficiency of either one of the processes. Alternatively, the information may be provided in advance on a roll comprising a film of packaging material, so that packages can be formed of said film and subsequently be filled. The film can be folded around the moist tissues, as it were, and thus be formed into a package. A drawback of this method is that it is necessary to purchase and keep a stock of preprinted packaging film for every imprint that may be used, with the attendant risk of said stock becoming obsolete.

It is therefore an object of the present invention to provide a package as referred to in the introductory paragraph, which provides a solution to at least some of the aforesaid problems and wherein relatively low stock-keeping costs

can be combined with a relatively simple production process. This object is achieved by the present invention in that the layers at least partially overlie each other substantially freely. What is meant by this is that the layers may be interconnected, to be true, for example at the edges, but that a medium, such as air, may be present between the two layers. This makes it easy to compose the package of the individual first and second layers upon production thereof. The liquid-tight layer may be a uniform layer, which can be used for different packages, whilst the second product-specific layer can be supplied in dependence on a product to be packaged. Thus it is only necessary to keep a product-specific stock of layers of material suitable for carrying information, which are of course cheaper than the composite film of packaging material of the known package. When the second layer is processed into the package, said second layer is thus provided with information already and in fact it is a layer of information-carrying material. By providing the two required properties of liquid-tightness and information-carrying capacity in the form of two separate layers of different materials, it is possible to manufacture and/or order the information-carrying material at comparatively low cost and in comparatively small amounts. In addition, this makes it possible to have relatively small amounts of packaging material manufactured, for example for private labels or for one-off campaigns, by changing only the information-carrying layer. Changes are frequently made to the package of moist tissues, for example when the composition of the moist tissues has been changed and the specification of (harmful) substances on the package must be adapted. When the liquid-tight material must be ordered in large quantities, this does not have to be a problem, since the liquid-tight material is a neutral material, which can thus be used for other packages.

Furthermore, packages are known in the form of a sealed bag of a flexible plastic for baby tissues. The package in question envelopes a stack of baby tissues, and comprises a hole that is recessed in the upper side thereof, i.e. near the top of the stack of baby tissues, through which baby tissues can be removed one by one from the package. A sticker is provided over the recess, which sticker adheres to the material of the liquid-tight bag, by means of an adhesive suitable for repeatable detachment and re-attachment of the sticker to the package. Providing it is correctly re-attached, the sticker seals the package liquid-tight again after a tissue has been removed. The plastic bag is provided with a print containing product information and marks intended to boost the sales of the product. A drawback of this

package, and also of the package according to FR 2 803 579, is that the printed plastic for forming the package must be purchased in relatively large quantities in order to be able to produce such a package at acceptable costs. This means that large stocks must be kept, with the attendant risk that large quantities of packaging material must be destroyed in the case of the package being changed.

Preferably, the first layer is positioned on the inner side of the package relative to the second layer. Thus, the second layer is protected by the first layer against moisture from the moist tissues.

The layer of information-carrying material is preferably printable. Printing is a generally used and relatively inexpensive method, at least when the right carrier material is used. As already stated above, the printable layer is already provided with a print the moment the package is composed.

Furthermore preferably, the printable layer comprises readable information. In this way a consumer can be correctly informed about the product contained in the package. Printing is an effective and relatively inexpensive way of providing information, for example on packaging material.

According to a preferred embodiment of the invention, the package comprises a third layer of a transparent material, in which case the second layer is present between the first and the third layer. The third layer is preferably liquid-tight. The second layer is thus enclosed by liquid-tight layers, which thus protect it against the action of liquid both from inside and from outside.

Furthermore preferably, the first layer is made of plastic material. Plastic is a material which is quite suitable for forming liquid-tight layers, and in addition to that it is available at a commercially attractive price.

The first layer preferably comprises polypropylene (PP). PP has the desired liquid-tight properties and is comparatively inexpensive.

Preferably, at least one of the layers comprises a laminate. This makes it possible to combine different specific properties of different materials in the laminate layer.

In a preferred embodiment, the first layer and the third layer are made of the same material. This minimises the number of different materials to be used.

The second layer preferably comprises paper. Paper is an inexpensive raw material, which is very easy to print at relatively low cost.

In a preferred embodiment of the invention, the second layer comprises a slightly rigid material. The layer of the slightly rigid material gives the package additional strength and shape stability, for example in those cases in which the package must be placed on a shelf with a relatively narrow side of the package. Cardboard, for example, which is a heavy form of paper, is quite suitable for this purpose.

It is furthermore preferable for the slightly rigid material to be provided with fold lines. The fold lines are useful in realising a desired shape of the package or in giving the package additional carrying capacity.

In a preferred embodiment of the invention, the closure means comprise a flap which, at least in the closure position, extends at least to beyond the dispensing opening on the outer side of the package for repeatable closure of the dispensing opening, with the flap being undetachably attached to the outer side of the bag. Within this context, the term undetachable is understood to mean that the flap cannot be detached from the rest of the package during normal use, for example when the dispensing opening is cleared by pulling the flap off. If excessive forces were to exerted on the flap and/or the rest of the package, however, the flap might come loose after all, of course. This aspect may be applied separately, i.e. apart from the principle idea of the present invention, and provides a solution to the problem of known packages that the loose sticker becomes entirely detached from the package upon removal of a moist tissue and must therefore be held or be stuck to another part of the package or to another object temporarily. The first situation restricts the user's possibilities of using his or her hands for other activities, for example wiping a baby's bottom. In the second situation, there is a risk of the sticker being stuck to a dusty surface, causing dust to adhere to the sticker, which in turn causes the adhesive properties of the sticker to deteriorate. As a result, the sticker will close the dispensing opening increasingly less well. Furthermore, with the known package the moisture from the moist tissues and/or dust affect(s) the inner side of the sticker via the dispensing opening, at least in the sealed condition of the package. This effect is enhanced in that in practice the sticker is placed over the dispensing opening in a different position each time, as a result of which a relatively large part of the adhesive area of the sticker is affected by the moisture from the tissues and/or dust. By adhering the flap undetachably to the package, the flap can simply be let go of upon removal of tissues, with the joint functioning as an

orientation means for the flap upon closure of the dispensing opening by means of the flap, so that the flap will be placed over the dispensing opening at more or less the same position each time. This reduces the risk of the adhesive layer being affected or fouled.

In a preferred embodiment of the invention, the flap is attached to or near a side edge of the bag and extends to near an opposite edge. Because of this, adhesives, generally glue, for example in the form of a hot melt, can be present at a relatively large distance from the dispensing opening, thereby minimising the risk of the closure means being affected by the moisture.

In a preferred embodiment of the invention, the flap is provided at or near a circumferential edge thereof with an adhesive layer of an adhesive that is suitable for repeatable closure and reclosure of the dispensing opening. The adhesive layer may also be applied to the upper surface of the package, of course, at the location where the flap will come into contact with said upper surface upon being closed. The connection between the flap and the rest of the package will each time be effected in substantially the same position of the flap in that case. An adhesive layer for repeatable closure and reclosure is very suitable for use with such a package, because repeatable closure and reclosure of the dispensing opening is an aspect that is inherent to packages for moist tissues.

Preferably, the package comprises a security element which seals the dispensing opening and which cannot be placed back sealingly after being opened. Such an element is also referred to as a "tamper evidence" closure. It tells a person who buys a package that the package has not been opened yet or, on the contrary, that it has actually been opened prior to the purchase of the product. The latter situation is an indication to a potential buyer to take another package that has not been opened yet.

In a preferred embodiment of the invention, the security element is attached to the flap, so that the flap automatically removes the security element from the dispensing opening as soon as the flap is opened for the first time. In this way the security element is removed automatically when the flap is opened for first use.

Furthermore it is preferable that the moist tissues are folded to form an interleaved stack in the package. In this way a substantially flat surface is realised, which enables easy stacking of the packages.

In a preferred embodiment of the invention, the tissues are folded and interleaved in such a manner that as one tissue is removed, a next tissue is pulled partially out of the box. Many variations of folding patterns are known for achieving this, in particular for use in non-moist tissues. Especially if the flap extends to beyond the dispensing opening, there is no danger that the moist tissue will affect the adhesive layer of the flap. In this way a first part of a tissue is directly presented to the user already upon opening the flap, which facilitates the removal thereof from the package.

The present invention will be explained in more detail below on the basis of a description of an illustrated embodiment of the present invention, in which reference is made to the schematic drawings, which are only shown by way of non-limitative example, and in which:

Figure 1 is a perspective view of a package according to the invention;

Figure 2 is a sectional view of the package along the plane II-II in figure 1; and

Figure 3 shows the package of figure 1 in closed condition, resting on a narrow side thereof.

Referring to figure 1, the figure shows a package 1 for moist tissues 2, comprising a liquid-tight bag 3 sealed all around, with an upper surface 4 that is relatively large in comparison to the lateral surfaces 5a, 5b, 6a and a flap 7 that may extend over substantially the entire upper surface 4. A hot melt 9 is applied to the upper surface 4 of the package 1 as an adhesive, and a dispensing opening 10 for moist tissues 2 is located approximately centrally in said upper surface. Present on the bottom side of the flap 7 is a part 11 of the original package that was originally positioned in the dispensing opening 10.

Now referring to figure 2, a sectional view of the package 1 along the plane II-II of figure 1 is shown. The package 1 is built up of an inner layer 21 of polypropylene (PP), an intermediate layer 22 of paper/cardboard and an outer layer 23 of PP. The outer edges of the PP layers are sealed together, so that the intermediate layer 22 of paper is present within a PP envelope. The paper is provided with a number of fold lines 24, 25, 26 near the side edge 6a. The flap 7 is connected to the rest of the package at 12. Present inside the package 1 is a stack of folded tissues 2a, 2b, 2c, 2d, ..., the uppermost tissue 2a of which projects

outwards from the dispensing opening 10. In the figure, the hot melt 9 is shown to be present on the upper surface 4, and the part 11 of the original package 1 that was originally present at the location of the dispensing opening 10 is present on the underside of the flap 7.

Referring to figure 3, the package 1 of figures 1 and 2 is shown, with the package 1 resting on its lateral surface 6a. As the figure shows, the flap 7 is folded over the upper surface 4 of the liquid-tight bag 3 and adheres thereto as a result of the presence of the hot melt (9 in figures 1, 2). The imprint on the intermediate paper layer 22 (see figure 2) is clearly visible through the transparent plastic outer layer 23 (see figure 2).

The package 1 for moist tissues 2 that is shown in the figures is made up of three layers 21, 22, 23. The intermediate layer 22 of printed paper is enclosed in the form of a pre-formed sheet by a PP cover sealed all around, which cover is made up of the inner layer 21 and the outer layer 23. Fold lines 24, 25, 26 are provided in the paper in the form of perforations (not shown) or, alternatively, in the form of scores. The fold lines 24, 25, 26, in combination with the rigidity of paper / cardboard, give the package 1 a certain degree of strength and shape-stability. The fold lines 24, 25, 26 are also important in order to be able to place the package on its lateral surface 6a, as is shown in figure 3. This enables a producer to utilise a relatively large area for presenting information, for example for stimulating sales in a shelf on which the packages are placed on their lateral surface 6a.

When a user has purchased a package 1 according to this embodiment and is about to use it, an advantage of the relatively long flap 7 becomes manifest. Since the flap 7 is fixedly connected to the rest of the package by means of a sealed joint 12, the sealed joint 12 in fact also functions as a means of orientation for the flap 7. When the package 1 is to be reclosed after a moist tissue 2a has been removed, the flap 7 orients itself by said joint 12, in such a manner that it will be positioned at substantially the same location on the upper surface 4 each time. As in addition to that the hot melt 9 is located at a relatively large distance from the dispensing opening 10, there is hardly any risk, if at all, of moisture from the tissues 2, in particular the tissue 2a that projects from the dispensing opening 10, affecting the adhesive layer 9. In addition, this enables the producer to stack the moist tissues 2a, 2b, 2c, ... in such a manner that as one tissue (tissue 2a in this case) is removed, a next tissue (tissue 2b in this case) is

pulled along partially through the dispensing opening 10, and that once the tissue 2a has been removed in its entirety, a small part of the tissue 2b presents itself for easy removal through the dispensing opening. This is not possible with the prior art package, because a tissue 2a that projects from the dispensing opening 10 may affect the adhesive layer of the figure 4, and if a large part of the tissue projects from the dispensing opening, there is even a risk of the sticker being adhered over the dispensing opening.

The package 1 may be formed by enveloping the paper layer 22 provided with a recess for the dispensing opening in the PP layers 21, 23. Then the edges of the PP layers 21, 23 are sealed together and a perforation line is formed in the PP at the location of the recess in the paper, around which furthermore a sealing edge is provided for sealing the layers 21 and 23 together at the dispensing opening 10. Then the sheet consisting of the three layers 21, 22, 23 is folded into the shape required for forming the package 1, with an end located at a short side of the sheet being folded back in the direction of the end located at the opposite short side of the sheet to a point located at approximately 2/3 of the distance between said end and the opposite end. The side edges overlying each other are subsequently sealed together, after which the moist tissues 2 are slid into the package 1 through the opening at the flap 7. Then the opening in question is sealed as well. Following that, an adhesive 9 is applied to the upper surface 4 of the package in a U-shaped line, which U-shaped line extends to near the flap 7. Finally, the flap 7 is placed on the upper surface 4 of the package 1 and closed by means of the adhesive 9, and the flap 7 is attached to the part 11 defined by the perforations of the upper surface 4 of the package 1 by means of a permanent adhesive (not shown), so that said part will come off when the flap 7 is pulled from the dispensing opening for the first time.

Using such a package 1 and a method for manufacturing the same, it will be easy to change over to the production of a package provided with a different imprint, to which end only the sheets for the intermediate layer 22 to be introduced need to be substituted for sheets carrying a different imprint. In this way the cost of resetting a machine during the manufacture of the package will be very low.

It will be apparent that the above embodiments are only meant by way of illustration of the present invention, and that they must not be construed in any way as limiting the scope of the present invention, which is defined by the

appended claims. Thus it is possible to choose materials other than paper enclosed by PP.

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CLAIMS

1. A package for moist tissues, comprising a liquid-tight bag sealed all around, which is provided with a dispensing opening and closure means for repeatable closure of the dispensing opening, said bag being built up of at least one liquid-tight first layer and a second layer of a material suitable for carrying information, characterised in that the layers at least partially overlie each other substantially freely.

2. A package according to claim 1, characterised in that the first layer is positioned on the inner side of the package relative to the second layer.

3. A package according to claim 1 or 2, characterised in that the layer of information-carrying material is printable.

4. A package according to claim 3, characterised in that the printable layer comprises readable information.

5. A package according to any one of the claims 1-4, characterised in that the package comprises a third layer of a transparent material, with the second layer being present between the first and the further layer.

6. A package according to any one of the claims 1-5, characterised in that the first layer is made of plastic material.

7. A package according to claim , characterised in that the first layer comprises polypropylene.

8. A package according to any one or more of the preceding claims, characterised in that at least one of the layers comprises a laminate.

9. A package according to any one of the claims 5-8, characterised in that the first layer and the third layer are made of the same material.

10. A package according to any one or more of the preceding claims, characterised in that the second layer comprises paper.

11. A package according to any one or more of the preceding claims, characterised in that the second layer comprises a slightly rigid material.

12. A package according to claim 11, characterised in that said slightly rigid material is provided with fold lines.

13. A package according to any one or more of the preceding claims, characterised in that the closure means comprise a flap which, at least in the closure position, extends at least to beyond the dispensing opening on the outer side of the

package for repeatable closure of the dispensing opening, with the flap being undetachably attached to the outer side of the bag.

14. A package according to claim 13, characterised in that the flap is attached to or near a side edge of the bag and extends to near an opposite edge.

15. A package according to either one of the claims 13 or 14, characterised in that the flap is provided at or near a circumferential edge thereof with an adhesive layer of an adhesive that is suitable for repeatable closure and reclosure of the dispensing opening.

16. A package according to any one or more of the preceding claims, characterised in that the package comprises a security element which seals the dispensing opening and which cannot be placed back sealingly after being opened.

17. A package according to claim 16, characterised in that the security element is attached to the flap, so that the flap automatically removes the security element from the dispensing opening as soon as the flap is opened for the first time.

18. A package according to any one or more of the preceding claims, characterised in that the moist tissues are folded to form an interleaved stack in the package.

19. A package according to claim 18, characterised in that the tissues are folded and interleaved in such a manner that as one tissue is removed, a next tissue is pulled partially out of the box.

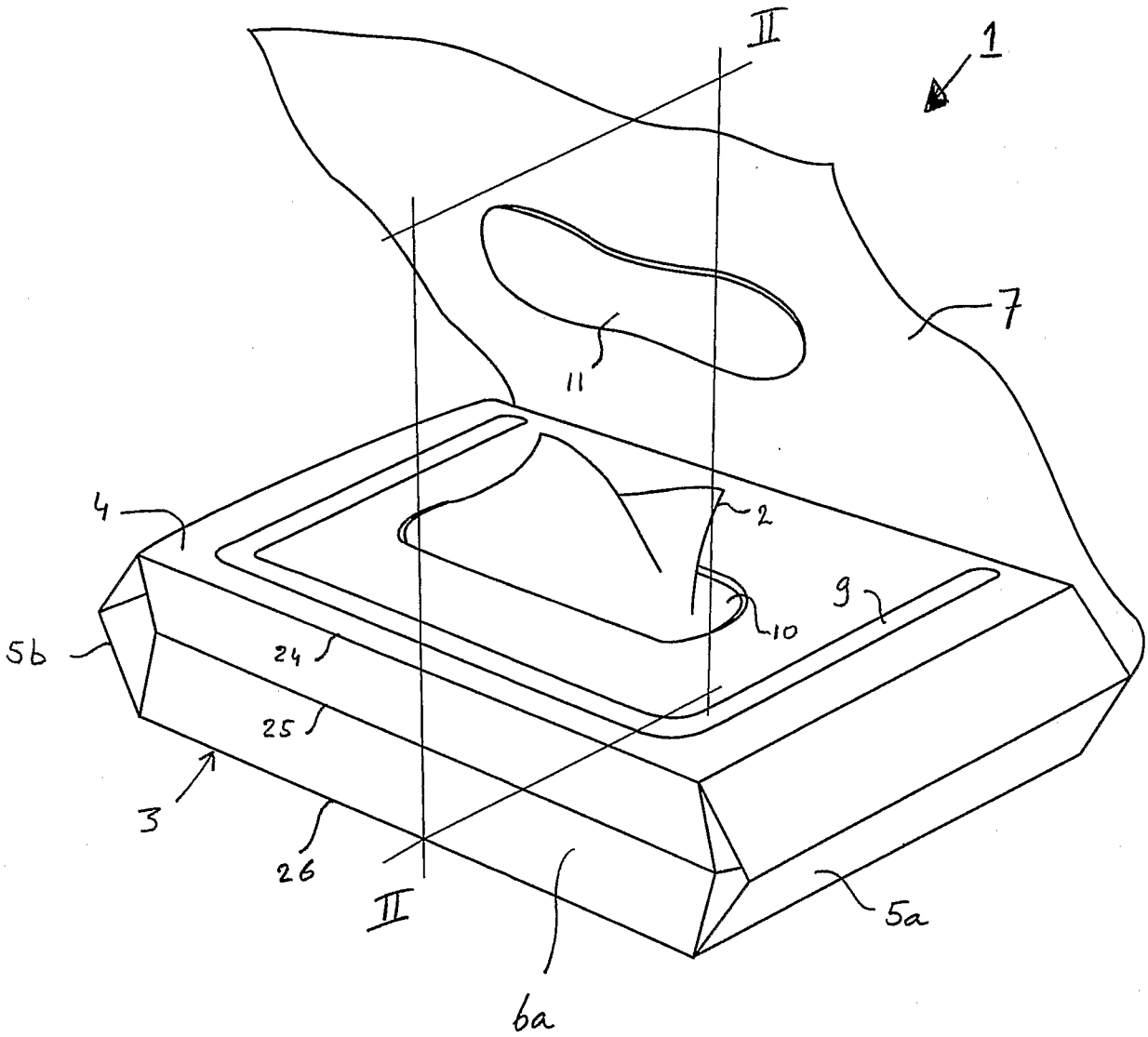

Fig. 1

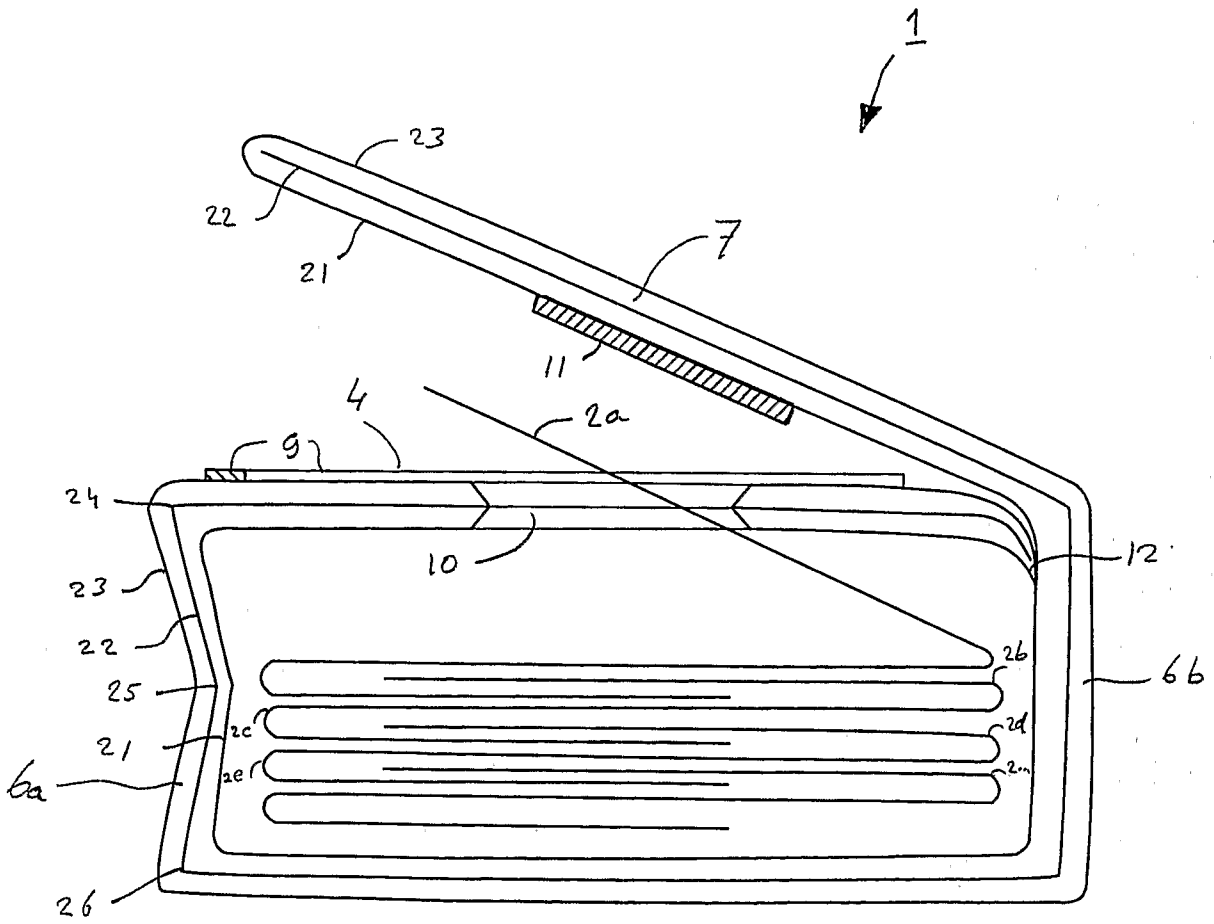

Fig. 2

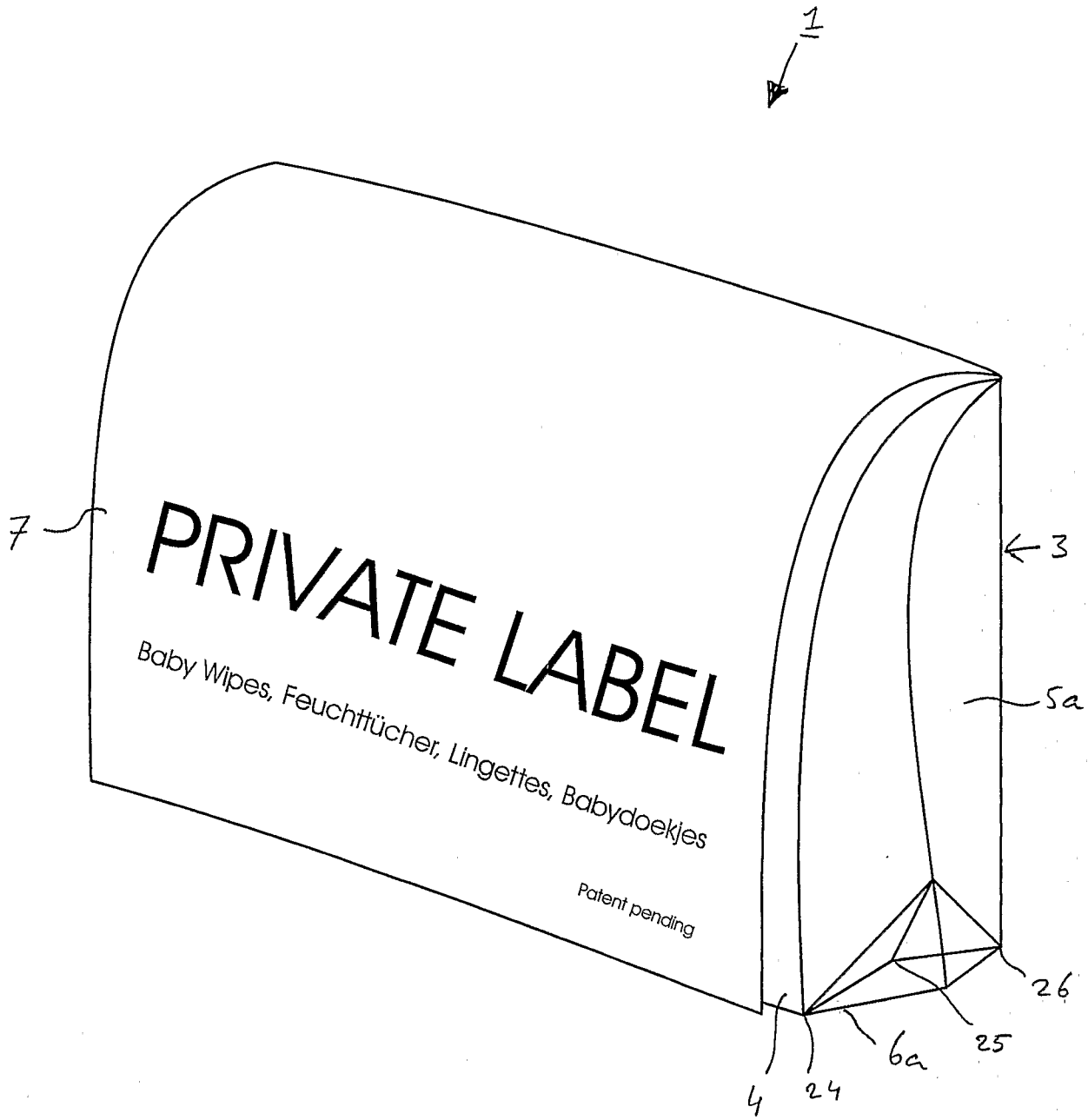
1
7
PRIVATE LABEL
Baby Wipes, Feuchttücher, Lingettes, Babydoekjes
Patent pending
3
5a
26
25
6a
24
4

Fig. 3

INTERNATIONAL SEARCH REPORT

International application No
PCT/NL2006/000379

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65D75/58

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D

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

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	US 6 126 009 A (SHIFFLER BENJAMIN N [US] ET AL) 3 October 2000 (2000-10-03) the whole document	18,19

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 October 2006	07/11/2006

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INTERNATIONAL SEARCH REPORT

International application No
PCT/NL2006/000379

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/NL2006/000379

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