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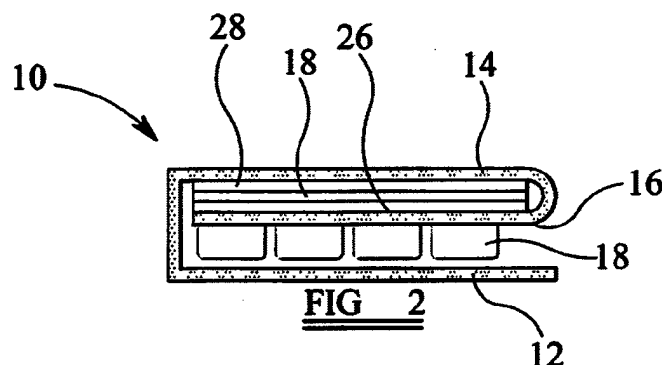
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(54) **Medicine packs**

(57) A folio (32) for a medication pack (30) for retaining a blister sheet (18); the folio (32) comprising in an open position; first (36) and second (38) adjacent leaves and a third leaf (40); the first leaf (36) having apertures (44) therein for receiving blisters of the blister sheet (18); the second leaf (38) having apertures (44) therein covered by a sheet material (50), the sheet ma-

terial having an adhesive layer thereon, whereby when the folio (32) is in a closed position with a blister sheet (18) in place, the adhesive layer seals the sheet material (50) to the blister sheet (18) and adheres the first (36) and second (38) leaves to one another with the apertures (44) of the first and second leaves (36 & 38) corresponding.



Description

[0001] The present invention relates to medicine packs.

[0002] Medicines are available in a variety of forms including, tablets and capsules. Tablets and capsules are traditionally packaged in bottles or containers, although the use of blister packs is now also commonplace. The advantages of blister packs over traditional bottles or containers include; maintaining the sterility of the medication; easy visual determination of the number of doses consumed and the number of doses remaining; and the ability to provide information on the blister pack regarding the medication itself and the time or day that the medication is to be taken by the patient.

[0003] Prior art blister packs have a front that is manufactured from a plastics material which has a number of raised blisters formed thereon for retaining individual doses of medication. The back of the blister pack is manufactured of a metal foil enabling the medication to be punched through the foil by applying finger pressure to the blister from the front. The back of the blister pack has the expiry date and the manufacturer's batch number printed thereon.

[0004] Some blister packs, known as calendar packs have information regarding the day on which the medication is to be taken printed on the back. Calendar packs may also have indicators (e.g. arrows) printed on the back to assist the patient in taking the correct dose on the correct day. The day indicator is also helpful in remembering whether the medication has in fact been taken on any particular day.

[0005] Even with the provision of day and other indicators on the back of the blister pack, some patients, especially the old, seriously ill, disabled or mentally ill, find it difficult to keep to a strict medication regime. For example, the elderly may have difficulty in reading the back of a calendar pack or may experience difficulty punching individual doses of medication through the foil backing owing to the small size of the blisters.

[0006] This situation is worsened when there are a number of different medicines to be taken at different times of day and where the pharmacist dispenses "generic" medicines that have different packaging to previously taken equivalent medicines.

[0007] To address some of the above problems, daily, weekly or monthly home medication packs are now available. A home medication pack is a self-assembly blister pack. The pharmacist places individual doses of medication into open blisters of a pre-formed blister sheet before sealing the doses inside the blisters using an adhesive backing foil. The blisters of a home medication pack are larger than those of a normal blister pack, so that more than one dose of medication can be put into each blister. Thus, a made-up home medication pack may have an array of blisters corresponding with days, times or weeks, with each blister containing the correct medication for the correct time for each day.

[0008] Home medication packs have been used successfully for training patients to stick to a complex medication regime. They also provide a convenient reference that carers can use to monitor or advise the patient regarding their compliance.

[0009] Some home medication packs come in a foldable format for protecting the blister pack and for providing additional areas for displaying information (e.g. pharmacy labels) regarding the medication.

[0010] Figure 1 of the drawings shows such a pack 10 comprising three leaves 12, 14 and 16, two of which 12 and 14 retain the blister pack 18 and the third 16 provides a protective cover. The first leaf 12 has areas 20 for affixing pharmacy labels 22. The third leaf 18 has apertures 24 therein to receive the blisters of the blister pack. The back of the third leaf 16 is has self-adhesive layer 26 thereon which is selectively exposable by peeling off a peel-away sheet (not shown). The back of the second leaf 14 has apertures 27 therein which are covered by a foil sheet 28, which is self-adhesive.

[0011] To use the home medication pack 10, the peel away sheet is removed from the back of the third leaf 16 and the blister sheet 18 is stuck thereto. The pharmacist then fills each blister with the correct medications for each time of each day and folds the second leaf 14 over the third leaf as denoted by arrow A.

[0012] Figure 2 shows the assembled home medication pack 10 from above. The blister sheet 18 is sandwiched between the foil 28 and the third leaf 16 thereby retaining the medication doses in the blisters of the blister sheet 18.

[0013] It is difficult to align the blisters of the blister sheet 18 with the apertures of the third leaf 16 without accidentally sticking the blister sheet 18 in the wrong place. This can be frustrating and costly.

[0014] Additionally, it is difficult for the pharmacist to put the medication doses in the correct blisters, because the day and time information corresponding with each blister pack is printed on the side of the pack that is not visible at the time. This problem can be frustrating and time consuming to overcome.

[0015] Furthermore, the folding and sticking operation can be awkward, and may sometimes lead to spillage of medication doses resulting in the medication pack having to be re-filled or discarded.

[0016] An object of the invention is to provide an improved medication pack.

[0017] Accordingly, a first aspect of the present invention provides a folio for a medication pack for retaining a blister sheet; the folio comprising in an open position; first and second adjacent leaves and a third leaf; the first leaf having apertures therein for receiving blisters of the blister sheet; the second leaf having apertures therein covered by a sheet material, the sheet material having an adhesive layer thereon, whereby when the folio is in a closed position with a blister sheet in place, the adhesive layer seals the sheet material to the blister sheet and adheres the first and second leaves to one another

with the apertures of the first and second leaves corresponding.

[0018] According to a second aspect of the present invention there is provided a method for assembling a folio for a medication pack for retaining a blister sheet; the folio comprising; first and second adjacent leaves and a third leaf; the first leaf having apertures therein for receiving blisters of the blister sheet; the second leaf having apertures therein covered by a sheet material, the sheet material having an adhesive layer thereon; wherein the method comprises the steps of; inserting the blisters of the blister sheet into the apertures of the first leaf; exposing the adhesive layer of the second leaf; and folding the second leaf on top of the first leaf; so that the adhesive layer seals the sheet material to the blister sheet and adheres the first and second leaves to one another with the apertures of the first and second leaves corresponding.

[0019] Preferably, the folio of the medication pack is manufactured of cardboard. Alternatively, the folio may be manufactured of a plastics material. Additionally, the folio may be laminated to make it more durable and/or water resistant.

[0020] The blister sheet is preferably manufactured of a plastics material. Preferably, the blisters are vacuum formed although injection-moulding techniques may be employed to achieve the same result. The plastics material is preferably transparent or translucent for easy visual determination of the medication doses contained therein.

[0021] The folio is folded twice to form three leaves, although an additional fold may also be present to define a spine. The spine is preferably wider than the height of the blisters of the blister sheet. Most preferably the folds are oriented such that the folio folds in a Z-wise manner. Most preferably, the first leaf is located between the second and third leaves.

[0022] The apertures of the first leaf preferably correspond with the blisters of the blister sheet such that the blister sheet can be engaged with the first leaf. Additionally, the first leaf may have markings thereon for relating each blister with a time and/or day for the medication regime. Preferably, the markings are arranged in a grid-like fashion for easy interpretation. Preferably also, markings are provided on both sides of the first leaf, one set visible during normal use, and the other set for assisting the pharmacist in making up the medication pack.

[0023] Areas may be provided on any part of the folio for displaying information relating to the patient and/or the medication. Areas may also be provided for affixing pharmacy stickers to the first leaf.

[0024] The folio is preferably adapted to receive a blister sheet having a certain number of blisters thereon. The number of blisters may relate to the medication regime, for example:

[0025] A "weekly" pack may contain seven blisters, i. e. one for each day, or multiples of seven blisters if dif-

ferent medications are to be taken at different times of the day. For example, the medication pack may have 14 blisters for a week long course of morning and night medication, or 28 blisters for a week long course of morning, lunch, dinner and bedtime medication.

[0026] A "daily" pack may have a plurality of blisters corresponding to the number of doses of medication to be consumed. Other convenient pack arrangements, e. g. "monthly", "bi-weekly", "quarterly" etc. can be easily worked out.

[0027] The apertures of the second leaf preferably correspond with the apertures of the first leaf when folded together.

[0028] The sheet material covering the apertures is preferably adapted to rupture or tear upon application of finger pressure to the blister or the sheet material. The sheet material is preferably a metal foil, although paper or plastics materials may also be used. The sheet material may be permanently affixed to second leaf. Where the sheet material is permanently affixed to the sheet material, it may be affixed by way of an adhesive, heat-sealing or welding. Where a welding process is used, it may be an ultrasonic welding process.

[0029] The sheet material has an adhesive layer thereon, which may be selectively exposable by way of a peel-off cover sheet.

[0030] The third leaf is preferably arranged to fold over the blisters of the blister pack. Such an arrangement may be provided to protect the blisters and/or the doses of medication, and/or to protect the modesty of the patient, who may not wish his or her medication to be easily visible.

[0031] A preferred embodiment of the invention shall now be described, by way of example only, with reference to and as illustrated in the accompanying drawings, in which:

Figure 1 shows a perspective view of a prior art medication pack;

Figure 2 shows a plan view of a prior art medication pack;

Figure 3 shows a front view of the invention;

Figure 4 shows a rear view of the invention; and

Figure 5 shows a plan view of the invention.

[0032] Referring to Figure 3 of the drawings, a medication pack 30 is shown comprising a folio 32 having 3 folds 34 therein defining a first 36, second 38 and third 40 leaf, in addition to a spine 42. The first leaf 36 is located between the second leaf 38 and the spine 42. The first leaf has a plurality of apertures 44 therein.

[0033] The apertures are arranged and displayed in a grid 46 to make it easy to determine the time and day on which each medication does (not shown) is to be taken. For convenience, the grid 46 is divided into four columns denoting breakfast, lunch, dinner and bedtime respectively, and seven rows - one for each day of the week. The first leaf 36 also has areas 48 for affixing

pharmacy stickers.

[0034] The second leaf 38 of the folio 32 also has apertures 44 therein. The apertures 44 are blocked by a metal foil 50 which is stuck onto the rear surface of the leaf 38. The second leaf 38 additionally has an medication identification chart 52 printed thereon, for use by the pharmacist.

[0035] The third leaf 40 has a number of areas 48 defined for affixing additional pharmacy stickers (not shown). The spine 42 has an area 54 for displaying manufacturer or patient information.

[0036] Figure 4 of the drawings shows the self-adhesive layer 54 on the second leaf 38 of the folio 32. The self-adhesive layer 54 is exposable by removing the peel-off layer 56 affixed thereto.

[0037] The first leaf 36 has a grid 58 thereon that helps the pharmacist to put the correct medication into the correct blister. The spine 42 has an area 60 thereon for displaying patient information. The third leaf 40 has areas thereon for displaying manufacturer information 62 and instructions 64 for using the pack 30.

[0038] Finally, Figure 5 of the drawings shows the pack 30 in plan view, and illustrates how the blisters of the blister sheet 36 protrude through the apertures of the first sheet 36 and are protected by the third sheet 40. The spine 42 is approximately the same width as the blisters 68. The self-adhesive foil layer 54 seals the back of the blisters 68 in addition to fixing the margin 70 (the area surrounding the blister sheet 66) of the second leaf 38 to the first leaf 36.

[0039] Medication doses 72 are removed from the medication pack 30 by pressing them through the foil layer 54 via the apertures 48 of the second leaf 38. This is accomplished by applying finger pressure to a desired blister 68 as indicated by arrow B.

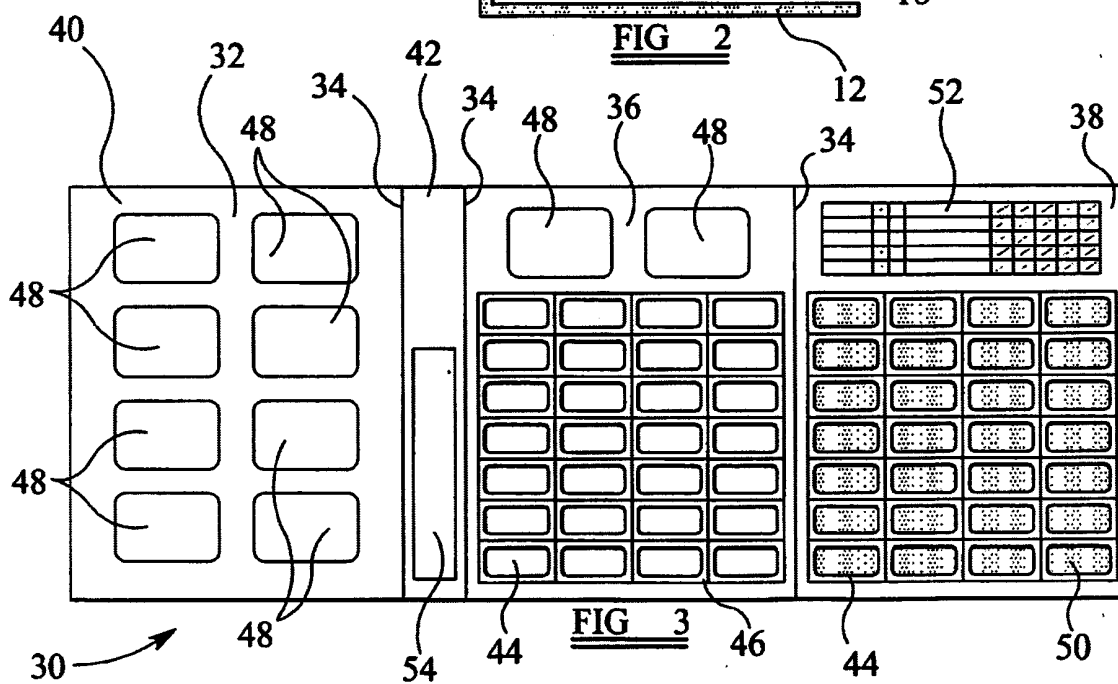
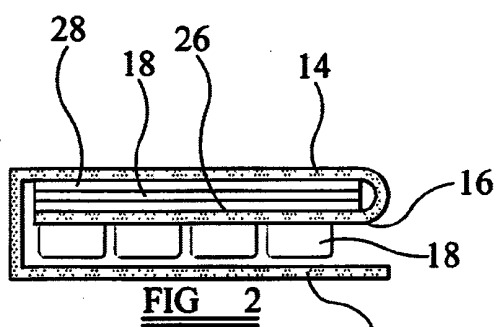
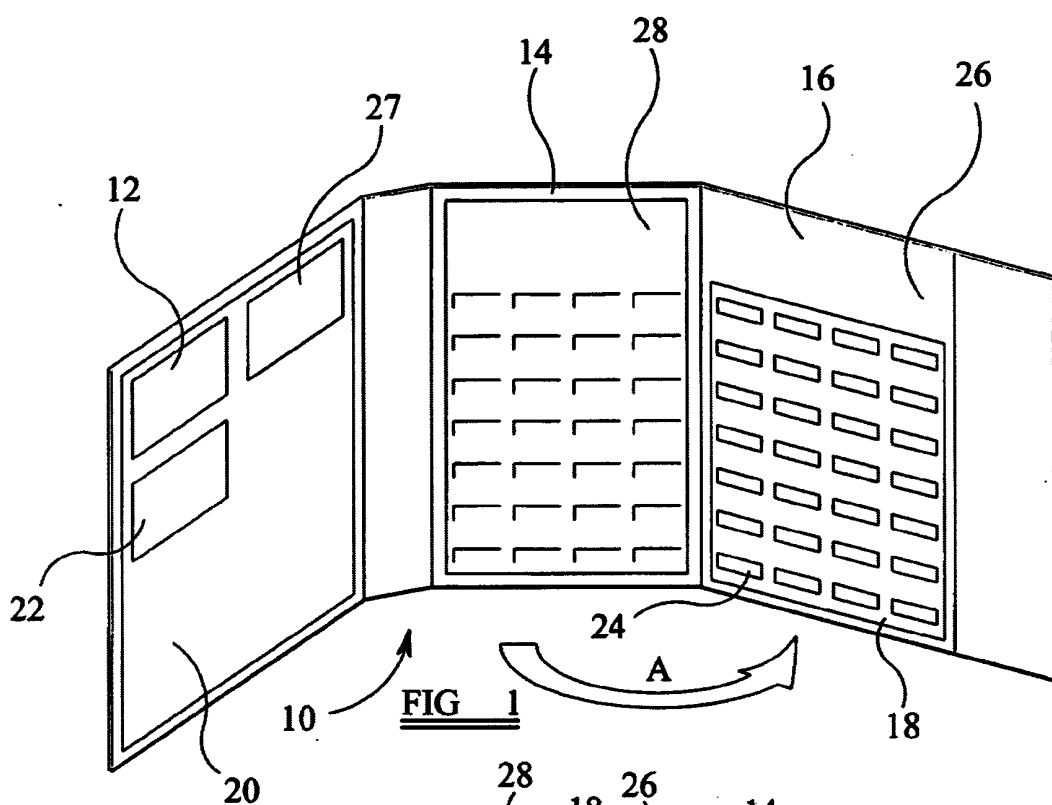
Claims

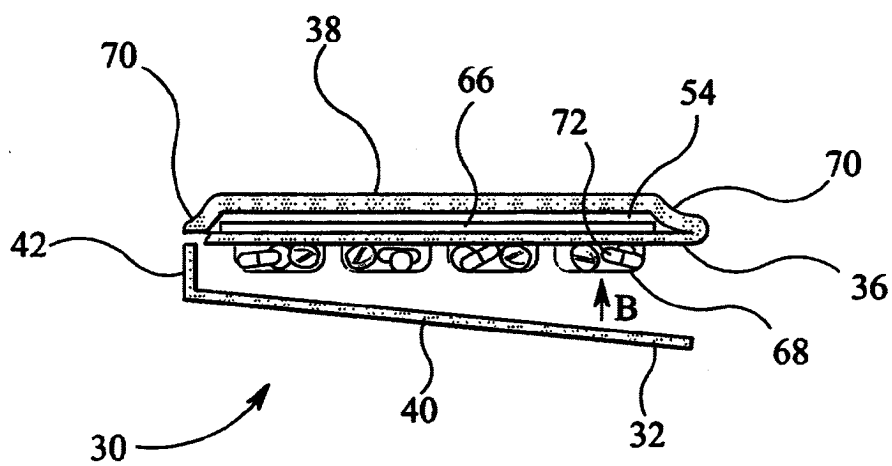
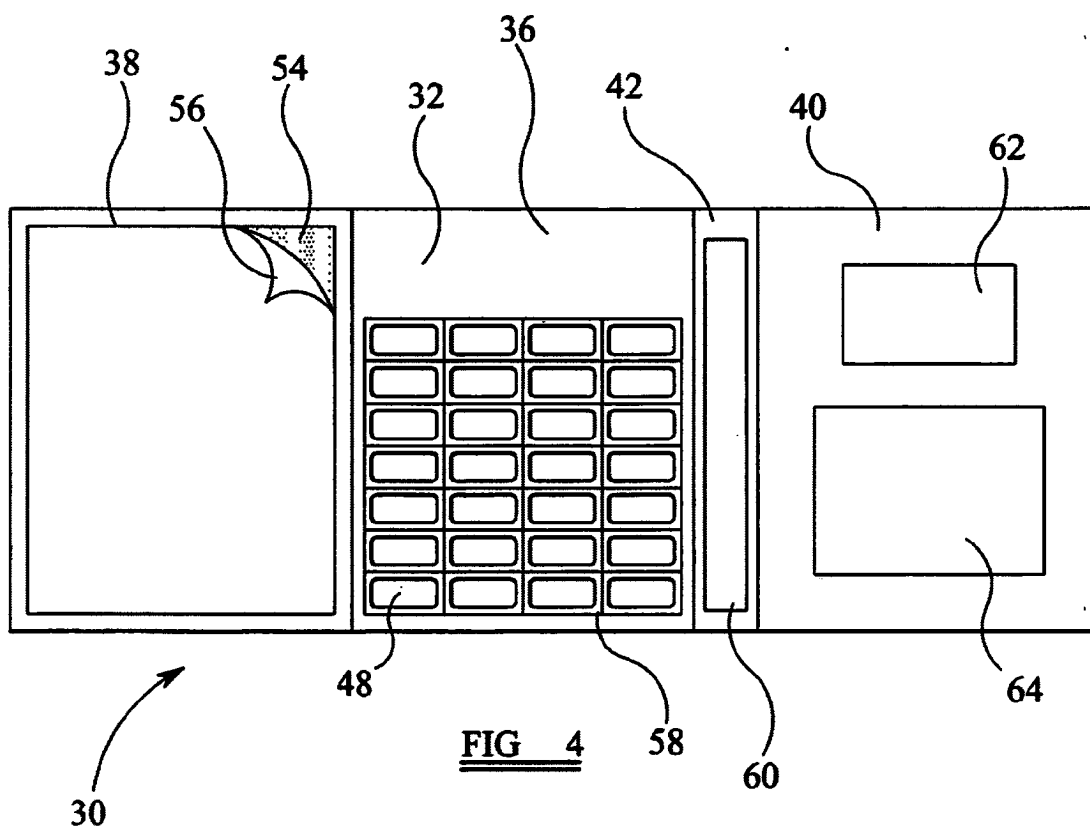
1. A folio for a medication pack for retaining a blister sheet; the folio comprising in an open position; first and second adjacent leaves and a third leaf; the first leaf having apertures therein for receiving blisters of the blister sheet; the second leaf having apertures therein covered by a sheet material, the sheet material having an adhesive layer thereon, whereby when the folio is in a closed position with a blister sheet in place, the adhesive layer seals the sheet material to the blister sheet and adheres the first and second leaves to one another with the apertures of the first and second leaves corresponding.
2. A folio for a medication pack as claimed in claim 1, wherein the medication pack is manufactured of cardboard or of a plastics material.
3. A folio for a medication pack as claimed in claim 1 or 2, wherein the folio is laminated.
4. A folio for a medication pack as claimed in claim 1, 2 or 3, wherein the blister sheet is manufactured of a plastics material.
5. A folio for a medication pack as claimed in claim 4, wherein the blisters are vacuum formed.
6. A folio for a medication pack as claimed in claim 4, wherein the blister sheet is injection moulded.
7. A folio for a medication pack as claimed in any of claims 1 to 6, wherein the plastics material is transparent or translucent.
8. A folio for a medication pack as claimed in any of claims 1 to 7, further comprising an additional fold to define a spine.
9. A folio for a medication pack as claimed in claim 8, wherein the spine is wider than the height of the blisters of the blister sheet.
10. A folio for a medication pack as claimed in any of claims 1 to 9, wherein the folds are oriented such that the folio folds in a Z-wise manner.
11. A folio for a medication pack as claimed in any of claims 1 to 10, wherein the first leaf is located between the second and third leaves.
12. A folio for a medication pack as claimed in any of claims 1 to 11, wherein the apertures of the first leaf preferably correspond with the blisters of the blister sheet such that the blister sheet can be engaged with the first leaf.
13. A folio for a medication pack as claimed in any of claims 1 to 12, wherein the first leaf has markings thereon for relating each blister with a time and/or day for the medication regime.
14. A folio for a medication pack as claimed in claim 13, wherein the markings are arranged in a grid-like fashion for easy interpretation.
15. A folio for a medication pack as claimed in claim 13 or claim 14, wherein markings are provided on both sides of the first leaf, one set visible during normal use, and the other set for assisting the pharmacist in making up the medication pack.
16. A folio for a medication pack as claimed in any of claims 1 to 15, wherein the number of blisters provided relates to the medication regime.
17. A folio for a medication pack as claimed in any of claims 1 to 16, wherein the apertures of the second leaf correspond with the apertures of the first leaf

when folded together.

18. A folio for a medication pack as claimed in any of claims 1 to 17, wherein the sheet material covering the apertures is adapted to rupture or tear upon application of finger pressure to the blister or the sheet material. 5
19. A folio for a medication pack as claimed in claim 18, wherein the sheet material is a metal foil, paper or plastics material 10
20. A folio for a medication pack as claimed in any of claims 1 to 19, wherein the sheet material is permanently affixed to the second leaf. 15
21. A folio for a medication pack as claimed in claim 20, wherein the sheet material is affixed to the second leaf by way of an adhesive, heat-sealing or welding. 20
22. A folio for a medication pack as claimed in any of claims 1 to 21, wherein the sheet material has a self-adhesive layer thereon, selectively exposable by way of a peel-off cover sheet. 25
23. A folio for a medication pack as claimed in any of claims 1 to 22, wherein the third leaf is arranged to fold over the blisters of the blister pack.
24. A method for assembling a folio for a medication pack for retaining a blister sheet; the folio comprising; first and second adjacent leaves and a third leaf; the first leaf having apertures therein for receiving blisters of the blister sheet; the second leaf having apertures therein covered by a sheet material, the sheet material having an adhesive layer thereon; wherein the method comprises the steps of; inserting the blisters of the blister sheet into the apertures of the first leaf; exposing the adhesive layer of the second leaf; and folding the second leaf on top of the first leaf; so that the adhesive layer seals the sheet material to the blister sheet and adheres the first and second leaves to one another with the apertures of the first and second leaves corresponding. 30 35 40 45
25. A method for assembling a folio for a medication pack as claimed in claim 24, further comprising the step of placing medication doses into one or more of the blisters prior to folding the second leaf on top of the first leaf. 50

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European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 04 25 3194

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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A	US 4 955 481 A (NOVINSKI MICHAEL V ET AL) 11 September 1990 (1990-09-11) * abstract; figures * -----	1-15, 17-19	TECHNICAL FIELDS SEARCHED (Int.Cl.7) B65D A61J
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 7 October 2004	Examiner Gino, C
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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