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(54) MULTILAYER SUPPORT, PARTICULARLY FOR FOOD PRODUCTS

MEHRSCICHTIGER TRÄGER, INSBESONDERE FÜR LEBENSMITTELPRODUKTE

SUPPORT MULTICOUCHE, EN PARTICULIER DESTINÉ À DES PRODUITS ALIMENTAIRES

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EP 3 585 706 B1

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Description

[0001] The present invention relates to a multilayer support particularly for food products, to a package comprising said support and to related manufacturing processes.

[0002] Patent application FR2976923A1 describes the use of bi-material supports for the packaging of food products such as meat or fish, in which a sheet of rigid cardboard is coated on a first face by a peelable film made of plastic material, which is used to keep the food product separate from the paper material, preventing any contaminations. This cardboard sheet has a pre-cut line which does not affect the peelable film and allows to remove the peelable film completely by tearing manually along the pre-cut line a portion of the cardboard sheet and pulling it so that it drags the peelable film with it. In this manner it is possible to separate the paper part from the plastic part and throw them into separate waste containers for any respective recycling.

[0003] One drawback of this known solution is that the pre-cut line enters the cardboard sheet from both faces. Such a process is complicated to perform, since the mutual alignment of the two mutually opposite incisions cannot be guaranteed. Furthermore, the fact that the pre-cut line enters also from the face that is opposite with respect to the one on which the peelable film is applied might cause the adhesion of paper material of the region of the pre-cut on the adhesive part of the peelable film when this film is removed.

[0004] Another drawback is that while the support is being peeled off, the cardboard sheet might bend or be deformed, making it difficult to remove the peelable film.

[0005] Furthermore, when a second film that retains the food product on the support is applied to the support, such as in skin packs, said support can warp due to the fixing of said second film on the support and the warping may increase while the package is kept in a low-temperature environment such as a refrigerator.

[0006] The aim of the present invention is to provide a multilayer support particularly for food products, a package comprising said support and corresponding manufacturing processes that are capable of improving the prior art in one or more of the aspects indicated above.

[0007] Within this aim, an object of the invention is to simplify the removal of the peelable film from the support.

[0008] Another object of the invention is to improve the full removal of the peelable film from the support.

[0009] An object of the invention is also to obtain, after peeling, two components (peelable film and card or cardboard blank) that are fully recyclable. In particular, the peelable film after peeling is entirely free from paper residues.

[0010] A further object is to reduce or eliminate the deformations or bends that the support can undergo during the removal of the peelable film and/or during the manufacture or use in the closed state of the package that uses said support.

[0011] Another object is to reduce the grammage of the card or cardboard blank of the support while retaining its rigidity required for the peeling and/or preservation of the package that uses it.

[0012] Furthermore, an object of the present invention is to overcome the drawbacks of the prior art in a manner that is alternative to existing solutions.

[0013] Another object of the invention is to provide a multilayer support particularly for food products, a package comprising said support and corresponding manufacturing processes that are highly reliable, relatively easy to provide and at competitive costs.

[0014] This aim, as well as these and other objects which will become better apparent hereinafter, are achieved by a multilayer support, particularly for food products, comprising a blank made of cardboard or card which is coated on a first face by a peelable film made of plastic material, said first face comprising a weakened line that is covered by said peelable film and is adapted to form on said blank a closed area that is delimited by at least one edge of said blank and by said weakened line, so that said closed area can consequently be torn away from the rest of the blank together with the peelable film, said weakened line being obtained by perforation or scoring performed starting from said first face toward the opposite face of the blank, characterized in that said weakened line is formed by a continuous incision which passes through to the second face only at discrete through portions, at least one of said discrete through portions intersecting said at least one edge of the blank.

[0015] The aim and objects of the invention are also achieved by a package for food products which comprises the above support and a covering film that is fixed on said support, so that the food product is interposed between said covering film and said peelable film.

[0016] The aim and objects of the invention are also achieved by a method for manufacturing packages of food products, characterized in that it comprises the steps of:

- providing the above support;
- interposing at least one food product between said support and a covering film;
- fixing said covering film to said support.

[0017] The aim and objects of the invention are also achieved by a method for manufacturing a multilayer support particularly for food products, characterized in that it comprises the steps of:

- scoring or perforation of a card or cardboard blank from a first face toward a second face of said blank in order to obtain a weakened line, said weakened line being formed by a continuous incision which passes through to the second face only at discrete through portions, at least one of said discrete through portions intersecting said at least one edge of the blank;

- coating said first face with a peelable film made of plastic material in order to obtain said multilayer support, said weakened line being covered by said peelable film and being adapted to form on said support a closed area that is delimited by said at least one edge of the blank and by said weakened line, so that said closed area can be torn away from the rest of the blank together with the peelable film.

[0018] Further characteristics and advantages of the invention will become better apparent from the description of preferred but not exclusive embodiments of the invention, illustrated by way of nonlimiting example in the accompanying drawings, wherein:

Figure 1 is a view of a multilayer support according to a first embodiment of the invention;

Figure 2 is a sectional view, taken along the plane II-II of Figure 1, which passes at a half-cut incision point P of the weakened line;

Figure 3 is a sectional view, taken along the plane III-III of Figure 1, which passes at a fully cut incision point of the weakened line, i.e., at a discrete through portion of the weakened line;

Figure 4 is a sectional view of a support according to a second embodiment of the invention, in a position that is similar to the one of the plane II-II of the support of Figure 1, i.e., in a half-cut incision point of the weakened line;

Figure 5 is a view of the support of Figure 1 while it is being peeled;

Figure 6 is a view of various multilayer supports according to the invention and of the corresponding relief ribs;

Figure 7 is a sectional view of the central ribs, taken along the plane VII-VII of the example D of the preceding figure;

Figure 8 is an exploded view of the support of Figure 1 before the impression of the ribs;

Figure 9 is a rear view of a portion of the support of Figure 1 as the weakened line begins to be fractured;

Figure 10 is view of a die-cutter used to obtain the weakened line, during its approach toward the first face of the blank according to the invention;

Figure 11 is a schematic view of the arrangement of the die-cutter at the end of the incision of the weakened line;

Figure 12 is a view of a package that uses the support according to the invention;

Figure 13 is a view of a multilayer support according to a third embodiment of the invention;

Figure 14 is a view of the support of Figure 13 while it is being peeled off.

[0019] With reference to the cited figures, in which, for simplicity, the same reference numbers are used to refer to the same or like parts, a multilayer support for food products according to the invention is designated gener-

ally by the reference numeral 1 and comprises a blank 2 made of cardboard or card, which is coated on a first face 21 by a peelable film 3 made of plastic material, in particular a barrier film suitable for contact with food.

[0020] The blank 2 can be a sheet made of cardboard or card that is substantially planar and can have a thickness comprised between 100 microns and 490 microns and a grammage comprised between 100 g/m² and 500 g/m².

[0021] The peelable film 3 can have a thickness comprised between 30 microns and 90 microns and is preferably applied exclusively to the first face 21 without covering, even just partially, the second face 22 of the blank 2 that lies opposite the first face 21.

[0022] The coupling between the blank 2 and the peelable film 3 can occur by means of per se known lamination methods, for example by applying beforehand a layer of adhesive to the face of the peelable film 3 to be coupled to the blank 2.

[0023] Advantageously, in order to facilitate the full separation of the peelable film 3 from the blank 2, the latter can be treated beforehand so as to have on the first face 21 a separation layer 23 which, during normal use, is interposed between the blank 2 and the peelable film 3, as shown in Figure 4. Said separation layer 23 comprises a release agent, which can be included in an adapted paint that is spread or sprayed onto the first face 21 of the blank 2 in order to form the separation layer 23.

[0024] The first face 21 of the blank 2 further comprises a weakened line 4 which, in the support 1, is coated in a "bridging fashion" by the peelable film 3, as shown for example in Figures 2 and 3. Said weakened line 4 is obtained by perforation or incision provided on the blank 2 before coating it on the first face 21 with the peelable film 3 and exclusively starting from the first face 21 toward the opposite face 22 of the blank 2, so that the material of the blank 2, in the support 1, is spaced from the peelable film 3 on the first face 21 along the entire weakened line region and therefore residues of this material do not remain attached to the film 3 when it is removed from the blank 2.

[0025] The weakened line 4 renders the blank 2 breakable along said line and is adapted to form on the blank 2 a closed area 11 that is delimited by at least one edge 13 of the blank 2 and by the weakened line 4, so that said closed area 11 can consequently be torn from the rest 12 of the blank 2 together with the entire peelable film 3 and acts therefore as a sort of pull-tab. In the illustrated example, the closed area 11 corresponds to a corner end of the blank 2, since the weakened line 4 has a direction that crosses two adjacent edges of the blank 2. The closed area 11 which, after peeling, remains attached to the film 3 can be removed completely from the latter manually.

[0026] According to an aspect of the invention, the weakened line 4 is formed by a continuous incision 40 along the first face 21 that divides the first face 21 into two planar surfaces that are completely separate at least

to a half-cut depth P and exits onto the second face 22 only at discrete through portions 41.

[0027] Among these discrete through portions 41, at least one end portion 41a intersects an edge 13 of the blank 2. More preferably, the discrete through portions 41a-41b that are located at both ends of the weakened line 4 intersect at least one edge 13 of the blank 2. This characteristic allows to facilitate peeling without residues from the beginning of the operation for removal of the peelable film 3 from the blank 2, since the user tends to tear the closed area 11 starting from one edge 13, wherein said area 11 is already separated from the rest 12 of the blank 2 by virtue of the through cuts 41a-41b.

[0028] The discrete through portions 41 are interlaid with bridges 42 made of cardboard or card, which are the result of the above cited perforation or incision operation and are meant to keep the blank 2 joined to the closed area 11. By looking at the blank 2, therefore, one sees a continuous line on the first face 21 and a dashed line on the second face 22, in which second face 22 the bridges 42 are all spaced from, and therefore do not affect, the perimetric edges 13 of the blank 2.

[0029] The weakened line 4 may have a rectilinear course along the plane of blank 2, such as in the embodiments of figures 1-12. In another preferred embodiment, depicted in figures 13-14, the weakened line 4 has a wavy course along the plane of blank 2, e.g. a sinusoidal course or a course corresponding to a series of alternated straight and overturned arcs. The bridges 42 are preferably arranged at the peaks of such wavy course, for example at every other half-wave as showed in Figure 14. As in the other embodiments, the wavy weakened line 4 of figure 13 is formed by a continuous incision along the blank's first face 21 that divides the first face 21 into two planar surfaces that are completely separate at least to a half-cut depth P and exits onto the blank's second face only at discrete through portions. The discrete through portions that are located at both ends of the wavy weakened line 4 intersect at least one edge 13 of the blank 2. The discrete through portions are interlaid with bridges 42 made of cardboard or card as in the embodiments of Figures 1-12.

[0030] It has been noted that a wavy course of the weakened line 4 improves the mechanical stability of the blank 2 at the bridges 42, avoiding that the closed area 11 be accidentally separated from the rest 12 of the blank 2 before the peeling operation.

[0031] According to another aspect of the invention, the blank 2 comprises relief ribs 5 which are adapted to stiffen the blank 2 during the peeling of the support 1 and/or during the manufacture or storage of the package 6 that uses said support 1. In this manner, the possibility that the blank 2 might be deformed or bent during peeling and/or that the support 1 might be deformed, warping, during normal use, i.e., when a covering film 61 is applied thereto which retains the food product 62 on the support 1, is prevented or in any case reduced.

[0032] The relief ribs 5 can be embossed and/or

creased regions and can be obtained in a per se known manner directly on the support 1, after the lamination of the blank 2 with the film 3.

[0033] For example, the relief ribs 5 can be obtained by interposing the multilayer support 1 between a printing plate and a contrast plate (not shown), which are moved mutually closer in order to impress in relief the ribs 5, which are consequently in relief on the multilayer support 1 and on the first face 21 and are recessed on the second face 22.

[0034] The ribs 5 preferably protrude from the support 1 away from the first face 21 and can be extended along the support 1 in various patterns adapted to stiffen the support 1 and the blank 2, as shown in Figure 6. For example, the ribs 5 can form a closed frame in relief along the peripheral region of the support 1 and/or can extend in a substantially longitudinal direction along a large part of the support 1 and/or be extended diagonally and/or radially in limited sectors of the support 1, for example along a perimetric band thereof. Along the support 1, the ribs 5 can be rectilinear and/or curved and/or undulated.

[0035] The ribs can be optionally provided with a saw-tooth profile 51 and at least partly concentrated in a central region of the support 1 so as to provide a friction surface for the food product 62 that is released on the support 1 being packaged.

[0036] By virtue of the ribs 5, when the support 1 is peeled as shown in Figure 5, the blank 2 remains substantially rigid, without bending, and further facilitates the full separation of the film 3 in a single move, optionally further facilitated by the presence of the separation layer 23 on the blank 2.

[0037] Furthermore, as a consequence of the manufacture of a package 6 for food products that contains the multilayer support 1, such as a skin pack, it is possible to prevent or in any case reduce the possibility that the support 1 might warp due to the tension applied by the covering film 61, which is fixed hermetically on a perimetric band of the support 1, in a per se known manner, in order to retain in the package 6 the food product 62 (which can be, for example, meat or fish).

[0038] The manufacture of the package 6 occurs in a per se known manner, but is characterized by the particular support 1 that is used.

[0039] This support 1 is manufactured beforehand by perforating or scoring the first face 21 of at least one blank made of cardboard or card 2 in order to obtain the weakened line 4, so that said perforation or incision is obtained along a direction that goes from the first face 21 toward the opposite face 22 of the blank 2, i.e., by moving the perforation or scoring tool against the first face 21 toward the second face 22 and leaving a continuous incision 40 on the first face 21 which, in portions, exits onto the second face 22.

[0040] The weakened line 4 is preferably obtained with a single operation for die-cutting the blank 2 for example by means of a toothed die-cutter 49, which is longer than the length of the weakened line 4 to be obtained, so that

the edge 13 of the blank 2 is affected by through cuts 41a-41b and not by residual bridges 42 made of paper material. The die-cutter 49 is provided with recesses 49a along the cutting edge which, despite allowing complete and continuous incision of the first face 21, generate a half-cut only in the discrete regions that produce said bridges 42, while the remaining regions 41, including the regions 41a-41b of the edge 13 of the blank 2, are affected by a complete cut.

[0041] This perforation or incision step can be preceded optionally by a step of application of the separation layer 23 on the first face 21.

[0042] The first face 21 is then coated, preferably fully, with the peelable film 3, for example by lamination, so that the weakened line 4 is covered like a bridge by said film 3, which consequently joins the closed area 11 to the remaining portion 12 of the blank 2.

[0043] Furthermore, there is a step for the relief impression of the ribs 5 that are adapted to stiffen the blank 2 and the support 1.

[0044] Advantageously, the manufacture of the supports 1 can start from a sheet of cardboard or card that has a surface extension that is substantially equal to or greater than that of a plurality of blanks 2, said sheet being perforated or scored on multiple areas in order to obtain various weakened lines 4 which are identical and its first face, on the side of which said perforation or incision has been provided, is coated completely by a peelable film. Said sheet thus perforated/scored and coated is then embossed or creased in order to obtain the ribs 5 and finally die-cut in order to obtain a plurality of supports 1.

[0045] The support 1 can then be used for the manufacture of a package 6, such as a skin pack, for example by resting thereon, and in particular on the face of the support 1 where the film 3 is located, one or more food products 62 (for example hamburgers, as in Figure 12) and by covering the face of the support 1 and the food product 62 with the covering film 61, for example by adhesive bonding or heat-sealing along a perimetric band of the support 1. Said covering film 61, made of plastic material, can also be a barrier film which is adapted for food contact and can be fixed to the support 1 in vacuum and/or in a conditioned environment.

[0046] In practice it has been found that the invention achieves the intended aim and objects, providing a support that is particularly suitable to come into contact with food products in the corresponding packages and can be peeled without leaving residues of paper material on the peelable film at the weakened line.

[0047] The invention also allows to avoid or in any case reduce significantly the risk of breakage of the peelable film due to deformations of the support 1, said deformations being prevented also when the package that uses the support is still to be opened.

[0048] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims..

[0049] In practice, the materials used, so long as they are compatible with the specific use, as well as the contingent shapes and dimensions, may be any according to the requirements and the state of the art.

[0050] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A multilayer support (1), particularly for food products, comprising a blank (2) made of cardboard or card which is coated on a first face (21) by a peelable film (3) made of plastic material, said first face (21) comprising a weakened line (4) that is covered by said peelable film (3) and is adapted to form on said blank (2) a closed area (11) that is delimited by at least one edge (13) of said blank (2) and by said weakened line (4), so that said closed area (11) can consequently be torn away from the rest of the blank (12) together with the peelable film (3), said weakened line (4) being obtained by perforation or scoring performed starting from said first face (21) toward the opposite face (22) of the blank (2), **characterized in that** said weakened line (4) is formed by a continuous incision (40) which passes through to the second face (22) only at discrete through portions (41), at least one (41a, 41b) of said discrete through portions (41) intersecting said at least one edge (13) of the blank (2).
2. The support according to claim 1, **characterized in that** said support (1) comprises relief ribs (5) adapted to stiffen said support (1).
3. The support according to the preceding claim, wherein said ribs (5) are embossed and/or creased regions.
4. The support according to one or more of the preceding claims, wherein said blank (2) comprises, on said first face (21), a separation layer (23) that is interposed between said blank (2) and said peelable film (3) and is adapted to facilitate the complete removal of said peelable film (3) when said area (11) is torn from the blank (2), entraining the peelable film (3) with it.
5. The support according to one or more of the preceding claims, wherein said blank (2) is a sheet of card or cardboard that is substantially planar.
6. The support according to one or more of the preceding

ing claims, wherein said weakened line has a wavy course along the blank (2).

7. A package for food products, **characterized in that** it comprises the support (1) according to one or more of the preceding claims and a covering film (61) that is fixed on said support (1) so that the food product (62) is interposed between said covering film (61) and said peelable film (3).

8. A method for manufacturing a multilayer support (1) particularly for food products, **characterized in that** it comprises the steps of:

- scoring or perforation of a card or cardboard blank (2) from a first face (21) toward a second face (22) of said blank (2) in order to obtain a weakened line (4), said weakened line being formed by a continuous incision (40) which passes through to the second face (22) only at discrete through portions (41), at least one (41a, 41b) of said discrete through portions (41) intersecting said at least one edge (13) of the blank (2);
- coating said first face (21) with a peelable film (3) made of plastic material in order to obtain said multilayer support (1), said weakened line (4) being covered by said peelable film (3) and being adapted to form on said support a closed area (11) that is delimited by said at least one edge (13) of the blank (2) and by said weakened line (4), so that said closed area (11) can be torn away from the rest of the blank (2) together with the peelable film (3).

9. The method according to claim 8, **characterized in that** it further comprises, after the coating step, a step of imprinting ribs in relief (5) at least on said blank, which are adapted to stiffen said blank (2) and/or said support (1).

10. The method according to claim 9, wherein said impression step consists of an embossing step or of a creasing step.

11. The method according to claim 9 or 10, wherein said impression step comprises a step of interposing said multilayer support (1) between a printing plate and a contrast plate and a step of mutual approach of said printing plate and said contrast plate in order to imprint in relief said ribs (5) on said blank (2) or on said support (1), respectively.

12. A method for manufacturing packages of food products, **characterized in that** it comprises the steps of:

- providing the support according to one or more of claims 1-6;

- interposing at least one food product (62) between said support (1) and a covering film (61);
- fixing said covering film (61) to said support (1).

Patentansprüche

1. Ein mehrschichtiger Träger (1), insbesondere für Lebensmittelprodukte, der ein Schnittteil (2) aus Vollpappe oder Pappe umfasst, welches auf einer ersten Fläche (21) mit Hilfe eines abziehbaren Films (3) aus Kunststoffmaterial beschichtet wird, wobei die erste Fläche (21) eine geschwächte Linie (4) umfasst, die mit dem abziehbaren Film (3) bedeckt und ausgebildet ist, um auf dem Schnittteil (2) einen geschlossenen Bereich (11) zu bilden, der durch mindestens eine Kante (13) des Schnittteils (2) und durch die geschwächte Linie (4) begrenzt ist, so dass der geschlossene Bereich (11) vom Rest des Schnittteils (12) gemeinsam mit dem abziehbaren Film (3) abgezogen werden kann, wobei die geschwächte Linie (4) durch Perforation oder Kerbmarkierung geformt wird, ausgehend von der ersten Fläche (21) zur gegenüberliegenden Fläche (22) des Schnittteils (2), **dadurch gekennzeichnet, dass** die geschwächte Linie (4) durch einen durchgehenden Einschnitt (40) geformt ist, welcher nur an abgegrenzten durchgehenden Abschnitten (41) bis zur zweiten Fläche (22) verläuft, wobei mindestens einer (41a, 41b) der abgegrenzten durchgehenden Abschnitte (41) die mindestens eine Kante (13) des Schnittteils (2) schneidet.
2. Der Träger gemäß Anspruch 1, **dadurch gekennzeichnet, dass** der Träger (1) Reliefrippen (5) umfasst, die ausgebildet sind, um den Träger (1) zu versteifen.
3. Der Träger gemäß dem obigen Anspruch, wobei die Rippen (5) geprägte und/oder gefaltete Bereiche sind.
4. Der Träger gemäß einem oder mehreren der obigen Ansprüche, wobei das Schnittteil (2) auf der ersten Fläche (21) eine Trennschicht (23) umfasst, die zwischen dem Schnittteil (2) und dem abziehbaren Film (3) angeordnet und ausgebildet ist, um das vollständige Entfernen des abziehbaren Films (3) zu erleichtern, wenn der Bereich (11) von dem Schnittteil (2) abgezogen wird und den abziehbaren Film (3) mit sich zieht.
5. Der Träger gemäß einem oder mehreren der obigen Ansprüche, wobei das Schnittteil (2) eine Lage aus Pappe oder Vollpappe ist, die im Wesentlichen planar ist.
6. Der Träger gemäß einem oder mehreren der obigen

Ansprüche, wobei die geschwächte Linie einen welligen Verlauf entlang dem Schnittteil (2) hat.

7. Eine Verpackung für Lebensmittelprodukte, **dadurch gekennzeichnet, dass** sie den Träger (1) gemäß einem oder mehreren der obigen Ansprüche und einen Abdeckfilm (61) umfasst, der so an dem Träger (1) befestigt ist, dass das Lebensmittelprodukt (62) sich zwischen dem Abdeckfilm (61) und dem abziehbaren Film (3) befindet.

8. Ein Verfahren zur Herstellung eines mehrschichtigen Trägers (1), insbesondere für Lebensmittelprodukte, **dadurch gekennzeichnet, dass** es folgende Schritte umfasst:

- die Kerbmarkierung oder Perforation eines Schnittteils (2) aus Pappe oder Vollpappe von einer ersten Fläche (21) zu einer zweiten Fläche (22) des Schnittteils (2), um eine geschwächte Linie (4) zu erhalten, wobei die geschwächte Linie durch einen durchgehenden Einschnitt (40) gebildet wird, welcher nur an abgegrenzten durchgehenden Abschnitten (41) bis zu der zweiten Fläche (22) verläuft, wobei mindestens einer (41a, 41b) der abgegrenzten durchgehenden Abschnitte (41) die mindestens eine Kante (13) des Schnittteils (2) schneidet;
- das Beschichten der ersten Fläche (21) mit einem abziehbaren Film (3) aus Kunststoffmaterial, um den mehrschichtigen Träger (1) zu erhalten, wobei die geschwächte Linie (4) von dem abziehbaren Film (3) bedeckt und ausgebildet ist, um auf dem Träger einen geschlossenen Bereich (11) zu bilden, der von der mindestens einen Kante (13) des Schnittteils (2) und der geschwächten Linie (4) begrenzt ist, so dass der geschlossene Bereich (11) gemeinsam mit dem abziehbaren Film (3) vom Rest des Schnittteils (2) abgezogen werden kann.

9. Das Verfahren gemäß Anspruch 8, **dadurch gekennzeichnet, dass** es weiter nach dem Beschichtungsschritt einen Schritt des Einprägens von Rippen in Relief (5) auf das mindestens eine Schnittteil umfasst, die ausgebildet sind, um das Schnittteil (2) und/oder den Träger (1) zu versteifen.

10. Das Verfahren gemäß Anspruch 9, wobei der Einprägeschritt aus einem Prägeschritt oder einem Falzschritt besteht.

11. Das Verfahren gemäß Anspruch 9 oder 10, wobei der Prägeschritt einen Schritt des Anordnens des mehrschichtigen Trägers (1) zwischen einer Druckplatte und einer Kontrastplatte und einen Schritt des gegenseitigen Annäherns der Druckplatte und der Kontrastplatte umfasst, um die Rippen (5) in Relief

in das Schnittteil (2) bzw. den Träger (1) einzuprägen.

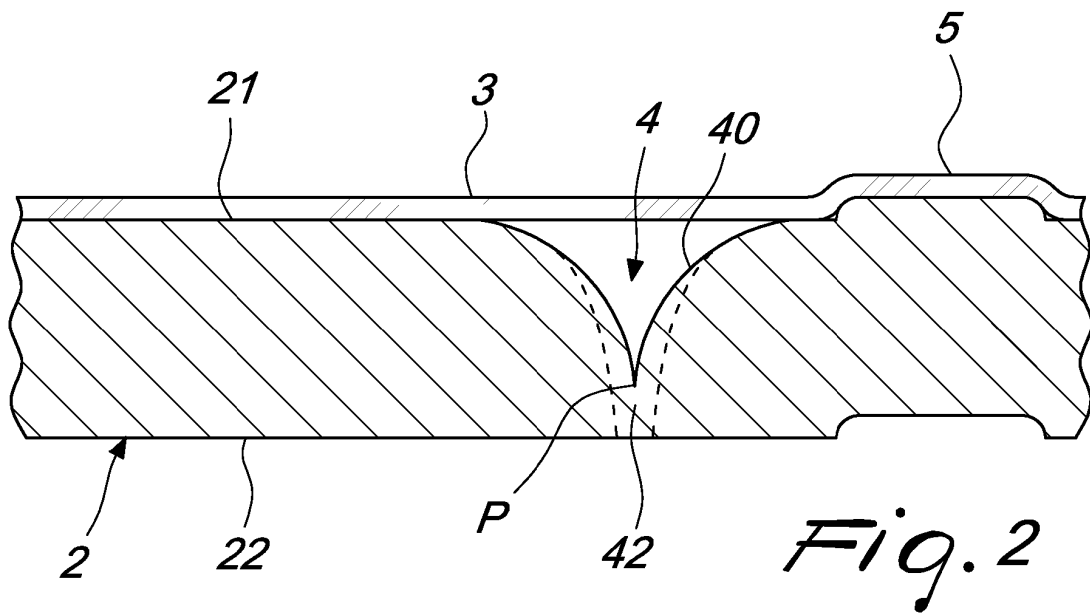
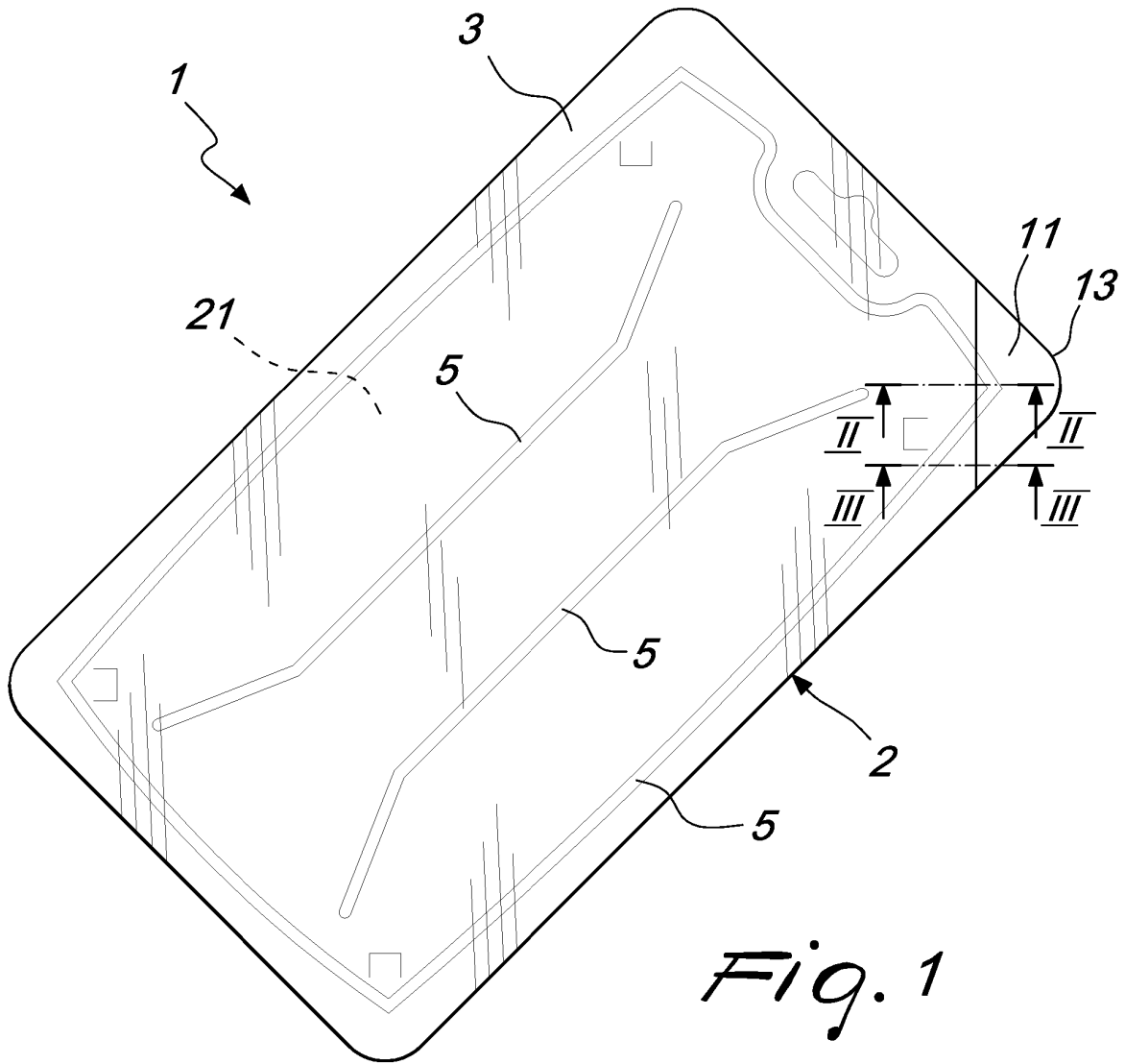
12. Ein Verfahren zur Herstellung von Verpackungen für Lebensmittelprodukte, **dadurch gekennzeichnet, dass** es folgende Schritte umfasst:

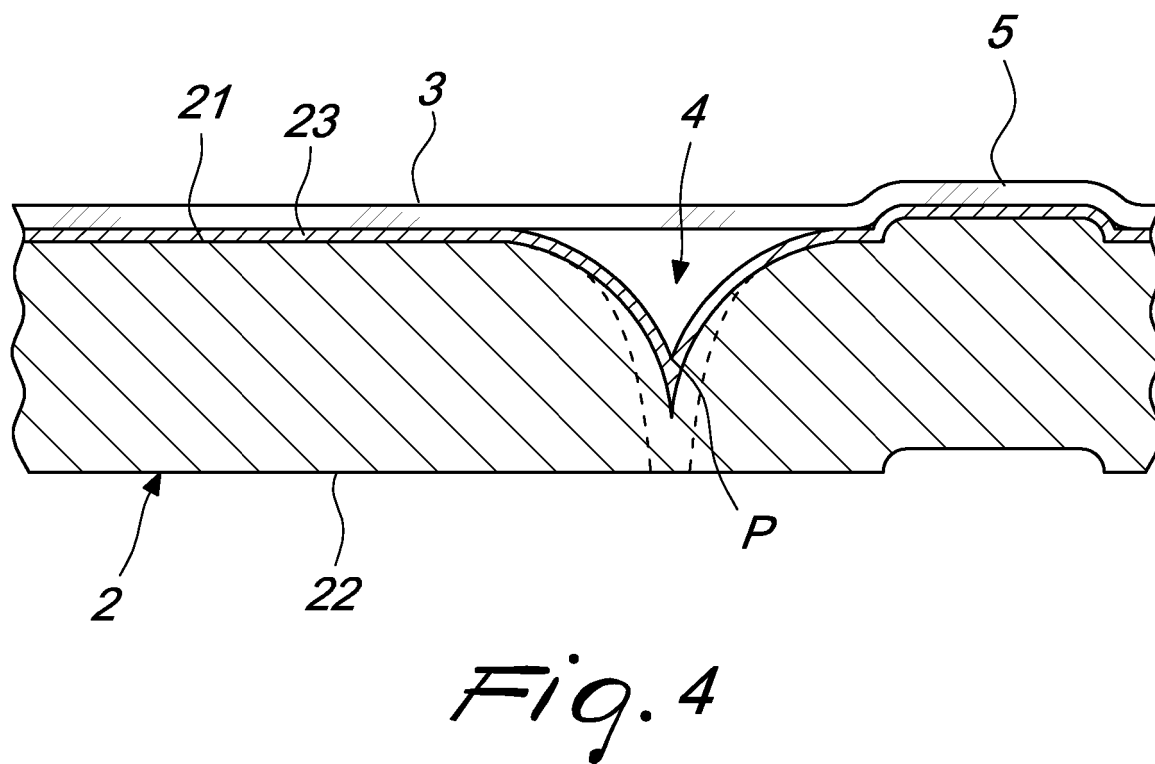
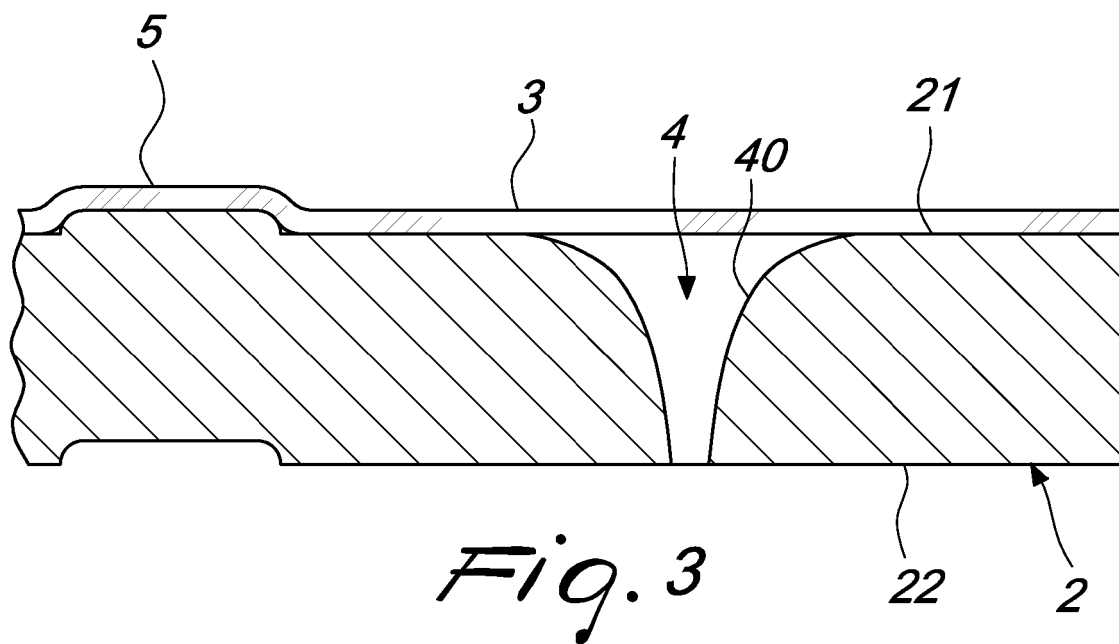
- das Bereitstellen des Trägers gemäß einem oder mehreren der Ansprüche 1-6;
- das Anordnen mindestens eines Lebensmittelprodukts (62) zwischen dem Träger (1) und einem Abdeckfilm (61);
- das Befestigen des Abdeckfilms (61) an dem Träger (1).

Revendications

1. Support multicouche (1), en particulier pour des produits alimentaires, comportant un support vierge (2) en carton ou en papier-carton qui est revêtu, sur une première face (21), d'un film pelable (3) en matière plastique, ladite première face (21) comportant une ligne affaiblie (4) qui est recouverte dudit film pelable (3) et est adaptée pour former sur ledit support vierge (2) une zone fermée (11) qui est délimitée par au moins un bord (13) dudit support vierge (2) et par ladite ligne affaiblie (4), de sorte que ladite zone fermée (11) peut par conséquent être enlevée par déchirure du reste dudit support vierge (2) en association avec le film pelable (3), ladite ligne affaiblie (4) étant obtenue par perforation ou incision effectuée en partant de ladite première face (21) vers la face opposée (22) du support vierge (2), **caractérisé en ce que** ladite ligne affaiblie (4) est formée par une incision continue (40) qui passe à travers jusqu'à la seconde face (22) uniquement sur des parties traversantes discrètes (41), au moins une (41a, 41b) desdites portions traversantes discrètes (41) coupant ledit au moins un bord (13) du support vierge (2).
2. Support selon la revendication 1, **caractérisé en ce que** ledit support (1) comporte des nervures en relief (5) adaptées pour renforcer ledit support (1).
3. Support selon la revendication précédente, dans lesdites nervures (5) sont des zones gaufrées et/ou plissées.
4. Support selon une ou plusieurs des revendications précédentes, dans lequel ledit support vierge (2) comporte, sur ladite première face (21), une couche de séparation (23) qui est intercalée entre ledit support vierge (2) et ledit film pelable (3) et est adaptée pour faciliter le retrait complet dudit film pelable (3) lorsque ladite zone (11) est déchirée à partir du support vierge (2), en entraînant le film pelable (3) avec elle.

5. Support selon une ou plusieurs des revendications précédentes, dans lequel ledit support vierge (2) est une feuille en papier-carton ou en carton qui est sensiblement plane. 5
6. Support selon une ou plusieurs des revendications précédentes, dans lequel ladite ligne affaiblie a une allure ondulée le long du support vierge (2).
7. Emballage pour produits alimentaires, **caractérisé en ce qu'il** comporte le support (1) selon une ou plusieurs des revendications précédentes et un film de recouvrement (61) qui est fixé sur ledit support (1) de sorte que le produit alimentaire (62) est intercalé entre ledit film de recouvrement (61) et ledit film pelable (3). 10 15
8. Procédé pour fabriquer un support multicouche (1) en particulier pour des produits alimentaires, **caractérisé en ce qu'il** comporte les étapes consistant à : 20
- effectuer une incision ou une perforation d'un support vierge en papier-carton ou en carton (2) à partir d'une première face (21) vers une seconde face (22) dudit support vierge (2) afin d'obtenir une ligne affaiblie (4), ladite ligne affaiblie étant formée par une incision continue (40) qui passe à travers jusqu'à la seconde face (22) uniquement sur des parties traversantes discrètes (41), au moins une (41a, 41b) desdites parties traversantes discrètes (41) coupant ledit au moins un bord (13) du support vierge (2), 25 30
 - revêtir ladite première face (21) d'un film pelable (3) en matière plastique afin d'obtenir ledit support multicouche (1), ladite ligne affaiblie (4) étant recouverte dudit film pelable (3) et étant adaptée pour former sur ledit support une zone fermée (11) qui est délimitée par ledit au moins un bord (13) du support vierge (2) et par ladite ligne affaiblie (4), de sorte que ladite zone fermée (11) peut être enlevée par déchirure du reste du support vierge (2) en association avec le film pelable (3). 35 40
9. Procédé selon la revendication 8, **caractérisé en ce qu'il** comporte en outre, après l'étape de revêtement, une étape consistant à imprimer des nervures en relief (5) au moins sur ledit support vierge (2), qui sont adaptées pour renforcer ledit support vierge (2) et/ou ledit support (1). 45 50
10. Procédé selon la revendication 9, dans lequel ladite étape d'impression consiste en une étape de gaufrage ou en une étape de plissage. 55
11. Procédé selon la revendication 9 ou 10, dans lequel ladite étape d'impression comporte une étape consistant à intercaler ledit support multicouche (1) entre une plaque d'impression et une plaque en opposition, et une étape d'approche mutuelle de ladite plaque d'impression et de ladite plaque en opposition afin d'imprimer en relief lesdites nervures (5) sur ledit support vierge (2) ou sur ledit support (1), respectivement.
12. Procédé pour fabriquer des emballages de produits alimentaires, **caractérisé en ce qu'il** comporte les étapes consistant à : 10
- fournir le support selon une ou plusieurs des revendications 1 à 6,
 - intercaler au moins un produit alimentaire (62) entre ledit support (1) et un film de recouvrement (61),
 - fixer ledit film de recouvrement (61) audit support (1).





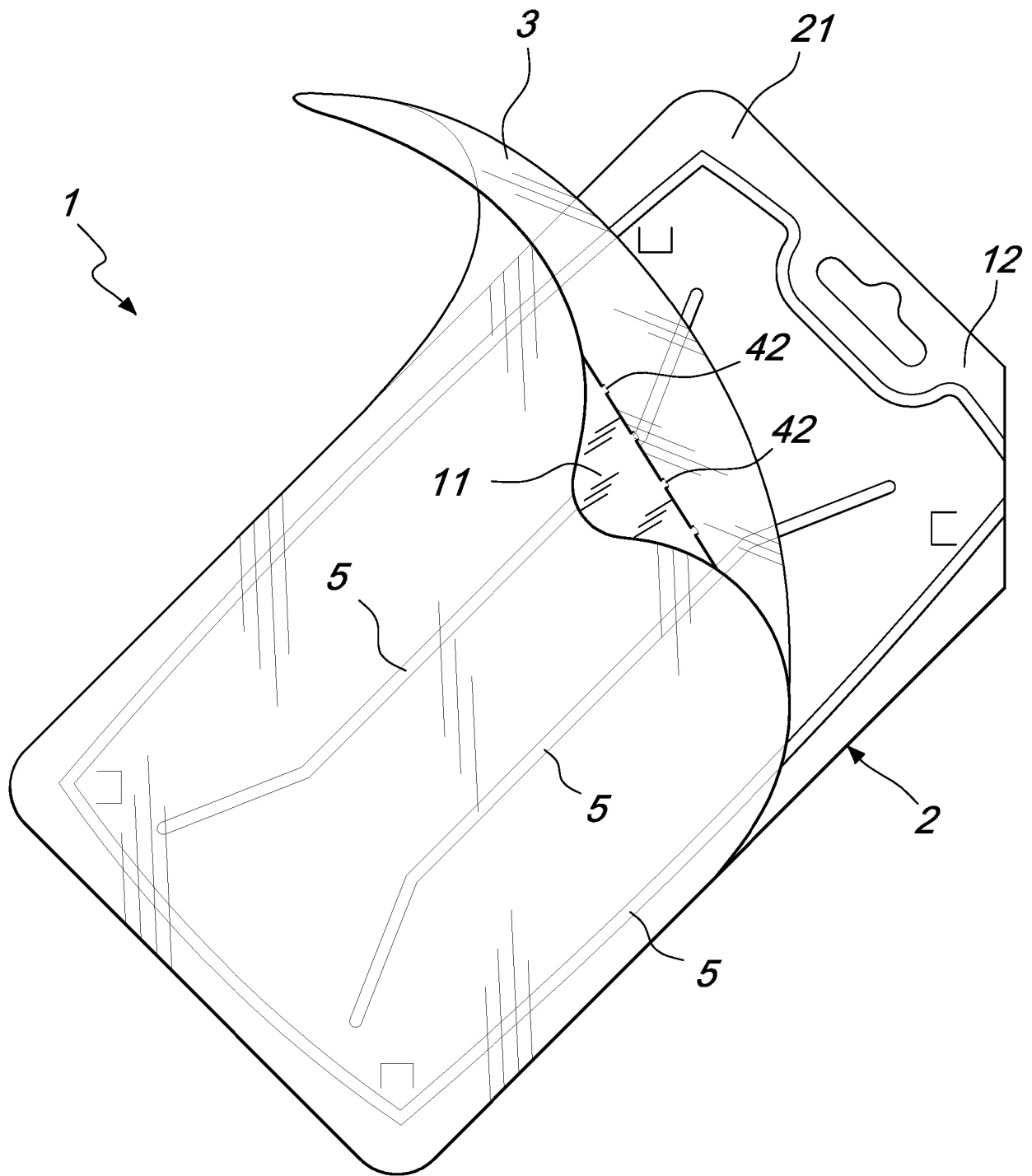
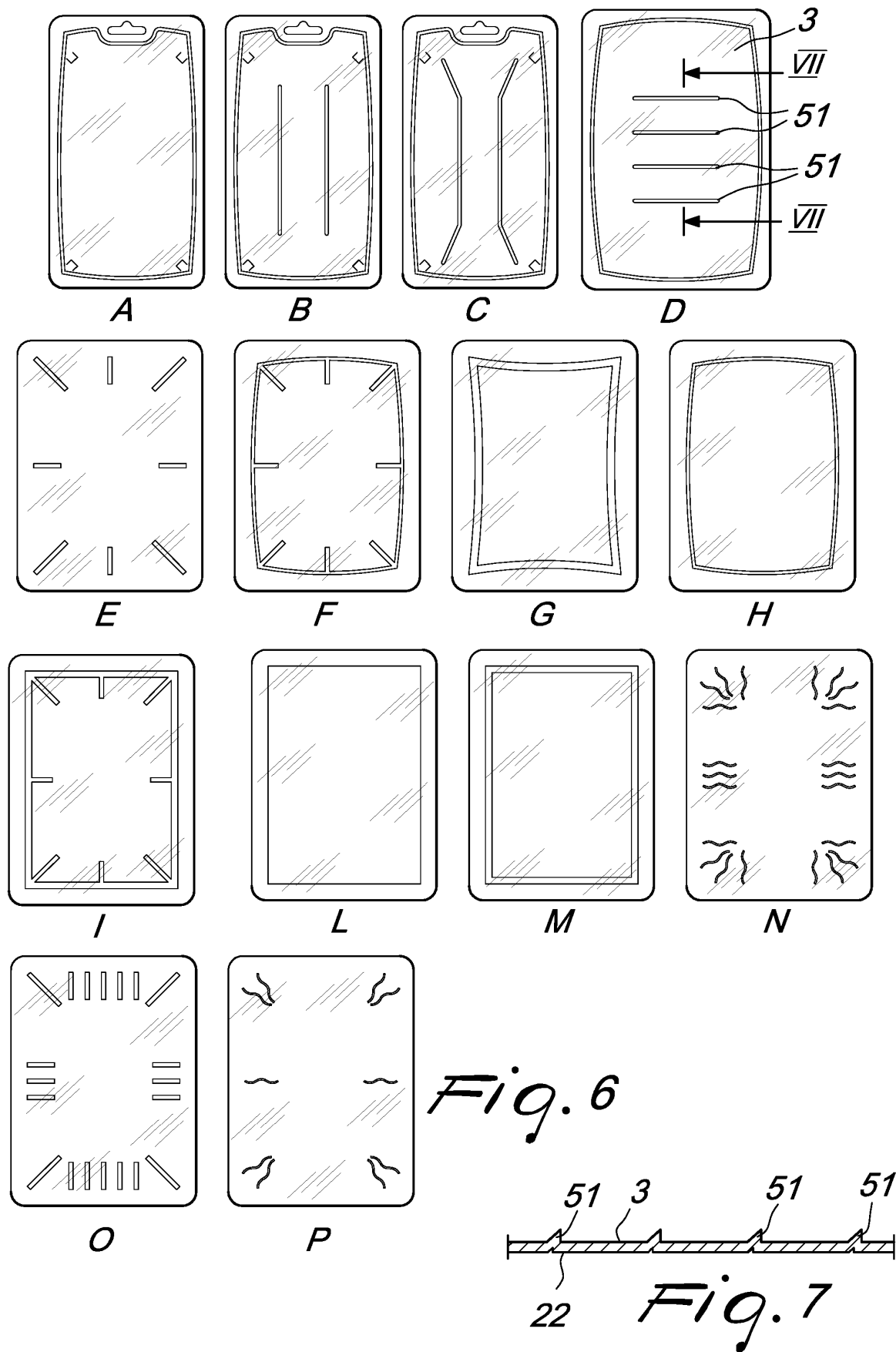


Fig. 5



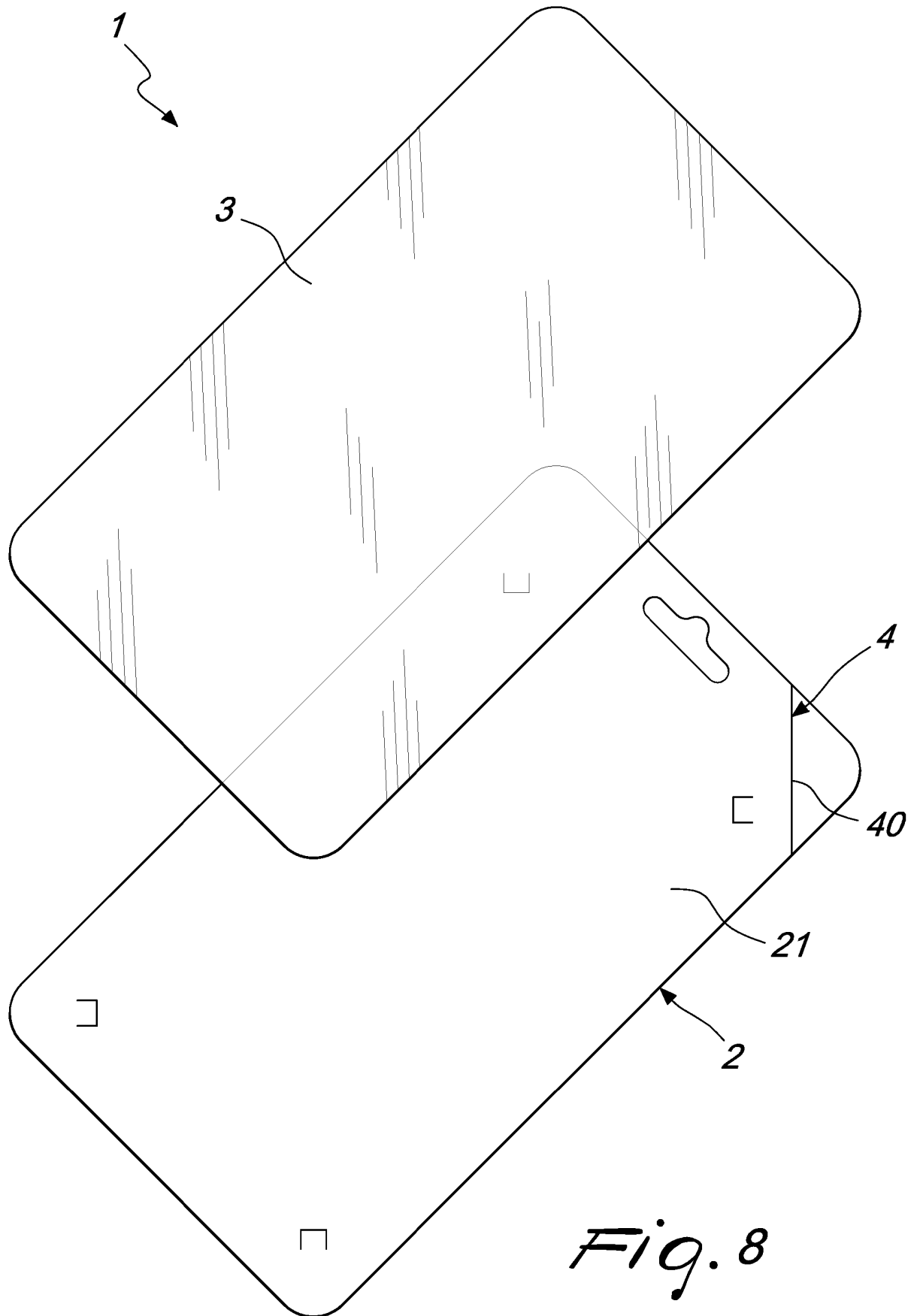
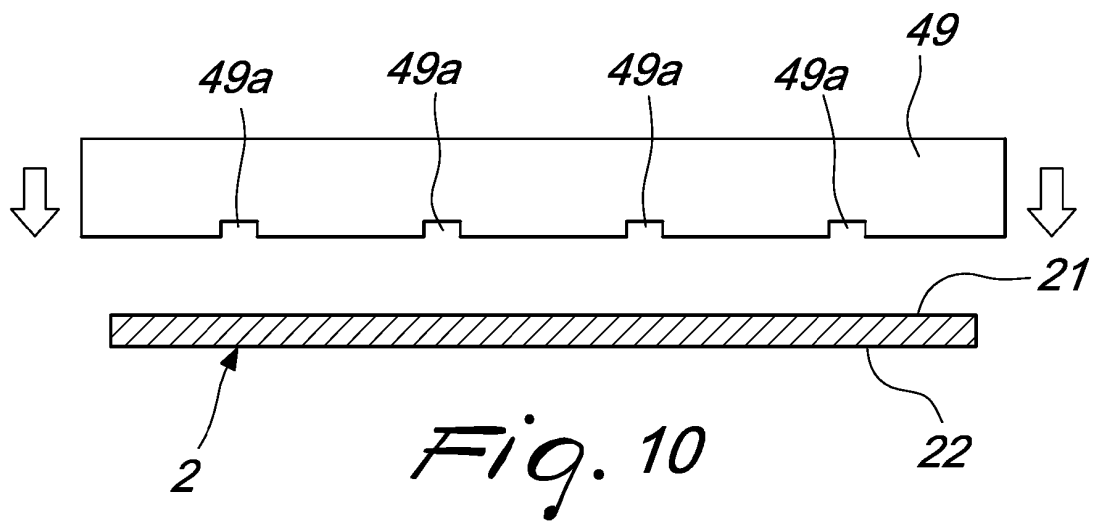
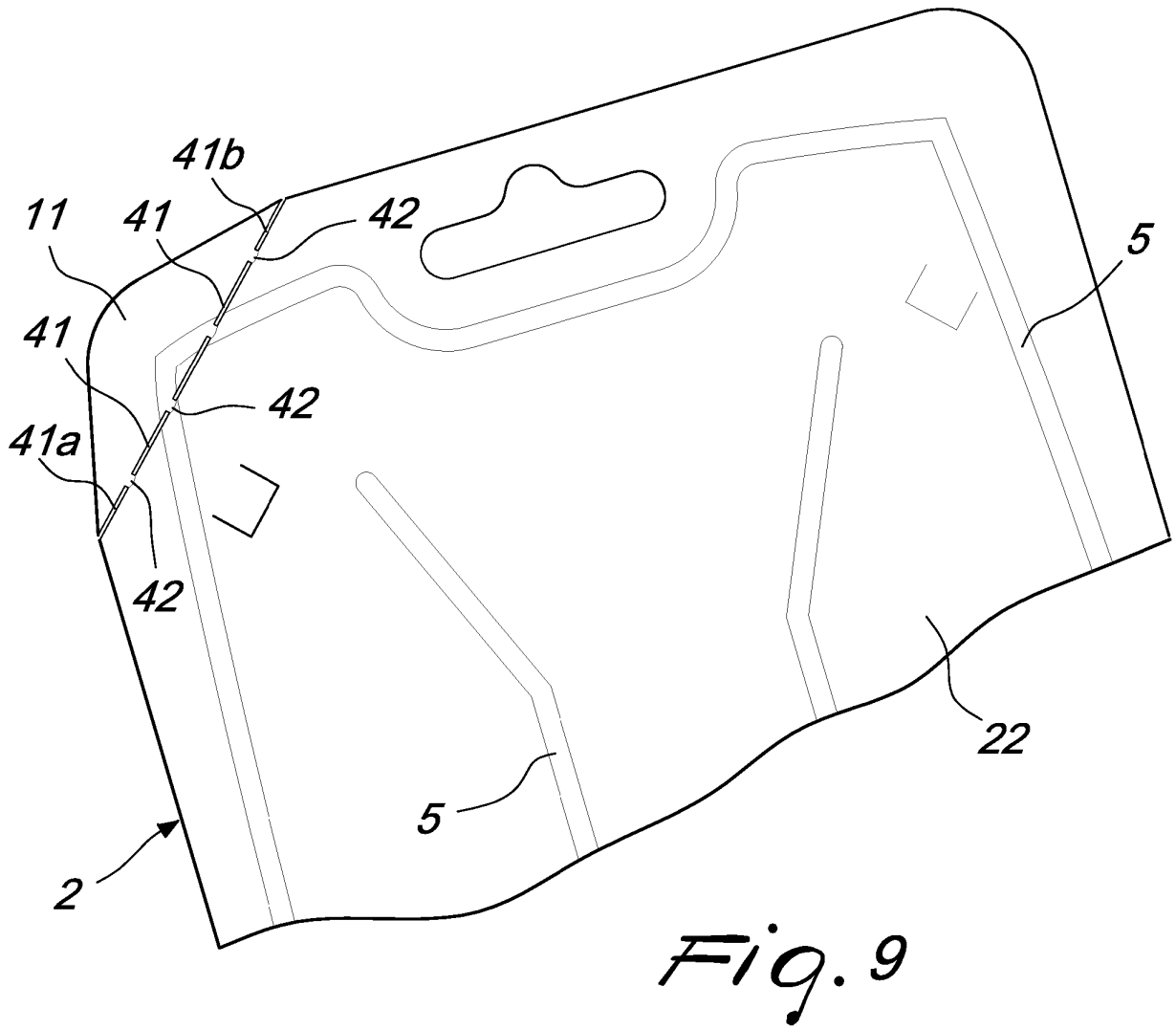


Fig. 8



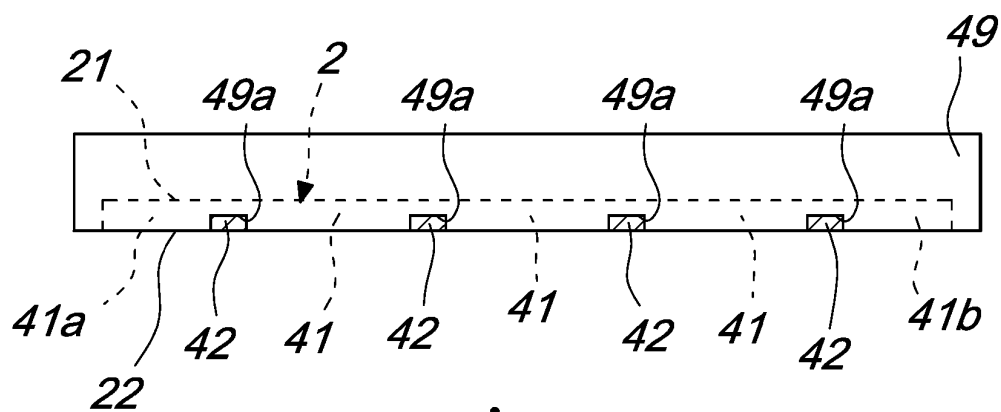


Fig. 11

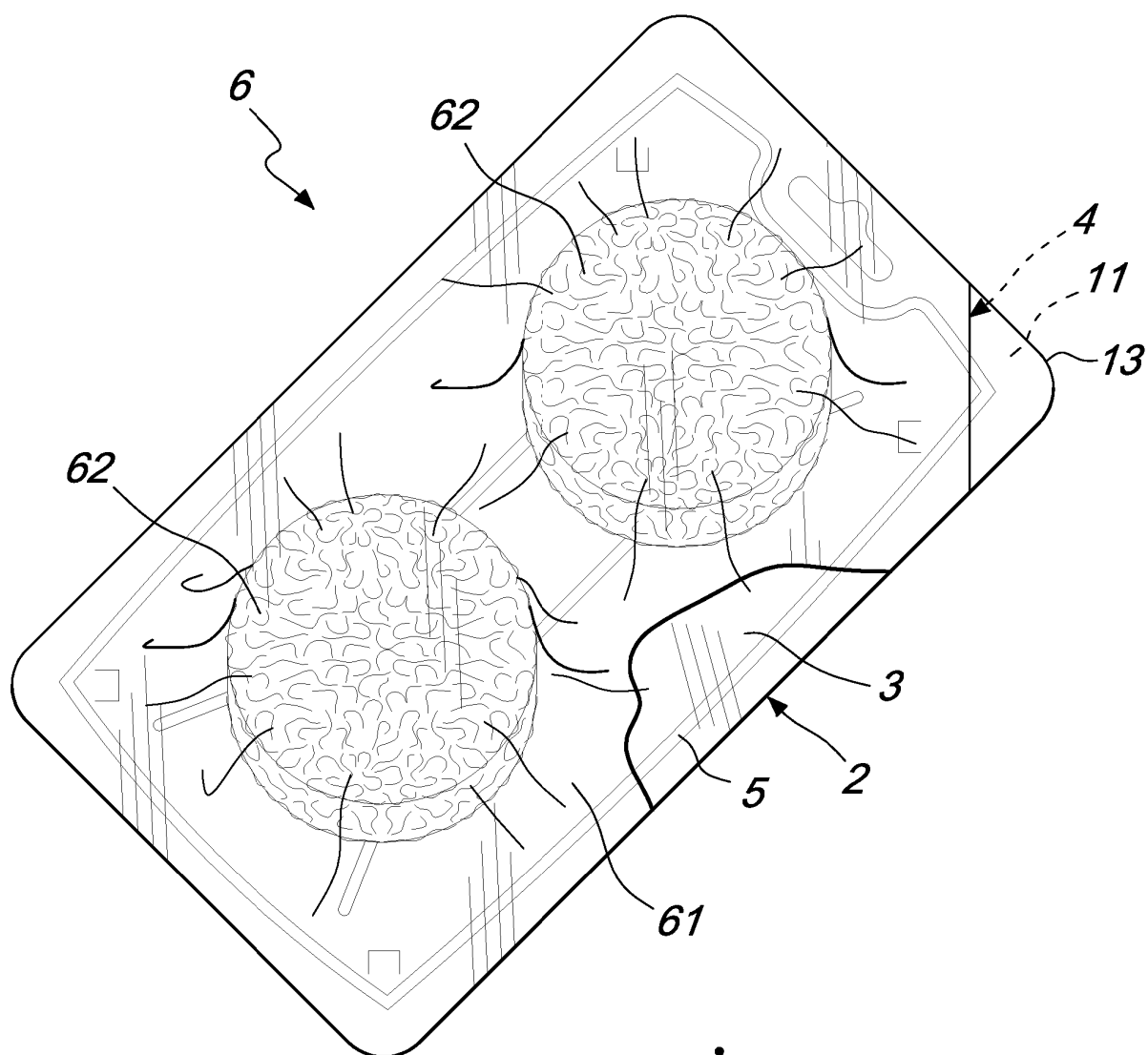


Fig. 12

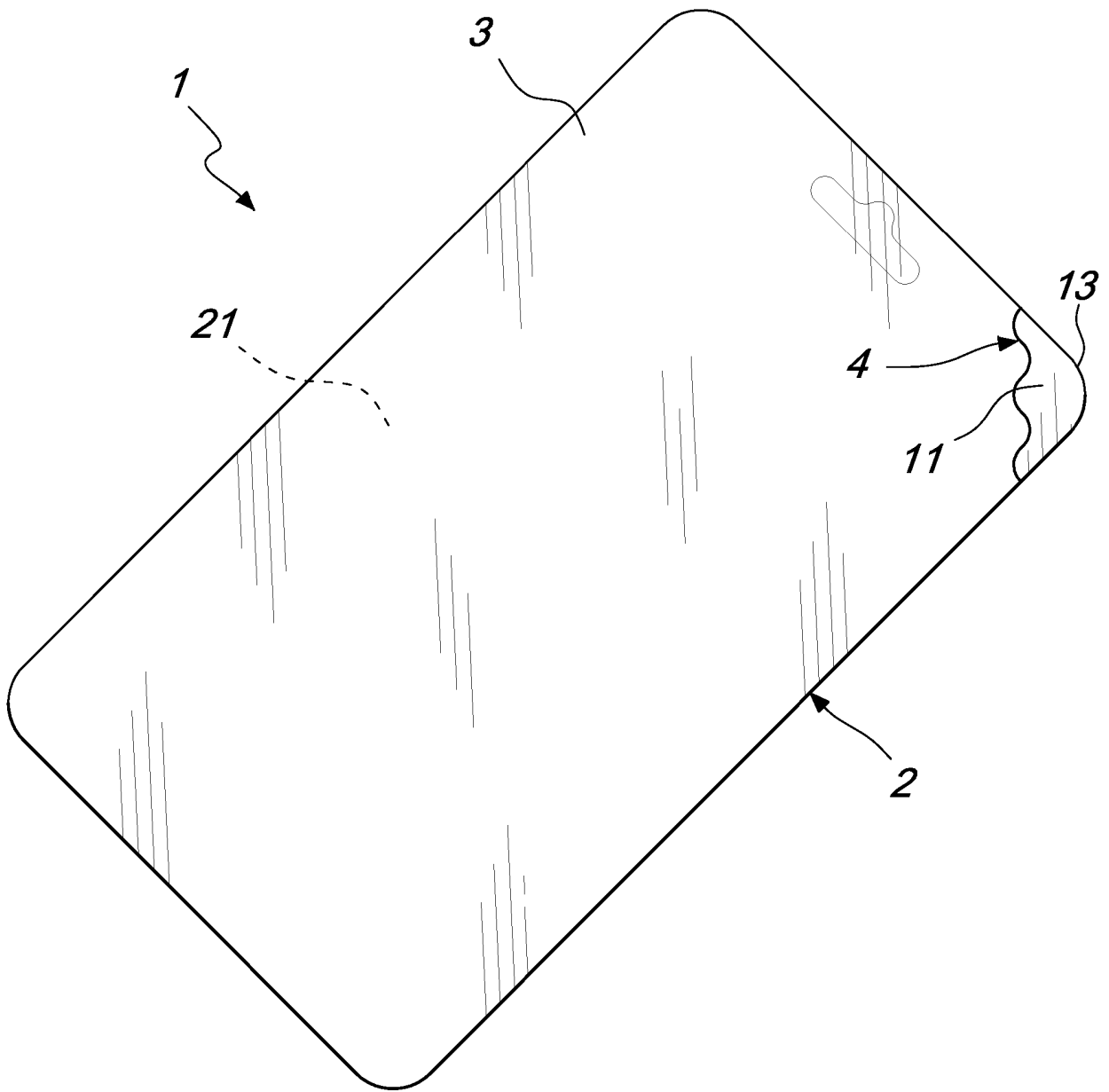


Fig. 13

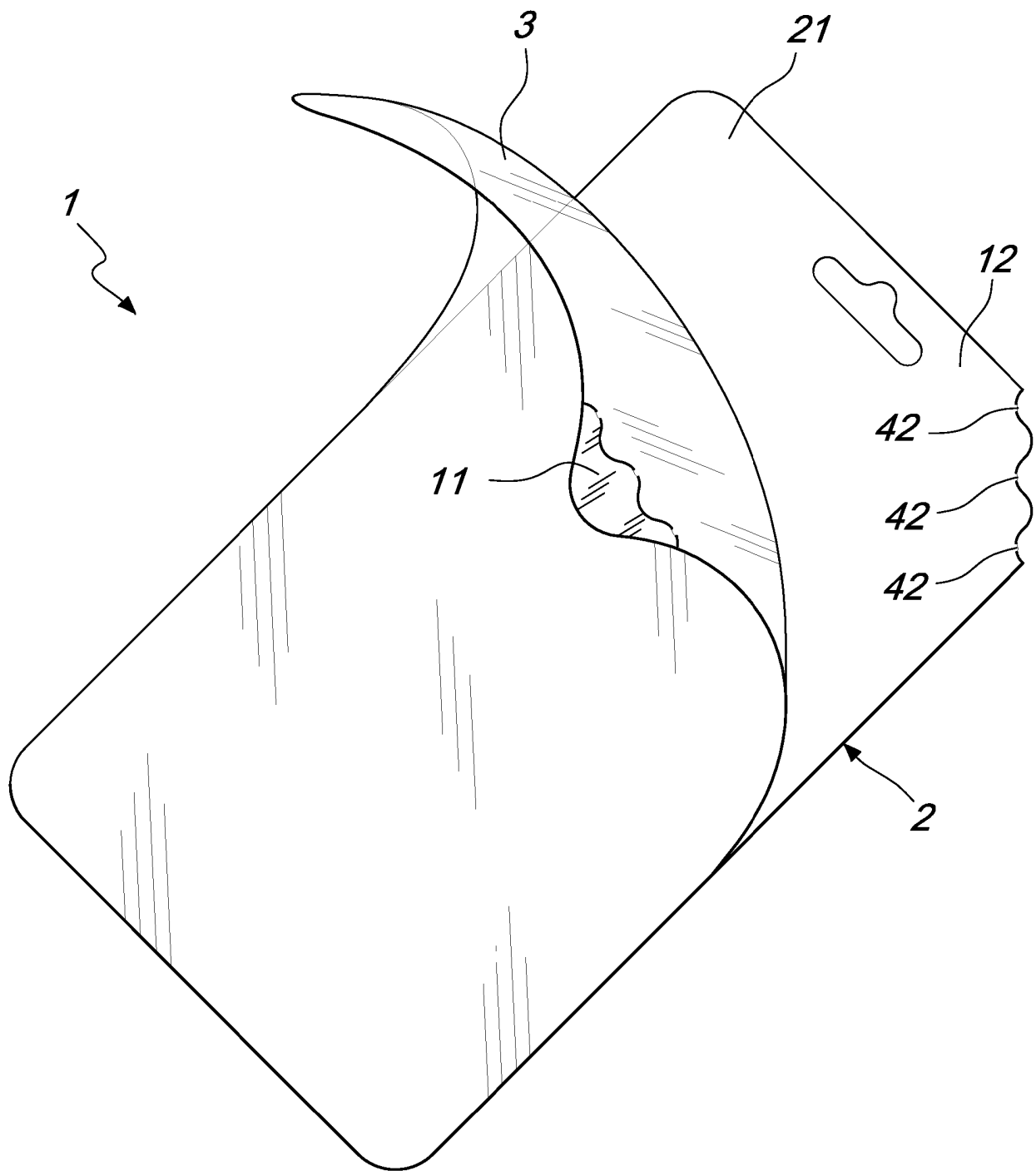


Fig. 14

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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