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(54) **BAG FOR CONTAINING A PRODUCT**

BEUTEL ZUR AUFNAHME EINES PRODUKTS

SAC POUR CONTENIR UN PRODUIT

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(56) References cited:  
**EP-A- 1 873 083 WO-A-02/12088**  
**WO-A-2006/067617 WO-A-2007/147568**  
**WO-A-2008/087357 US-A- 2 093 977**  
**US-A- 5 062 716 US-A- 5 547 284**  
**US-A1- 2004 208 402 US-B1- 6 206 571**

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## Description

### Technical Field

**[0001]** This invention relates to a bag for containing a product.

**[0002]** The bag is preferably, but not exclusively, designed to contain a food product, including a pet food, or a product that is preferably in the form of a granular product or a product in pieces.

**[0003]** Further, the bag is preferably made from a plastic film, in particular a layered flexible plastic film.

### Background Art

**[0004]** In this field, bags made of layered plastic material to contain products, in particular foodstuffs, are known. These bags comprise a front face, a rear face and side faces, in the form of respective V-shaped gussets.

**[0005]** Some prior art bags have an upper tubular mouth without gusseted parts which can be opened and closed by means, consisting of a zip, extending across the full width of the bag to also form means for sealing the upper end of the bag gussets themselves.

**[0006]** In bags made according to prior art, the outflow of the product from the bag does not occur in the optimum manner and, besides, the bag is not easy for the user to hold in ideal manner.

**[0007]** As a result, it is difficult to pour the product out exactly where required, since pouring the bag contents and handling the bag in general are rather awkward.

**[0008]** WO-A-2007/147568 discloses a film bag according to the preamble of claim 1, which is formed by folding a film, is provided with a front surface, a rear surface, an inserted first lateral gusset, and a second inserted lateral gusset, the first lateral fold forms an outlet mouth that opens at the flaps of the gusset, and has gripping means by which the bag can be gripped, located on one side of the bag which is the side opposite to the product outlet mouth.

### Disclosure of the Invention

**[0009]** According to one advantageous aspect of it, it is provided a bag according to claim 1.

### Brief Description of the Drawings

**[0010]** These and other characteristics of the invention are clearly described in the claims below and its advantages are more apparent from the detailed description which follows, with reference to the accompanying drawings which illustrate preferred embodiments of the invention provided merely by way of example without restricting the scope of the inventive concept, and in which:

- Figure 1 is a perspective view of a preferred embod-

iment of the bag according to the invention in a bag closed condition;

- Figure 2A is a side view showing the first preferred embodiment of the bag in an empty and flattened condition;
- Figure 2B is a section view through the line IIB-IIB of Figure 2A illustrating the first embodiment of the bag in an empty and flattened condition;
- Figure 2C is a section view through the line IIC-IIC of Figure 2A illustrating the first embodiment of the bag in an empty and flattened condition;
- Figure 3 is a perspective view showing the first preferred embodiment of the bag in an open condition;
- Figure 4 is a perspective view showing the first preferred embodiment of the bag in the condition where the product contained is being poured out;
- Figure 5 is a top plan view of the web of film used in a first process for making the first preferred embodiment of the bag;
- Figure 6 is a schematic perspective view of a second preferred embodiment of the bag;
- Figure 7 illustrates the second preferred embodiment of the bag in the condition where the gussets are spaced apart;
- Figure 8 is a side view of a third preferred embodiment of the bag in an empty condition;
- Figures 9 and 10 are perspective views of a second process for making the first preferred embodiment of the bag;
- Figure 11 is a perspective view of a third process for making the first preferred embodiment of the bag;
- Figure 12 is a perspective view of a fourth process for making the first preferred embodiment of the bag;
- Figure 13 is a side view of a fourth preferred embodiment of the bag;
- Figure 14 is a side view of a fifth preferred embodiment of the bag;
- Figure 15 is a top plan view of the web of film used in a fifth process for making the bag according to the invention;
- Figure 16 is a schematic side view showing a sixth preferred embodiment of the bag;
- Figure 17 is a schematic side view showing a seventh preferred embodiment of the bag;
- Figure 18 is a schematic side view showing an eighth preferred embodiment of the bag;
- Figure 19 is a schematic side view showing a ninth preferred embodiment of the bag;
- Figure 20 is a schematic perspective view of the ninth preferred embodiment of the bag;
- Figure 21 is a schematic perspective view of a tenth preferred embodiment of the bag;
- Figure 22 is a schematic perspective view of the tenth preferred embodiment of the bag.

### Description of the Preferred Embodiments of the Invention

**[0011]** Figures 1 to 4 illustrate a first preferred embodiment 10 of a bag made according to this invention.

**[0012]** The bag is preferably designed to contain a food product, including a pet food, or a product that is preferably in the form of a granular product or a product in pieces.

**[0013]** The bag might however be adapted to contain other products, in liquid or powder form, such as for example a detergent or the like.

**[0014]** As will become clearer as this description continues, the bag is made preferably by folding a web of film, in particular layered plastic film exhibiting suitable flexibility.

**[0015]** In particular, for making a bag according to the embodiment shown in Figure 1, it is contemplated the use of a web of plastic or plasticized film, where said film has a sealable face, in particular heat-sealable, and an opposite face which is not sealable and which is printed with appropriate writing, colours and images on predetermined areas of it, corresponding to predetermined parts of the front, rear and side faces of the finished bag.

**[0016]** As shown in the drawings, the bag 10 comprises a front wall 12, a rear wall 14 and opposite side walls 16, 18, made in such a way as to form respective gussets having a V-shaped cross section and comprised of respective flaps or portions of film transversally indented towards the inside or central part of the bag.

**[0017]** As illustrated, the gussets or side walls 16 and 18 consist of respective longitudinal portions or flaps 19, 21 and 23, 25 that extend from respective edges 12a, 14a and 12b, 14b of the front and rear walls 12 and 14.

**[0018]** The reference numerals 16a and 18a thus denote the longitudinal folding or separating edges between the gusseted portions or panels 19, 21 and 23, 25 which, as mentioned above, are indented towards the inside of the bag under normal conditions of use.

**[0019]** The top of the bag is closed along a join portion, in particular a transversal seal 41 described in more detail below.

**[0020]** The bottom of the bag 10 is defined by a transversal strip 44 made by joining or sealing opposite lower transversal ends 12c, 14c of the front and rear walls 12, 14.

**[0021]** As shown in Figure 1, when the bag is full, the lower portions or zones of the front and rear walls 12, 14 contribute to forming the bottom of the bag. As illustrated in Figure 1, the bottom part 12c, 14c of the bag might also be folded in such a way as to overlap the front wall 12, thus giving the bag an enlarged or flat bottom in which the lower portion of the wall 14 forms the lower transversal face of the bag when full.

**[0022]** In this condition, the lower portion of the bag, which is folded over the front wall 12, is pressed against and glued to the respective portion of the rear wall in a manner well within the knowledge of an expert in the

trade and therefore not described in further detail. Obviously, the bottom portion might also be folded over and fixed to the rear wall 14.

**[0023]** At the top of it, the bag according to the invention has a product outlet mouth 30, which is described in more detail below, where there are means for opening and closing the mouth 30, for example in the form of a zip, comprising respective connecting elements that can be fastened and unfastened to and from each other, and more specifically, unfastened by pulling apart the respective portions of the front and rear bag walls 12, 14 and fastened by pressing together again the same portions of the front and rear walls 12, 14.

**[0024]** As illustrated, there are longitudinal seals or joins, labelled 31s, 33s, 35s, 37s, at the edges 12a, 12b, 14a, 14b for respectively connecting the front wall 12 and the rear wall 14 with the portions 19, 21, 23, 25 forming the bag side gussets.

**[0025]** As illustrated, the bag 10 comprises side gussets 16, 18 having respective upper ends 16', 18', of which only the upper end 18' of the gusset 18, as shown in Figure 2A, is closed by a band or strip 40 designed to seal that end of the gusset to prevent communication between the inside and outside of the bag. Preferably, therefore, the band 40 constitutes means for hermetically sealing the bag.

**[0026]** The band 40 is suitably glued or sealed above the upper end 18' of the gusset 18 which is in contact with a respective wall of the bag or, more specifically, in this embodiment, with the inside face of the wall 14. The band 40 is also glued or sealed to the respective inside face 14' of the wall 14 of the bag.

**[0027]** Advantageously, the bag 10 comprises a joining portion 33 between the front wall 12 and the rear wall 14 of the bag, said joining portion 33 being provided on the extension of the respective flaps 23, 25 of the gusset 16.

**[0028]** Advantageously, the joining portion 33 is adapted to form gripping means for gripping the bag, located on the extension of the respective gusset 18 and, as may be inferred in particular from Figure 4, the joining portion 33 is wide enough to be engaged by at least one finger and, in particular, by a plurality of fingers of the user's hand M.

**[0029]** In this way, it is possible to define a portion 33 by which the bag can be conveniently gripped and handled, in particular allowing the product P to be poured out of the bag, as clearly illustrated in Figure 4.

**[0030]** As shown, the joining portion 33 extends longitudinally along the bag between the end 18' of the gusset 18 and the upper edge 41 that seals the top of the bag.

**[0031]** As illustrated, the joining portion 33 is delimited by an inner and an outer longitudinal edge 33a and 33b, and by respective transversal edges 33c, 33d.

**[0032]** Further, as illustrated, the joining portion 33 extends transversally for at least part of the width of the respective gusset, and more specifically, until it reaches the longitudinal extension of the inner edge 18a of the

respective gusset 18.

**[0033]** The joining portion or gripping means might, however, also be made wider than the transversal width of the respective gusset, that is to say, the inner edge 33a of the joining portion might extend transversally beyond the inner edge 18a of the respective gusset 18.

**[0034]** A large gripping means 33 easily engaged by the user's fingers is thus obtained.

**[0035]** To facilitate the hold on the portion 33, at least one hole 35, delimited by a respective edge 35', is made in the portion 33, said hole 35 being, advantageously in the form of an oblong hole extending longitudinally of the bag, that is to say, parallel to the sides 16 and 18 of the bag.

**[0036]** In this way, the user's hand M can be conveniently positioned as shown in Figure 4, inside the hole 35 in such a way that the product P can be easily poured out of the bag 10.

**[0037]** Advantageously, as illustrated, the bag has a first and a second gusset 16 and 18, of which one, namely the gusset 16, extends longitudinally beyond the upper longitudinal edge 18' of the other gusset 18.

**[0038]** As stated, in this embodiment, the bag gripping means 33 are provided on the extension of the short gusset 18, that is to say on a longitudinal zone without the gusseted portion 18.

**[0039]** In an especially advantageous manner, the gusset 16 is in turn adapted to form means for channelling the product P out of the bag 10, as clearly shown in Figure 4.

**[0040]** In practice, the presence of a longer gusset is 16 is used as means for channelling the product P out of the bag 10.

**[0041]** As illustrated, the gusset 16 has a respective upper end 16' that is located at the upper boundary 41 of the bag 10.

**[0042]** In practice, a product P outlet mouth 30 is advantageously provided at the flaps 19, 21 of the gusset 16.

**[0043]** More specifically, as illustrated, the mouth 30 is provided at the end 16' of the gusset 16.

**[0044]** Advantageously, at the outlet mouth 30, the gusset 16 has a respective end section or portion 161 that can be moved between a closed configuration, illustrated in Figure 3, and a configuration in which the product can be poured out of the mouth 30, as illustrated in Figure 4.

**[0045]** In particular, the gusset 16 has a longitudinal end 16' such that when the gusset 16 is in the folded in condition towards the inside of the bag, it forms means for at least partly closing the product outlet mouth 30.

**[0046]** In practice, the product can be poured out when the respective flaps 19, 21 of the gusset 16 are transversally spread apart or extended towards the outside of the bag, as illustrated in Figure 4.

**[0047]** In particular, the material constituting the film used to make the bag, or at least the gusset, exhibits properties such that the gusset 16 opens or extends to-

wards the outside of the bag under the weight of the product P contained in the bag and elastically re-closes towards the inside of the bag when the weight of the product P no longer bears on the gusset 16.

**[0048]** As illustrated, the product P outlet mouth 30 opens at the end 16' of the gusset 16, that is to say, on the transversal side opposite the side where the bag gripping means 33 are located, and is substantially aligned with the gripping means 33 in a transversal direction.

**[0049]** As illustrated, the outlet mouth 30 is defined by an oblique border, labelled 30', which extends along the end edge 41 of the bag.

**[0050]** This provides a product outlet mouth 30 that opens longitudinally of the bag. In another embodiment, however, the product outlet mouth might be made in such a manner as to open both transversally, or laterally, and longitudinally of the bag.

**[0051]** As illustrated in particular in Figure 4, the outlet mouth 30 is defined by opposite borders 19', 21' of the flaps 19, 21 of the respective gusset 16 and by respective borders 126', 146' of the front and rear walls 12, 14 of the bag, which substantially coincide with or match the borders of the gusset flaps 19', 21' when the bag is closed, as illustrated in Figure 3, and which are, instead, inclined in the opposite direction to the borders 19', 21' at the end 16' of the gusset 16, when the end portion 161 of the gusset 16 extends transversally beyond the edges 12a, 14a of the front and rear walls 12, 14.

**[0052]** In particular, as illustrated, the borders 19', 21' of the respective flaps 19, 21 of the gusset 16 extend obliquely in the same way as the borders 126', 146' of the portion of the respective walls 12 and 14 facing the respective flaps 19, 21 of the gusset 16.

**[0053]** In particular, the mouth 30 extends transversally for substantially the full width of the respective gusset 16.

**[0054]** The product outlet mouth 30 might, however, also extend for a short transversal section, remaining substantially within the transversal dimension of the gusset 16. As already mentioned, the bag comprises an upper transversal edge 41 for closing the bag and which is defined by opposite end strips joined together, in particular sealed, on the front and rear walls 12, 14 of the bag before the flaps 19, 21 of the gusset 16 are opened.

**[0055]** As stated, the mouth 30 opens at the upper transversal edge 41. In particular, the product outlet mouth 30 opens on one side of the upper transversal closing edge 41.

**[0056]** As stated, the bag also has longitudinal closing edges, labelled 31s and 33s, provided, respectively, between the front wall 12 and the opposite gusset flap 19, between the rear wall 14 and the opposite flap 21 of the gusset 16, and on the opposite side of the longitudinal closing edges 35s, 37s provided between the front wall 12 and the opposite flap 23 of the gusset 18 and between the rear wall 14 and the opposite flap 25 of the gusset 18. The longitudinal edges 31s, 33s, 35s, 37s are provided by corresponding joined portions of the front and

rear walls 12 and 14 and of the respective flaps 19, 21, 23, 25 forming the gussets 16 and 18 and which are joined by longitudinal seals.

**[0057]** As illustrated, the product outlet mouth 30 opens at respective longitudinal edges 31s, 33s, in particular along a longitudinal upper end zone of the longitudinal edges 31s, 33s joining the front and rear walls 12, 14 to the flaps of the gusset 16.

**[0058]** Advantageously, as may be inferred in particular from Figure 3, the longitudinal end 16'a of the edge 16a that joins the flaps 19, 21 of the gusset 16 extends at the transversal closing edge 41.

**[0059]** As may be inferred from Figures 1 and 2A, the bag is provided with a tear line, preferably in the form of a pre-weakened line 31, for removing a corner portion 10' of the bag, said pre-weakened line 31 coinciding, once the portion 10' has been removed, with the border delimiting the product outlet mouth 30.

**[0060]** The tear line 31, preferably a pre-weakened line, extends obliquely relative to the principal direction in which the bag extends, that is to say, or at an angle to the longitudinal sides of the bag, and is obtained, as may be better inferred from Figure 5, from respective sections 319, 321, that extend at the parts of the film which constitute the gusset flaps 19, 21 and which are oriented, starting from a common junction point, in opposite angular directions, and further oblique sections 314, 312, that extend at the parts of the film which constitute the front and rear bag walls 12, 14 and which extend from, and in an angular direction opposite to, the respective ends of the oblique portions 319, 321.

**[0061]** The tear or pre-weakened line 31 is advantageously in the form of a part of the plastic film that is thinner than the rest of the film and is, in particular, made by laser thinning. Other means for pre-cutting the film are also imaginable, however, provided always that they keep the bag hermetically sealed before opening. For example, the film might be cut mechanically but without cutting right through it, or the film might simply have a line printed on it indicating that the user should cut it using scissors or another cutting tool.

**[0062]** As illustrated, tearing aid means are provided at the pre-weakened line 31, in the form of notches 31a, 31b located at the ends of the pre-weakened line 30, said notches 31a, 31b being cut in the longitudinal closing edges 31s, 33s and in the transversal closing edge 41, as well illustrated in Figure 2A.

**[0063]** Means 40 are also advantageously provided for sealing the respective end 18' of the gusset 18, said means, as mentioned above, being in the form of a short sealing band 40 extending only at the end 18' of the short gusset 18.

**[0064]** The portion 33 defining the bag gripping means extends at the sealing means 40 of the gusset 18 end 18'.

**[0065]** The numerals 53 and 63 denote further bag gripping means located on the longitudinal side opposite the product outlet side and, in particular, on the longitudinal side of the bag opposite the side where the first

gripping means 33 are located, or, other words, at the bottom of the bag 10.

**[0066]** In particular, the bag gripping means 53, 63 are provided on the extensions of the gussets 16, 18, at the bottom ends 16", 18" of the respective gussets.

**[0067]** More specifically, as illustrated, second gripping means 53 are provided on the side 18 of the bag, and third gripping means 63 on the other side 16 of the bag.

**[0068]** In practice, second gripping means 53, located at the bottom of the bag on the side 18 of the bag, are longitudinally aligned with the first gripping means 33, while third gripping means 63, located at the bottom of the bag on the side 16 of the bag, are longitudinally aligned with the outlet mouth 30.

**[0069]** The gripping means 53 and 63 at the bottom of the bag comprise respective holes 55, 65 which are delimited by respective edges 55', 65 and into which the user can insert at least one finger.

**[0070]** As illustrated, the gripping means 53, 63 on the bottom of the bag are made by sealing the gusset flaps 19, 21 and 23, 25 to the respective front and rear walls 12, 14.

**[0071]** In practice, it is contemplated the provision of a first and a second portion defining the second and third gripping means 53 and 63, respectively, which can also be joined to each other to form a single, compact whole for the gripping means 53, 63.

**[0072]** As illustrated, the product outlet mouth 30 opens only on one side of a lateral area of the bag.

**[0073]** In practice, the bag thus has an upper area where the product outlet mouth 30 is made and a bottom area longitudinally opposite it. As illustrated, the bag comprises gripping means 33 extending at the top of the bag and, more specifically, at the upper transversal edge 41 of the bag.

**[0074]** Further, as illustrated, the bag gripping means 33 extend longitudinally beyond the bottom edge of the mouth 30 towards the bottom of the bag, thus facilitating the tasks of pouring out the product and generally handling and transporting the bag.

**[0075]** According to another aspect, the bag gripping means 33 are provided on one side of the bag, and, in particular, on the extension of a respective gusset 18, in an area situated beyond the upper longitudinal edge of that gusset. These gripping means, as clearly shown in Figure 4 are in the form of advantageous means that can be held or gripped by the user's fingers in opposition to the palm of the hand. Thus, the user's fingers are wrapped around gripping means 35", as may be inferred from Figure 4.

**[0076]** In practice, the gripping means 35" located between the opening 35 and the respective outer lateral edge of the bag constitutes a handy elongated grip extending longitudinally of the bag along the outer lateral edge of the bag.

**[0077]** From Figure 5 it may be inferred that an advantageous process for making the first preferred embodi-

ment 10 of the bag according to the invention comprises feeding a flat web of film 51 suitable for making the bag 10, providing an area 58 of the web 51, where the bag gusset 18 will be formed, with an opening 57 and cutting a line, in particular using laser means, in a portion of the web transversally aligned with said opening 57, that is to say, in a portion 56 of the film where the gusset 16 of the bag 10 will be formed.

**[0078]** Said laser cut, as described above, comprises a first section 319, a second section 321, together defining a shape substantially like a V, a third section 312 on the extension of the section 319 and forming with the latter a portion having a general V shape, and a fourth section 314 on the extension of the section 321 and forming with the latter a portion having a general V shape, said sections together forming the pre-cut area designed to make the product outlet mouth 30 in the finished bag.

**[0079]** In order to obtain the bag using the first preferred embodiment of the process, the method to be followed is substantially that described in international patent application WO2006/067617 or explained in Italian patent application BO2007A000230 both ascribable to the present applicant.

**[0080]** In a second preferred embodiment 100 illustrated in Figures 6 and 7, the bag gripping portion 133 at the upper longitudinal end of the bag can be made by sealing the respective ends of a gusset 18.

**[0081]** In practice, a first portion 133a is provided between the flap 23 of the gusset 18 and the front wall 12 and a second portion 133b is provided between the flap 25 of the gusset 18 and the rear wall 14, both portions being suitably perforated to afford respective openings 135a and 135b for gripping and holding the bag.

**[0082]** It is then contemplated joining, in particular by sealing, the perforated gripping portions 133a, 133b, to create a single gripping portion 133, as illustrated in Figure 6, thanks to the provision of respective openings, not illustrated in detail in the accompanying drawings, in the flaps 23, 25 of the gusset 18, which enable the sealable inside faces of the front and rear walls 12 and 14 to come into direct contact with each other. The wall 12 can thus be made to adhere to the wall 14 to create a single gripping portion 133.

**[0083]** In practice, in this second preferred embodiment 100, the gussets 16 and 18 are equal in length and extend preferably to the top edge of the bag.

**[0084]** In a third preferred embodiment 200 of the bag, illustrated in Figure 8, similar to the first embodiment 10 and where the parts that are the same as those of the latter are denoted by the same reference numerals and, for brevity, will not be described in detail again, a first and a second band 140a, 140b are provided for sealing the respective gussets 16, 18, both being reduced in length, that is to say, ending with respective ends 16', 18' that are longitudinally spaced from the upper edge 41 of the bag.

**[0085]** In this third preferred embodiment, there are oblique seals 190, 210 and 230, 250, which are located

longitudinally beneath the respective bands 140a, 140b that seal the gussets 16, 18, and which join the respective gusset flaps 19, 21 and 23, 25 to the front and rear walls 12, 14, in such a way as to form means for channelling the product out of the bag.

**[0086]** A second preferred embodiment of the process for making the bag, in particular for making the first preferred embodiment of the bag, is illustrated in Figures 9 and 10. This second preferred embodiment of the process contemplates the use of a plurality of webs of film 351, 352, 353, 354, unwound from respective rolls 301, 302, 303, 304, for making the front and rear walls and the side walls, or gussets, of the bag. In particular, the second preferred embodiment comprises feeding a first and second web of film 351, 352, oriented horizontally, to make the front and rear walls of the bag and transversally inserting between them respective webs of film 353, 354 suitably folded to form the respective gussets of the bag.

**[0087]** Advantageously, as illustrated in particular in Figure 10, the webs of gusset film 353, 354 are inserted transversally in such a way that for each assembled length of film that will form a bag, the gussets 318, 316 are made in different lengths, and more specifically, long gussets 316 extending for substantially the entire width of the webs 351, 352 of the front and rear walls, and short gussets 318 extending from one lateral edge of the webs 351, 352 only across a predetermined part of the width of the respective webs 351, 352. The bag gripping portion 33 is subsequently made at the short gusset 318 of the bag.

**[0088]** A third preferred embodiment of the process for making the bag, in particular for making the first preferred embodiment of the bag, is illustrated in Figure 11. This third preferred embodiment of the process contemplates the use of a plurality of webs of film 451, 452, 453, 454, unwound from respective rolls not illustrated in the drawing, for making the front and rear walls and the side walls, or gussets, of the bag. In particular, the third preferred embodiment comprises feeding a first and second web of film 451, 452, oriented vertically, to make the front and rear walls of the bag and transversally inserting between them respective webs of film 453, 454 suitably folded to form the respective gussets of the bag.

**[0089]** Advantageously, as illustrated in Figure 11, the webs of gusset film 453, 454 are inserted transversally in such a way that for each assembled length of film that will form a bag, the gussets 418, 416 are made in different lengths, and more specifically, long gussets 416 and short gussets 418, where the bag gripping portion 33 is subsequently made, substantially as described in connection with the process of Figures 9 and 10 described above.

**[0090]** A fourth preferred embodiment of the process for making the bag, in particular for making the first preferred embodiment of the bag, is illustrated in Figure 12. This fourth preferred embodiment of the process contemplates the use of a plurality of webs of film 551, 552,

553, 554, unwound from respective rolls not illustrated in the drawing, for making the front and rear walls and the side walls, or gussets, of the bag. In particular, the fourth preferred embodiment comprises feeding a first and second web of film 551, 552, oriented vertically, to make the front and rear walls of the bag and longitudinally inserting between them respective webs of film 553, 554 suitably folded to form the respective gussets of the bag.

**[0091]** Advantageously, as illustrated in Figure 12, the webs of gusset film 553, 554 are inserted longitudinally in such a way that for each assembled length of film that will form a bag, the gussets are made in different lengths, and more specifically, long gussets and short gussets, made by interrupting feed of the web of gusset film 553 to form longitudinally spaced portions 553, 553 with an opening 553a between them, where the bag gripping portion 33 is subsequently made.

**[0092]** In order to obtain the bag using the fourth preferred embodiment of the process, the method to be followed is substantially that described in international patent application WO2006/067617 or explained in Italian patent application BO2007A000230 both ascribable to the present applicant .

**[0093]** Figure 13 illustrates a fourth preferred embodiment 600 of the bag, which is similar to the third embodiment 200 and in which the components similar to those of that embodiment are labelled with the same reference numerals and, for brevity, will not be described again in detail.

**[0094]** In the fourth preferred embodiment of the bag, the gussets 16, 18 are sealed by folding back the end portion 619', 621', 623' and 625' of the respective gusset flaps 19, 21 and 23, 25 towards the bottom of the bag and joined, in particular sealed, to the respective facing portions of the front and rear walls 12, 14. This allows the gussets to be sealed without using specific sealing bands or strips.

**[0095]** Figure 14 illustrates a fifth preferred embodiment 700 of the bag, which is similar to the third embodiment 200 and in which the components similar to those of that embodiment are labelled with the same reference numerals and, for brevity, will not be described again in detail. In the fifth preferred embodiment of the bag, it is contemplated the provision of a pre-weakened line 731 for removing a corner portion of the bag, where a longitudinal section 731 a of the pre-weakened line 731 extends on the front and rear walls of the bag, and a transversal section 731b runs on the front and rear walls and on the gusset flaps. The pre-weakened line 731 is advantageously in the form of a part of the plastic film that is thinner than the rest of the film and is, in particular, made by laser thinning. Tearing aid means or notches 731c, 731d similar to those of the first embodiment 10 are advantageously provided at the pre-weakened line 731. This provides a product outlet mouth that opens both longitudinally and transversally of the bag.

**[0096]** The bands or strips 40, 140a, 140b for sealing the gussets are made preferably of heat-sealable mate-

rial, and especially of material that is heat sealable on both sides or faces.

**[0097]** A fifth preferred embodiment of the process for making the bag is illustrated in Figure 15. The fifth preferred embodiment of the process is particularly suitable for making a bag having an L-shaped product outlet mouth, that is, a mouth delimited by a border or portion extending transversally of the bag and a border or portion extending longitudinally of the bag in a manner similar that described in connection with the fifth preferred embodiment of the bag illustrated in Figure 14.

**[0098]** In the fifth preferred embodiment of the process, the lateral product outlet mouth is obtained by pre-cutting or weakening the portions of film defining the gusset flaps and the respective portions of the film defining the front and rear walls of the finished bag.

**[0099]** In practice, as shown in Figure 15, the pre-cutting or thinning of the film, accomplished preferably by a laser beam emitting device, is defined by a first transversal portion, or line, 771 running along a longitudinal area 756, where a respective side gusset is made on the bag, and across the longitudinal lines 752a, 754a which delimit or separate the film portions defining the gusset flaps 759, 761 from the film portions defining the front and rear walls 752, 754 of the bag.

**[0100]** The pre-cutting or thinning of the film also comprises respective longitudinal sections or lines 772, 774 running from the ends of the transversal pre-cut or weakening line 771 to a longitudinal area of the film that will form the transversal upper end edge of the bag.

**[0101]** As illustrated, the pre-cut or pre-weakened area of the film defined in its entirety by the line 771, 772, 774 has the general shape of a U. As shown in the drawing, the pre-weakened line 771, 772, 774 is transversally aligned with an opening 757 made by punching the web of film 751 and located at the film portion 758 defining a respective flap of a side gusset of the bag.

**[0102]** This creates an outlet mouth for advantageously and effectively channelling the product out of the bag and a pre-cut weakened area that is quick and easy to make.

**[0103]** In order to obtain the bag using the fifth preferred embodiment of the process, the method to be followed is substantially that described in international patent application WO2006/067617 or explained in Italian patent application BO2007A000230 both ascribable to the present applicant.

**[0104]** Figure 16 illustrates the top of a sixth preferred embodiment 800 of the bag, which is similar to the first embodiment 10 and in which the components similar to those of that embodiment are labelled with the same reference numerals and, for brevity, will not be described again in detail. In the sixth preferred embodiment of the bag, the invention contemplates the provision of a pre-cut line, preferably a pre-weakened line 813 for removing a corner portion of the bag, where said pre-cut line 813 extends between the lateral longitudinal edges 31s, 33s and the upper transversal edge 41 of the bag.

**[0105]** The sixth preferred embodiment differs from the first preferred embodiment in that it has a pre-cut line 813 which extends at the front and rear bag walls 12 and 14 transversally beyond the inside edge 16a of the gusset 16.

**[0106]** Figure 17 illustrates the top of a seventh preferred embodiment 820 of the bag, which is similar to the first embodiment 10 and in which the components similar to those of that embodiment are labelled with the same reference numerals and, for brevity, will not be described again in detail.

**[0107]** In the seventh preferred embodiment of the bag, the invention contemplates the provision of a pre-cut line, preferably a pre-weakened line 823 for removing a corner portion of the bag, where said pre-cut line 823 extends between the lateral longitudinal edges 31s, 33s and the upper transversal edge 41 of the bag.

**[0108]** The seventh preferred embodiment, too, differs from the first preferred embodiment in that it has a pre-cut line 823 which extends at the front and rear bag walls 12 and 14 transversally beyond the inside edge 16a of the gusset 16.

**[0109]** Besides that, the seventh preferred embodiment differs from the first and sixth preferred embodiments in that the pre-cut line 823 is divided into a first and a second part 823a and 823b each extending on the front and rear bag walls at a different angle from the other with respect to the longitudinal line along which the bag extends.

**[0110]** In particular, the first part 823a of the pre-cut line extends from the gusset 16 at an angle Aa to the longitudinal direction of the bag, said angle Aa being greater than the angle Ab made by the second part 823b of the pre-cut line extending from the upper edge 41 of the bag.

**[0111]** In this way, it is easy for the user to tear the bag along the pre-cut line to make an advantageously large opening near the respective lateral edge of the bag, that is to say, near the respective gusset, with obvious advantages in terms of channelling the product out of the bag.

**[0112]** As illustrated, the first part 823a of the pre-cut line extending from the lateral edge 31s, 33s at the gusset 16 and beyond the inside edge 16a of the gusset makes an obtuse angle A, that is, greater than 90°, with the second part 823a of the pre-cut line extending from the upper edge 41 of the bag.

**[0113]** Figure 18 illustrates the top of a eighth preferred embodiment 840 of the bag, which is similar to the first embodiment 10 and in which the components similar to those of that embodiment are labelled with the same reference numerals and, for brevity, will not be described again in detail.

**[0114]** In the eighth preferred embodiment of the bag, the invention contemplates the provision of a pre-cut line, preferably a pre-weakened line 843 for removing a corner portion of the bag, where said pre-cut line 843 extends between the lateral longitudinal edges 31s, 33s and the

upper transversal edge 41 of the bag.

**[0115]** The eighth preferred embodiment, too, like the sixth and seventh embodiments, differs from the first preferred embodiment in that it has a pre-cut line 843 which extends at the front and rear bag walls transversally beyond the inside edge 16a of the gusset 16.

**[0116]** Advantageously, the pre-cut line 843 of the eighth preferred embodiment has an arcuate shape both on the front and rear walls 12 and 14 and on the flaps of the gusset 16, as clearly shown in Figure 19, which illustrates a bag with a similar opening cut.

**[0117]** As illustrated, the pre-cut line 843 extends from an outer edge of the bag in a direction substantially perpendicular to the respective longitudinal edge 31s, 33s, and ends substantially perpendicular, or slightly inclined, to the upper transversal closing line 41 of the bag.

**[0118]** In practice, this provides an outlet mouth 30 which extends across part of the width of the bag, and more specifically, for slightly more than half the width of the respective gusset 16, and which is conveniently large and effective in channelling or guiding the product out of the bag.

**[0119]** Figures 19 and 20 illustrate the top of a ninth preferred embodiment 850 of the bag, which is similar to the first embodiment 10 and in which the components similar to those of that embodiment are labelled with the same reference numerals and, for brevity, will not be described again in detail.

**[0120]** The ninth preferred embodiment of the bag advantageously comprises means 861 for closing the product outlet mouth 30 after the bag has been opened.

**[0121]** Advantageously, the closing means 861 are designed to keep the outlet mouth 30 closed after the bag has been opened and are provided at or near the product outlet mouth 30 itself.

**[0122]** The means 861 for closing product outlet mouth 30 are integral with the bag and are embodied by means forming part of the mouth 30 and designed to keep the top 850' of the bag at the product outlet mouth 30 closed by keeping it in a folded condition, as illustrated in Figure 20, over an outside face of the respective bag wall 14 to which it is suitably fixed.

**[0123]** In particular, the means for closing or folding the top 850' of the bag comprise a tab 861, preferably made from a strip of film and having one portion 861a that is integral with or fixed to an outside face of one bag wall 12 and another portion 861b designed to adhere or be fastened to the outside face of the opposite wall 14 of the bag.

**[0124]** As illustrated in Figure 19, the closing tab 861 before use is in a disengaged condition at the top of the bag and of the gusset 16, being located just under the respective portion of the line 843 that delimits the product outlet mouth 30.

**[0125]** As may be clearly inferred from the drawings, the length of the tab 861 and its distance from the line 843 that delimits the product outlet mouth 30 are such that when it is used it folds the top 850' of the bag at the

product outlet mouth 30, that is to say, at the side gusset 16, over an outside face of the bag wall 14.

**[0126]** The part 850' of the bag at the gusset 16 is folded with respect to an oblique line 850" inclined at an angle to the longitudinal direction of the bag, the closing tab 861 extending in a direction perpendicular to the fold line 850".

**[0127]** Figures 21 and 22 illustrate the top of a tenth preferred embodiment 900 of the bag, which is similar to the first embodiment 10 and in which the components similar to those of that embodiment are labelled with the same reference numerals and, for brevity, will not be described again in detail. The tenth preferred embodiment of the bag advantageously comprises means 911 for closing the product outlet mouth 30 after the bag has been opened.

**[0128]** Advantageously, the means for closing or keeping in a closed condition the outlet mouth 30 are in the form of means 911 designed to keep the flaps 19, 21 of the gusset 16 close to each other after the bag has been opened, and are provided at or near the product outlet mouth 30 itself.

**[0129]** More specifically, the means 911 for keeping the flaps 19, 21 of the gusset 16 close to each other are integral with the bag and located at the top of the bag and of the gusset 16, under the respective portion of the pre-cut line, or edge, 843 delimiting the product outlet mouth 30.

**[0130]** In particular, the means for keeping the gusset flaps close to each other at the product outlet mouth comprise mutually engageable and disengageable means 911a, 911b applied to the facing surfaces of the opposite flaps 19, 21 of the gusset 16.

**[0131]** Looking in more detail, the engageable and disengageable means comprise a respective element 911a fixed to the outside face of the gusset flap 19 and having adhesion means for connecting it to an element 911b fixed to the outside face of the opposite gusset flap 21.

**[0132]** In practice, the mutually engageable and disengageable means 911a and 911b, which keep the opposite gusset flaps 19, 21 close to each other in the closed or mutually engaged condition are provided on the face of the flap 19 or 21 that faces the flap 21 or 19 opposite it.

**[0133]** In practice, the mutually engageable and disengageable means 911a and 911b are preferably in the form of Velcro strips or other suitable means that can be fastened to each other.

**[0134]** In the embodiments of the bag described above, the means for gripping or holding the bag are located, preferably, at or near the respective longitudinal end edge of the bag. It will be understood, however, that in another embodiment, the means for gripping or holding the bag might be provided at any other intermediate longitudinal position of the respective lateral edge or area of the bag.

**[0135]** The invention described above is susceptible of industrial application and may be modified and adapted in several ways without thereby departing from the

scope of the inventive concept defined by the appended claims. Moreover, all the details of the invention may be substituted by technically equivalent elements.

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## Claims

1. A bag (10) for containing a product (P), especially a food product that is preferably in the form of a granular product or a product in pieces, the bag having a containing body made preferably of a flexible material such as a plastic film, and comprising a front wall (12), a rear wall (14) and at least one gusset (16, 18) defined by opposite flaps (19, 21, and 23, 25), in particular a first and a second side gusset (16, 18), the bag comprising a product (P) outlet mouth (30) that opens at the flaps (19, 21) of the gusset (16), and having first gripping means (33) by which the bag can be gripped, located on one side of the bag which is the side opposite to the product outlet mouth (30), **characterized in that** the first bag gripping means (33) comprises a joining portion (33, 133a, 133b) having at least one hole (35) made in it for gripping and holding the bag, and that the bag comprises second gripping means (53) for gripping the bag on the same longitudinal side opposite the side where the first gripping means (33) are located, said second bag gripping means (53) being substantially aligned with the first gripping means (33) and having at least one hole (55) for gripping and holding the bag.
2. The bag according to claim 1, **characterized in that** the respective gusset (16) at the outlet mouth (30) can be moved between a configuration in which the product outlet mouth (30) is at least partly closed and a configuration in which the product (P) can be poured freely out of the mouth (30) and which is the result of the respective gusset flaps (19, 21) being extended towards the outside of the bag.
3. The bag according to any of the foregoing claims, **characterized in that** the joining portion (33) constituting first bag gripping means is between the front wall (12) and the rear wall (14) of the bag, and is provided on the extension of the flaps (23, 25) of the respective gusset (18) .
4. The bag according to any of the foregoing claims, **characterized in that** the first bag gripping means (33) is on the extension of a respective gusset (18) and is transversally aligned with the product (P) outlet mouth (30).
5. The bag according to any of the foregoing claims, **characterized in that** the joining portion (33) extends longitudinally between the end (18') of the respective gusset (18) and the upper edge (41) of the

bag.

6. The bag according to any of the foregoing claims, **characterized in that** the hole (35) of the first gripping means (33) is in the form of an oblong hole extending longitudinally of the bag. 5
7. The bag according to any of the foregoing claims, **characterized in that** it comprises a gusset (16) that extends longitudinally beyond the longitudinal end (18') of the other gusset (18), the first bag gripping means (33) being located on the extension of the short gusset (18). 10
8. The bag according to any of the foregoing claims, **characterized in that** it comprises a pre-cut line (31) for tearing off a portion (10') of the bag and defining a product (P) outlet mouth (30) which is used to remove a corner portion (10') of the bag. 15
9. The bag according to claim 8, **characterized in that** the pre-cut line (31) is in the form of a part of the material the bag is made of that is thinner than the rest of the material, the pre-cut line (31) being in the form of a thinned part obtained by laser thinning. 20 25
10. The bag according to any of the foregoing claims 8 or 9, **characterized in that** the pre-cut line (31) extends on the flaps (19, 21) of the respective gusset (16). 30
11. The bag according to any of the foregoing claims from 8 to 10, **characterized in that** the pre-cut line (31) extends on the front and rear walls (12, 14) of the bag. 35
12. The bag according to any of the foregoing claims, **characterized in that** it comprises means (40) for sealing the respective end (18') of the gusset (18). 40
13. The bag according to claim 12, **characterized in that** the means (40) for sealing the end (18') of the gusset (18) are in the form of a sealing band (40).
14. The bag according to any of the foregoing claims, **characterized in that** it comprises means (53, 63) for gripping the bag located at the bottom of the bag. 45
15. The bag according to any of the foregoing claims, **characterized in that** it comprises means (53, 63) for gripping the bag located at the respective gusset (16, 18). 50

#### Patentansprüche 55

1. Beutel (10) zur Aufnahme eines Produktes (P), insbesondere eines Lebensmittelproduktes, vorzugs-

weise in Form eines körnigen Produktes oder eines stückigen Produktes, wobei der Beutel einen Füllraum aufweist, der vorzugsweise aus einem flexiblen Material wie beispielsweise Kunststoffolie gefertigt ist, und eine Vorderwand (12), eine Rückwand (14) und zumindest eine Seitenfalte (16, 18) aufweist, die durch einander gegenüberliegende Flanken (19, 21, und 23, 25) gebildet wird, und im Besonderen eine erste und eine zweite Seitenfalte (16, 18), wobei der Beutel eine Ausschüttöffnung (30) für das Produkt (P) beinhaltet, die sich an den Flanken (19, 21) der Seitenfalte (16) öffnet, und erste Greifmittel (33) aufweist, an denen der Beutel gegriffen werden kann und die auf einer Seite des Beutels angeordnet sind, die der Seite mit der Produktaus-

schüttöffnung (30) gegenüber liegt, **dadurch gekennzeichnet, dass** die ersten Beutelgreifmittel (33) einen Verbindungsabschnitt (33, 133a, 133b) beinhalten, der zumindest eine darin angefertigte Öffnung (35) zum Greifen und Halten des Beutels aufweist, und **dadurch**, dass der Beutel zweite Greifmittel (53) zum Greifen des Beutels auf der Längsseite gegenüber der Seite der Anordnung der ersten Greifmittel (33) aufweist, wobei diese zweiten Beutelgreifmittel (53) im Wesentlichen mit den ersten Greifmitteln (33) ausgerichtet sind und zumindest eine Öffnung (55) zum Greifen und Halten des Beutels aufweisen.

2. Beutel nach Anspruch 1, **dadurch gekennzeichnet, dass** die entsprechende Seitenfalte (16) an der Ausschüttöffnung (30) bewegt werden kann zwischen einer Konfiguration, in der die Produktaus-
- schüttöffnung (30) zumindest teilweise geschlossen ist, und einer Konfiguration, in der das Produkt (P) ungehindert aus der Öffnung (30) geschüttet werden kann und die **dadurch** erzielt wird, dass die entsprechenden Seitenfaltenflanken (19, 21) zur Außenseite des Beutels herausgezogen werden.

3. Beutel nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der Verbindungs-
- abschnitt (33), der die ersten Beutelgreifmittel bildet, zwischen der Vorderwand (12) und der Rückwand (14) des Beutels liegt und auf der Verlängerung der Flanken (23, 25) der entsprechenden Seitenfalte (18) vorgesehen ist.

4. Beutel nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die ersten Beutel-
- greifmittel (33) auf der Verlängerung einer entsprechenden Seitenfalte (18) vorgesehen und in Querrichtung mit der Ausschüttöffnung (30) für das Produkt (P) ausgerichtet sind.

5. Beutel nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** sich der Verbindungs-
- abschnitt (33) in Längsrichtung zwischen dem

Ende (18') der entsprechenden Seitenfalte (18) und der oberen Kante (41) des Beutels erstreckt.

6. Beutel nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Öffnung (35) der ersten Greifmittel (33) in Form eines Langlochs ausgebildet ist, das sich in Längsrichtung des Beutels erstreckt. 5
7. Beutel nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** er eine Seitenfalte (16) beinhaltet, die sich in Längsrichtung über das Längsende (18') der anderen Seitenfalte (18) hinaus erstreckt, wobei die ersten Beutelgreifmittel (33) auf der Verlängerung der kurzen Seitenfalte (18) angeordnet sind. 10
8. Beutel nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** er eine vorgestanzte Linie (31) zum Abreißen eines Abschnittes (10') des Beutels und Bilden einer Ausschüttöffnung (30) für das Produkt (P) beinhaltet, die dazu dient, einen Eckabschnitt (10') des Beutels zu entfernen. 15
9. Beutel nach Anspruch 8, **dadurch gekennzeichnet, dass** die vorgestanzte Linie (31) in Form einer Verdünnung eines Teils des Materials, aus dem der Beutel gefertigt ist, im Verhältnis zum Rest des Materials ausgeführt ist, wobei die vorgestanzte Linie (31) in Form eines durch Laserschwächung erhaltenen verdünnten Teils ausgeführt ist. 20
10. Beutel nach einem der vorhergehenden Ansprüche 8 oder 9, **dadurch gekennzeichnet, dass** sich die vorgestanzte Linie (31) auf den Flanken (19, 21) der entsprechenden Seitenfalte (16) erstreckt. 25
11. Beutel nach einem der vorhergehenden Ansprüche von 8 bis 10, **dadurch gekennzeichnet, dass** sich die vorgestanzte Linie (31) auf der Vorder- und Rückwand (12, 14) des Beutels erstreckt. 30
12. Beutel nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** er Mittel (40) zum Verschließen des entsprechenden Endes (18') der Seitenfalte (18) beinhaltet. 35
13. Beutel nach Anspruch 12, **dadurch gekennzeichnet, dass** die Mittel (40) zum dichten Verschließen des Endes (18') der Seitenfalte (18) in Form eines Verschlussstreifens (40) ausgeführt sind. 40
14. Beutel nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** er Mittel (53, 63) zum Greifen des Beutels beinhaltet, die am Boden des Beutels angeordnet sind. 45
15. Beutel nach einem der vorhergehenden Ansprüche, 50

**dadurch gekennzeichnet, dass** er Mittel (53, 63) zum Greifen des Beutels beinhaltet, die an der entsprechenden Seitenfalte (16, 18) angeordnet sind.

## Revendications

1. Un sac (10) pour contenir un produit (P), notamment un produit alimentaire qui est de préférence sous la forme d'un produit granulaire ou d'un produit en morceaux, le sac ayant un corps de logement réalisé de préférence dans un matériau flexible tel qu'un film plastique, et comprenant une paroi avant (12), une paroi arrière (14) et au moins un soufflet (16, 18) défini par des rabats opposés (19, 21, et 23, 25), en particulier un premier et un deuxième soufflets (16, 18) latéraux, le sac comprenant une bouche (30) de sortie du produit (P) qui s'ouvre au niveau des rabats (19, 21) du soufflet (16), et ayant des premiers moyens de prise (33) par l'intermédiaire desquels le sac peut être saisi, situés sur un côté du sac qui correspond au côté opposé à la bouche (30) de sortie du produit, **caractérisé en ce que** les premiers moyens (33) de prise du sac comprennent une portion d'union (33, 133a, 133b) ayant au moins un trou (35) qui y est pratiqué pour saisir et tenir le sac, et **en ce que** le sac comprend des deuxièmes moyens de prise (53) pour saisir le sac sur le même côté longitudinal à l'opposé du côté où se trouvent les premiers moyens de prise (33), lesdits deuxièmes moyens (53) de prise du sac étant essentiellement alignés avec les premiers moyens de prise (33) et ayant au moins un trou (55) pour saisir et tenir le sac. 5
2. Le sac selon la revendication 1, **caractérisé en ce que** le soufflet (16) respectif au niveau de la bouche de sortie (30) peut être déplacé entre une configuration dans laquelle la bouche (30) de sortie du produit est au moins partiellement fermée et une configuration dans laquelle le produit (P) peut être versé librement par la bouche (30) et qui résulte de l'extension des rabats (19, 21) du soufflet respectif vers l'extérieur du sac. 10
3. Le sac selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la portion d'union (33) constituant les premiers moyens de prise du sac est située entre la paroi avant (12) et la paroi arrière (14) du sac, et est prévue sur l'extension des rabats (23, 25) du soufflet (18) respectif. 15
4. Le sac selon l'une quelconque des revendications précédentes, **caractérisé en ce que** les premiers moyens (33) de prise du sac sont situés sur l'extension d'un soufflet (18) respectif et sont alignés transversalement par rapport à la bouche (30) de sortie du produit (P). 20

5. Le sac selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la portion d'union (33) s'étend longitudinalement entre l'extrémité (18') du soufflet (18) respectif et le bord supérieur (41) du sac. 5
6. Le sac selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le trou (35) des premiers moyens de prise (33) est réalisé sous la forme d'un trou oblong s'étendant longitudinalement au sac. 10
7. Le sac selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'il** comprend un soufflet (16) qui s'étend longitudinalement au-delà de l'extrémité longitudinale (18') de l'autre soufflet (18), les premiers moyens (33) de prise du sac étant situés sur l'extension du soufflet court (18). 15
8. Le sac selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'il** comprend une ligne de pré-coupe (31), pour l'arrachage d'une portion (10') du sac et définissant une bouche (30) de sortie du produit (P), qui est utilisée pour enlever une portion d'angle (10') du sac. 20  
25
9. Le sac selon la revendication 8, **caractérisé en ce que** la ligne de pré-coupe (31) est définie par une partie du matériau constituant le sac qui est plus mince que le reste du matériau, la ligne de pré-coupe (31) étant définie par une partie amincie obtenue par amincissement au laser. 30
10. Le sac selon l'une quelconque des revendications précédentes 8 ou 9, **caractérisé en ce que** la ligne de pré-coupe (31) s'étend sur les rabats (19, 21) du soufflet (16) respectif. 35
11. Le sac selon l'une quelconque des revendications précédentes de 8 à 10, **caractérisé en ce que** la ligne de pré-coupe (31) s'étend sur les parois avant et arrière (12, 14) du sac. 40
12. Le sac selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'il** comprend des moyens (40) pour sceller l'extrémité (18') respective du soufflet (18). 45
13. Le sac selon la revendication 12, **caractérisé en ce que** les moyens (40) de scellage de l'extrémité (18') du soufflet (18) sont sous la forme d'une bande de scellage (40). 50
14. Le sac selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'il** comprend des moyens (53, 63) de prise du sac, situés dans la partie inférieure du sac. 55
15. Le sac selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'il** comprend des moyens (53, 63) de prise du sac, situés au niveau du soufflet (16, 18) respectif.

FIG. 1

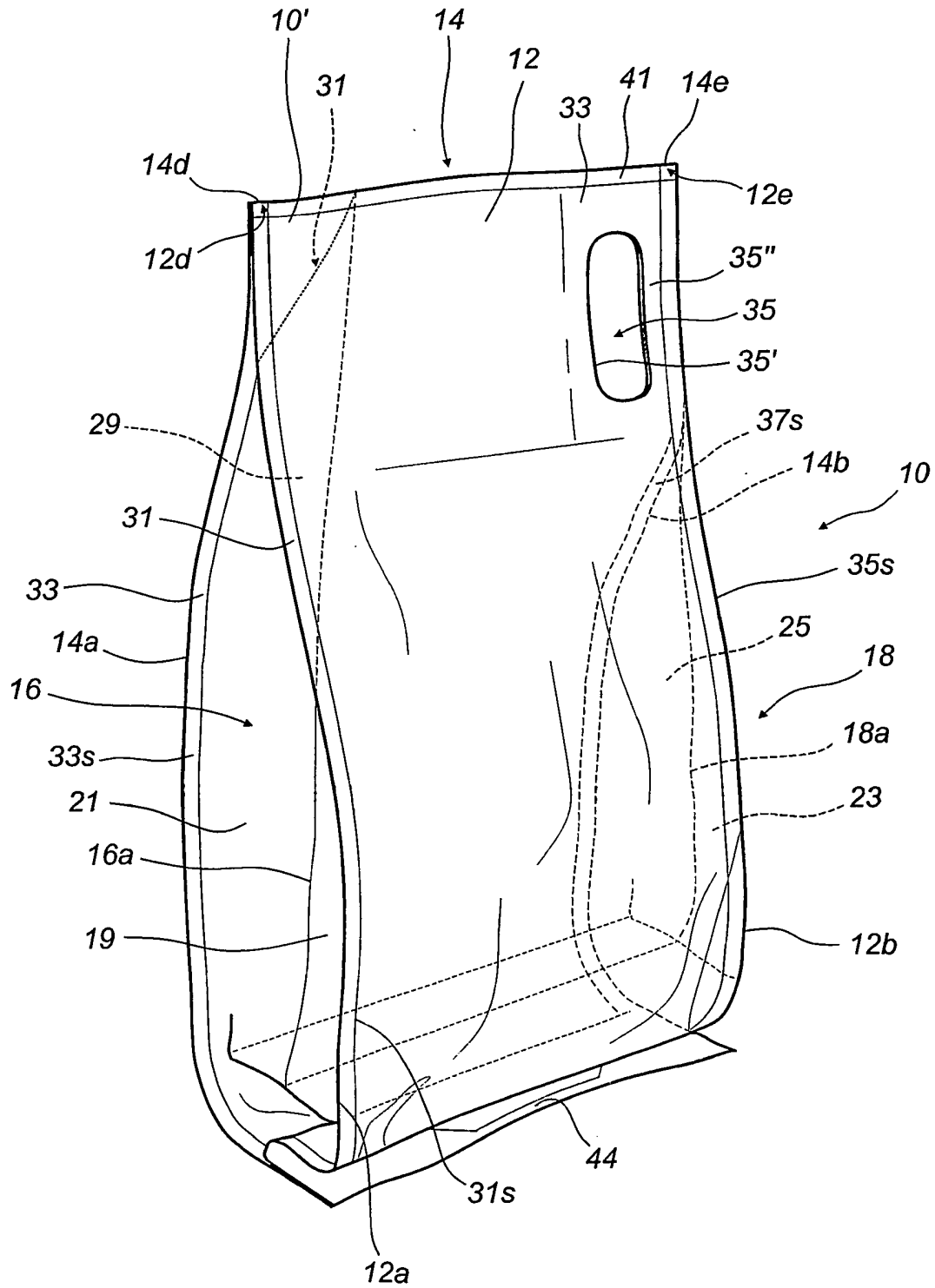




FIG. 2B

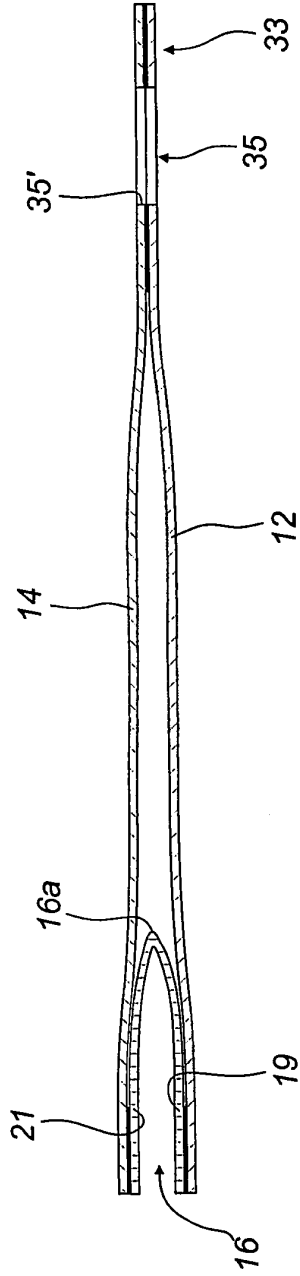


FIG. 2C

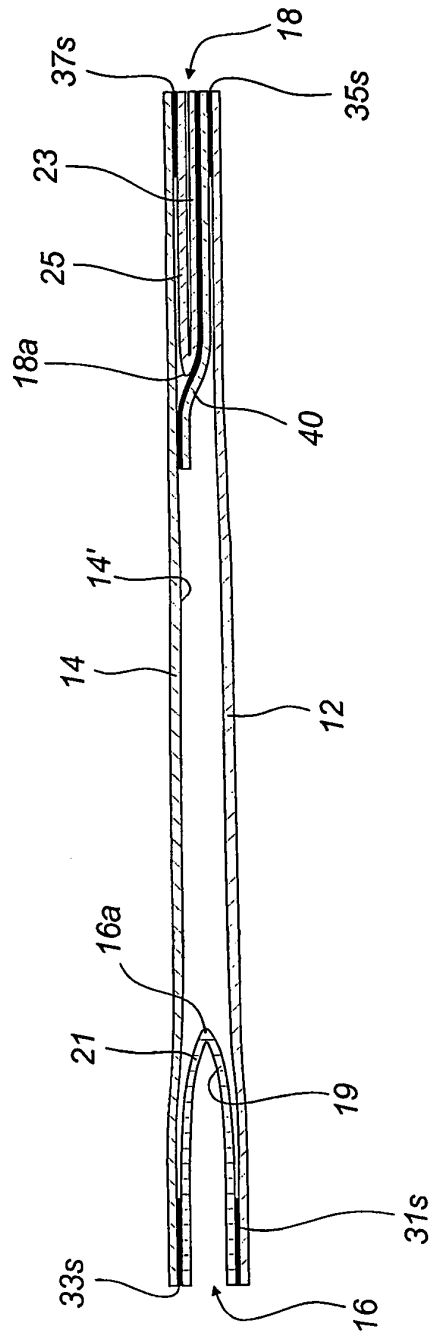
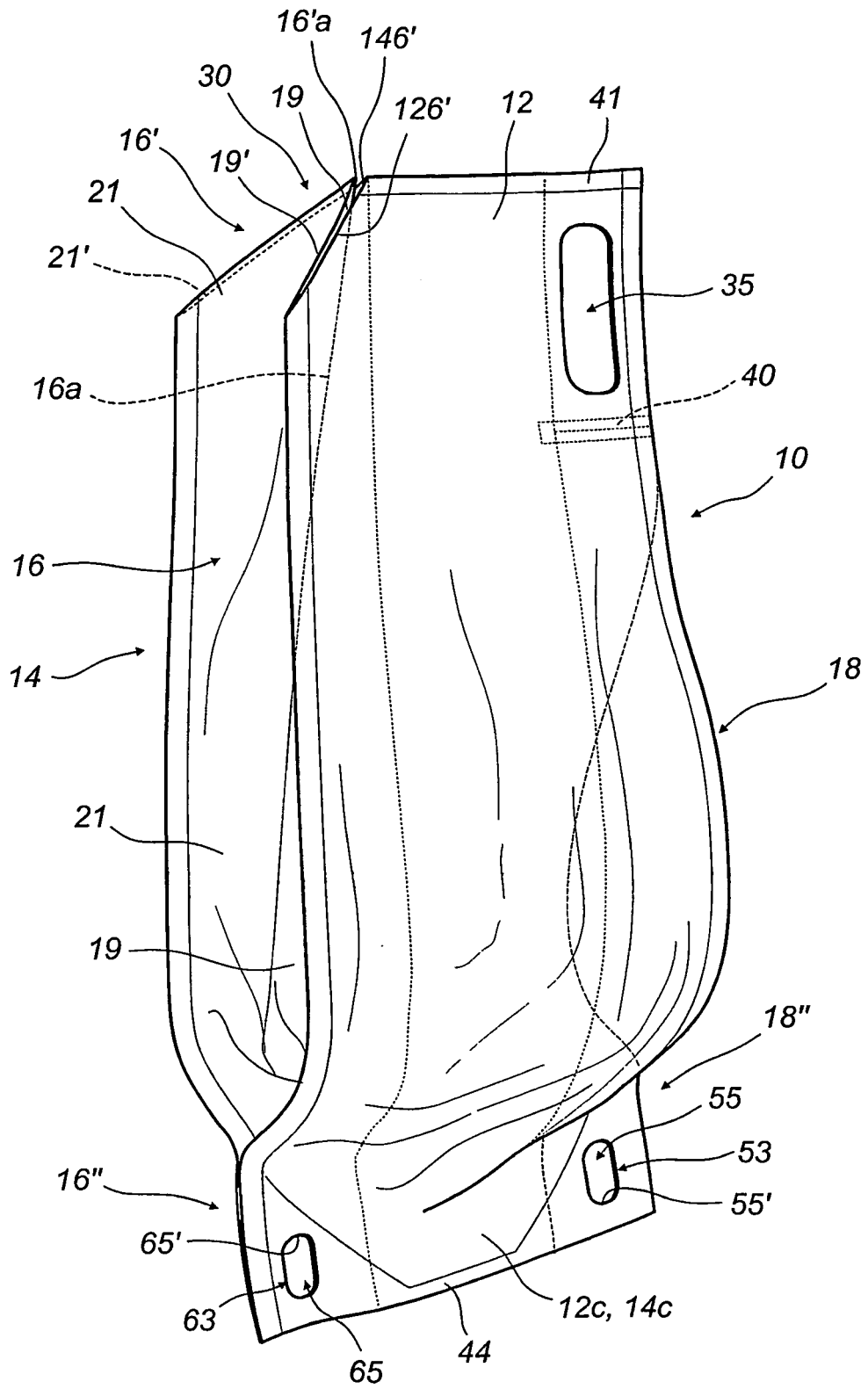
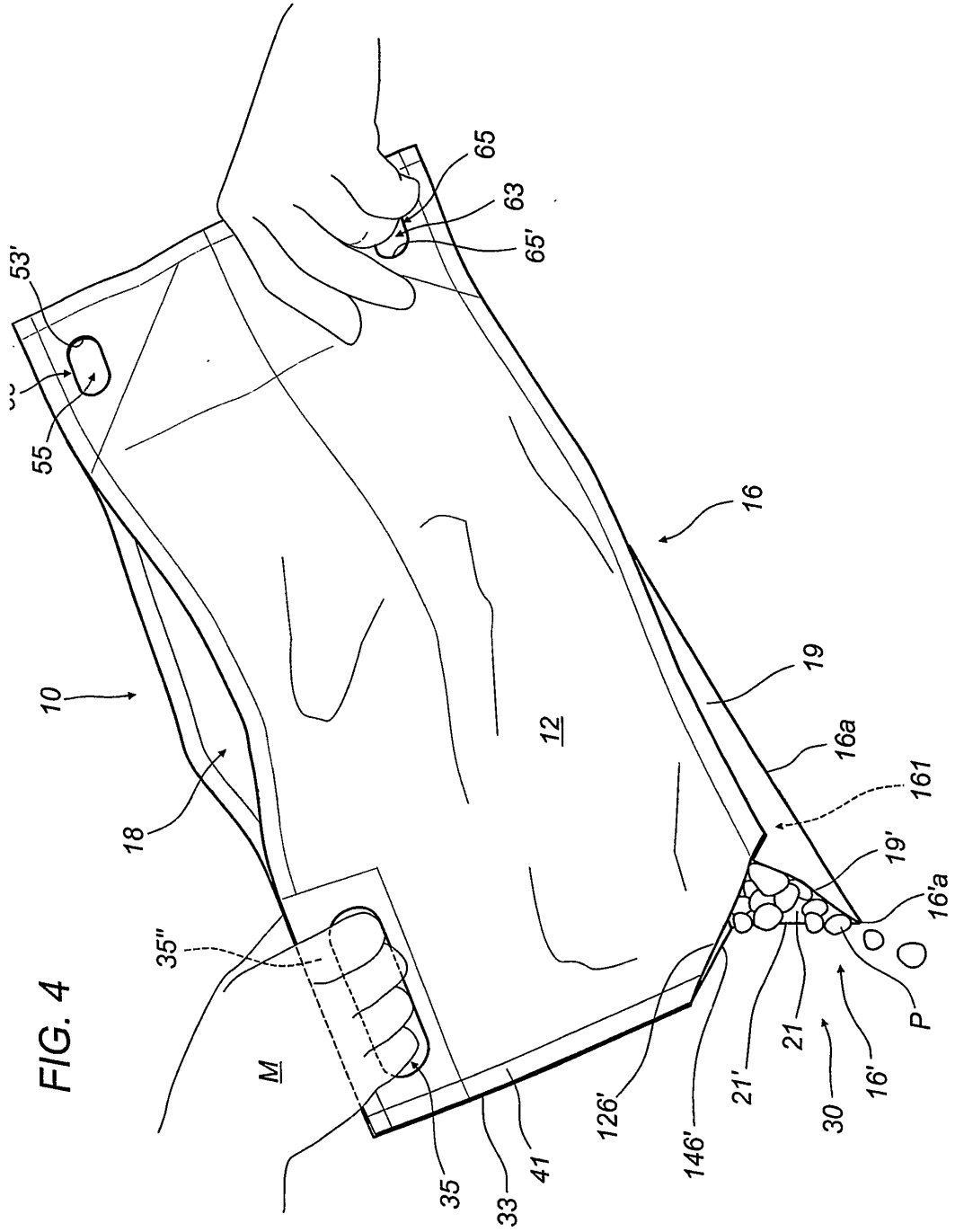


FIG. 3





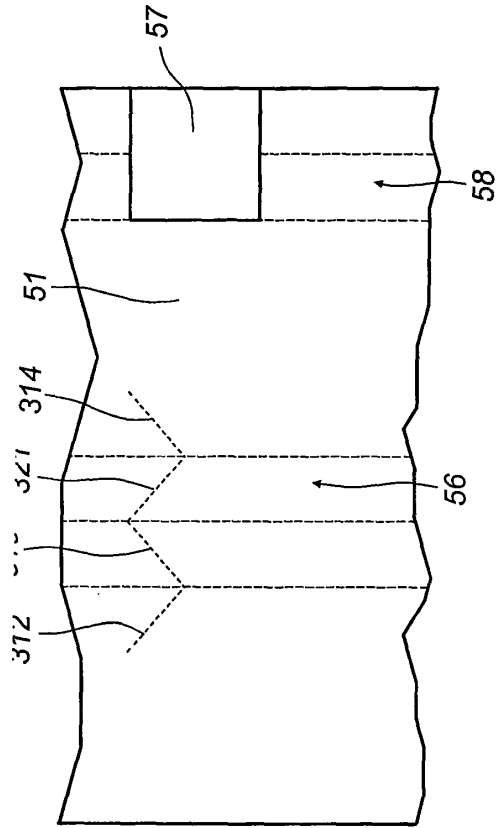


FIG. 5

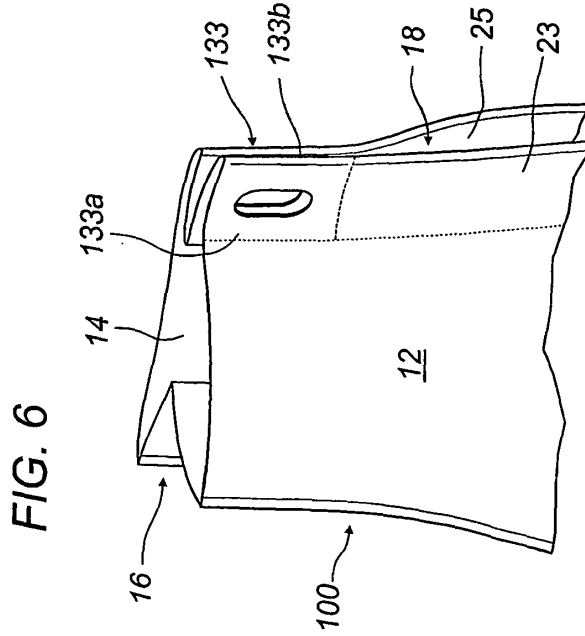


FIG. 6

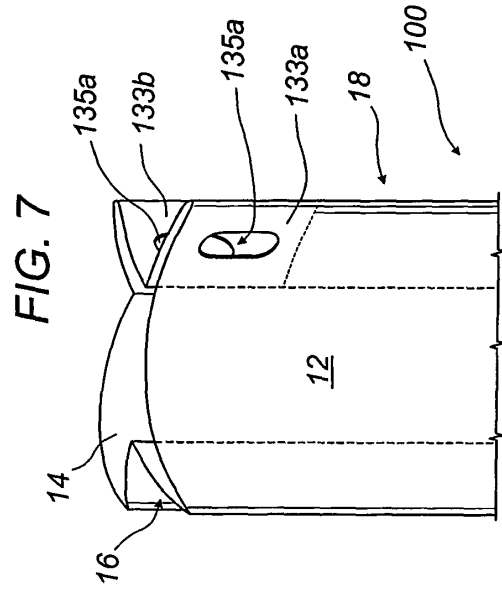
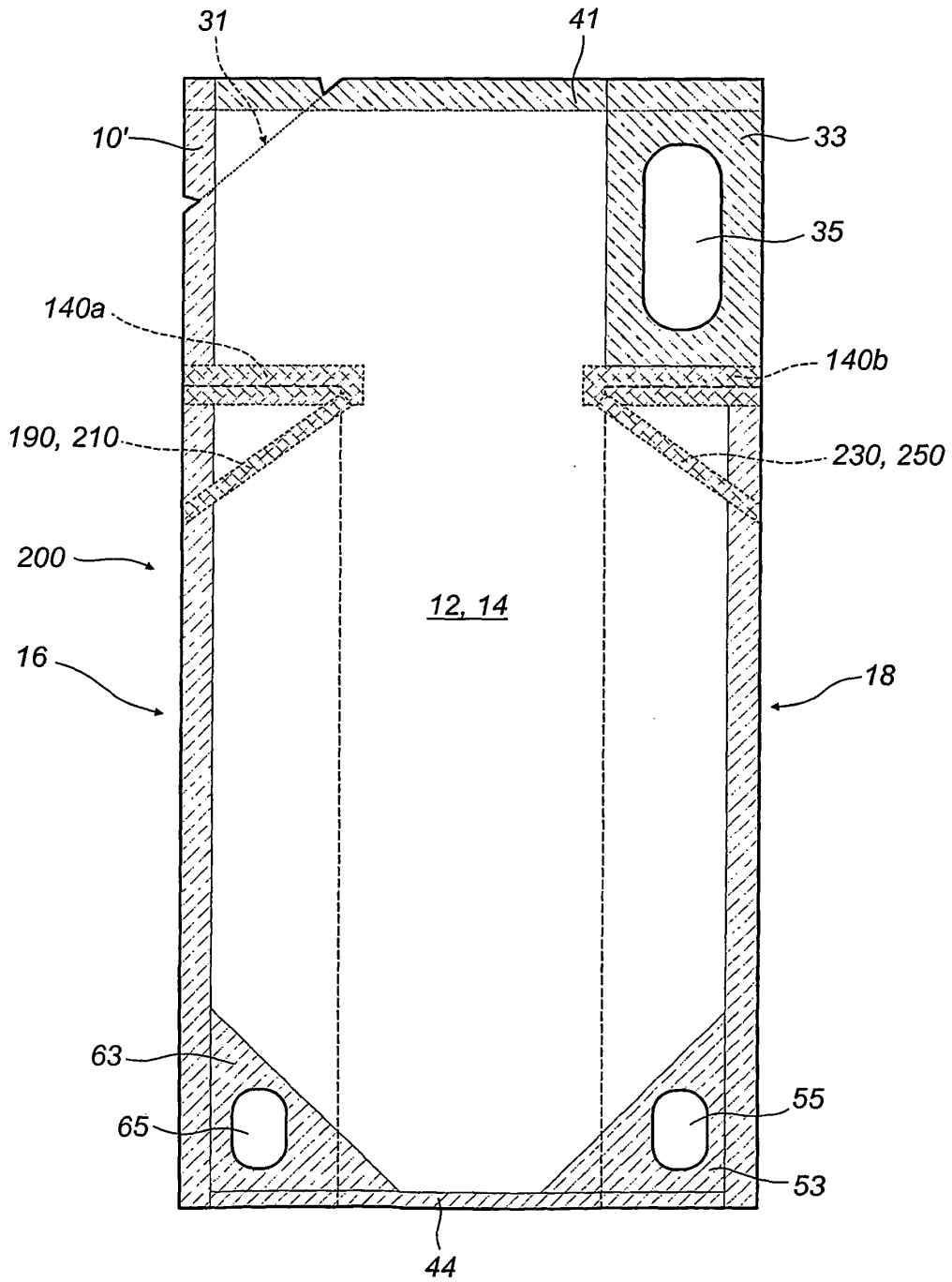
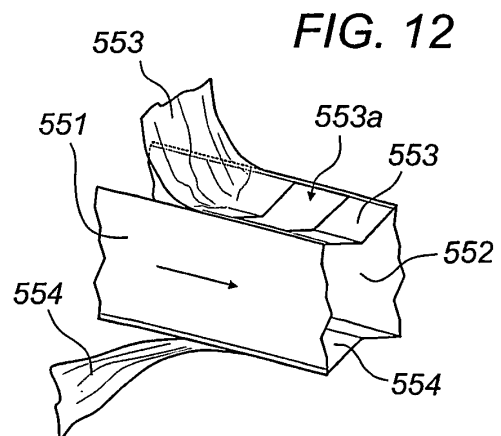
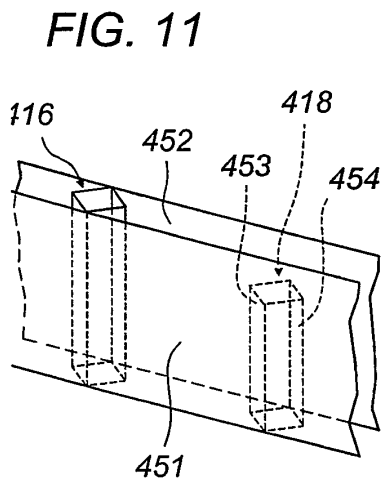
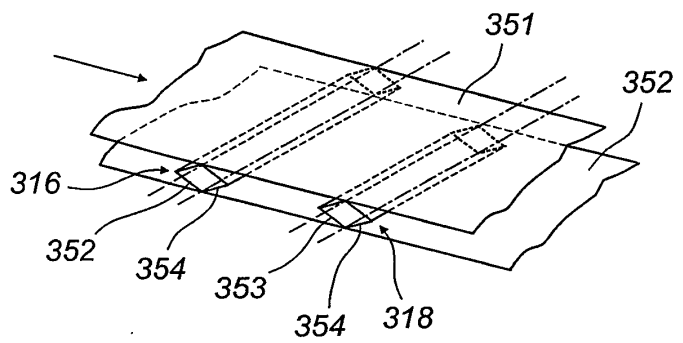
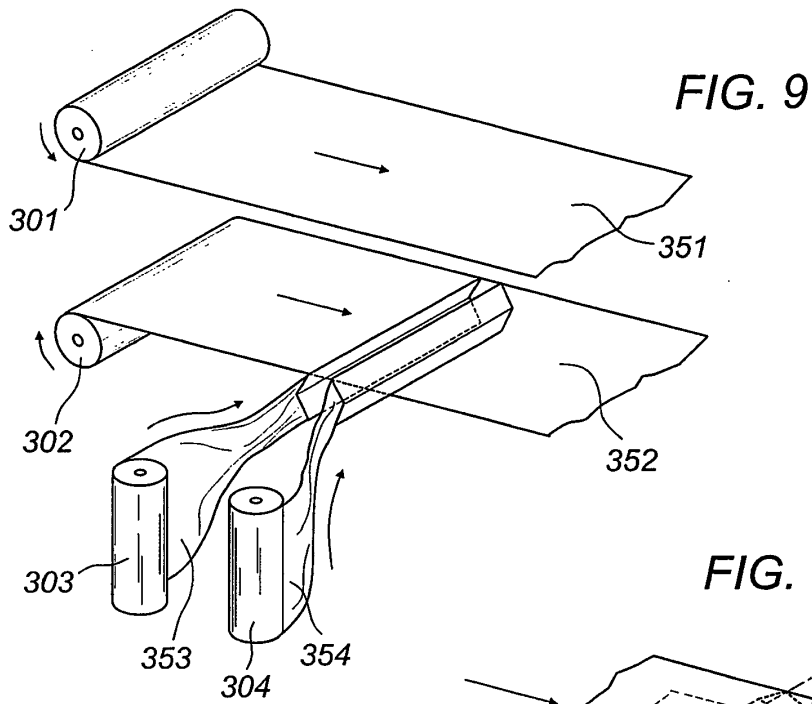
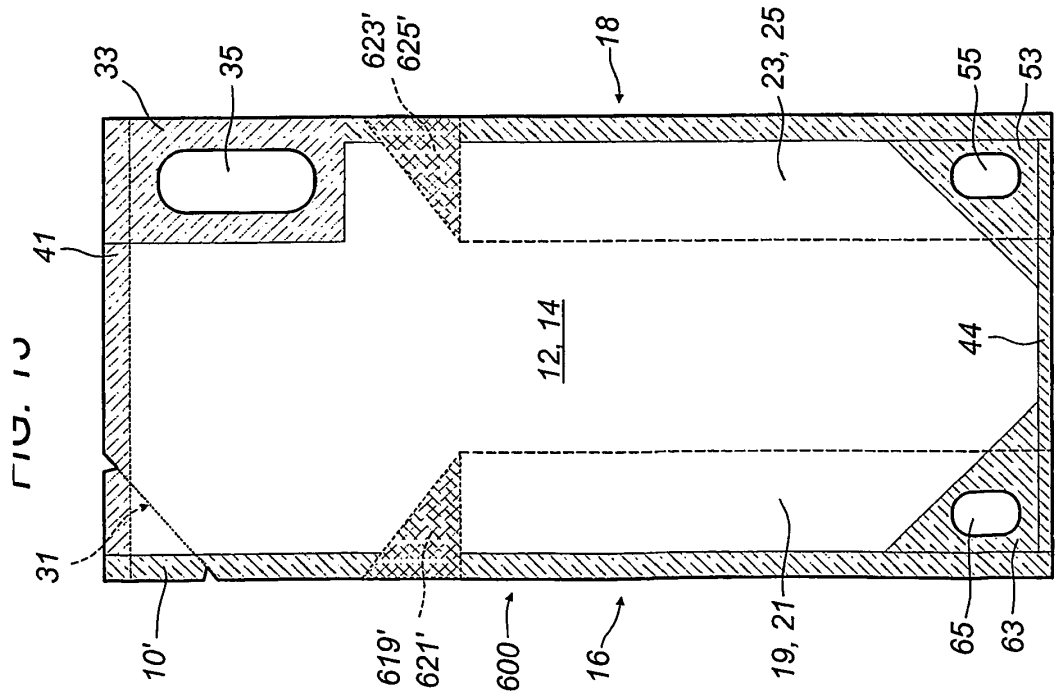
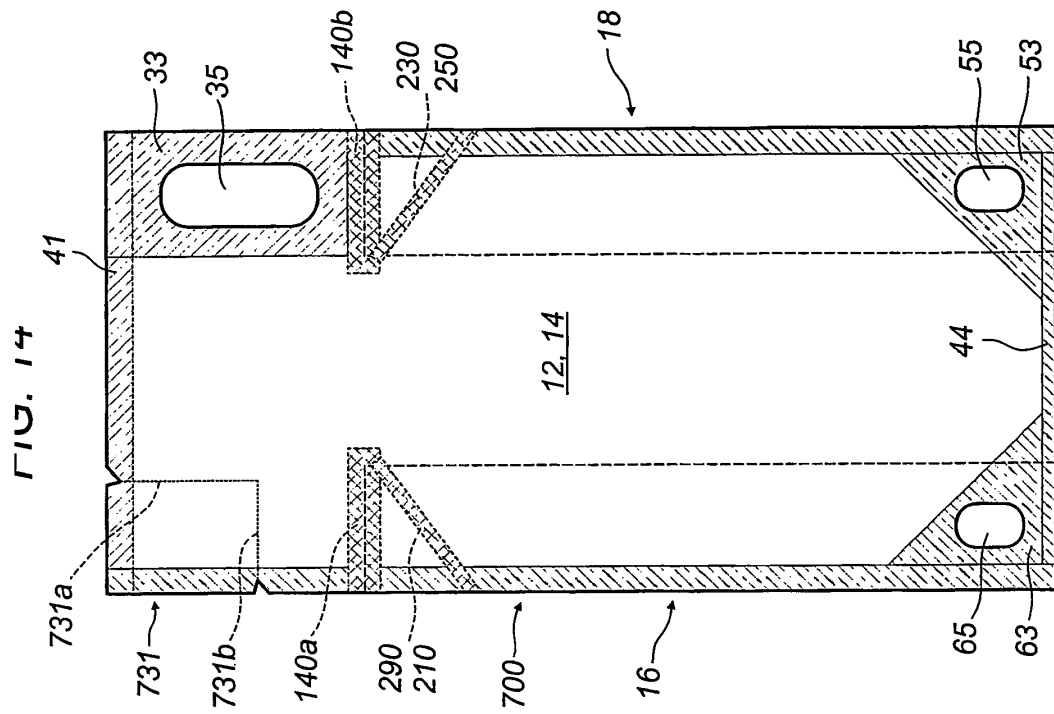


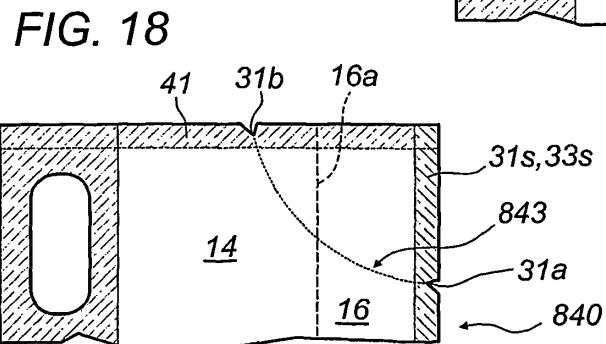
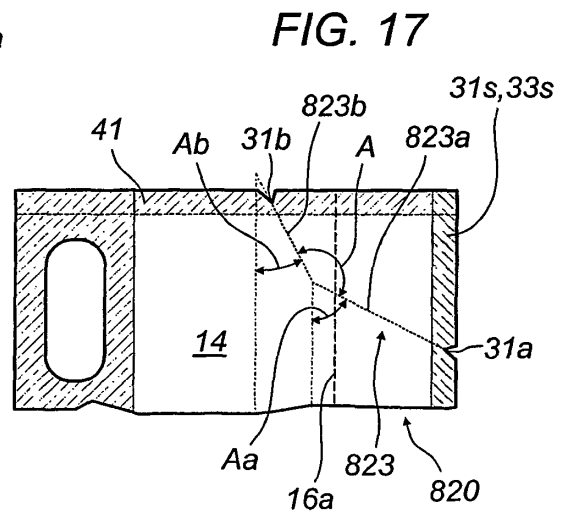
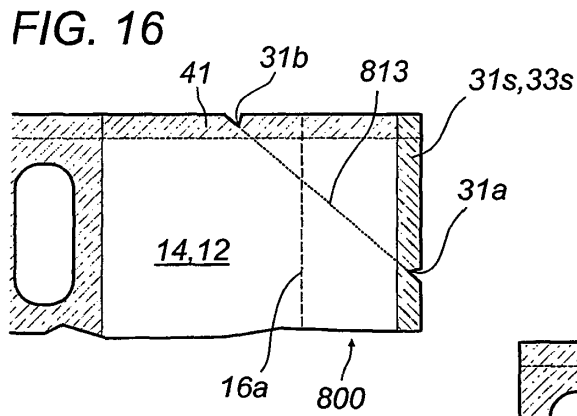
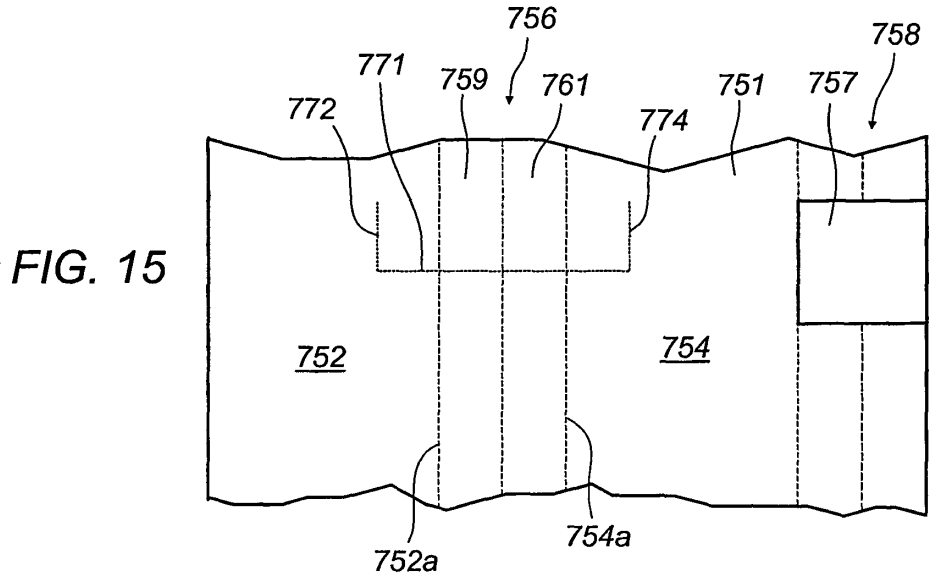
FIG. 7

FIG. 8











**REFERENCES CITED IN THE DESCRIPTION**

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**Patent documents cited in the description**

- WO 2007147568 A [0008]
- WO 2006067617 A [0079] [0092] [0103]
- IT BO20070230 A [0079] [0092] [0103]