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(54) **PARTITIONED BOX**

(57)

ABSTRACT

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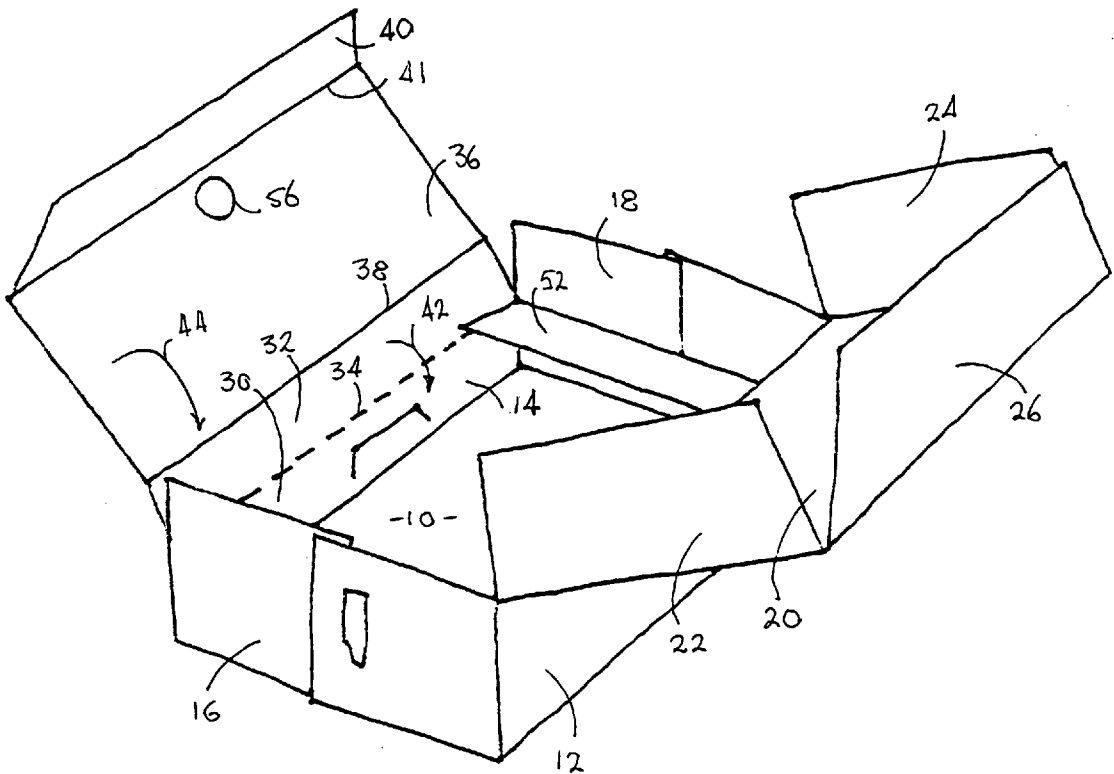
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The box has a rear wall which is composed of two vertically spaced segments. The upper segment is foldable from a vertical position to a horizontal position. An interior wall is foldably connected to the upper segment. The interior wall together with the upper segment, when horizontal, defines a partition which separates the interior of the box into lower and upper compartments. The rear wall of a second embodiment of the box is unfolded but the interior wall which is connected to it has a pair of spaced folds which define inner, intermediate and outer segments. The interior wall folds into lower and upper alternative positions. In lower position, the intermediate and outer segments are generally horizontal and are spaced apart from both the lower wall of the box and its closed lid. In the upper position the inner and intermediate segments are generally horizontal and are at generally the same level as the upper edges of the side walls of the box.



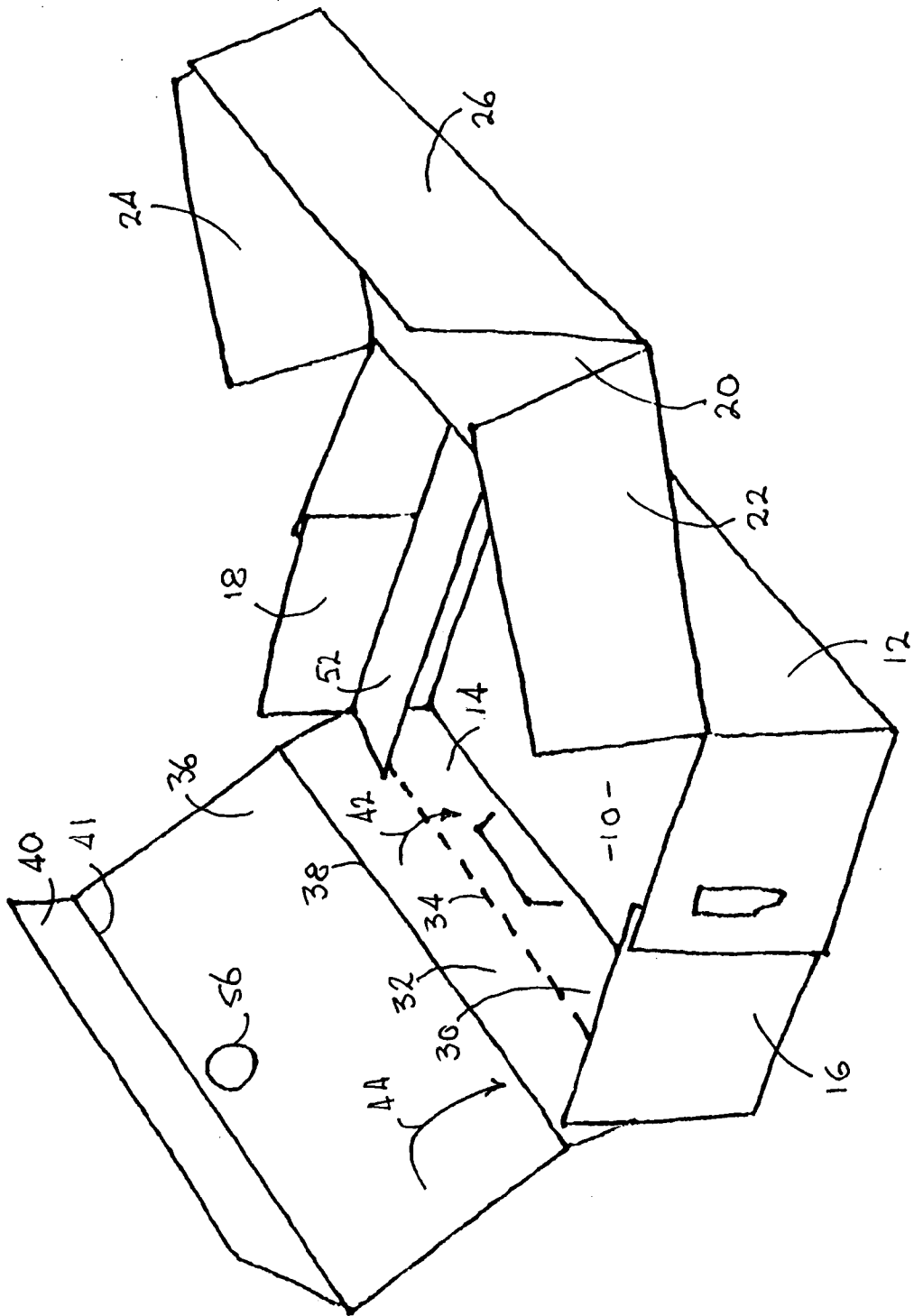


FIG.1.

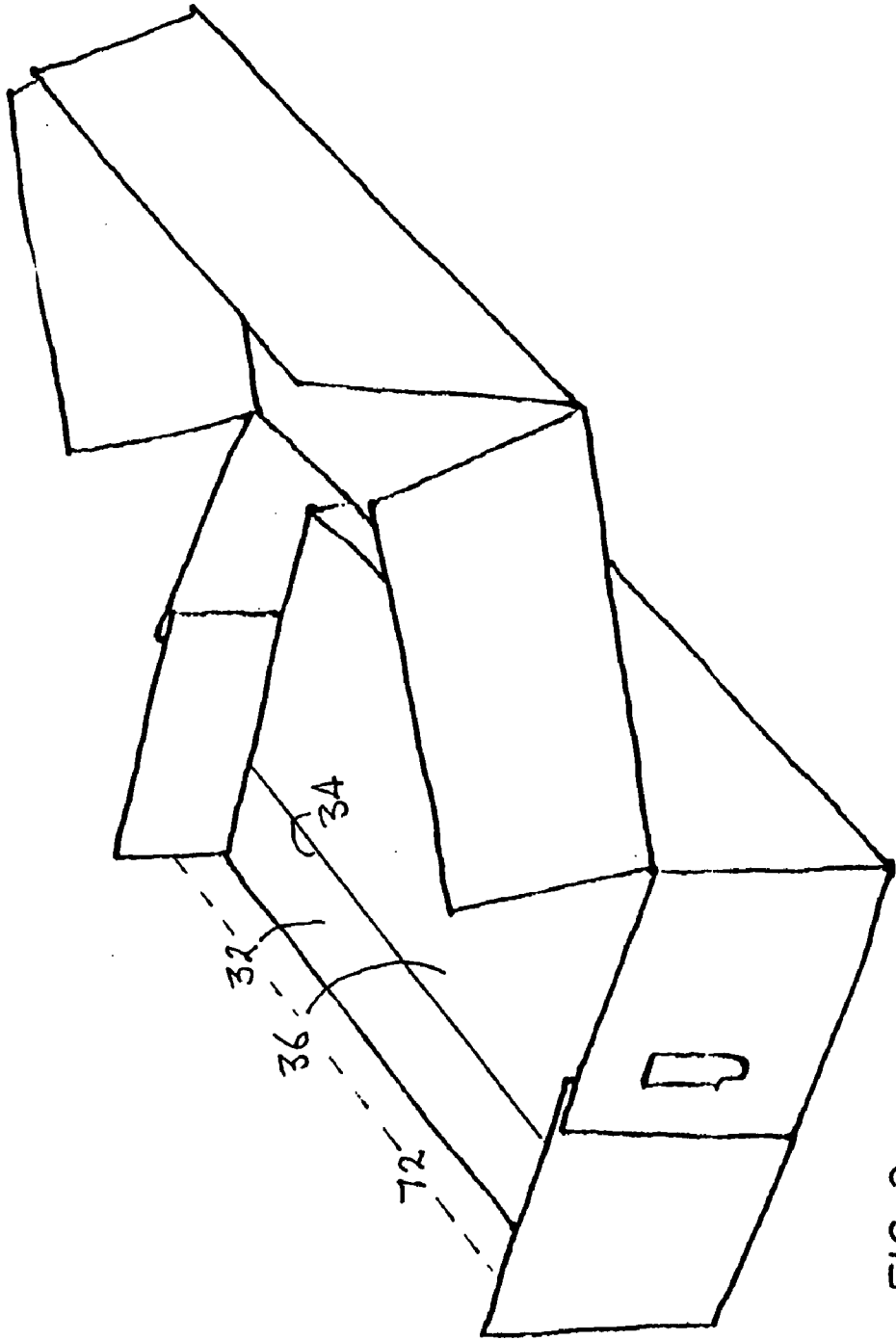


FIG. 2.

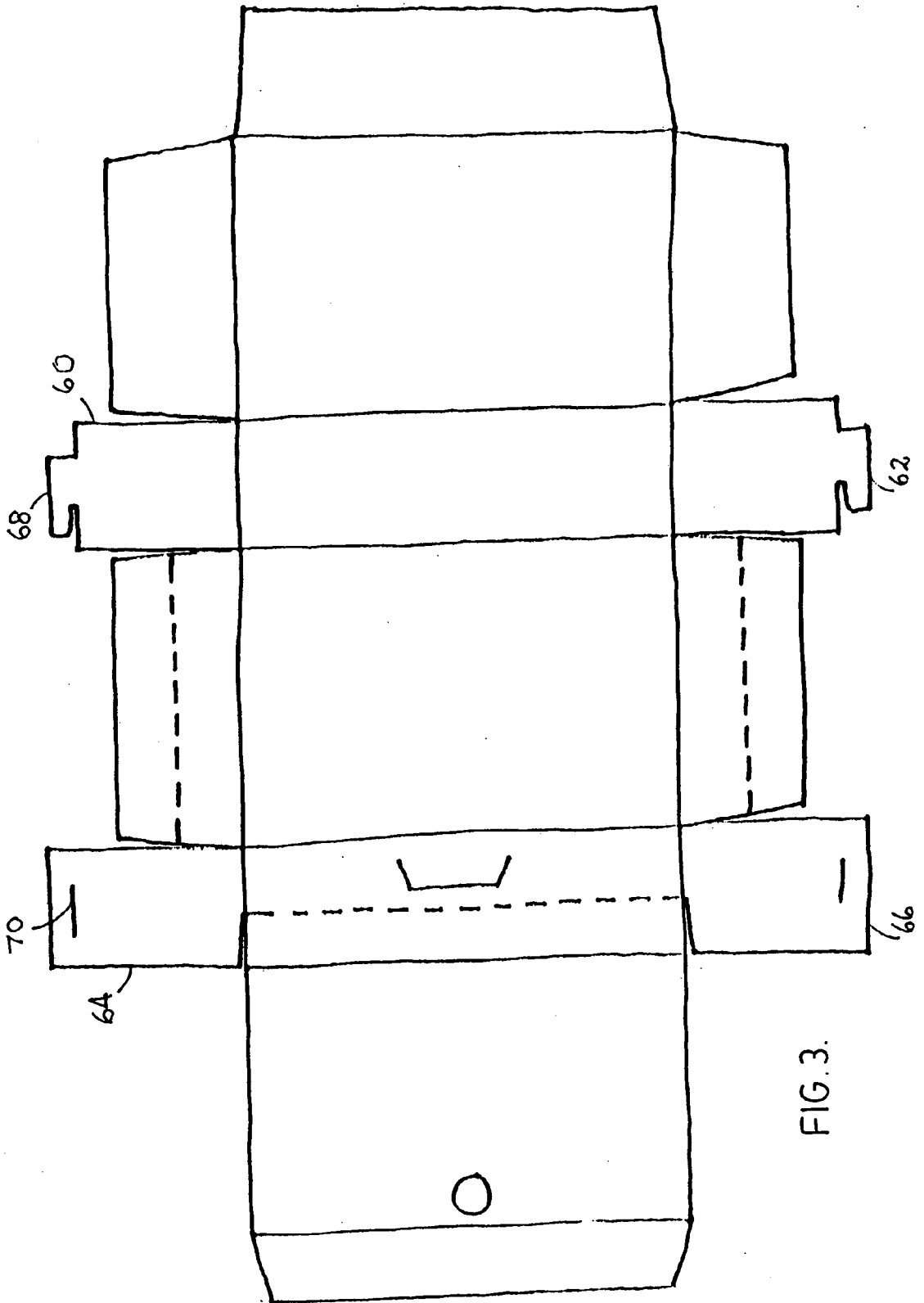


FIG. 3.

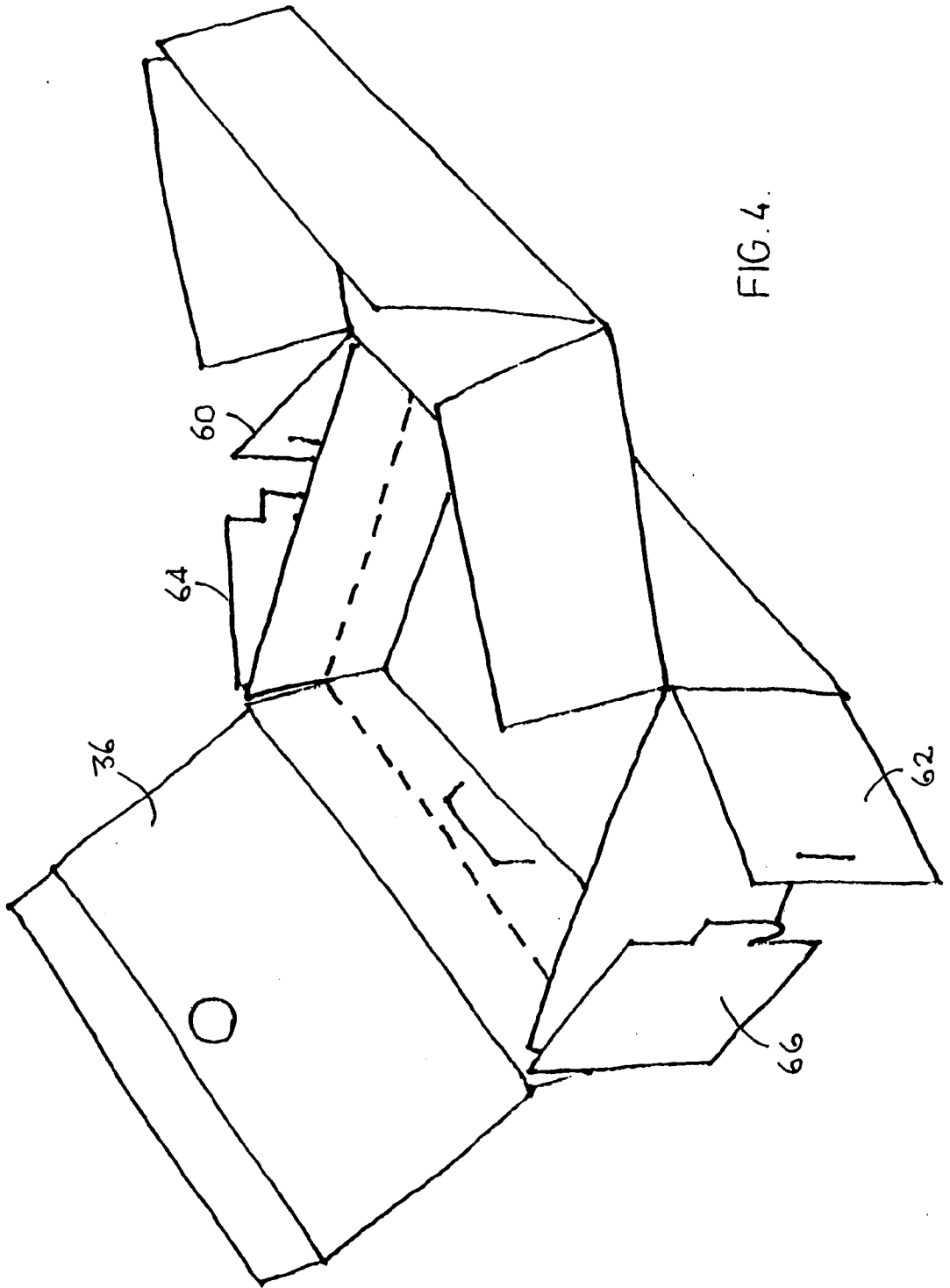


FIG. 4.

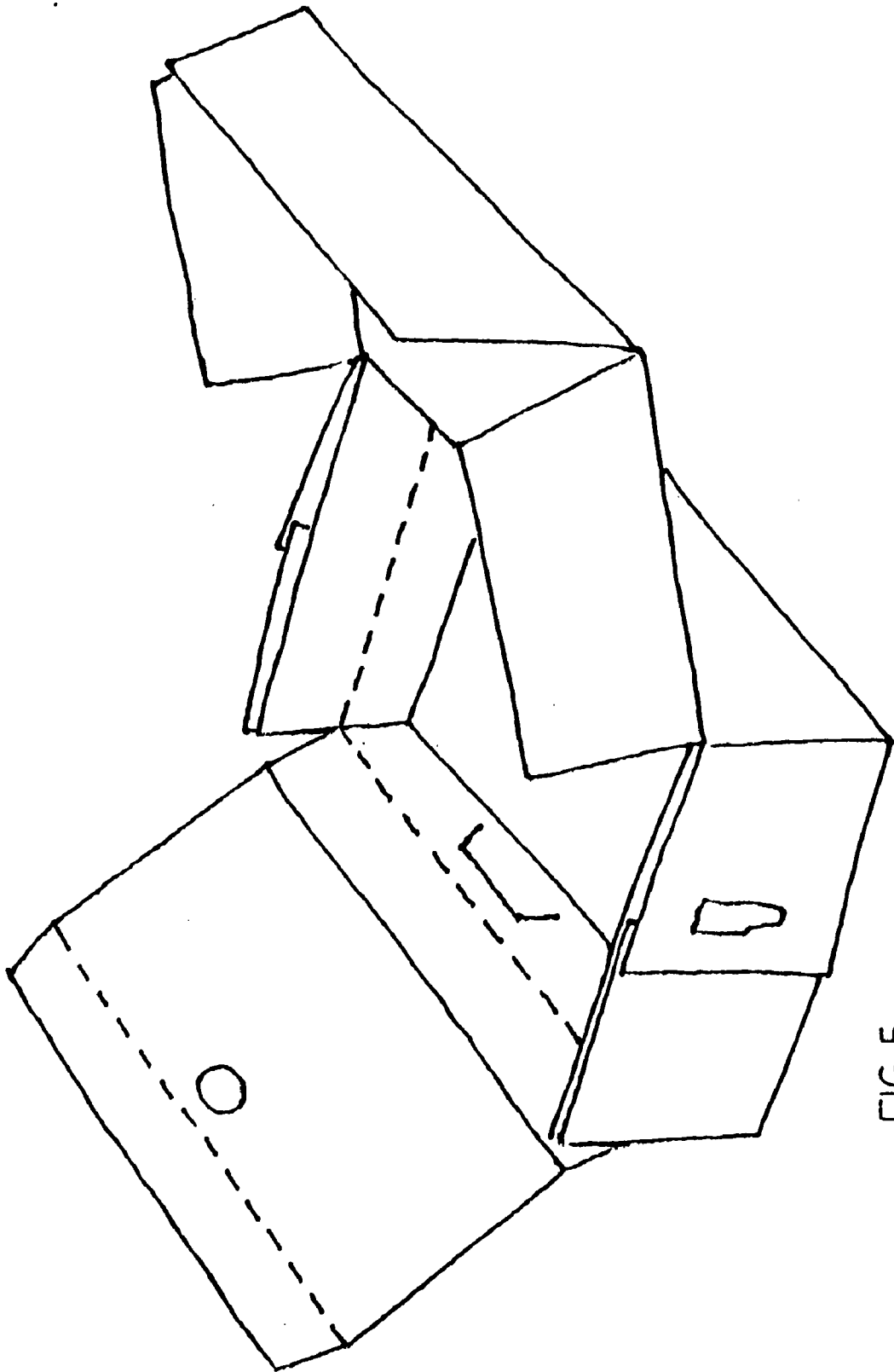


FIG. 5.

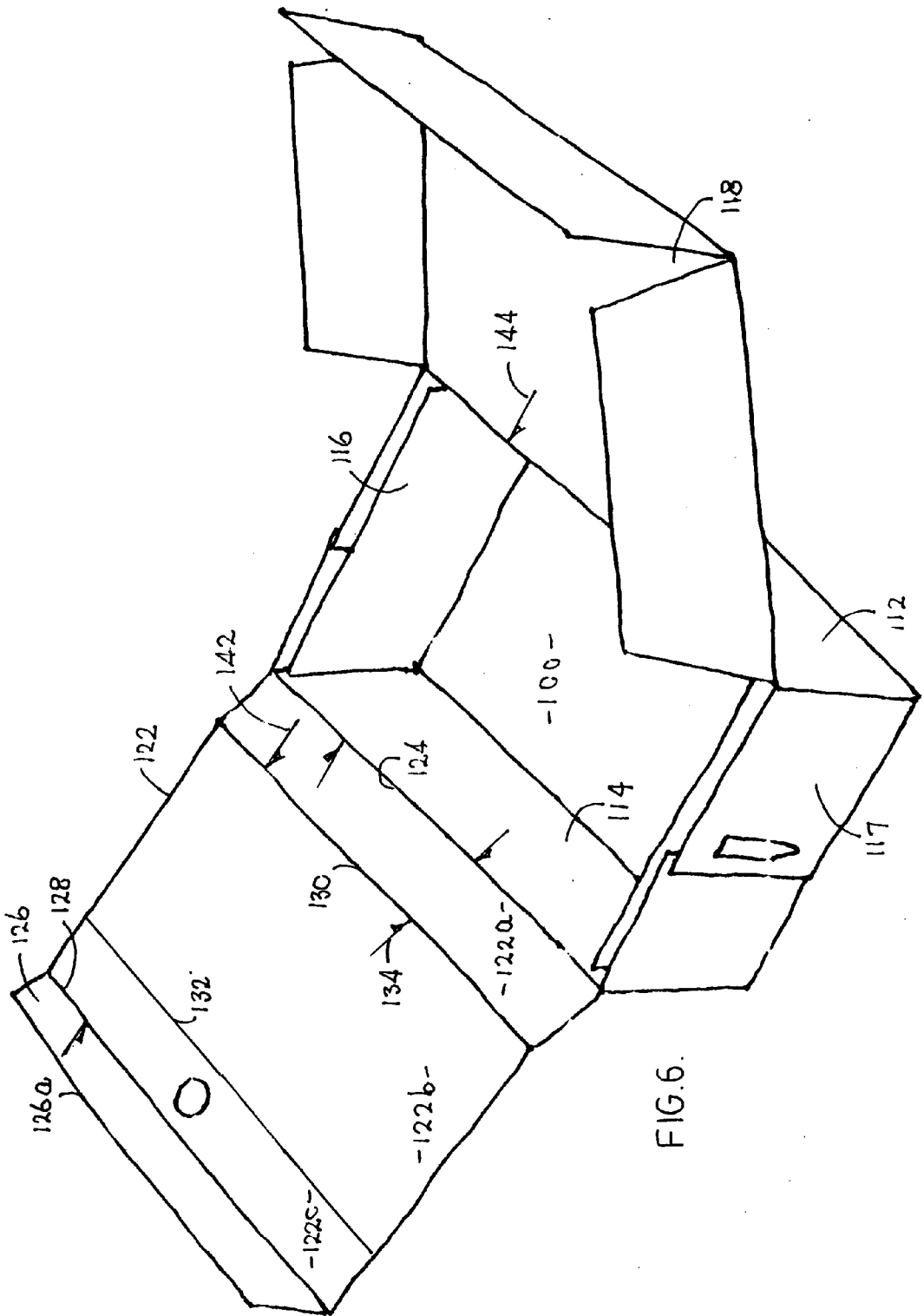


FIG. 6.

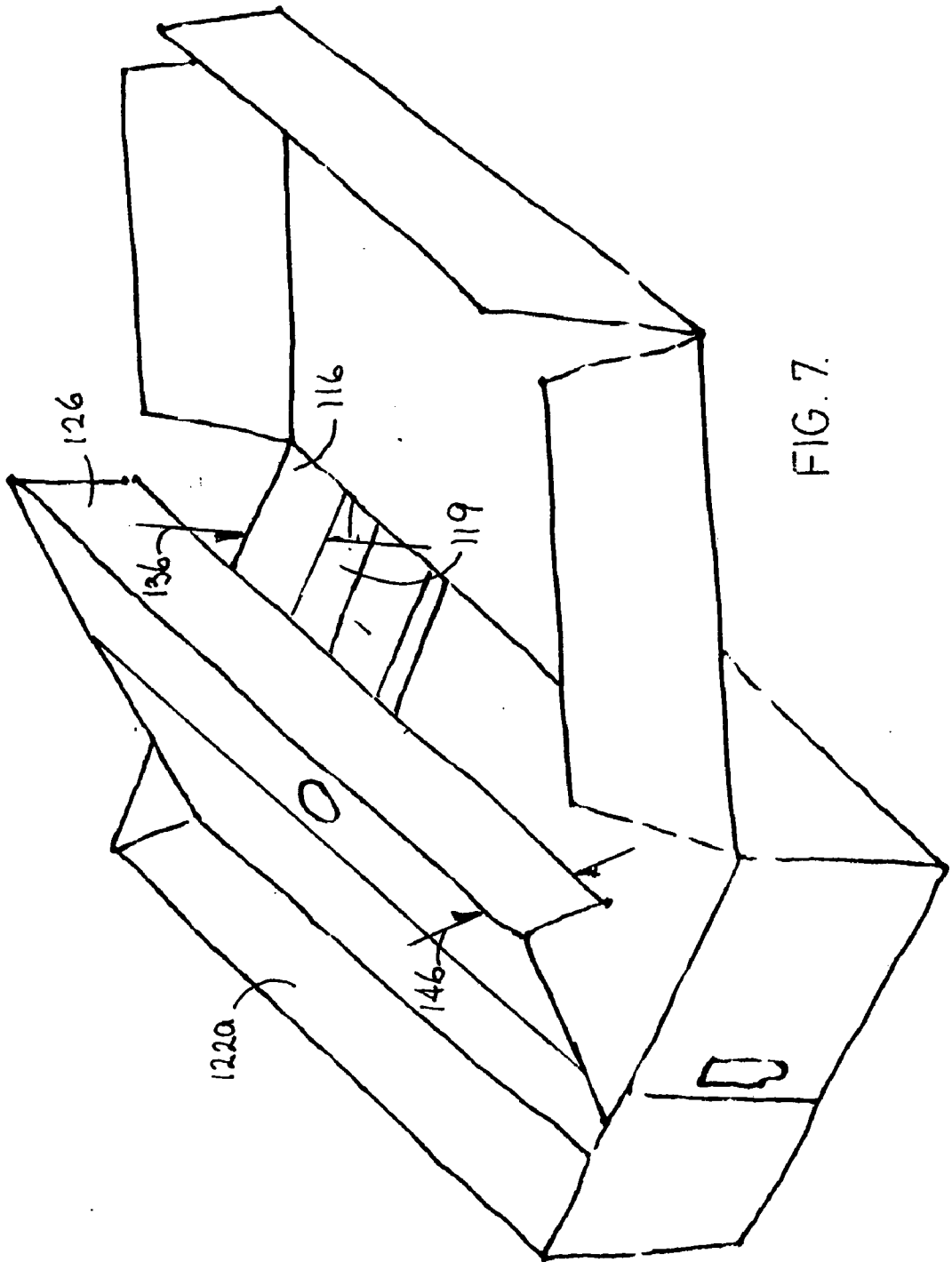


FIG. 7.

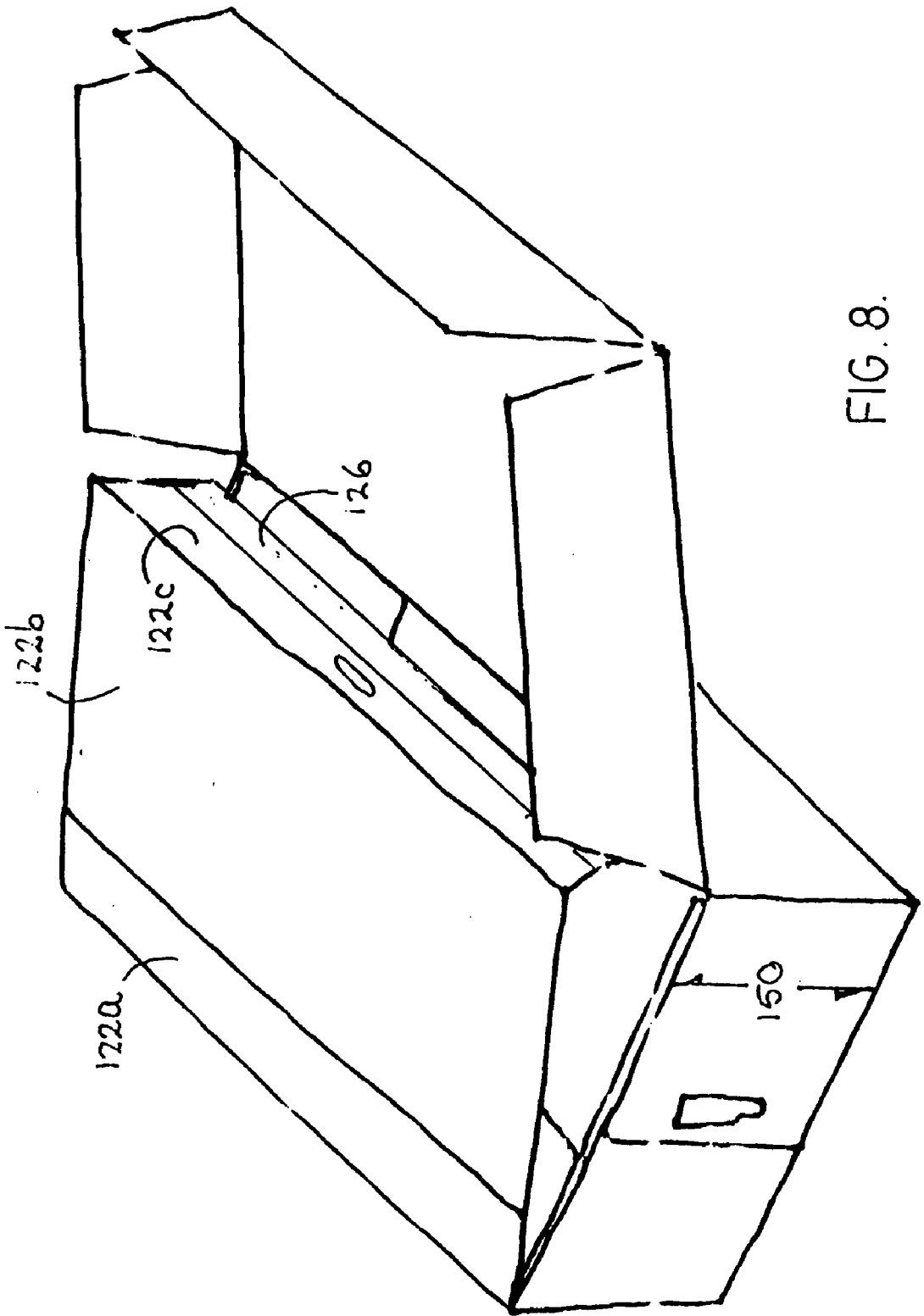


FIG. 8.

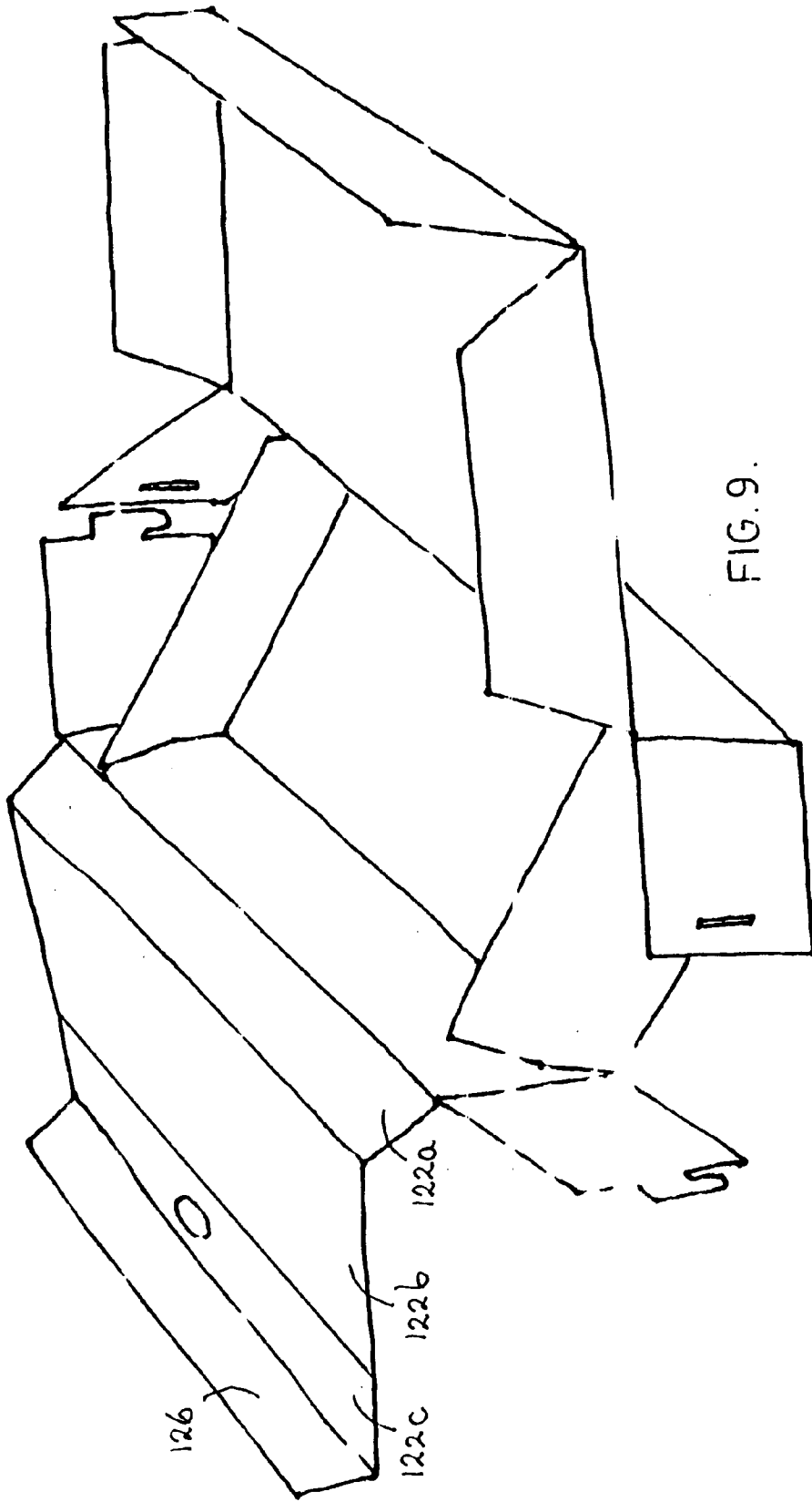


FIG. 9.

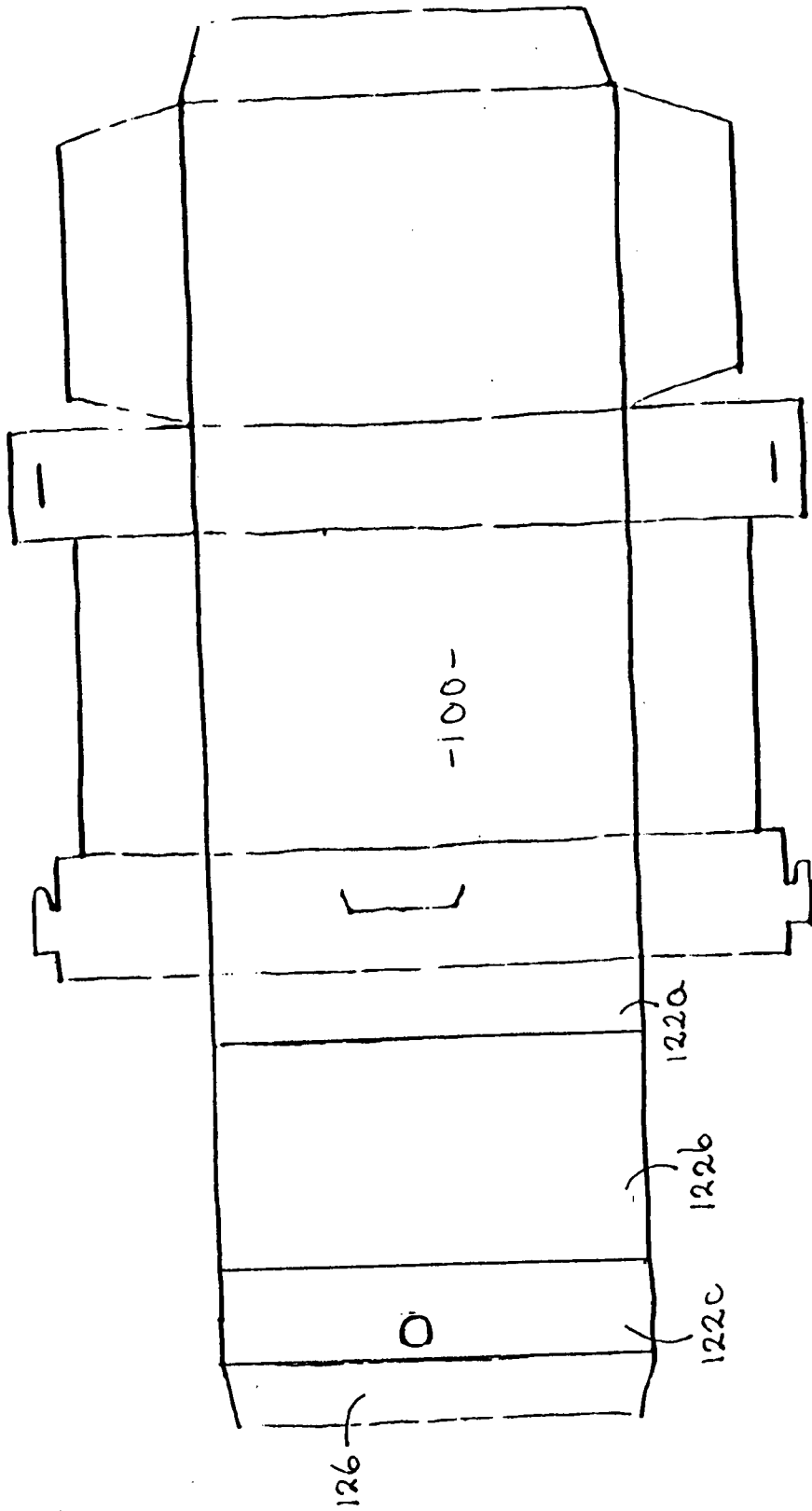


FIG. 10.

PARTITIONED BOX

FIELD OF THE INVENTION

[0001] This invention relates to a box having a partition for dividing the interior of the box into separate compartments. More particularly the invention relates to a box having a partition which may be positioned in a box for use or folded out of the way should it not be required.

BACKGROUND OF THE INVENTION

[0002] Baked foods such as donuts, cookies, tarts and pies are commonly sold in cardboard boxes which are folded into shape from flat blanks at the time they are filled with the baked goods. Some boxes contain partitions to protect the baked goods from damage should the box be accidentally dropped or otherwise handled roughly.

[0003] In some cases partitions are desirable or necessary, in other cases they are not. Partitions are useful where the baked goods are relatively small such as donuts, cookies and tarts but are not where the goods are relatively large such as cakes. In the latter case, the partitions must be removed from the boxes before they are suitable for use.

[0004] Boxes which have partitions do not generally have provision for removing the partitions without damaging the boxes. Once removed, the boxes are usually unsightly and do not show the baked good which they contain well. For this reason, bakeries which stock boxes with partitions generally also stock boxes without so that the baked goods always show well. Thus two stocks of boxes are required. Two stocks are, however, undesirable to bakeries because they give rise to additional costs and inconvenience.

[0005] I have invented a box which contains a partition which may be used or not. If it is not used, it folds out of the way against other parts of the box. The partition does not occupy any space in the interior of the container and does not detrimentally affect the appearance of the box. Should the partition be used, it is merely folded into position within the box.

SUMMARY OF THE INVENTION

[0006] Briefly the partitioned box of my invention includes a lower wall which, in use, is oriented horizontally; front and rear walls and two side walls which extend vertically upward from the horizontally oriented lower wall and which define an enclosure. A lid is connected to the front wall and is fittable with the rear and side walls to close the box. The lid is pivotal from a closed to an open position in which the contents of the box are exposed. The rear wall has lower and upper segments pivotally interconnected along a horizontally extending line. The upper segment is pivotal from a vertical position to a horizontal position. The box has an interior wall having forward and rear edges and being pivotally connected to the upper segment along the rear edge. The interior wall together with the upper segment, when horizontal, define a continuous partition which separates the enclosure into lower and upper compartments. The box is provided with means for supporting the interior wall when it defines the partition.

[0007] According to a second embodiment, the rear wall of the box is unfolded but the interior wall has a pair of spaced folds which define inner, intermediate and outer

segments. The interior wall folds from a lower position in which the inner segment folds downwardly to a vertical position adjacent to an inner face of the rear wall while the intermediate and outer segments assume a horizontal position and, as such, define a continuous partition which separates the enclosure into lower and upper compartments. In the upper position, the inner segment folds to a horizontal position which, together with the intermediate segment, when also horizontal, extends across and closes the mouth of the box.

DESCRIPTION OF THE DRAWINGS

[0008] The partitioned box of the invention is described with reference to the accompanying drawings in which:

[0009] **FIG. 1** is a perspective view of the partitioned box in which an interior wall is folded outwardly;

[0010] **FIG. 2** is a perspective view of the box in which the interior wall is in a lower position for use as a partition which separates the interior of the box into two vertically spaced compartments;

[0011] **FIG. 3** is a plan view of a blank used to make the box;

[0012] **FIG. 4** is a perspective view of the box in the course of assembly from the blank;

[0013] **FIG. 5** is a perspective view of the box illustrated in the previous drawings but without supporting tabs;

[0014] **FIG. 6** is a perspective view of second embodiment of the box in which an interior wall is folded outwardly;

[0015] **FIG. 7** is a perspective view of the box of **FIG. 6** in which the interior wall is in the course of being folded inward to a lower position where it forms a partition;

[0016] **FIG. 8** is a perspective view of the box of **FIG. 6** in which the interior wall is in an upper position where it is adjacent to the upper edges of the box;

[0017] **FIG. 9** is a perspective view of the box in the course of assembly; and

[0018] **FIG. 10** is the blank used to make the box of **FIG. 6**.

[0019] Like reference characters refer to like parts throughout the description of the drawings.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0020] With reference to **FIGS. 1 and 2**, the partitioned box has a lower wall **10** which, in use, is oriented horizontally. The box has front and rear walls **12, 14** and spaced side walls **16, 18**. The walls extend vertically upward from the lower wall when the latter wall is oriented horizontally and the upstanding walls together define an enclosure for food products.

[0021] A lid **20** is connected to the front wall. The lid has side flaps **22, 24** and an end flap **26** which fit snugly into contact with the rear and side walls when the lid is closed to protect the contents of the box. The lid pivots open to expose the contents of the box.

[0022] The rear wall has lower and upper segments **30, 32** separated by a horizontally extending fold line **34**. The upper segment is joined to an interior wall **36** along a fold line **38**. A flap **40** is connected to the interior wall at its edge opposite fold line **41**.

[0023] The upper segment **32** of the rear wall is pivotal from the vertical position as illustrated in **FIG. 4** to a horizontal position illustrated in **FIG. 2**. The direction of pivoting is indicated by arrow **42** in **FIG. 1**. When the upper segment is horizontal, interior wall **36** may be pivoted inwardly in the direction of arrow **44** into the box to the position illustrated in **FIG. 2** in which it is co-planar with upper segment.

[0024] When upper segment **32** and interior wall **36** are co-planar within the box they cooperate with one another to define a continuous partition which separates the enclosure into lower and upper compartments **46, 48**.

[0025] Flap **40** serves to support the interior wall when the wall is within the box. To this end, the flap extends downwardly and into contact with the lower wall as illustrated in **FIG. 2**. The interior wall is supported at its sides by tabs (one visible and marked **52**) The tabs extend inwardly from both side walls of the box at the same level as the interior wall. The tabs also support the upper segment of the rear wall when it too is within the box.

[0026] The tabs are a desirable not essential feature of the box. **FIG. 5** illustrates a box without tabs. Such a box is suitable where the box is used to hold relatively light baked goods such as French pastries.

[0027] An aperture **56** is formed in the interior wall adjacent to flap **40**. The aperture is large enough to receive a thumb or finger and facilitates to removal of the interior wall from the box to expose the lower compartment.

[0028] With reference to **FIGS. 3 and 4**, the box is provided with the customary flaps **60, 62, 64 and 66** at both ends of the front and rear walls to hold the walls together when they are standing upright. Flaps **60, 64** interconnect with each other by means of a finger **68** on flap **60** which fits into a slit **70** in flap **64** in the usual fashion and flap **62, 66** are interconnected in the same manner.

[0029] Whether the box contains the partition or not is optional. If the partition is not required, the upper segment of the rear wall, when the box is closed, will be vertical, as illustrated in **FIG. 4**. Interior wall **36** will be folded over in contact with the upper edges of the side walls and the lid will be folded over onto the interior wall. The interior of the container will be completely free of obstructions.

[0030] Should the partition be required, the upper segment of the rear wall and the interior wall are folded inward as indicated above. As illustrated in **FIG. 2**, part of the rear wall of the box forms the partition. Thus when there is a partition in the box, there is an opening in the rear wall. That opening is indicated generally **72** in **FIG. 2**. When the box is closed, that opening is closed by end flap **26** of the lid. The end flap accordingly serves to protect the contents in the upper compartment of the box when the lid is closed.

[0031] With reference to **FIG. 6**, the partitioned box has a lower wall **100** which, in use, is oriented horizontally. Like the box of the previous drawings, the box of **FIG. 6** has front and rear walls **112, 114** and spaced side walls **116, 117**. The

walls extend vertically upward from the lower wall when the latter wall is oriented horizontally and a lid **118** is connected to the front wall and has the same construction as lid **12** of the previous Figures. Tabs (one illustrated and marked **119**) are affixed to the side walls of the box and extend inwardly into the interior of the box as do tabs **52** of the previous Figures.

[0032] The rear wall is joined to an interior wall **122** along a fold line **124**. A flap **126** is connected to the interior wall at its outer edge. The connection is defined by fold line **128**. As illustrated in **FIG. 6**, fold lines **128** and **124** are on opposite edges of the interior wall.

[0033] The interior wall is divided into three segments, an inner segment **122a**, an intermediate segment **122b** and an outer segment **122c**. Those segments are separated by inner and outer parallel fold lines **130, 132** formed in the interior wall. For the purposes of the description that follows, the "width" of each segment is measured at right angles to the fold lines that define them and the "width" of flap **126** is measured at right angles between its outer edge **126a** and fold line **128**.

[0034] The width of the inner segment **122a** is equal to the distance between the upper edge of the box and the level of the partition beneath the upper edge. Those distances are marked **134** on the interior wall of **FIGS. 6 and 136** in **FIG. 7**. Thus distance **134** equals vertical distance **136** measured on the side wall **116**. The width of the intermediate segment **122b** together with the width of the outer segment **122c** are equal to the width of the upper opening or mouth of the box. Those widths are marked **142** and **144** in **FIG. 6**. Thus width **142** equals distance **144**.

[0035] Interior wall **122** forms a horizontal partition within the box. To form the partition, as illustrated in **FIG. 7**, the inner segment **122a** is folded downwardly until it is adjacent to the rear wall of the box. The intermediate and outer segments are then folded flat so that their upper faces are co-planar and define the upper face of the partition and flap **126** is folded down. Its width, marked **146** in **FIG. 7** is equal to the height of the partition above the lower wall of the box so that the flap serves to support the partition along its outer edge. Its side edges are supported by tabs **119**.

[0036] As illustrated in **FIG. 8**, when the partition is not required, the inner and intermediate segments **122a,b** of the interior wall are folded flat until their upper faces are co-planar. The wall is then folded over until the two segments contact the upper edges of the side walls of the box. The outer segment **122c** of the interior wall is folded downwardly so that the lid can be folded over to close the box.

[0037] The width of flap **126** together with the width of the outer segment **122c** is equal to the height of the box, marked **150** in the same Figure. Accordingly when the upper faces of inner and intermediate segments **122a, 122b** are coplanar as illustrated in **FIG. 8**, the outer segment **122c** and flap **126** cooperate to support the former segments adjacent to the upper edge of the box where they will not intrude into the interior of the box.

[0038] With reference to **FIGS. 9 and 10**, the box is provided with customary flaps at both ends of the front and rear walls and the flaps interconnect in the same way as those illustrated in **FIGS. 3 and 4**.

[0039] The partitioned box illustrated in the drawings is composed of cardboard which is sufficiently flexible that its walls and flaps will yield to interconnect in the manner described above. The cardboard is however strong enough to remain connected and to retain its shape when it holds baked foods such as donuts, cookies, tarts and pies.

[0040] It will be understood however that the box can be composed of other material without departing from the scope of the invention. In addition, modifications can be made in the structure and construction of the box without departing from the scope of the invention.

I claim:

1. A partitioned box for use in carrying food products including: a lower wall which, in use, is oriented horizontally; front and rear walls and two side walls which extend vertically upward from said horizontally oriented lower wall and which define an enclosure; a lid foldably connected to said front wall and fittable with said rear and side walls to close said box, said lid being foldable from a closed position to an open position in which the contents of said box are exposed, said rear wall having lower and upper segments foldably interconnected along a horizontally extending line, said upper segment being foldable from a vertical position to a horizontal position; an interior wall having forward and rear edges and being foldably connected to said upper segment, said interior wall together with said upper segment, when horizontal, defining a continuous partition which separates said enclosure into lower and upper compartments.

2. A partitioned box for use in carrying food products including: a lower wall which, in use, is oriented horizontally; front and rear walls and two side walls which extend vertically upward from said horizontally oriented lower wall and which define an enclosure having an open mouth defined by an upper edge of each said front, rear and side walls; a lid foldably connected to said front wall and fittable with said rear and side walls to close said box, said lid being foldable from a closed position to an open position in which the contents of said box are exposed, said rear wall having lower and upper segments foldably interconnected along a horizontally extending line, said upper segment being foldable from a vertical position to a horizontal position; an interior wall having forward and rear edges and being foldably connected to said upper segment, said interior wall being situated in lower and upper alternative positions, the lower position being such that both said upper segment and said interior wall are horizontal and together define a continuous partition which separates said enclosure into lower and upper compartments, the upper position being such that the upper segment is vertical and said interior wall is horizontal and is at the same level as the upper edges of said side walls.

3. The partitioned box of claim 1 further including a flap foldably attached to said forward edge of said interior wall and adapted to extend vertically downward when said interior wall is horizontal, said flap having a length sufficient to contact said lower wall when so extending downward in order to support said interior wall when defining said partition.

4. The partitioned box of claim 1 further including a tab attached to at least one said side wall and extending inwardly into said enclosure at a level that will provide support to said interior wall when defining said partition.

5. The partitioned box of claim 1 wherein said interior wall has an aperture formed therein large enough to receive a thumb to facilitate folding of said interior wall from and to the horizontal position.

6. The partitioned box of claim 1 wherein said rear wall has an opening when said upper segment is horizontal, said opening extending upwardly from said lower segment, said lid having a flap which is of a length sufficient to close said opening when said lid is in the closed position.

7. The partitioned box of claim 2 further including a flap foldably attached to said forward edge of said interior wall and adapted to extend vertically downward when said interior wall is in the lower position, said flap having a length sufficient to contact said lower wall when so extending downward in order to support said interior wall when defining said partition.

8. The partitioned box of claim 2 further including a tab attached to at least one said side wall and extending inwardly into said enclosure at a level that will provide support to said interior wall when in the lower position.

9. The partitioned box as of claim 2 wherein said interior wall has an aperture formed therein large enough to receive a thumb to facilitate folding of said interior wall from and to the lower position.

10. The partitioned box of claim 2 wherein said rear wall has an opening when said interior wall is in the lower position, said opening extending upwardly from said lower segment, said lid having a flap of sufficient length to close said opening when said lid is in the closed position.

11. A partitioned box for use in carrying food products including: a lower wall which, in use, is oriented horizontally; front and rear walls and two side walls which extend vertically upward from said horizontally oriented lower wall and which define an enclosure having an open mouth defined by an upper edge of each said front, rear and side walls; a lid connected to said front wall and fittable with said rear and side walls to close said box, said lid being foldable to an open position to expose the contents of said box; an interior wall having forward and rear edges and being foldably connected to the upper edge of said rear wall, said interior wall having a pair of spaced folds which define inner, intermediate and outer segments and which fold into lower and upper alternative positions, the lower position being such that said intermediate and outer segments are generally horizontal and are spaced apart from both said lower wall and said lid when said lid is closed, and the upper position being such that said inner and intermediate segments are generally horizontal and are at generally the same level as said upper edges of said side walls.

12. A partitioned box for use in carrying food products including: a lower wall which, in use, is oriented horizontally; front and rear walls and two side walls which extend vertically upward from said horizontally oriented lower wall and which define an enclosure having an open mouth defined by an upper edge of each said front, rear and side walls; a lid connected to said front wall and fittable with said rear and side walls to close said box, said lid being foldable to an open position to expose the contents of said box; an interior wall having forward and rear edges and being foldably connected to the upper edge of said rear wall, said interior wall having a pair of spaced folds which define

inner, intermediate and outer segments and which fold into lower and upper alternative positions, the lower position being such that said inner segment is folded downwardly to a vertical position adjacent to an inner face of said rear wall and such that said intermediate and outer segments assume a generally horizontal position and, as such, define a continuous partition which separates said enclosure into lower and upper compartments, the upper position being such that said intermediate and outer segments are generally horizontal and extend across and close the mouth of said box

13. The partitioned box as claimed in claim 11 further including means for supporting said intermediate and outer segments when said interior wall is in the lower position.

14. The partitioned box as claimed in claim 11 further including means for supporting said inner and intermediate segments when said interior wall is in the upper position.

15. The partitioned box of claim 11 further including a flap attached to said outer segment of said interior wall, said supporting means being constituted by said flap together with said outer segment.

16. The partitioned box of claim 11 wherein the width of said intermediate segment together with said outer segment,

measured normal to the fold which separates the latter said segments is equal to the length of the upper edge of each of said side walls.

17. The partitioned box of claim 11 wherein the width of said inner segment measured normal to the fold which separates said inner segment from said intermediate segment is equal to the vertical distance which separates said lid when closed from the intermediate and outer segments of said interior wall when in the lower position.

18. The partitioned box of claim 11 wherein said interior wall has a flap foldably connected to said forward edge, said means for supporting said intermediate and outer segments when defining said partition is said flap which extends vertically downward into contact with said lower wall.

19. The partitioned box of claim 11 wherein said interior wall has a flap foldably connected to said forward edge, said means for supporting said inner and intermediate segments when horizontal is constituted by said outer segment and said flap both of which extend vertically downward.

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