

March 3, 1953

M. E. HOLY  
BOTTLE CARRIER

2,630,264

Filed April 19, 1949

3 Sheets-Sheet 1

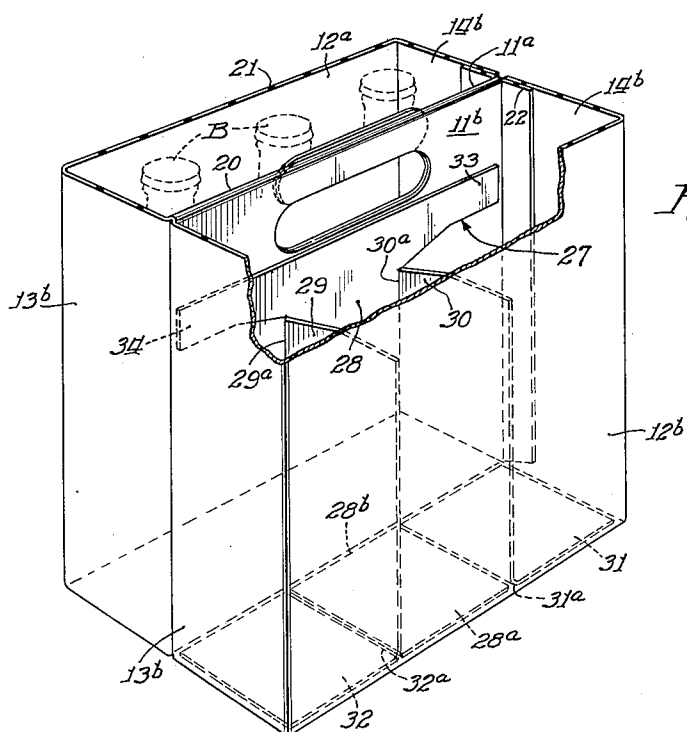


Fig. 1

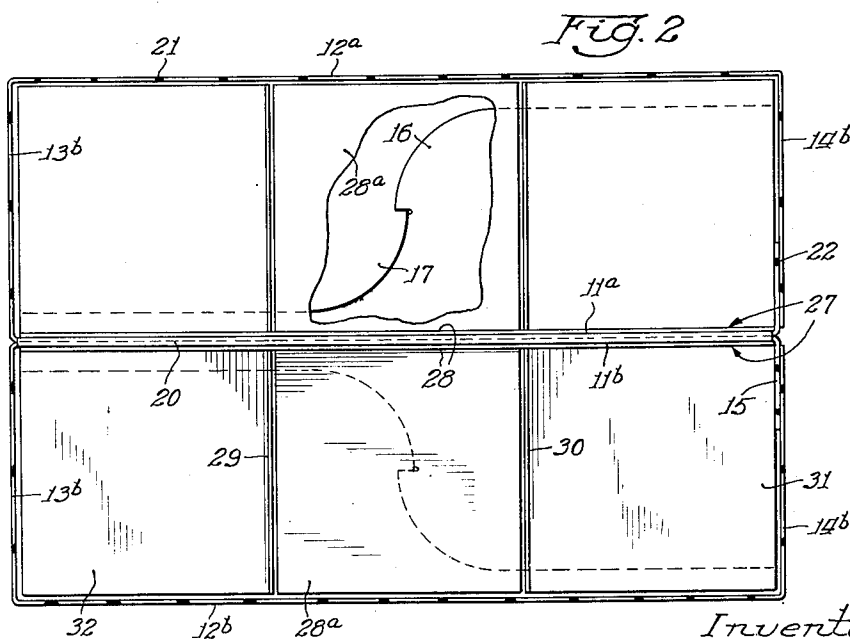


Fig. 2

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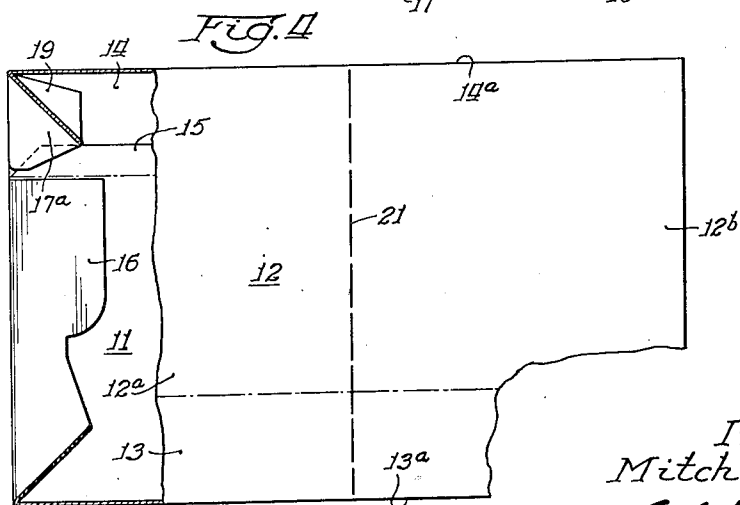
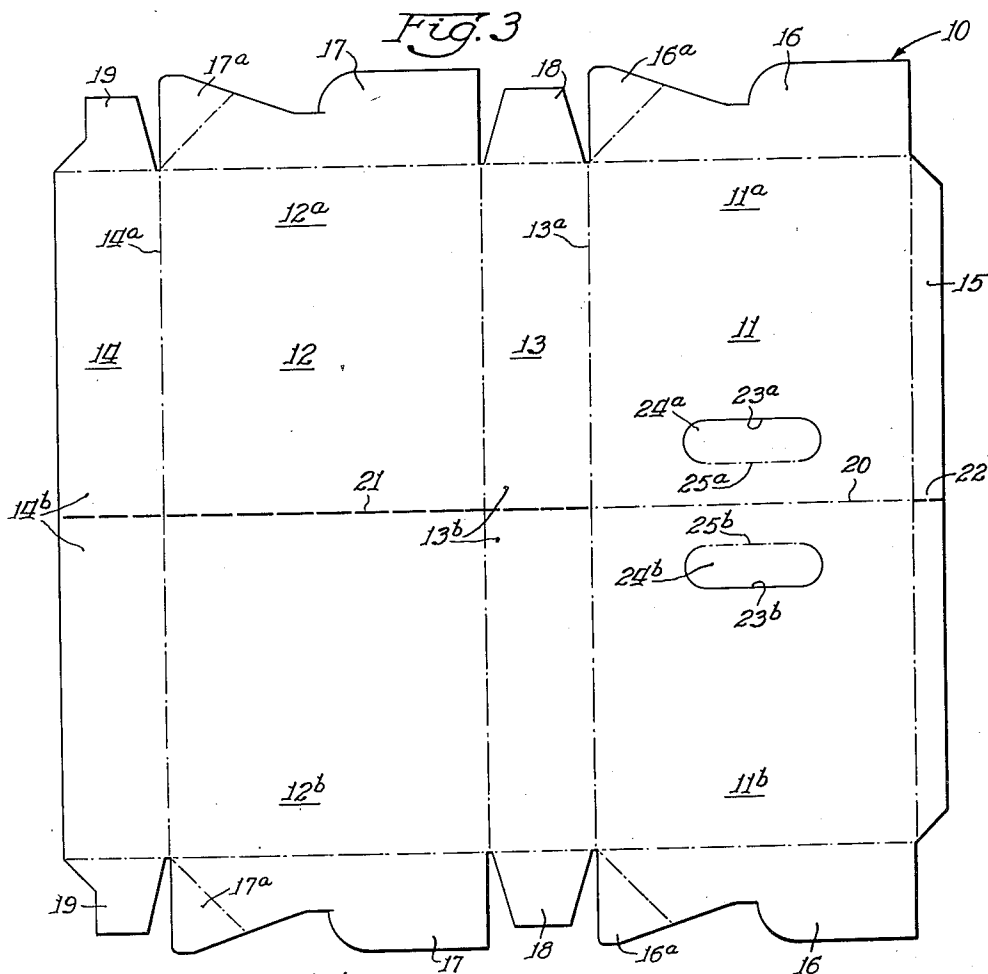
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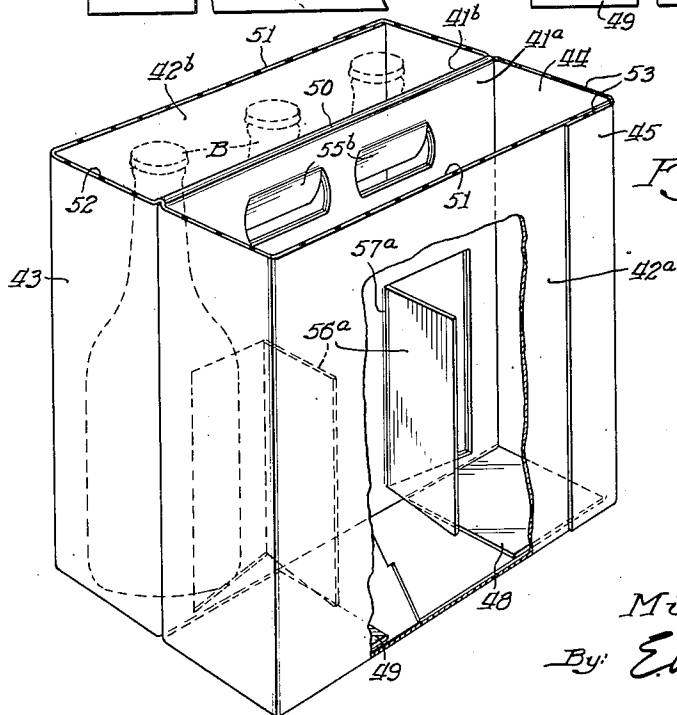
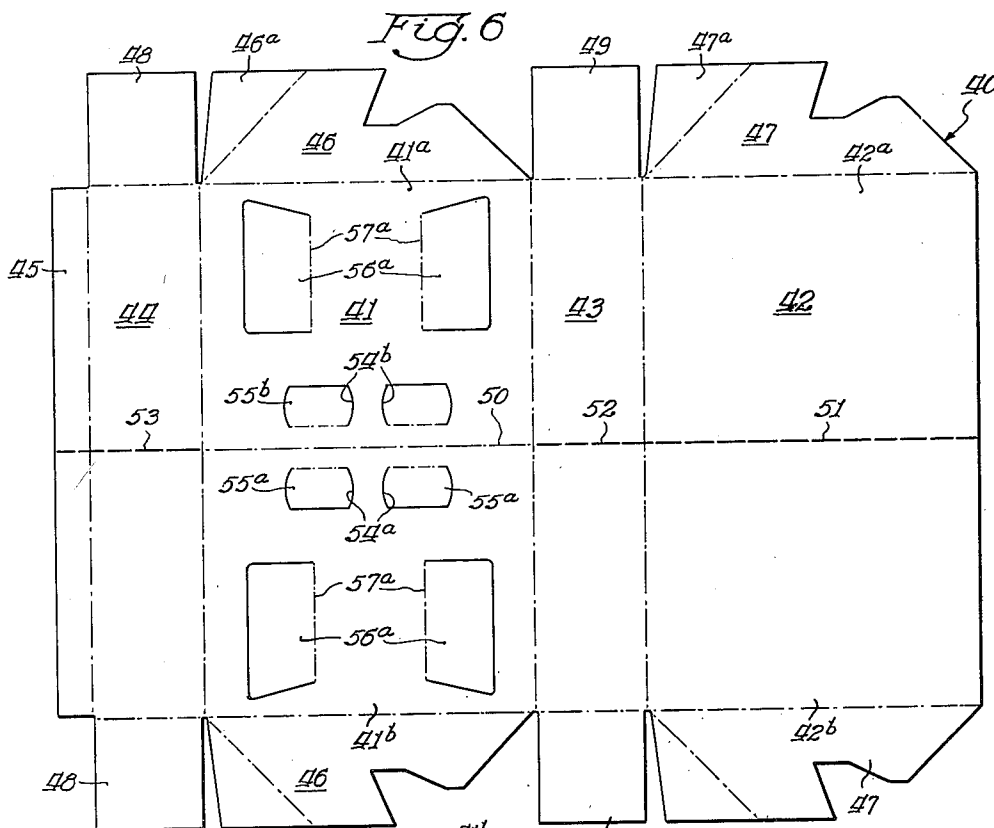
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3 Sheets-Sheet 3



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## UNITED STATES PATENT OFFICE

2,630,264

## BOTTLE CARRIER

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## 1 Claim. (Cl. 229—39)

1

The present invention relates to paperboard containers and more particularly to folding or collapsible cartons adapted to hold a plurality of uniformly shaped objects such as bottles, cans, and similar articles.

One object of the present invention is to provide a carton that can be carried readily in the hand and which is convenient for use in carrying out a small group of bottles from a retail store.

Another object of the invention is to provide a collapsible type carton which can be shipped to the user in collapsed condition and quickly set up by him for use in receiving articles without requiring the use of staples, glue, cord or other securing means to condition the carton for carrying bottles and other objects from a retail store to the home.

Another object of the invention is to provide a carton having two sections or compartments, one on each side of a handle member, and so forming the sections or compartments that they are originally of tubular form in which the carton sections are in end-to-end alignment.

A still further object of the invention is to provide a carton in the form of an elongated tube with enclosure elements at each end which are adapted to lie folded within the tube while in flattened condition and which will move to closure forming position when the container is expanded into tubular form, certain of the carton walls being provided with weakened lines to enable the carton, after being brought to an expanded condition, to be formed into two compartments or sections located side by side, such compartments or sections having a common wall in which finger openings are provided to form a carrying handle.

Other objects of the invention will become apparent in the description which follows and will be more specifically pointed out in the claim appended hereto.

In the drawings:

Fig. 1 is a perspective view of a carton formed in accordance with one embodiment of the invention showing such carton in set-up condition and providing two compartments for carrying bottles or other articles;

Fig. 2 is a plan view of the carton in set-up condition;

Fig. 3 is a view of the carton blank as it appears prior to the gluing operation;

Fig. 4 is a view of the carton as it appears after the gluing operation in which the carton is in the form of a flattened tube, certain parts being broken away to show the position of the closure elements;

2

Fig. 5 is a perspective view of a carton similar to the carton shown in Fig. 1, illustrating a modified form; and

Fig. 6 is a view of the blank corresponding to Fig. 5.

Referring more particularly to Figs. 1 to 4, inclusive, of the drawings the carton blank, indicated as a whole at 10, comprises two relatively wide side walls 11 and 12 and two relatively narrow side walls or edge walls 13 and 14. The side wall 11 carries an attaching flap 15 which is adapted to be secured as by means of glue to edge wall 14 to form the carton into a tube.

The side walls 11 and 12 carry at each end thereof closure flaps 16 and 17 and the edge walls 13 and 14 carry at each end thereof closure flaps 18 and 19. The respective closure flaps 16 and 17 are so shaped as to have cooperative inter-locking parts when the carton is in set-up condition. The respective flaps 18 and 19 on the edge walls are adapted to be secured in a suitable manner as by means of adhesive to flap sections 16a and 17a on the flaps 16 and 17 respectively. With these flaps so constructed and secured together a so-called "automatic" action of the flaps is effected by the movement of the walls of the carton to expanded tubular form. The specific construction of closure flaps forms no part of the present invention except that the arrangement of flaps is preferably of the so-called automatic type, well-known in carton manufacture. An arrangement of this type is illustrated, for example, in the patent issued to Parks et al., dated August 13, 1935, No. 2,011,232.

The walls 11, 12, 13 and 14 are preferably treated so that the carton can readily be formed into two sections. For this purpose wall 11 is formed with a centrally positioned fold line 20, and the walls 12, 13 and 14 are formed with a weakened line 21 which extends uninterruptedly across such walls as best illustrated in Fig. 3. The attaching flap 15 which is adapted to be secured to the edge wall 14 is formed with a weakened line 22, which is in alignment with the weakened line 21. By the fold line and the weakened lines just described the carton wall and attaching flap are each divided into two parts 11a, 11b, 12a, 12b, etc.

The wall sections 11a and 11b are each formed with finger openings 23a and 23b, the stock of such finger openings being left in, as indicated at 24a and 24b and is hingedly joined to the wall section along fold lines 25a and 25b.

The carton blanks shown in Fig. 3 are run over suitable folding and gluing machinery which folds the blanks along crease line 13a between

3

walls 11 and 13 and crease line 14a between walls 12 and 14 thereby bringing walls 11 and 14 to lie against walls 12 and 13 with the attaching flap underlying the edge portion of the edge wall 14. Prior to the folding of the edge and side walls to lie in parallelism with each other the closure flaps 16, 17, 18 and 19 are folded inwardly with the flap portion 16a at each end of the blank suitably glued to flap 18 and the flap portion 17a suitably glued to flap 19, substantially as illustrated in the above-mentioned Parks patent.

After the carton has been glued it will take the form illustrated in Fig. 4 and is then ready for delivery to the user who may employ the carrier to receive six articles such as bottles B, B. For the sake of clarity in the drawings only three bottles are indicated.

When it is desired to use the carton for the retention of articles, the user will expand the carton to bring it into tubular form. This may be done by pressing inwardly upon the opposite edges formed by crease lines 13a and 14a of the collapsed carton. Pressure on the edges of the collapsed carton not only brings the carton into open, rectangular shape, but also moves the closure flaps toward closure forming position. With the carton thus set-up it can be brought into the condition illustrated in Fig. 1 by applying a small amount of force to bend the carton along fold line 20, thereby breaking the walls along the weakened lines 21 and 22 and enabling wall sections 11a and 11b to be brought into flat contact with each other. The flaps 24a and 24b will then be swung together in a lateral direction thus bringing one of these flaps through the finger opening in the other wall section. This will tend to retain the wall sections 11a and 11b in contact as illustrated in Fig. 1. The carton is then ready, if desired, to receive bottles or other articles.

In some cases it is desirable to provide partition and cushioning elements such as designated as a whole at 27 in Figures 1 and 2. For the sake of simplicity of illustration only one of these elements is shown in Figure 1. The element 27 is preferably formed of a single blank of foldable paperboard and comprises a center panel 28 and wing sections 29 and 30 defined from the center panel by crease lines 29A and 30A as to permit such wing sections to be folded to extend transversely of the carton. At the lower end of the center panel 28 there is provided a flap 28a and at the lower ends of the wings 29 and 30 there are provided flaps 31 and 32. These flaps are defined from the center panel 28 and wings 29 and 30 by fold line 28b, 31a and 32a respectively. The flaps 31 and 32 thus are adapted to rest flat upon the upper surfaces of the closure elements at the extremities of the carton section and flap 28a extends from the center panel 28 to the outer wall section 12b. These flaps afford a degree of reinforcement for the closure element as well as providing additional cushioning for the articles in the carton and, at the same time, tend to retain the vertical wings 29 and 30 in positions transversely of the carton section. The upper portion of the center panel 28 is formed with extended portions 33 and 34, the ends of which lie closely adjacent the walls 13b and 14b thereby tending to retain the wing sections 29 and 30 in vertical position prior to the insertion of articles within the sub-compartments thus formed by these wing sections.

After expanding the carton and bringing it into carrying position and after the insertion of

4

the partition members 27 just described, the carton is in condition to receive bottles or other articles and to retain such objects for transportation from the retail store to the home.

In the modified form of the invention illustrated in Figs. 5 and 6 the blank 40 comprises side walls 41 and 42 and edge walls 43 and 44 with an attaching flap 45 extending from the edge wall 44. Closure flaps 46 and 47 are provided on the side walls and closure flaps 48 and 49 are provided on the edge walls. A fold line 50 is formed in the side wall 41 and weakened lines 51 and 52 are formed in the respective side and edge walls 42 and 43. A weakened line 53 is also formed in the edge wall 44 and attaching flap 45.

As in the first described form the crease line and the weakened lines divide the various carton walls into wall sections 41a, 41b, 42a and 42b, etc.

Finger openings 54a and 54b are provided with the stock left therein, indicated at 55a and 55b, providing tabs which are foldable along one side of the finger opening.

In this form of the invention partition elements are provided which are in the form of flaps cut out along three sides from the respective wall sections 41a and 41b and are left hingedly secured to such wall sections along fold lines 57a. As in the case of the first described embodiment the blanks will be run over a folding and gluing machine to secure attaching flap 45 to side wall 42 and to fold the closure flaps inwardly and secure the flaps 48 and 49 to the flap portions 46a and 47a. When thus folded and glued the collapsed carton will be in a condition similar to the form illustrated in Fig. 4. From this condition the carton may be set-up into the carrying condition in the same manner as previously described and as so set-up the carton will appear as indicated in Fig. 5, one difference, however, being that the partition sections, 56a, are shown swung outwardly at a 90° angle in which position the lower portions of these partition elements engage against a free edge portion of edge wall flaps 48 and 49. This engagement has the effect of retaining the partition member substantially in a position at right angles to its supporting panel. When the carton is so set-up it is then ready to receive six bottles or other articles.

As illustrated in Figs. 1 and 5 the cartons herein disclosed are well adapted to receive bottles of a height substantially the same as the height of the carton sections, or, if desired, the carrier can be used for bottles which project somewhat above the carton sections.

It has previously been described how the blank of Fig. 3 or the blank of Fig. 6 may be folded into the form of a flat collapsed elongated tubular structure with the weakened lines unruptured so that the user may expand the carton into erected tubular form and thereafter "break" the structure along the weakened lines by swinging the two erected carton sections into side-by-side relationship. This method of erecting the carton is predicated upon the fact that the carton manufacturer will ship the elongated, collapsed, flat, tubular carton to the retailer who will perform the erecting operation as previously described. If desired however the carton manufacturer may elect to perform an initial fold upon the elongated flat tubular carton by bending the same along the line 20 (in the case of the structure of Fig. 4) or along the line 50 (in the

case of the carton of Fig. 5). This bending or folding operation will be performed upon the flat tubular blank and will automatically serve to break one carton side and two carton end walls without necessitating opening up the carton sections into erected tubular form. This will permit a large number of the structures to be stacked and shipped in a more compact condition and in a smaller space.

When this latter method of packaging the collapsed tubular cartons is selected, the meeting walls 12 and 12b or 41 and 41b (as the case may be) may be permanently glued together by the application of glue or a suitable adhesive to selected areas of either or both contacting walls.

The operation of setting up the container in the form just described is similar to that described in connection with the first form of the invention, with particular reference to Fig. 4, except that it will be necessary for the user only to push inwardly on the edges of the collapsed carton which will cause the two connected sections in face-to-face relation to become simultaneously expanded and, at the same time, will cause the separate closure elements of each section to assume their closing position.

Instead of applying the glue while the carton is in collapsed condition, it is obvious that the glue may be applied after the sections have been brought to expanded form and just before bringing them into face-to-face relation.

While the present description sets forth a preferred embodiment of the invention, certain changes may be made in the construction without departing from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claim rather than to the foregoing description to indicate the scope of the invention.

I claim:

A carton in an expansible, flattened tube form, the carton having a plurality of side walls of even number not less than four, said walls being connected with one another along substantially parallel fold lines and collapsed against one another along opposite fold lines, and an automatic type closure at each end of the carton tube, said closures being adapted to close the ends of the carton when the walls are moved to expanded tubular position, said carton being formed with a continuous centrally disposed and transversely extending weakened line across all but one of the walls to enable the carton to be broken, either before or after such expansion of the walls, into two juxtaposed collapsed or expanded article-carrying sections as and when erected, said one wall being foldable along a hinge line extending between the ends of said weakened line to bring one part thereof into face to face relation with the other part, the said parts of said one wall having registrable finger openings adjacent to said hinge line to facilitate carrying the erected carton.

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