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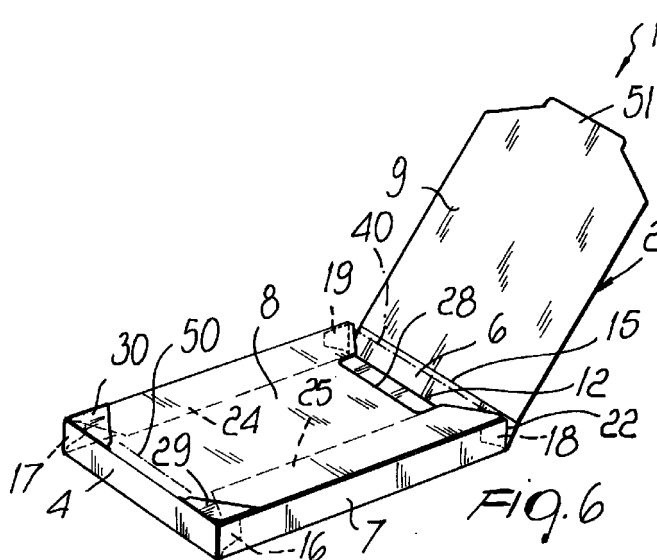
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(54) **Reclosable carton box and method for forming it**

(57) A package made of die-cut paper-like material, particularly for pharmaceutical products or the like, and a method for assembling and filling it. The package (1) comprises: a sheet (2) made of die-cut paper-like material which forms: a base wall, side walls (4, 6, 7) which rise from the base wall, an inner lid (8) which is super-

imposed on the base wall and spaced above it, and an outer lid (9) which is superimposed on the inner lid (8) and can be opened in order to allow access to the inside of the package.



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Description

[0001] The present invention relates to a package made of die-cut paper-like material, particularly for pharmaceutical products or the like, and to a method for assembling and filling it.

[0002] Packages, particularly for pharmaceutical products, are known which are substantially constituted by a sheet of die-cut paper-like material which is conveniently folded and assembled by pasting and generally forms a base wall, side walls which rise from the base wall, and a lid which protrudes from the upper side of one of said side walls and is pasted or simply rigidly coupled by means of folded tabs to the opposite side wall or to the contiguous side walls.

[0003] Some of these packages also have, above the base wall, seats for supporting the products to be packaged which are obtained by folding and/or cropping a portion of the die-cut sheet or of a die-cut insert which is pasted to the base wall.

[0004] Once these packages have been opened, they have the problem that they leave a very wide opening through which the packaged products can escape very easily and fall, particularly if they are not adequately coupled to the package.

[0005] Packages are also known in which the opening for accessing the packaged products, instead of being formed at the upper face, is formed on one of the side walls.

[0006] With these packages, problems are noted in inserting the products inside the package, particularly when said products are flexible or otherwise deformable. For this reason, these packages require the use of suitable rigid supports for the products to be packaged.

[0007] Moreover, packages provided with an opening at one of the side walls are produced starting from pre-pasted tube-shaped die-cut elements which are closed at the two opposite ends after inserting the products.

[0008] Indeed because of the fact that these packages use pre-pasted die-cut elements, they have relatively high production costs.

[0009] The aim of the present invention is to solve the above problems by providing a package made of die-cut paper-like material which can have a wide opening during the packaging of the product, so as to make this operation particularly easy, and a small opening when the package is used.

[0010] Within the scope of this aim, an object of the present invention is to provide a package which reduces the possibilities of the products falling when the box is opened, even if said products are not rigidly coupled to the package.

[0011] Another object of the present invention is to provide a package which offers additional spaces for applying information related to the packaged products and/or to their use.

[0012] Another object of the present invention is to

provide a package which can be manufactured at a low cost.

[0013] Another object of the present invention is to provide a method for assembling and filling a package according to the invention.

[0014] This aim, these objects and others which will become apparent hereinafter are achieved by a package made of die-cut paper-like material, particularly for pharmaceutical products or the like, characterized in that it comprises a sheet made of die-cut paper-like material which forms: a base wall, side walls which rise from said base wall, an inner lid which is superimposed on said base wall and spaced above it, and an outer lid which is superimposed on said inner lid and can be opened in order to allow access to the inside of the package.

[0015] Further characteristics and advantages of the invention will become apparent from the description of a preferred but not exclusive embodiment of the package according to the invention, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a view of the die-cut sheet for producing the package according to the invention;

Figures 2 to 5 are perspective views of the various steps of the assembly and filling of a package according to the invention;

Figure 6 is a view of the package according to the invention in the open condition during the use of the products packaged therein.

[0016] With reference to the above figures, the package according to the invention, generally designated by the reference numeral 1, comprises a sheet 2 made of die-cut paper-like material which forms: a base wall 3; side walls 4, 5, 6 and 7, which rise above the base wall 3; an inner lid 8, which is superimposed on the base wall 3 and spaced above it; and an outer lid 9, which is superimposed on the inner lid 8 and can be opened in order to allow access to the inside of the package.

[0017] Advantageously, the package according to the invention is constituted by a single sheet 2 made of die-cut paper-like material which is folded and pasted during the assembly of the package.

[0018] More particularly, the sheet 2 has a preferably rectangular central portion which constitutes the base wall 3. At the perimetric sides of the base wall 3 there are provided preset folding lines 10, 11, 12 and 13 which coincide with the lower edge of the side walls 4, 5, 6 and 7, which also have a substantially rectangular shape.

[0019] The inner lid 8 rises from the upper side of the side wall 4 and is joined to it by means of another preset folding line 14.

[0020] The outer lid 9 extends from the upper edge of the side wall 6 and is joined to it by means of an addi-

tional preset folding line 15.

[0021] The side walls 4 and 6 have, at their edges that are contiguous to the side walls 5 and 7, tabs 16, 17, 18 and 19 which are meant to be superimposed on the inner face of the side walls 5 and 7 and fixed to them by pasting.

[0022] The tabs 16, 17, 18 and 19 too are joined to the corresponding side wall 4 and 6 by preset folding lines 20, 21, 22 and 23.

[0023] The side walls 5 and 7 have, at their upper edge, i.e., at the edge that lies opposite the edge that is connected to the base wall 3, flaps 24 and 25 which can fold with respect to the corresponding side wall 5 and 7 along preset folding lines 26 and 27 which coincide with the upper edge of the corresponding side walls 5 and 7, so as to be arranged above the base wall 3 and parallel to it.

[0024] The inner lid 8 is fixed by pasting to the upper face of the flaps 24 and 25 after they have been folded above the base wall 3.

[0025] Advantageously, the inner lid 8 has a substantially rectangular shape with a recess 28 at the edge that lies opposite with respect to the side wall 4 from which the inner lid 8 protrudes.

[0026] The purpose of the recess 28 is to increase the opening for accessing the inside of the package and to facilitate the extraction of the packaged products.

[0027] Conveniently, along the folding lines 22 and 23 from which the tabs 18 and 19 protrude there are provided tear lines so that the side wall 6 separates from said tabs 18 and 19, pasted to the inner side of the side walls 5 and 7, when the outer lid 9 is opened. This tearing frees the opening for accessing the inside of the package when the outer lid 9 is opened.

[0028] Also the outer lid 9 is substantially rectangular and is pasted above the inner lid 8 at two regions 29 and 30 which are located in the two corners that are adjacent to the edge of the outer lid 9 that lies opposite the edge of the side wall 6 from which said outer lid 9 protrudes.

[0029] The regions 29 and 30 are separated from the remaining part of the outer lid 9 by tear lines 31 and 32.

[0030] It should be noted that the tear lines 31 and 32 form, at the edge of the outer lid 9 that lies opposite its edge that is connected to the side wall 6 from which it protrudes, a reclosure tab 51 which can engage a slit 50 formed correspondingly on the inner lid 8 proximate to its edge that is connected to the side wall 4.

[0031] Information related to the packaged products and/or to the method of use thereof can be printed on the face of the inner lid 8 that lies opposite with respect to the base wall 3.

[0032] Information related to the packaged products and/or to their use can also be printed on the inner face of the outer lid 9, on the outer face of said outer lid 9 and on the outer face of the base wall 3.

[0033] The package according to the invention is

assembled and filled as follows.

[0034] Initially, the die-cut sheet 2 is inserted in a forming fixture so that the base wall 3 is arranged on a substantially horizontal plane. Inside the forming fixture, the side walls 4, 5, 6 and 7 are folded above and at right angles with respect to the base wall 3 along the preset folding lines 10, 11, 12 and 13. The tabs 16, 17, 18 and 19 are pasted to the inner face of the side walls 5 and 7. After forming, the inner lid 8, the outer lid 9 and the flaps 24 and 25 are arranged vertically, like the side walls 4, 6, 5 and 7 from which they extend.

[0035] The inner lid 8 and the outer lid 9 are then preferably folded outward along the folding lines 14 and 15 and the package is then moved to a filling station, where the products 40 to be packaged are lowered vertically onto the base wall 3, as shown in Figure 2.

[0036] It should be noted that the insertion of the products 40 inside the package, by occurring in a direction which is perpendicular to the side wall 3 and by having the package available in a practically fully open configuration, is particularly easy and fast even with deformable products.

[0037] The flaps 24 and 25 are then folded along the preset folding lines 26 and 27 and moved to a horizontal plane which is spaced upward from the base wall 3.

[0038] At this point, the inner lid 8 is folded along the preset folding line 14 and pasted to the flaps 24 and 25, as shown in Figures 3 and 4.

[0039] Finally, the outer lid 9 is folded along the corresponding preset folding line 15 and is pasted, at the regions 29 and 30, onto the inner lid 8, as shown in Figure 5.

[0040] During use of the products 40, the user tears the outer lid 9 along the tear lines 31 and 32, lifting it with respect to the inner lid 8.

[0041] Opening of the package is completed by gently pulling the outer cover 9, so as to produce tearing along the lines 22 and 23. In this manner, the user can access the products 40 through the lateral opening that is formed in the region previously occupied by the side wall 6, as shown in Figure 6.

[0042] After the initial opening, the package can be reclosed and opened several times by engaging and disengaging the tab 51 of the outer lid 9 with respect to the slit 50 formed in the inner lid 8.

[0043] In practice it has been observed that the package according to the invention fully achieves the intended aim and objects, since it is easy to fill even with deformable products without requiring the preliminary arrangement of said products on a rigid support, and since it offers adequate assurances of safety against the accidental fall of the products when the package is being opened.

[0044] Another advantage of the package according to the invention is that it provides a considerable amount of space which can be occupied by information to be supplied to the end user.

[0045] The package thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the inventive concept; all the details may also be replaced with other technically equivalent elements.

[0046] In practice, the dimensions may be any according to requirements and to the state of the art.

[0047] The disclosures in Italian Patent Application No. MI98A002447 from which this application claims priority are incorporated herein by reference.

[0048] 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 package made of die-cut paper-like material, particularly for pharmaceutical products or the like, characterized in that it comprises a sheet made of die-cut paper-like material which forms: a base wall, side walls which rise from said base wall, an inner lid which is superimposed on said base wall and spaced above it, and an outer lid which is superimposed on said inner lid and can be opened in order to allow access to the inside of the package.
2. The package according to claim 1, characterized in that it is constituted by a single sheet of die-cut paper-like material which is folded and pasted.
3. The package according to claims 1 and 2, characterized in that said base wall is substantially rectangular, four side walls extending from its edges.
4. The package according to one or more of the preceding claims, characterized in that said inner lid extends from the upper edge of one of said side walls and is pasted onto two flaps which extend from the upper edge of the two contiguous side walls and are folded above said base wall, said outer lid protruding from the upper edge of the side wall that lies opposite the side wall that supports said inner lid.
5. The package according to one or more of the preceding claims, characterized in that the side walls that support said inner lid and said outer lid have, on their edges directed toward the contiguous side walls, connecting tabs which are pasted to the inner face of said contiguous side walls.
6. The package according to one or more of the preceding claims, characterized in that the connecting tabs of the side wall that bears said outer lid have, along their edge that is connected to the side wall that bears said outer lid, tear lines for separating the side wall that bears said outer lid from the related connecting tabs when said outer lid is opened.
7. The package according to one or more of the preceding claims, characterized in that said inner lid is provided with an access recess along its edge that lies opposite the edge that is connected to the side wall from which it extends.
8. The package according to one or more of the preceding claims, characterized in that said outer lid is pasted above said inner lid at the two corners that are adjacent to its edge that lies opposite the edge for connection to the side wall from which it extends, tear lines being provided at said two corners in order to allow to open said outer lid by tearing along said two tear lines.
9. The package according to one or more of the preceding claims, characterized in that said two tear lines of the outer lid form, at the edge of said outer lid that lies opposite the side wall from which said outer lid extends, a reclosure tab which can engage a slit which is formed in said inner lid proximate to its edge that is connected to the side wall from which said inner lid extends.
10. The package according to one or more of the preceding claims, characterized in that said side walls are connected to said base wall by means of preset folding lines, said lateral flaps being connected to the corresponding two side walls by means of preset folding lines, said tabs being joined to the corresponding side walls by means of preset folding lines, said inner lid and said outer lid being connected to the side walls, from which they extend, by means of preset folding lines.
11. The package according to one or more of the preceding claims, characterized in that information related to the packaged product and/or to its method of use is printed on the face of said inner lid that is directed toward said outer lid.
12. The package according to one or more of the preceding claims, characterized in that information related to the packaged product and/or to its method of use is printed on the outer face and/or on the inner face of said outer lid and/or on the outer face of said base wall.
13. A method for assembling and filling a package according to one or more of the preceding claims, characterized in that it comprises: a forming step,

during which said base wall is arranged on a substantially horizontal plane and said side walls are folded vertically above the plane of arrangement of said base wall and are mutually fixed by pasting said connecting tabs, keeping said inner lid and said outer lid substantially vertical; a filling step, in which the products to be packaged are rested on said base wall with a movement which is substantially perpendicular to said base wall; and a closure step, during which said inner lid is pasted to the flaps of two contiguous side walls which are folded above said base wall and said outer lid is folded and pasted onto said inner lid.

14. The method according to claim 13, characterized in that before said filling step said inner lid and said outer lid are folded outward.
15. The method according to claim 13, characterized in that the pasting of said outer lid onto said inner lid affects only two corners of said outer lid which are adjacent to its edge that lies opposite its edge that is connected to the side wall from which said outer lid extends, the regions affected by the pasting being separated from the remaining part of the outer lid by means of tear lines.

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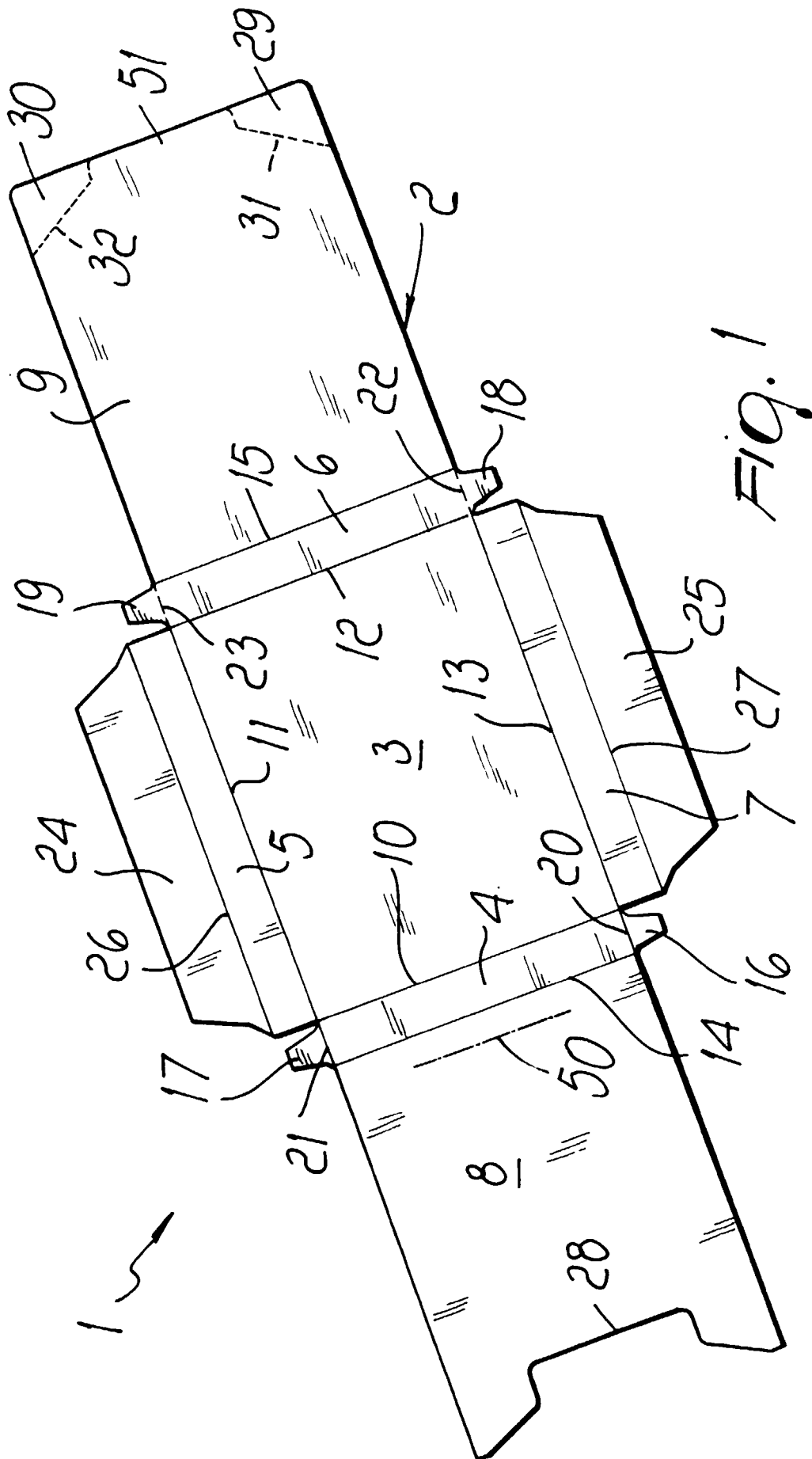
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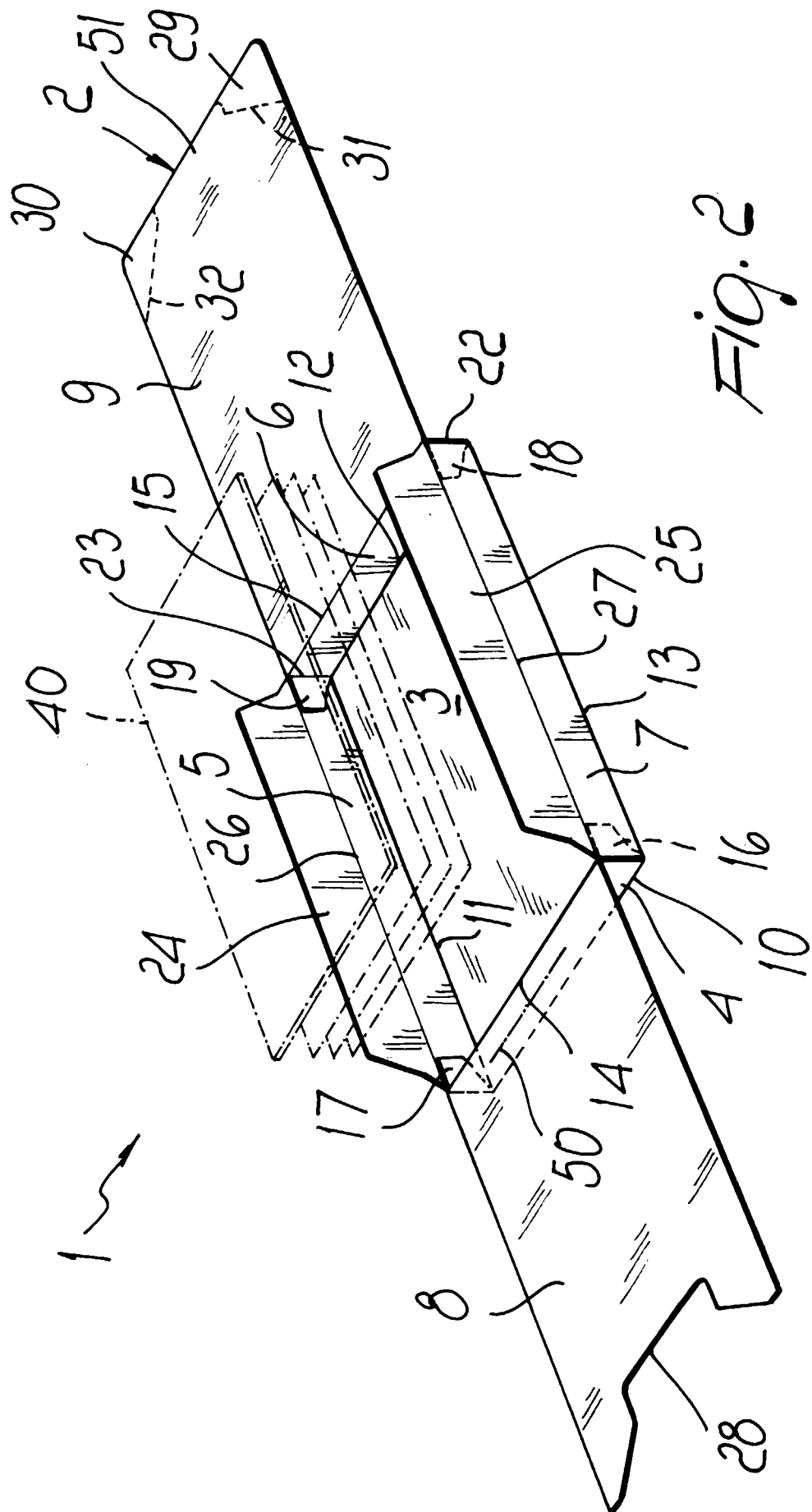


Fig. 2

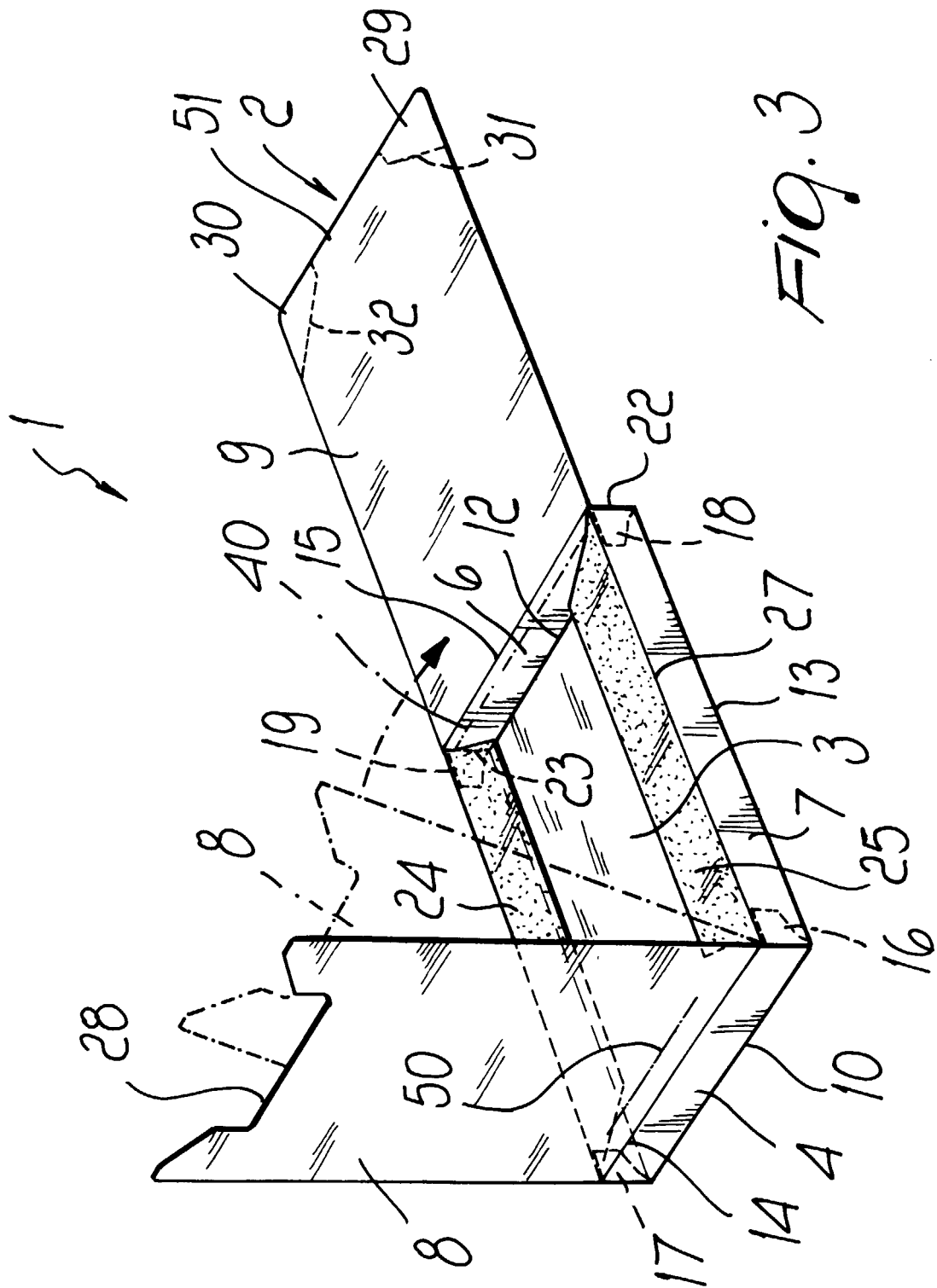
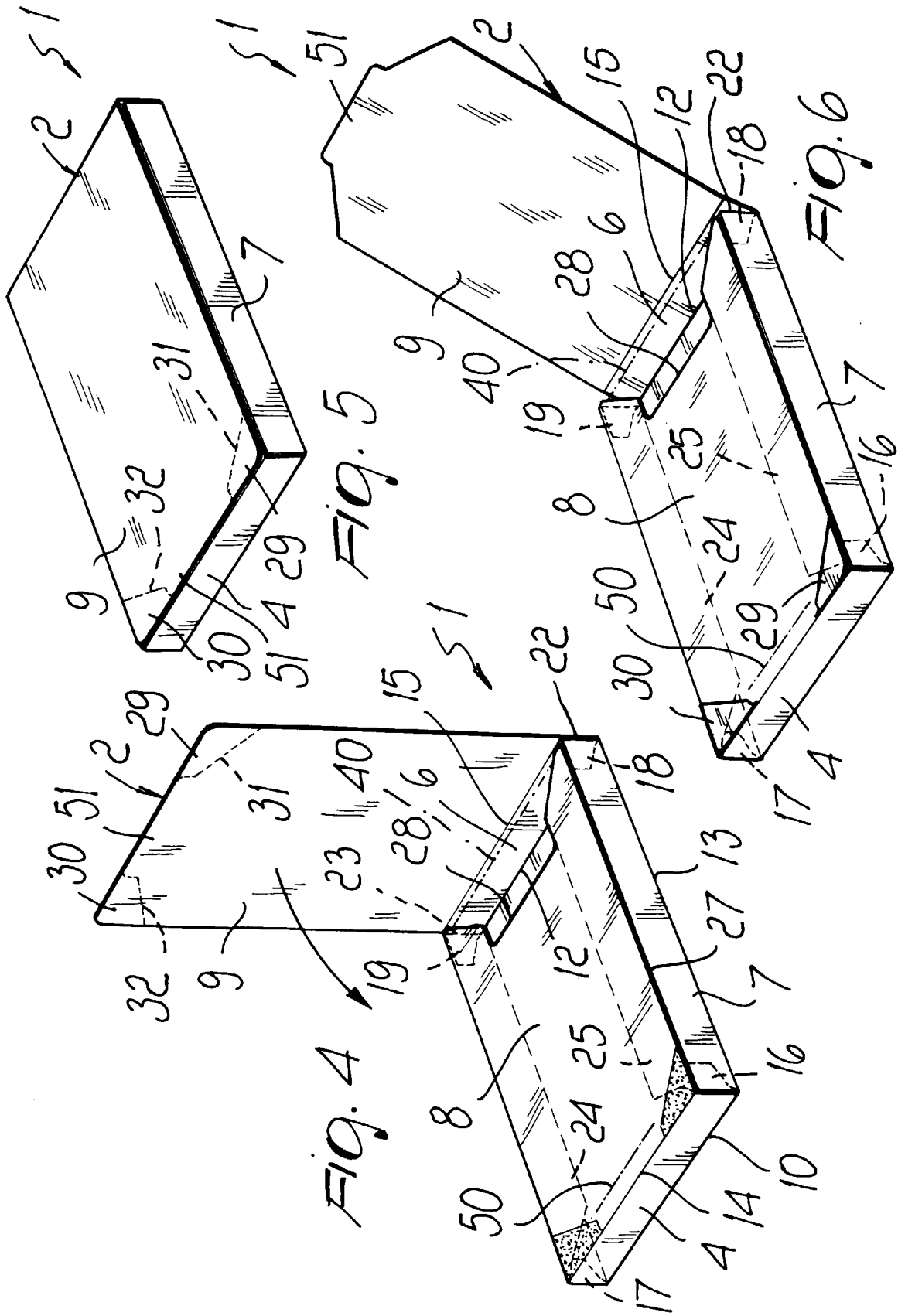


Fig. 3





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EUROPEAN SEARCH REPORT

Application Number
EP 99 12 1957

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18 February 2000	Examiner Pernice, C
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P/MC01)

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