



(11) **EP 2 429 923 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention
of the grant of the patent:
14.12.2016 Bulletin 2016/50

(51) Int Cl.:
B65D 85/36 (2006.01) **B65D 30/02** (2006.01)
B65D 33/02 (2006.01) **B65D 75/58** (2006.01)
B65D 33/01 (2006.01) **B65D 81/38** (2006.01)

(21) Application number: **10774573.9**

(86) International application number:
PCT/DK2010/050100

(22) Date of filing: **11.05.2010**

(87) International publication number:
WO 2010/130259 (18.11.2010 Gazette 2010/46)

(54) **PIZZA PACKAGING**

PIZZAVERPACKUNG

EMBALLAGE DE PIZZA

(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 SE SI SK SM TR**

(74) Representative: **Gregersen, Niels Henrik et al**
Patrade A/S
Fredens Torv 3A
DK-8000 Aarhus C (DK)

(30) Priority: **14.05.2009 DK 200900612**

(56) References cited:
WO-A1-2008/055554 WO-A1-2008/074060
BE-A3- 1 016 104 BE-A3- 1 016 104
FR-A1- 2 888 218 US-A- 3 650 383
US-A- 4 709 851 US-A- 5 180 075
US-A- 5 180 075 US-A- 6 019 511
US-A1- 2003 017 243 US-A1- 2003 127 462
US-A1- 2005 274 780 US-A1- 2005 274 780
US-A1- 2009 071 850 US-A1- 2009 071 850
US-B1- 6 581 764

(43) Date of publication of application:
21.03.2012 Bulletin 2012/12

(73) Proprietor: **PIZZAflex Development A/S**
7400 Herning (DK)

(72) Inventor: **ØSTERGAARD, Ole**
DK-7400 Herning (DK)

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

Description

Field of the Invention

[0001] The present invention concerns a pizza packaging of the kind specified in the introduction of claim 1.

Background of the Invention

[0002] A traditional pizza packaging consists of a flat folding box which is often made of cheap recycled cardboard, and which in connection with preparation - folding the flat foldable boxes - demands extensive and relatively time-consuming work. Besides, this manual handling may constitute a risk of contamination by touch.

[0003] The busy periods in pizza bakeries are of course concentrated around eating times, i.e. lunchtime from 11 to 14 and dinnertime from 17 to 21. Prior to these busy periods, the staff prepares/folds a very large number of flat folding boxes which in the folded up condition, i.e. with folded and fixed box part and with open lid, are placed in high stacks.

[0004] It is thus very normal that almost any table or disk face of a pizza bakery close to the mentioned busy periods are filled with high stacks of frequently hundreds of folded up and prepared pizza boxes.

[0005] In other words, much work time and storage space is used for preparation and folding up of prior art pizza boxes of cardboard so that the subsequent packing of baked pizzas and distribution thereof can be made as efficient as possible.

[0006] However, pizza consumers are conscious of hygiene and environment and aware of any possible health risk. It has appeared that the type of recycled cardboard used extensively for making pizza folding boxes may contain residues of heavy metals and other hazardous substances that may present a food safety hazard.

[0007] A possible alternative may be using a cleaner and more expensive cardboard or fibre material for making the popular flat folding boxes for pizzas, however implying a considerable increase in the cost of the known folding pizza boxes.

[0008] Auxiliary request amendments - replacement sheets - 09.05.2016

[0009] Moreover, the food authorities recommend that fibre-based materials in general are not used for direct contact with food.

[0010] US 2003/0127462 A1 discloses a transportable packaging system for products that are best carried in a horizontal position and that require spaced, non crushable stacking. It is useful in the food industry as packaging for pizza, heated fast-food items, salads, deli products, and bakery goods. This packaging system has additional uses outside the food industry, for example as lightweight, cost-effective packaging for crushable arts and crafts, floral wreaths, toys, and any other products that are best kept in a horizontal position during storage and transport and that need to be stacked apart without crush-

ing. This packaging is potentially reusable, and thus environmentally friendly.

[0011] US 2005/0274780 A1 discloses a carry-out food container comprised of a flexible open-ended, bag-like container having an upper partially transparent panel and a lower panel, in combination with a food tray which is moveable into and out of the closable open end of the bag-like container, the tray having a food-supporting planar base panel with a peripheral edge supporting an upstanding sidewall that extends partially there around to define an unrestricted access to the interior of the tray, the tray being freely moveable within the container to a position where the tray base panel is beneath the window and its unrestricted access is adjacent to and slightly inward of the openable end of the closable container.

[0012] US 2009/0071850 A1 discloses a package for a hot food item may include an enclosure adapted to receive the hot food item, and a barrier disposed within the enclosure. The barrier may include a moisture impermeable portion covering at least a first portion of the hot food item such that moisture from the first portion is at least partially retained therein. The package is adapted to retain moisture in the first portion of the hot food item, while reducing moisture accumulation in a second portion of the hot food item.

[0013] US 5 180 075 A discloses a pizza delivery system which combines the use of inexpensive paper bags and flat paperboard trays, with an insulating reusable container that permits pizza to be delivered in a warm, unsoggy condition.

[0014] Auxiliary request amendments - replacement sheets - 09.05.2016

[0015] BE 1 106 104 A3 discloses a container for transporting warm pizzas, the container has a polyolefin coating on at least one of its inside walls in order to keep the pizza warm. The bag-shaped container for transporting warm pizzas comprises flat front and rear walls connected to each other by side walls with a harmonica fold construction so that the bag can be folded flat or opened up in order to insert or take out the pizza. Further is disclosed a transportable stack of pre-formed bag-shaped pizza transport containers and a method for making pizza transport containers by coating a web, applying adhesive, folding the web, joining two length sides together to form a length direction joint, producing loose containers from the web and closing one end of each loose container.

Object of the Invention

[0016] On this background, the object of the invention is to indicate a new and improved pizza packaging which by means of relatively simple means enables counteraction of the above mentioned problems by the prior art pizza packagings.

Description of the Invention

[0017] The pizza packaging according to the invention is characterised in that said bag packaging includes a lower support member consisting of a plate-shaped rigid material, that said lower support is disposed at the inner side of the lower part and fastened to the latter and that said support member is constituted by a flat piece of plastic, e.g. polypropylene, which at the top side along its periphery is designed with upright, upwardly tapering support columns, the pointed ends of which being adapted to engage complementarily designed recesses in the bottom side of a corresponding flat plastic piece.

[0018] By means of relatively simple means it hereby becomes possible to counteract the above mentioned problems connected with the work of folding up the prior art pizza packagings in the shape of flat folding boxes of cardboard.

[0019] Besides, an acknowledged problem by using the prior art flat pizza boxes of cardboard is avoided while at the same time eliminating cardboard dust and small cardboard pieces whirling around in the pizza bakery when the pizza boxes are assembled. As an important extra benefit, the disagreeable taste of cardboard in the pizza is eliminated at the same time.

[0020] Auxiliary request amendments - replacement sheets - 09.05.2016

[0021] Irrespective of the support member being placed inside or outside of the bag packaging, it may be advantageous that said support member is made from the same type of plastic material as the bag film, e.g. polypropylene, since hereby it will be very easy to fix the support member to the plastic film by means of an appropriate number of weld points.

[0022] It may be advantageous to design the pizza packaging according to the invention such that the inner support member is constituted by a plastic disc with a plane centre surface of about the same size as a pizza and with an annular edge part sloping upwards/outwards. Hereby is achieved the extreme advantage that the pizza can be enclosed by the annular edge part which provides lateral support when stacking several bag-packed pizzas.

[0023] The pizza packaging according to the invention may further be designed such that said the upper part is constituted by a plastic film with encapsulated metal coating. Hereby it becomes possible to achieve a further important advantage by a bag-packaging according to the invention since the metallised bag will contribute to keeping the pizza warm for a longer time than in the common pizza packaging.

[0024] On the other hand, the pizza packaging according to the invention is advantageous such that said upper part at least in an edge area outside a circular centre area with a size corresponding to that of a pizza is designed with a large number of micro-perforations, such that the pizza will avoid being unnecessarily soft and spongy.

[0025] With the intention of facilitating removal of the pizza, or taking a piece of the pizza, the pizza packaging according to the invention may advantageously be designed such that the upper part is designed with a circular central tearing field with a size corresponding to that of a pizza and with a gripping tab disposed centrally in the opening, the tearing field including gripping tab being formed by a series of annular perforations.

[0026] The pizza packaging according to the invention is suitably provided in varying sizes at least corresponding to pizzas with diameters of about 23, 30 and 40 cm.

[0027] Auxiliary request amendments - replacement sheets - 09.05.2016

[0028] With the object of making the pizza packaging according to the invention stackable, it may advantageously be designed such that the inner support member is constituted by a flat piece of plastic, e.g. polypropylene, which at the top side along its periphery is designed with upright, preferably hollow, upwardly tapering support columns, the pointed ends of which being adapted to engage complementarily designed recesses in the bottom side of the flat plastic piece.

[0029] It may furthermore be expedient to design the pizza packaging according to the invention such that the support columns and the recesses, respectively, are angularly spaced apart along the periphery of the flat plastic piece such that a number of pizza packagings after turning 90° may be stacked upon each other, as the pointed ends of the support columns in the lower pizza packaging may engage the recesses of an upper pizza packaging with the same design.

Description of the Drawing

[0030] The invention is explained below in more detail with reference to the drawing, on which:

Fig. 1 shows a schematic view of an embodiment having only some of the features of a pizza packaging according to the invention;

Fig. 2 shows a schematic view of another embodiment having only some of the features of a pizza packaging according to the invention;

Fig. 3 shows a plan view of an embodiment of a support plate according to the invention with upright spacer columns for use in the pizza packaging according to the invention; and

Fig. 4 shows a plan sectional view of two stacked support plates, cf. Fig. 3.

Detailed Description of the Invention

[0031] The pizza packaging 2 shown in Fig. 1 is designed as a bag packaging including a lower part 4 and an upper part 6 which are both made of plastic film, e.g.

polypropylene,

[0032] Auxiliary request amendments - replacement sheets - 09.05.2016 and which at both side edges 8, 10 and one rear side edge 12 are interconnected by weld seams.

[0033] At an open front side, the lower part 4 has an extension forming a closure flap 16 which is intended for bending upwards/forwards for fastening to an upper side edge of the upper part 6, as the closure flap 16 for this purpose is provided with a transverse strip 18 of adhesive which in a way known per se is temporarily covered by a tearing strip 20.

[0034] The upper part 6 on the drawing is shown darker than the lower part 4, indicating that the upper part 6 is provided with an encapsulated metal coating having the purpose of keeping the pizza warm and which does not get in contact with the pizza. The upper part 6 is around a central circular field 22 which in size corresponds to the size of a pizza designed with an annular zone 24 provided with a very large number of micro perforations 26 so that vapour may escape from the hot pizza which thereby does not become soft and spongy.

[0035] The central circular field 22 of the upper part 6 forms a tearing field 28 which at the front side of the bag packaging 2 has a tearing tab 30. The tearing field including the tearing tab are provided by an annular series of perforations 32 such that the tearing field 28 can be torn up by gripping the gripping tab 30 and pulling backwards/upwards so that the tearing field 28 - like a lid - is pulled off, providing free access to the pizza.

[0036] At the lower part 4 is provided a lower square support member 34 which is intended for supporting a pizza disposed inside the pizza bag 2, and which is constituted by a relatively stiff material, e.g. fibre cardboard or plastic. The support member 34 is fastened to the outer side of the lower part 4.

[0037] The pizza bag 36 shown in Fig. 2 is largely designed as the pizza bag 2, why the same reference numbers are used for the same parts, the difference being that the outer support member 34 has been substituted by an inner disc-shaped support member 38 provided with an annular upwardly/outwardly sloping edge part 40.

[0038] Irrespective of the support member has been disposed inside or outside the bag packaging 2, it may be advantageous if the support member 34, 38 is made of the same type Auxiliary request amendments - replacement sheets - 09.05.2016 of plastic material as the bag film, e.g. polypropylene, such that it becomes further easy to fix the support member 34, 38 to the lower part 6 by means of a suitable number of weld points.

[0039] A very important aspect of the invention is to save work time and storage space for preparation and folding of prior art folding boxes of cardboard, so that the subsequent packing of baked pizzas can be made efficient by using quite flat bag packagings which in a way known per se can be stored suspended on a wall in layers of bags, wherefrom the bags can be taken one by one in the situation of use.

[0040] Figs. 3 and 4 show a preferred embodiment of a support plate 42 for use by a stackable pizza packaging. The support plate 42 which is made of a suitable plastic material, e.g. polypropylene, is U-shaped along the periphery with upright hollow upwardly tapering support columns 44, the height of which adapted to the thickness of a pizza.

[0041] The pointed ends 46 of the support columns 44 are adapted to interact with recesses 48 made at the bottom side of a corresponding support plate 42, as the mutual angular position of support columns 44 and recesses 48 are adapted such that they also fit together after turning an upper pizza packaging 90°, so that it may be supported on the support columns 44 by a corresponding lower support plate 42 of a corresponding pizza packaging (Fig. 4). For the sake of clarity, the bag-shaped pizza packaging is omitted in Fig. 4.

[0042] In Fig. 3, the mutual angular displacement is 110° and 70° between two support columns 44 and two recesses 48, respectively. Any other angular displacement may be applied if only their sum is 180°. For example, a mutual angular displacement of 100° and 80°, respectively, between support columns 44 and recesses 48 is also acceptable.

[0043] In connection with production and distribution, support plates 42 may be stacked in a denser and less space-consuming stack because the support columns 44 are hollow and open downwardly. In practice, the support columns may probably have greater width along the periphery of the support plate 42, but may still be hollow and open downwardly.

Claims

1. A pizza packaging for baked, ready-to-eat pizza, including a lower part (4) or bottom upon which the pizza may be supported, and an upper part (6) or a lid that may protect the top side of the pizza, said packaging is designed as a bag-shaped packaging of plastic, said lower and upper parts are constituted by a plastic film which at opposite side edges (8,10) and one end edge (12) are interconnected by welds, said bag packaging has an opening at a front side edge with a closure flap (16) constituted by an extended part of the lower part, **characterised in that** said bag packaging includes a lower support member (42) consisting of a plate-shaped rigid material, that said lower support is disposed at the inner side of the lower part and fastened to the latter and that said support member is constituted by a flat piece of plastic, e.g. polypropylene, which at the top side along its periphery is designed with upright, upwardly tapering support columns (44), the pointed ends of which being adapted to engage complementarily designed recesses (48) in the bottom side of a corresponding flat plastic piece.

2. Pizza packaging according to claim 1, **characterised in that** said upper part (4) is constituted by a plastic film with encapsulated metal coating, and that said upper part at least in an edge area outside a circular centre area with a size corresponding to that of a pizza is designed with a large number of micro-perforations (26).
3. Pizza packaging according to claim 1, **characterised in that** said upper part is designed with a circular central tearing field (22) with a size corresponding to a pizza and with a gripping tab (30) disposed centrally in the opening, the tearing field including gripping tab being formed by perforations (32).
4. Pizza packaging according to any of the preceding claims **characterised in that** said packaging is provided at least for pizzas with diameters of about 23, 30 and 40 cm.
5. Pizza packaging according to claim 1 **characterised in that** the support columns (44) and the recesses (48), respectively, are angularly spaced apart along the periphery of the flat plastic piece such that a number of pizza packagings after turning 90° may be stacked upon each other, as the pointed ends of the support columns (44) in the lower pizza packaging may engage the recesses (48) of an upper pizza packaging with the same design.

Patentansprüche

1. Pizzaverpackung für eine gebackene, verzehrfertige Pizza mit einem unteren Teil (4) oder Boden, auf dem die Pizza getragen werden kann, und einem oberen Teil (6) oder einem Deckel, der die Oberseite der Pizza schützen kann, wobei die Verpackung als eine taschenförmige Verpackung aus Kunststoff ausgestaltet ist, das untere und das obere Teil durch eine Kunststofffolie gebildet werden, die an gegenüberliegenden Seitenkanten (8, 10) und einer Endkante (12) durch Schweißnähte verbunden sind, die Taschenverpackung eine Öffnung an der vorderen Seitenkante mit einer Verschlussklappe (16), die von einem verlängerten Teil des unteren Teils gebildet wird, aufweist,
dadurch gekennzeichnet, dass die Taschenverpackung ein unteres Stützelement (42) aufweist, das aus einem plattenförmigen steifen Material besteht, wobei das untere Stützelement an der Innenseite des unteren Teils angeordnet und an diesem befestigt ist, und dass das Stützelement durch ein flaches Teil aus Kunststoff, z. B. Polypropylen, gebildet wird, welches an der Oberseite entlang seines Umfangs mit senkrechten, nach oben verjüngten Stützsäulen (44) ausgestaltet ist, deren spitz zulaufende Enden ausgelegt sind, in komplementär ausgestaltete Ver-

tiefungen (48) in der Bodenseite eines entsprechenden flachen Kunststoffteils einzugreifen.

2. Pizzaverpackung nach Anspruch 1, **dadurch gekennzeichnet, dass** das obere Teil (4) durch eine Kunststofffolie mit einer eingekapselten Metallbeschichtung gebildet wird, und dass das obere Teil zumindest in einem Kantenbereich außerhalb eines kreisförmigen Mittelbereichs mit einer Größe entsprechend derjenigen der Pizza mit einer großen Anzahl von Mikroperforierungen (26) ausgestaltet ist.
3. Pizzaverpackung nach Anspruch 1, **dadurch gekennzeichnet, dass** das obere Teil mit einem kreisförmigen mittigen Aufreißfeld (22) mit einer Größe entsprechend einer Pizza und mit einer Greiflasche (30) ausgestaltet ist, die mittig in der Öffnung angeordnet ist, wobei das Aufreißfeld Greiflaschen, die von Perforierungen (32) gebildet werden, umfasst.
4. Pizzaverpackung nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** die Verpackung zumindest für Pizzas mit Durchmessern von ca. 23, 30 und 40 cm bereitgestellt wird.
5. Pizzaverpackung nach Anspruch 1, **dadurch gekennzeichnet, dass** die Stützsäulen (44) und die Vertiefungen (48) entlang des Umfangs des flachen Kunststoffteils jeweils winkelig voneinander beabstandet sind, so dass eine Anzahl von Pizzaverpackungen, nachdem sie um 90° gedreht wurden, aufeinander gestapelt werden können, da die spitz zulaufenden Enden der Stützsäulen (44) in der unteren Pizzaverpackung in die Vertiefungen (48) einer oberen Pizzaverpackung mit der gleichen Ausgestaltung eingreifen können.

Revendications

1. Emballage de pizza pour pizza cuite au four prête-à-manger, incluant une partie inférieure (4) ou un fond sur lequel la pizza peut être supportée, et une partie supérieure (6) ou un couvercle qui peut protéger le côté supérieur de la pizza, ledit emballage est conçu comme un emballage en plastique en forme de sachet, lesdites parties inférieure et supérieure sont constituées par un film en plastique dont les bords latéraux opposés (8, 10) et un bord d'extrémité (12) sont reliés par des soudures, ledit emballage-sachet comporte une ouverture au niveau d'un bord latéral avant avec un rabat de fermeture (16) constitué par une partie étendue de la partie inférieure, **caractérisé en ce que** ledit emballage-sachet inclut un élément de support inférieur (42) constitué d'un matériau rigide en forme de plaque, **en ce que** ledit support inférieur est disposé au niveau du côté intérieur de la partie inférieure et fixé à celle-ci et **en ce**

que ledit élément de support est constitué par une pièce plate en plastique, par exemple du polypropylène, qui, au niveau du côté supérieur le long de sa périphérie, est conçue par des colonnes de support verticales se resserrant vers le haut (44), dont les extrémités pointues sont adaptées pour s'engager avec des évidements de conception complémentaire (48) dans le côté inférieur d'une pièce plate en plastique correspondante.

5

10

2. Emballage de pizza selon la revendication 1, **caractérisé en ce que** ladite partie supérieure (4) est constituée par un film en plastique à revêtement métallique encapsulé, et **en ce que** ladite partie supérieure, au moins dans une zone de bord à l'extérieur d'une zone centrale circulaire d'une taille correspondant à celle d'une pizza, est équipée d'un grand nombre de micro-perforations (26).
3. Emballage de pizza selon la revendication 1, **caractérisé en ce que** ladite partie supérieure est équipée d'un champ de déchirure central circulaire (22) d'une taille correspondant à une pizza et d'une languette de préhension (30) disposée au centre de l'ouverture, le champ de déchirure incluant la languette de préhension étant formé par des perforations (32).
4. Emballage de pizza selon l'une quelconque des revendications précédentes **caractérisé en ce que** ledit emballage est prévu au moins pour des pizzas dont les diamètres font environ 23, 30 et 40 cm.
5. Emballage de pizza selon la revendication 1 **caractérisé en ce que** les colonnes de support (44) et les évidements (48), respectivement, sont angulairement espacés le long de la périphérie de la pièce plate en plastique de telle sorte qu'un certain nombre d'emballages de pizza après rotation de 90° peuvent être empilés les uns sur les autres, comme les extrémités pointues des colonnes de support (44) dans l'emballage de pizza inférieur peuvent s'engager avec les évidements (48) d'un emballage de pizza supérieur ayant la même conception.

15

20

25

30

35

40

45

50

55

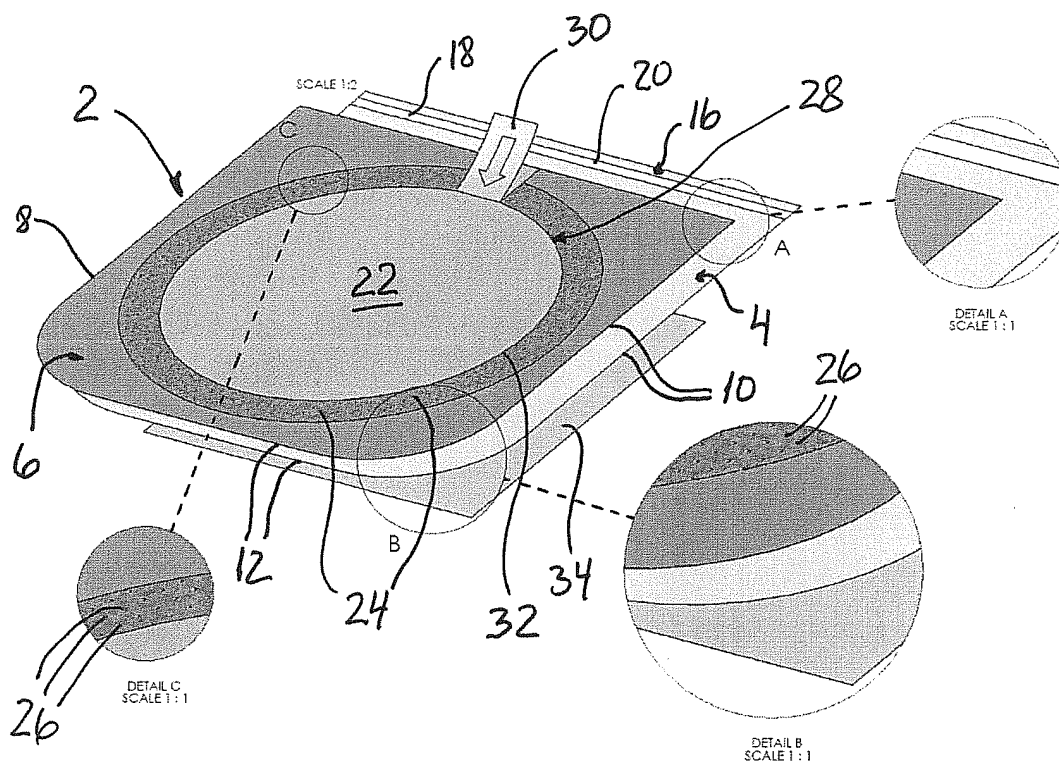


Fig. 1

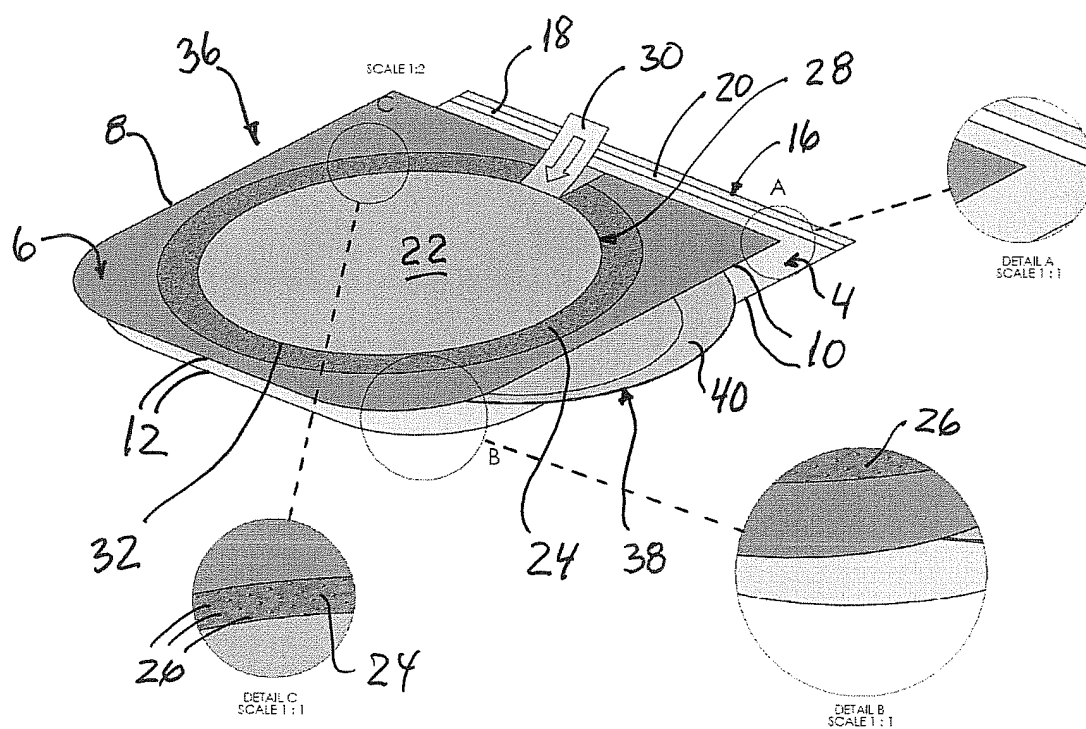


Fig. 2

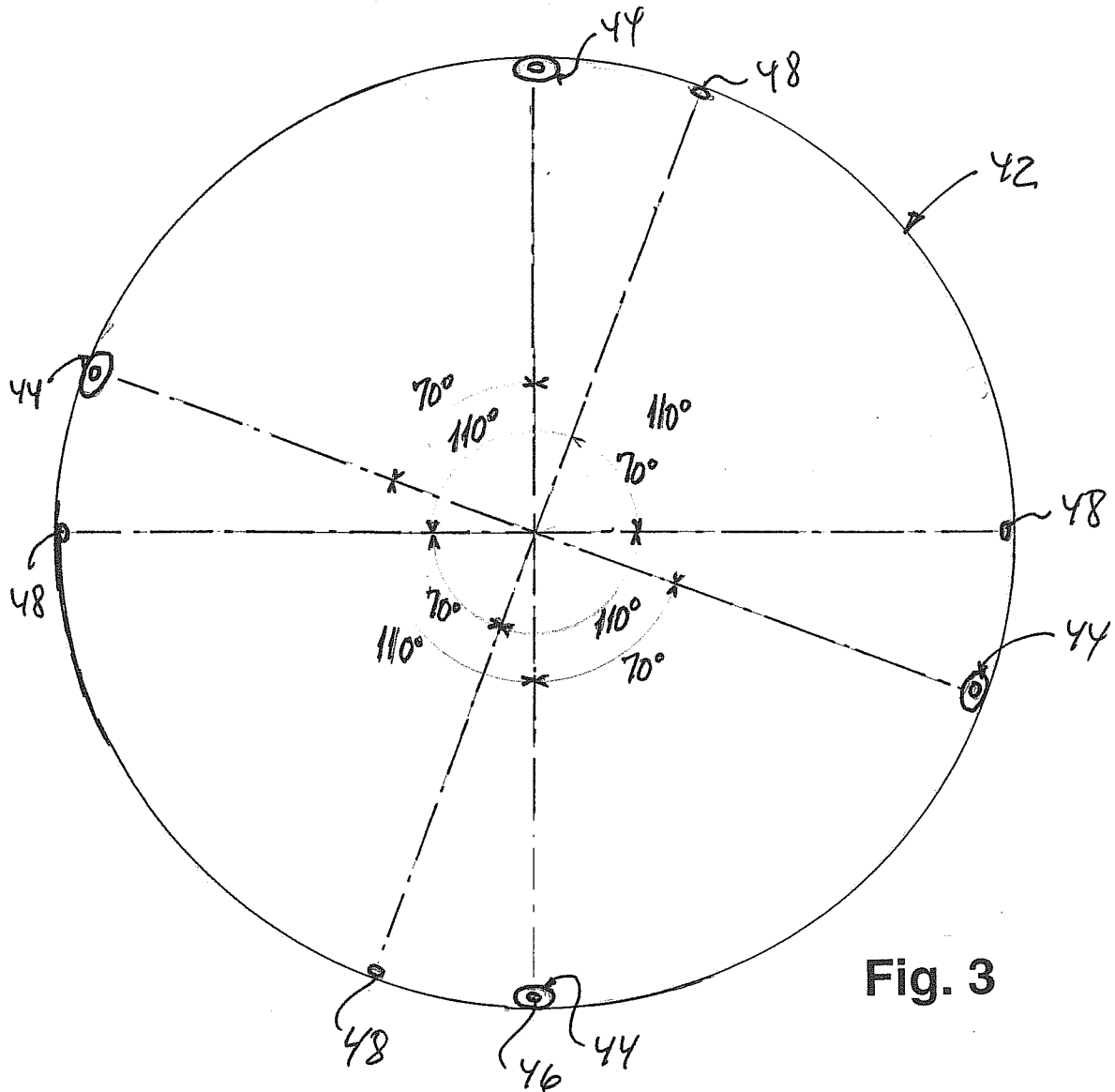


Fig. 3

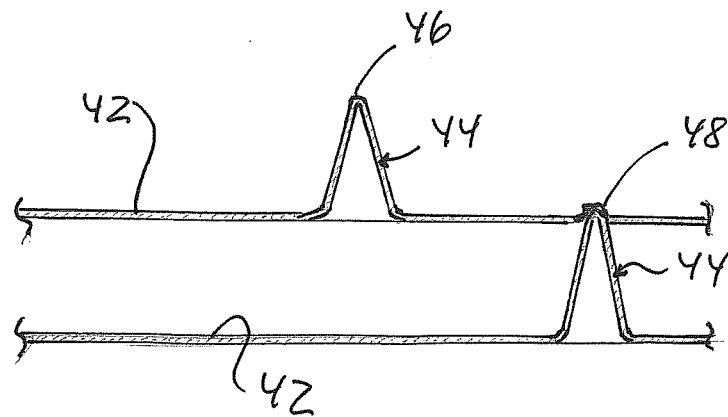


Fig. 4

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 20030127462 A1 **[0010]**
- US 20050274780 A1 **[0011]**
- US 20090071850 A1 **[0012]**
- US 5180075 A **[0013]**
- BE 1106104 A3 **[0015]**