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(54) MULTIPLE LEVEL CARTON BOX ASSEMBLY FOR PIZZA OR THE LIKE

(76) Inventors: **Evangelos Angelopoulos**, Piraeus (GR); **Antonia Motseta Dolores**, Piraeus (FR)

Correspondence Address:
Evangelos Angedpoulos
58 60 Thoukididou Street
Piraeus 185 38 (GR)

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(57) **ABSTRACT**

The multiple level carton box assembly consists of a series of open carton boxes, stacked one on top of the other so that the base **(5)** of each carton box acts as a serving tray and also becomes the cover of the adjacent carton box below. The carton boxes are secured to each other by means of vertical interlocking tongues **(7C, 9C)** extending above the front back side walls **(7, 9)** of each carton box which are inserted and wedged into the slots **(7D, 9D)** on the base **(5)** of the adjacent carton box above thus interlocking and stabilizing the assembly of carton boxes. Stability of the embodiment is attained by the folding corners **(1, 2, 3, 4)** which due to the double fold provide firm support of the adjacent carton box above as well as the horizontal semicircular tongues **(7E, 7F, 9E, 9F)** of each carton box which provide added support to the adjacent carton box above and thus prevent bending or collapsing of the embodiment. The multiple level carton box assembly is closed by only one cover **(11)** which is placed on the uppermost carton box.

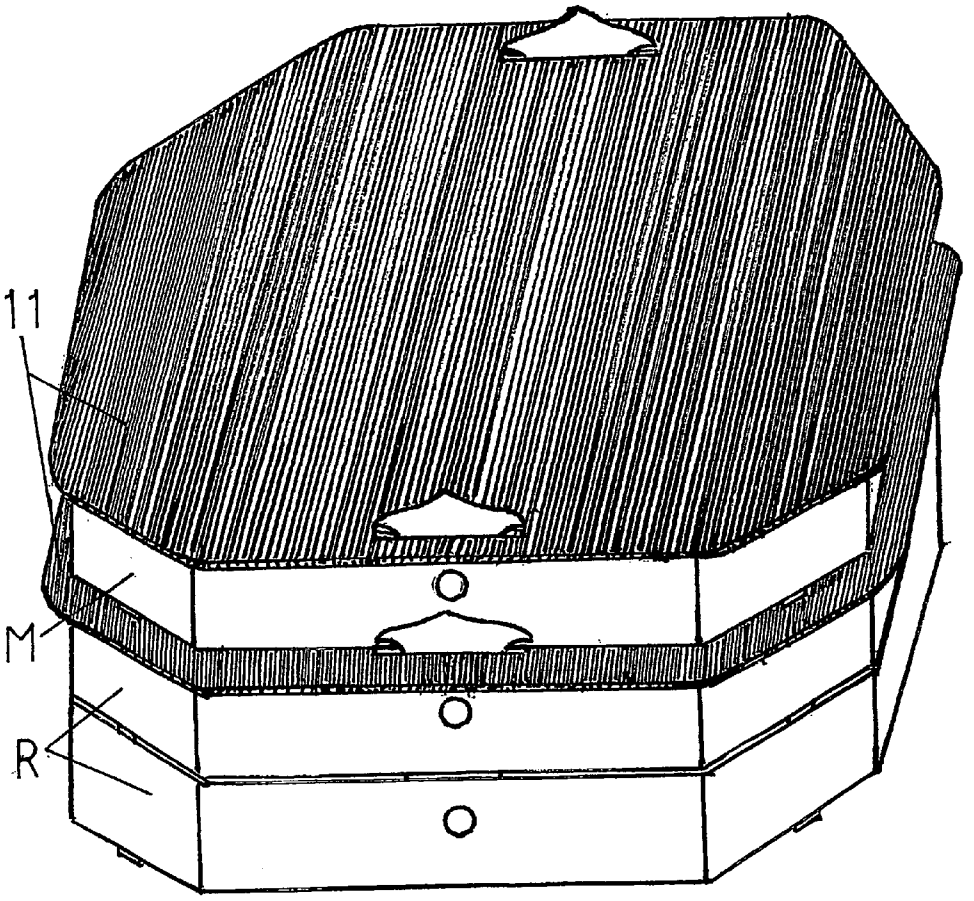

FIG. 1

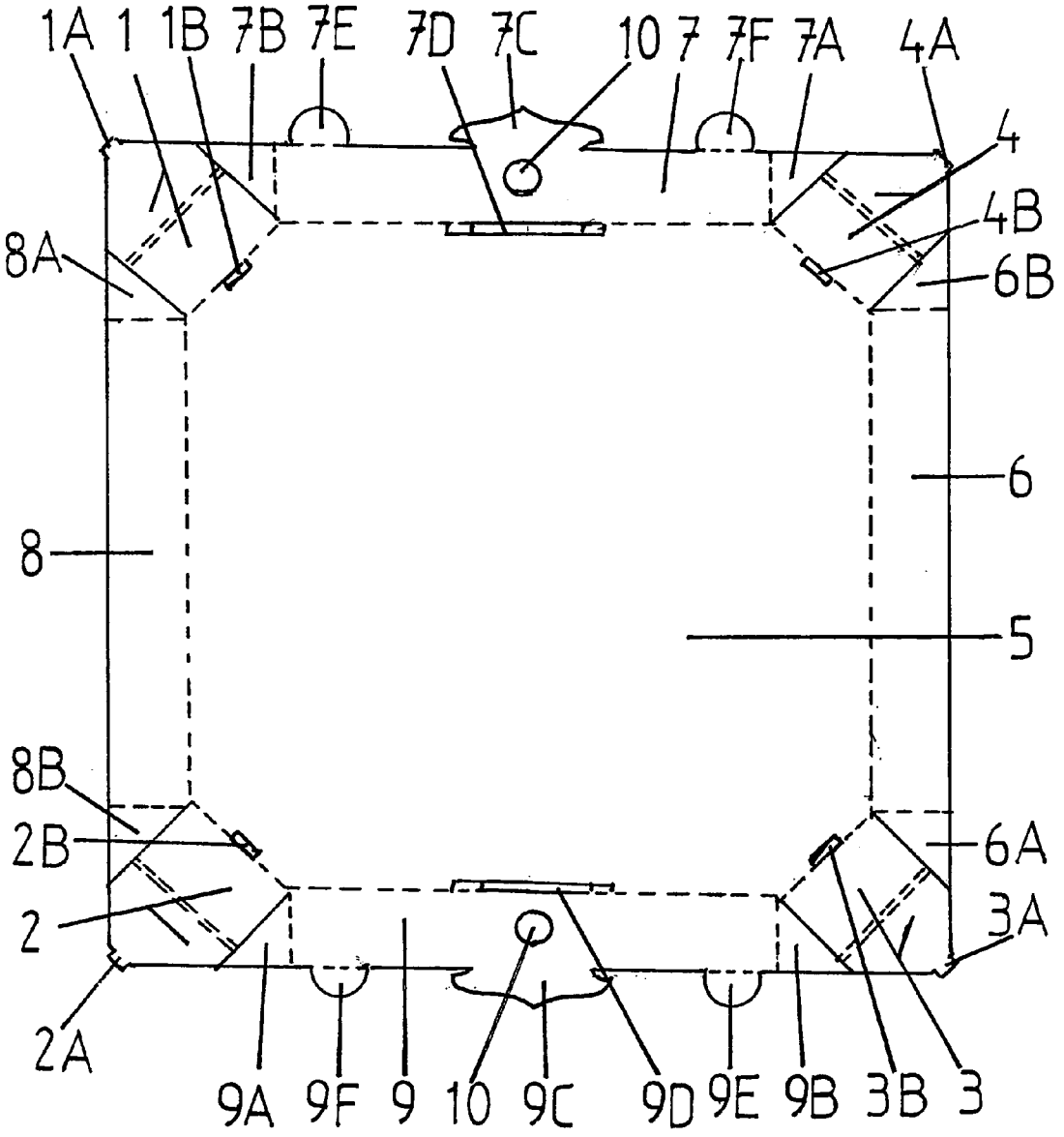
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FIG. 2

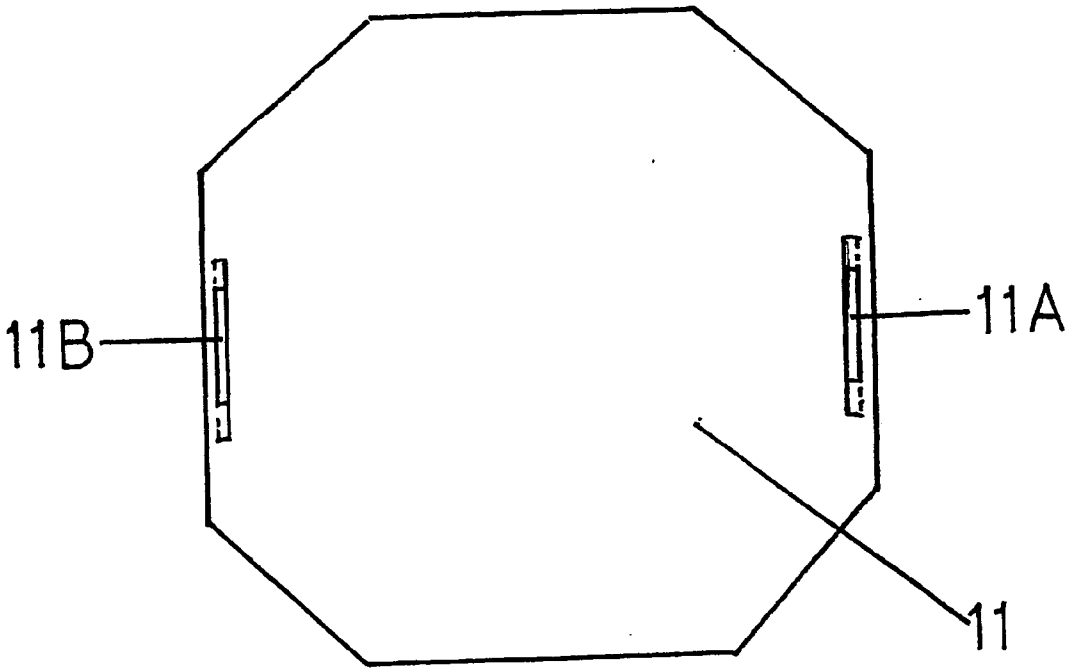


FIG. 3

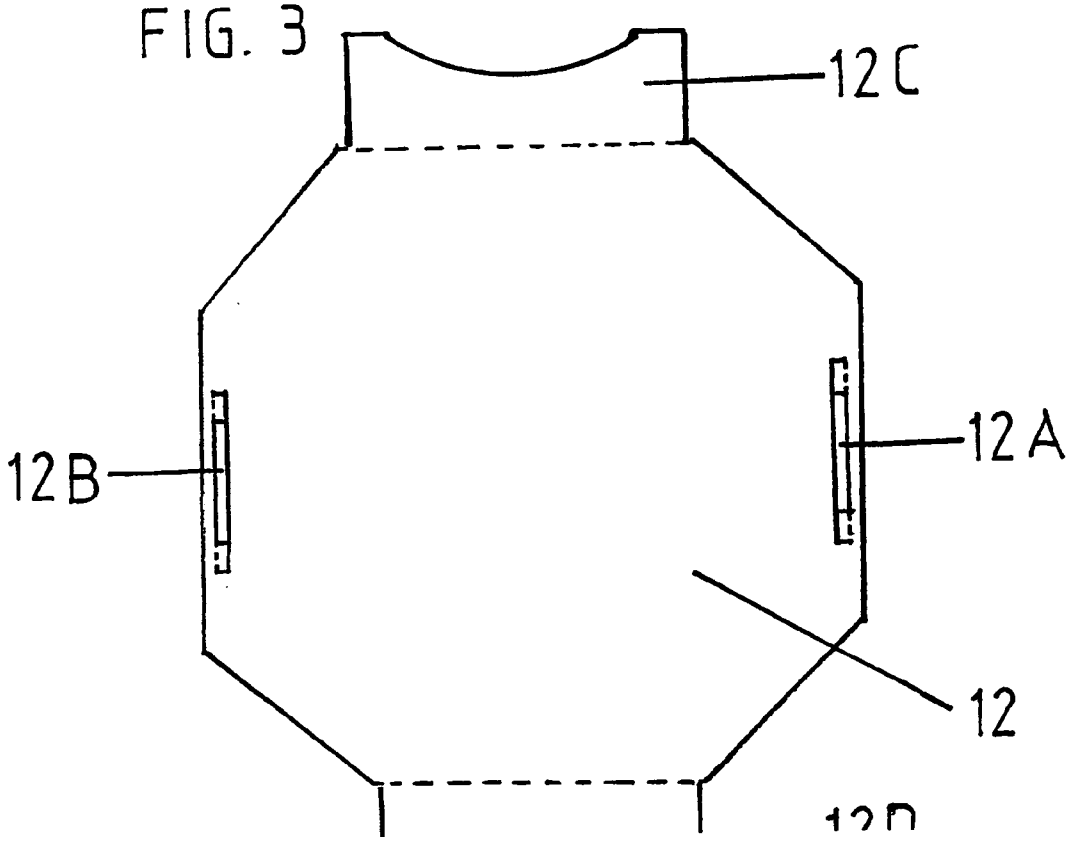


FIG. 4

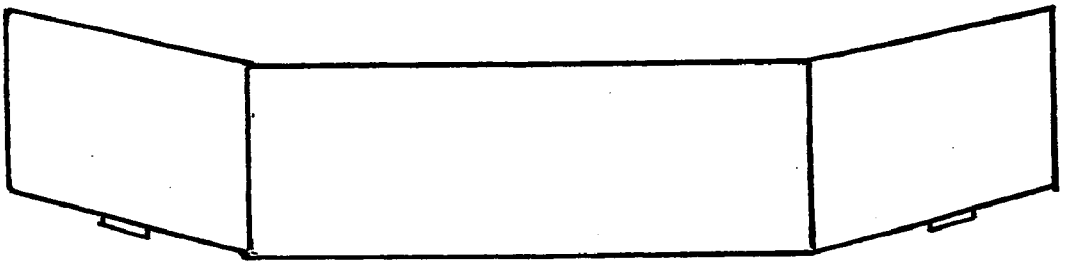


FIG. 5

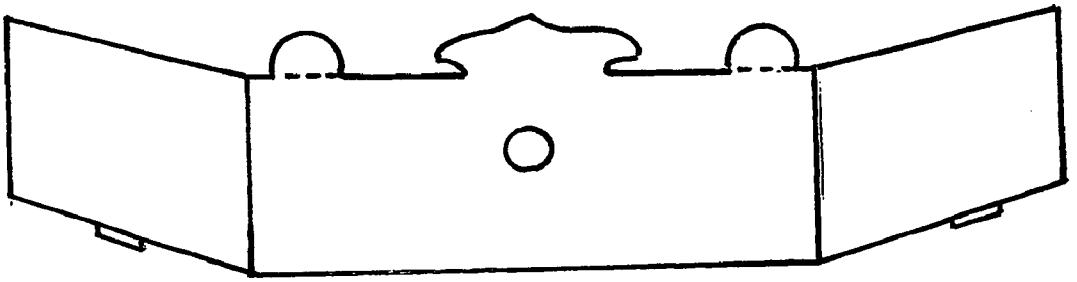


FIG. 6

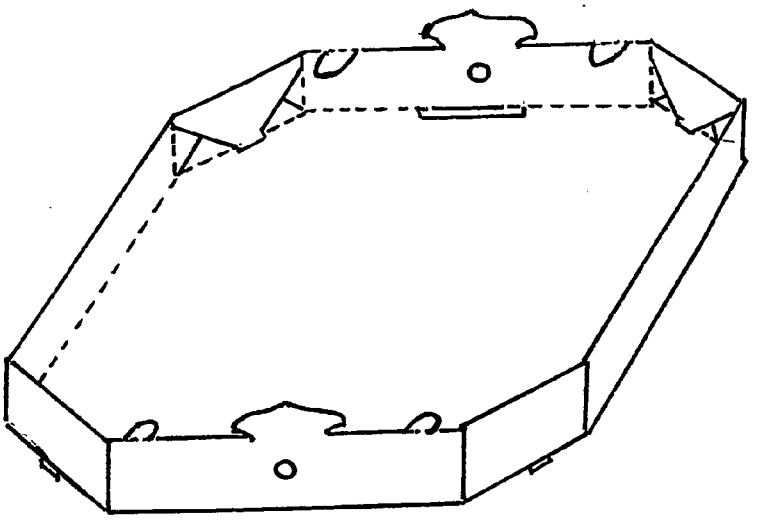


FIG. 7

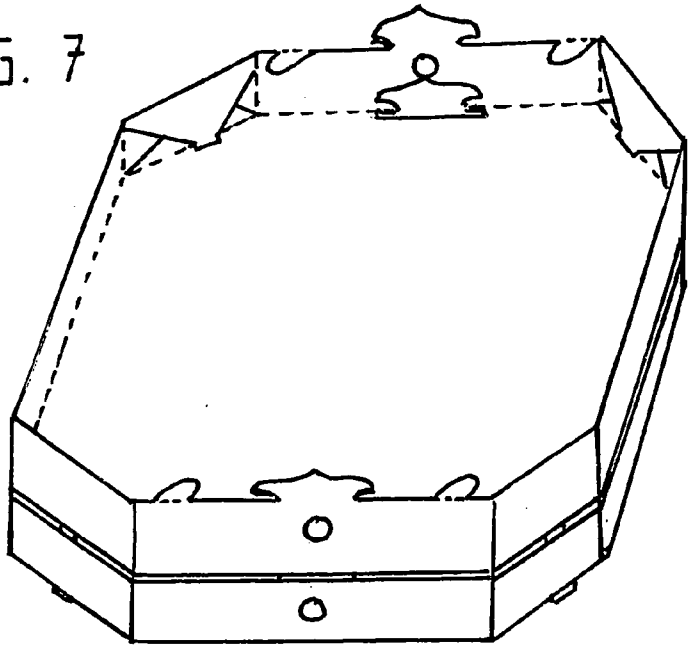
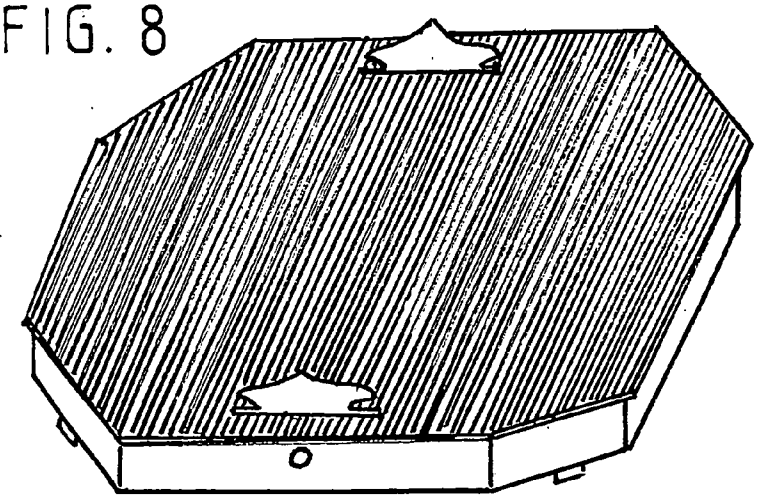


FIG. 8



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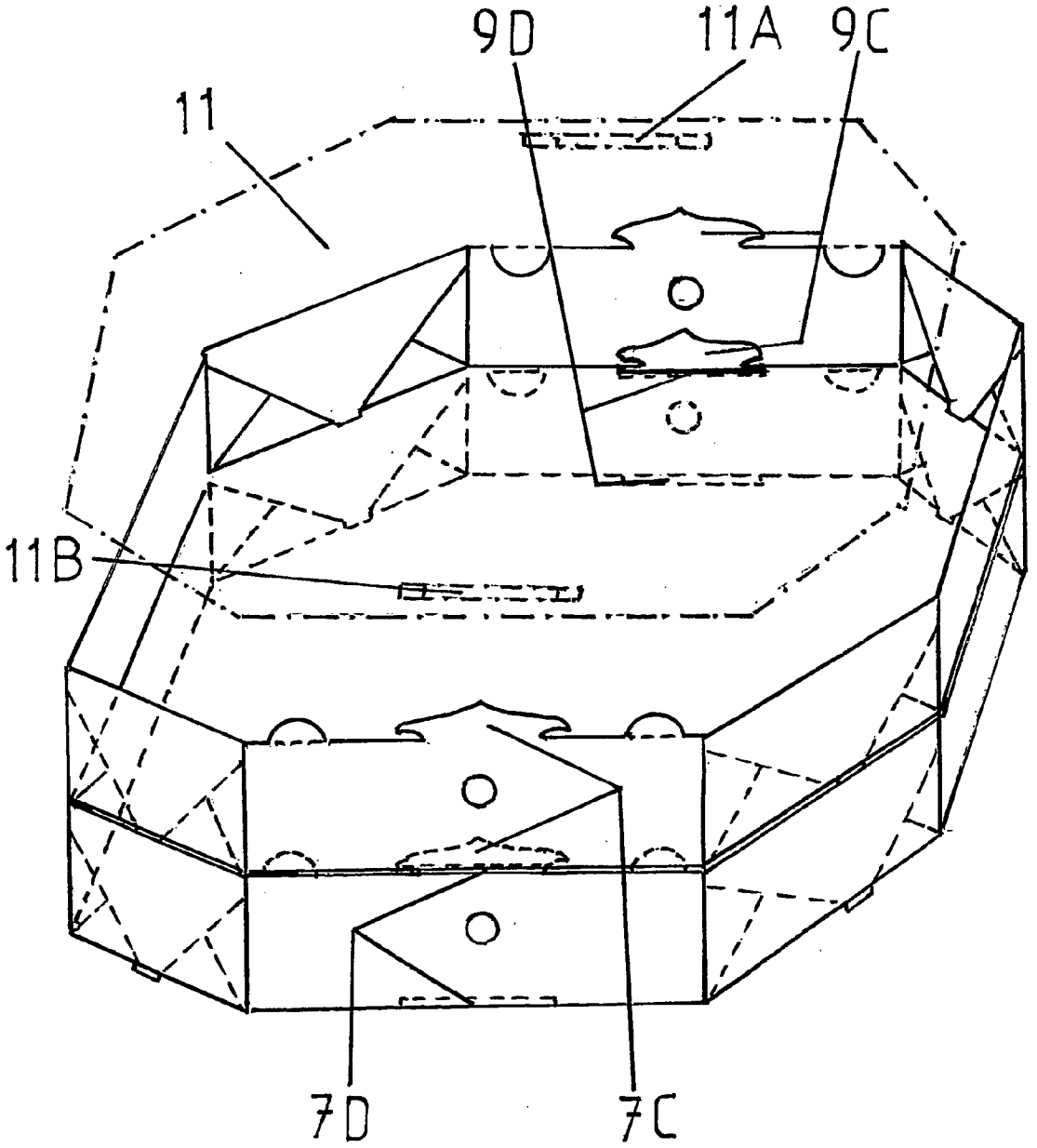

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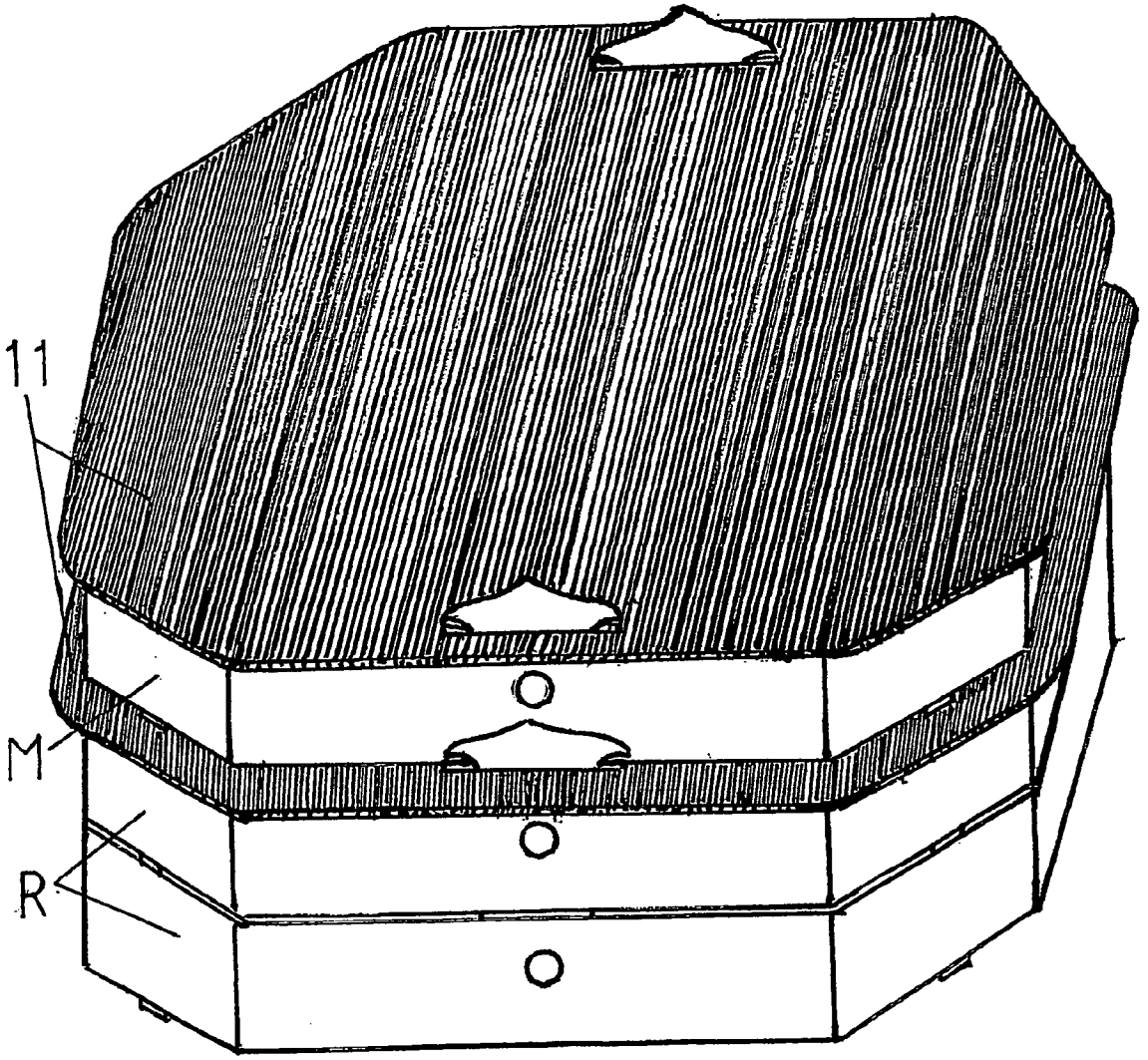

FIG. 11

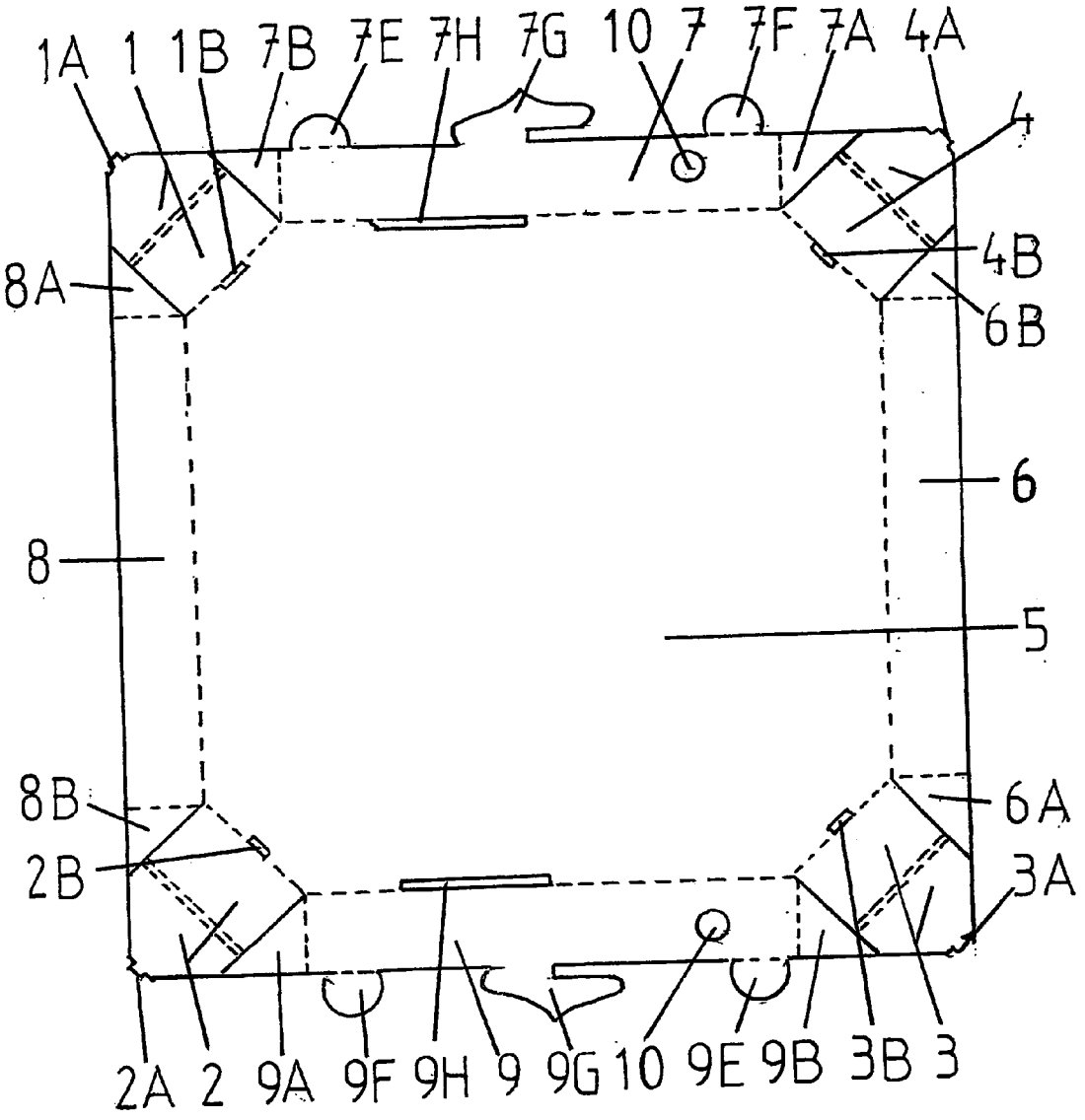
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FIG. 12

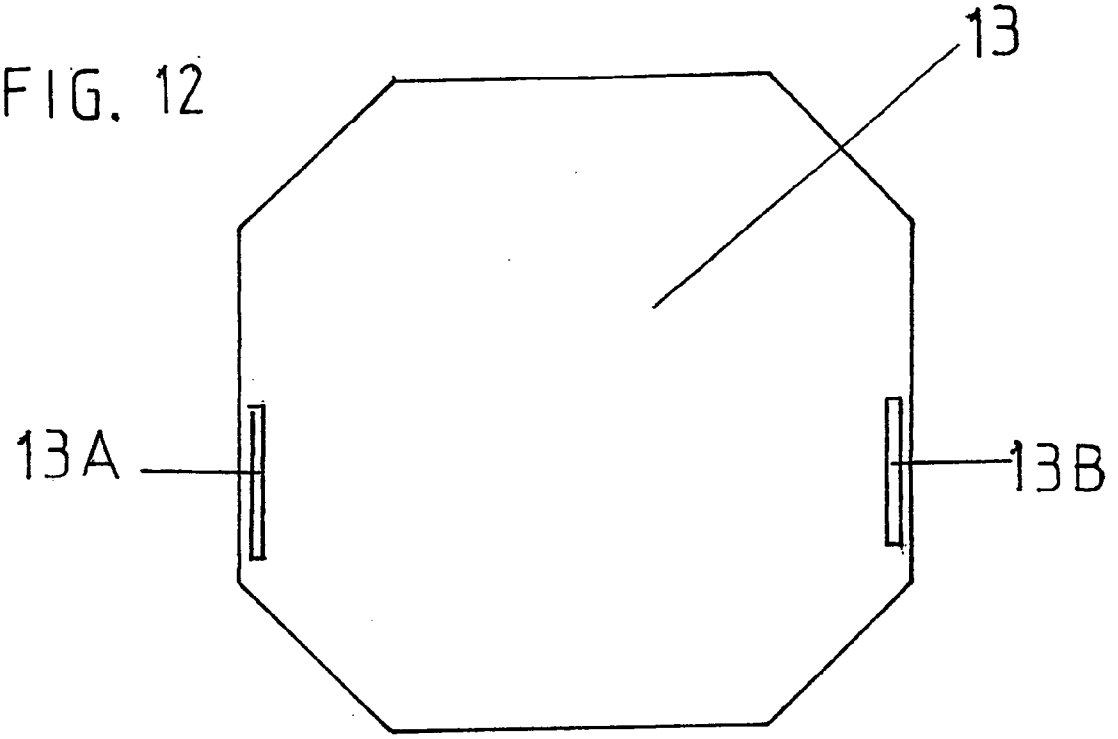


FIG. 13

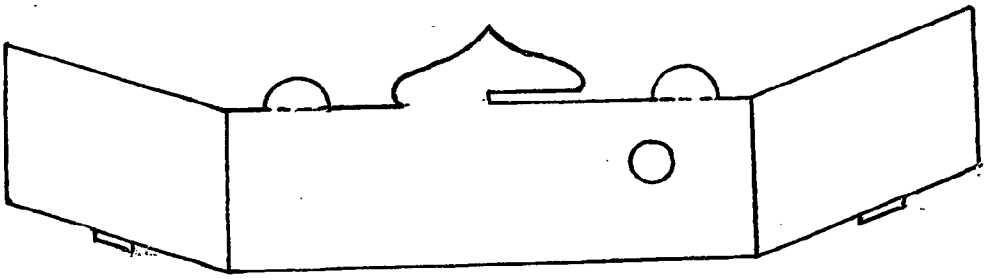


FIG. 14

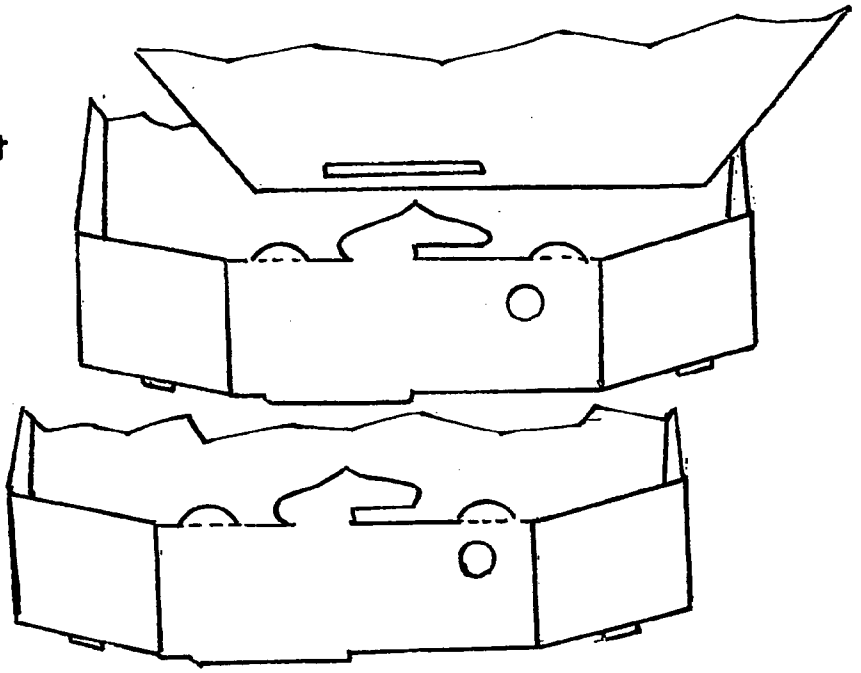


FIG. 15

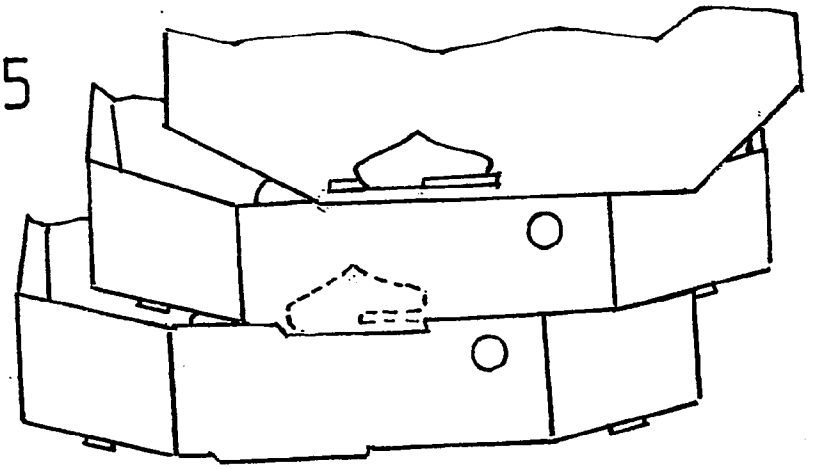


FIG. 16

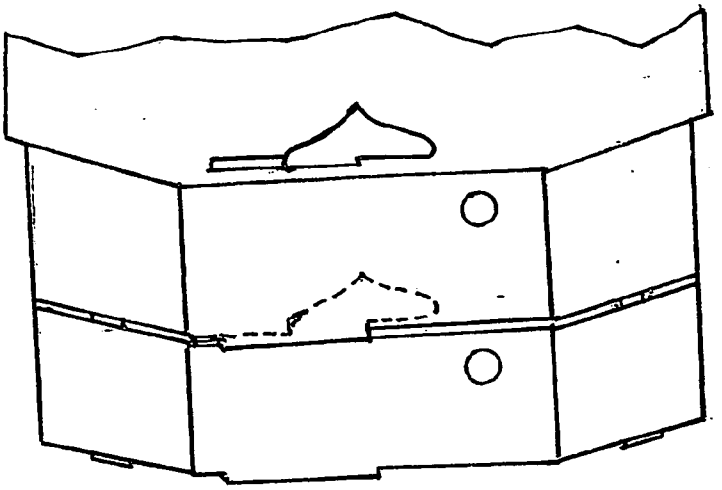
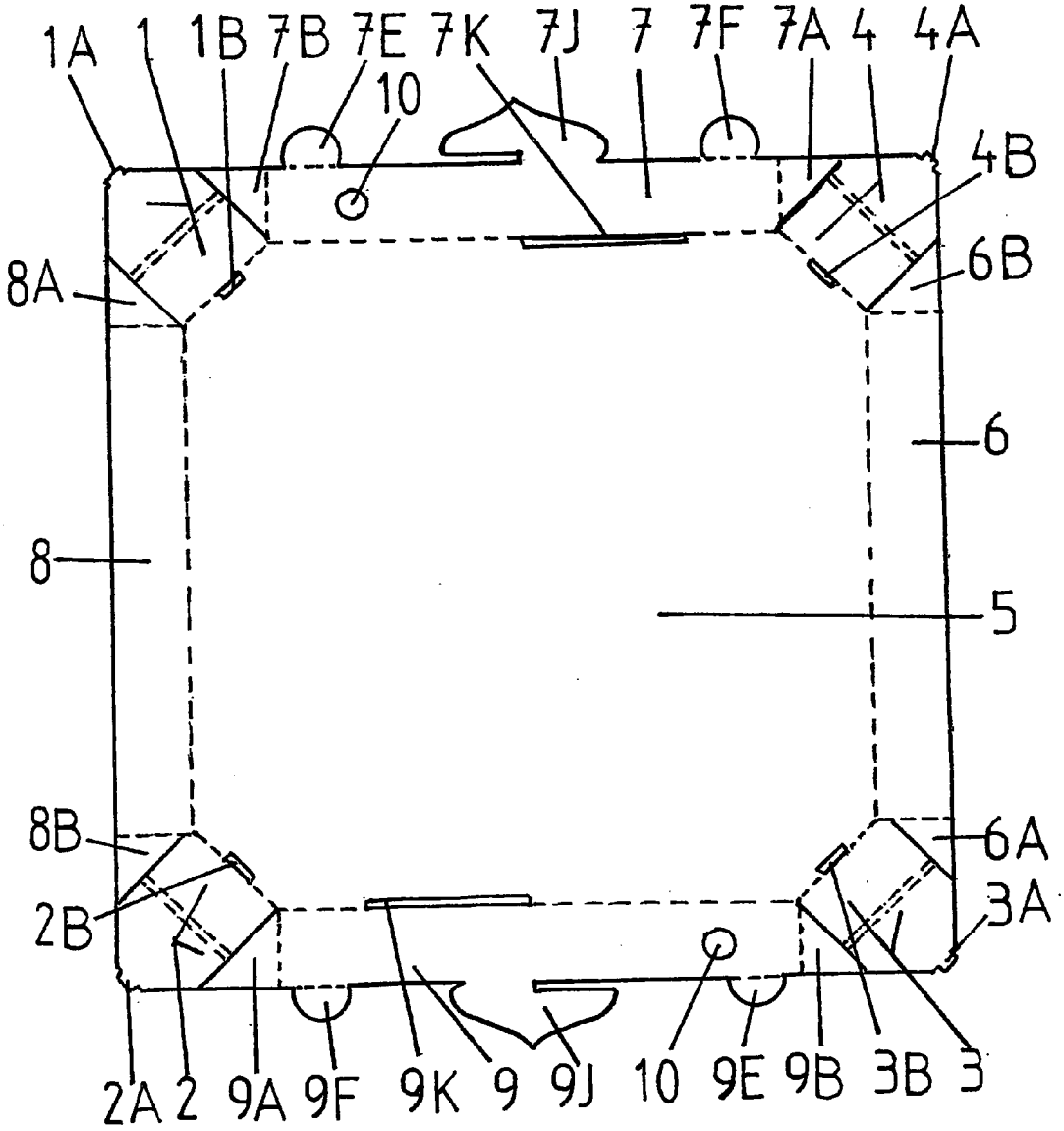


FIG. 17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8B
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FIG. 18

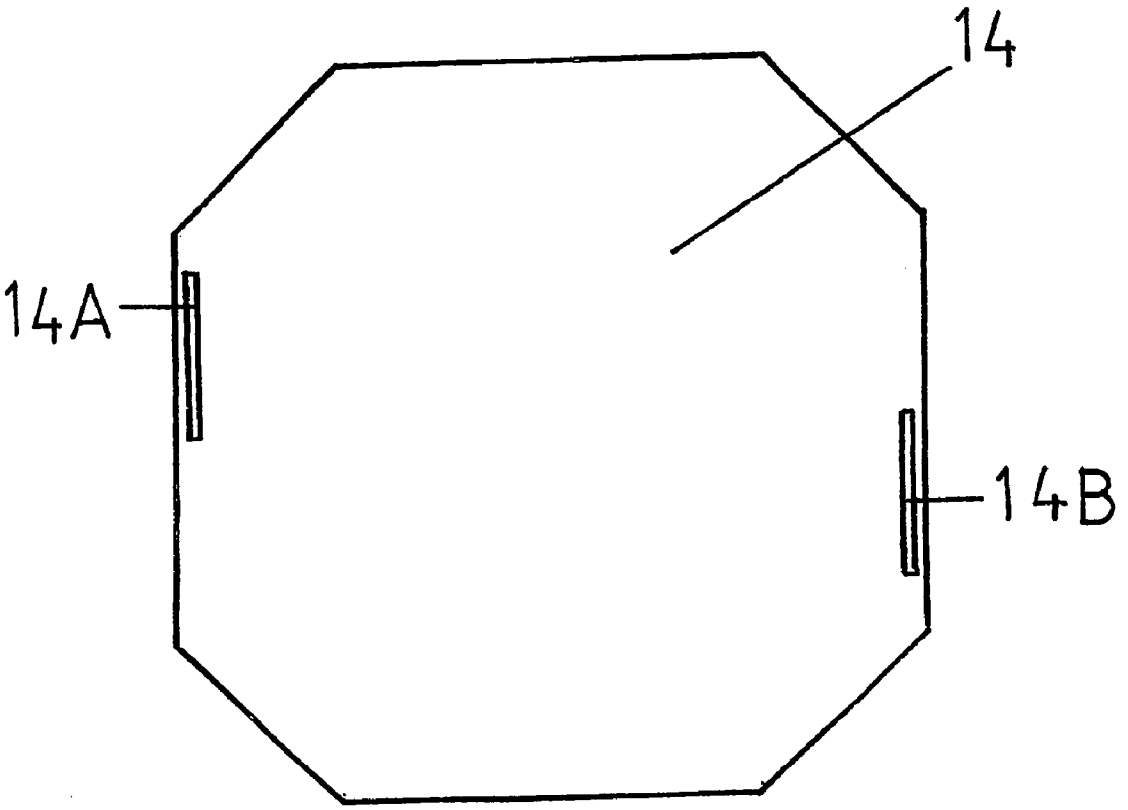


FIG. 19

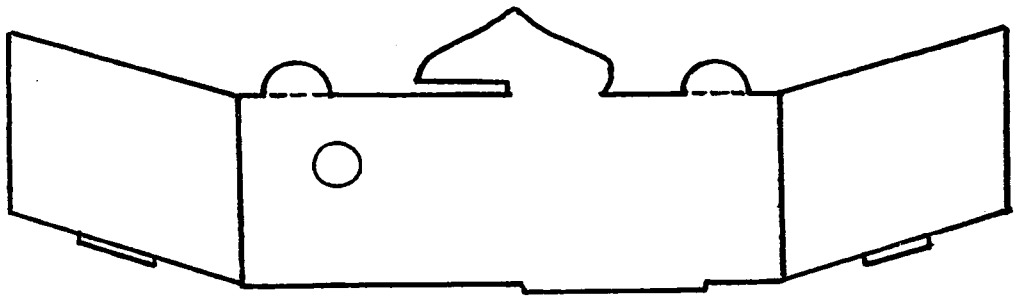
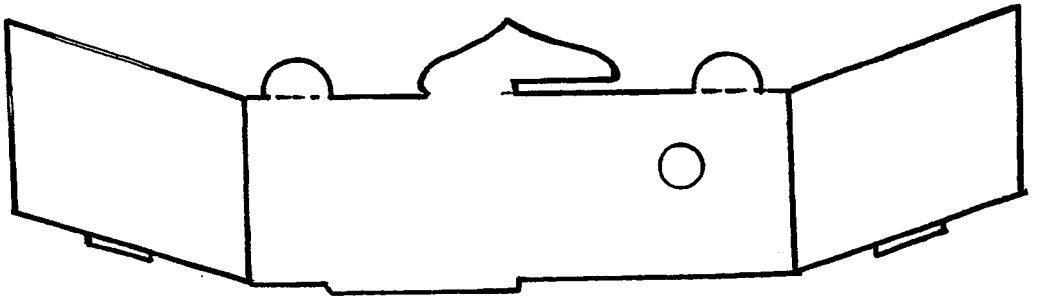


FIG. 20



MULTIPLE LEVEL CARTON BOX ASSEMBLY FOR PIZZA OR THE LIKE

[0001] The invention for which we wish to obtain a patent, is a multiple level carton box assembly, that is an embodiment of several vertically engaged interlocking parallel levels of carton boxes (trays), horizontally arranged in a series of one on top of the other, enabling the base (floor) of each carton box to act as a serving tray and also to become the cover of the adjacent box (tray) below. The carton boxes (trays) of our multiple level carton box assembly are secured (interlocked) to each other by means of vertical interlocking tongues extending above the front-back side walls of each carton box (tray) which penetrate the slits-slots of the base of the adjacent carton box (tray) above thus creating an embodiment, interlocking and stabilizing the multiple level carton box assembly in place and securing it against shifting, sliding, separation, bouncing or any other movement during transport. The multiple level carton box assembly is closed by only one cover which is placed on the uppermost carton box (tray) of the assembly, where the vertical interlocking tongues extend above the front-back side walls ready to engage and interlock the cover to the embodiment for the distribution of pizza, other takeaway foods and pastry.

[0002] Single level carton boxes for the distribution of pizza have been in the market since long ago. It has been established however, that with the use of such single-level boxes there is considerable waste of material, time and money. Furthermore, it is also established that the transport of a single pizza, requires its own separate box as well as time for its assembly.

[0003] Particularly, we have researched the U.S. Pat. No. 4,984,734, date of patent Jan. 15, 1991, of inventor Kenneth J. Zion, which requires an excessive amount of cardboard for the construction of each carton box and furthermore, the locking device of the carton boxes to one another is not safe for two reasons. First, because the locking flaps simply surround the adjacent carton box above without penetrating its base and therefore there is no stability in the stack, and second because the size of the flaps is not sufficient to withstand the weight and the heat from the pizza in the boxes above. This second fault is also evident in the design of the top cover which does not have any slots through which the flaps can slide to secure the cover which therefore can easily slide off with any vibration or movement during transport. The multiple level carton box assembly of our invention has both vertically interlocking "tongues" which penetrate the base of the adjacent box (tray) above and stabilize the assembly against shifting, sliding, separation, bouncing or any other movement and horizontal supporting semicircular 'tongues" which allow each carton box (tray) to withstand the weight and the heat of the pizza in the adjacent carton box (tray) above without touching or crushing the pizza in the carton box (tray) below. The multiple level carton box assembly requires only one cover on the uppermost carton box (tray). This cover locks in place by the penetration of the vertically interlocking tongues of the uppermost carton box (tray) into the respective slits-slots on the cover thus securing the entire embodiment.

[0004] The advantages of our multiple level carton box assembly are as follows:

[0005] First: Financial and ecological benefits. A conventional single carton box with its individual cover, requires 3,240 cm^2 of cardboard. In our invention, a carton box of the same capacity requires 2,850 cm^2 of cardboard that is 390 cm^2 less cardboard or savings of 12%. For an order of two pizzas the conventional pizza carton boxes require 6,480 cm^2 of cardboard while our multiple level carton box assembly, due to the use of a single cover, drops to 4,605 cm^2, a difference of 1,875 cm^2, that is savings of 29%. With a three-box multiple level carton box assembly (order of three pizzas), we have savings of 34% while with a four-box multiple level carton box assembly (order of four pizzas) the savings reach 37%. Furthermore, our invention achieves time saving in its assembly of up to 60% compared to that of conventional packaging. The savings in material result in cost reduction in the production of the multiple level carton box assembly which passes on to the business owner of pizza parlors or other food establishments and in turn to the consumer. Thus a chain of double financial benefit is achieved, since less material means less quantity of natural resources being used (wood) and a decrease in the quantity of disposable material being produced with all the environmental advantages that result thereof.

[0006] Second: Storage Benefits

[0007] Because the carton boxes (trays) of the multiple level carton box assembly are stored flat (open), thousands of carton boxes (trays) can be stored in the place of business requiring very little storage space while box assembly is extremely simple and fast for whatever number of carton boxes (trays) may be required.

[0008] Third: Production Benefits

[0009] The manufacturer constructing the flat cut outs for the carton boxes (trays) of the multiple level carton box assembly does not need large storage space during production because the size of the cardboard cut out for each carton box (tray) is much less than that of conventional pizza boxes due to the fact that the cover is a separate component. There is also no waste of material nor large volumes of left over scraps for disposal.

[0010] Fourth: The side walls of each carton box (tray) of the multiple level assembly have a meticulously designed construction and reinforcements to support the base of the adjacent carton box (tray) above thus eliminating the possibility of bending of the base due to the weight of the pizza because each base rests firmly on the rigid folding corners, the side walls as well as on horizontal semicircular "tongues" and vertical interlocking tongues of the adjacent carton box (tray) below which provide additional support.

[0011] Fifth: Minimal Time for Assembly

[0012] The store owner does not need to assemble the carton boxes (trays) of the multiple level carton box assembly in advance but simply to place the pizza on each base, raise the side walls, fold the corners and with very little pressure stabilize them by entering the small "teeth" on the edges of the corners into the proper slots on the base of the carton box (tray) whereupon the carton box (tray) is ready to receive the top which is also the base of the adjacent carton box (tray) above and thus repeat this simple process until the desired number of levels is achieved and finally with a single cover close and lock the entire multiple level carton box assembly forming a rigid embodiment.

[0013] Sixth: Distribution Benefits

[0014] With the successive placing of pizzas in multiple level carton boxes (trays), maintenance of satisfactory temperature levels is achieved, so that the orders are delivered to the consumer at satisfactory temperature levels because there are side ventilation holes on each carton box (tray) which help maintain the desired temperature steady and prevent sogging.

[0015] Seventh: Serving Benefits

[0016] Serving becomes easy because the base of each carton box of the multiple level carton box assembly acts as a tray with no space taken up by the cover since the cover can be simply lifted off and discarded because the cover is a separate component not attached to the base as is the case in conventional pizza boxes where the base and cover are one component. In the multiple level assembly with the lifting of each carton box the one underneath remains open as a tray, etc.

[0017] Eighth: Stability of the Shape and Surface of Pizza

[0018] Each carton box (tray) of the multiple level carton box assembly interlocks safely into the base of the adjacent carton box (tray) above thus creating an embodiment, preventing distortion of the stack due to the presence of vertically interlocking tongues which penetrate and interlock into slits-slots, slots on the base of the adjacent box (tray) above thus securing all carton boxes (trays) of the multiple level assembly in place. Furthermore, the rigid folding corners and the horizontal semicircular tongues ensure excellent surface resting of each carton box (tray) on top of the other preventing bending or collapsing of the carton boxes trays (above) and maintaining the pizza flat.

[0019] Ninth: Stacking Two or More Orders.

[0020] With our multiple level carton box assembly, two or more orders can be combined for delivery, stacked vertically so that the cover of each order acts as a divider for the next order above also securing the separate orders from shifting, sliding during transport by the extending above the cover vertical interlocking tongues which lock into the slits-slots on the adjacent base of the carton box (tray) of the next order above.

[0021] Tenth: Variety of Shapes, Sizes and Material

[0022] Our multiple level carton box assembly allows for; choice of any geometric shape of box (square, rectangular, hexagonal, octagonal even triangular).

[0023] Choice of Any Desired Size.

[0024] Besides corrugated cardboard, any other material which can be cut and bent to take the shape of a box can be used.

[0025] The above characteristics are the "avant-garde" of our invention giving our multiple level carton box assembly a uniqueness which we have arduously worked for, aiming to provide a beneficial packaging alternative to the entire industry of production and distribution of pizza as well as other food products and pastry.

DESCRIPTION OF THE CARTON BOX COMPONENTS

[0026] All component numbers refer to **FIG. 1** unless otherwise stated.

[0027] **1**, **2**, **3**, **4**. Folding corners with teeth **1**A, **2**A, **3**A, **4**A respectively

[0028] **1**A. Tooth which is inserted in slot **1**B

[0029] **2**A. Tooth which is inserted in slot **2**B

[0030] **3**A. Tooth which is inserted in slot **3**B

[0031] **4**A. Tooth which is inserted in slot **4**B

[0032] **5**. Carton box base (floor)

[0033] **6**, **8**. Opposite side walls

[0034] **6**A, **6**B, **8**A, **8**B. Folding inwards corner triangles of side walls covered by the folding corners **1**, **2**, **3**, **4**, for bracing of side walls

[0035] **7**, **9**. Front-back side walls

[0036] **7**A, **7**B, **9**A, **9**B. Folding inwards corner triangles of side walls covered by the folding corners **1**, **2**, **3**, **4**, for bracing of side walls

[0037] **7**C, **9**C. Vertically interlocking "tongues" which penetrate slits-slots **7**D, **9**D respectively of base **5** of the adjacent box (tray) above

[0038] **7**G, **9**G. Vertically interlocking "tongues" which penetrate slots **7**H, **9**H respectively of base **5** of the adjacent box (tray) above, **FIG. 11**

[0039] **7**J, **9**J. Vertically interlocking "tongues" which penetrate slots **7**K, **9**K respectively of base **5** of the adjacent box (tray) above, **FIG. 17**

[0040] **7**E, **7**F, **9**E, **9**F. Horizontal semicircular "tongues" which bend inwards at a right angle to the vertical side walls (parallel to the box base) for support of the base above and to prevent bending of same

[0041] **10**. Round ventilation holes

[0042] **11**. Cover, **FIG. 2**

[0043] **11**A, **11**B. Slits-slots of cover **11** where vertical interlocking tongues **7**C, **9**C of the uppermost carton box (tray) are inserted respectively

[0044] **12**. Another type of cover, **FIG. 3**

[0045] **12**A, **12**B. Slits-slots of cover **12** where vertical interlocking tongues **7**C, **9**C of the uppermost carton box (tray) are inserted respectively

[0046] **12**C,**12**D. Side flaps of cover **12** which bend downwards and are inserted inside the uppermost carton box (tray) of the assembly. To be noted that the size and shape of the flaps may vary according to the size, shape and use of the carton box (tray).

[0047] **13**. Cover, **FIG. 12**, which accompanies box base of **FIG. 11**

[0048] **13**A, **13**B. Slots of cover **13**, **FIG. 12**, where vertical interlocking tongues **7**G, **9**G of the uppermost carton box (tray) are inserted respectively

[0049] **14**. Cover, **FIG. 18**, which accompanies box base of **FIG. 17**

[0050] **14**A, **14**B. Slots of cover **14**, **FIG. 18**, where vertical interlocking tongues **7**J, **9**J of the uppermost carton box (tray) are inserted respectively

DESCRIPTION OF MULTIPLE LEVEL CARTON BOX ASSEMBLY

[0051] All component numbers refer to **FIG. 1** unless otherwise stated.

[0052] In **FIG. 1**, we can observe the various components of the carton box (tray) of the multiple level carton box assembly, numbered as they appear on page 5, under the section titled "Description of the Carton Box Components".

[0053] Side walls **6**, **7**, **8**, **9** must be bent (raised) vertically to the base of the carton box (tray), while triangles **6**A, **6**B, **7**A, **7**B, **8**A, **8**B, **9**A, **9**B are to be bent inwards along the side walls so as to be covered by folded corners **1**, **2**, **3**, **4**.

[0054] Corners **1**, **2**, **3**, **4**, are to be bent vertically to the base of the carton box (tray). Then they are to be folded in half along the double discontinuous lines.

[0055] The semicircular tongues **7**E, **7**F, **9**E, **9**F must be bent inwards vertically to the side walls so as to be in a horizontal position parallel to the base of the carton box (tray). The discontinuous lines on the figures show the places where the side walls, triangles and tongues bend (are folded).

[0056] Following the above clarifications, we will now proceed to describe how the multiple level carton box assembly is constructed.

[0057] **FIG. 1** shows the flat cut-out surface of the carton box (tray), before assembly, made of corrugated cardboard as it will be delivered from the manufacturer. We raise (bend vertically) the two opposite side walls **6**, **8** and side wall **7** with our palms on corners **1**, **4** and with our fingers we bend inwards triangles **6**B, **7**A, **7**B, **8**A. We then raise (bend) corners **1**, **4**, fold them in half inwards along the double discontinuous lines so as to cover triangles **6**B, **7**A, **7**B, **8**A and we then press teeth **1**A, **4**A into their respective slots **1**B, **4**B on base **5** so that the folded corners are safely secured in place. We then raise the last side wall **9**, and in the same manner, we bend inwards triangles **6**A, **9**B, **9**A, **8**B, we raise corners **2**, **3** and fold them in half along the double discontinuous lines covering triangles **6**A, **9**B, **9**A, **8**B and we press teeth **2**A, **3**A into their respective slots **2**B, **3**B on base **5**. Finally, we bend the semicircular tongues **7**E, **7**F, **9**E, **9**F inwards so as to bring them to a horizontal position. The first carton box (tray) of the assembly is now constructed with its side walls rigidly secured to base **5**. We continue to assemble the second, third, etc. carton boxes (trays) in the same manner.

[0058] Please note that the analytical description of the multiple level carton box assembly given in the preceding paragraph, in no way suggests that this is a time consuming process because in actuality the time required for the assembly of the carton box (tray) does not exceed 15 to 20 seconds, having placed the pizza in the box beforehand and repeating this simple process for as many carton boxes (trays) as necessary quickly, securely, safely but most of all economically.

[0059] The vertical interlocking tongues **7**C, **9**C of the front-back side walls of each carton box (tray), are inserted and lock into slits-slots **7**D, **9**D respectively on base **5** of the adjacent carton box (tray) above so stabilizing the multiple level embodiment against movement or vibration of any kind while cover **11**, **FIG. 2**, covers the uppermost carton box (tray) of the assembly and is stabilized by vertical interlocking tongues **7**C, **9**C extending **15** above the uppermost carton box (tray) which are inserted into slits-slots **11**A, **11**B respectively. Using cover **12**, **FIG. 3**, the vertical interlocking tongues **7**C, **9**C of the uppermost carton box (tray) are inserted into the slits-slots **12**A, **12**B respectively while flaps **12**C, **12**D are bent downwards and inwards along side walls **6**, **8** of the uppermost carton box (tray) of the assembly thus securing the embodiment completely. Holes **10**, **FIG. 1**, are used for ventilation purposes.

[0060] In **FIG. 11**, the vertical interlocking tongues **7**G, **9**G on the front-back side walls of each carton box (tray) have small indentations (cuts) on one side of the vertical interlocking tongues **7**G, **9**G in the same direction. These vertical interlocking tongues **7**G, **9**G, are inserted into slots **7**H, **9**H on base **5** of the adjacent carton box (tray) above and stabilize the assembly with a slight push sideways (shift). For this reason slots **7**H, **9**H are placed off center to allow the base **5** of the adjacent box above to be pushed sideways (shift) into vertical interlocking tongues **7**G, **9**G and lock and stabilize the embodiment of the multiple level carton box assembly for pizza, various other foods and pastry. Cover **13** of **FIG. 12** covers the uppermost carton box (tray) of the assembly and interlocks in place by a sliding motion (shift) of vertical interlocking tongues **7**G, **9**G into slots **13**A, **13**B respectively of cover **13**, **FIG. 12**, which are placed off center so that the cover can shift and lock into place thus securing the embodiment completely.

[0061] All other components and numbers of **FIG. 11** are the same as those of **FIG. 1** with all box components numbered and described under section titled "Description of Carton Box Components" on page 5.

[0062] In **FIG. 17**, the vertical interlocking tongues **7**J, **9**J on the front-back side walls of each carton box (tray) have small indentations (cuts) on opposite sides. These vertical interlocking tongues **7**J, **9**J, are inserted into slots **7**K, **9**K on base **5** of the adjacent carton box (tray) above and stabilize the assembly by rotation. For this reason slots **7**K, **9**K are placed off center in opposite directions to allow the base **5** of the adjacent carton box (tray) above to rotate into the vertical interlocking tongues, **7**J, **9**J and lock and stabilize the embodiment of the multiple level carton box assembly for pizza, various other foods and pastry. Cover **14** of **FIG. 18**, covers the uppermost carton box (tray) of the assembly and interlocks into place by rotation of the vertical interlocking tongues **7**J, **9**J into slots **14**A, **14**B respectively of cover **14**, **FIG. 18**, which are placed off center in opposite directions so that the cover can rotate and lock into place thus securing the embodiment completely.

[0063] All other components and numbers of **FIG. 17** are the same as those of **FIG. 1**, **FIG. 11**, with all box components numbered and described under section titled "Description of Carton Box Components" on page 5.

[0064] By referring to **FIG. 1**, **FIG. 11**, **FIG. 17**, we surmise that the vertical interlocking tongues can be of three different types. The first type of interlocking tongues (**7**D,

9D), **FIG. 1**, allows the adjacent carton box (tray) above to simply move on an up and down direction to interlock with the adjacent carton box (tray) below, the second type of interlocking tongues (7G, 9G), **FIG. 11**, requires a sliding movement (shift) of the adjacent carton box (tray) above to interlock with the carton box (tray) below and the third type of interlocking tongues (7J, 9J), **FIG. 17**, requires a rotating motion of the adjacent carton box (tray) above to interlock with the carton box (tray) below. The same applies to their respective types of covers (11, 12) **FIGS. 2, 3**, cover (13) **FIG. 12**, cover (14) **FIG. 18**.

DESCRIPTION OF ATTACHED FIGURES

[0065] **FIG. 1**. Flat carton box (tray) surface (unassembled) as it will be manufactured

[0066] Numbers are described under section titled "Description of Carton Box Components" on page 5

[0067] **FIG. 2**. Cover **11**, with slits-slots **11**A, **11**B

[0068] **FIG. 3**. Cover **12** is a variation of cover **11** with slits-slots **12**A, **12**B and flaps **12**C, **12**D. To be noted that this particular size and shape of flaps is indicative only. The size and shape of the flaps may vary according to the geometric shape, size and use of the carton box (tray).

[0069] **FIG. 4**. Left-right side wall of carton box (tray) of **FIG. 1**

[0070] **FIG. 5**. Front-back side wall of carton box (tray) of **FIG. 1**

[0071] **FIG. 6**. Assembled single carton box (tray), uncovered

[0072] **FIG. 7**. Two-level carton box (tray) assembly, uncovered

[0073] **FIG. 8**. Single carton box (tray) with cover

[0074] **FIG. 9**. Two-level carton box (tray) assembly, where slots on base **5** are numbered **7**D, **9**D and vertical interlocking tongues are numbered **7**C, **9**C. The vertical interlocking tongue **7**C, shown with a discontinuous line, is inserted into slit-slot **7**D on base **5** of the carton box (tray) above, while vertical interlocking tongue **7**C, shown by a continuous line, is inserted into slit-slot **11**B of cover **11**. Vertical interlocking tongue **9**C is inserted into slit-slot **9**D on base **5** of the carton box (tray) above while vertical interlocking tongue **9**C is inserted into slit-slot **11**A of cover **11**.

[0075] **FIG. 10**. Two-order assembly. (Double order R. Single order M) Separation cover **11** and top cover **11** on single order.

[0076] **FIG. 11**. Flat cut out carton box (tray) surface (unassembled) with differently shaped vertical interlocking tongues than those of **FIG. 1**.

[0077] On the flat cut out carton box (tray) surface of **FIG. 11** the vertical interlocking tongues **7**G, **9**G have indentations (cuts) on one side into which slides (shifts) base **5** of the adjacent carton box (tray) above and locks in place to also form the cover of the carton box (tray) below.

[0078] Slots **7**H, **9**H on base **5** of **FIG. 11** are placed off-center in the same direction to match the indentations (cuts) of the vertical interlocking tongues **7**G, **9**G of the adjacent carton box (tray) below so as to penetrate slots **7**H, **9**H of base **5** of the adjacent carton box (tray) above and slide (shift) to interlock in place.

[0079] Other than the difference in the shape of the vertical interlocking tongues **7**G, **9**G and the position of slots **7**H, **9**H, all other components and numbers are the same as those in **FIG. 1**.

[0080] **FIG. 12**. Cover **13** which solely accompanies the carton box (tray) type of **FIG. 11**. This cover has slots **13**A, **13**B placed off center on both sides in the same direction to match the position of the indentations (cuts) in the vertical interlocking tongues **7**G, **9**G so it can slide (shift) into slots **13**A, **13**B and interlock in place.

[0081] **FIG. 13**. Front-back side wall of carton box (tray) of **FIG. 11**

[0082] **FIG. 14**. Two-level carton box (tray) assembly and cover **13** before stacking

[0083] **FIG. 15**. Stacking of the two carton boxes (trays) and cover **13** (order of two pizzas) showing how the vertical interlocking tongues **7**G, **9**G, slide into slots **7**H, **9**H, ready to be slided (shifted) in place to interlock the assembly.

[0084] **FIG. 16**. Interlocked two-level carton box (tray) assembly with cover **13**, as it appears after sliding (shifting) into place.

[0085] **FIG. 17**. Flat cutout carton box (tray) surface (unassembled) with differently shaped vertical interlocking tongues than those of **FIG. 1**, **FIG. 11**.

[0086] On the flat cutout carton box (tray) surface of **FIG. 17** the vertical interlocking tongues **7**J, **9**J have indentations (cuts) in opposite directions into which rotates base **5** of the adjacent carton box (tray) above and interlock in place to also form the cover of the adjacent carton box (tray) below.

[0087] Slots **7**K, **9**K on base **5** of **FIG. 17** are placed off center in opposite directions to match the indentations (cuts) of the vertical interlocking tongues **7**J, **9**J of the adjacent box (tray) below so as to penetrate slots **7**K, **9**K of base **5** of the adjacent box (tray) above and rotate to interlock in place. Other than the difference in the shape of the vertical interlocking tongues **7**J, **9**J and the position of slots **7**K, **9**K, all other components and numbers are the same as those in **FIG. 1**, **FIG. 11**.

[0088] **FIG. 18**. Cover **14** which solely accompanies the carton box (tray) type of **FIG. 17**. This cover has slots **14**A, **14**B placed off center on both sides in the opposite direction to match the position of the indentations (cuts) in the vertical interlocking tongues **7**J, **9**J so it can rotate into slots **14**A, **14**B and interlock in place.

[0089] **FIG. 19**. Front side wall of carton box (tray) of **FIG. 17**

[0090] **FIG. 20**. Back side wall of carton box (tray) of **FIG. 17**.

1. The multiple level carton box assembly for pizza, various other foods and pastry consists of a series of open carton boxes each of which interlocks into the adjacent carton box above so that the base (floor) of each carton box acts as a serving tray and also becomes the cover of the adjacent box below thus forming a rigid embodiment. The carton boxes (trays) of our multiple level carton box assem-

bly are secured to each other by means of vertical interlocking tongues extending above the front-back side walls of each carton box (tray) which penetrate and lock into cuts on the edges of the front-back side walls of the base of the adjacent carton box (tray) above called "slits-slots". These "slits-slots" are cuts of different thickness. The center part called "slot" is thicker to guide the vertical interlocking tongue into the slot while the "slits" which are much thinner cuts on either end of the slot wedge the vertical interlocking tongue in place to secure it against movement. By these interlocking devices, the multiple level carton box assembly attains a rigidity which secures it from shifting, sliding, separating, bouncing or any other movement during transport and the assembly becomes an embodiment.

The folding corners of each carton box (tray) of the multiple level carton box assembly, due to the double fold of each corner, provide reinforcement to the adjacent carton box (tray) above so the entire embodiment attains stability and is secure from bending or collapsing due to the weight and heat of its contents:

Additional horizontal support is provided by means of horizontal semicircular tongues located on the front-back side walls, placed equidistantly on either side of the vertical interlocking tongues. These horizontal semicircular tongues provide added support for the adjacent carton box (tray) above which is maintained flat and secure against collapsing into the adjacent carton box (tray) below.

The assembly is closed by only one cover which is placed on the uppermost box (tray) of the embodiment secured by means of slits-slots, slots into which the vertical interlocking tongues of the adjacent box (tray) below penetrate and lock into the assembled embodiment.

Each carton box (tray) of our multiple-level carton box assembly consists of;

a base (**5**), side wall (**6**) with triangles (**6**A), (**6**B) on each end, side wall (**8**) opposite side wall (**6**) with triangles (**8**A), (**8**B) on each end, side wall (**7**) with triangles (**7**A), (**7**B) on each end, vertical interlocking "tongue" (**7**C) in its center and horizontal semicircular tongues (**7**E), (**7**F) placed equidistantly on either side of vertical interlocking tongue (**7**C), side wall (**9**) opposite side wall (**7**) with triangles (**9**A), (**9**B) on each end, vertical interlocking tongue (**9**C) in its center and horizontal semicircular tongues (**9**E), (**9**F) placed equidistantly on either side of vertical interlocking tongue (**9**C), folding corners (**1**), (**2**), (**3**), (**4**) with teeth (**1**A), (**2**A), (**3**A), (**4**A) respectively, slits-slots (**7**D), (**9**D) and slots (**1**B), (**2**B), (**3**B), (**4**B) on base (**5**), one single cover (**11**) with two slits-slots (**11**A), (**11**B) to close the uppermost carton box (tray) of the embodiment.

There must be a minimum of two vertical interlocking tongues (**7**C), (**9**C) and a minimum of two slits-slots (**7**D), (**9**D) on base (**5**). The number of required horizontal semicircular tongues varies according to the geometric shape of the carton box (tray).

2. The multiple-level carton box (tray) assembly for pizza, various other foods and pastry, according to claim 1, is characterized by the existence on each box of the assembly of two types of "tongues"; vertical interlocking tongues (**7**C, **9**C), (**7**G, **9**G), (**7**J, **9**J), and horizontal semicircular "tongues" (**7**E), (**7**F), (**9**E), (**9**F), the existence of folding corners (**1**), (**2**), (**3**), (**4**) with teeth (**1**A), (**2**A), (**3**A), (**4**A) respectively, side walls (**6**), (**7**), (**8**), (**9**) with triangles (**6**A) (**6**B), (**7**A) (**7**B), (**8**A) (**8**B), (**9**A) (**9**B), on each end and slits-slots (**7**D), (**9**D), slots (**7**H, **9**H), (**7**K, **9**K), and slots (**1**B), (**2**B), (**3**B), (**4**B) on base (**5**) of each carton box (tray).

3. The multiple-level carton box assembly for pizza, various other foods and pastry as described in claims **1**, **2**, is characterized by the placement of one carton box (tray) on top of the other to form an interlocking assembly of at least two carton boxes (trays) in such way so the vertical interlocking tongues (**7**C), (**9**C) of the adjacent carton box (tray) below to penetrate the slits-slots (**7**D), (**9**D) on base (**5**) of the adjacent carton box (tray) above and by so doing we see that base (**5**) of the adjacent carton box (tray) above is interlocked into the base (**5**) of the adjacent carton box (tray) below to become its cover supported evenly underneath by the horizontal semicircular tongues (**7**E), (**7**F), (**9**E), (**9**F) of the adjacent carton box (tray) below.

4. The multiple level carton box assembly according to claims **1**, **2**, **3** is characterized by the stability of the form of each carton box (tray) because the folding corners (**1**), (**2**), (**3**), (**4**) of each carton box (tray) lock into place securely by the insertion of their end teeth (**1**A), (**2**A), (**3**A), (**4**A) into slots (**1**B), (**2**B), (**3**B), (**4**B) respectively on base (**5**) and therefore they attain a rigidity which allows them to maintain the side walls (**6**), (**7**), (**8**), (**9**) firmly perpendicular to the base (**5**). Furthermore, corners (**1**), (**2**), (**3**), (**4**), due to the double fold, provide firm support to the adjacent carton box (tray) above so the entire embodiment attains stability and is secure from bending or collapsing due to the weight and the heat of its contents.

5. The multiple level carton box assembly according to claims **1**, **2**, **3**, is characterized by the even support of each carton box (tray) because the horizontal semicircular tongues (**7**E), (**7**F), (**9**E), (**9**F), of the adjacent carton box (tray) below provide added support and eliminate the possibility of bending or collapsing from heat of base (**5**) of the adjacent carton box (tray) above.

6. The multiple-level carton box assembly, according to claims **1**, **2**, **3**, is characterized by the stability of the assembly, because the vertical interlocking tongues (**7**C), (**9**C) of each carton box (tray) penetrate the slits-slots (**7**D), (**9**D) of the adjacent carton box (tray) above and they are wedged into the thin slits (thin cuts) which exists on either side of each slot thus securing the vertical interlocking tongues (**7**C), (**9**C) in place to form a rigid embodiment secure from any movement.

7. The multiple-level carton box assembly for pizza, various other foods and pastry according to claim 1, is characterized by the versatility of its shape which allows it to take the shape of any geometric polygon i.e., square, rectangular, triangular, hexagonal, octagonal etc. Furthermore, the carton box (tray) of the multiple level assembly, besides corrugated cardboard, can be constructed from any other material which can be bent and folded to take the shape of a box. Any change in the shape and size of the carton box (tray) does not create any technical difficulty in its construction because the design of the flat surface of the box permits constriction in any shape and size with all its interlocking characteristics intact. To be noted that there are variations in the manner in which the corners fold and the number of interlocking devices required according to the geometric shape of the carton box (tray).

8. The multiple-level carton box (tray) assembly for pizzas, various other foods and pastry according to claim 2 is characterized by vertical interlocking tongues (**7**G), (**9**G) on the front-back side walls (**7**), (**9**) which have indentations on one side in the same direction to be inserted into slots (**7**H), (**9**H) respectively of base (**5**) of the adjacent carton box (tray) above by a shifting (sliding) movement. For this reason slots (**7**H), (**9**H) are placed off center on base (**5**) in the same direction to enable the vertical interlocking tongues (**7**G), (**9**G) to shift and interlock into the slots (**7**H), (**9**H). Cover (**13**) with slots (**13**A), (**13**B) into which vertical interlocking tongues (**7**G), (**9**G) of the uppermost carton box (tray) are inserted is shifted (slided) sideways accordingly to lock in place and cover the assembly, forming a rigid embodiment.

9. The multiple-level carton box assembly for pizzas, various other foods and pastry according to claim 2 is characterized by vertical interlocking tongues (**7**J), (**9**J) on the front-back side walls (**7**), (**9**) which have indentations (cuts) on one side in opposite direction to be inserted into slots (**7**K), (**9**K) respectively of base (**5**) of the adjacent carton box (tray) above by rotation. For this reason slots (**7**K), (**9**K)are placed off center on base (**5**) in the opposite direction to enable the vertical interlocking tongues (**7**J), (**9**J), to rotate and interlock into the slots (**7**K), (**9**K). Cover (**14**) with slots (**14**A), (**14**B), into which vertical interlocking tongues (**7**J), (**9**J) of the uppermost carton box (tray) are inserted rotates to lock in place and cover the assembly, forming a rigid embodiment.

10. The method of assembly of the multiple level carton boxes for pizza, various other foods and pastry is characterized by the following steps:

Step one: We bend (raise) two adjacent side walls, (**7**), (**8**), perpendicularly to the base (**5**), bend (fold) inwards triangles (**7**B), (**8**A), bend and fold in half corner (**1**) covering triangles (**7**B), (**8**A) and securing tooth (**1**A) of corner (**1**) into slot (cut) (**1**B) on base (**5**).

Step two: We repeat the process of step one for side walls (**6**), (**9**) and corner (**3**) that is we bend (raise) side walls (**6**), (**9**) perpendicularly to the base (**5**), bend (fold) inwards triangles (**6**A), (**9**B), bend and fold in half corner (**3**) covering triangles (**6**A), (**9**B) and secure tooth (**3**A) of corner (**3**) into slot (cut) (**3**B) on base (**5**).

Step three: With side walls (**8**), (**9**) already in upright position, we bend (fold) inwards triangles (**8**B), (**9**A) and we bend and fold in half corner (**2**) and lock tooth (**2**A) into slot (cut) (**2**B) on base (**5**).

Step four: With the side walls (**6**), (**7**) already in upright position, we bend (fold) inwards triangles(**7**A), (**6**B), bend and fold in half corner (**4**) covering triangles (**6**B), (**7**A) and secure tooth (**4**A) into slot (cut) (**4**B) of base (**5**). After the above steps we bend inwards the horizontal semicircular tongues (**7**E), (**7**F), (**9**E), (**9**F) so as to bring them to a horizontal position and the first carton box (tray) is now completely assembled.

We place one carton box (tray) on top of the other in such a way so that the vertical interlocking tongues (**7**C), (**9**C) of the bottom carton box (tray) to penetrate the slits-slots (**7**D), (**9**D) on base (**5**) of the adjacent carton box (tray) above and we immediately see that the base (**5**) of the second carton box (tray) interlocks with the carton box (tray) below, becomes the cover of the adjacent carton box (tray) below and it rests on the horizontal semicircular tongues (**7**E), (**7**F), (**9**E), (**9**F) of the bottom carton box (tray).

This procedure is repeated for the third, fourth etc. carton boxes (trays) so that the assembly is completed for as many levels as they are necessary forming a rigid embodiment for multiple orders of pizza, various other foods and pastry.

11. The use of the multiple-level carton box assembly for delivery of pizzas, various other foods and pastry according to claims **1**, **2**, **3**, **6**, is characterized by the fact that during delivery of the food products there is no distortion of the form of each assembled carton box (tray) and the embodiment which is composed of at least two assembled carton boxes (trays) is maintained without shifting or bending which could be caused from bouncing, shifting, sliding, compression or any other cause even when the transportation vehicle moves on rough roads, because vertical interlocking tongues (**7**C, **9**C), (**7**G, **9**G), (**7**J, **9**J) interlock into slits-slots (**7**D, **9**D), slots (**7**H, **9**H), (**7**K, **9**K) respectively on base (**5**).

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