(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 2 253 252 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
24.11.2010 Bulletin 2010/47

(51) Int Cl.:
A47G 23/00 *(2006.01)*

(21) Application number: **10163353.5**

(22) Date of filing: **20.05.2010**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
Designated Extension States:
BA ME RS

(30) Priority: **20.05.2009 BE 200900317**

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(54) Protective device for refreshments

(57) The invention relates to a protective device for refreshments, comprising a single-part folding element (1) having folding faces (2-13) which are separated from one another by folding lines (a-k). The folding element (1) can be folded to a flat compact state (II) having a surface area which is smaller than the surface area of the largest protective wall (2,3), and can easily be brought into a stable protective position (I) ready for use by being unfolded from this compact state (II), in which the folding faces (2-13) form at least one protective wall (2,3), (4-6), (7-9) and a roof portion (10, (12), (33). This protective device is efficient and user-friendly and is also a marketing instrument which is inexpensive to produce.

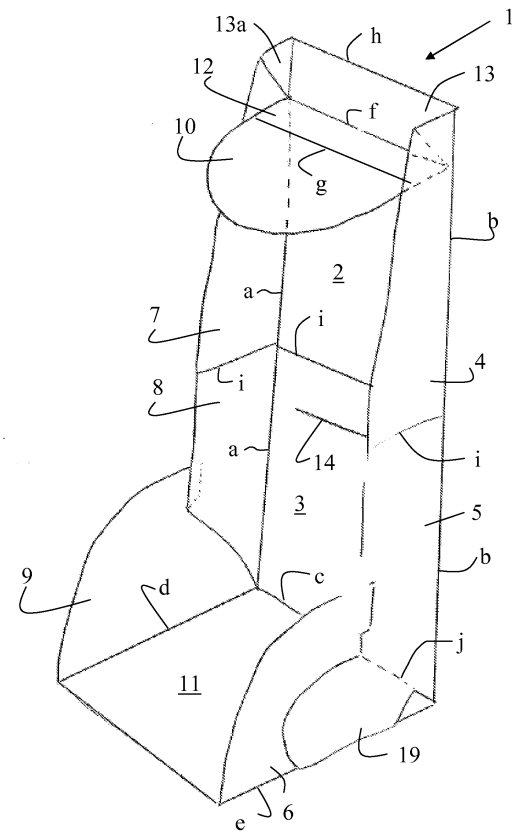

FIG. 1

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Description

[0001] The present invention relates to a protective device for refreshments, comprising a single-part folding element having a number folding faces which are separated from one another by folding lines, which can be brought to a stable protective position in which the folding faces form at least one upright protective wall and a roof portion.

[0002] More particularly, the present invention relates to a protective device which is designed to protect refreshments from being influenced by an environmental factor, such as a heat source (in particular 'the sun') or an air stream and/or from contact or contamination with foreign substances or bodies, such as for example insects, leaves or parts of plants or trees, smoke, confetti, dust particles or drops of liquid.

[0003] In the present patent application, the term 'refreshments' is used to refer to all drinkable and edible products.

[0004] Anyone consuming food or drinks in the open air on a sunny day experiences the drawback that the heat from the sun heats these drinks or this food in a relatively short time to a temperature at which these refreshments no longer taste good or lose their appeal. In this case, consideration is given mainly, but not exclusively, to soft drinks, beers and aperitifs, to dishes and deserts which are best consumed at relatively cold temperatures, such as cold dishes and ice cream (preparations), and products which melt at elevated temperatures, such as chocolate products.

[0005] The use of a sunshade makes it possible to create shade across a large part of the table surface and thus to protect a number of refreshments from direct exposure to the sun, but this means that a number of people who are sitting around the table will also be in the shade which, in some cases, is not desired. Also, a sunshade cannot always prevent that a part of the surface area of the table will be in the sun. In addition, that part of the table which is exposed to the sun travels as the position of the sun changes, so that either the sunshade or the refreshments have to be moved in order to keep them out of the sun.

[0006] Protective elements are available which only create a shadow at the location of the refreshments. However, these protective elements have a number of drawbacks, as will become clear below.

[0007] Thus, Belgian patent BE 890 349 and Dutch patent NL 1 021 027 describe three-part protective devices consisting of a base panel, a sun protection means and means which fix the sun protection means at a suitable distance above the base panel. These devices consist of various parts which are combined to form a body which takes up a relatively large volume and which therefore not only does not travel easily, but also cannot be stacked neatly in relatively large numbers within a limited volume. In addition, these protective devices have the drawback that they are impossible to manufacture at low cost in terms of material and production.

[0008] Dutch patent NL 8 003 052 also describes a three-part sun protection element of this type. This element too takes up a relatively large volume, as a result of which it suffers the same drawbacks as the elements described above. In addition, the element only protects against the sun and does not offer sufficient protection against other environmental factors, such as the wind or air streams.

[0009] DE 201 04 055 U1 describes a protective device for foodstuffs which comprises a folding element made from a flat and relatively thin material, provided with folding lines and connecting means in the form of slot-shaped holes and a corresponding connecting lip. The element can be brought to a position of use by folding it in such a manner that two upright faces are obtained which are at a right angle to one another , adjacent to a horizontal bottom face. To this end, the connecting lip has to be pushed through two holes.

[0010] In the folded-out position, such a folding element forms a flat and relatively thin unit which takes up little volume and can easily be stacked. However, the drawback is that it does take up a relatively large surface area, as a result of which it cannot be carried in a handbag or coat pocket without becoming damaged, and several protective means together cannot be stacked to form a compact stack. In addition, a series of connecting operations has to be carried out in order to bring the folding element into its position of use. Thus, no roof portion is provided on the folding element itself and a separate covering element has to be coupled to the folding element. The above also applies to the protective means according to DE 298 05 935 U1 and DE 297 10 606 U1.

[0011] The protective means from DE 200 02 689 U1 also occupies a relatively large surface area in the folded-out position. In addition, the upright protective wall has to be supported by the receptacle containing the refreshments, so that the protective means cannot be brought into a stable position of use.

[0012] The protective device described in DE 202 07 597 U1 consists of 3 relatively thick elements of inflexible material which are hingedly connected to one another. The bottom part is provided with cooling means and is even thicker. The material and manufacturing costs for producing such a protective means are relatively high. In addition, in its inoperative position, the protective means occupies a relatively large surface area, resulting in the fact that it cannot readily be carried along and that several protective means cannot be stacked to form a compact stack.

[0013] The protective means according to WO96/25076 comprises a single-part folding element having the features which are mentioned in the first paragraph of this description. By folding the folding element according to the folding lines and inserting a number of connecting lips into a respective incision, a stable protective position is achieved, in which an upright protective wall and a roof portion are formed. When this protective

means is not in the protective position and is thus folded open completely, the folding element occupies a relatively large surface area, resulting in the fact that it cannot readily be carried along and that several protective means cannot be stacked to form a compact stack. Folding and inserting the connecting lips into their respective incision is relatively laborious. If this is left to the consumer, a large number of consumers will not perform this action or will only do so reluctantly. If assembly of the protective means is left to the producer or supplier of the protective means, this will inevitably result in an increase in the cost price or to a significant time loss for the supplier.

[0014] It is an object of the present invention to provide such a protective device for refreshments which offers sufficient protection against a large number of environmental factors, which can be produced at low material and manufacturing costs and which can, for example, be used as free promotional material, and which also does not require any laborious assembly in order to bring the protective means from an inoperative position into the stable protective position, and which, finally, can also readily be carried along and makes compact stacking of these protective devices possible.

[0015] These objects are achieved by providing a protective device for refreshments, comprising a single-part folding element having a number of folding faces which are separated from one another by folding lines, which can be brought to a stable protective position in which the folding faces form at least one upright protective wall and a roof portion, while the folding element can be folded along said folding lines to a compact state in which it forms a relatively flat unit having a surface area which is smaller than the surface area of the largest protective wall, and can be brought into the stable protective position from the compact position by unfolding.

[0016] In said compact state, such a protective device takes up a small volume and a smaller surface area, thus allowing neat stacking of the folding elements. Thus, it is possible to ensure, for example, that the folding element, in the compact state, has a surface area which corresponds to the surface area of a coaster, as a result of which a stack of these folding elements can be accommodated in a standard holder for coasters. Such a folding element can also readily be carried along in a coat pocket or handbag. In addition, it suffices to unfold the folding element from its compact state to bring it into its stable protective position and make it ready for use. Thus, no prior assembly operations are required. In addition, the roof portion and the one or more upright protective walls not only offer protection from direct exposure to the sun, but also from other disturbing environmental factors, such as, inter alia, a natural or artificial air stream and/or from contact with or contamination by foreign substances or bodies, such as for example insects, leaves or parts of plants or trees, smoke, confetti, dust particles or drops of liquid.

[0017] By using a folding element made of paper or cardboard or plastic or any other inexpensive material (or a combination of two or more of these materials), a product is obtained that can be produced at low material cost. From the point of view of manufacturing, for example, it suffices to punch the correct shape of the folding element from a sheet of said material. Such kind of manufacturing can easily be automated and makes mass production at low manufacturing costs possible. As a result of these low material and manufacturing costs, the product can be used as promotional material. Thus, the surface area of the folding element can be used for promotional purposes in hotels, restaurants or cafes, and can also, for example, be given away free of charge with drinks and the like.

[0018] In a preferred embodiment, the folding element comprises folding faces which, in the protective position, form a first and a second upright protective wall which are connected to one another via a first folding line, while these first and second protective walls are connected via a respective second folding line to a respective edge portion of a folding face which, in the protective position, assumes a virtually horizontal position, these edge portions being connected to one another forming an angle or via a curved section.

[0019] As a result thereof, unfolding of the folding element along one of said folding lines leads to the folding element also automatically unfolding along the two other folding lines.

[0020] It is for example possible to unfold the folding faces which are to form the upright protective walls about said first folding line to a position in which they are joined to one another in the protective position so as to form an angle. As a result of this unfolding movement, the folding face which has to assume a substantially horizontal position will be carried along and be rotated about both second folding lines to a position in which it extends substantially at right angles to the intersecting planes of the protective walls. Thus, by means of one unfolding movement, said folding faces automatically end up in the position which they have to assume in the protective position.

[0021] Obviously, it is also possible to use a different approach and to rotate the folding face which is to assume a substantially horizontal position about a second folding line. Due to this unfolding movement, the folding faces which are to form the upright protective walls will unfold automatically, both with respect to one another (about the first folding line) and with respect to the folding face which is to assume a substantially horizontal position (about the other second folding line).

[0022] In other words, this embodiment offers the advantage that the various folding faces which are to form the upright protective walls and a substantially horizontal face are taken to the protective position with respect to one another as a result of an unfolding movement with respect to one single folding line.

[0023] Such a protective device is particularly user-friendly and no time-consuming and/or complex folding

actions are required in order to bring the folding element into the protective position, as this can be done in one uninterrupted unfolding movement. As a result thereof, the protective device can easily be used by most people, including relatively young children. In particular for children, it is important that they are able to protect their refreshments against environmental factors themselves.

[0024] The folding face which, in the protective position, assumes a substantially horizontal position is preferably connected to one or more protective wall-forming folding faces through a peripheral angle of at least 90°, preferably 120°. In a particularly preferred embodiment, this peripheral angle is at least 150°. In the most preferred embodiment, this angle is approximately 180°.

[0025] In a particular embodiment, the folding element comprises folding faces which, in the protective position, form a first, a second, and a third upright protective wall which are connected to one another via first folding lines, these protective walls also being connected via a respective second folding line to a respective edge portion of a folding face which, in the protective position, assumes a substantially horizontal position, with these edge portions being connected to one another forming an angle or via a curved section.

[0026] As a result thereof, the unfolding element has three protective walls which, in the protective position, protect the refreshments on different sides. Such a protection is particularly effective.

[0027] In this case, these three protective walls preferably form an upright boundary surface having a substantially U-shaped profile in top view in the protective position.

[0028] In a preferred embodiment, the folding face which assumes a substantially horizontal position in the protective position, forms a base face of the protective device in this protective position.

[0029] When consuming drinks or food in the open air, the problem often arises that insects, which are attracted by the refreshments, continuously fly around the plates, glasses and bottles. The risk of an insect ending up in the drink or in the food is relatively large. Obviously, this is detrimental to the enjoyment and the taste of the refreshments. In addition, insects in refreshments which are not spotted can be very dangerous (for example wasps). Thus, it is general knowledge that the sting of a wasp in the mouth or throat can lead to asphyxiation (in particular with children).

[0030] This problem is solved by means of a particularly preferred embodiment of the present invention in which the folding element comprises at least one folding face which, in the position of use, forms a covering face for covering an open top of a receptacle containing food or drink. Obviously, this also provides maximum protection against other particles floating in the air or fluttering down (dust, falling parts of plants and the like)

[0031] Preferably, the folding element also comprises means for keeping or securing it in said compact state. This may, for example, be a lip which fits into a corresponding cut-out in the folding element. It is also possible to use a separate card which is provided with a lip. This card can be pushed in between the folded parts of the folding element in the compact state, while the lip is also pushed into an opening or incision in the folding element in order thus to keep the folding element in the compact folded state together. Said card can, for example, have the format of a coaster.

[0032] The folding element can be manufactured at minimal production and material costs when it is made from a sheet-like material, such as for example a sheet of paper, cardboard or plastic.

[0033] On a surface area which is directed outwards in the protective position and/or in the compact state, the folding element may be provided with a brand name, a logo, a distinguishing mark, a design, a drawing, a word or a text or any kind of combination thereof. As a result thereof, the protective device according to the present invention, in addition to being a particularly user-friendly and useful item of use, also becomes particularly valuable as a marketing tool for, for example, beverage companies and event organisers.

[0034] In its most preferred embodiment, in the abovementioned compact state, the folding element is the format of a coaster. This format may, for example, be square or rectangular, and have a side with a length preferably between 5 cm and 20 cm. Of course, a round format having a diameter which is preferably between 5 cm and 20 cm or an oval or polygonal shape (for example pentagonal or hexagonal) can also be used. In the latter case, the maximum transverse dimension is preferably also between 5 cm and 20 cm.

[0035] In the following detailed description of some exemplary embodiments of a protective device according to the present invention, the aforementioned features and advantages of the invention are explained further. The description is only intended to explain the general principles of the present invention and this description can therefore by no means be interpreted as a limitation of the invention or of its area of application.

[0036] In this description, reference numerals are used to refer to the attached Figs. 1 to 17, in which:

- Fig. 1 shows a perspective view of a first embodiment of a folding element arranged in the protective position;
- Fig. 2 shows the shape which is punched out of a sheet of paper, cardboard or plastic in order to manufacture the folding element from Fig. 1;
- Figs. 3 to 6 show perspective views of the folding element from Fig. 1 in different successive phases during folding, from the protective position to a compact folded state.
- Fig. 7 shows a perspective view of two folding elements which have been folded to form half boxes and are placed opposite one another along their open sides, and two insert cards used in order to join these folding elements to form a box-shaped unit;

- Fig. 8 shows a perspective view of the box-shaped unit which is formed using the components illustrated in Fig. 7;
- Fig. 9 shows a perspective view of a second embodiment of a folding element placed in the protective position;
- Fig. 10 shows the shape which is punched out of a sheet of paper, cardboard or plastic in order to manufacture the folding element from Fig. 9;
- Fig. 11 shows the shape which is punched out of a sheet of paper, cardboard or plastic in order to manufacture a wider embodiment of a folding element;
- Figs. 12 and 13 shows two embodiments of a folding element placed in the protective position and having a cover plate which can be provided at different heights;
- Fig. 14 shows a perspective view of two folding elements according to the invention which have been placed opposite one another along their open sides and with which a packaging unit can be formed;
- Fig. 15 shows the shape which is punched out of a sheet of paper, cardboard or plastic in order to manufacture the folding elements illustrated in Fig. 14;
- Fig. 16 shows a perspective view of the packaging unit which is formed by the folding elements illustrated in Fig. 14; and
- Fig. 17 shows a perspective view of a folding element which has been brought to a presentation position.

[0037] Fig. 1 shows a possible folding element (1) according to the present invention in its protective position (I). This folding element (1) is made from the shape punched out of paper, cardboard or plastic and illustrated in Fig. 2.

[0038] This folding element (1) comprises a number of folding lines (a-m) which subdivide the folding element (1) into folding faces (2-13). In the figures, not all folding lines and folding faces are denoted by a reference numeral.

[0039] The folding faces (5) and (6) are provided with complementary connecting means (19), (20) in order to connect these folding faces (5), (6) to one another. In the same manner, the folding faces (8) and (9) are provided with complementary connecting means (21), (22) in order to connect these folding faces (8), (9) to one another. These connecting means (19-22) are designed to produce the connection by engaging with one another. Of course, it is possible to provide an additional adhesive connection. The connection can also be produced solely by means of adhesive.

[0040] In order to produce the folding element (1), the various folding faces (2-13) are folded along their folding line (a-k) until they are in the position which is illustrated in Fig. 1. Relative to their respective adjacent folding faces (2), (3) and (11), the folding faces (7), (8) and (9) are folded until they form a substantially right angle to these folding faces. The folding faces (4), (5), (6) are also folded relative to the respective adjacent folding faces (2), (3) and (11) until they form a substantially right angle to these folding faces. The folding faces (5) and (6) on one side and the folding faces (8) and (9) on the other side are connected to one another by means of the abovementioned connecting means (19-22).

[0041] According to a first option (illustrated in Fig. 1), the upper part of the folding element (1) can be folded downwards along the folding line (h). In this case, the folding face (13) comes to lie against the folding face (2). The folding faces (10) and (12) situated above the folding line (f) are folded to a horizontal position along this folding line (f), so that these folding faces (10) and (12) can act as a roof portion in order to protect refreshments from exposure to direct sunlight and/or to cover a receptacle.

[0042] The faces (13a), (13b) to the left and right of the folding face (13) are divided in two by respective small folding lines (1), (m) which extend obliquely upwards from the right angle. As a result thereof, the faces (13a), (13b) can be folded along these small folding lines (1), (m) during the downward folding of the parts (10,12,13,13a,13b) situated above this folding line (h) along the folding line (h), as a result of which the former can readily assume the position illustrated in Fig. 1, adjacent to the folding faces (7),(4), and can also readily leave this position during the reverse upward unfolding movement along the folding line (h).

[0043] There is also a second option which is to leave the folding faces (13), (13a), (13b) in their upright position and to bring the folding faces (10) and (12) in a substantially horizontal position by folding along the folding line (f). Finally, according to a third option, the folding faces (12) and (13) can be left in an upright position and only the folding face (10) is folded along the folding line (g) into a horizontal position, so that only the folding face (10) acts as a roof portion.

[0044] It is obvious, that the roof portion with each of the options indicated above extends at a different height, i.e. at a distance (v) below the folding line (f), at the level of the folding line (f) and at the level of the folding line (g).

[0045] In its protective position (I), which is illustrated in Fig. 1, the folding element (1) according to the present invention thus has a bottom face which is formed by the folding face (11), a roof portion which is formed by the folding faces (10) and (12), and three upright protective walls, namely a rear wall which is formed by the folding faces (2) and (3), a right side wall which is formed by the folding faces (4), (5) and (6), and a left side wall which is formed by the folding faces (7), (8) and (9). The left side wall (7-9) is connected to the rear side (2,3) via the folding line (a) and connected to the bottom face (11) via the folding line (d). The right side wall (4-6) is connected to the rear side (2,3) via the folding line (b) and connected to the bottom face (11) via the folding line (e).

[0046] On the bottom face which is formed by the folding face (11), for example a coaster or any other kind of

table mat for refreshments may be provided. The bottom face preferably has approximately the same shape and the same dimensions as a coaster. During manufacture of the protective device according to the present invention, this coaster can be provided in the folding element in the compact state (II) beforehand. Of course, this coaster can then also be provided with a brand name, a logo, or any other kind of promotional message.

[0047] The folding element (1) thus formed can be folded up to a very small state (II) occupying a small surface area (see Fig. 6) from the protective position (I) illustrated in Fig. 3. In this case, the folding face (11) is folded to the rear side (2,3) along the folding line (c). At the same time, the side walls (4-6) and (7-9) are also folded to the rear side (2,3) along the folding lines (a), (b), (d), (e), and the side walls (4-6) and (7-9) themselves are also folded up in two parts along the respective folding lines (j) and (k). Eventually, the situation which is illustrated in Fig. 4 is achieved, in which the side walls (4-6) and (7-9) bears against the rear side (2,3) and the bottom face (11) has been brought up against these folded side walls (4-6) and (7-9).

[0048] Subsequently, the folding element (1) is folded along the folding line (i) (see Figs. 4 and 5) and the folding faces (10), (12), (13) are folded back along the folding line (h), so that the folding element is folded to a very compact state (II) (see Fig. 6) and has a small thickness (approximately 4 to 5 mm) and a surface area which approximately corresponds to the surface area of a coaster (10 cm x 10 cm).

[0049] An incision (14) is provided in the folding face (3), so that the rounded edge portion (15) of the folding face (10) can be inserted into this incision. As a result thereof, the very flat and compact state (II) is maintained and a folded unit is produced having the appearance of a closed envelope. It is obvious that it is also possible to use other connecting means, such as for example an adhesive connection of the type which can allows repeated releasing and fastening (such as a post-it ®) or a velcro connection.

[0050] The element can be unfolded to the protective position (I) from its compact folded state (II) in a single continuous unfolding movement. The unfolding movement can be followed by following the reverse order of that shown in Figs. 3 to 6. This is due to the fact that the unfolding of the bottom face (11) with respect to the rug-folding face (3) along the folding line (c) also brings the side walls (4-6), (7-9) into their protective position in a plane which is substantially at right angles to the bottom face (11).

[0051] The folding element (1) illustrated in Fig. 1 can also be folded to form the half-box shape (III) illustrated in Fig. 7. To this end, the folding faces (2), (4), (7), (10), (12), (13), (13a), (13b) situated above the folding line (i) are folded downwards along this folding line (i), so that the folding face (2) rests against the folding face (3) and forms the rear side, the folding face (7) rests against the folding face (8) and forms the left side wall, the folding face (4) bears against the folding face (5) and forms the right side wall, and the folding faces (10), (12), (13), (13a), (13b) lie against the bottom face (11) (not illustrated in Fig.7). The top edge of this half-box shape is thus formed by the folding line (i).

[0052] In this half-box shape (III), the folding element (1) can of course also be used to protect refreshments from an environmental factor, but in this shape it can also be joined together with another folding element in this half-box shape (III) in order to form a box-shaped unit (16). As a result thereof, these folding elements acquire an interesting additional function as a container or small box which can be used for storing, for example, coasters and/or other folding elements in a compact state (II), or other dining utensils.

[0053] In order to assemble the box-shaped unit (16), two folding elements (1) folded in the half-box shape (III) are placed opposite one another along their open front sides, and a card (17), (18) or any other kind of flat element is pushed into each pair of opposite side walls. The card is pushed into the two opposite side walls for the same distance until the upper edges (i) of the two folding elements (1) bear against each other and together form a substantially cube-shaped box with an open upper side.

[0054] The two side walls of the folding elements (1) in half-box shape (III) respectively consist of abutting folding faces (7),(8) and (4),(5). The space between these abutting folding faces is accessible from the front side and it is into this free space that the abovementioned cards (17),(18) are pushed. These cards create a connection between the two folding elements (1) in half-box shape (III).

[0055] The folding element (1) illustrated in Fig. 9 in the protective position (I) is made from a sheet of cardboard, paper or plastic in the shape shown in Fig. 10, and differs from the folding element from Figs. 1 and 2 in that the roof portion is designed differently. The folding faces (2-9), the folding lines (a-f) and (i-k), as well as the connecting means (19,20) and (21,22) are consequently identical to those described for the above-described embodiment from Figs. 1 and 2.

[0056] Above the folding line (f), there are seven folding faces (23-29) being substantially triangular in shape which are separated from one another by folding lines and together form the roof portion (33). On the left-hand side and right-hand side of this roof portion (33) respective connecting folding faces (30a),(30b); (31a),(31b) are provided in order to connect the roof portion (33) in a substantially horizontal position to the side walls (4-6), (7-9). The left-hand connecting faces (30a), (30b) are separated from one another by a small folding line (p). The right-hand connecting faces (31a), (31b) are separated from one another by a small folding line (q). This connection can be achieved, for example, by gluing the left-hand connecting folding face (30b) to the upper folding face (7) of the left side wall, and by gluing the right-hand connecting folding face (31b) to the upper folding face (4) of the right side wall.

[0057] In the protective position (I) as illustrated in Fig. 9, the folding faces (23-29) form a roof surface which extends substantially horizontally and comprises two central adjacent folding faces (24), (25) at the front which extend towards one another in an upwardly inclined manner and adjoin one another via a folding line (32) so as to form an apex.

[0058] The folding element according to Fig. 9 is also designed to be folded to a compact state (II). This is achieved in a manner which is substantially identical to that illustrated in Figs. 3 to 6 with reference to the embodiment from Figs. 1 and 2. Only the roof portion (33) has to be folded differently, of course. This is achieved by first folding the section of the roof portion (33) situated in front of the folding line (g) inside, so that the folding faces (23-26) bear against the underside of the folding faces (27-29). Subsequently, the folding faces (23-29) which have been folded thus are folded inwards together with the side walls (4-6), (7-9) until these side walls bear against the folding faces (2), (3) of the rear side. The abutting folding faces (26) and (27) on one side and the abutting folding faces (23) and (29) on the other side are in this case folded along the folding lines (r) and (s) and eventually take up a surface area which corresponds to that of the folding face (28) and also covers this folding face (28). As a result thereof, a folded portion is achieved above the folding line (f) which comprises the folding faces (23-29) and has a triangular shape which corresponds to the shape of folding face (28).

[0059] Apart from that, the operations illustrated in Figs. 4 and 5 are carried out in an identical manner. In the last phase of folding which is shown in Fig. 5, said triangular part is folded back along the folding line (f), so that this triangular part bears against the folding face (3) (instead of against the folding face (10) in Fig. 6) and the appearance of a closed envelope is achieved. Of course, it is possible to provide other connecting or fixing means in order to secure the very flat and compact state (II) obtained.

[0060] The above-described embodiments according to Figs. 1 and 9 make it possible to protect a narrow and relatively tall receptacle from direct exposure to the sun or other environmental factors. As a result thereof, such a protective device is mainly suitable for use with refreshments which are consumed in glasses, mugs or bottles.

[0061] In an alternative embodiment according to the present invention, it is however also possible to produce a folding element (1) which has a width which is greater than its height, so that this can be used to protect relatively wide receptacles. Such a folding element is made from a sheet of plastic, paper or cardboard having the shape illustrated in Fig. 11.

[0062] The folding element (1) from Fig. 11 consists of two folding faces (11) which together are designed to form an uninterrupted bottom face, two folding faces (3) which together are designed to form an uninterrupted rear side, two folding faces (5), (6) which are connected on the right-hand side to a folding face (3) of the rear side and a folding face (11) of the bottom face, respectively, and are provided with complementary connecting means (19), (20) in order to connect these folding faces (5), (6) to one another so as to form a right side wall, and finally two folding faces (8), (9) which are connected on the left-hand side to a folding face (3) of the rear side and a folding face (11) of the bottom face, respectively, and are also provided with complementary connecting means (21), (22) in order to connect these folding faces (8), (9) to one another so as to form a left side wall.

[0063] The two folding faces (3) of the rear side are connected at the top via a folding line (h) to the respective folding faces (13), which in turn are connected at the top via a folding line (f) to the respective folding faces (10). Analogous to the folding faces (13) in Fig. 2, the folding face (13) in Fig. 11 is designed to be folded down along the folding line (h) so that the folding faces (13) bear against the folding faces (3) of the rear side. The folding faces (10) situated above the folding line (f) are then folded to a horizontal position along the folding line (f). The small folding lines (t), (u) in the faces to the left and right of the two folding faces (13) have the same function as the small folding lines (l), (m) in the embodiment from Fig. 2. Here, the horizontal folding faces (10) thus also act as roof portion of the protective device. The folding element (1) has a folding line (p) which extends along a vertical axis of symmetry and which separates the adjacent folding faces (10), (13), (3) and (11) from one another.

[0064] In order to obtain a folding element (1) according to the present invention, the left side wall (8), (9) and the right side wall (5), (6) have to be connected to one another using the connecting means (19), (20) and (21), (22) provided. The unit which is thus assembled can also, analogously to that which is shown in Figs. 3 to 6, be folded up to a flat, compact state (II). In the embodiment from Fig. 11, the folding element (1) has to be folded up along the vertical folding line (p) and not along horizontal folding line (i), as was the case with the embodiment according to Figs. 4 to 6.

[0065] In its protective position (I), this folding element (1) can be used to protect refreshments in relatively wide receptacles, such as an elongate bowl which is often used to serve ice cream. Such a folding element (1) also allows two or more relatively narrow receptacles to be placed next to one another in the same protective device. Thus, for example, two cups of coffee can be protected from cooling down while standing next to one another.

[0066] In Fig. 12, a protective device is shown of the type which has been described above with reference to Figs. 9 and 10. The embodiment from Fig. 12 is provided with a square cover plate (34) or card (or any other kind of flat element) which is provided with an insertion lip (35), while a number of horizontal slots (36) are provided above one another at regular intervals on the rear side (2), (3). The cover plate (34) can be pushed into any one of the slots (36) by its insertion lip (35) in order to thus create a cover face at the required height by means of

which the open top of a receptacle containing food or drink can be covered. Obviously, the required height is selected based on the height of the receptacle to be covered. Embodiments may be provided with a larger number of slots (36) at smaller intervals. In Fig. 12, the cover plate (34) is illustrated as being inserted in the bottom slot (36) by its insertion lip (35). In this position, the cover plate serves as a table mat for a receptacle containing food or drink.

[0067] Fig. 13 shows a protective device of the type which has been described above with reference to Figs. 1 and 2, but with the added feature of a cover plate (35) while the rear side of the folding element (1) is also provided with slots (36) having the same function as described above with reference to Fig. 12.

[0068] Fig. 14 shows a variant embodiment of a protective device according to the present invention. Analogously to the embodiment from Fig. 9, the roof portion is formed by an upper wall. In contrast with the embodiment according to Fig. 9, this upper wall consists of only three folding faces (37-39) separated by folding lines, resulting in a flat roof face. In addition, an upright, semicircular arcuate wall (40) which consists of three folding faces is provided on the front edge of this roof face. The arcuate wall is connected to the roof face (37-39) via a folding line. The folding element which is illustrated in Fig. 14, is manufactured from a punched piece of cardboard, paper or plastic having the shape illustrated in Fig. 15.

[0069] In this case as well, the usual folding lines are provided in order to fold the unit together to a flat compact state (II) having a small surface area, analogously to the manner described above.

[0070] Two of these folding elements (1) are partly pushed into one another in their protective position (I), with their open sides facing one another, until the vertical edges of the folding faces (5) and (8) of the side faces abut one another. The arcuate walls (40) come to lie against one another in this case (see Fig. 16).

[0071] Thus, an original packaging unit (41) is obtained, in which for example drinks or glasses can be sold. The abutting arcuate walls (40) can be used as a handle for picking up and carrying the packaging unit. After purchase, the consumer can push the two folding elements (1) apart and use them. On the outer sides of the folding elements, the brand name or logo of the respective drink may be illustrated, for example. In this way, the packaging material creates publicity even after purchase while at the same time being a useful item for the user.

[0072] A folding element according to the present invention can also be arranged in a so-called display position (IV), as is illustrated in Fig. 17. This position is achieved by, for example starting from the folded state illustrated in Fig. 4, using the folding face (3) as a horizontal base face, placing the folding faces (11) on one side and (2) and (13) on the other side in a position which is inclined obliquely upwardly and tapers towards one another, and folding the folding faces (10) and (12) back along the folding line (f) and pushing them into the space between the obliquely raised folding face (11) and the folding faces (5),(6),(8),(9) situated behind the latter, which space is accessible from above. Thus, a three-dimensional shape having a square or rectangular base face is obtained, formed by the folding face (3), and two obliquely tapering square or rectangular flanks, respectively formed by the folding face (11) and the folding faces (2) and (13), as illustrated in Fig. 17.

[0073] The folding element may, for example, be provided on one or both oblique flanks with a promotional message (such as for example a brand name, a logo or an advertising slogan) and/or be provided with information (such as for example the available refreshments or the announcement of an event), and can be placed in the above-described display position (IV) on tables where refreshments are offered in order to make this message or information clearly visible to customers and passers-by. This again underlines the great versatility of the protective device according to the present invention.

Claims

1. Protective device for refreshments, comprising a single-part folding element (1) having a number of folding faces (2-13) which are separated from one another by folding lines (a-k), which can be brought into a stable protective position (I) in which the folding faces (2-13) form at least one upright protective wall (2,3), (4-6), (7-9) and a roof portion (10), (33), **characterized in that** the folding element (1) can be folded according to said folding lines (a-k) to a compact state (II), in which it forms a relatively flat unit having a surface area which is smaller than the surface area of the largest protective wall (2,3), and can be brought into the stable protective position (I) from the compact position (II) by unfolding.

2. Protective device for refreshments according to Claim 1, **characterized in that** the folding element (1) comprises folding faces (2-9) which, in the protective position (I), form a first (2,3) and a second upright protective wall (4-6), (7-9) which are connected to one another via a first folding line (a),(b), and **in that** these first (2,3) and second protective walls (4-6), (7-9) are connected via a respective second folding line (c); (d),(e) to a respective edge portion of a folding face (11) which, in the protective position (I), assumes a substantially horizontal position, these edge portions being connected to one another forming an angle or via a curved section.

3. Protective element for refreshments according to Claim 2, **characterized in that** the folding element (1) comprises folding faces (2-9) which, in the protective position (I), form a first (2,3), a second (4-6),

and a third upright protective wall (7-9) which are connected to one another via first folding lines (a), (b), and **in that** said protective walls (2,3), (4-6), (7-9) are connected via a respective second folding line (c), (d),(e) to a respective edge portion of a folding face (11) which, in the protective position (I), assumes a substantially horizontal position, these edge portions being connected to one another forming an angle or via a curved section.

4. Protective element for refreshments according to Claim 3, **characterized in that** the first (2,3), second (4-6) and third protective wall (7-9) boundary surface has a substantially U-shaped profile in top view in the protective position (I).

5. Protective device for refreshments according to one of Claims 2 to 4, **characterized in that** said folding face (11) which assumes a substantially horizontal position in the protective position (I), forms a base face of the protective device in this protective position (I).

6. Protective device for refreshments according to one of the preceding claims, **characterized in that** at least one folding face which, in the position of use, forms a covering face (10) for covering an open top of a receptacle containing food or drink.

7. Protective device for refreshments according to one of the preceding claims, **characterized in that** the folding element (1) comprises means (14), (15) in order to keep it in said compact state (II).

8. Protective device for refreshments according to one of the preceding claims, **characterized in that** said folding element (1) is made from a sheet-like material, such as a sheet of paper, cardboard or plastic.

9. Protective device for refreshments according to one of the preceding claims, **characterized in that** the unit (1) comprises means (12a, 12b), (13a, 13b) in order to secure at least two (5,6), (8,9) of the folding faces which, in the position of use, form an upright protective wall (2,3), (4-6), (5-7) with respect to one another.

10. Protective element for refreshments according to one of the preceding claims, **characterized in that** the element, on a surface area which is directed outwards in the protective position (I) and/or in the compact state (II), is provided with a message or a sign, such as a brand name, a logo, a distinguishing mark, a design or a drawing, a word or a text or a combination of one or several of these signs.

11. Protective element for refreshments according to one of the preceding claims, **characterized in that** the folding element (1), in said compact state (II), has a square or rectangular format with a side, the length of which is between 5 cm and 20 cm, or a round format with a diameter between 5 cm and 20 cm, or has an oval or polygonal shape having a maximum transverse dimension of between 5 cm and 20 cm.

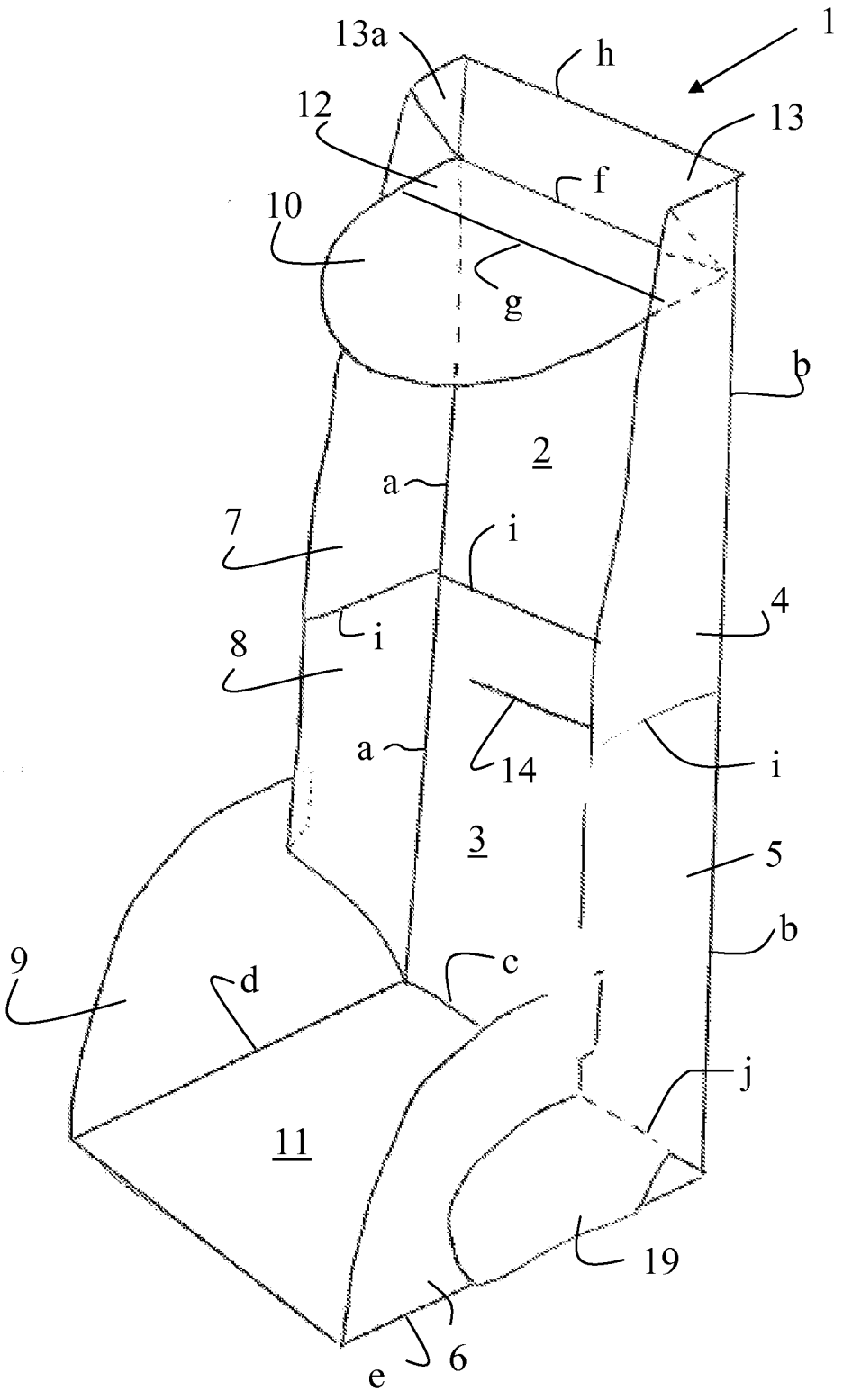

FIG. 1

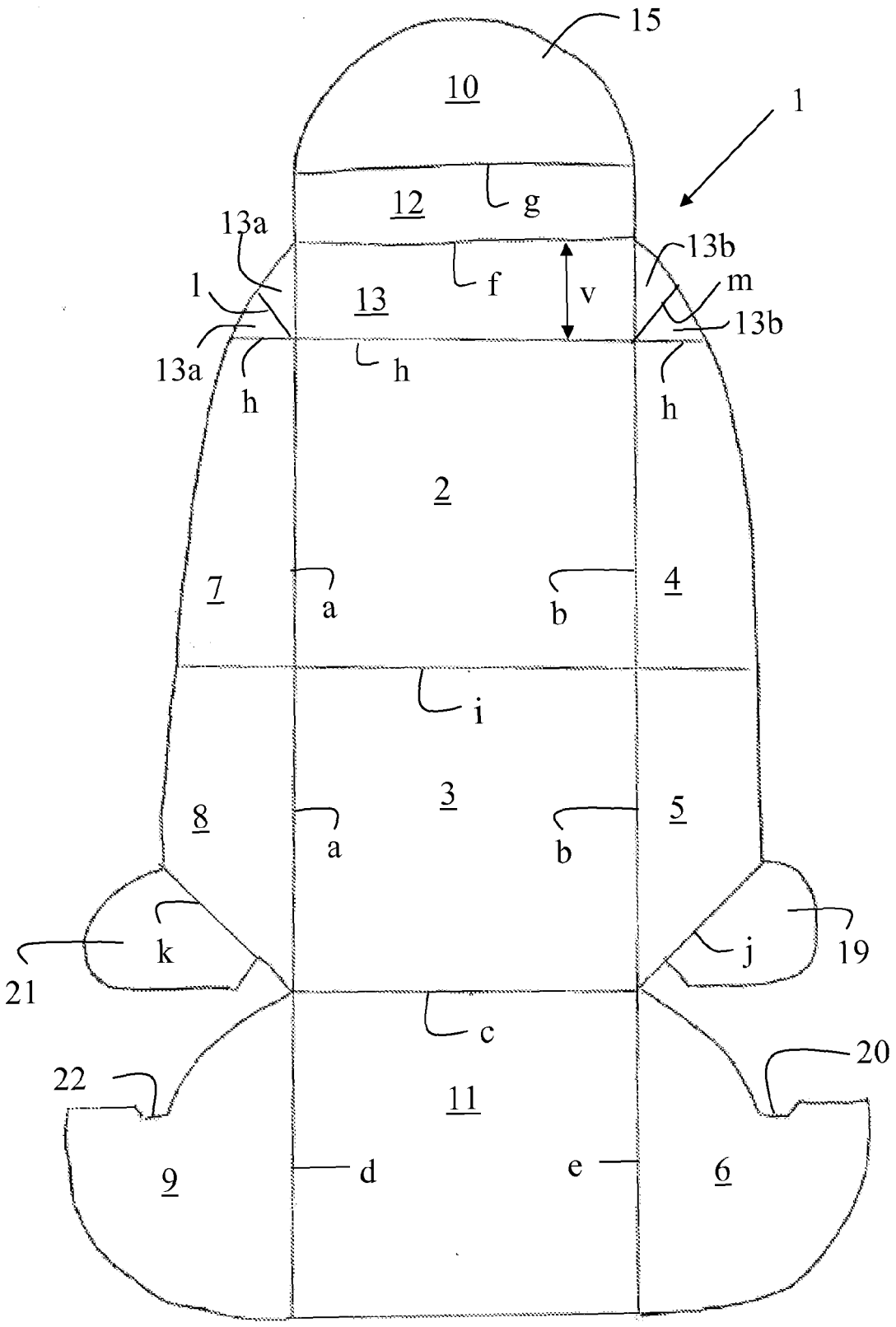
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FIG. 2

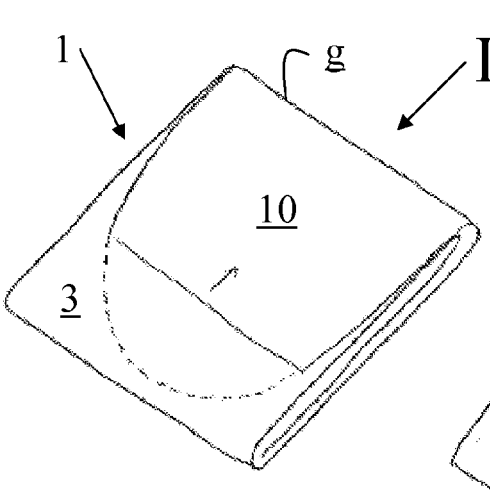

FIG. 6

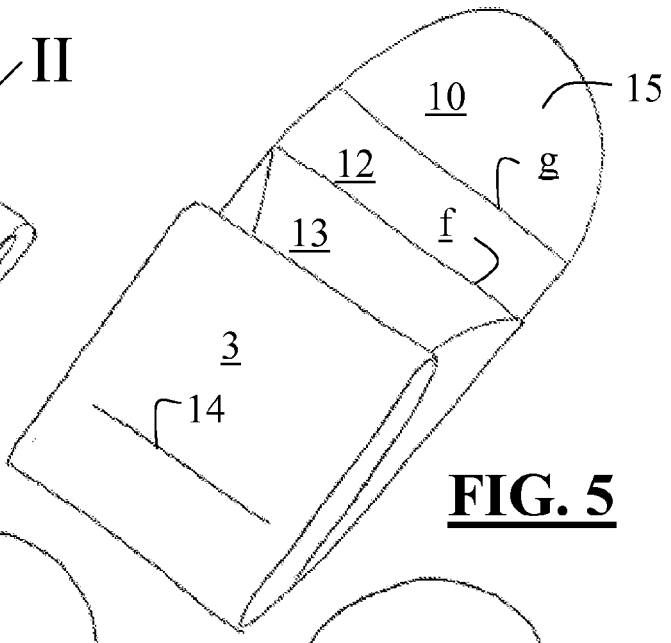

FIG. 5

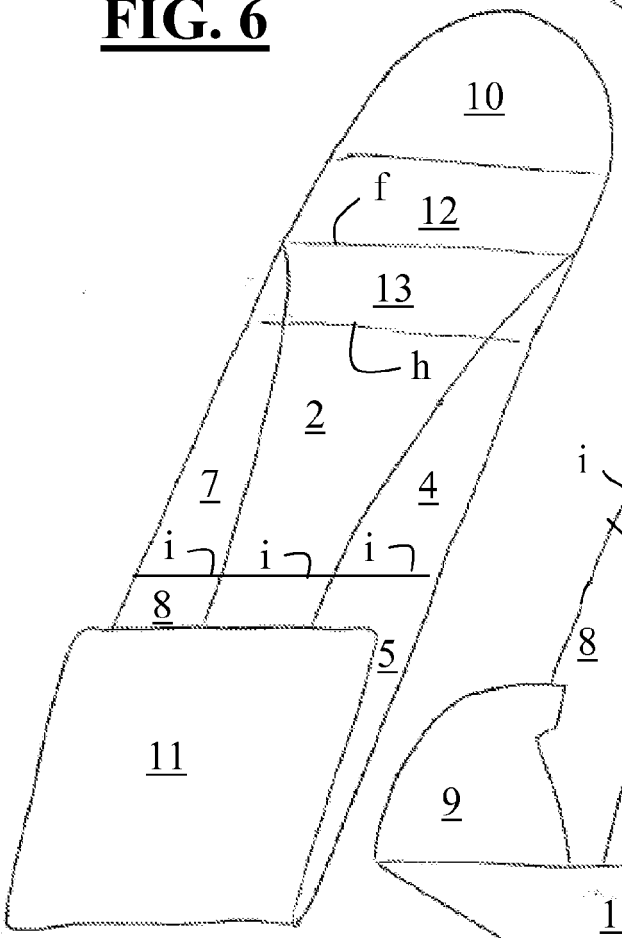

FIG. 4

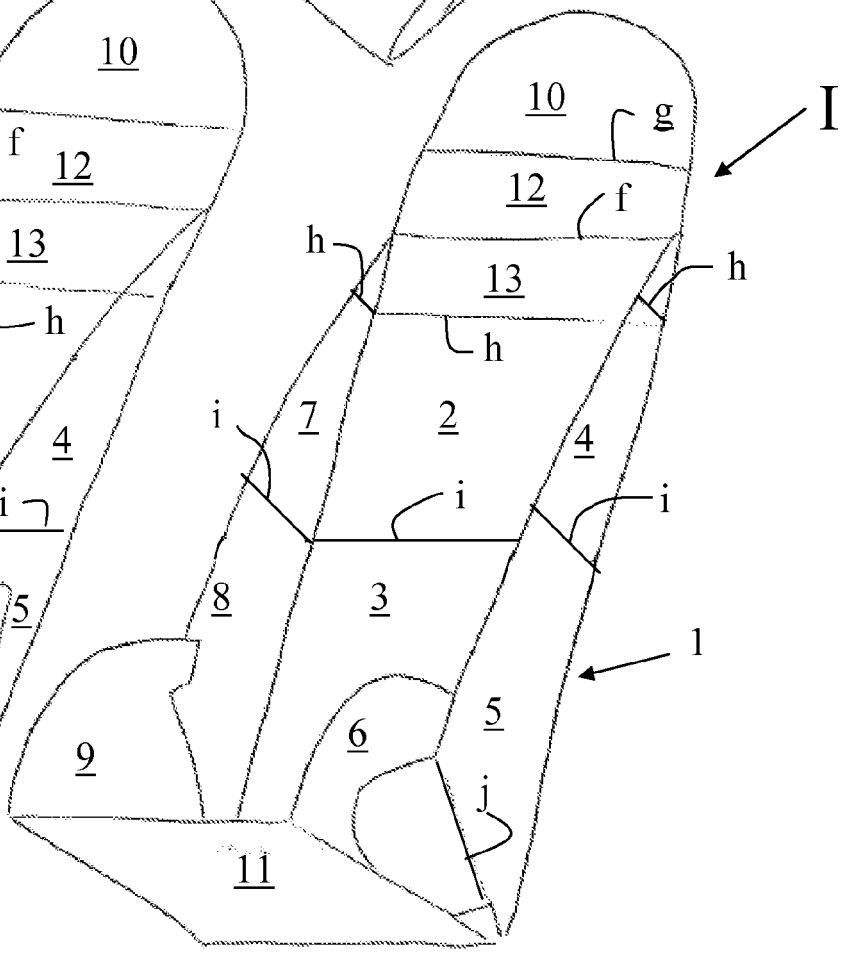

FIG. 3

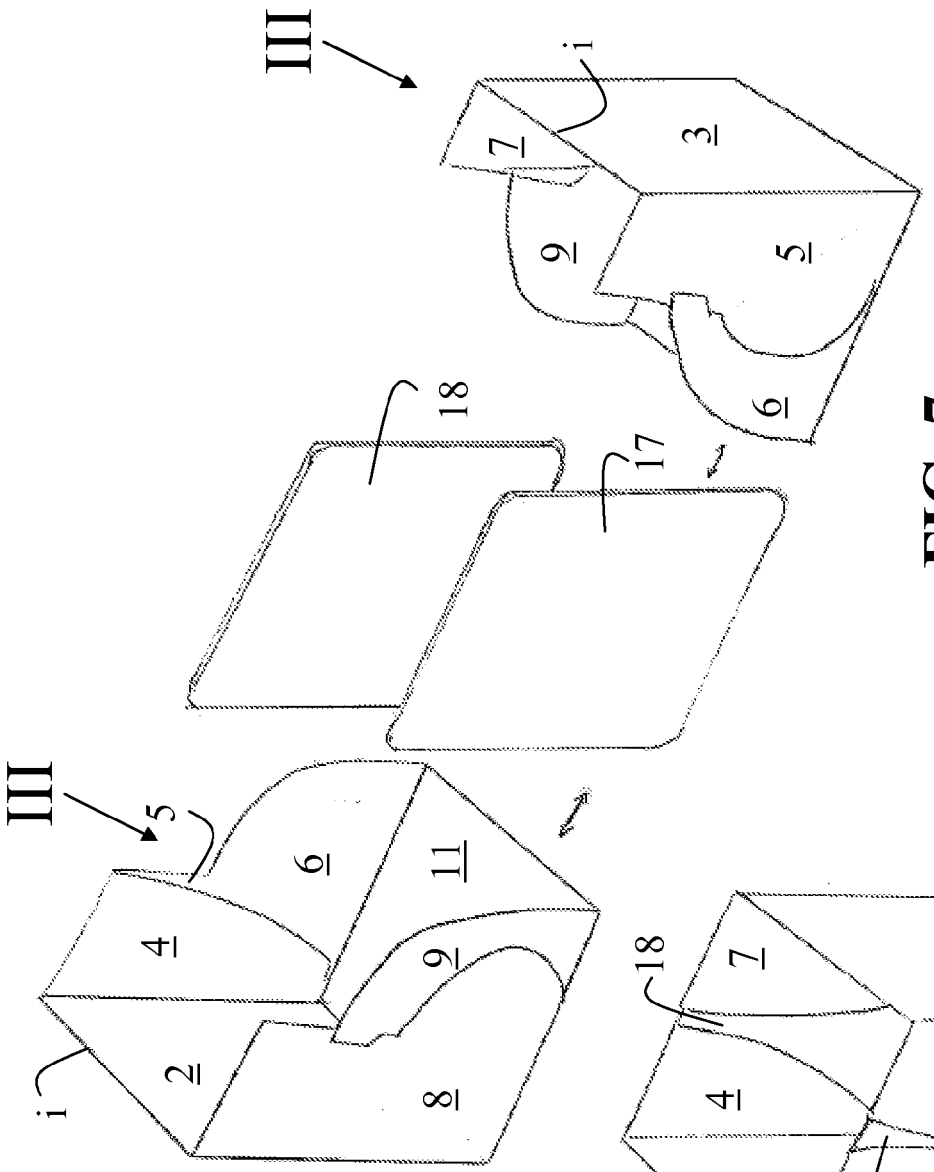

FIG. 7

FIG. 8

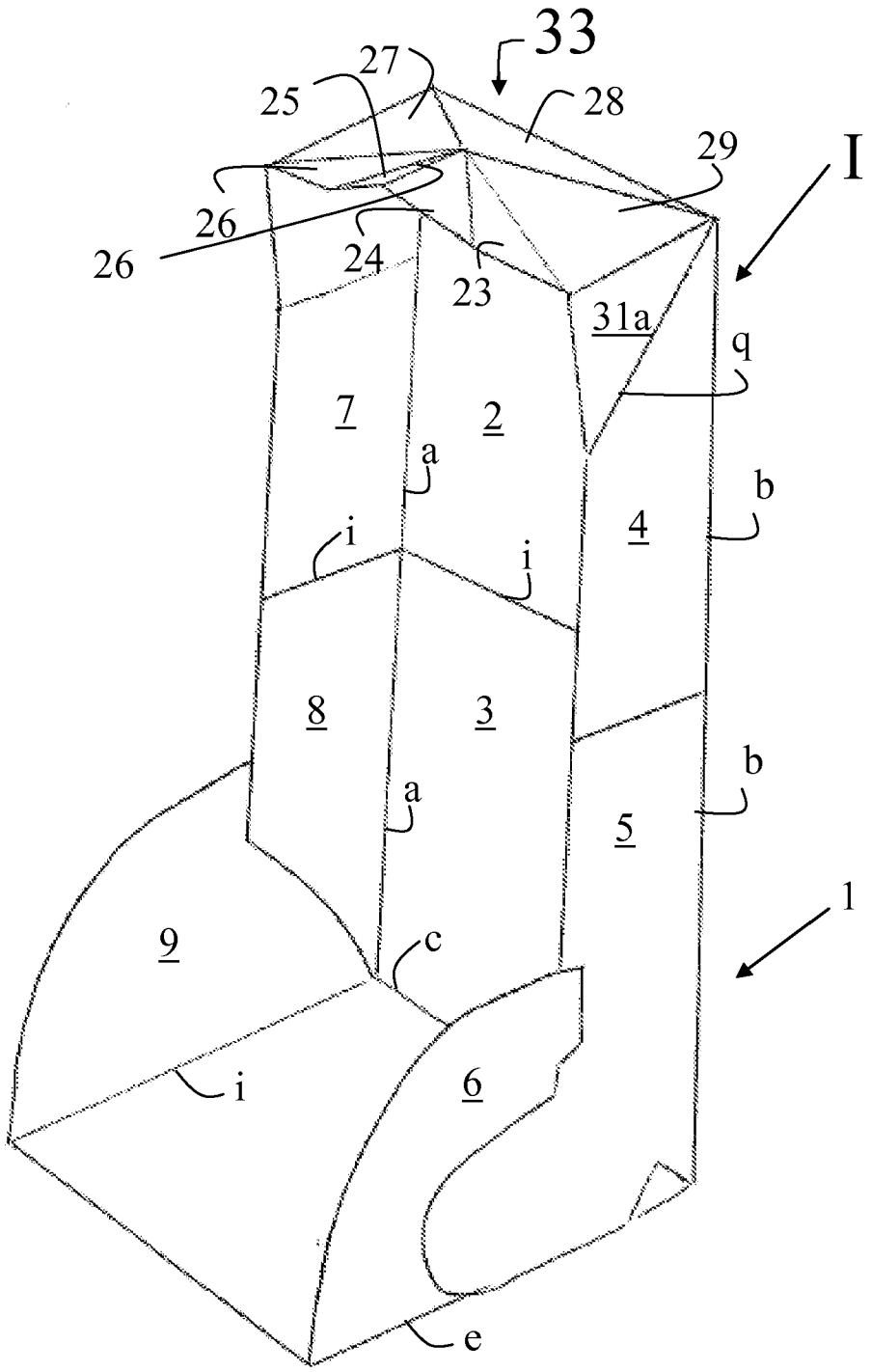

FIG. 9

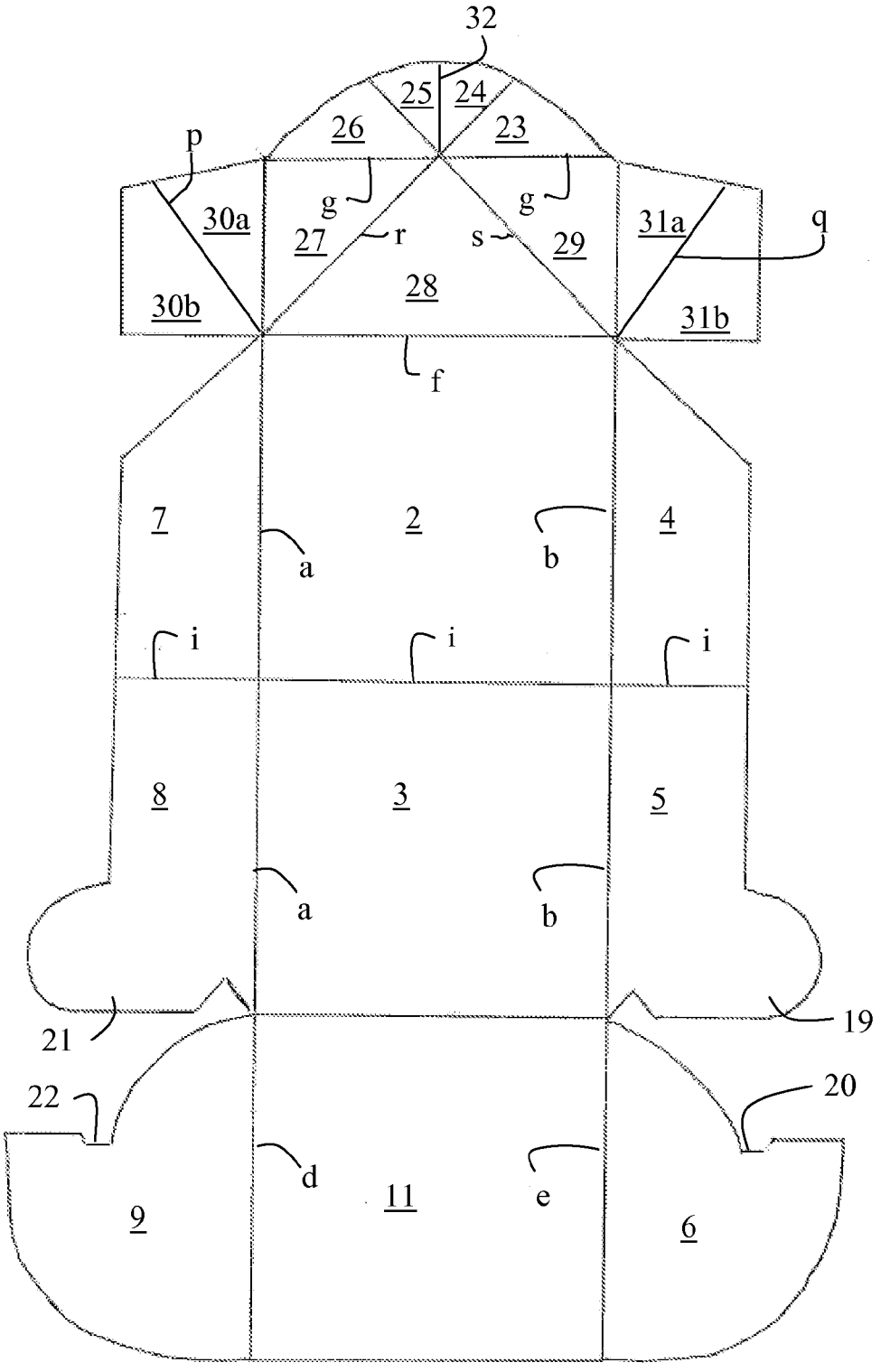
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FIG. 10

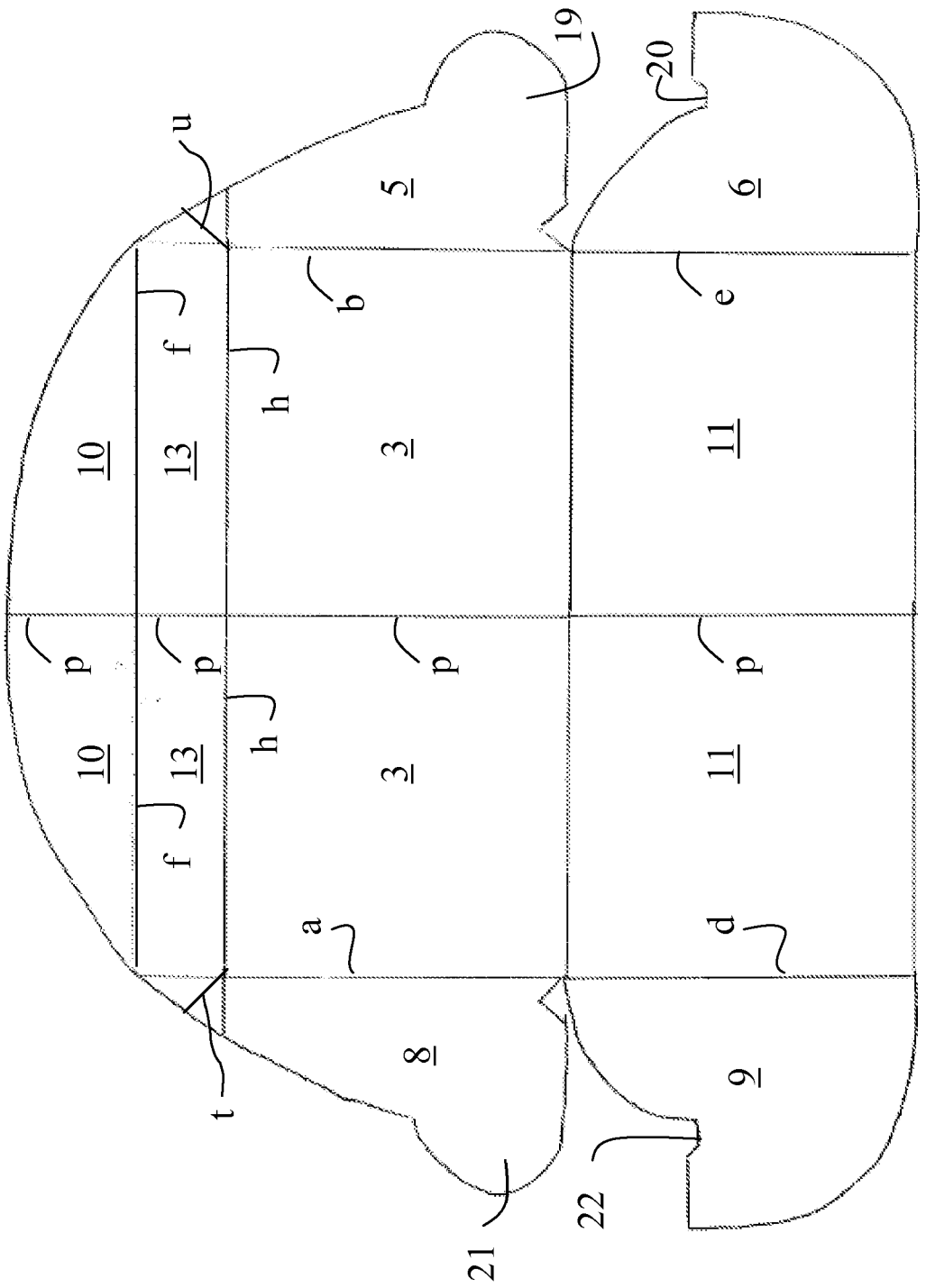

FIG. 11

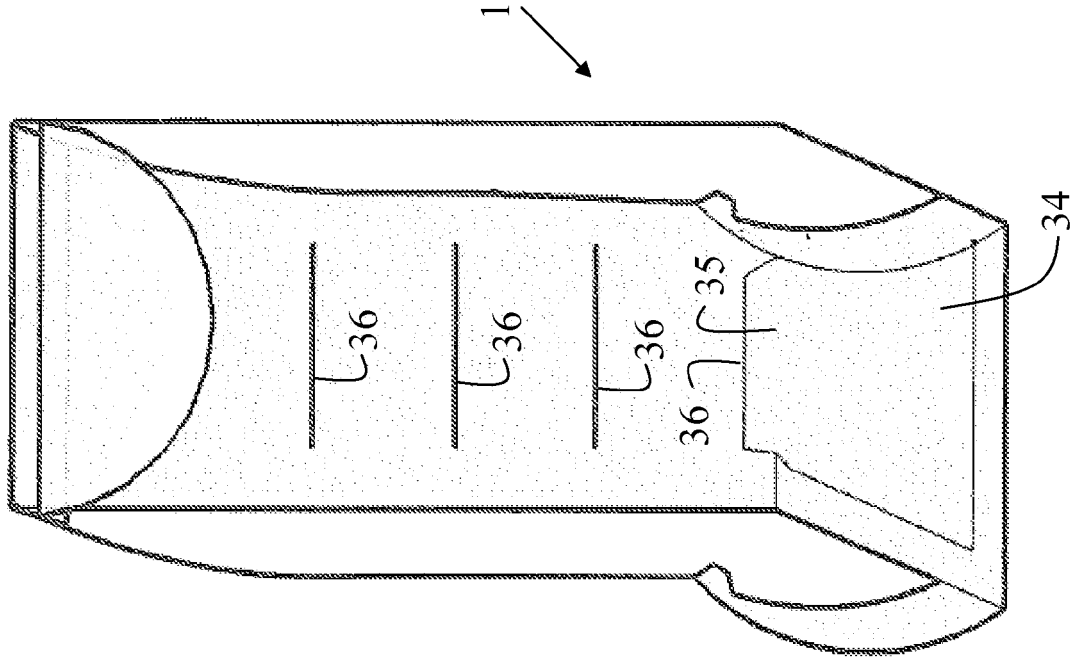

FIG. 13

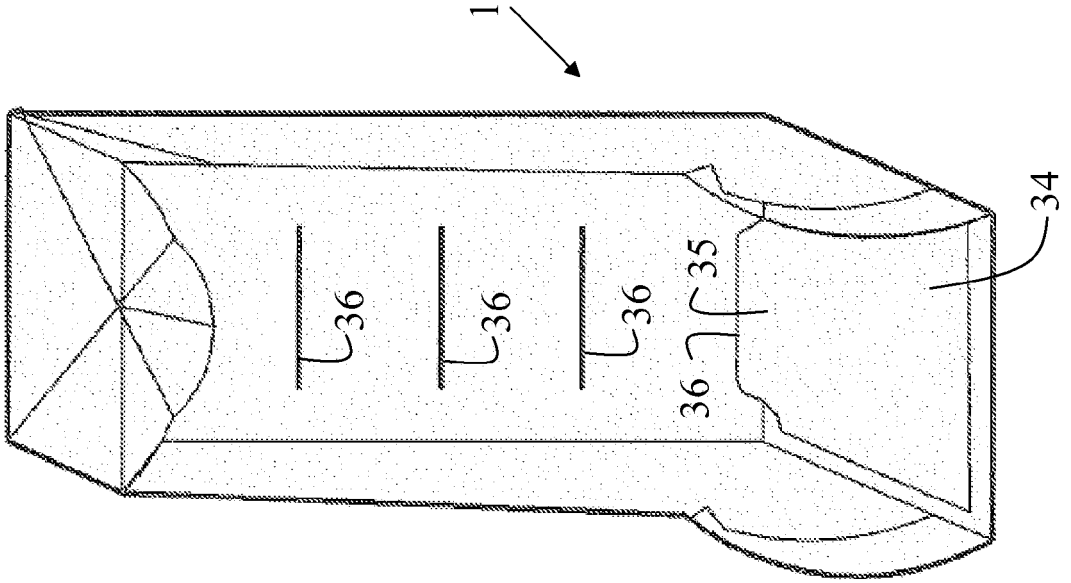

FIG. 12

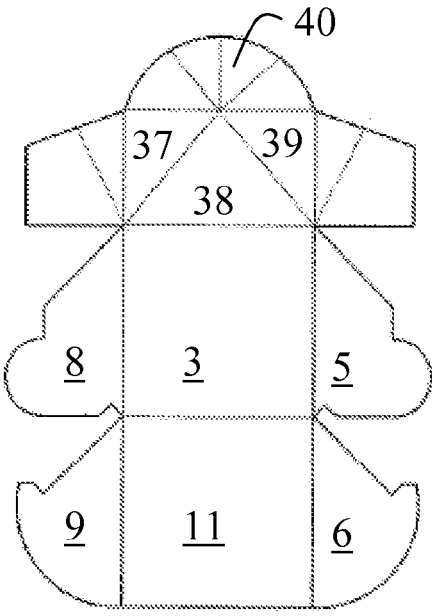

FIG. 15

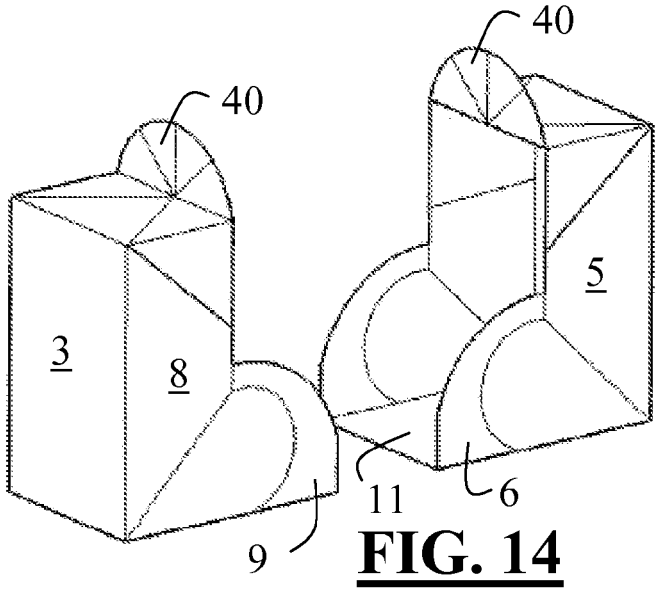

FIG. 14

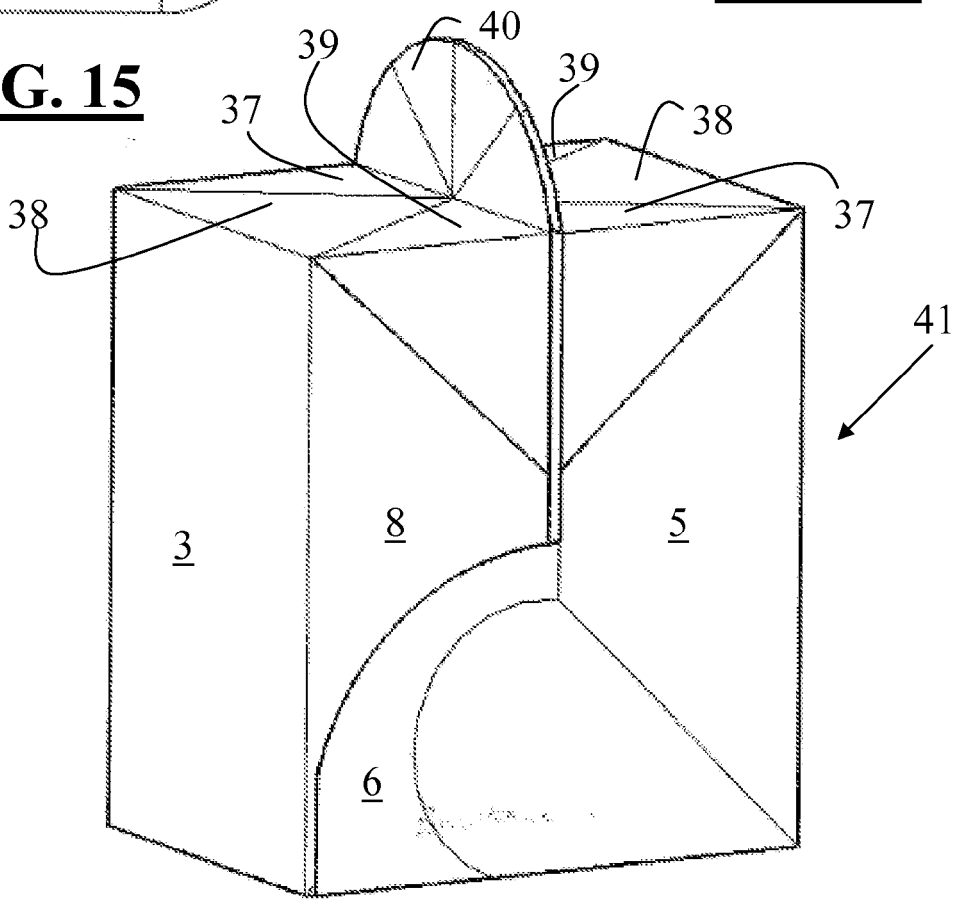

FIG. 16

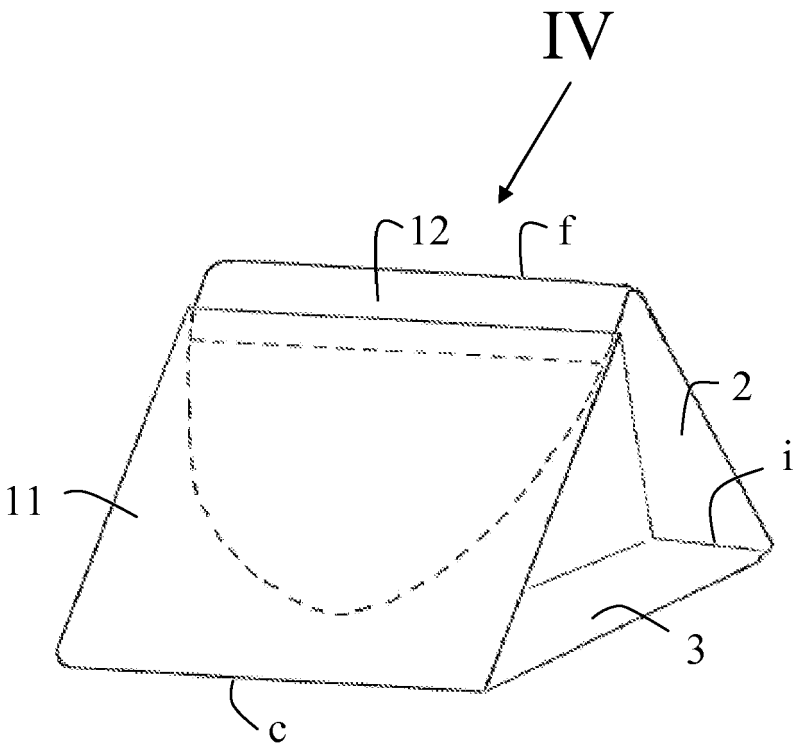

FIG. 17

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EUROPEAN SEARCH REPORT

Application Number
EP 10 16 3353

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	DE 89 13 066 U1 (HEYDRICH, WOLF) 4 January 1990 (1990-01-04) * page 3, line 1 - page 4, line 6; figures 1,2 *	1-6,8, 10,11	INV. A47G23/00
Y	DE 296 06 556 U1 (WENTZIEN ULF [DE]) 29 August 1996 (1996-08-29) * page 3, lines 8-12; figures 1-4 * * page 6, lines 11-17 *	1-6,8, 10,11	
A	DE 88 03 689 U1 (VOGL, IRENE; VOGL, GEORG-ANTON) 5 May 1988 (1988-05-05) * figure 5 *	1-6,8, 10,11	
A	DE 298 05 934 U1 (FRISCH ELISABETH [DE]) 28 May 1998 (1998-05-28) * the whole document *	1-6,8, 10,11	
			TECHNICAL FIELDS SEARCHED (IPC) A47G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	14 July 2010	Balz, Oliver

CATEGORY OF CITED DOCUMENTS

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14-07-2010

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DE 29606556 U1	29-08-1996	NONE	
DE 8803689 U1	05-05-1988	NONE	
DE 29805934 U1	28-05-1998	NONE	

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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