United States Patent [19]

Furbeck

[11] **3,924,797**

[45] **Dec. 9, 1975**

[54] **PAPERBOARD CARTON**

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[22] Filed: **Dec. 14, 1973**

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[52] **U.S. Cl.** ..... **229/17 G;** 229/52 B

[51] **Int. Cl.²** **B65D 5/72**

[58] **Field of Search** ..... 229/17 G, 52 B, 7 R

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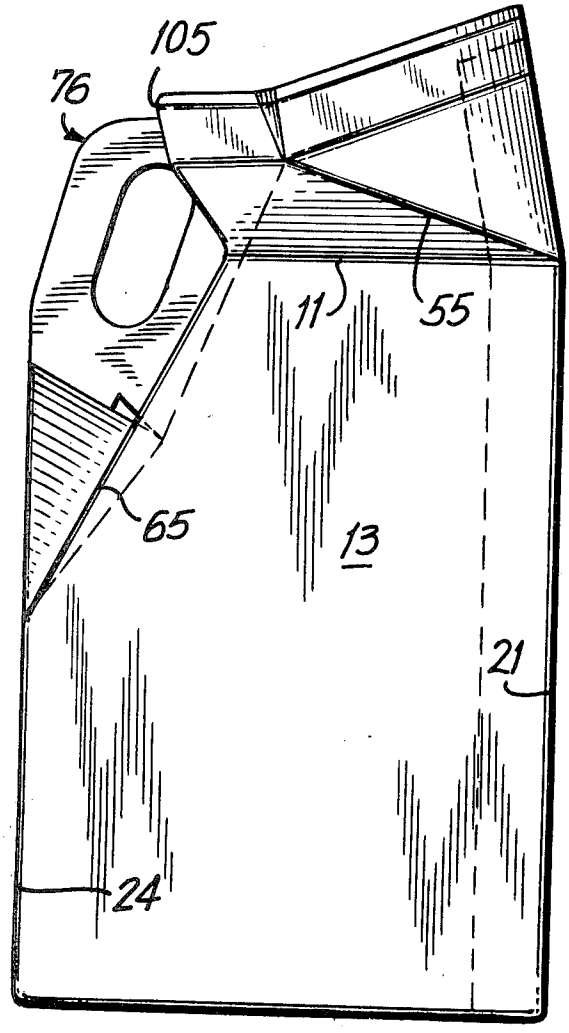
Primary Examiner—Leonard D. Christian

Attorney, Agent, or Firm—Alfred L. Michaelsen

[57] **ABSTRACT**

An improved paperboard carton and blank which includes an integral carrying handle wherein the provision of the carrying handle does not require additional paperboard.

28 Claims, 10 Drawing Figures



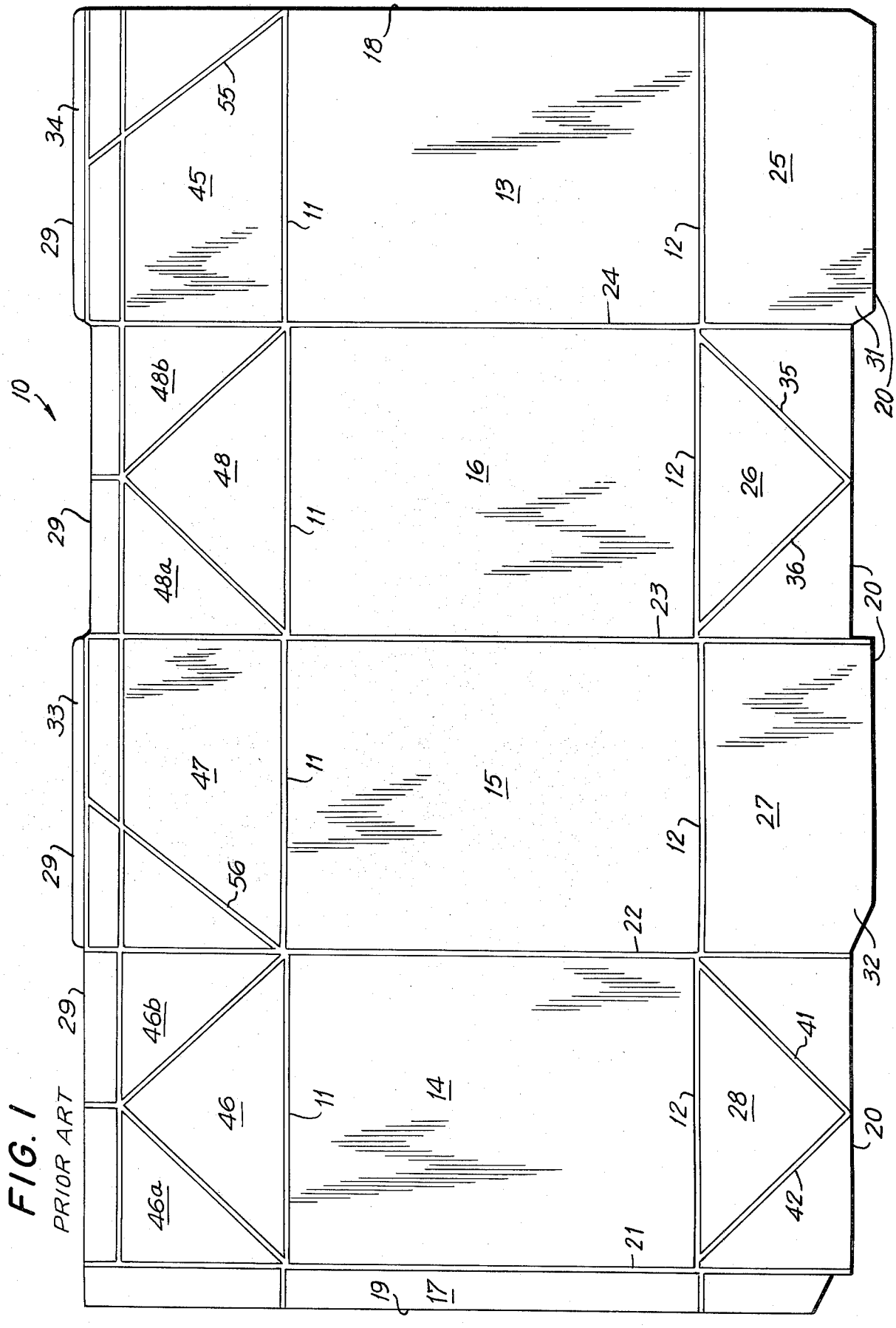


FIG. 1
PRIOR ART

FIG. 3

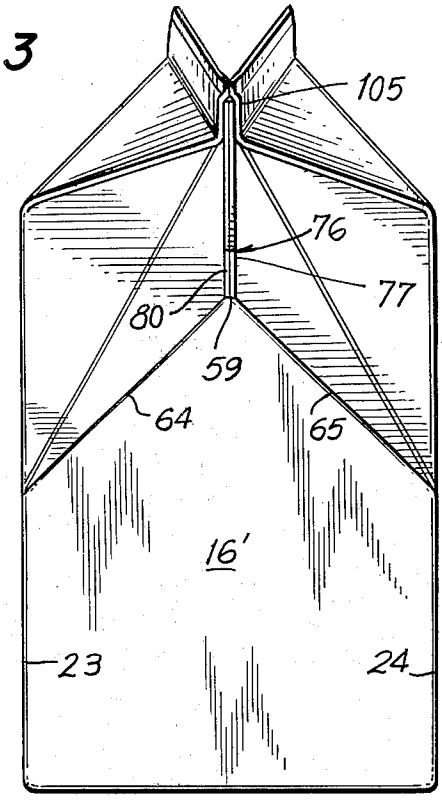
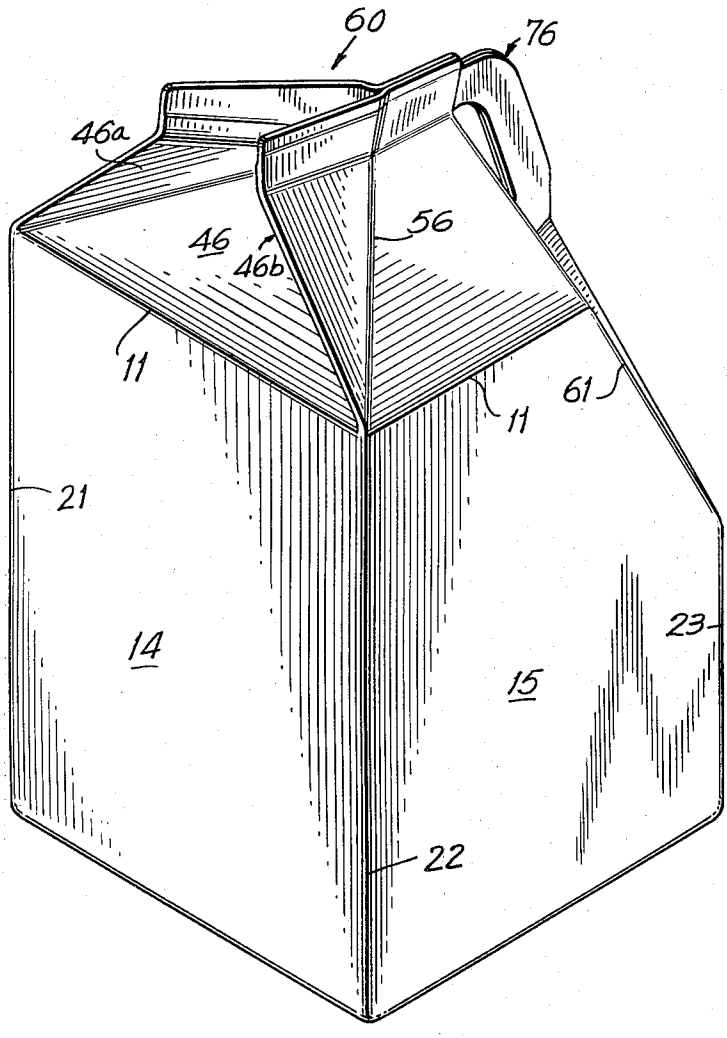


FIG. 2



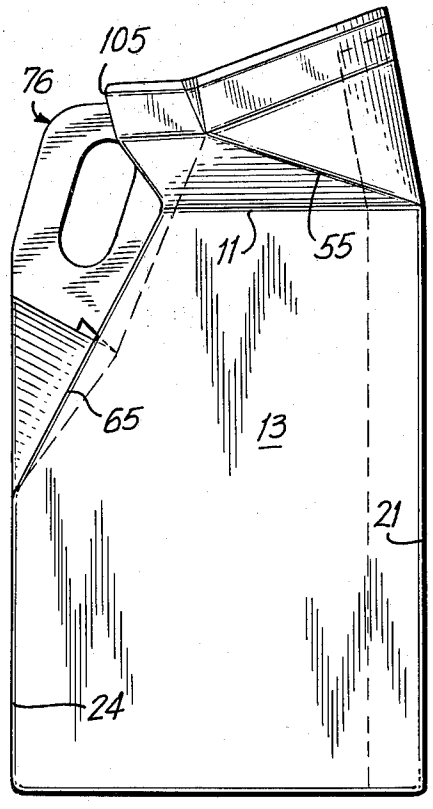


FIG. 4

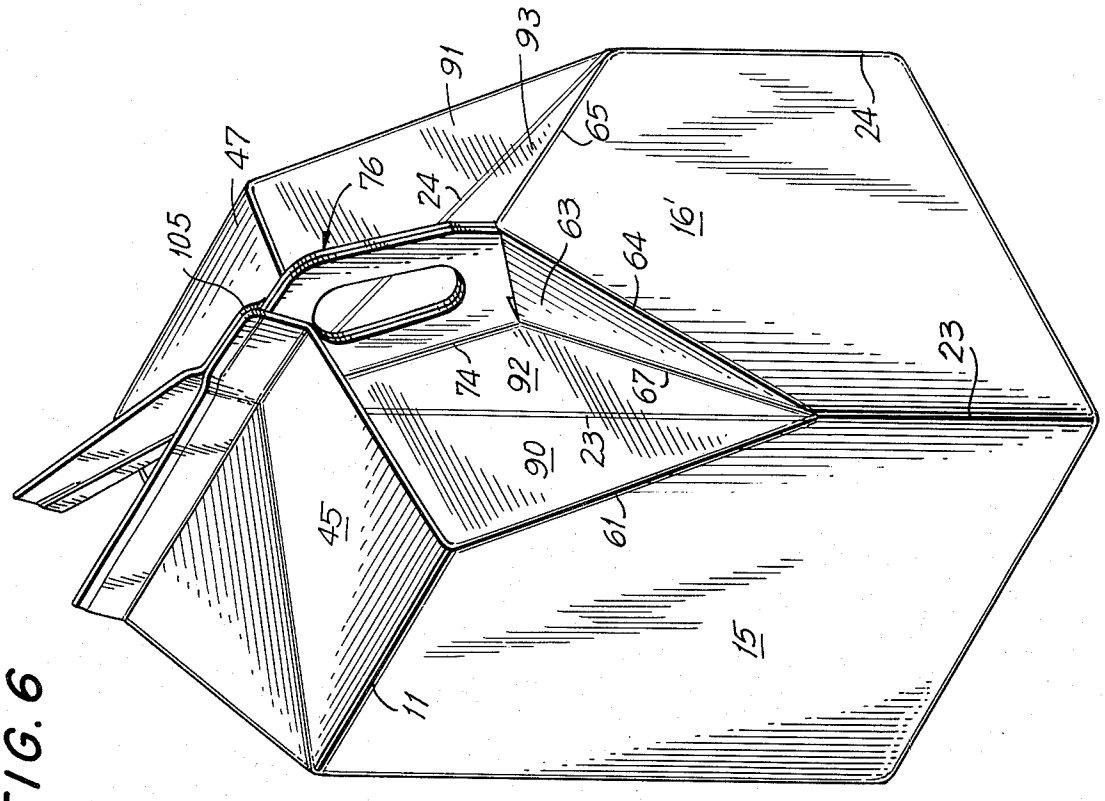

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FIG. 6

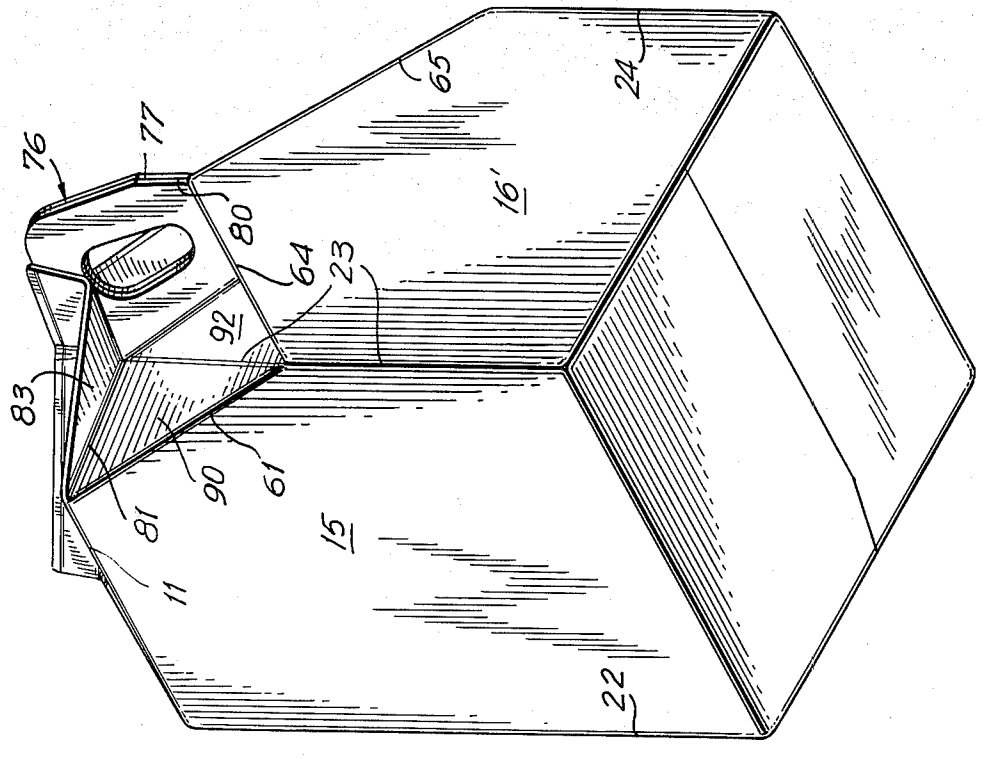

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FIG. 5

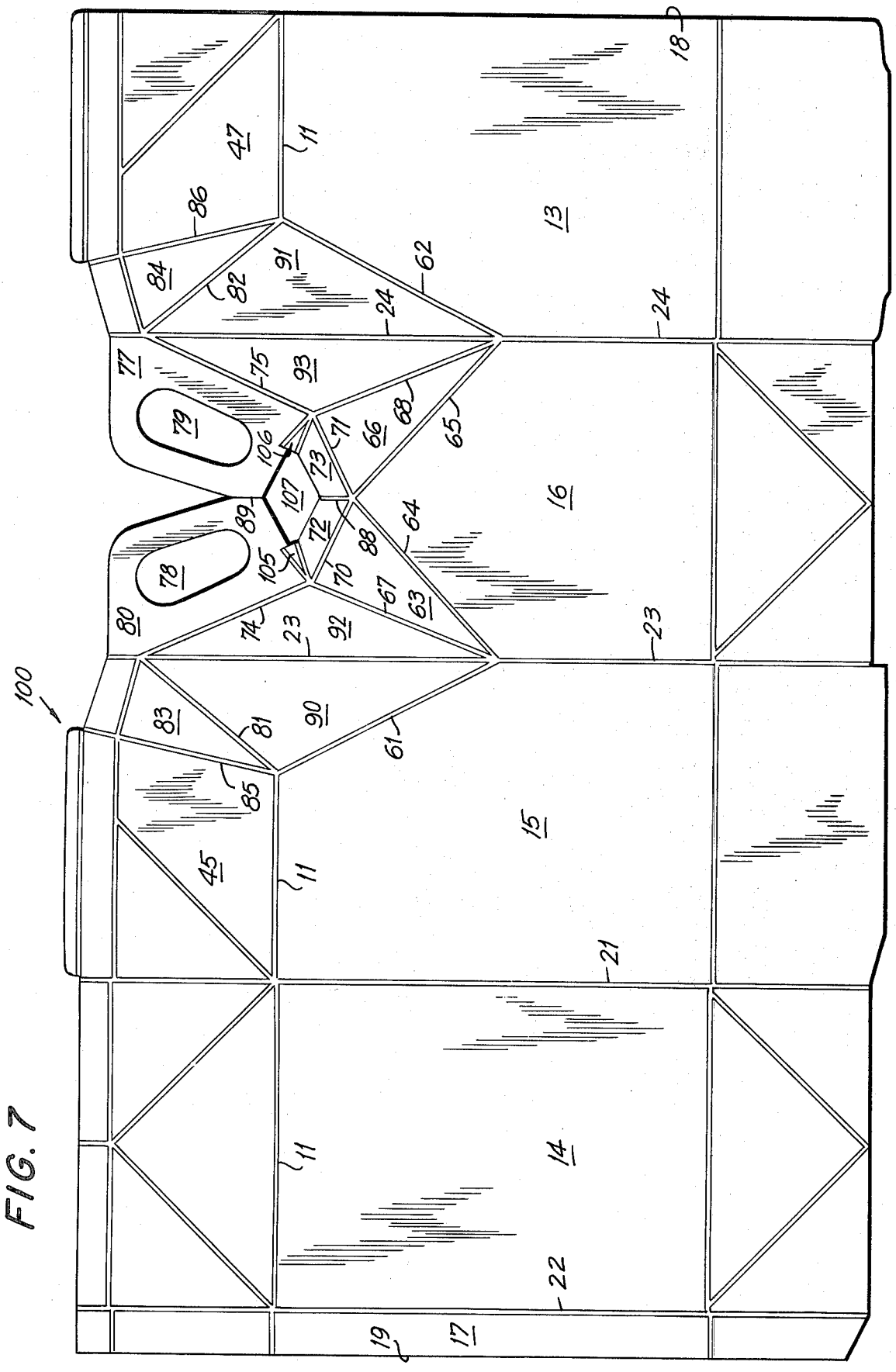

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FIG. 7

FIG. 8

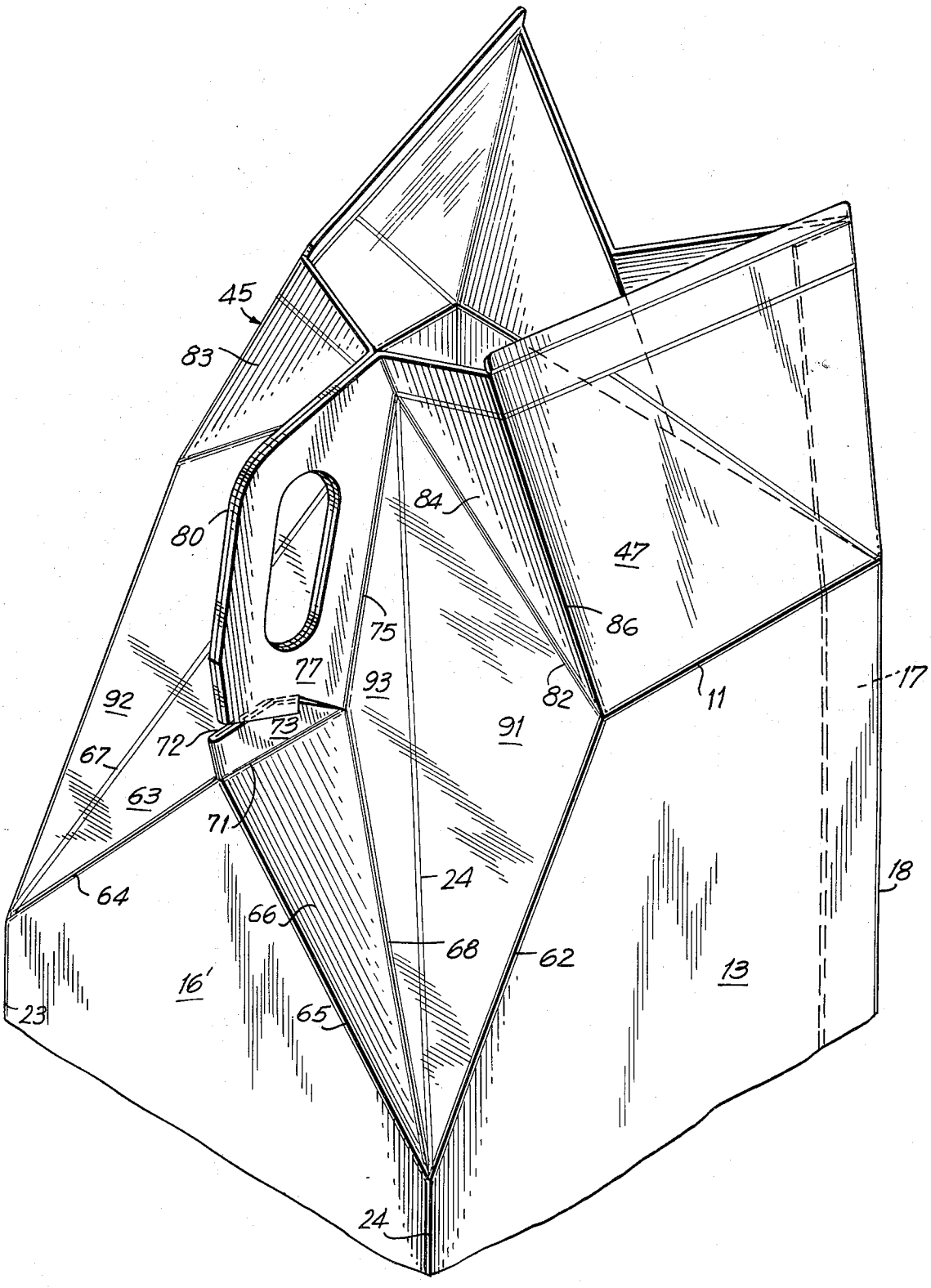

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FIG. 9

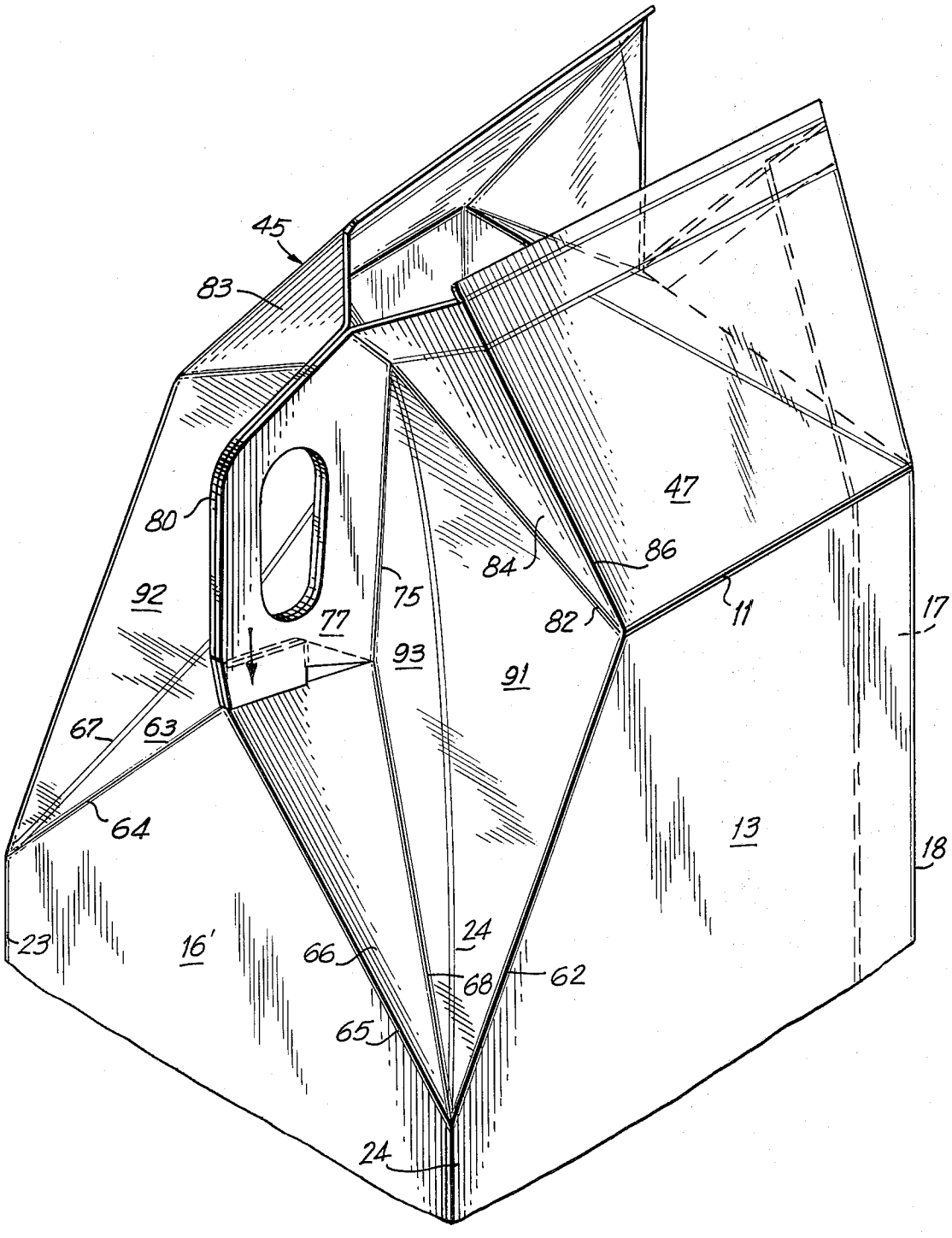
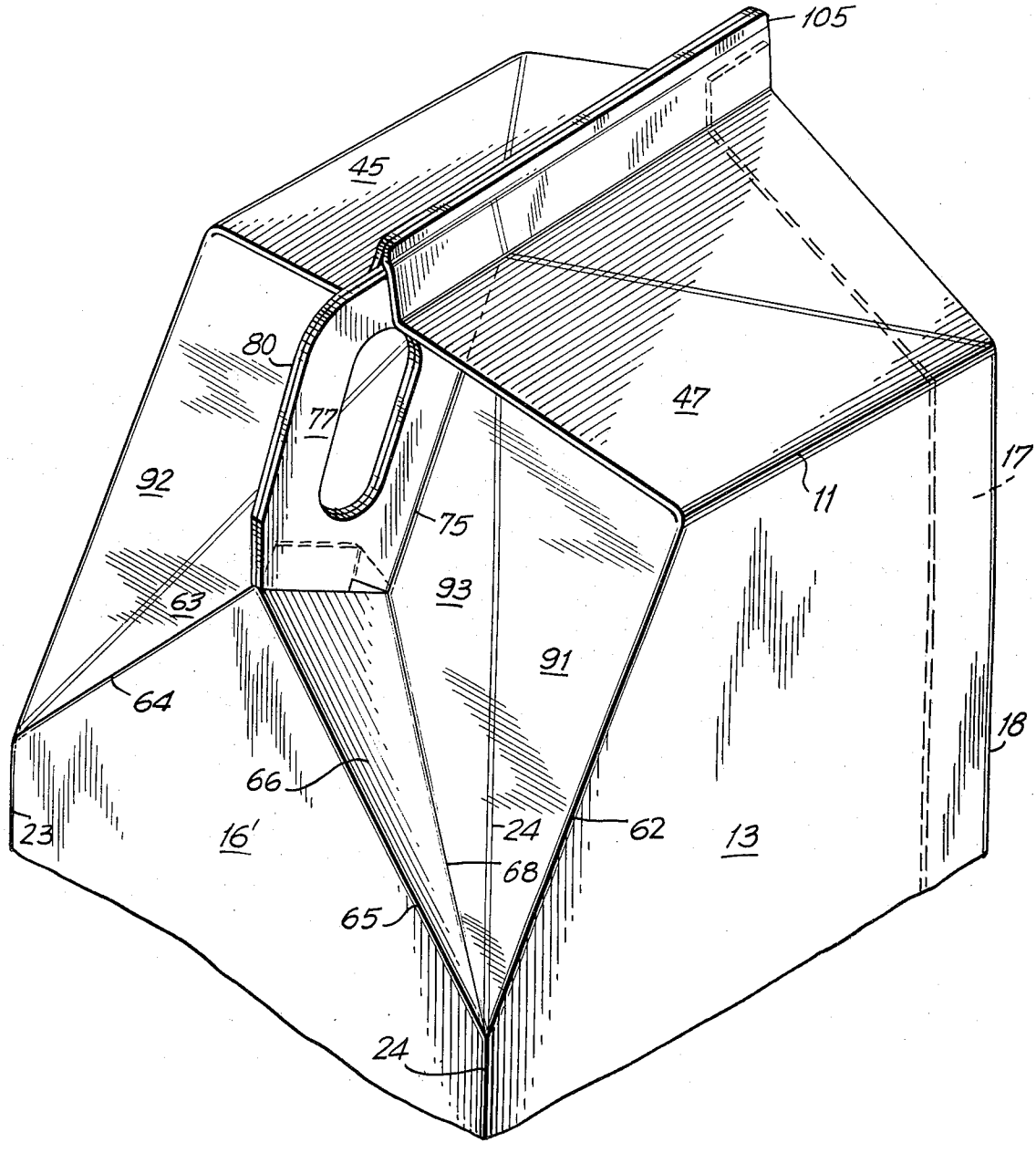

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FIG. 10



PAPERBOARD CARTON

BACKGROUND OF THE INVENTION

1. Field to Which the Invention Pertains

Paperboard cartons or containers are frequesntly used to package flowable materials, e.g. liquids or solid materials which are either granulated or powdered. A prime example of such containers are paperboard cartons used to package milk. Generally, such containers are coated with thermoplastic material such as polyethylene which both protects the paperboard from attack by the packaged product and also provides a means whereby various surfaces of the carton may be heat-sealed together without the use of a separate adhesive.

For reasons of economy, the volumetric capacity of such paperboard cartons is often quite large. For example, substantial quantities of milk are now packaged in one gallon paperboard cartons. Using milk as a typical example, it will be appreciated that a one gallon paperboard carton filled with milk is both bulky and heavy. Thus, to carry such a container or to pour milk therefrom is troublesome, particularly for a child. As a result, numerous carton constructions have been proposed wherein a handle is provided on the carton to facilitate carrying the carton and pouring milk therefrom. Broadly speaking, prior proposals for providing a paperboard carton handle can be divided into two categories, viz. constructions wherein the handle is an integral part of the carton and constructions wherein the handle is added to the carton after the carton has been formed. As will hereinafter be pointed out, the use of all such previous proposed constructions for supplying a handle on a paperboard carton have been attended by certain disadvantages.

Considering constructions wherein a paperboard carton is provided with a non-integral handle, it will be appreciated that a separate machine and separate processing operation is generally required to mount such a handle on a formed paperboard carton. As a result, the ultimate cost of the finished carton is accordingly increased. In prior art proposed constructions wherein a carrying handle was provided as an integral part of the paperboard blank from which the container is formed, the provision of a carrying handle resulted in an increase of the amount of paperboard per carton blank. Thus, the ultimate cost of the formed carton or container was correspondingly increased.

The field to which this invention pertains is the paperboard packaging art. More particularly, the invention disclosed herein relates to a paperboard carton and a paperboard blank therefore, wherein there is provided an integral carrying handle and the construction of said blank and said carton are such that additional paperboard is not required.

2. Prior Art

Referring to FIG. **1**, there is shown therein a plan view of a paperboard blank which is widely used to form one gallon milk cartons. Generally, the blank **10** in FIG. **1** is coated on both sides with a thermoplastic material, e.g., polyethylene. Since the blank **10** of FIG. **1** is well know to those skilled in the art to which this invention pertains, only a brief description thereof will be set forth. A more detailed description maybe found in the disclosure of U.S. Pat. No. 3,120,333.

The blank **10** of FIG. **1** is provided with longitudinal score lines **21–24** inclusive, which define a front wall panel **14**, a back wall panel **16**, side wall panels **13, 15**

and a manufacturer's joint panel **17**. A lower horizontal score line **12** defines bottom closure flaps **25–28** inclusive. Transverse score lines **35, 36, 41** and **42** define bottom closure means known to those skilled in the art.

The upper horizontal score line **11** defines upper closure panels **45–48** inclusive. As those skilled in this art will appreciate, the transverse score lines on the front upper closure flap **46** and the back upper closure flap **48** define gable top closure means which include gusset panels **46***a*, **46***b*, and **48***a*, **48***b* whereby, when the blank **10** of FIG. **1** is erected to form a container, the top closure will be of the gable type. The score lines **55, 56** may be provided on the upper side closure flaps **45, 47** respectively to facilitate the formation of a liquid pouring spout.

Considering the overall shape of the blank **10** shown in FIG. **1** it may be noted that the blank **10** is substantially rectangular. Thus, the side edges **18** and **19** are straight. The bottom edge **20** deviates from a straight line only to the extent of the small extensions **31, 32** on the bottom flaps **25, 27**, respectively. Similarly, the top edge **29** deviates from a straight line only to the extent of the small upwardly protruding flaps **33, 34.** The significance of the generally rectangular shape of the blank **10** shown in FIG. **1** resides in the fact that such a blank requires a minimum amount of board and results in a minimum amount of waste. Thus, if the blank in FIG. **1** were cut from a sheet of paperboard material, the only waste which would be encountered would result from the presence of the protruding flaps **31, 32, 33** and **34.** That is to say, the edges of the flaps **31, 32** and the edges of the flaps **33, 34** may be viewed as defining the bottom and top edges of a rectangle which will be cut from a sheet of paperboard material when the blank **10** of FIG. **1** is formed. The only area which would be removed from the rectangle and which would constitute waste would be the material between the lower and top edges of the rectangle and the edges of the bottom forming flaps **26, 28** and the edges of the top forming flaps **46, 48.** Thus, it will be seen that the quantity of waste is relatively small. Moreover, because of the relative symmetry of the blank shown in FIG. **1,** multiple blanks may be cut from a wide sheet of paperboard material and the die which cuts the multiple blanks may be adjusted as to longitudinally nest one blank into another and thereby further minimize the waste.

The above detailed consideration of the prior art blank shown in FIG. **1** is informative because it illustrates the fact that the manufacture of blank **10** results in a relatively minimum amount of waste. Further, in view of the foregoing, it is apparent that the quantity of board required and the quantity of waste incurred will be increased if, for the same volumetric size container, a blank is used which has more panels than the panels of blank **10** in FIG. **1,** or if any parts of another blank extend beyond the terminal edges of the bottom forming flaps **25, 27** or the terminal edges of the top forming flps **45, 47.** Thus, it will be seen that if a blank is to be provided which includes an integral carrying handle, such a blank would ideally not require the use of any more board than the blank **10** of FIG. **1,** and, additionally, the manufacturer of such a blank would not create any waste material in an amount greater than the amount of waste material produced in the production of blank **10** of FIG. **1.** Viewed in this context, various prior art constructions which include handle forming flaps may be evaluated, whereby it will be seen that, in

general, such prior art constructions have resulted in an increase of the amount of board required to produce the blank.

SUMMARY OF THE INVENTION

In combination with a paperboard gable top container, which includes foldably connected vertical front, back and side walls, there is provided an integral carrying handle. The carrying handle is connected to the walls of the container by intermediate, non-vertical panels. Preferably, the terminal edges of the handle do not extend beyond the planes defined by the vertical walls of the container and the top of the handle does not extend above the gable top of the container.

The paperboard blank from which the above described container is formed includes gusset panels formed in the side wall panels thereof. Preferably, the blank is coated with a thermoplastic material.

DESCRIPTION OF THE DRAWINGS

FIG. **1** is a plan view of a paperboard blank known to the prior art.

FIG. **2** is a perspective view of a partially open paperboard carton in accordance with the present invention.

FIG. **3** is a rear view of the container of FIG. **2.**

FIG. **4** is a side view of the container of FIG. **2.**

FIG. **5** is a upwardly directed perspective view of the carton of FIG. **2.**

FIG. **6** is a downwardly directed perspective view of the carton of FIG. **2.**

FIG. **7** is a plan view of a paperboard blank which incorporates a preferred embodiment of the instant invention and from which the container of FIG. **2** may be formed.

FIGS. **8, 9** and **10** are fragmentary perspective views showing steps in the formation of the carton of FIG. **2** from the blank of FIG. **7.**

DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIGS. **2** and **3** show perspective view of the carton of the instant invention. Since portions of the carton **60** shown in FIGS. **2** and **3** are similar to corresponding portions of prior art cartons the reference numbers of FIG. **1** have been repreated for such corresponding portions. Referring to FIG. **2,** which shows a front perspective view of the container **60,** it will be seen that the front wall of the container **60** is of a generally conventional configuration, i.e., there is provided a front wall **14** defined by vertical score lines **21, 22.** Additionally, horizontal score line **11** defines front top closure panels **46, 46***a* and **46b** (not visible in FIG. **2**) wherein panels **46***a*, **46***b* are gusset panels. The container **60** shown in FIG. **2** is in a partially open condition and suggests the known expedient that the gusset panels **46a, 46b** may be moved outwardly to form a conventional pouring spout.

The side walls **13** and **15** are symmetrically scored so that a description of only one side wall is necessary. Referring to FIG. **2,** it will be seen that the front portion of the side wall **15,** i.e., the portion of the side wall **15** adjacent to the front wall **14,** has been scored in a conventional manner and includes the vertical score line **21** and the upper horizontal score line **11.** The rear portion of the side wall **15** is defined by the vertical score line **23** and the upwardly extending score line **61.** As may be seen in FIG. **4,** side wall **13** is the mirror image of side wall **15** and is defined by the vertical score lines **21, 24,** the upper horizontal score line **11** and the upwardly extending score line **65.**

Referring to FIG. **2,** above the upper score line **11** the front part of the side top closure is scored in a conventional manner and includes transverse score line **56** which facilitates the formation of a pouring spout when the container is open.

Referring to FIGS. **3, 5** and **6,** it will be seen that the back of the container **60** includes a vertical wall **16′,** the upper portion of which is defined by the transverse score lines **64, 65** which extend downwardly and outwardly from the apex **59** to the vertical score lines **23, 24.** Since the rear portion of the container **60** is symmetrically scored, only the left portion thereof will be described.

A non-vertical, triangular panel **63** is foldably connected by the score line **64** to the vertical, back panel **16′.** As shown, the panel **63** is preferably triangular in shape and extends inwardly and downwardly from the vertical back wall **16′.** A first triangular sub-panel **92** is foldably connected to the non-vertical panel **63** by score line **67.** A carrying handle **76** is foldably connected to the first triangular sub-panel **92** by score line **74.**

A second triangular sub-panel **90** is foldably connected to the first triangular sub-panel **92** by the score line **23.** Additionally, the second triangular sub-panel **90** is also foldably connected to the side wall **15** by the score line **61** and is connected to the rear gusset panel **83** by the score line **81.** It may be noted that the first triangular sub-panel **92** and the second triangular sub-panel **90,** in combination, define a non-vertical quadrilateral panel or second non-vertical panel which is bounded by the score lines **61, 67, 74** and **81.**

Referring to the carrying handle **76,** the lower edge thereof is secured to the triangular panel **63** and the corresponding triangular sub-panel **66** (not shown). The handle **76** is comprised of two layers **80, 77** of paperboard in face-to-face sealed relationship. The top or upper end of the handle **76** is secured to the ridge of the gable. More specifically, referring to FIGS. **3** and **6,** the upper end of the handle **76** is disposed between the two layers of paperboard which form the ridge **105** of the gable. Thus, when the container is sealed, the thermosplastic coating on the exterior surfaces thereof acts as an adhesive and the upper end of the handle **80** is secured to the ridge of the gable.

Considering still further the handle **76** and referring particularly to FIG. **4,** it may be noted that the terminal edges of the handle **76** do not extend beyond the plane defined by the vertical back wall **16′.** Similarly, the terminal edges at the upper edge of the handle **76** do not extend beyond the top of the gable ridge **105.** Thus, it will be seen that although the container **60** is provided with a handle which both facilitates carrying and pouring, the handle does not extend vertically beyond the top of the container or horizontally beyond the back wall. As such, the container or a number of containers may be placed within a shipping case and the handles will not interfere with adjacent containers. Similarly, when such containers are stored on a shelf, the carrying handle will not interfere with adjacent containers or items.

Referring now to FIG. **7,** there is shown a plan view of a paperboard blank which maybe erected to form the container of FIG. **2.** Initially, the similarity between portions of the blank **100** shown in FIG. **7** and the blank **10** of FIG. **1** may be noted. Thus, the front wall

panel 14 and the top and bottom closure means associated therewith as well as the side wall panels 13, 15 and the front portion of the top and bottom closure means associated with the side wall panels 13 and 15 are similar to corresponding portions of the blank 10 shown in FIG. 1. Indeed, with reference to the bottom closure panels of the blank 100 shown in FIG. 6, any bottom closure means may be employed.

Referring now to the rear portion of the side wall panels 13, 15, i.e., the portion of the side wall panels 13, 15 which is adjacent to the back wall panel 16, it will be seen that each of the side wall panels 13, 15, is provided, at the rear thereof, with two triangular panels. Thus, referring to the upper rear corners of the side wall panels 15, 13, it will be seen that there are provided gusset panels 83, 84, respectively. The gusset panel 83 is foldably connected to the top, side panel 45 by fold line 85 and the gusset panel 84 is connected to the top side panel 47 by fold line 86. Recognizing that the panels 83 and 84 are gusset panels, it will immediately be appreciated by those skilled in the art that the blank 100 of FIG. 7 differs substantially from the blank 10 of FIG. 1 in that the back gusset panels 83, 84 of the blank 100 are provided on the side wall panels thereof whereas the coresponding gusset panels 48*a*, 48*b* of the blank 10 in FIG. 1 are, according to the prior art, disposed upon the top portion 48 of the back wall panel 16. The significance of locating the gusset panels 83 and 84 on the respective side walls 15 and 13 will become apparent hereinafter.

With further reference to the back gusset panels 83, 84, it may be noted that the score lines which define the sides thereof, i.e., score lines 81, 85 and 82, 86, respectively, converge at the upper score line 11. Referring to the side wall panel 15, a diagonal score line 61 is also provided and extends downwardly from the lower end of the gusset panel 83 to the adjoining longitudinal score line 23. Thus, the score line 61 together with the score lines 81 and 23, define, what may be referred to as, a side wall sub-panel 90. Similarly, the side wall panel 13 includes a side wall sub-panel 91 which is defined by the score line 62 which extends downwardly from the end of the gusset panel 84 to the adjoning score line 24.

The back wall panel of the blank 100 is substantially symmetrically scored to define a number of sub-panels. For example, there is provided a first pair of back wall sub-panels 92, 93 which are foldably connected to side wall sub-panels 90, 91, respectively, by the longitudinal score lines 23, 24. A second pair of back wall sub-panels 63, 66 are foldably connected by score lines 67, 68, respectively, to the first pair of back wall sub-panels 92, 93 respectively. Additionally, the second pair of back wall sub-panels 63, 66 are foldably connected by score lines 64, 65 to the remainder of the back wall panel 16. Also as part of the back wall panel there is provided a pair of handle flaps 80, 77 which are foldably connected by score lines 74, 75 to the first pair of back sub-panels 92, 93. Preferably, the handle flaps 80, 77 are provided with cutouts 78, 79. As shown in FIG. 6, the handle flaps 80, 77 may be foldably connected by a score line 89. Alternatively, however, the line 89 may be cut so as to sever any connection between the handle flaps 80, 77. Preferably, the area 107 is cut-out.

Finally, connecting flaps 72, 73 are provided and are foldably connected by the vertical score line 88. The connecting flaps 72, 73 are foldably connected by score lines 70, 71 to the second pair of back wall sub-panels 63, 66, respectively. To facilitate erection of the blank to form a container, intermediate panels 105, 106 may be provided so as to interconnect the connecting flaps 72, 73 with the handle flaps 80, 77, respectively.

In summary, it will be seen that the back wall panel of the blank 100 includes a vertical wall forming section 16 and at least two pairs of foldably connected back wall sub-panels, viz. 63, 66 and 92, 93. Additionally, the back wall panel of the blank 100 includes a pair of handle flaps 80, 77 each of which is foldably connected to a respective panel of one of said at least two pairs of said back sub-panels.

With general regard to the blank 100 shown in FIG. 7, a number of observations may be made. For example, as previously pointed out, it may be noted that the blank 100 of FIG. 7 includes back gusset panels which are formed in the side walls thereof as opposed to the prior art practice of providing back gusset panels on the back panel of such a blank. Second, it may be observed that the upper edges of the handle forming flaps 80, 77 do not extend upwardly beyond the top edges of the closure flaps on the adjoining side wall panels. This is of significance since it will be apparent that this construction ensures that although handle forming flaps are provided, additional board is not necessitated. Third, in general, it is possible to provide the blank 100 of FIG. 7 with a thermoplastic coating, for example a polyethylene coating, whereby various portions of the blank may be heat-sealed together during the carton forming process and thus the use of a separate adhesive is not required. The following comments, which presuppose the blank 100 of FIG. 7 is provided with a thermoplastic coating, describe the process by which the blank 100 may be erected to form a container of the type shown in FIG. 2.

FIG. 8 shows a partially formed container wherein the blank of FIG. 7 has been folded to form a rectangular tube and wherein the manufacturer's joint panel 17 has been heat-sealed to the interior face of the side wall 13. For clarity, the bottom portion of the partially erected carton shown in FIG. 8 has been omitted since any bottom closure may be used. In addition to the blank having been formed into a tube, it will be noted that the handle forming flaps 80, 77 have been moved into a face abutting configuration. While held in this position, the handle flaps are moved downwardly such that the lower portions of the handle flaps sandwich the connecting flaps 72, 73. While in this position, the handle flaps are heat sealed together which simultaneously effects a heat-seal between the two connecting flaps and between the interior faces of the connecting flaps and the interior faces of the handle flaps 80, 77. Thus, the construction shown in FIG. 9 results. The construction of FIG. 9 is then subjected to a gable top closing process whereby the gable flaps 45, 47 are moved inwardly until a gable ridge is formed whereupon the gable ridge is heat-sealed and thus the construction of FIG. 10 is obtained. As may be noted by comparing FIGS. 9 and 10, the presence of the previously heat sealed handle 76 necessitates that the gable ridge will slope downwardly from front to back when the gable ridge is formed. It may be noted that in the process of forming the gable top and the gable ridge 105, the gable ridge 105 will sandwich the upper portions of the handle flaps 80, 77 and thus the upper portion of the handle 74 will be heat-sealed to the interior of the ridge, thereby providing a unitary, liquid tight con-

struction.

The container shown in FIG. 2 and 10 has particular utility as a one gallon milk container. When used as a one gallon container for milk or other materials, it is desirable that the blank from which the container is formed, e.g. the blank of FIG. 7, has an overall width from edge 18 to edge 19 of approximately 22.8 inches. A blank of this width is desirable because a number of blank producing machines are available to process blanks of this width. Similarly, in many instances it is desirable to provide a blank which has wall panels of an equal width, e.g., the blank 100 of FIG. 7.

Although I have hereinbefore described the preferred embodiments of my invention as well as a number of variations thereof, it will be appreciated that still other variations may be perceived by those skilled in the art to which this invention pertains without departing from the scope of my invention as described by the claims appended hereto.

I claim:

1. In combination with a paperboard gable top container having a gable ridge, said container including foldably connected vertical front, back and side walls and front and back pairs of gusset panels, the improvement which comprises:
   a. a first pair of non-vertical panels foldably connected to said back wall;
   b. a second pair of non-vertical panels, each foldably connected to a respective one of
      i. said side walls,
      ii. said first pair of non-vertical panels, and
      iii. said back pair of gusset panels; and
   c. a handle, foldably connected to said second pair of non-vertical panels.

2. The improved container of claim 1 wherein the lower end of said handle is secured to said first pair of non-vertical panels and the upper end of said handle is secured to said gable ridge.

3. The improved container of claim 2 wherein the upper end of said handle is disposed within the gable ridge and said gable ridge slopes downwardly from the front of said container to back of said container.

4. The improved container of claim 3 wherein said container is coated with a thermoplastic material.

5. The improved container of claim 4 wherein the upper end of said handle is heat sealed to said gable ridge.

6. The improved container of claim 1 wherein each of said second pair of non-vertical panels is comprised of first and second foldably connected sub-panels, each of said first sub-panels being foldably connected to said handle and a respective one of said first pair of non-vertical panels and each of said second sub-panels being foldably connected to a respective side wall and a respective one of said back gusset panels.

7. In combination with a paperboard gable top carton having a gable ridge, said carton including foldably connected vertical front, back and side walls and front and back pairs of gusset panels, the improvement which comprises:
   a. a pair of non-vertical triangular panels foldably connected to said back wall;
   b. a pair of quadrilateral panels each foldably connected to a respective side wall, a respective one of said rear gusset panels and a respective one of said triangular panels;
   c. a pair of connecting sub-panels, each foldably connected to a respective one of said triangular panels; and
   d. a handle foldably connected to each of said quadrilateral panels, the end of said handle being secured to said connecting sub-panels and the upper end of said handle being secured to said gable ridge.

8. The improved carton of claim 7 wherein said carton is coated with a thermoplastic material.

9. The improved carton of claim 8 wherein the lower end of said handle is heat sealed to said connecting sub-panels and the upper end of said handle is heat sealed within said gable ridge.

10. The improved carton of claim 9 wherein each of said quadrilateral panels is comprised of two foldably connected, triangular sub-panels.

11. The improved carton of claim 10 wherein the fold line which connects each of said two triangular sub-panels is an extension of the fold line which connects said back wall to a respective side wall.

12. In combination with a paperboard blank for forming a gable top container, said blank having longitudinal score lines which define front and back wall panels and transverse score lines which define bottom and top closure flaps, said top closure flaps including gable forming flaps, the improvement which comprises:
   a. two side wall panels, each of which includes a back gusset panel;
   b. a pair of handle flaps, the top edge of said gable forming flaps being above the top edge of said handle flaps; and
   c. sub-panels foldably connecting each of said handle flaps to a respective one of said back gusset panels.

13. The blank of claim 12 wherein the width of said blank is approximately 22.8 inches.

14. The blank of claim 13 wherein said blank is coated on both sides with a thermoplastic material.

15. The blank of claim 14 wherein said thermoplastic material is polyethylene.

16. In combination with a paperboard blank having a longitudinal score lines which define front and back wall panels and transverse score lines which define bottom and top closure flaps, the improvement which comprises:
   a. side wall panels, each of which includes a gusset panel and a foldably connected side wall sub-panel in the upper rear corner thereof;
   b. a back wall panel which comprises:
      i. a vertical wall forming section,
      ii. at least two pairs of foldably connected back wall sub-panels, each pair said two pairs of panels foldably connecting a respective one of said side wall sub-panels to said vertical wall forming section,
      iii. a pair of carrying handle flaps each foldably connected to a respective sub-panel of said at least two pairs of said back wall sub-panels.

17. The blank of claim 16 wherein the top edges of said handle flap do not extend beyond the top edges of said closure flaps on said side wall panels.

18. The blank of claim 17 wherein said blank is coated with a thermoplastic material.

19. The blank of claim 18 wherein the width of said wall panels is approximately equal.

20. The blank of claim 19 wherein said blank has a width of approximately 22.8 inches.

21. In combination with a paperboard blank having longitudinal score lines which define front, back and

side wall panels, a lower horizontal score line which defines bottom closure flaps, an upper horizontal score line which defines upper closure flaps on said front and side wall panels and transverse score lines on said upper closure flaps which define gable top closure means, the improvement which comprises:

a. a gusset panel in the rear upper portion of each of said side wall panels, the lower end of each of said gusset panels terminating at said upper score line,

b. a pair of side wall sub-panels each foldably connected to a respective one of said gusset panels;

c. a first pair of back wall sub-panels each foldably connected to a respective one of said side wall sub-panels;

d. a second pair of back wall sub-panels each foldably connected to both the remainder of said back wall panel and a respective one of said first pair of back wall sub-panels; and

e. a pair of handle flaps each foldably connected to a respective one of said first pair of back wall sub-panels.

22. The blank of claim **21** which further comprises a pair of foldably connected connecting flaps each foldably connected to a respective one of said second pair of back sub-panels and to a respective one of said pair of handle flaps.

23. The blank of claim **22** wherein the top edges of said handle flaps do not extend beyond the top edges of said closure flaps on said side wall panels.

24. The blank of claim **23** wherein said blank is coated with a thermoplastic material.

25. The blank of claim **24** wherein the width of wall panels is approximately equal.

26. The blank of claim **25** wherein said blank has a width of approximately 22.8 inches.

27. In combination with a paperboard blank which is scored to define wall panels, a manufacturer's joint panel, bottom closure means and gable top closure means, the improvement which comprises:

a. a back wall forming panel which comprises

i. a vertical wall forming portion,

ii. a first pair of triangular panels each foldably connected to said vertical wall forming portion, and

iii. a second pair of triangular panels each foldably connected to a respective one of said first pair of triangular panels and to a respective side wall panel along a respective longitudinal score line;

b. a pair of side wall panels each of which includes

i. a side wall forming portion,

ii. a triangular side sub-panel foldably connected to said side wall forming portion and a respective one of said second pair of triangular panels, and

iii. a rear gusset panel foldably connected to a respective one of said triangular side sub-panels; and

c. a pair of carrying handle flaps each foldably connected to a respective one of said second pair of triangular panels.

28. In combination with a gable top paperboard carton made from a unitary blank and including vertical front, back and opposed side walls, the improvement which comprises a stationary handle fixedly mounted and foldably connected to said carton, said handle being recessed such that, at all times, the vertical terminal edges of said handle lie within the planes defined by said vertical side walls and the top edge of said gable top is above the top edge of said handle.

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