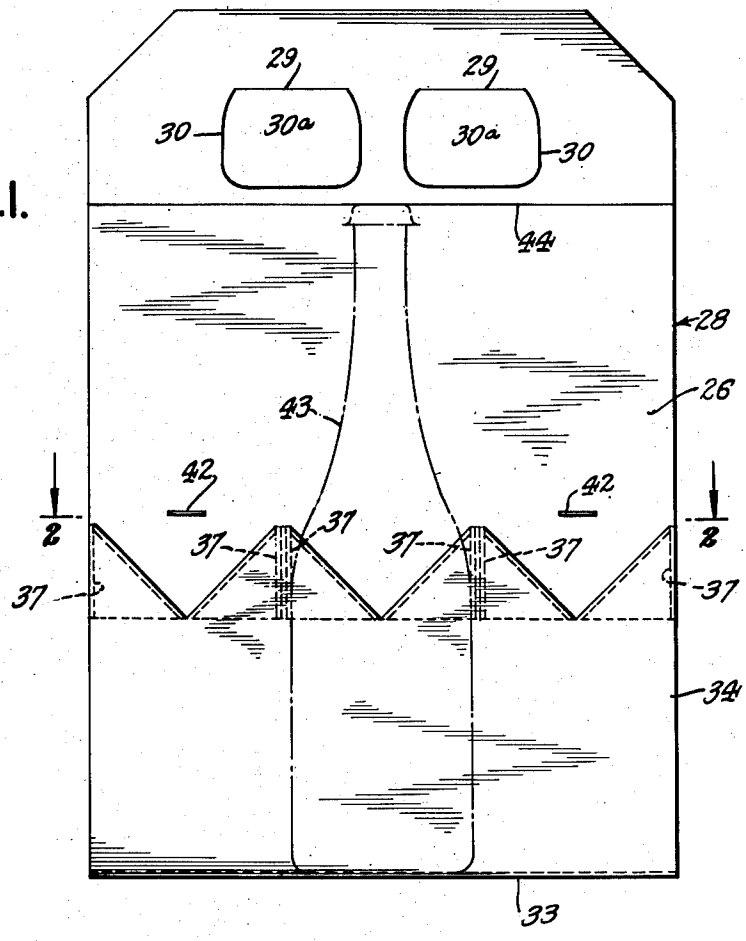
March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 1

FIG. 1.



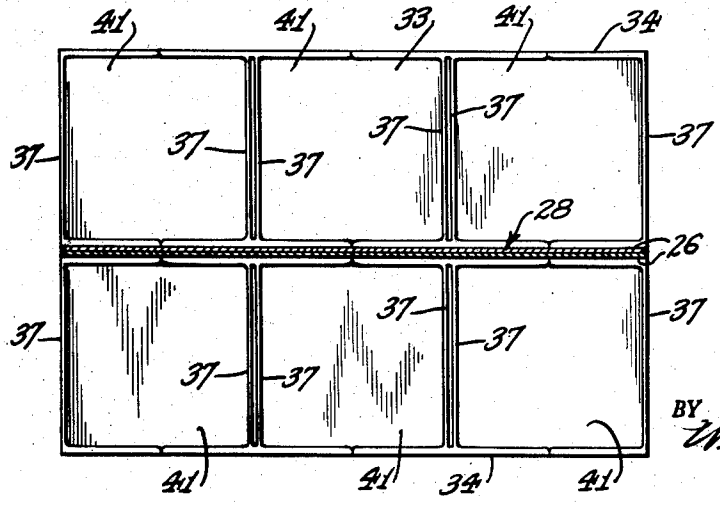


FIG. 2.

INVENTOR.
Arthur J. Weiss
BY
W. Philip Churchill
ATTORNEY

March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 2

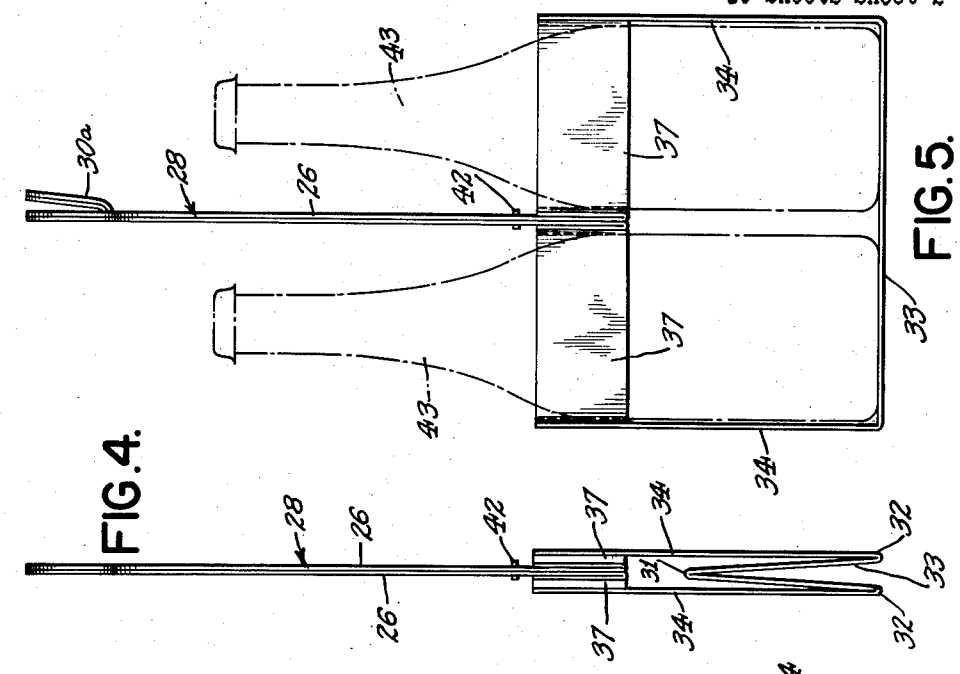
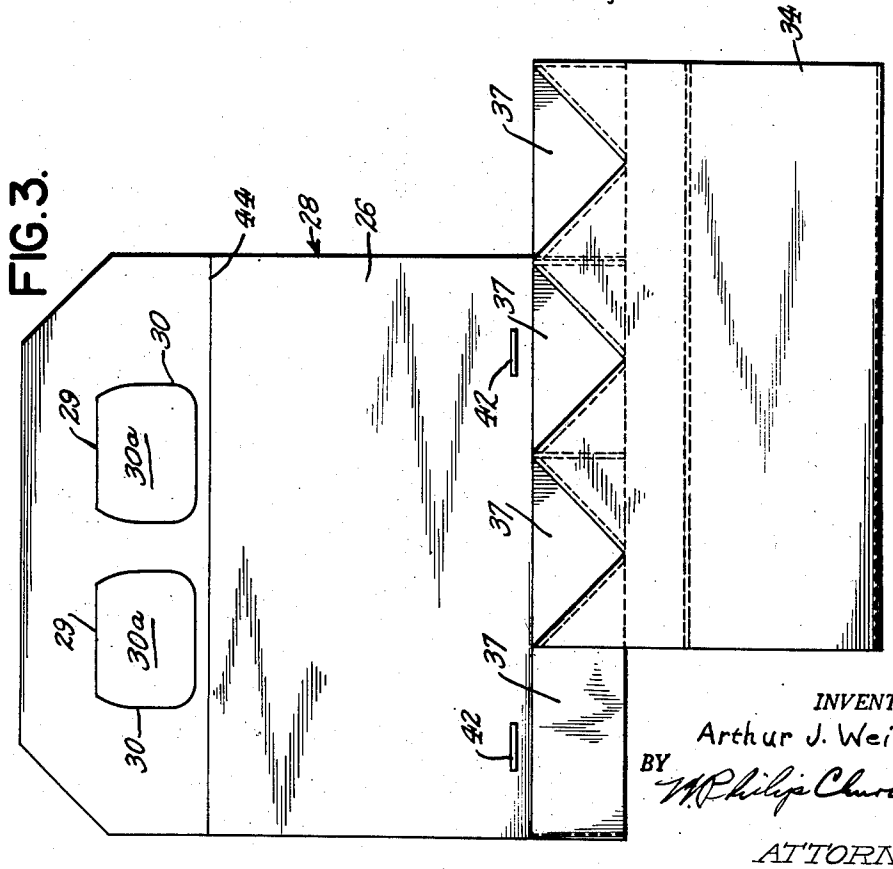


FIG. 5.

FIG. 4.

FIG. 3.



INVENTOR.
Arthur J. Weiss
BY W. Philip Churchill
ATTORNEY

March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 3

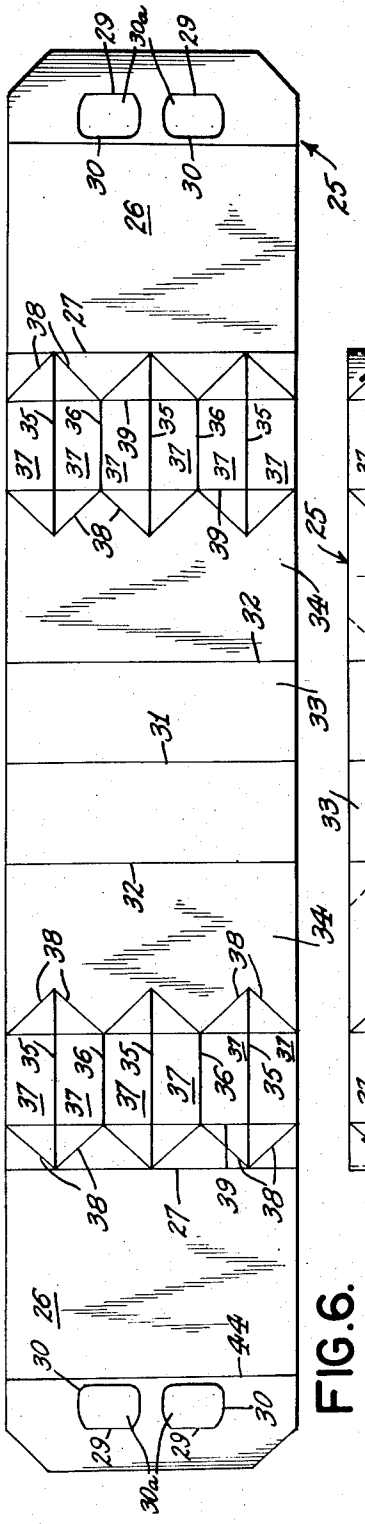


FIG. 6.

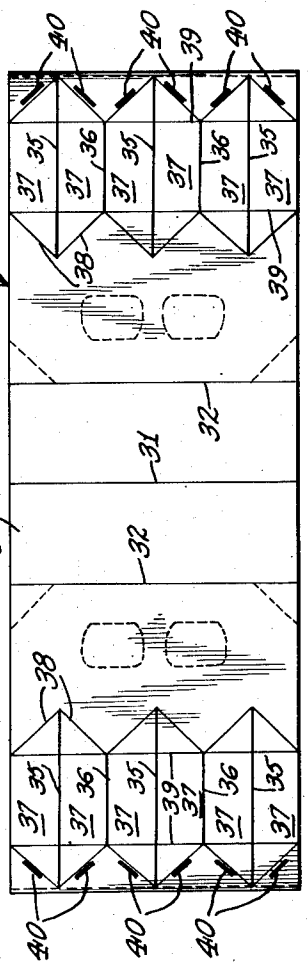


FIG. 7.

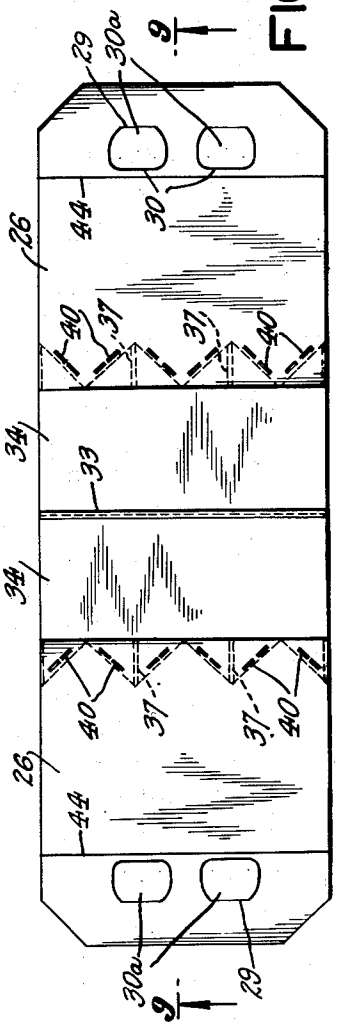


FIG. 8.

INVENTOR.
Arthur J. Weiss
BY W. Philip Churchill
ATTORNEY

March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 4

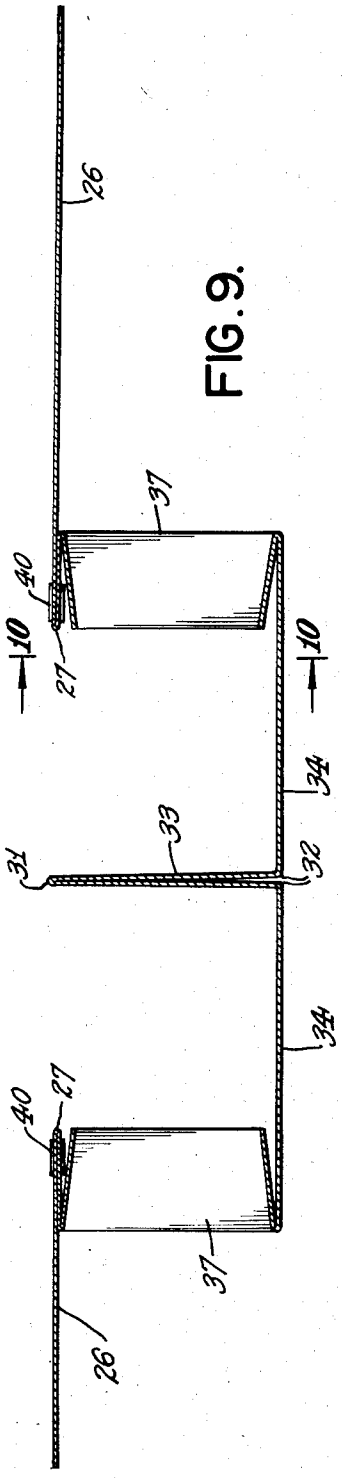


FIG. 9.

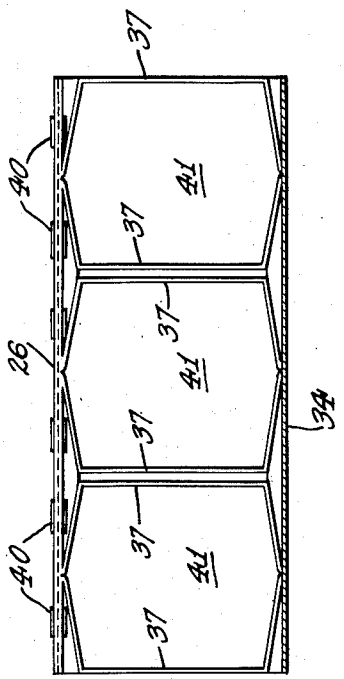


FIG. 10.

INVENTOR.
Arthur J. Weiss
BY W. Philip Churchill
ATTORNEY

March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 5

FIG. 11.

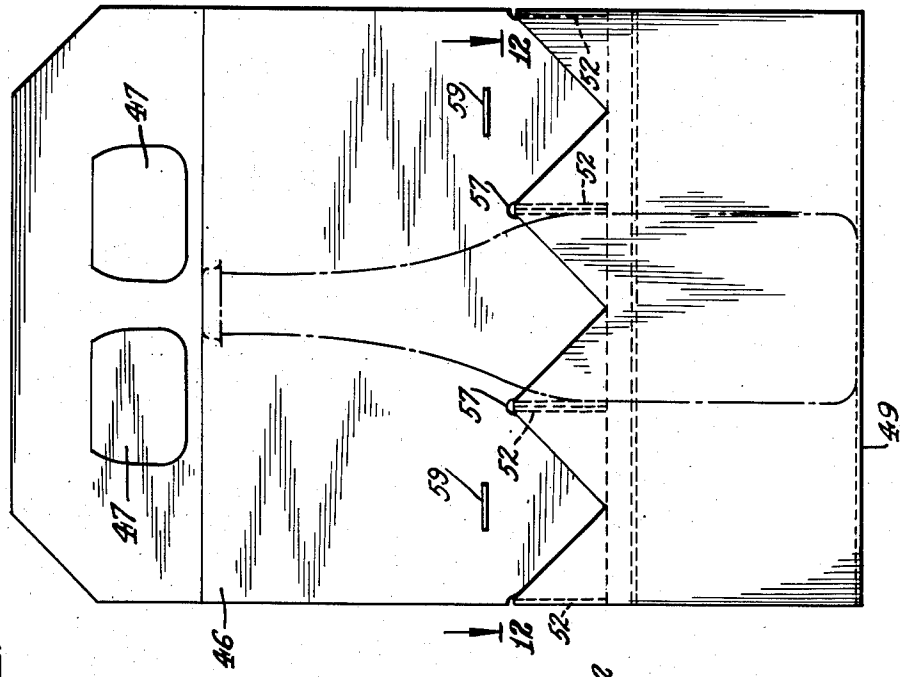


FIG. 12.

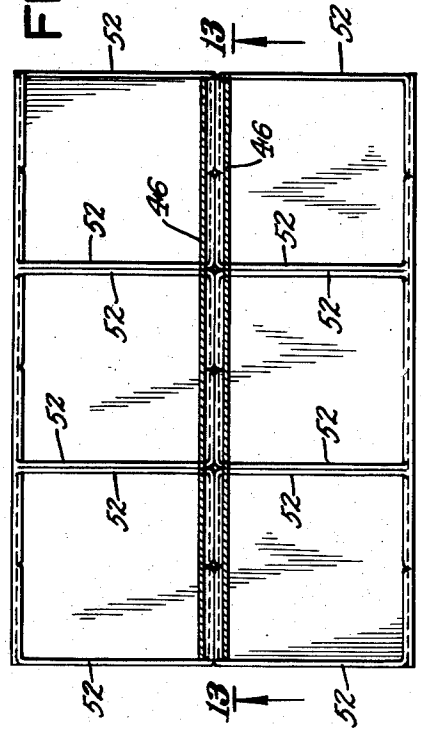
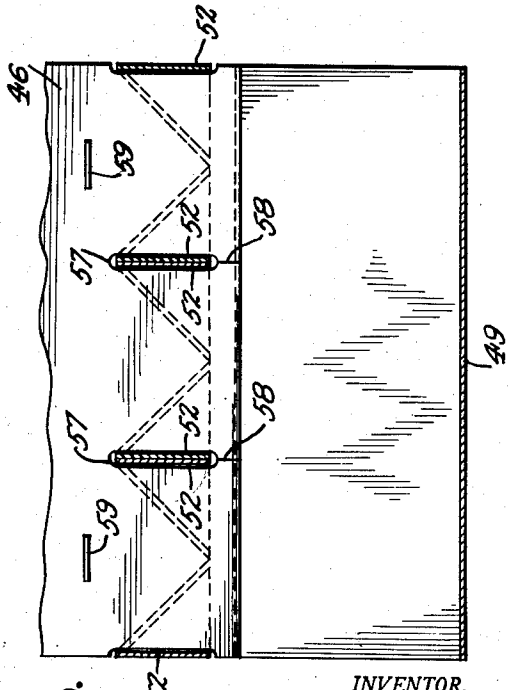


FIG. 13.



INVENTOR.

Arthur J. Weiss

BY W. Philip Churchill

ATTORNEY

March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 6

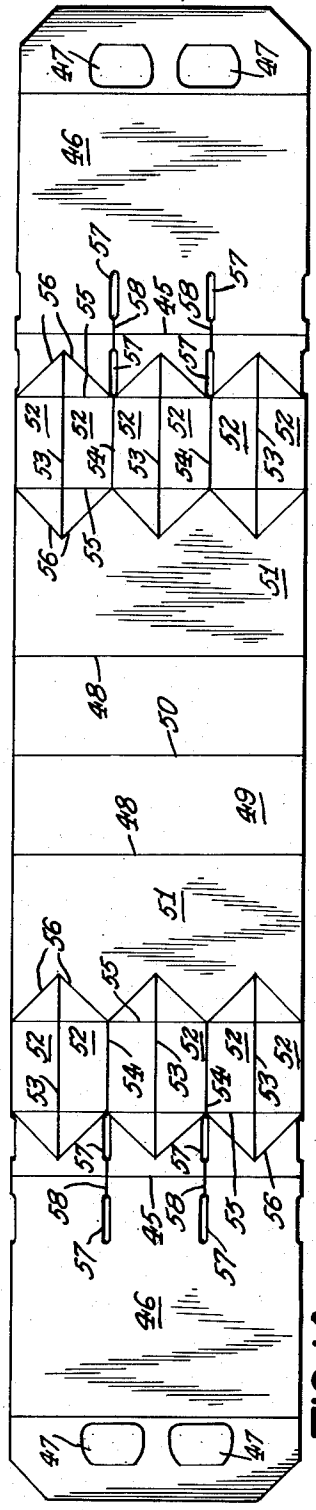


FIG. 14.

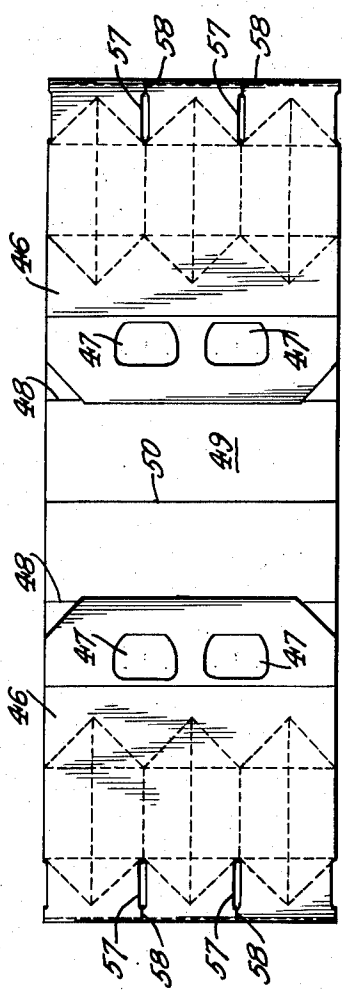


FIG. 15.

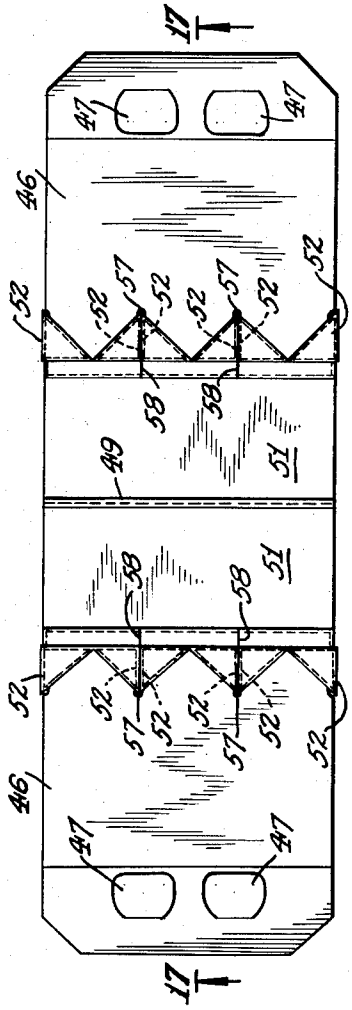


FIG. 16.

INVENTOR.
Arthur J. Weiss
BY W. Philip Churchill
ATTORNEY

March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 7

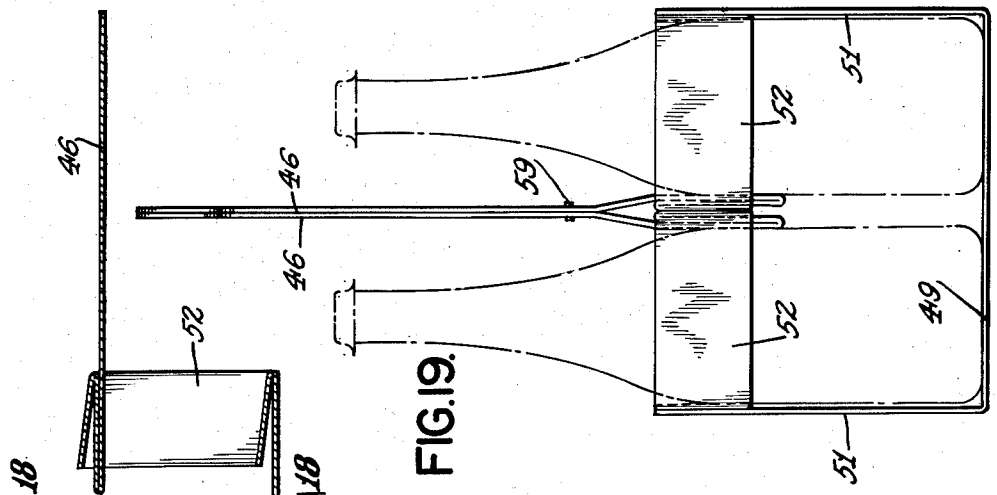


FIG. 19.

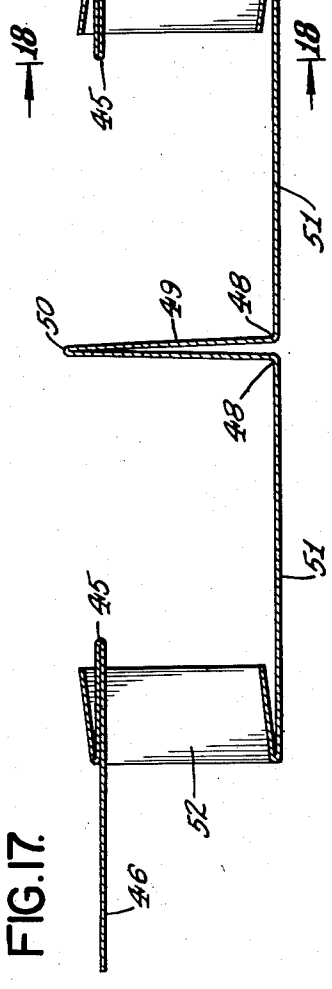


FIG. 17.

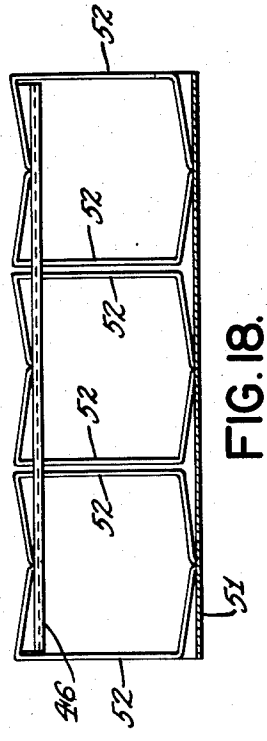


FIG. 18.

INVENTOR.
Arthur J. Weiss
BY E. Philip Churchill
ATTORNEY

March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 8

FIG. 20.

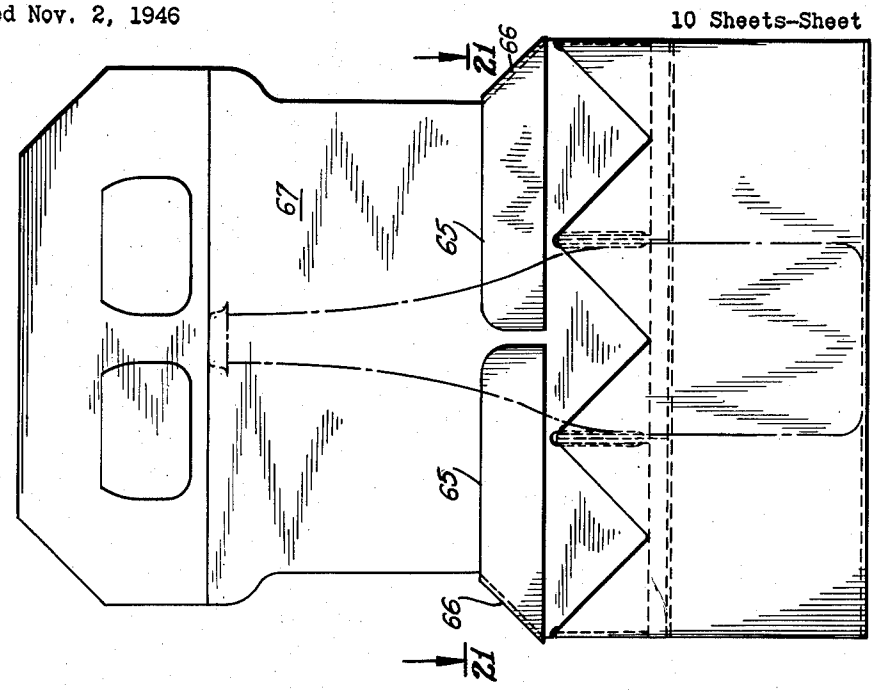


FIG. 21.

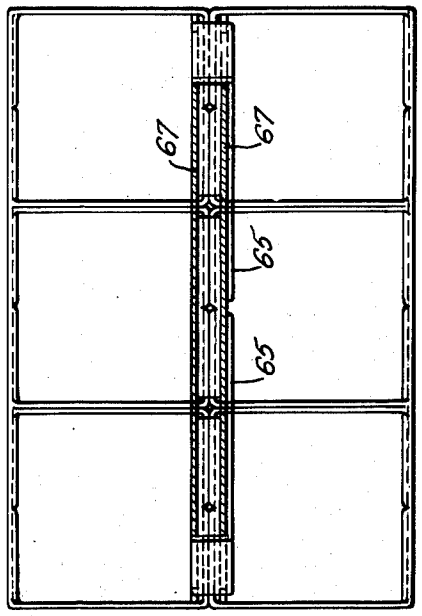
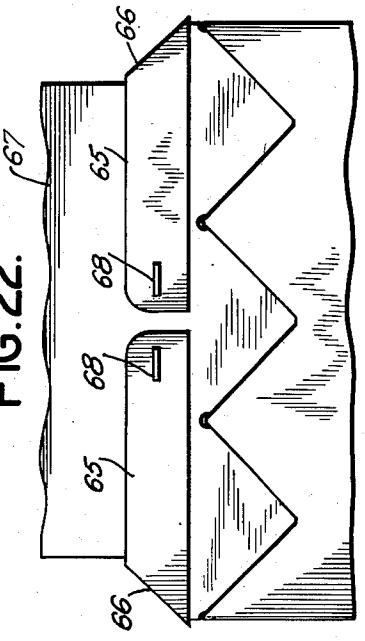


FIG. 22.



INVENTOR.
Arthur J. Weiss
BY E. Phillips Churchill
ATTORNEY

March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 9

FIG. 23.

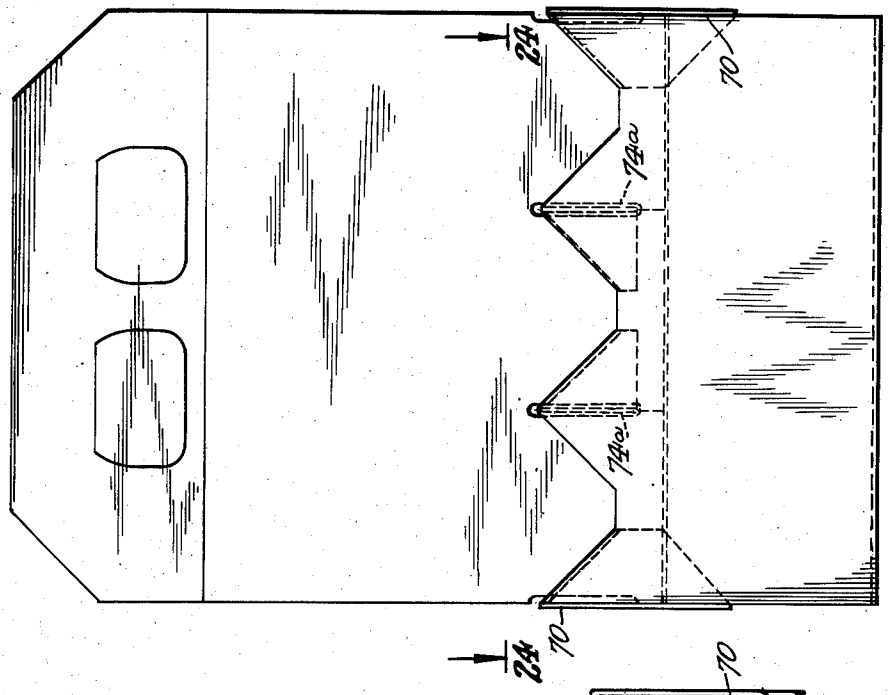


FIG. 24.

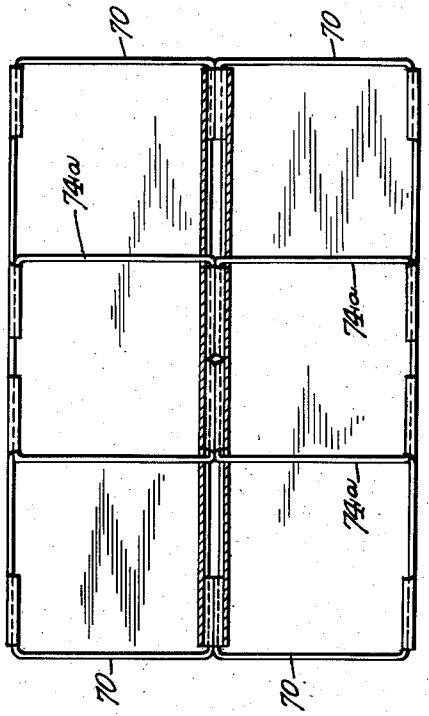
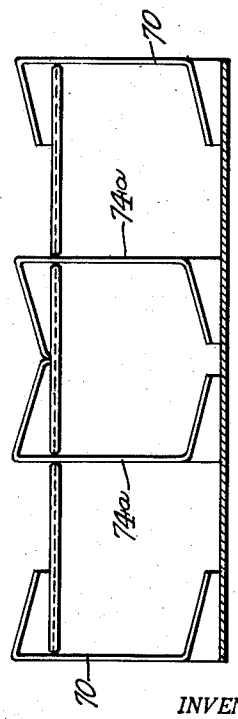


FIG. 25.



INVENTOR.
Arthur J. Weiss
BY
W. Bladis Churchill
ATTORNEY

March 1, 1955 A. J. WEISS 2,703,189

CONTAINER CARRIER

Filed Nov. 2, 1946 10 Sheets-Sheet 10

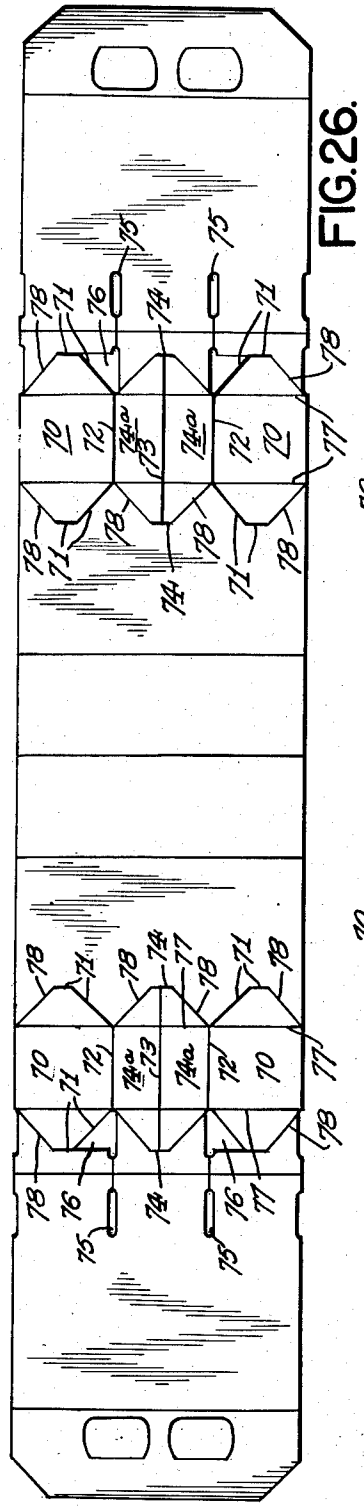


FIG.26.

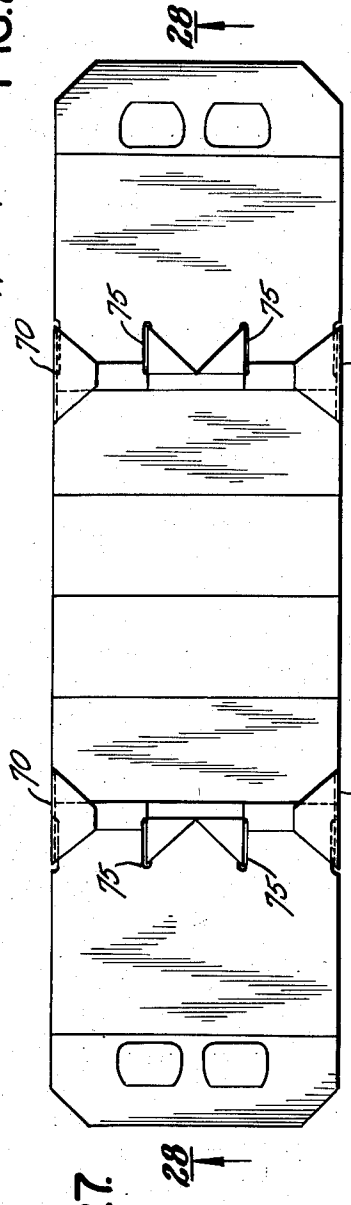


FIG.27.

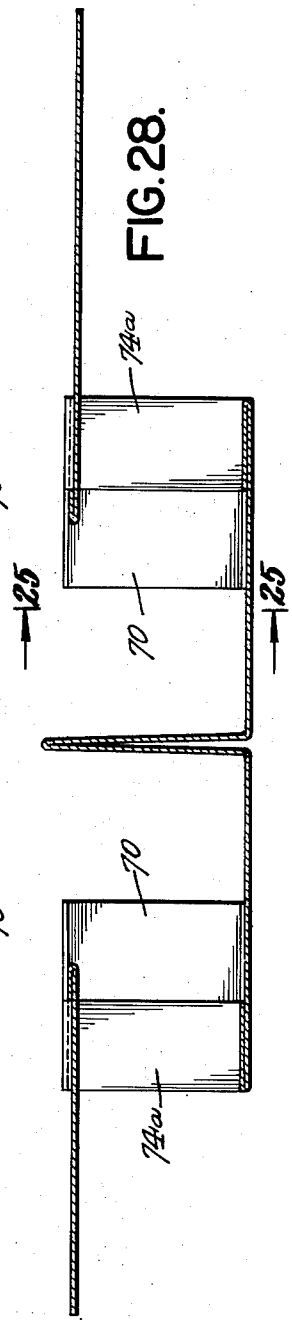


FIG.28.

INVENTOR.
Arthur J. Weiss
BY W. Philip Churchill
ATTORNEY

United States Patent Office 2,703,189 Patented Mar. 1, 1955

2,703,189

CONTAINER CARRIER

Arthur J. Weiss, West Englewood, N. J., assignor to Robert Gair Company, Inc., New York, N. Y., a corporation of Delaware

Application November 2, 1946, Serial No. 707,421

9 Claims. (Cl. 220—114)

This invention relates to a collapsible carrier of the type used for carrying bottles and similar containers, and to a blank of sheet material which is cut and scored so that it may be folded to produce the carrier.

In general, such a carrier should be sufficiently strong to support the weight of a number of filled bottles or other containers, with a reasonably high factor of safety, and should be easy to produce from the blank in a form that is collapsible after it is folded, for easy shipment and storage. In addition, the carrier should be easy to open from the collapsed position so that it can be quickly loaded with bottles.

Many carriers have been proposed and used heretofore but in most instances the blanks used for the carriers have had to be cut out in very irregular shapes with the result that considerable amounts of sheet material have been wasted in forming the blanks. In cases where rectangular blanks have been used, the material of the blank has not been used to best advantage.

One object of this invention is to provide a carrier meeting the foregoing requirements which may be formed from a simple rectangular blank utilizing to advantage, virtually all the sheet material in the blank.

A further object of this invention is to provide such a carrier in which the grain of the paper, cardboard or other sheet material used runs vertically down through the handle section and from there horizontally out to the side sections and then down to the base or bottle carrying section whereby the maximum strength of the sheet material is utilized.

A further object of this invention is to provide such a carrier which is readily folded from the blank by machine or by hand and which may be secured in the folded position in simple fashion as by means of one or more staples or a few spots of adhesive.

Another object of the invention is to provide such a carrier which, after being folded into bottle carrying position, may be readily collapsed to a flat form for shipping or storage and which is very easily opened out and filled with bottles.

Other objects and advantages of the invention will be apparent and will be explained in connection with the following description of several embodiments of my invention illustrated in the accompanying drawings, in which:

Fig. 1 is a side elevation view of one form of the carrier embodying my invention.

Fig. 2 is a horizontal sectional view taken about on the line **2—2** of Fig. 1, and showing the lower portion of the carrier in plan.

Fig. 3 is a side elevation view of the folded carrier shown in Fig. 1 in collapsed position for shipping or storing before the bottles are inserted.

Fig. 4 is an end elevation view of the carrier in this collapsed position.

Fig. 5 is an end elevation view of the folded carrier in open position after bottles are placed in it.

Fig. 6 is a plan view of a blank used to form the carrier shown in Fig. 1.

Fig. 7 is a plan view of such a blank after it is partly folded.

Fig. 8 is a plan view of the blank in another partly folded position.

Fig. 9 is a vertical sectional view through the partly folded blank taken about on the line **9—9** of Fig. 8.

Fig. 10 is a vertical sectional view taken about on the line **10—10** of Fig. 9.

Fig. 11 is a side elevation view of a folded carrier representing a second embodiment of my invention.

Fig. 12 is a horizontal sectional view of the folded carrier taken about on the line **12—12** of Fig. 11.

Fig. 13 is a vertical sectional view of this second embodiment of the carrier taken about on the line **13—13** of Fig. 12 and having the top portion of the carrier broken away.

Fig. 14 is a plan view of a blank used for making the carrier shown in Fig. 11.

Fig. 15 is a plan view of such a blank in partly folded condition.

Fig. 16 is a plan view of such a blank folded into shape ready to form the carrier.

Fig. 17 is a vertical sectional view through such a partly folded blank taken about on the line **17—17** of Fig. 16.

Fig. 18 is a vertical sectional view of such a partly folded blank taken about on the line **18—18** of Fig. 17.

Fig. 19 is an end elevation view of the completed carrier shown in Fig. 11.

Fig. 20 is a side elevation view of a folded carrier representing a third embodiment of my invention.

Fig. 21 is a horizontal sectional view of such a carrier taken about on the line **21—21** of Fig. 20.

Fig. 22 is a side elevation view of the central portion of a carrier showing a slight modification of the carrier illustrated in Fig. 20.

Fig. 23 is a side elevation view of a folded carrier representing a fourth embodiment of my invention.

Fig. 24 is a horizontal sectional view of such embodiment taken about on the line **24—24** of Fig. 23.

Fig. 25 is a vertical sectional view of a partly folded blank taken about on the line **25—25** of Fig. 28.

Fig. 26 is a plan view of a blank used to form the carrier shown in Fig. 23.

Fig. 27 is a plan view of such a blank in partly folded condition.

Fig. 28 is a vertical sectional view through such a partly folded blank taken about on the line **28—28** of Fig. 27.

Referring particularly to the embodiment of my invention illustrated in Figs. 1 to 10 of the drawings, the carrier is formed from a simple blank **25**, which may be of rectangular shape and simply scored, cut and folded to provide a carrier utilizing to best advantage virtually all of the material of the blank. The blank illustrated in these figures of the drawings is shown with the corners cut off so that the handle section of the carrier does not have sharp corners. Otherwise, however, the blank is a complete rectangle and therefore may be readily cut out of large sheets of flexible sheet material with substantially no waste. It is apparent, of course, that carriers of my invention may be formed from any relatively flexible sheet material, such as paper, cardboard, paperboard or the like, as long as the material is reasonably strong and can be readily scored, cut and folded.

The end portions **26**, **26** of the blank are simply scored along the lines **27**, **27**, so that when the blank is folded into its final shape these two sections are brought together to provide a handle section **28** for the carrier. If desired, suitable hand grips may be formed by scoring the blank along the lines **29** and cutting the blank along the lines **30** to provide tabs **30***a* that may be pushed out and folded upward after the carrier is formed (see Figs. 4 and 5) to provide a convenient grip for the handle section as will be understood by those skilled in the art.

The central portion of the blank may be scored across the middle at the line **31**, for a purpose to be described hereinafter, and also along the lines **32**, **32** which define between them a bottom or base section **33** in the folded carrier designed to support the bases of bottles or other containers to be carried.

The material in the blank on each side of the bottom section **33** provides in the folded carrier upright side sections **34**, **34** which are connected to the handle section **28** by means of a plurality of strips. These strips are formed by cutting the blank longitudinally along the lines **35** and also along the shorter lines **36**. This provides on each side of the blank six strips **37** of substantially uniform

width, each of which is scored on each end along the short diagonal lines 38 and along the lines 39 extending transversely across the blank.

In forming the carrier, the end portions 26, 26 of the blank are folded underneath, as shown in Fig. 7, by folding the blank along the scored lines 27, 27. The triangular sections of the blank at the ends of the strips 37 adjacent to the end portions 26, 26 preferably are then secured to the end portions by means of the staples 40 or by adhesive or other suitable means. By pressing outwardly against each pair of strips 37, the end portions 26, 26 may then be turned so that they are substantially parallel to the side sections 34, 34 as best seen in Figs. 8, 9 and 10, the strips 37 being rotated through an angle of approximately 90° during this folding process to form the bottle or container receiving openings 41 between each pair of strips. The triangular sections of the blank adjacent the side sections 34, 34 are thus folded down inside the carrier as the strips 37 are rotated into position. The two end portions 26, 26 may then be brought together to form the handle section 28 of the folded carrier and attached together as by means of the staples 42, or by adhesive or other means.

It will be seen that the three pairs of strips 37 on each side of the carrier are now in a position at right angles to the handle section 28 and the side sections 34, 34 of the carrier, are substantially horizontal and integral with these sections, and define bottle receiving openings 41 between each pair of strips. Thus, in the central portion of the folded carrier, the strips 37 are adjacent each other, which in effect provides central connecting strips of double thickness at these points.

After the carrier is completely folded, it may be readily collapsed or flattened for shipping or storing in the form shown in Figs. 3 and 4. For this purpose, the bottom section 33 is folded upward along the score line 31 to provide two sections extending up between the side sections 34, 34. The side sections at the same time may be easily shifted relative to the handle section 28 by reason of the fact that the strips 37 are all hinged about vertical lines to the handle section and to the side sections. This provides a completely folded carrier easy to ship and store, which may be readily loaded with bottles by simply grasping the handle portion of the carrier and pressing the projecting end of the lower portion of the carrier against the body or a wall while the bottles are inserted. As soon as the carrier is loaded with bottles 43 or other containers, of course, it necessarily retains the folded position shown in Figs. 1, 2 and 5.

A particular advantage of my invention is that the connecting strips are formed to utilize to best advantage substantially all of the material across the width of the blank, this material all being turned so that the grain of the sheet material runs down through the handle section, laterally outward along the strips, down the side sections and across the bottom section, thus taking advantage of the maximum strength of the sheet material used.

If desired, end portions 26, 26 of the blank may be scored along the lines 44 (Fig. 1) so that they can be folded down to lie on the tops of the bottles and thus facilitate stacking of the carriers one on top of the other after they are filled with bottles.

Another embodiment of my invention is illustrated in Figs. 11–19, inclusive, which likewise employs a rectangular blank of sheet material scored across each end on the lines 45, 45 to form the end portions 46, 46, and scored and cut so that the tabs 47 at each end may be pushed out and folded over to provide a hand hold or grip for the handle section. This blank similarly is provided with score lines 48, 48 defining the bottom or base section 49 having a central score line 50, and side sections 51, 51 on each side of the bottom section 49.

The strips 52 are formed by longitudinal cuts made in the blank along the longer lines 53 and the shorter lines 54. At each end of each strip, triangular sections are formed between the transverse score lines 55 and the short diagonal score lines 56.

As described thus far, the blank is the same as that shown in Figs. 1–10. This second embodiment differs from the first, however, in that two transverse rows of slots 57 are cut out of the blank, one row on each side of each score line 45. The slots 57 are joined by the cut lines 58. In folding this blank, the end portions 46, 46 are folded over on the score lines 45 so that pairs of slots 57 are brought into alinement with each other. Each end portion 46, at this stage, may be glued or otherwise secured to the sheet material of the blank between the score line 45 and the angular score lines 56. This step is not essential but is preferable because it facilitates the subsequent steps of folding the blank to form a carrier.

The end portions 46, 46 may then be turned over from the position shown in Fig. 15 by folding the blank on the lines 55, 55 nearest these end portions. The strips 52 may now be rotated to form bottle receiving openings and the pairs of strips 52 in the center of the blank pushed through the slots 57 to the position shown in Figs. 16, 17 and 18. When the two end portions 46, 46 are then brought together and secured by means of the staples 59, or by adhesive or other means, it is apparent that the triangular portions of the blank at the ends of the strips 52 nearest the end portions 46, 46 will be held tightly between the lower portions of the two end portions that now form the handle section of the carrier.

Here again, the folded carrier utilizes substantially all of the material of a simple rectangular blank and provides connecting means between the handle section and side sections of the carrier of maximum strength as well as pleasing appearance. Such a carrier may be collapsed into a flat position similar to that shown in Figs. 3 and 4 for the purpose of shipment and storage.

The embodiment of my invention illustrated in Figs. 20, 21 and 22 is similar to that shown in Figs. 11–19, except for the different formation of the handle section. In this modification, the two end portions of the blank are brought together in the usual manner to provide a handle section for the carrier, but one end portion has tabs 65, 65 cut out from the side portion of the handle section and scored along the diagonal lines 66, 66 so that the tabs 65, 65 may be folded around the other end portion 67 and secured thereto by adhesive or by the staples 68. The tabs 65 thus reduce the size of the handle section but at the same time provide added strength for the carrier by serving as a reinforcement, holding together the two end portions making up the handle section in an improved manner over the use of ordinary adhesive or staples.

Figs. 23 to 28, inclusive, illustrate a fourth embodiment of my invention made from a blank similar to that shown in Figs. 11 to 19. In this embodiment, however, connecting strips 70 of extra width are provided at each end of the container by cutting the blank along the lines 71 and 72. The blank is also cut along the lines 73 and the short connecting lines 74 to form the narrower central strips 74*a*. Slots 75 may be cut out of the blank as in the embodiment shown in Figs. 11–19 and, in addition, the triangular sections 76 may be cut out of the blank completely.

The blank is scored along the transverse lines 77 and also along the short diagonal lines 78. Thus, when the blank is folded, the central strips 74*a* extend through the slots 75 and the outer strips 70, substantially wider than the strips 74*a*, provide extra strength at the outer edges of the carrier. It is apparent that the handle section, side sections and base section of this carrier are formed from the blank in the same manner as described above in connection with the embodiment of my invention shown in Figs. 11–19.

The terms and expressions which I have employed are used as terms of description and not of limitation, and I have no intention, in the use of such terms and expressions, of excluding any equivalents of the features shown and described or portions thereof, but recognize that various modifications are posible within the scope of the invention claimed.

I claim:

1. A carrier for bottles and the like which is formed from a rectangular blank of flexible sheet material and comprises a bottom section, side sections extending upward therefrom, a centrally located handle section comprising juxtaposed end portions of said blank, and a plurality of strips connecting the side sections to the handle section, said strips being integral with said side and handle sections and having their inner ends held between the portions of the blank forming the handle section.

2. A carrier for bottles and the like which is formed from a rectangular blank of flexible sheet material and comprises a bottom section, side sections extending upward therefrom, a centrally located handle section com-

prising juxtaposed end portions of said blank, and a plurality of strips connecting the side sections to the handle section, and strips being integral with and extending approximately at right angles to said side and handle sections, and the outer strips being substantially wider than the inner strips.

3. A carrier for bottles and the like which is formed from a rectangular blank of flexible sheet material and comprises a bottom section, side sections extending upward therefrom, a centrally located handle section comprising juxtaposed end portions of said blank, and a plurality of strips integral with and connecting the side sections to the handle section to define bottle receiving openings, said strips having their inner ends held between the end portions of the blank forming the handle section and the outer strips being substantially wider than the inner strips.

4. A carrier for bottles and the like which is formed from a rectangular blank of flexible sheet material and comprises a bottom section, side sections extending upward therefrom, a centrally located handle section comprising juxtaposed end portions of said blank, and a plurality of strips integral with and connecting the side sections to the handle section, said strips having their inner ends held between the end portions of the blank forming the handle section, and one of said end portions having at least one strap cut from its side and folded over and around the other of said end portions to hold the handle section together.

5. A carrier for bottles or the like which is formed from an elongated blank of paperboard having its grain extending lengthwise, said carrier comprising a bottom section, side sections extending upward therefrom, a centrally disposed handle section composed of two layers of paperboard having vertical slots near their lower edges, and pairs of strips cut parallel to said grain and integral with and connecting said side and handle sections, said strips being folded at the ends to rotate the strips about their longitudinal axes into bottle pocket defining position, and the folded ends of the strips nearest the handle section being disposed between said two layers with the strips extending out through said slots to lock the strips in folded position.

6. A container having pockets to receive articles such as bottles or the like which is formed from a blank of flexible sheet material comprising a bottom section, side sections integral therewith and extending upwardly therefrom, a plurality of pocket defining strips integral with said side sections and extending inwardly therefrom, and a central partition section formed by juxtaposed end portions of said blank, the inner ends of said strips being integral with and folded so as to be held between said juxtaposed end portions.

7. A blank for forming a collapsible carrier for bottles and the like which comprises an elongated rectangular sheet of flexible material having a central portion adapted to form the base of a carrier, side portions adjacent thereto adapted to form the side sections of a carrier, end portions adapted to be folded together to form a handle section of the carrier, and portions between said side and end portions that are cut along lines extending longitudinally of the blank to form in each such portion a plurality of longitudinal strips of substantially uniform length joined at their ends to said side and handle sections and scored so that when said blank is folded said strips are rotated approximately 90° to the plane of the blank to form bottle receiving openings, the material of the blank across its entire width being utilized to form the strips, and said end portions and portions adjacent thereto having slots cut in them through which said strips are adapted to extend when the carrier is folded.

8. A blank for forming a collapsible carrier for bottles and the like which comprises an elongated rectangular sheet of flexible material having a central portion adapted to form the base of a carrier, side portions adjacent thereto adapted to form the side sections of a carrier, end portions adapted to be folded together to form a handle section of the carrier, and portions between said side and end portions that are cut along lines extending longitudinally of the blank to form in each such portion a plurality of longitudinal strips of substantially uniform length joined at their ends to said side and handle sections and scored so that when said blank is folded said strips are rotated approximately 90° to the plane of the blank to form bottle receiving openings, the material of the blank across its entire width being utilized to form the strips, and the outermost strips on each side being substantially wider than the strips disposed therebetween.

9. A blank for a carrier, said blank having portions to form the bottom and sides, terminal sections to make a hinged handle, top parts between said sides and said sections, each top part having a pair of separated transverse parallel score lines, cuts extending longitudinally of said blank across said score lines and beyond the latter, longitudinal score lines between said cuts uniting the transverse score lines, the longitudinal cuts and score lines being substantially equi-distant from one another and said cuts nearest the side of the blank being the same distance from said sides, and diagonal score lines extending from points adjacent the ends of each cut beyond the transverse score lines to the ends of said longitudinal score lines and sides of the blank, said diagonal score lines being at an angle to each other.

References Cited in the file of this patent

UNITED STATES PATENTS

D. 130,065	Di Rico	Oct. 21, 1941
1,760,132	Hale	May 27, 1930
1,967,285	Buschman	July 24, 1934
2,182,065	Warren	Dec. 5, 1939
2,273,266	Himes	Feb. 17, 1942
2,318,807	Slevin	May 11, 1943
2,393,114	Lyons	Jan. 15, 1946
2,397,549	Koolnis	Apr. 2, 1946
2,418,350	Holy	Apr. 1, 1947
2,432,481	Lyons	Dec. 9, 1947