Aug. 15, 1950 W. A. RINGLER 2,518,818

CARRIER

Filed June 11, 1945 5 Sheets-Sheet 1

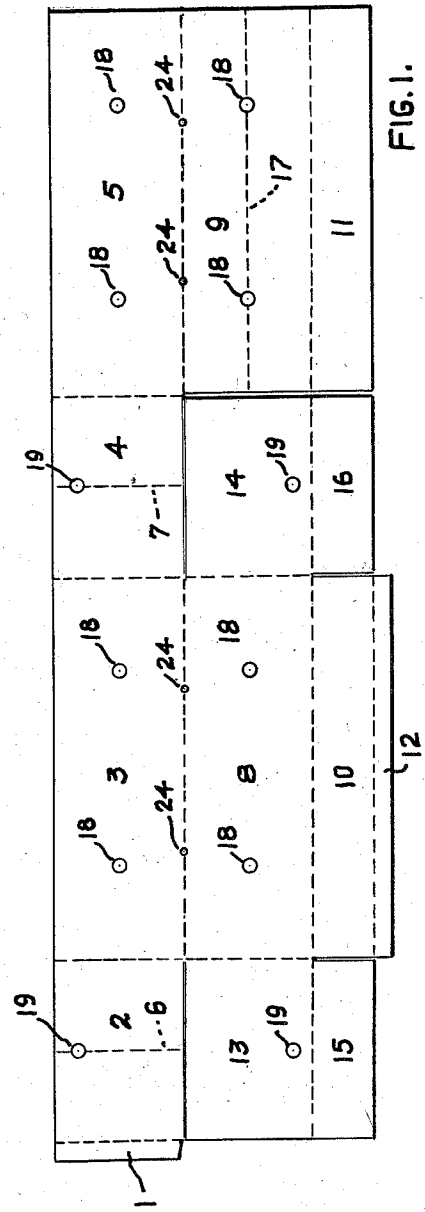


FIG. 1.

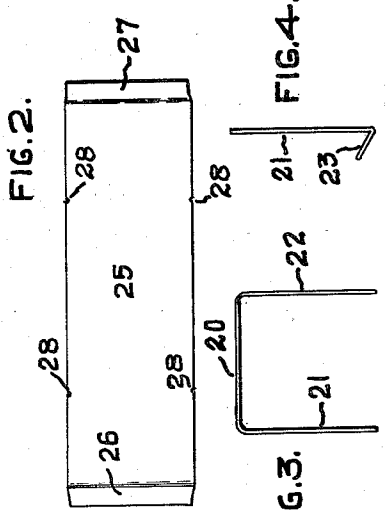


FIG. 2.

FIG. 3.

FIG. 4.

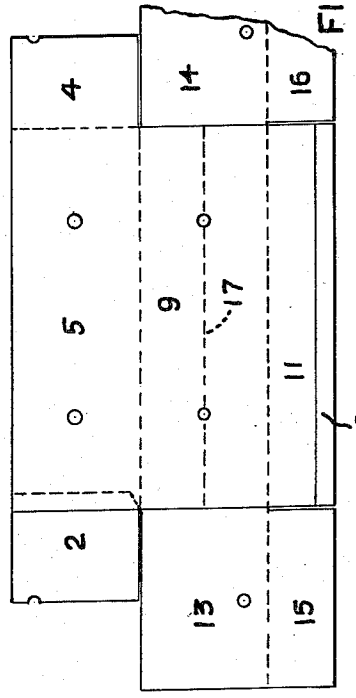


FIG. 5.

WILLIAM A. RINGLER, *INVENTOR.*

BY Allen & Allen

Attorneys

Aug. 15, 1950 W. A. RINGLER 2,518,818

CARRIER

Filed June 11, 1945 5 Sheets-Sheet 2

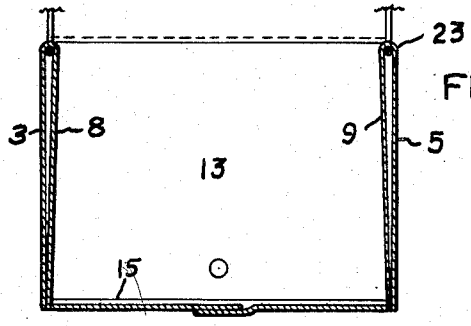


FIG. 6.

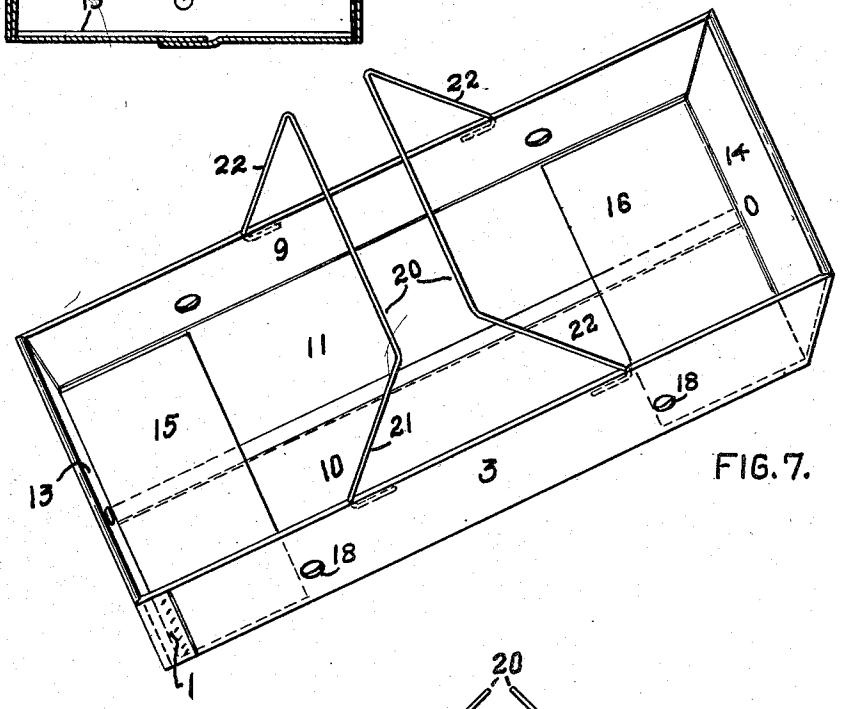


FIG. 7.

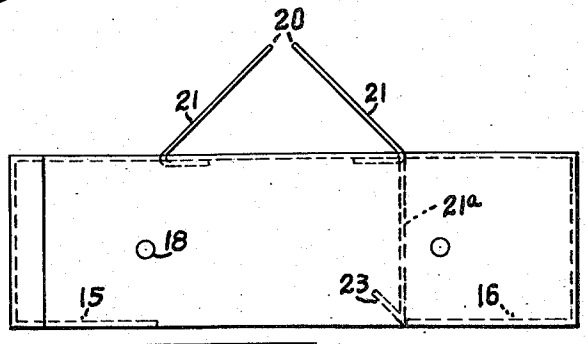
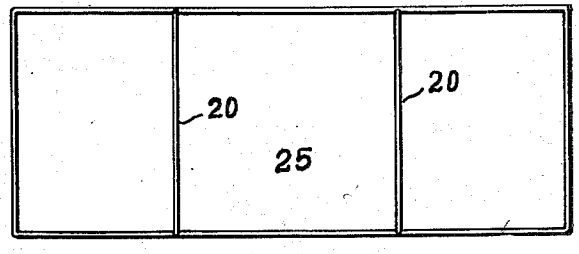


FIG. 8.

FIG. 9.



WILLIAM A. RINGLER,
INVENTOR.

BY Allen & Allen
Attorneys

Aug. 15, 1950 W. A. RINGLER 2,518,818

CARRIER

Filed June 11, 1945 5 Sheets-Sheet 3

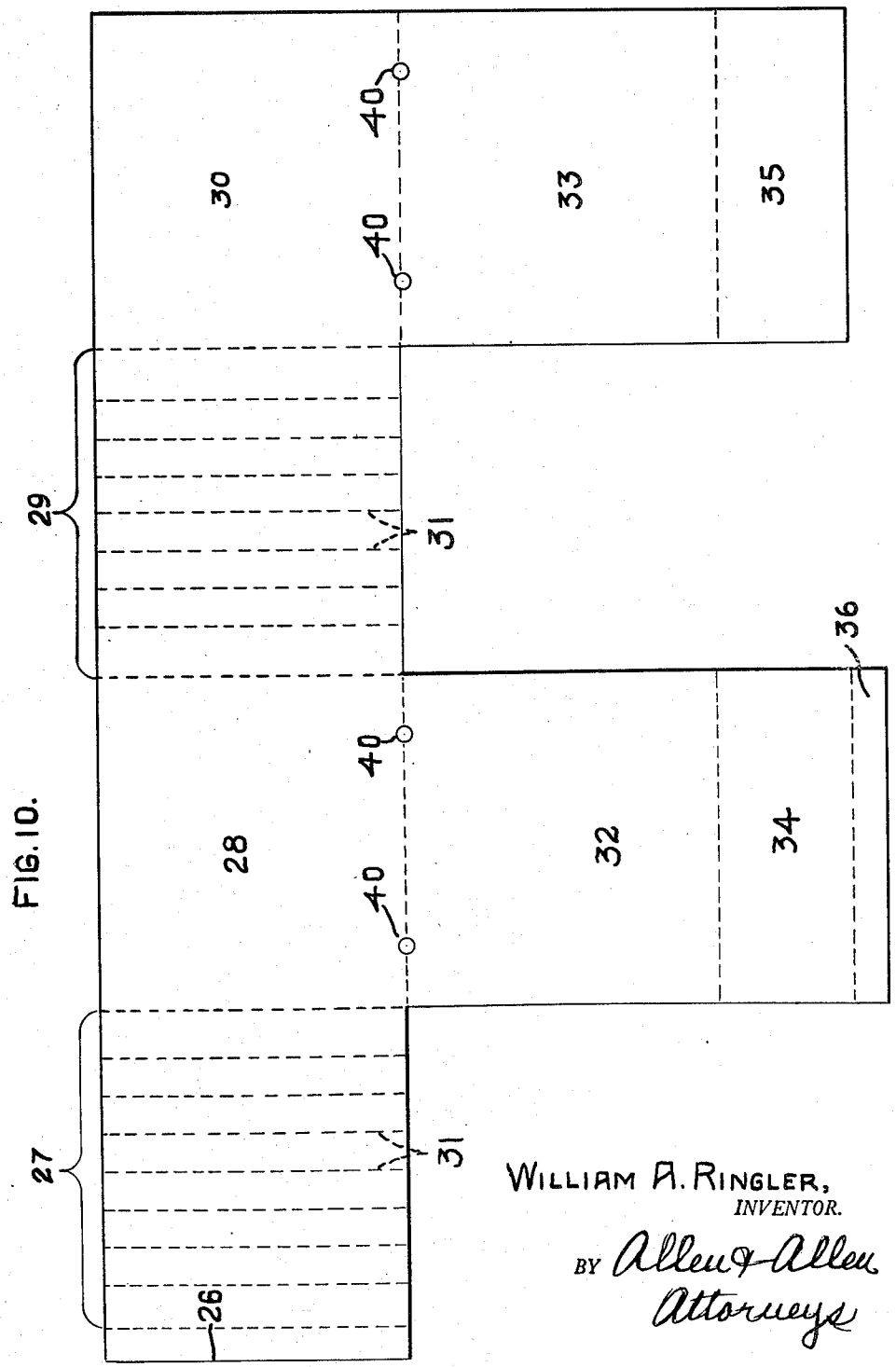


FIG. 10.

WILLIAM A. RINGLER,
INVENTOR.

BY Allen & Allen
Attorneys

Aug. 15, 1950 W. A. RINGLER 2,518,818

CARRIER

Filed June 11, 1945 5 Sheets-Sheet 4

FIG. 11.

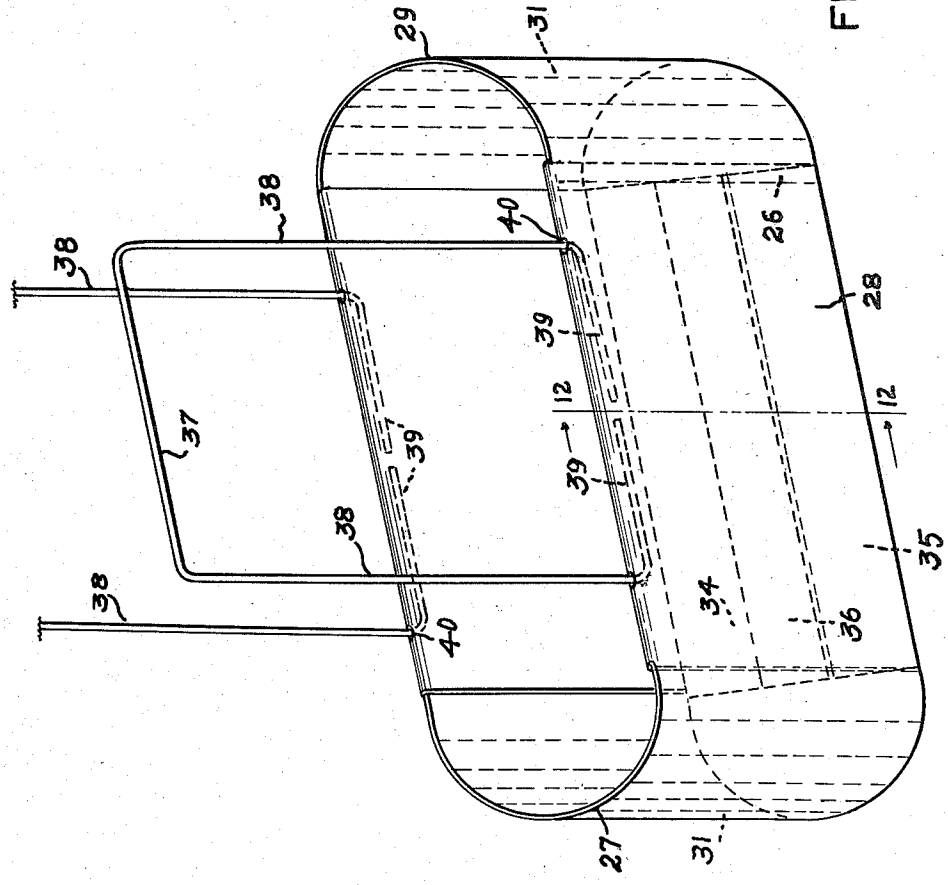
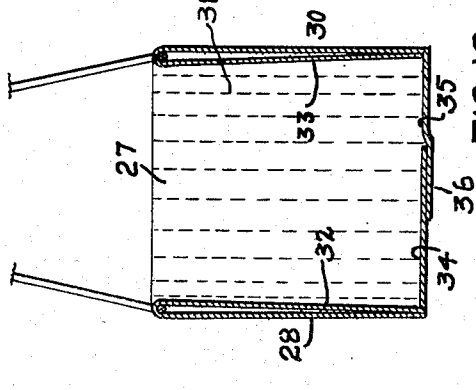


FIG. 12.



WILLIAM A. RINGLER.
INVENTOR.

BY Allen & Allen
Attorneys

Aug. 15, 1950 W. A. RINGLER 2,518,818

CARRIER

Filed June 11, 1945 5 Sheets-Sheet 5

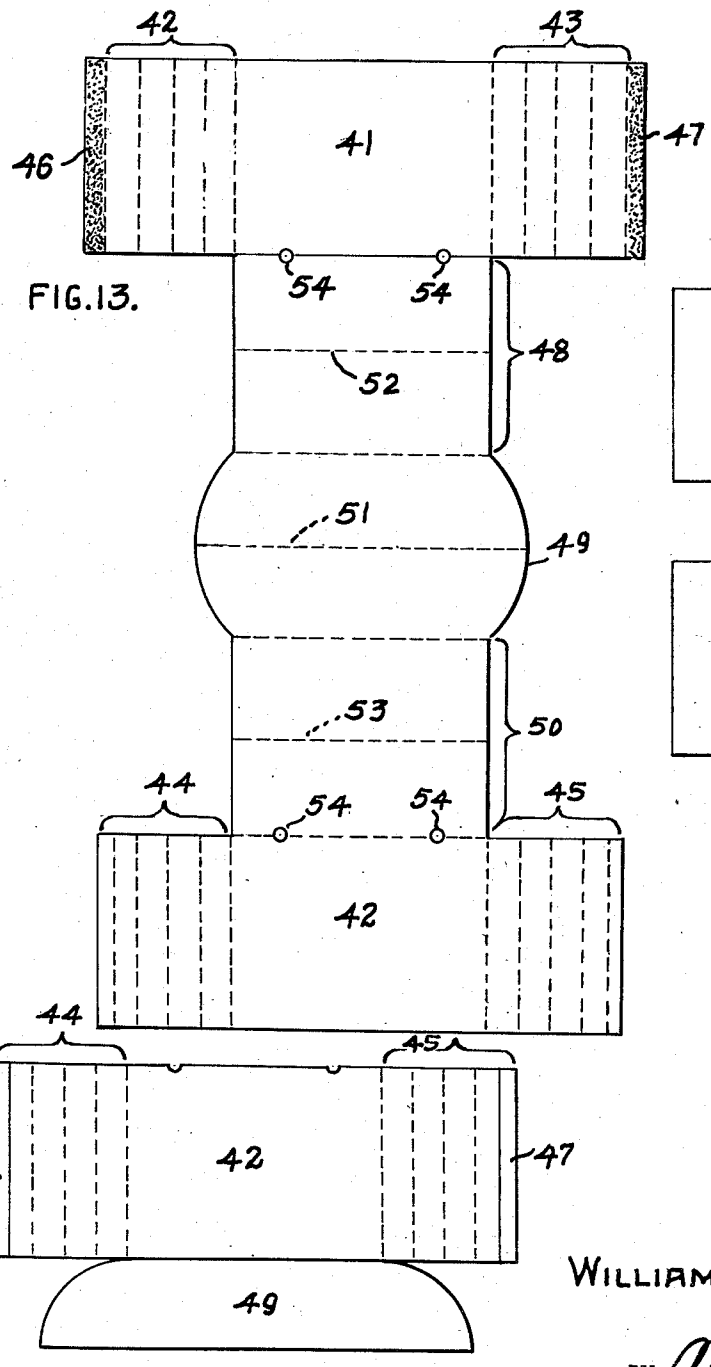


FIG.13.

FIG.14.

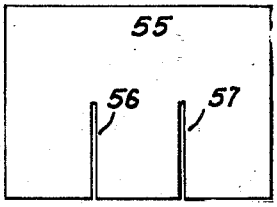


FIG.15.

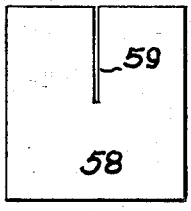


FIG.16.

WILLIAM A. RINGLER
INVENTOR.

BY Allen & Allen
Attorneys

Patented Aug. 15, 1950 2,518,818

UNITED STATES PATENT OFFICE

2,518,818

CARRIER

William A. Ringler, Wayne, Pa., assignor to The Gardner Board and Carton Co., a corporation of Ohio

Application June 11, 1945, Serial No. 598,800

7 Claims. (Cl. 229—52)

1

My invention relates to paper board carriers and has for its principal object the provision of collapsible or knocked-down paper board carriers which are improved as to strength and durability.

In a co-pending application entitled Carriers for Bottles, Serial No. 582,907, filed March 15, 1945, I have taught the production of knocked-down paper board structures comprising a closed band for surrounding the bottles to be carried and a loop-like portion connecting with side walls.

This loop-like portion has parts bendable at right angles to the walls of the expanded band, and a central upstanding portion separating the bottles and furnishing means for the attachment of a handle element.

In the present invention, from blank structures which are very much like those of my co-pending application I form, by a new mode of relating the parts, improved carrier structures which are both stronger and more flexible in use. They are not characterized by the up-standing central portion referred to. They are adapted to the provision of carriers for other articles than bottles, as will hereinafter be set forth.

The main objects of my invention and others which will be set forth hereinafter or will be apparent to one skilled in the art upon reading these specifications, I accomplish by the construction and arrangement of parts and in that mode of use of which I shall now describe exemplary embodiments.

Reference is made to the accompanying drawings wherein:

Figure 1 is a plan view of a blank for a fruit basket construction.

Figure 2 is a plan view of a cover means.

Figures 3 and 4 are respectively side and end elevations of a handle member.

Figure 5 is a plan view of the blank of Figure 1 in folded and glued condition.

Figure 6 is a transverse sectional view of the erected carrier.

Figure 7 is a perspective view of the erected carrier or basket.

Figure 8 is a side elevational view of the erected carrier showing a mode of disposal of the handle members for stacking purposes.

Figure 9 is a top plan view of the erected carrier showing the cover in place.

Figure 10 is a plan view of a blank for a bottle carrier.

Figure 11 is a perspective view of the erected bottle carrier.

Figure 12 is a transverse sectional view of the erected carrier.

2

Figure 13 is a plan view of a blank for another carrier showing an alternate way of forming the blank.

Figure 14 shows a blank of Figure 13 in folded and glued condition.

Figures 15 and 16 are plan views of partition members which may be employed with my bottle carriers.

Referring to Figure 1, I have shown a blank for a basket comprising an attachment flap 1, an end wall 2, a side wall 3, an end wall 4 and a side wall 5 in the order named, articulated together by the usual scored lines. The end walls are intermediately scored as at 6 and 7.

To one side of the side walls 3 and 5, I articulate members 8 and 9 having dimensions similar to those of the side walls. To the opposite edges of these members, I articulate wall portions 10 and 11, which are approximately of the same length as the side walls but approximately half the width of the end walls. An attachment flap 12 is articulated to the opposite edge of one of these members.

To the ends of the member 8, I articulate wall portions 13 and 14 which are approximately of the same dimensions as the end walls 2 and 4. These, at their lower edges, carry articulated flaps 15 and 16 which, as illustrated, are of the same depth as the members 10 and 11.

It will be noted, that with the members formed as described and illustrated, the blank is substantially rectangular in configuration, and can be formed by the usual cutting and scoring operations with very little waste.

It will be of assistance in setting up the knocked-down structure, especially if it is to be made of heavy board, to provide a score line 17 intermediate the wall member 9 as shown. Where the baskets are intended to contain fruit, ventilation may be desired; and in this event I provide the side walls 3 and 5 and the wall portions 8 and 9 with matching perforations 18 of any suitable size, shape and disposition. Also, I may provide the end walls 2 and 4 and the mating wall portions 13 and 14 with corresponding perforations 19.

In folding the blank of Figure 1, it is bent as shown in Figure 5 along the scored lines 6 and 7 with attachment of the flap 1 to the free marginal portion of side wall 5. This attachment may be accomplished by adhesive or by mechanical fastening means, such as staples or the like. The result of folding and attaching, as described, is the tubing of the band portion comprising the

walls 2, 3, 4, and 5. Wall portions 9 and 11 are at the same time brought to overlie wall portions 8 and 10; and the attachment flap 12 on the last mentioned wall portion may be folded over onto wall portion 11 and attached as set forth above. If the attachment is done in both cases adhesively, the folding and gluing of the blank may be accomplished by running it twice through the ordinary carton folding and gluing machines.

In the set up structure, the band portion comprising walls 2, 3, 4, and 5 will form the outer side and end walls of the carrier. Wall portions 8 and 9 will be bent at 180 degrees to the corresponding side wall portions 3 and 5, and will parallel them. Wall portions 10 and 11, joined together, will form the outer bottom of the structure. The upper edges of the side walls will be folded edges lying along the lines of articulation between walls 3 and 5 and wall portions 8 and 9.

In forming the erected carrier from the knocked-down structure of Figure 5, parts 15 and 16 are first folded with respect to parts 13 and 14 to which they are articulated, and then these folded parts are themselves folded rearwardly against wall portion 8 to get them out of the way. Then the band portion is squared up and the loop portion, consisting of the remainder of the parts, is passed through the band portion. This results in turning the loop portion inside out, and is facilitated when the board bends along score line 19.

The band portion is then turned upside down, wall 9 is brought to lie insie of and parallel to wall 5. In a similar manner, wall 8 is caused to parallel wall 3; and the bottom, consisting of part 10, 11, and 12, is flattened down. Next, wall 13 is swung to parallel end wall 2 and flap 15 is laid down on the bottom. In a similar manner, wall 14 is brought to parallel end wall 4 and flap 16 is laid down upon the bottom. The condition of the erected structure is shown in Figure 7. It will be noted that all lateral walls of the carrier are of double thickness and that the upper edges of the side walls present folded board edges. The bottom is of double thickness in part. It can be lined throughout if desired by increasing the depth of flaps 15 and 16 in the original blank; but inasmuch as this is somewhat wasteful of board, I prefer to line the bottom of the carrier with a separate piece of box board if greater strength or greater resistance to moisture is found to be desirable.

Handles are provided for the structure in the form of wire members illustrated in Figures 3 and 4. These have a band portion consisting of a top member 20 and depending legs 21 and 22. Angularly related parts 23 are bent over at the ends of the legs. The blank of Figure 1 shows small perforations 24 in the lines of articulation between the inner and outer side wall members and the handles are inserted through these perforations in a way which will be clear from Figure 7. It will also be clear from Figures 6, 7 and 8 that the bent over portions 23 of the handle members engage beneath the folded edges of the board along the lines of articulation between the inner and outer side wall members and thus serve to support the structure. The angular relation of the portions 23 to the legs 21 and 22 is such that the portions 20 of the handles may be brought close together for easy carrying.

The handles, however, may be depressed and rotated outwardly, i. e., toward the ends of the carrier, and then pressed downwardly so that the leg portions lie between the inner and outer side walls as indicated at 21*a* in Figure 8 and the top portions 20 of the handles lie directly across the carrier from one top edge to the other of the side wall portions. When the handles are in this position the carriers or baskets may be stacked, the handles being not only in a position to permit this but, also, serving as reinforcements across intermediate portions of the top of the carrier to help sustain the weight of other carriers imposed thereon.

For certain uses, I prefer to provide a top or cover for my basket in the form of a rectangular piece of board 25 (Figure 2) of the length of the carrier and having turned over flaps 26 and 27 at its ends. The width of the member 25 is preferably made somewhat greater than the transverse internal dimensions of the carrier so that it will be supported upon the side walls at its edges; and I may notch it as at 28 at the places where the handle members engage the side wall elements. It is put in place as shown in Figure 9; and since the handle portions 20 overlie the cover 25, the cover does not interfere with the alternate dispositions of the handles as shown in Figure 8, while the handle portions 20 serve to hold the cover in place in the stacked carriers.

In Figure 10, I have shown the blank for a bottle carrier dimensioned to hold a sales unit of three large size bottles. The blank presents an attachment flap 26, an end wall 27, a side wall 28, an end wall 29, and side wall 30 articulated together in the order named. The end walls are scored at intervals as at 31 to assist the board in bending, since it is desired that the end walls be curved in the erected carrier.

Inner side wall members 32 and 33 are articulated to the edges of the outer side wall members 28 and 30. Bottom forming portions 34 and 35 are articulated to the inner side walls, and one of these bears an attachment flap 36.

This structure may be tubed, as will readily be understood, by bending it upon the score lines located centrally of the end wall sections, with the attachment of flap 26 to the marginal portion of side wall 30. This will result in the superposition of the inner side wall and bottom forming members whereupon the attachment flap 36 may be bent over upon the bottom forming portion 35 and attached thereto.

The erected form of this carrier is shown in Figures 11 and 12 in perspective and cross section. It is formed by erecting the band portion and thrusting the loop consisting of the inner side walls and bottom through the erected band, causing the inner side walls to parallel the outer side walls and the bottom to extend across the erected band.

With such a carrier, designed for tall bottles, I prefer to use two separate handles of wire or the like, each comprising a band portion 37, leg portions 38 and turned over portions 39 at the ends of the legs.

These turned over portions may be inserted between the inner and outer side walls through perforations 40 along the line of articulation between the walls, so that the turned over portions 39 engage beneath the fold lines and thus support the carrier. Where desired the handles may be depressed and brought partially out of the way by thrusting the leg portions 38 down between the inner and outer side walls, as when it is desired to stack the carriers.

For bottles of different sizes and for sales units

of different numbers, my carriers will be dimensioned as may be required. In Figure 13, I have illustrated the blank for a carrier dimensioned for a sales unit of six beverage bottles; and this figure also illustrates another mode of blank formation applicable to all of the structures here illustrated. Instead of providing the outer and end and side walls in articulation in a line, the blank Figure 13 presents spaced side wall members **41** and **42** each of which at its ends carries side wall forming portions **42, 43, 44** and **45**. Certain of these end wall forming portions are provided with attachment flaps **46** and **47**.

The spaced side wall portions are connected by an integral strip of box board dimensioned and scored to provide an inner side wall **48**, a bottom **49** and an inner side wall **50**, in the order named. The bottom panel will have a medial score line **51**, and one or both of the inner side wall panels may be medially scored as at **52** or **53**.

In forming the knocked-down structure, the blank is folded over on the medial score line **51** of the bottom panel **49**, resulting in superposition of the inner and outer side wall members and of the end wall forming members, whereupon the attachment flaps **46** and **47** may be bent over and glued or otherwise attached to the side wall forming portions **44** and **45**. The shipping dimensions of the knocked-down structure may be made effectively smaller by thrusting the loop portions consisting of inner side walls **48** and **50** and the bottom **49** through the band, as illustrated in Figure 14. The manner of setting up this structure and the appearance of it when erected will be clear from a consideration of Figures 11 and 12 and the description pertaining thereto. Perforations **54** are provided along the lines of articulations between the inner and outer side wall elements. The same type of handle may be employed as is illustrated in Figure 11, or handles extending across the carrier from side wall to side wall may be employed. Where sales units involving more than one row of bottles are carried, partition members are frequently desired. These may be formed by providing a longitudinal partition member **55** as shown in Figure 15, slotted as at **58** in Figure 16 and reversely slotted as at **59**. These partition elements will be interlocked as readily understood in this art and may be positioned in my carriers.

Modifications may be made in my invention without departing from the spirit of it. Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A collapsible paperboard carrier structure comprising a permanently closed band portion for surrounding articles in said carrier, having an outer end wall, an outer side wall, an outer end wall and an outer side wall in articulation in the order named, median score lines in said outer end walls, extensions from the top edges of said side walls only, each of said extensions scored to form an inner side wall portion of the same depth as the side walls and articulated thereto, and another portion articulated to the outer edges of the first named portions and of only half the width to extend across the bottom of the erected band, one of said last named portions having a glue flap articulated to its outer edge, and adhesively secured to the outer marginal portion of the other last named portion, whereby said extensions together form a permanently closed loop, said loop extending through said band to form an erected structure with double-thickness side walls and a bottom, said double-thickness side walls being perforated for the attachment of handle elements.

2. The structure claimed in claim 1 including handle elements for said carrier comprising portions extending between the inner and outer side wall members and engaging the fold of paperboard at the line of articulation between the inner and outer side wall members.

3. A bottle carrier as claimed in claim 1 including handle elements for said carrier comprising portions extending between the inner and outer side wall members and engaging the fold of paperboard at the line of articulation between the inner and outer side wall members, there being one such handle engaged solely with each double-thickness side wall, and depressible between the inner and outer members thereof.

4. The carrier claimed in claim 1 including flaps of substantially the same area as the outer end walls articulated to lateral edges of one of the inner side wall members to form inner end wall members acting when positioned inwardly of the outer end walls to maintain the band portion in erected condition.

5. The carrier claimed in claim 1 including flaps of substantially the same area as the outer end walls articulated to lateral edges of one of the inner side wall members to form inner end wall members acting when positioned inwardly of the outer end walls to maintain the band portion in erected condition, and additional flaps articulated to the lower end edges of said first mentioned flaps and acting when folded angularly to said first mentioned flaps and lying parallel to said bottom to retain said first mentioned flaps in position.

6. The carrier claimed in claim 1 including flaps of substantially the same area as the outer end walls articulated to lateral edges of one of the inner side wall members to form inner end wall members acting when positioned inwardly of the outer end walls to maintain the band portion in erected condition, and additional flaps articulated to the lower end edges of said first mentioned flaps and acting when folded angularly to said first mentioned flaps and lying parallel to said bottom to retain said first mentioned flaps in position, and handle elements for said carrier comprising portions extending between the inner and outer side wall members and engaging the fold of paperboard at the line of articulation between the inner and outer side wall members.

7. The carrier claimed in claim 1 including flaps of substantially the same area as the outer end walls articulated to lateral edges of one of the inner side wall members to form inner end wall members acting when positioned inwardly of the outer end walls to maintain the band portion in erected condition, and additional flaps articulated to the lower end edges of said first mentioned flaps and acting when folded angularly to said first mentioned flaps and lying parallel to said bottom to retain said first mentioned flaps in position, and handle elements for said carrier comprising portions extending between the inner and outer side wall members and engaging the fold of paperboard at the line of articulation between the inner and outer side wall members, said handle elements extending in spaced relation across said carrier from side wall structure to side wall structure.

WILLIAM A. RINGLER.

(References on following page)

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
736,955	Garman	Aug. 25, 1903
1,217,029	Long	Feb. 20, 1917
1,493,460	Pinkerton	May 6, 1924
1,535,436	Nordstrom	Apr. 28, 1925
1,971,863	Lupton	Aug. 28, 1934
2,179,555	Kells	Nov. 14, 1939
2,218,360	Rokol	Oct. 15, 1940

FOREIGN PATENTS

Number	Country	Date
202,503	Great Britain	Aug. 23, 1923