

(19)



(11)

EP 2 089 292 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
27.02.2013 Bulletin 2013/09

(51) Int Cl.:
B65D 81/07 (2006.01) B65D 75/20 (2006.01)

(21) Application number: **06829380.2**

(86) International application number:
PCT/EP2006/011760

(22) Date of filing: **07.12.2006**

(87) International publication number:
WO 2008/067835 (12.06.2008 Gazette 2008/24)

(54) **Package for holding an article between two resilient films**

Verpackung zum Halten eines Gegenstandes zwischen zwei elastischen Filmen

Emballage pour le maintien d'un article entre deux films souples

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI
SK TR**

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(43) Date of publication of application:
19.08.2009 Bulletin 2009/34

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Description

FIELD OF THE INVENTION

[0001] The present invention generally relates to a package for holding an article therein. In particular, the invention relates to a package for holding a mobile electronic apparatus, for example for shipment purposes. Especially, the invention relates to a package for presenting a mobile electronic apparatus at a point of sales.

BACKGROUND OF THE INVENTION

[0002] Mobile electronic apparatuses, such as mobile phones, have hitherto been shipped and presented at a point of sales in boxes, made from paper, carton, plastic or the like. These boxes were lined with formfitting inserts that securely held the mobile phone and its accessories in recesses with a shape that matches the article or articles to be packed. These inserts are typically made of plastic foil or vacuum aspirated molded fiber and are typically designed to hold a mobile phone, a charger and possibly a CD and a user manual. For each different product (type, shape, size of mobile phone), a 3-D tooling needed to be designed and manufactured. In view of the relatively short life cycle of mobile electronic devices the design and manufacturing of the 3-D tooling is very resource consuming. Also, keeping stock of different packaging for various models of mobile phones is undesirable from a logistical point of view.

[0003] D1 US 3270878 A (GIESLER JERRY B) 6 September 1966 describes according to the title of the application "Display packages".

[0004] D2 US 4466534 A (DUNN J MALCOLM (US)) 21 August 1984 describes according to the abstract of the application: A display package for small, high value objects such as gem stones utilizes a double sided adhesive insert between a pair of cover members each of which is bonded to a respectively associated one of the adhesive sides of the insert. The article to be displayed is sandwiched between window elements, and in some forms cushion and background elements which are themselves bonded to respectively associated adhesive sides of the insert.

[0005] D4 DE 202005008916 U1 (TATUNG CO (TW)) 8 September 2005 describes according to the abstract of the application: A packing box is disclosed and is suitable for packaging as well as display purposes. The packing box comprises two triangular boxes, which can be arranged abreast, each triangular boxes having an oblique surface. One of the oblique surfaces of the two triangular boxes has a recess, and the recess has a holding portion. A cover can be used to cover the two triangular boxes, and the cover has the shape coincided with the two triangular boxes arranged in combination.

DISCLOSURE OF THE INVENTION

[0006] On this background, it is an object of the present invention to provide a package for holding articles of various shapes and sizes that avoids or at least reduces the resources required for 3-D tooling.

[0007] This object is achieved by providing a package according to claim 1.

[0008] With this construction a package is created and that provides a variable sized chamber or recess is defined between the two resilient films by the article itself. Thus, many different shapes and sizes of mobile electronic devices to be held in the package will snugly fit between the two resilient films. The snug fit and the resilient characteristics of the film to ensure that the object to be held is secured relative to the frame. The construction, therefore, provides a "one fit many" type of package.

[0009] The films resiliently contact the article and resiliently urge the article towards the other film when the frames are in the closed position with the article therebetween.

[0010] The package may further comprise means for holding the frames in the closed position.

[0011] The films may be light-transmissive.

[0012] The films may be a flexible, stretchable, elastomeric membrane.

[0013] The frame may be made of a polymer material or composition. Alternatively, the frame can be made of wood, metal, or the like.

[0014] Preferably, the films are stretched over the opening.

[0015] The package may define substantially no cavity in the closed position when there is no article between the films.

[0016] The frames may comprise complementary parts of a snap-fit connection.

[0017] The two films are formed by one integral piece of film with a portion of the integral piece of film connecting the respective portions of film that are attached to the respective frames forming the hinge of the package.

[0018] It is another object of the present invention to provide a sales package comprising a mobile apparatus placed between two resilient films suspended from a frame with the resilient frames being stretched due to the presence of the mobile apparatus and the resilient films enveloping the mobile apparatus snugly.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] In the following detailed portion of the present description, the invention will be explained in more detail with reference to the exemplary embodiments shown in the drawings, in which:

Fig. 1 is a front view of an embodiment of the package according to the invention,

Fig. 2 is a side view of the package of Fig. 2,

Fig. 3 is a detailed sectional view of the package of

Fig. 1,
 Fig. 4 is a side view of the package of Fig. 1 in an open position without any article therein,
 Fig. 5 is an elevated view of a plurality of sales packages according of an embodiment of the invention at a point of sale, and
 Fig. 6 is an elevated view of one package as shown in Fig. 5.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0020] Referring now to the drawings, reference numeral 10 generally identifies a package for holding an article 12. As illustrated, article 12 is a mobile phone. This has been done merely for ease of illustration. Virtually any article can be packaged in accordance with this invention.

[0021] As shown in Figs. 1 to 3 package 10 includes a frame 12 that includes a front frame portion 13 and a rear frame portion 14. The front frame portion 13 and the rear frame portion 14 have a substantially identical outline. The outline of the two frame portions 13,14 is in an embodiment of a generally rectangular. A rectangular frame shape is particularly useful when a generally rectangular object or article is to be packed. Accordingly, other frame shapes can be used that generally correspond to the outline of the article or object to be packed.

[0022] Each of the frame portions 12,13 defines an opening, and the frame portions 13,14 are along one of their edges hingeably connected to one another by a hinge 18 that will be described in greater detail further below.

[0023] A resilient film 15 is placed over the opening of frame portion 12 and a substantially identical resilient film 16 is placed over the opening of frame portion 13. In an embodiment, the resilient films 15,16 are attached to the respective frame portions 13,14 by plastic welding (ultrasonic welding) or by applying an adhesive. In the embodiment, the films 15,16 are part of one larger piece of film that includes a hinge portion 18, which can be seen in greater detail in Fig. 3.

[0024] When the films 15,16 are attached to the frames, they are not or only very little pre-tensioned (Fig. 4). Thus, when the package 10 is in an open position (Fig. 4) the films 15, 16 are substantially planar, and when the package 10 is closed without any article between the films 15,16, there is essentially no cavity between the two films 15,16.

[0025] The frame portions 15,16 are at their ends opposite to the hinge 18 provided with (complementary) snap means (not shown) or other locking means for keeping the frame portions 15, 16 in the closed position. Additional snap means may also be provided along the outline of the frame portions 15,16 to securely keep the frame portions attached to one another when they are brought into the closed position shown in Figs 1 to 3 with the frame portions 13,14 lying on one another.

[0026] When the package 10 is closed with an article, such as the mobile phone 1, or other mobile rechargeable battery operated apparatus the films 15,16 are stretched to make place for the mobile phone 1. Thus, the mobile phone 1 is snugly kept in place by the force applied to the mobile phone by the stretched films 15,16. The films 15,16 resiliently contact the article and resiliently urge the article towards the other film. The package is a substantially flat and/or planar structure when there is no article between the films.

[0027] Figs. 5 and 6 illustrate a package 10 according to an embodiment at a point of sales. The sales package 10 can be essentially identical to the package described above, or it may vary by having a different frame outline, a different type of locking means, etc. This sales package 10 includes a mobile phone 1, but no battery charger, user manual or CD, i.e. only the mobile phone 1 or other mobile rechargeable battery operated apparatus.

[0028] The mobile rechargeable battery operated apparatus 1 is placed in the substantially transparent (can be colored) sales package without a battery charger and then presented at a point of sales.

[0029] The plastic films 15,16 are in an embodiment flexible, stretchable, elastomeric membranes. In an embodiment the membrane is made from a is silicon based polymer and has a thickness of approximately 0.5mm. The thickness of the film may depend on which material is used. In an embodiment the film material is based on a bio plastic.

[0030] The films 15,16 are in an embodiment light-transmissive.

[0031] The frame portions 13,14 are in an embodiment made of a polymer material or composition. The frame can be made of wood, metal, or the like.

[0032] The frame portions can be substantially mirror images of one another, this may or may not apply to the locking means that hold them together in the locked position

[0033] The invention has numerous advantages. Different embodiments or implementations may yield one or more of the following advantages. It should be noted that this is not an exhaustive list and there may be other advantages which are not described herein. One advantage of the invention is that it allows different types, shapes and sizes of articles to be packed without the need for 3-D tooling. Another advantage of the invention is that it allows a mobile apparatus to be presented at the point of sales in an attractive manner. A further advantage of the invention provides for a relatively inexpensive way of packaging articles for presentation at the point of sales.

[0034] The term "comprising" as used in the claims does not exclude other elements or steps. The term "a" or "an" as used in the claims does not exclude a plurality.

[0035] Although the present invention has been described in detail for purpose of illustration, it is understood that such detail is solely for that purpose, and variations can be made therein by those skilled in the art without

departing from the scope of the invention as defined by the appended claims.

Claims

1. A package (10) for holding an article (1), the package comprises

- two generally planar frames (12) hinged to one another so as to be able to move between a closed position in which the two generally planar frames (12) lie on one another, and an open position in which the two generally planar frames (12) do not lie on one another, the two generally planar frames (12) having a substantially identical outline defining an opening,

- a resilient film (15, 16) placed over each opening and attached to each of the two generally planar frames (12), the resilient films (15, 16) being stretched when the article (1) is placed between the two generally planar frames (12) and the two generally planar frames (12) are in the closed position, wherein the resilient films (15, 16) resiliently contact the article (1) and resiliently urge the article (1) towards the other resilient film (15, 16) when the two generally planar frames (12) are in the closed position with the article (10) therebetween, and wherein the two resilient films (15, 16) are formed by one integral piece of film (15, 16) with a portion of the integral piece of film (18) connecting the respective portions of the resilient film (15, 16) that are attached to the respective two generally planar frames (12), **characterized in that** the portion of the integral piece of film (18) connecting the respective portions of the resilient film (15, 16) is the hinge (18) of said package (10).

2. A package according to claim 1, further comprising means for holding the frames (12) in the closed position.

3. A package according to claim 1, wherein said films (15, 16) are light-transmissive.

4. A package according to claim 1, wherein the film (15, 16) is a flexible, stretchable, elastomeric membrane and/or said frame (12) is made of a polymer material or composition.

5. A package according to claim 1, wherein the films (15, 16) are stretched over the opening.

6. A package according to claim 1, comprising a substantially flat and/or planar structure when there is no article (1) between the films (15, 16).

7. A package according to claim 1, wherein said frames (12) comprise complementary parts of a snap-fit connection.

8. A package according to claim 1, comprising a mobile apparatus (1) placed between the two resilient films (15, 16) suspended from a frame (12) with the frames (12) being stretched due to the presence of the mobile apparatus (1) and the resilient films (15, 16) enveloping the apparatus (1) snugly.

Patentansprüche

1. Verpackung (10) zum Halten eines Gegenstands (1), die Verpackung umfassend

- zwei im Allgemeinen plane Rahmen (12), die aneinander angelenkt sind, sodass sie imstande sind, sich zwischen einer geschlossenen Position, in der die zwei im Allgemeinen planen Rahmen (12) aufeinander liegen, und einer offenen Position zu bewegen, in der die zwei im Allgemeinen planen Rahmen (12) nicht aufeinander liegen, wobei die zwei im Allgemeinen planen Rahmen (12) eine im Wesentlichen identische Kontur aufweisen, die eine Öffnung definiert,

- eine elastische Folie (15, 16), die über jeder Öffnung angeordnet und an jedem der zwei im Allgemeinen planen Rahmen (12) angebracht ist, wobei die elastischen Folien (15, 16) gedehnt sind, wenn der Gegenstand (1) zwischen den zwei im Allgemeinen planen Rahmen (12) angeordnet ist und die zwei im Allgemeinen planen Rahmen (12) in der geschlossenen Position sind, wobei die elastischen Folien (15, 16) den Gegenstand (1) elastisch berühren und den Gegenstand (1) elastisch zu der anderen elastischen Folie (15, 16) drängen, wenn die zwei im Allgemeinen planen Rahmen (12) in der geschlossenen Position mit dem Gegenstand (1) dazwischen sind, und wobei die zwei elastischen Folien (15, 16) durch ein einstückiges Stück Folie (15, 16) ausgebildet sind, wobei ein Abschnitt des einstückigen Stücks Folie (18) die jeweiligen Abschnitte der elastischen Folie (15, 16) berührt, die an den jeweiligen zwei im Allgemeinen planen Rahmen (12) angebracht sind, **dadurch gekennzeichnet, dass** der Abschnitt des einstückigen Stücks Folie (18), der die jeweiligen Abschnitte der elastischen Folie (15, 16) verbindet, das Gelenk (18) der Verpackung (10) ist.

2. Verpackung nach Anspruch 1, ferner umfassend Mittel zum Halten der Rahmen (12) in der geschlossenen Position.

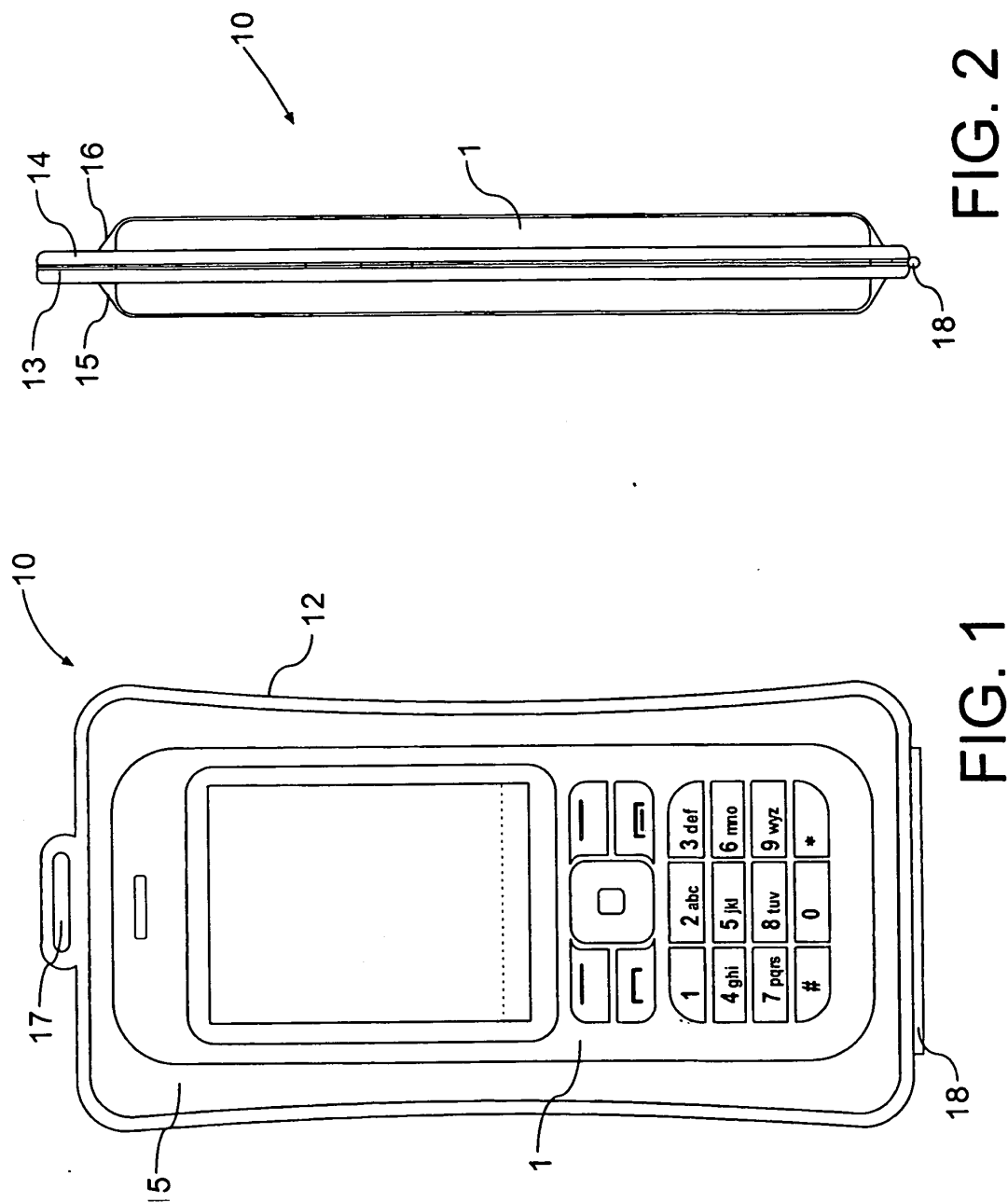
3. Verpackung nach Anspruch 1, wobei die Folien (15, 16) lichtdurchlässig sind.
4. Verpackung nach Anspruch 1, wobei die Folie (15, 16) eine flexible, dehnbare Elastomermembran ist und/oder der Rahmen (12) aus einem/er Polymermaterial oder -zusammensetzung hergestellt ist.
5. Verpackung nach Anspruch 1, wobei die Folien (15, 16) über die Öffnung gestreckt sind.
6. Verpackung nach Anspruch 1, umfassend eine im Wesentlichen flache und/oder plane Struktur, wenn sich kein Gegenstand (1) zwischen den Folien (15, 16) befindet.
7. Verpackung nach Anspruch 1, wobei die Rahmen (12) komplementäre Teile einer Schnappverbindung umfassen.
8. Verpackung nach Anspruch 1, umfassend eine mobile Vorrichtung (1), die zwischen den zwei elastischen Folien (15, 16) angeordnet und an einem Rahmen (12) aufgehängt ist, wobei der Rahmen (12) aufgrund des Vorhandenseins der mobilen Vorrichtung (1) gestreckt ist und die elastischen Folien (15, 16) die Vorrichtung (1) eng umhüllen.

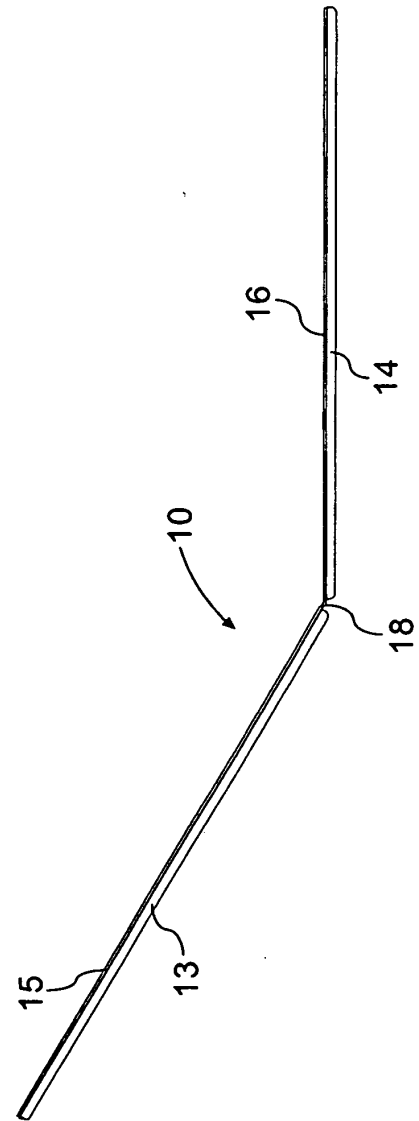
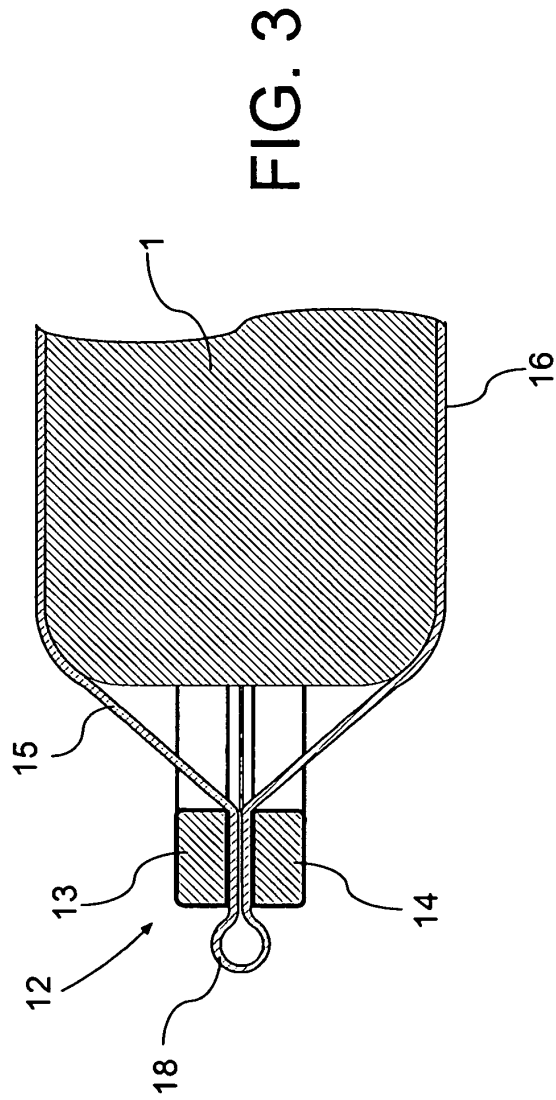
Revendications

1. Emballage (10) destiné à maintenir un article (1), l'emballage comportant :
 - deux cadres généralement plans (12) mutuellement articulés de manière à pouvoir se déplacer entre une position fermée, dans laquelle les deux cadres généralement plans (12) se superposent mutuellement, et une position ouverte dans laquelle les deux cadres généralement plans (12) ne se superposent pas mutuellement, les deux cadres généralement plans (12) présentant un contour sensiblement identique définissant une ouverture ;
 - un film souple (15, 16) placé au-dessus de chaque ouverture et rattaché à chacun des deux cadres généralement plans (12), les films souples (15, 16) étant étirés lorsque l'article (1) est placé entre les deux cadres généralement plans (12), et lorsque les deux cadres généralement plans (12) sont dans la position fermée, dans lequel les films souples (15, 16) entrent en contact de manière résiliente avec l'article (1) et appuient de manière résiliente sur l'article (1) en direction de l'autre film souple (15, 16) lorsque les deux cadres généralement plans (12) sont dans la position fermée avec l'article (10) situé entre ceux-ci, et dans lequel les deux films sou-

ples (15, 16) sont formés par un fragment de film intégral (15, 16), avec une partie du fragment de film intégral (18) connectant les parties respectives du film souple (15, 16) qui sont rattachées aux deux cadres généralement plans respectifs (12), **caractérisé en ce que** la partie du fragment de film intégral (18) connectant les parties respectives du film souple (15, 16) est la charnière (18) dudit emballage (10).

2. Emballage selon la revendication 1, comprenant en outre un moyen pour maintenir les cadres (12) dans la position fermée.
3. Emballage selon la revendication 1, dans lequel lesdits films (15, 16) transmettent la lumière.
4. Emballage selon la revendication 1, dans lequel le film (15, 16) est une membrane souple, extensible, élastomère, et/ou ledit cadre (12) est réalisé en un matériau polymère ou une composition de cela.
5. Emballage selon la revendication 1, dans lequel les films (15, 16) sont étirés au-dessus de l'ouverture.
6. Emballage selon la revendication 1, comprenant une structure sensiblement plate et/ou plane lorsqu'il n'y a pas d'article (1) entre les films (15, 16).
7. Emballage selon la revendication 1, dans lequel lesdits cadres (12) comprennent des parties complémentaires d'une connexion par encliquetage.
8. Emballage selon la revendication 1, comprenant un dispositif mobile (1) placé entre les deux films souples (15, 16), suspendu à un cadre (12), dont les cadres (12) sont étirés sous l'effet de la présence du dispositif mobile (1) et dont les films souples (15, 16) enveloppent le dispositif (1) fermement.





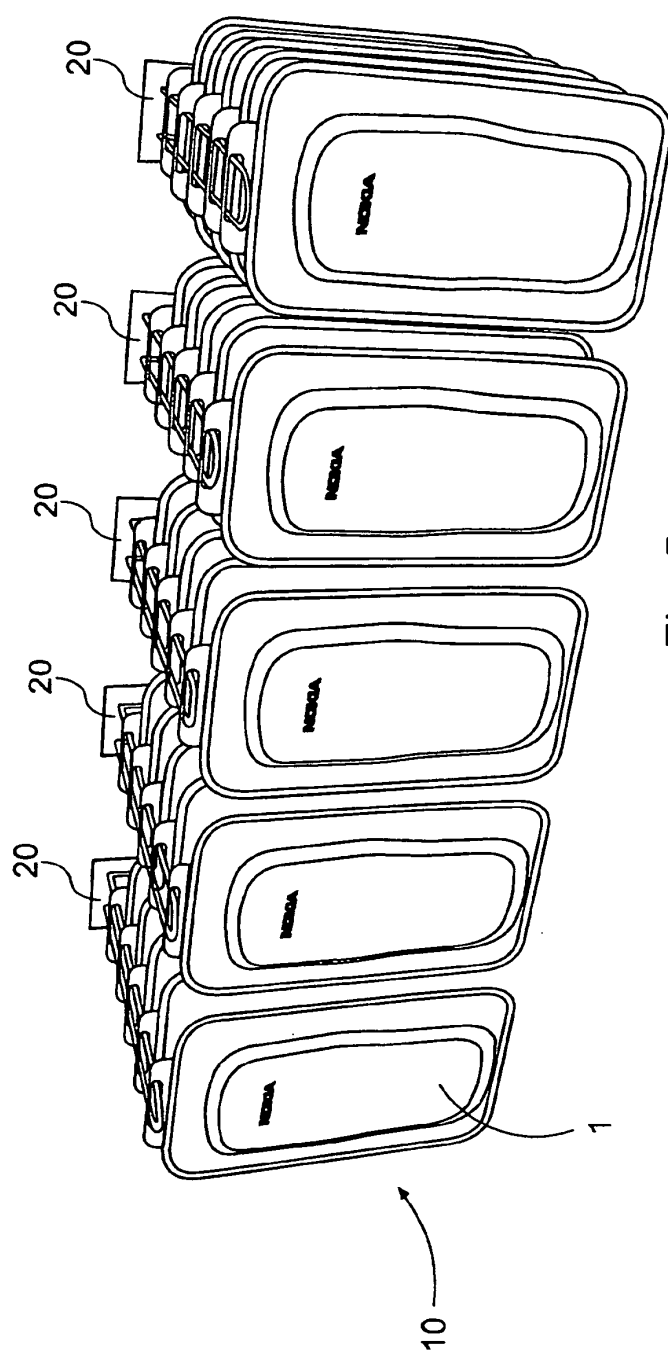


Fig. 5

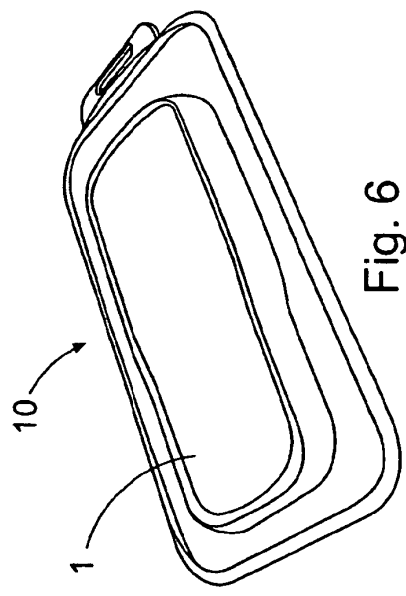


Fig. 6

REFERENCES CITED IN THE DESCRIPTION

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