

Dec. 28, 1948.

M. G. HALL ET AL

2,457,308

BOTTLE CARRIER

Filed Nov. 9, 1945

2 Sheets-Sheet 1

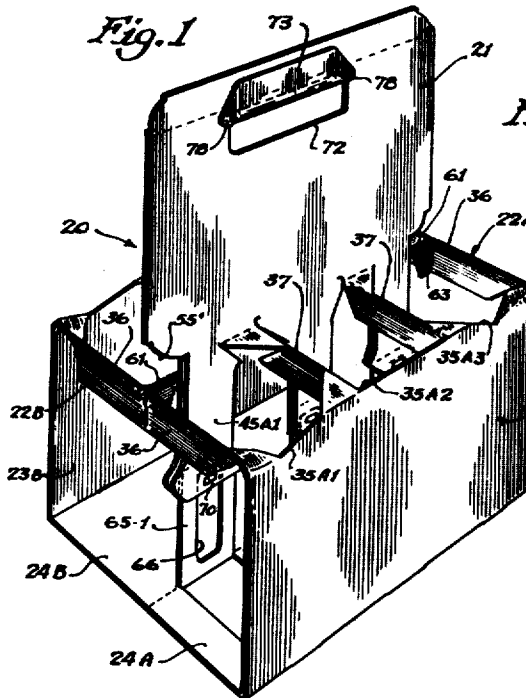


Fig. 2

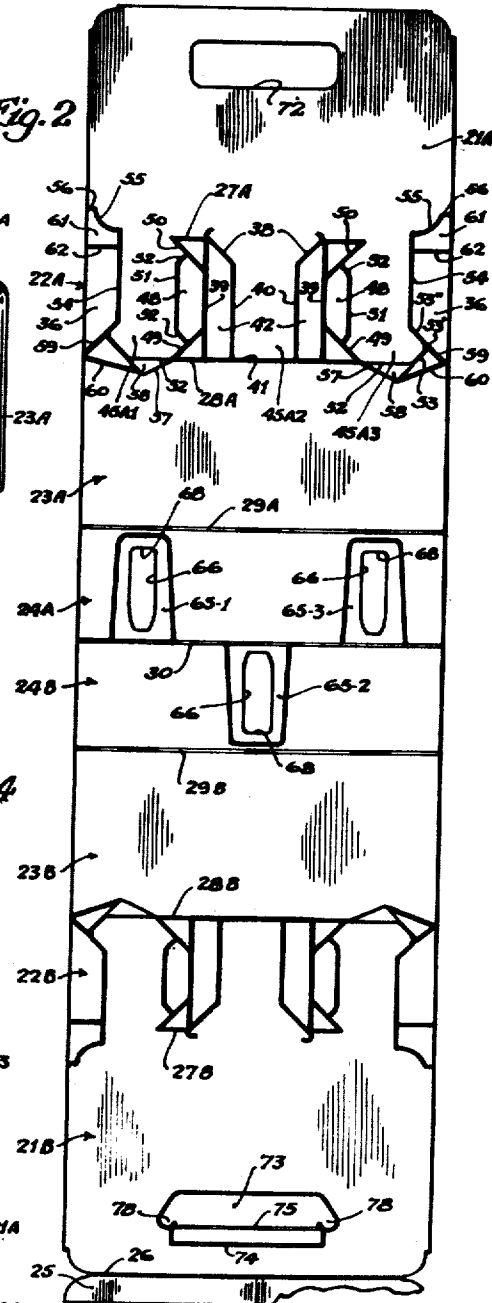


Fig. 3

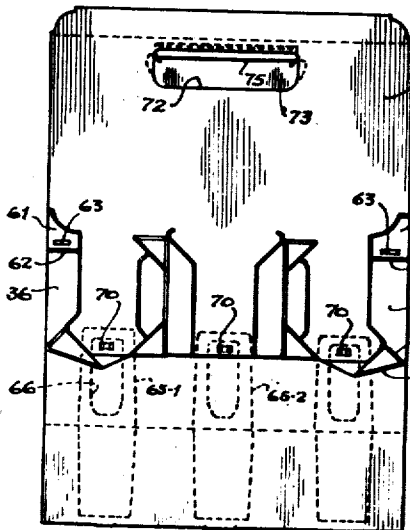
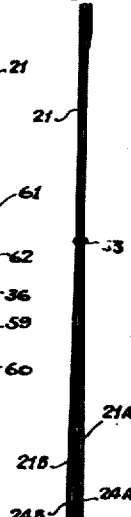


Fig. 4



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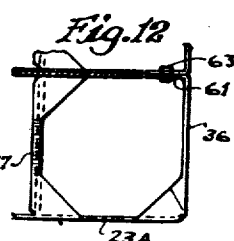
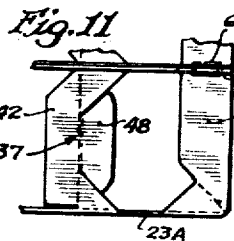
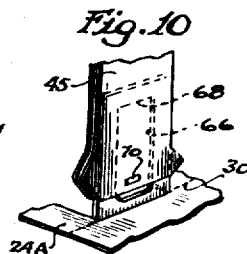
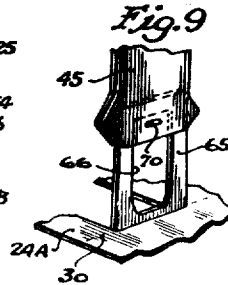
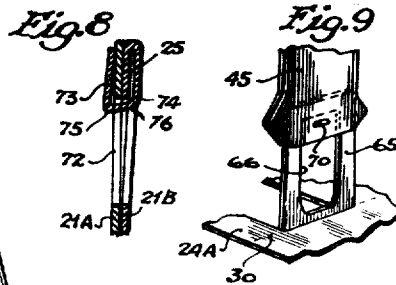
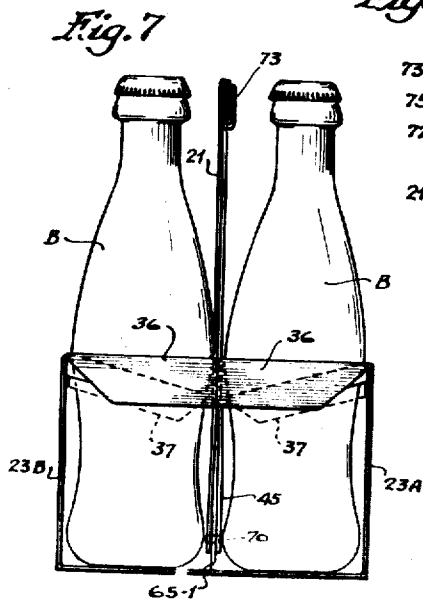
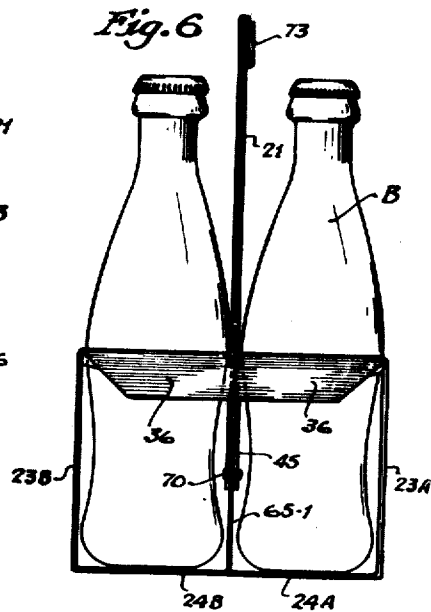
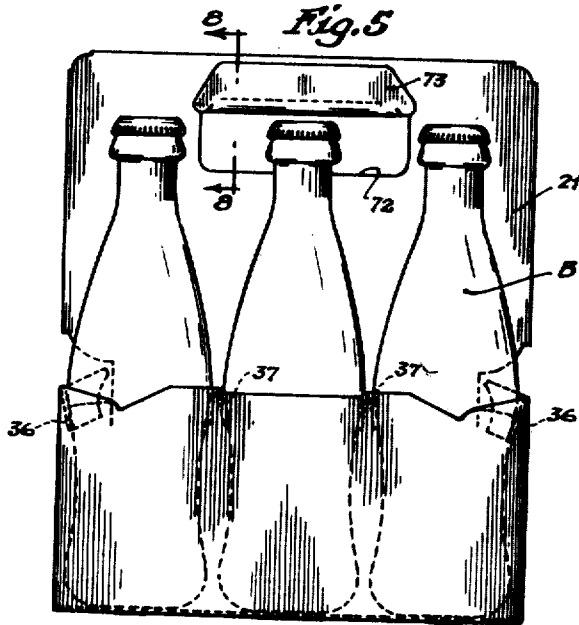
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UNITED STATES PATENT OFFICE

2,457,308

BOTTLE CARRIER

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Application November 9, 1945, Serial No. 627,680

4 Claims. (Cl. 224-45)

1

This invention relates to bottle carriers and particularly to bottle carriers that are fabricated in a collapsible form from material such as cardboard.

Bottle carriers of the general character to which this invention relates have heretofore been made from material such as cardboard so as to afford an upstanding handle section adapted to be grasped by the user and having a pair of bottle receiving sections on opposite sides of the handle into which bottles may be inserted in a downward direction so as to rest upon a bottom wall that is associated with the bottle receiving sections by means of downwardly extended side walls that embrace the outer sides of the bottles. According to the most usual practice in the art, such bottle carriers are arranged to accommodate two rows of three bottles each, the two rows being disposed in symmetrical relation on opposite sides of the handle section. In the use of such carriers it is usually considered to be essential that the parts be so formed and arranged that the loaded carriers may be placed in the usual cases in which the particular kind of bottles are usually handled, and it is also important that the carriers be so constructed that such carriers may be stacked one upon the other, thereby to enable the loaded carriers to be economically stacked and stored. For these reasons it is important that the handle section be so arranged that it may be depressed to a position beneath the tops of the bottles when the carriers are to be stacked one upon the other.

In our co-pending application, Serial No. 604,654, filed July 12, 1945, we have disclosed a bottle carrier that is so constructed and arranged as to enable the weight of the bottles in a bottle carrier to be transmitted directly from the central portion of the bottom wall to the handle section in such a manner that the handle section may readily be depressed when the user desires to stack one bottle carrier upon another, and by the arrangement thus afforded, the use of relatively thin and light weight separating webs in the bottle receiving sections of a bottle carrier is rendered practical.

In the attainment of relatively small dimensions in a bottle carrier so as to enable the carrier to be disposed in the usual cases in which the bottles are transported, the width of the bottle carrier, that is the dimension parallel to the two rows of bottles, is quite important and must be only slightly more than the combined diameters of the three bottles in a row, and in attaining this result, it is customary to make the webs that

2

separate the bottles so as to be quite thin, and in respect to the two webs that are disposed on opposite sides of the central bottle of one of the rows, this may be readily and easily accomplished in the manner disclosed in the co-pending application of Joseph L. Lyons, Serial No. 301,915, filed October 30, 1939, now abandoned, or patent to Joseph L. Lyons, No. 2,432,481 filed February 7, 1942. As to the end webs of each bottle receiving section, however, the attainment of the desired smallness of dimension has heretofore required the use of reinforcing flanges along the ends of the bottle receiving sections, and these reinforcing flanges have necessitated the use of added width in the blanks from which the carriers are made, and to enable such reinforcing flanges or flaps to be eliminated while still maintaining the desired smallness of dimension of the carrier that is a still further object of the present invention. Other and related objects are to form the end webs of the bottle receiving sections of a bottle carrier in such a way that these webs assume an angular position when the bottles are in position, to so form such end webs of the bottle receiving sections that although they are disposed in such generally angular position, these webs may bend readily and easily as an incident to the movements required when the handle section is depressed or elevated, and to so form such end webs that loading of the end bottles in the carrier is facilitated.

When the material is cut and formed to afford bottle receiving openings in the bottle receiving sections of the carrier, a portion of the material is utilized in forming the bottle separating flaps joined to and forming part of the webs of the bottle receiving sections, while other portions of the material is left in a connected and unscored relationship with respect to the handle section so as to thereby afford downwardly projecting bottle cushioning flaps disposed between the rows of bottles in the carrier; and a further object is to enable such material to be so distributed in forming the bottle cushioning flaps and bottle separating flaps that maximum efficiency and effectiveness of bottle cushioning separating is attained by such flaps.

Other and further objects of the present invention will be apparent from the following description and claims as illustrated in the accompanying drawings which, by way of illustration, show a preferred embodiment and the principle thereof and what we now consider to be the best mode in which we have contemplated applying that principle. Other embodiments of

the invention embodying the same or equivalent principle may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claims.

In the drawings,

Fig. 1 is a perspective view of a bottle carrier embodying the features of the invention, the carrier being shown in its fully erected position;

Fig. 2 is an elevational view of one face of a blank that is utilized in constructing the bottle carrier of Fig. 1;

Fig. 3 is an elevational view of one side face of the carrier of Fig. 1 when the carrier is in its collapsed condition;

Fig. 4 is an end elevational view of the collapsed carrier shown in Fig. 3;

Fig. 5 is a side elevational view of the carrier with the bottles loaded therein;

Fig. 6 is an end elevational view of the loaded carrier;

Fig. 7 is a view similar to Fig. 6 and showing the parts in the positions which they assume when the handle section is depressed for purposes of stacking;

Fig. 8 is a fragmental sectional view taken substantially along the line 8-8 of Fig. 5;

Fig. 9 is a fragmental perspective view showing the relationship of the weight transmitting elements when the handle section is in the upper or carrying position shown in Fig. 6;

Fig. 10 is a view similar to Fig. 9 and showing the positions of the weight transmitting elements when the handle section is depressed to the position shown in Fig. 7;

Fig. 11 is a fragmental plan view of one of the end webs in its horizontal position assumed during erection of the carrier; and

Fig. 12 is a view similar to Fig. 11 and showing the end web in its vertical relation that it assumes as a bottle is put in position.

In the form chosen for disclosure herein the invention is embodied in a bottle carrier 20 that is in most respects similar to the bottle carrier shown in our aforesaid copending application, and this carrier, in the erected form shown in Fig. 1 of the drawings, comprises an upstanding handle section 21, a pair of generally horizontal bottle receiving sections 22A and 22B extended outwardly from opposite sides of the lower ends of the handle section, side wall sections 23A and 23B extended downwardly from the outer side edges of the respective bottle receiving sections, and a pair of connected bottom wall panels or sections 24A and 24B extended between and connected to the lower edges of the side walls. The carrier 20 is particularly adapted to contain six bottles B arranged in two rows of three bottles each, one row being disposed in the bottle receiving section on each side of the handle section 21.

The bottle carrier 20 of the present invention is formed from a material such as cardboard, and in the production of the carrier, the cardboard stock is initially formed as an elongated rectangular blank that is shown in detail in Fig. 2 of the drawings. The elongated blank has a glue flap 25 formed along one end thereof so as to be joined along a fold line 26 to the edge of a panel 21B that in the finished carton will form a part of the handle section 21. At its other end the blank is formed to afford a panel 21A that will form the other side of the handle section 21 in the finished carton, and intermediate the panels 21A and 21B, the parts that are to form the bottle receiving

sections 22A and 22B, the side wall sections 23A and 23B and the bottom panels 24A and 24B are disposed. Thus the bottle receiving section 22A is joined to the adjacent edge of the panel 21A along a discontinuous fold line 27A, while the other edge of the bottle receiving section 22A is joined to one edge of the side wall section 23A along a discontinuous fold line 28A. The other or lower edge of the side wall section 23A is joined to one edge of the bottom panel 24A along a fold line 29A, while the other edge of the bottom panel 24A is joined to one edge of the other bottom panel 24B along a fold line 30 that is located midway between the fold line 26 and the opposite end of the blank.

The corresponding elements of the other side of the carrier 20 are, in the blank of Fig. 2, similarly joined together along fold lines as hereinabove described. Thus the bottle receiving section 22B is joined along its opposite edges to the panel 21B and the side wall section 23B along discontinuous fold lines 27B and 28B respectively, while the other or lower edge of the side wall section 23B is connected to the outer or other edge of the bottom panel 24B along a fold line 29B.

It has been pointed out hereinabove that each of the bottle receiving sections 22A and 22B is adapted to receive a row of three bottles B, and each such bottle receiving section is therefore provided with three bottle receiving openings which, in the bottle receiving section 22A, are indicated as 35A1, 35A2, and 35A3. In forming or defining these three bottle receiving openings, each bottle receiving section is arranged to afford a pair of end webs 33 which define the outer end edges of the bottle receiving openings 35A1 and 35A3, while a pair of webs 37 are provided in spaced relation to each other and with respect to the end webs 33 so as to thereby define the inner edges of the end openings 35A1 and 35A3 and the webs 37 also define the opposite side edges of the central opening 35A2.

The webs 37 of the bottle receiving sections are in the present case formed substantially in the manner disclosed in the aforesaid patent to Lyons No. 2,432,481, filed February 7, 1942, thereby to render these webs relatively thin when they are in their operative condition shown in Fig. 1. Thus as will be evident in the blank illustrated in Fig. 2, the central opening 35A2 is formed by a pair of angularly positioned slits 38 extended from spaced portions of the fold line 27A in converging relationship, such slits 38 being arranged at their remote ends so as to meet not only with the portions of the fold line 27A but also with parallel fold lines 39 that are disposed perpendicular to the fold line 27A. The two angular slits 38 are arranged respectively so as to meet a pair of spaced parallel slits 40 which are, in turn, arranged parallel to the fold lines 39 and the slits 40 and the fold lines 39 are extended so as to meet a slit 41 that is formed on the fold line 28A so as to extend between the two fold lines 39. The material between the fold line 39 and the slits 38 and 40 is utilized to form a pair of bottle spacing flaps 42 that are joined to the respective webs 37 along the fold lines 39. Thus the slits 38, 40 and 41 cooperate to form a generally rectangular flap 45A2 that is disposed in Fig. 2 between the two flaps 42, and the flap 45A2 is joined in an unbroken or uncreased relationship along one of its sides to the panel 21A. This relationship is such that in the erected carrier, the flap 45A2 remains in the plane of the panel 21A so as to serve as a down-

5

wardly bottle cushioning flap disposed between the central bottles of the two rows.

While the flaps 42 that are thus afforded on the webs 37 will have a bottle separating and cushioning action when the carrier is loaded, the webs 37 are also provided with additional flaps 48 formed so as to be connected along the score lines 39 with the triangular sections of material that connect the webs 37 to the handle section 21A and the side wall section 23A. Thus a pair of angular slits 49 and 50 are extended in a diverging relation from each score line 39 and in opposite directions therefrom, and the slits 49 and 50 are arranged to meet the score lines 28A and 27A respectively in outwardly spaced relation with respect to the score lines 39. The slits 49 and 50 are connected by slits 51 having curved end portions 52 that merge into the slits 49 and 50, the slits 51 being spaced outwardly from the score lines 39. Hence the slits 49, 50, 51 and 52 cooperate in defining the flaps 48 connected to the webs 37 along the fold lines 39 and which in the erected carrier serve as depending bottle cushioning flaps disposed on opposite sides of the central bottle B.

The slits 50, 51, 52 and 49 also serve to define one side edge of a pair of bottle separating flaps 45A1 and 45A3 that are formed from the material that is cut away in forming the bottle receiving openings 35A1 and 35A3 respectively. These bottle separating flaps 45A1 and 45A3 are joined along their upper edges to the panel 21A in an unscored relationship, and the lower edges of these flaps are defined by slits 52 that are formed on or constitute outward continuations of the fold line 29A. The other or outer sides of each of the flaps 45A1 and 45A3 is defined by angularly related slits 53, 53' and 53'' that are extended from the slit 52 in an outwardly, then upwardly, and then in an inwardly direction so as to meet or merge with a slit 54 that is disposed parallel to the fold line 39 and is spaced inwardly from the side edge of the blank. The slit 54 is extended somewhat beyond the line of the score line 27A and is then extended to the adjacent edge of the blank by an arcuate slit 55 and a short straight slit 56 that is parallel to the fold or score line 27A, thus to afford material for the formation of the end webs 36 as will hereinafter be described in detail. The lower ends of the slits 53 are extended downwardly and inwardly so as to meet with the outer ends of slits 57, the inner ends of which are extended to the juncture of the adjacent slits 49 and 52. This results in the formation of an opening 58 adjacent the lower end of each of the tabs 45A1 and 45A3, as will be evident in Fig. 2 of the drawings.

The relatively narrow end webs 36 that are thus defined by the slits 53, 53', 53'', 54, 55 and 56 are so formed and arranged that they will invariably assume a predetermined relation with respect to the bottles B as such bottles are loaded in the carrier and are also arranged so that they may be readily bent with relation to the side wall sections 23A and 23B when the handle section is moved up and down between its elevated position of Fig. 6 and its depressed or lowered position of Fig. 7. In accomplishing this the webs 36 are provided with a plurality of angularly related score lines that connect the webs 36 to the side wall section 23A in such a manner as to enable such bending of the webs as will hereinafter become apparent. Thus the score line 59 is extended in an angular direction and as a continuation of the slit 53'' so that the

6

score line 59 meets the adjacent side edge of the blank at a point that is aligned with the score line 28A, and from the outer end of the score line 59, a score line 60 is extended inwardly at an angle of substantially 70° with respect to the side edge of the blank so as to meet the slit 53 at substantially the point at which the slit 53 meets the adjacent one of the slits 57.

Thus the end webs 36 are connected to the side wall sections 23 at the outer ends of such webs so as to enable tilting of such webs from the horizontal relationship of Fig. 11 to the vertical position of Figs. 1 and 12, and this connection is such that these webs 36 may be pivoted downwardly at their inner ends to positions corresponding with the dotted line positions of the webs 37 as shown in Fig. 7 in the event that forces are applied thereto in the course of depression of the handle section 21. Under the present invention, however, the webs 36 are separate or independent from the handle section 21, thereby to simplify and facilitate insertion or loading of bottles B into the end openings of the carrier, and this is accomplished by securing the ends of the adjacent end webs 36 together. Thus as disclosed herein, the ends of the webs 36 that are defined by the slits 55 and 56 are utilized to afford connecting flaps 61, there being score lines 62 formed across the webs 36 parallel to the score line 27A. The score line 62 is spaced slightly toward the score line 28A, as will be evident in Figs. 2 and 3, for by this arrangement the total length of the two connected webs 36 may be controlled, and this serves to govern the snugness with which such webs will engage the end bottles B. In the assembled carton, the two flaps 61 are connected together in such a manner that the two end webs 36 at each end of the carrier form a continuous retaining strap, and such connection as herein shown is afforded in each instance by a staple 63, Figs. 1 and 3.

Thus, by an arrangement of fold lines and slits as just described, the openings 35A1, 35A2 and 35A3 of the bottle receiving section 22A are afforded, and the necessary webs 36 and 37 are defined, and by a similar arrangement of fold lines and slits, the corresponding webs and bottle receiving openings of the bottle receiving section 22B are provided, it being understood of course that the relationship of the fold lines and slits is reversed in the bottle receiving section 22B.

When the bottle carrier 20 is in its erected condition, it is desirable that the weight of the bottles B loaded in the carrier be transmitted directly upwardly from the center portion of the bottom wall to the handle section 21, thereby to relieve the webs 36 and 37 of substantially all weight supporting forces, and in attaining this result, it is also desirable that the handle section 21 be capable of depression from the elevated position of Fig. 6 to the depressed position of Fig. 7, thereby to enable the bottle carriers to be stacked one upon the other. This desirable weight supporting action, coupled with the depressibility of the handle section 21 is attained in the present carrier by means of the character disclosed in our aforesaid patent, and such means accomplish this end through the provision of lost-motion connections between the several bottle separating flaps 45 and means that are connected to the bottom wall of the carrier substantially along the central score line 30. Such lost-motion connections are afforded in the pres-

7

ent instance by means that are cut from the bottom wall sections 24A and 24B, and this is accomplished in such a way that the bottom wall sections will retain adequate material and strength to enable them to properly support the weight of the bottles thereon. Thus as will be evident in Figs. 1, 2 and 3, the bottom wall section 24A has a pair of spaced connecting link members 65—1 and 65—3 that are extended from the score line 30 toward the score line 29A in alignment with the bottle separating flaps 45A1 and 45A3. The bottom wall section 24B has a single connecting link 65—2 cut therefrom by appropriate slits so as to extend from the fold line 30 toward the fold line 29B and in alignment with the two bottle separating flaps 45A2 and 45B2.

When the bottle carrier of the present invention is in its assembled condition of Figs. 3 and 4, or when it is in its erected condition of Fig. 1, the connecting links 65—1, 65—2 and 65—3 are disposed in an upstanding relationship in a plane parallel to and disposed between the planes of the several bottle spacing flaps 45, and a lost-motion connection is provided between each link 65 and the aligned flaps 45, as will be evident in Figs. 1, 3, 9 and 10. In order that such a lost-motion connection may be afforded each of the connecting links 65 has an elongated slot 66 formed therein, and each slot terminates in an end wall 68 that is spaced from the free end of the link. Each link is disposed between the aligned pair of flaps 45, and thus for assembly purposes, the link 65—1 is disposed between the flaps 45B1 and 45A1. After this relationship has been established, a weight transmitting connection such as a staple 70 is extended through the opposed flaps 45 in such a position as to extend freely through the slot 66 in the related link 65. The relationship of the upper end walls 68 and the location of the staples 70 is such that when the handle section 21 is pulled upwardly slightly beyond the position shown in Fig. 6, each staple 70 engages the end 68 of the related slot 66, and thus a weight transmitting connection is afforded between the flaps 45 and the several connecting links 65. The weight of the bottles B is, of course, carried by the bottom panels 24A and 24B, and in this connection it will be observed that the central bottle in one row spans the opening formed in the bottom panel 24B so as to rest on this panel on both sides of such opening, and a similar relationship is attained in respect to the two end bottles that are rested on the panel 24A. The weight of the bottles is transmitted to the connecting links 65 so as to be thereby transmitted directly upwardly through the flaps 45 and the handle portion 21, and as a result of this arrangement, the connecting webs 37 of the bottle receiving sections sustain very little weight and serve primarily to space the bottles and retain the same in their upright positions. This of course enables the webs 37 as well as the webs 36 to be of a relatively light construction, and this advantage is reflected in the entire carrier inasmuch as it enables the carrier as a whole to be made from relatively light cardboard stock.

When the loaded carriers are to be stacked one upon the other, either in the cases in which they are shipped, or as a display in a retail store, the handle sections 21 may be readily moved downwardly so as to be located beneath or at the same level as the tops of the bottles, and in such movement the handle section 21 is shifted from the position of Fig. 6 to the position shown in

8

Fig. 7. The fit of the bottles in the carrier is relatively snug, so that when the handle is depressed as aforesaid, the lower ends of the flaps 45 as well as the lower portions of the handle section will be frictionally gripped between the bottles so as to hold the handle section against undesired upward displacement. It should be observed that the height of the handle section 21 is such that when it is in its upper position it may be grasped through the finger receiving opening, and the lower ends of the flaps 45 are so spaced from the bottom wall that the handle section may be depressed to the protected position of Fig. 7. In the course of such a depressing movement of the handle section 21, the flaps 45 are caused to move downwardly as will be best seen in Figs. 7 and 10 of the drawings, and in the course of such movement the staples 70 move downwardly through the slots 66 to substantially the positions shown in Figs. 7 and 10. When the bottle carriers are again to be lifted by means of the handles 21 thereof, each handle is grasped and pulled upwardly into and somewhat beyond the position shown in Fig. 6, and the staples 70 thereby move upwardly through the slots 66 and into engagement with the upper ends 68 of these slots. The desired weight transmitting relationship is thereby reestablished and the weight of the bottles is primarily supported upon the center portions of the bottom walls or panels of the carrier. It should be observed that the slots 66 terminate short of the fold line 30, and hence in the erected carrier the lower portions of the links 65 serve to space the lower edges of the bottles in one row from the lower edges of the bottles in the other row, and hence damage and wear to these lower edges is minimized.

It has been pointed out that the end webs 36 of the carrier of the present invention are formed without the necessity for reinforcing end flaps along the outer edges thereof, thereby to materially reduce the effective width of the blank from which the bottle carrier is made, and the webs 36 are so formed as to enable these webs to conform with the shape of the bottles and to move in a generally pivotal manner or with a twisting action as the bottles are loaded therein. Thus, as a bottle B is inserted downwardly into one of the end openings, as 35A1, the bottle strikes the inner edge of the web 36 so that the web is in effect twisted to the relation shown in Figs. 1, 5, 6, 7, and 10. This twisting action bends the web 36 along the fold lines 59 and 60 so that the web 36 is in a substantially vertical position and conforms with the side of the bottle. Moreover, it should be observed that such twisting of the web 36 bends the same along the fold lines 59 and 60 in such a manner that the paper stock or fibres remain undamaged. When the web 36 is thus positioned it holds the two end bottles B firmly in position, and the tabs formed by the joined flaps 61 extend into the space between the two end bottles to thereby accomplish a spacing or cushioning function.

The complete separation of the inner ends of the webs 36 from the handle section 21 is of particular advantage in the loading of the carrier, for as the first one of the end bottles is introduced downwardly into an end opening 35, the connected webs 36 give the effect of being relatively slack, thereby to facilitate quick loading without danger of injury to the carrier. Moreover, the twisting of the connected end webs that is thus accomplished in the loading of the first end bottle serves to condition the carrier for the load-

ing of the adjacent end bottle, since the web 36 requires no further twisting in this second loading operation.

With the end webs 36 thus located in substantially vertical positions, it will be clear that when the handle section 21 is to be depressed, the webs 36 may pivot along the fold lines 59 and 60 in the event that the projecting flaps or tabs 61 are engaged by the shoulder 55' that is formed at each end edge of the handle section 21, as shown in Fig. 1. Thus when necessary the end webs 36 may have the necessary up and down movements to enable manipulation of the handle section 21 to be accomplished, and yet this movement and the requisite bending of the parts of the end webs 36 may take place without breaking of the fibres of the end webs, and hence these webs retain their strength and are effective to hold the end bottles in place.

In the lifting of a bottle carrier of the character to which this invention relates it will be recognized that a considerable downward pressure is exerted upon the fingers of the user, the finger receiving openings of the present carrier are constructed and arranged, as disclosed in our aforesaid patent, so that such forces are transmitted to the fingers of the user without undue strain or fatigue. Thus the end panel 21A has a generally rectangular opening 72 formed therein as will be evident in Fig. 2 of the drawings, and in substantial alignment with this opening 72 and in the handle section or panel 21B, a flap 73 is cut by appropriate slits so as to be connected to the panel 21B along a fold line 74 that will in the finished or erected carrier be aligned with the upper edge of the opening 72. The flap 73 also has a fold line 75 formed therein parallel to and spaced a short distance from the fold line 74 so that when the flap 73 is forced through an opening 72, the portion of the flap between the fold lines 74 and 75 will be disposed so as to form a relatively wide area panel 76, which as shown in Fig. 8 is disposed in a substantially horizontal position. The ends of the flap 73 have relatively small ears 78 formed thereon which serve to latch the flap 73 in its projecting relationship beyond the opening 72, as will be evident in Figs. 1 and 8. It should be observed in this connection that when the handle section is assembled the fold line 74 is disposed slightly above the level of the upper edge of the opening 72, so that when the flap 73 is forced through the opening 72, it will bear against the upper edge of the opening in such a manner as to hold the panel 76 in the desired downwardly facing relation. Thus this construction of the finger receiving opening of the present carton enables the carton to be conveniently and easily carried by the user.

In the assembly of the bottle carrier of the present invention, the blank is bent along the fold line 30 so that the faces of the bottom panels 24A and 24B that are to constitute the lower faces in the erected carrier are disposed in a face to face relationship, and in accomplishing such bending of the blank, the connecting links 65 are allowed to remain in the plane of the particular bottom section to which they are connected. In other words, these connecting links are not bent along the fold line 30, and hence when such folding operation has been completed, the connecting links 65 extend upwardly in substantially the relationship shown in Fig. 4 of the drawings. The opposite side portions of the carrier are then bent along the fold lines 29A and 29B so as to assume the relationship shown in Fig. 4 of the drawings,

and as an incident to this folding operation the glue flap 25 is bent along the fold line 26 into position between the two panels 21A and 21B. Suitable adhesive is applied to the glue flap 25 so as to secure the same to the opposed face of the handle section 21A and hence the carrier is maintained substantially in the folded relationship shown in Figs. 3 and 4.

As will be evident in Fig. 3 of the drawings, the collapsed or folded blank as thus formed has the several bottle spacing flaps 45 disposed in pairs on opposite sides of the related supporting links 65, and at this stage in the assembly operation, the staples 70 are placed in position so as to connect the pairs of flaps 45 and extend through the slots 66 of the related connecting links 65, and the staples 63 are put in place to connect the flaps or tabs 61 of the adjacent pairs of end webs 36. The assembly of the carrier is thus completed, and the carrier assumes the form shown in Figs. 3 and 4. The carrier is of course shipped in this flat or collapsed form and is erected to the form shown in Fig. 1 when the bottles are to be loaded into the carrier.

From the foregoing description it will be evident that the present invention enables bottle carriers to be made in a simple and expeditious manner from cardboard or like material of a relatively light weight, and the invention also enables such carriers, even though they are made from light weight stock, to support the weight of the bottles without imposing objectionable or breaking forces upon the thin webs that separate the bottles. The present invention enables bottle carriers to be made in such a size that the loaded carriers may be positioned within the cases usually utilized in handling or shipping such bottles, and this is attained in such a manner that a relatively narrow blank may be utilized. Thus the present invention enables bottle carriers to be made with the minimum of cardboard stock.

The construction of the end webs of the bottle receiving sections of the present carrier is particularly valuable in that the necessary strength is attained in these end webs in such a manner that these webs are capable of pivoting and bending movement in the loading and unloading as well as in the use of the carrier. The provision of end webs that are connected to each other at their adjacent ends but are not connected to the handle section at such ends serves to facilitate the loading of the carrier and avoid damage to such webs, and hence this increases the useful life of the carrier and enables it to be used many times for carrying full bottles as well as returning empty bottles.

Thus, while we have illustrated and described the preferred embodiment of our invention, it is to be understood that this is capable of variation and modification and we therefore do not wish to be limited to the precise details set forth, but desire to avail ourselves of such changes and alterations as fall within the purview of the following claims.

We claim:

1. A pre-formed collapsible bottle carrier formed from cardboard or like material and comprising a bottom wall, side walls, a handle portion, and bottle receiving sections extended between said side walls and said handle portions, each of said bottle receiving sections comprising a plurality of webs arranged at spaced intervals therein to afford bottle receiving openings in the sections between said webs, all of said webs having ends thereof connected to a side wall along score

lines, and those webs that are spaced from the ends of said carrier being connected to said handle section along score lines, the webs at the ends of said bottle receiving sections having the score lines along which they are connected to the side walls disposed at an angle to the longitudinal axis of such webs, and each of such end webs also having another score line formed adjacent to the fold line that joins the end webs to the side wall and extending from the outer edge of said web inwardly at an angle to said last mentioned fold line and in diverging relation to each other, said end webs being severed from said handle section at the ends thereof that are spaced from said side walls to enable said end webs to tilt into vertical planes for bottle-retaining engagement with bottles disposed in the respective end bottle receiving openings, and means joining said last mentioned ends of said end webs together.

2. A pre-formed collapsible bottle carrier formed from cardboard or like material and comprising a bottom wall, side walls, a handle portion, and bottle receiving sections extended between said side walls and said handle portions, each of said bottle receiving sections comprising a plurality of webs arranged at spaced intervals therein to afford bottle receiving openings in the sections between said webs, all of said webs having ends thereof connected to a side wall along score lines, and those webs that are spaced from the ends of said carrier being connected to said handle section along score lines, the webs at the ends of said bottle receiving sections having the score lines along which they are connected to the side walls disposed at an angle to the longitudinal axis of such webs, and each of such end webs also having another score line formed adjacent to the fold line that joins the end webs to the side wall and extending from the outer edge of said web inwardly at an angle to said last mentioned fold line and in diverging relation to each other, said end webs being severed from said handle section at the ends thereof that are spaced from said side walls to enable said end webs to tilt into vertical planes for bottle-retaining engagement with bottles disposed in the respective end bottle receiving openings, securing flaps formed on said last mentioned ends of said end webs, and means securing said securing flaps together.

3. A pre-formed collapsible bottle carrier formed from cardboard or like material and comprising a bottom wall, side walls, a handle portion, and bottle receiving sections extended between said side walls and said handle portions, each of said bottle receiving sections comprising a plurality of webs arranged at spaced intervals therein to afford bottle receiving openings in the sections between said webs, all of

said webs having ends thereof connected to a side wall along score lines, and those webs that are spaced from the ends of said carrier being connected to said handle section along score lines, the webs at the ends of said bottle receiving sections having the score lines along which they are connected to the side walls disposed at an angle to the longitudinal axis of such webs, and each of such end webs also having another score line formed adjacent to the fold line that joins the end webs to the side wall and extending from the outer edge of said web inwardly at an angle to said last mentioned fold line and in diverging relation to each other, said end webs being severed from said handle section at the ends thereof that are spaced from said side walls, securing flaps cut in part from the material of said handle section and joined along fold lines to said last mentioned ends of said end webs, and means securing said securing flaps together.

4. A preformed collapsible bottle carrier formed from cardboard or like material and comprising a bottom wall, side walls, a handle portion, and bottle receiving sections extended between said side walls and said handle portion, each of said bottle receiving sections comprising a plurality of webs arranged at spaced intervals therein to afford bottle receiving openings in the sections between said webs, all of said webs having ends thereof connected to a side wall along score lines, and those webs that are spaced from the ends of said carrier being connected to said handle section along score lines, the webs at the ends of said bottle receiving sections having a plurality of other score lines disposed adjacent to said side walls and formed at spaced points and transversely thereof to enable bending and lateral tilting of said webs with relation to said side walls, said end webs being severed from said handle section at the ends thereof that are spaced from said side walls, securing flaps cut in part from the material of said handle section and joined along fold lines to said last mentioned ends of said end webs, and means securing said securing flaps together.

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