(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 3 277 247 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
12.01.2022 Bulletin 2022/02

(21) Application number: **16710778.8**

(22) Date of filing: **21.03.2016**

(51) Int Cl.:
A61J 1/03 *(2006.01)* ***B65D 75/32*** *(2006.01)*

(86) International application number:
PCT/EP2016/056168

(87) International publication number:
WO 2016/156093 (06.10.2016 Gazette 2016/40)

(54) PHARMACEUTICAL PACKAGING

PHARMAZEUTISCHE PACKUNG

EMBALLAGE PHARMACEUTIQUE

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

(30) Priority: **02.04.2015 GB 201505791**

(43) Date of publication of application:
07.02.2018 Bulletin 2018/06

(73) Proprietor: **TEVA Nederland BV**
2003 RN Haarlem (NL)

(72) Inventor: **DEEBEN, Ad**
1815 LA Alkmaar (NL)

(74) Representative: **D Young & Co LLP**
120 Holborn
London EC1N 2DY (GB)

(56) References cited:
CA-A1- 2 776 111
US-A- 4 988 004
US-A1- 2007 012 592
US-A1- 2007 289 893
US-A1- 2012 145 586
US-A1- 2013 081 968

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Printed by Jouve, 75001 PARIS (FR)

Description

Technical Field

[0001] The present invention relates to a label arrangement. In particular the present invention is concerned with a blister pack including a label arrangement and its production.

Background

[0002] Pharmaceuticals and drugs are typically provided in various liquid, semi-solid or solid dosage forms, for example in the form of a capsule or tablet. Where a pharmaceutical dose is in the form of a capsule or tablet, the individual doses are often either provided in a jar or container or individually packaged in a particular type of preformed plastic packaging called a blister pack. A blister pack (or press through pack) includes a blister or cavity made from a formable web. This cavity is typically backed with paperboard or a lidding seal of aluminium foil or plastic. Conventionally, the cavity is a semi-rigid formed cavity that is capable of collapsing upon the application of force such that when the cavity collapses it pushes the capsule or tablet through the seal thereby dispensing the individual doses of medicament. Blister packs advantageously protect the product contained in the pack from contamination and provide a convenient means for dispensing individual doses. Blister packs are thus particularly useful in the pharmaceutical industry. An example of such a pharmaceutical packaging can be found in CA 2 776 111 A1.

[0003] Recent changes in pharmaceutical legislation in certain countries have increased the requirements for labelling of pharmaceutical products. Conventionally, information relating to the pharmaceutical product, for example article number, expiration date, batch number serial number etc, is conveniently provided on a label or leaflet that is associated with a blister pack containing a series of blisters. The contents of the blister pack can thereby be identified as well as any additional information such as a dose.

[0004] In recent times it has been identified that there is a need for a cost effective and convenient means of providing relevant product information on each individual blister on a blister pack such that individual doses can be carefully monitored. In particular it has become increasingly common for individual blisters to be separated from one another which can result in the relevant information becoming detached from the particular dose of medicament. The present invention therefore aims to mitigate the issues associated with current products.

Summary

[0005] The invention is defined by the appended claims.

[0006] According to a first aspect there is provided a pharmaceutical packaging including a plurality of recesses arranged to receive individual doses of medicament, a hermetically sealing layer sealing each of said recesses, and a plurality of hinged portions, each hinged portion associated with a recess. Each hinged portion is selectively movable between a first position adjacent said hermetically sealing layer and a second position in which the hermetically sealing layer is exposed.

[0007] Thus a pharmaceutical packaging is provided that conveniently provides additional space for providing the dose information required for regulatory approval whilst at the same time minimising the amount of alterations to current systems thereby reducing the burden of obtaining regulatory approval for the changes in the packaging. Additionally a means of packaging the device that does not interfere with the dispensing of the dose from the packaging is also provided (for example in contrast to a label or cardboard adhering to the entire sealing layer). Still further the packaging arrangement optimises the available space for user and/or regulatory information whilst minimising the overall size of the packaging. The packaging also provides flexibility should regulatory requirements change and/or differ in different jurisdictions. Furthermore, this invention enables the production and provision of individualized medication from pre-packed blisters. In particular individualised medication can be provided from already existing blister packs without the need to re-pack the already blister-packed medication. Existing blister packs may remain in their primary packaging which has been approved by medical authorities during the entire chain of manufacturing, distribution and storage of the invention.

[0008] Conveniently by providing a hinged portion, additional information relating to the contents of the packaging may be provided whilst at the same time allowing the additional material to be moved away from the recess such that the easy removal of the dose from the packaging is not compromised.

[0009] Each hinged portion may include an indicia supporting region on the user facing side of the hinged portion. By providing an indicia supporting region on the user facing side of the hinged portion the user is conveniently provided with relevant information relating to the dose thereby meeting regulatory requirements.

[0010] The indicia supporting region may include a machine readable region and a human readable region. In this manner basic information to enable the user to identify the particular drug and dose may be provided in an easily readable format but more detailed information meeting the regulatory requirements relating to the manufacture of the dose is additionally provided on a machine readable region. Information can be displayed or presented using multi-modes.

[0011] The machine readable region may include an RFID (radio-frequency identification) tag, a 2D or 3D matrix or bar code. The RFID tag, 2D or 3D matrix or bar code may include alphanumeric data. The RFID tag, 2D or 3D matrix or bar code may include data relating to the

contents of the individual dose of medicament contained in the respective recess. An RFID tag, 2D or 3D matrix or bar code is a convenient means for providing large amounts of information in a small area of space. In this manner detailed information relating to the particular dose can be provided on each individual dose. The information contained in the bar code may be obtained by scanning the code with a machine and may be conveniently stored for a medical professional to review in due course.

[0012] The packaging is divided into individual units wherein each unit includes one recess and its associated hinged portion. Thus each individual unit provides detailed information relating to the particular dose contained therein thereby assisting in monitoring individual doses.

[0013] Each hinged portion may be sized such that it covers at least its respective recess when the hinged portion is in the first position. In this manner the packaging is a convenient shape for transportation and storage. Additionally, the hinged portion provides additional protection for the sealing layer thereby preventing the seal from being broken for example during storage or transport.

[0014] In an alternative example the area of each hinged portion may be sized such that it covers its respective unit. In this manner the amount of space on which to provide the dose information is maximised whilst at the same time providing information on a per dose basis.

[0015] Each hinged portion is bonded to its respective unit along one edge of the unit. In this manner the hinged portion is bonded to its respective unit at a location as far from the recess as possible thereby minimising the amount of interference between the hinged portion and the recess.

[0016] The edge of the unit along which the hinged portion is bonded may be a straight edge. By bonding the hinged portion along a straight edge, a clean straight hinge is provided that minimises any interference between the hinged portion and the recess.

[0017] Each hinged portion may include a bonding portion in the form of a strip arranged to adhere to one edge of the unit. The strip may include an adhesive. In this manner a convenient means of bonding the hinged portion to the edge of the unit is provided that facilitates manufacture.

[0018] The packaging includes two rows of units and each hinged portion is bonded to its respective unit along an outer perimeter of the packaging. Alternatively, each label portion may be attached to its respective unit along an inner edge of the blister pack. In this manner when each hinged portion is in the second position, there is no interference between the recesses and the hinged portions thereby facilitating the removal of the dose from the packaging.

[0019] Each unit may be joined to its adjacent units via frangible seams. In this manner, the packaging may be separated into individual dose units with each unit including relevant information relating to the dose. This can be particularly useful for example in nursing homes or hospitals where one packet of a drug may be needed for a number of patients.

[0020] Each recess may contain the same dose of medicament. In this manner a packaging for a particular dose of a particular medicament is provided that can be divided into individual units for example for administration. This can be particularly useful where one packet of a drug is needed for a number of patients.

[0021] In alternative examples each recess may contain a different medicament and/or dose. In this manner a flexible packaging is provided that can be used to provide a bespoke prescription for a single patient's use.

[0022] According to a second aspect there is provided a method of manufacturing a pharmaceutical packaging including: providing a packaging comprising a plurality of recesses; providing a dose of a medicament in each of the recesses; sealing each of the recesses containing a dose with a hermetically sealing layer; and associating a hinged portion with each of the plurality of recesses. Each hinged portion is selectively movable between a first position adjacent said hermetically sealing layer and a second position in which the hermetically sealing layer is exposed.

[0023] The packaging is divided into individual units wherein each unit comprises one recess and its associated hinged portion and wherein the associating step comprises bonding each hinged portion to its respective unit along one edge of the unit.

[0024] The bonding step may include applying adhesive to a bonding portion in the form of a strip along one edge of the respective unit.

Description of Drawings

[0025] The present teachings will now be described by way of example only with reference to the following figures in which like parts are depicted by like reference numerals:

Figure 1 illustrates a bottom view of a pharmaceutical packaging according to the present invention;
Figure 2 illustrates a top view of a pharmaceutical packaging according to the present invention;
Figure 3A illustrates a side view of a single unit of a pharmaceutical packaging according to the present invention in storage;
Figure 3B illustrates a side view of a single unit of a pharmaceutical packaging in use.

[0026] While the invention is susceptible to various modifications and alternative forms, specific embodiments are shown by way of example in the drawings and are herein described in detail. It should be understood, however, that the drawings and detailed description of the specific embodiments are not intended to limit the invention to the particular forms disclosed.

Detailed Description

[0027] Figure 1 illustrates a bottom view of a pharmaceutical packaging in the form of a blister pack (1). In this example the blister pack (1) includes eight individual units (2) each unit (2) containing a recess or blister (3) for storing a dose of medication for example in the form of a capsule or tablet. In the illustrated example the pharmaceutical packaging includes eight units (2) however the pharmaceutical packaging may be formed of any number of units (2). In this example the units (2) are arranged in two rows however in other examples the units (2) may be arranged in any suitable arrangement. In the illustrated example the units (2) are connected to each other via seams (4). In some examples the seams (4) may be frangible such that the units (2) can be separated from one another. In some examples the seams are perforated so that the entire blister can be easily broken up into individual units. In other examples the seams may be permanent such that the individual units (2) might be separated e.g. by cutting the entire blister into individual units.

[0028] Figure 2 illustrates a top view of a pharmaceutical packaging according to the present invention. Each of the units (2) is hermetically sealed by a sealing layer (5) extending over the recess (3) (shown in dotted line). The sealing layer (5) may extend over the entire unit (2) or in alternative examples may extend only over the recess (3). The sealing layer (5) thereby seals the individual dose of medicament (e.g. a capsule or tablet) in the recess (3) as illustrated in Figures 3A and 3B. Suitable materials for the sealing layer (5) are well established for pharmaceutical packaging, for example hard and soft aluminium foil.

[0029] Each of the units also includes a label portion (6) in the form of a hinge. Each hinged label portion (6) is arranged to cover the recess (3) of its respective unit (2) in a first position and to expose the recess (3) of its respective unit (2) in a second position.

[0030] Each label portion (6) is attached to the respective unit (2) along one edge. The connection can be made via hot melt, an adhesive, a pressure sensitive tape or via a mechanical fastener, for example a paper staple.

[0031] Preferably, the connection is via a strip of adhesive or single line of glue. Suitable adhesives include silicone adhesives, acrylate adhesives, gum, natural or synthetic rubber or resin. The expert is familiar with those materials used in e.g. pressure-sensitive adhesive tapes and stickers.

[0032] In the illustrated example each label portion (6) is attached to its respective unit (2) along an outer perimeter edge of the blister pack (1). In other examples each label portion may be attached to its respective unit along an inner edge of the blister pack.

[0033] Each label portion (6) includes an indicia supporting region on its upper surface. The upper surface is considered to be the surface facing the user when the label portion covers the recess (3). The indicia supporting region provides information as to the contents of the pharmaceutical packaging in accordance with regulatory requirements. In the illustrated example the indicia supporting region includes a human-readable portion (7a) and a machine-readable portion (7b). The human-readable portion (7a) provides information such as the title and dosage of the drug in a form readable to the human user. The machine-readable portion (7b) includes an RFID tag, a 2D or 3D matrix or bar code (e.g. a bar code or QR code), that includes information such as the article number, expiration date, batch number, serial number etc, in an encoded form that may be read by a computer. Thus a user may scan the tag, bar code or QR code in order to obtain more detailed information relating to the drug contained in the packaging. In another example, this indicia supporting region includes only the machine-readable portion (7b) as described above.

[0034] Each hinged label portion (6) maybe made of any suitable material for example paper, cardboard, plastic (e.g. PE including PE-HD, PP, PVC, PET, polyolefine), or a laminate of plastic with other materials. In one embodiment the material might be thermo-sensitive for printing the required information. Preferably, each hinged label portion (6) may be made of paper or cardboard, more preferably of cardboard.

[0035] Figure 3A illustrates a side view of an individual unit (2) of the pharmaceutical packaging illustrated in Figures 1 and 2 in which the hinged label portion (6) is in its first position. As can be seen from Figure 3A each unit is built up of a plurality of layers. A base layer (8) typically formed of plastic includes a recess (3). Suitable materials from which the base layer may be formed include thermoformable and cold-formable materials known for use in pharmaceutical packaging, for example aluminium, polyamide, PVC, PVDC, PCTFE (ACLAR), PET, PE, PP, COC and various combinations thereof. Preferred example materials are aluminium, PVC or PCTFE. An individual dose of medicament (e.g. capsule or tablet) (9) is provided in the recess. A hermetically sealing layer (5) is provided on top of the base layer (8) such that it sealingly covers the recess (3) thereby retaining the capsule or tablet (9) in the recess and preventing contamination of the capsule or tablet (9). This sealing layer may be for example made from aluminium. Finally a label portion (6) is provided on top of the hermetically sealing layer (5). The label portion (6) includes a hinge (10) arranged along one edge of the unit (2) such that the hinge (10) lies outside of the area of the recess (3). In a first position illustrated in Figure 3A the hinge (10) is in a closed position such that the label portion (6) covers the hermetically sealing layer (5) and the recess (3).

[0036] When a user desires to remove the individual dose (e.g. capsule or tablet) (9) from the pharmaceutical packaging (1), the label portion (6) is bent back along the hinge (10) thereby exposing the hermetically sealing layer (5) covering the recess (3). In some examples each hinged region protrudes beyond the edge of the respective unit (e.g. by approximately 1 mm). Put another way, the hinged region extends slightly beyond one edge of

the base layer. Preferably the hinged region extends slightly beyond the opposite edge to the attached edge. This makes it easier for the user to grasp and bend back the label portion thereby facilitating exposure of the hermetically sealing layer covering the recess.

[0037] Force is applied to the outside of the recess (3) in the direction of arrow A which pushes the capsule or tablet (9) through the hermetically sealing layer (5) thereby releasing the individual dose (e.g. capsule or tablet) (9) from the packaging (1).

[0038] Whilst in the examples described above each label is individually provided on each individual unit, in some examples the labels may be connected to one another in the same manner as the individual units. For instance the individual labels may be connected to one another via frangible seams that can be broken in the same manner as the frangible seams between individual units when an individual unit is to be separated from the rest of the packaging.

[0039] In some examples the drug and dose contained in each individual blister is the same. In other examples a blister pack may contain a number of different doses of different medications in which each individual blister contains a different dose or medicament. These may be for administration at different times of the day or on different days.

[0040] Thus a pharmaceutical packaging that provides the user with sufficient information relating to the individual dosage to meet regulatory requirements yet at the same time allows the dose to be conveniently dispensed from the packaging has been discussed. Although particular examples have been described above the invention is not limited to the arrangements illustrated in the Figures and discussed above. Instead the present disclosure is intended to cover all combinations and alternatives that fall within the scope of the appended claims.

[0041] The present invention also relates to the production of a pharmaceutical packaging. Firstly a packaging including a plurality of recesses is provided. As discussed previously the packaging may be formed of a plurality of individual units, each unit having its own recess. A dose of medicament is then provided in each of the recesses. The dose may be in the form of a tablet, capsule or powder. Each recess is subsequently sealed with a hermetically sealing layer. Finally a hinged portion is associated with each of the plurality of recesses. This may be achieved by bonding each hinged portion to its respective unit along one edge of the unit, for example by gluing.

[0042] Each hinged portion is selectively movable between a first position adjacent said hermetically sealing layer and a second position in which the hermetically sealing layer is exposed. Each hinged portion may have an indicia supporting region on its upper surface as described above. This indicia supporting region may be printed on each hinged portion on-line during production shortly before it is associated with each of the plurality of recesses. Furthermore, the production of a blister pack as defined above in which the packaging is divided into individual units wherein each recess is bonded along the edge of the individual unit to its associated hinged label portion as defined above is also contemplated. Thus a pharmaceutical packaging in which a blister pack may be bonded to a plurality of hinged label portions is provided. During production the packaging is divided into individual units wherein each unit includes one recess and its associated hinged portion.

[0043] The present invention also relates to the production of a pharmaceutical packaging as defined above which can be carried out using machines suitable for pharmaceutical mass production at high speed, preferably handling at least 100 blister packs per minute or at least 150 blister packs per minute.

Claims

1. A pharmaceutical packaging (1) comprising:

   a plurality of recesses (3) arranged to receive individual doses of medicament;
   a hermetically sealing layer (5) sealing each of said recesses; and
   a plurality of hinged portions (6), each hinged portion associated with a recess;
   wherein:

   each hinged portion is selectively movable between a first position adjacent said hermetically sealing layer and a second position in which the hermetically sealing layer is exposed;
   the packaging comprises a plurality of individual units (2) wherein each unit comprises one recess and its associated hinged portion; and
   the packaging comprises two rows of units and each hinged portion is bonded to its respective unit along an outer perimeter of the packaging.

2. A pharmaceutical packaging according to claim 1 wherein each hinged portion comprises an indicia supporting region on the user facing side of the hinged portion.

3. A pharmaceutical packaging according to claim 2 wherein the indicia supporting region comprises a machine readable region (7b) and optionally a human readable region (7a) and optionally wherein the machine readable region comprises an RFID tag, a 2D or 3D matrix or bar code, and optionally wherein the RFID tag, 2D or 3D matrix or bar code comprises alphanumeric data and/or wherein the RFID tag, 2D or 3D matrix or bar code comprises data relating to the contents of the individual dose of medicament

contained in the respective recess.

4. A pharmaceutical packaging according to claim 1 wherein each hinged portion is sized such that it covers at least its respective recess when the hinged portion is in the first position and/or wherein the area of each hinged portion is sized such that it covers its respective unit.

5. A pharmaceutical packaging according to any preceding claim wherein each hinged portion is bonded to its respective unit along one edge of the unit.

6. A pharmaceutical product according to claim 5 wherein the edge of the unit along which the hinged portion is bonded is a straight edge and/or wherein each hinged portion comprises a bonding portion arranged to adhere to one edge of the unit.

7. A pharmaceutical packaging according to claim 5 or claim 6 wherein each hinged portion comprises a bonding portion in the form of a strip arranged to adhere to one edge of the unit and optionally wherein the strip comprises an adhesive.

8. A pharmaceutical packaging according to any preceding claim wherein each unit is joined to its adjacent units via frangible seams.

9. A pharmaceutical packaging according to any preceding claim wherein each recess contains the same dose of medicament.

10. A pharmaceutical packaging according to claim 9wherein the medicament is in the form of a capsule or tablet (9).

11. A method of manufacturing a pharmaceutical packaging comprising:

providing a packaging comprising: a plurality of recesses, a dose of a medicament in each of the recesses and a hermetically sealing layer sealing each of the recesses; and
associating a hinged portion with each of the plurality of recesses wherein each hinged portion is selectively movable between a first position adjacent said hermetically sealing layer and a second position in which the hermetically sealing layer is exposed, wherein:

the packaging is divided into individual units wherein each unit comprises one recess and its associated hinged portion and wherein the associating step comprises bonding each hinged portion to its respective unit along one edge of the unit; and
the packaging comprises two rows of units and each hinged portion is bonded to its respective unit along an outer perimeter of the packaging.

12. A method according to claim 11 wherein the bonding step comprises applying adhesive to a bonding portion in the form of a strip along one edge of the respective unit.

Patentansprüche

1. Pharmazeutische Verpackung (1), die umfasst:

eine Mehrzahl von Aussparungen (3), die dazu angeordnet sind, einzelne Medikamentendosen aufzunehmen;
eine hermetisch abdichtende Schicht (5), die jede der Aussparungen abdichtet; und
eine Mehrzahl von gelenkig gelagerten Abschnitten (6), wobei jeder gelenkig gelagerte Abschnitt mit einer Aussparung assoziiert ist;
wobei:

jeder gelenkig gelagerte Abschnitt gezielt zwischen einer ersten Position, die an die hermetisch abdichtende Schicht angrenzt, und einer zweiten Position, in der die hermetisch abdichtende Schicht freiliegend ist, beweglich ist;
die Verpackung eine Mehrzahl von einzelnen Einheiten (2) umfasst, wobei jede Einheit eine Aussparung und ihren assoziierten gelenkig gelagerten Abschnitt umfasst; und
die Verpackung zwei Reihen von Einheiten umfasst und jeder gelenkig gelagerte Abschnitt mit seiner jeweilige Einheit entlang eines Außenumfangs der Verpackung verbunden ist.

2. Pharmazeutische Verpackung nach Anspruch 1, wobei jeder gelenkig gelagerte Abschnitt einen Zeichenträgerbereich auf der einem Benutzer zugewandten Seite des gelenkig gelagerten Abschnitts umfasst.

3. Pharmazeutische Verpackung nach Anspruch 2, wobei der Zeichenträgerbereich einen maschinenlesbaren Bereich (7b) und optional einen durch Menschen lesbaren Bereich (7a) umfasst und optional wobei der maschinenlesbare Bereich eine RFID-Kennzeichnung, eine 2D- oder 3D-Matrix oder einen Strichcode umfasst, und optional wobei die RFID-Kennzeichnung, die 2D- oder 3D-Matrix oder der Strichcode alphanumerische Daten umfasst und/oder wobei die RFID-Kennzeichnung, die 2D- oder 3D-Matrix oder der Strichcode Daten in Bezug auf den Inhalt der einzelnen in der jeweiligen Aus-

sparung enthaltenen Medikamentendosis umfasst.

4. Pharmazeutische Verpackung nach Anspruch 1, wobei jeder gelenkig gelagerte Abschnitt derart dimensioniert ist, dass er mindestens seine jeweilige Aussparung abdeckt, wenn der gelenkig gelagerte Abschnitt in der ersten Position ist, und/oder wobei die Fläche des gelenkig gelagerten Abschnitts derart dimensioniert ist, dass er seine jeweilige Einheit abdeckt.

5. Pharmazeutische Verpackung nach einem der vorhergehenden Ansprüche, wobei jeder gelenkig gelagerte Abschnitt mit seiner jeweilige Einheit entlang einer Kante der Einheit verbunden ist.

6. Pharmazeutisches Produkt nach Anspruch 5, wobei die Kante der Einheit, entlang derer der gelenkig gelagerte Abschnitt verbunden ist, eine gerade Kante ist und/oder wobei jeder gelenkig gelagerte Abschnitt einen Verbindungsabschnitt umfasst, der dazu angeordnet ist, an einer Kante der Einheit zu haften.

7. Pharmazeutische Verpackung nach Anspruch 5 oder Anspruch 6, wobei jeder gelenkig gelagerte Abschnitt einen Verbindungsabschnitt in der Form eines Streifens umfasst, der dazu angeordnet ist, an einer Kante der Einheit zu haften, und optional wobei der Streifen einen Klebstoff umfasst.

8. Pharmazeutische Verpackung nach einem der vorhergehenden Ansprüche, wobei jede Einheit an ihre angrenzenden Einheiten über zerbrechbare Nähte gefügt ist.

9. Pharmazeutische Verpackung nach einem der vorhergehenden Ansprüche, wobei jede Aussparung dieselbe Medikamentendosis enthält.

10. Pharmazeutische Verpackung nach Anspruch 9, wobei das Medikament in der Form einer Kapsel oder Tablette (9) ist.

11. Verfahren zum Herstellen einer pharmazeutische Verpackung, das umfasst:

Bereitstellen einer Verpackung, die umfasst: eine Mehrzahl von Aussparungen, eine Medikamentendosis in jeder der Aussparungen und eine hermetisch abdichtende Schicht, die jede der Aussparungen abdichtet; und
Assoziieren eines gelenkig gelagerten Abschnitts mit jeder der Mehrzahl von Aussparungen, wobei jeder gelenkig gelagerte Abschnitt gezielt zwischen einer ersten Position, die an die hermetisch abdichtende Schicht angrenzt, und einer zweiten Position, in der die hermetisch abdichtende Schicht freiliegend ist, beweglich ist, wobei:

die Verpackung in einzelne Einheiten unterteilt ist, wobei jede Einheit eine Aussparung und ihren assoziierten gelenkig gelagerten Abschnitt umfasst und wobei der Assoziierungsschritt Verbinden jedes gelenkig gelagerten Abschnitts mit seiner jeweiligen Einheit entlang einer Kante der Einheit umfasst; und
wobei die Verpackung zwei Reihen von Einheiten umfasst und jeder gelenkig gelagerte Abschnitt mit seiner jeweilige Einheit entlang eines Außenumfangs der Verpackung verbunden ist.

12. Verfahren nach Anspruch 11, wobei der Verbindungsschritt Aufbringen von Klebstoff auf einen Verbindungsabschnitt in der Form eines Streifens entlang einer Kante der jeweiligen Einheit umfasst.

Revendications

1. Emballage pharmaceutique (1) comprenant :

une pluralité d'évidements (3) agencés pour recevoir des doses individuelles de médicament ;
une couche de scellement hermétique (5) scellant chacun desdits évidements ; et
une pluralité de portions articulées (6), chaque portion articulée étant associée à un évidement ;
chaque portion articulée étant sélectivement mobile entre une première position adjacente à ladite couche de scellement hermétique et une deuxième position dans laquelle la couche de scellement hermétique est exposée ;
l'emballage comprenant une pluralité d'unités individuelles (2), chaque unité comprenant un évidement et sa portion articulée associée ; et
l'emballage comprenant deux rangées d'unités et chaque portion articulée étant liée à son unité respective le long d'un périmètre externe de l'emballage.

2. Emballage pharmaceutique selon la revendication 1 dans lequel chaque portion articulée comprend une région de support d'indices sur le côté faisant face à l'utilisateur de la portion articulée.

3. Emballage pharmaceutique selon la revendication 2 dans lequel la région de support d'indices comprend une région lisible par machine (7b) et facultativement une région lisible par un humain (7a) et la région lisible par machine comprenant facultativement une étiquette RFID, une matrice 2D ou 3D ou un code à

barres, et la matrice RFID, la matrice 2D ou 3D ou le code à barres comprenant facultativement des données alphanumériques et/ou l'étiquette RFID, la matrice 2D ou 3D ou le code à barres comprenant des données relatives au contenu de la dose individuelle de médicament contenue dans l'évidement respectif.

4. Emballage pharmaceutique selon la revendication 1 dans lequel chaque portion articulée est dimensionnée de telle sorte qu'elle recouvre au moins son évidement respectif lorsque la portion articulée est dans la première position et/ou dans lequel la surface de chaque portion articulée est dimensionnée de telle sorte qu'elle recouvre son unité respective.

5. Emballage pharmaceutique selon l'une quelconque des revendications précédentes, dans lequel chaque portion articulée est liée à son unité respective le long d'un bord de l'unité.

6. Produit pharmaceutique selon la revendication 5 dans lequel le bord de l'unité le long duquel la portion articulée est liée est un bord droit et/ou dans lequel chaque portion articulée comprend une portion de liaison agencée pour adhérer à un bord de l'unité.

7. Emballage pharmaceutique selon la revendication 5 ou la revendication 6 dans lequel chaque portion articulée comprend une portion de liaison sous la forme d'une bande agencée pour adhérer à un bord de l'unité et la bande comprenant facultativement un adhésif.

8. Emballage pharmaceutique selon l'une quelconque des revendications précédentes dans lequel chaque unité est jointe à ses unités adjacentes par l'intermédiaire de coutures cassables.

9. Emballage pharmaceutique selon l'une quelconque des revendications précédentes dans lequel chaque évidement contient la même dose de médicament.

10. Emballage pharmaceutique selon la revendication 9 dans lequel le médicament est sous la forme d'une capsule ou d'un comprimé (9).

11. Procédé de fabrication d'un emballage pharmaceutique comprenant :

la fourniture d'un emballage comprenant : une pluralité d'évidements, une dose d'un médicament dans chacun des évidements et une couche de scellement hermétique scellant chacun des évidements ; et
l'association d'une portion articulée à chaque évidement parmi la pluralité d'évidements, chaque portion articulée étant sélectivement mobile entre une première position adjacente à ladite couche de scellement hermétique et une deuxième position dans laquelle la couche de scellement hermétique est exposée, dans lequel :

l'emballage est divisé en unités individuelles, chaque unité comprenant un évidement et sa portion articulée associée et l'étape d'association comprenant la liaison de chaque partie articulée à son unité respective le long d'un bord de l'unité ; et
l'emballage comprend deux rangées d'unités et chaque portion articulée est liée à son unité respective le long d'un périmètre externe de l'emballage.

12. Procédé selon la revendication 11 dans lequel l'étape de liaison comprend l'application d'un adhésif sur une portion de liaison sous la forme d'une bande le long d'un bord de l'unité respective.

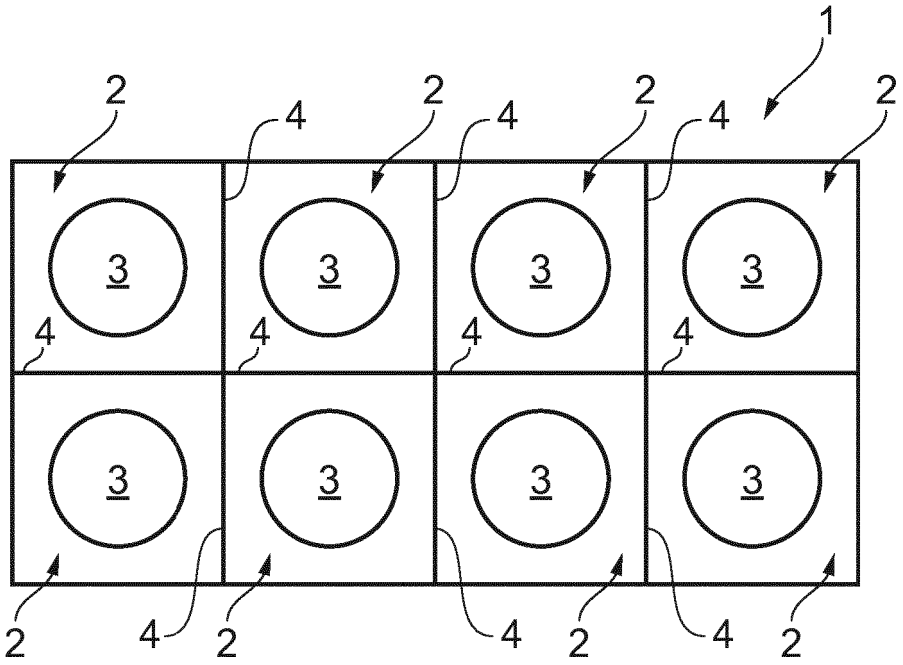

FIG. 1

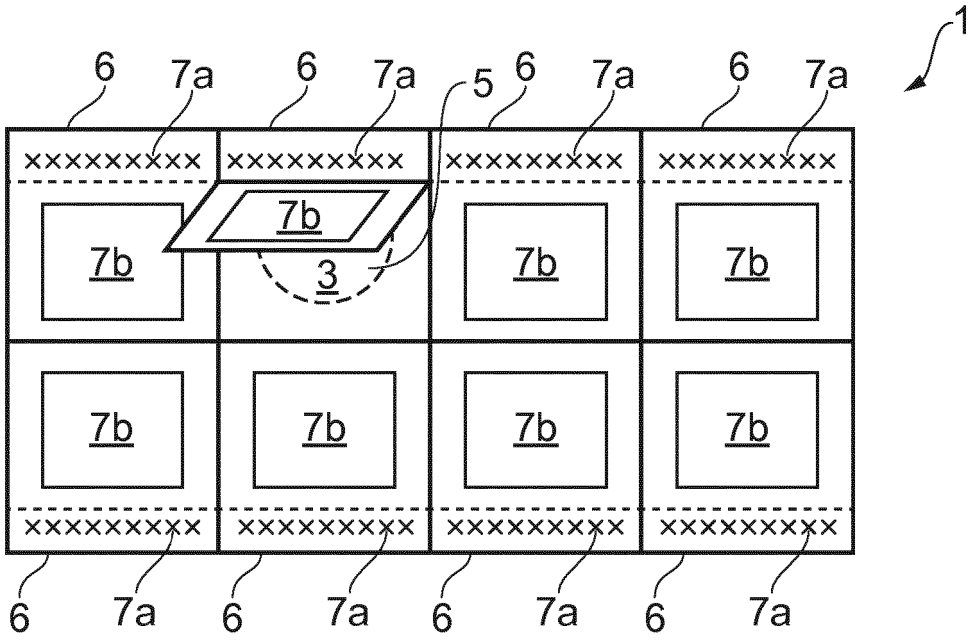

FIG. 2

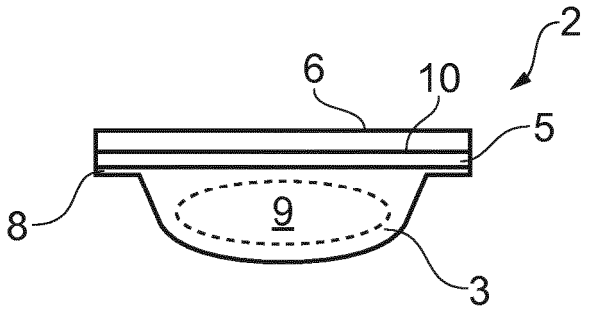

FIG. 3A

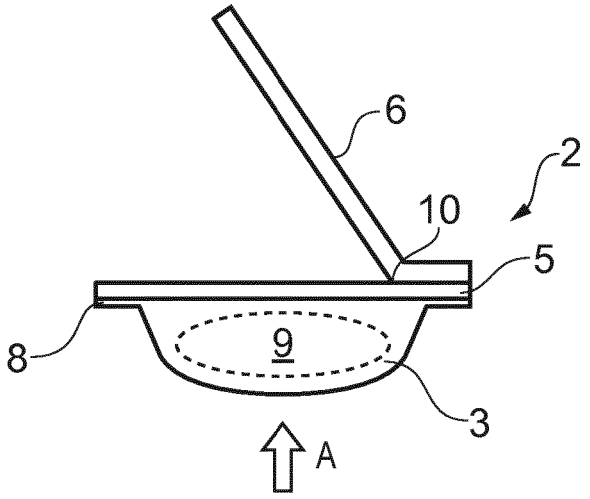

FIG. 3B

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- CA 2776111 A1 **[0002]**