Dec. 30, 1947. W. A. RINGLER 2,433,676

CARRIER FOR BOTTLES AND THE LIKE

Filed April 15, 1944

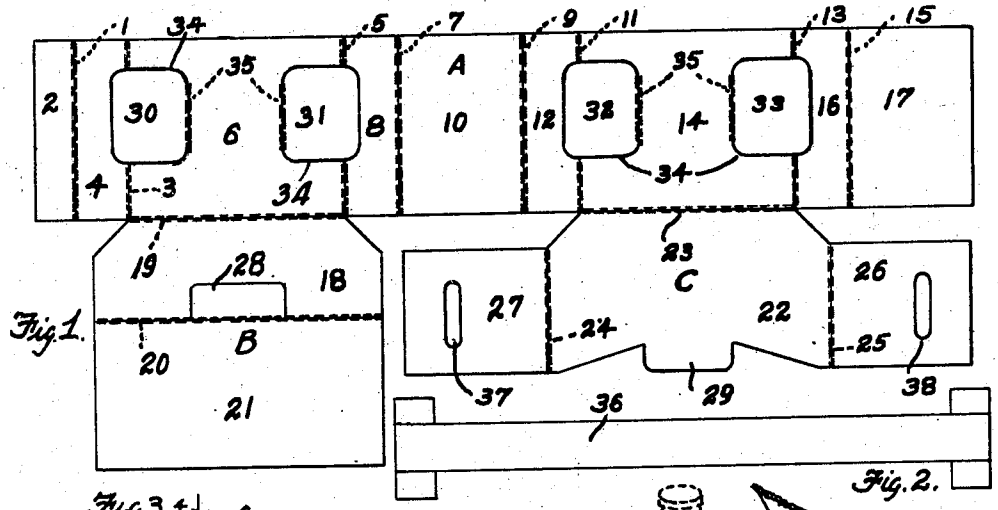

Fig. 1.

Fig. 2.

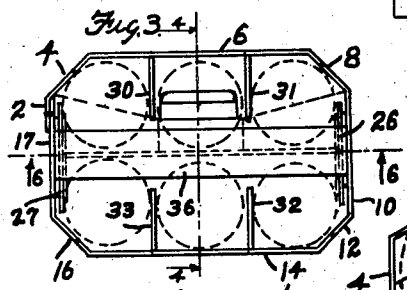

Fig. 3.

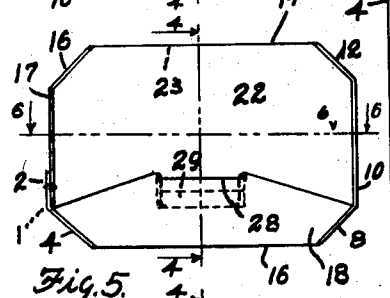

Fig. 5.

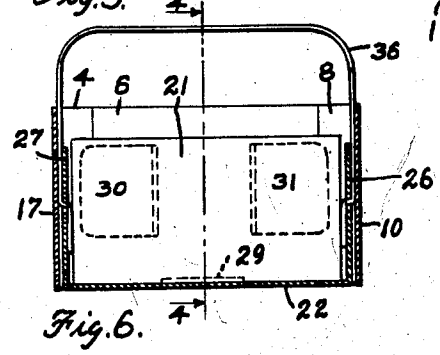

Fig. 6.

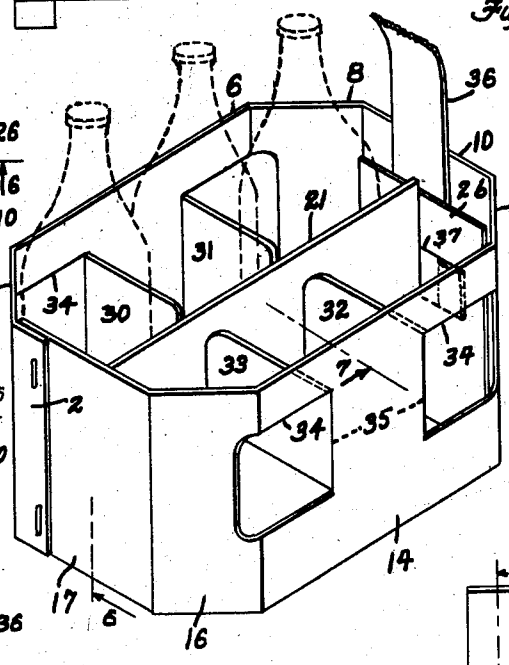

Fig. 4.

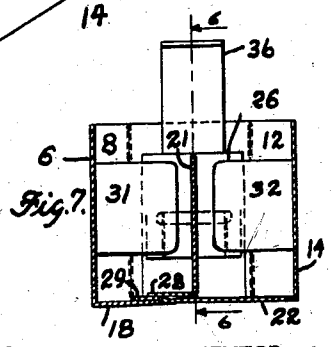

Fig. 7.

WILLIAM A RINGLER, INVENTOR.

BY Allen & Allen Attys.

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CARRIER FOR BOTTLES AND THE LIKE

William A. Ringler, Wayne, Pa., assignor to The Gardner-Richardson Company, Middletown, Ohio, a corporation of Ohio

Application April 15, 1944, Serial No. 531,234

9 Claims. (Cl. 229—52)

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My invention relates to paperboard carriers for groups of articles, of which the bottle carrier used in merchandising bottled beverages is a primary example.

The general objects of my invention are to provide a bottle carrier or similar structure which is strong and durable and not subject to the weaknesses of many structures in common use; to provide a bottle carrier or the like which in set up form is self-sustaining, from which the articles may be readily withdrawn and into which they may readily be inserted; to provide a bottle carrier or like structure having sufficient internal partitions adequately to separate the articles one from another; and to provide a bottle carrier or like structure having the above noted advantages which nevertheless can be made without substantial wastage of board, can be packed and shipped in knocked-down condition, can be readily set up, and is inexpensive in first cost.

These and other objects of my invention, which will be set forth hereinafter or will be apparent to one skilled in the art upon reading these specifications, I accomplish by that certain construction and arrangement of parts of which I shall now describe an exemplary embodiment. Reference is made to the drawings wherein:

Figure 1 is a plan view of the blank for my improved structure.

Figure 2 is a plan view of a handle blank which may be employed with the structure.

Figure 3 is a plan view of an erected structure formed from the tubed blank of Figure 1.

Figure 4 is a perspective view of the erected and filled carrier.

Figure 5 is a bottom view thereof showing the interengagement of parts.

Figure 6 is a longitudinal section of the erected carrier.

Figure 7 is a central transverse section of the erected carrier.

My carrier comprises a blank of boxboard and the like appropriately divided by cut and score lines into a band portion designed to surround a group of articles such, for example, as a sales unit of soft drink bottles, and a pair of bottom forming members so dimensioned that one is capable of underlapping the other in the erected structure. The underlapped bottom forming member preferably is provided with an articulated upstanding central portion capable of serving as a partition between groups of articles. The underlapping bottom forming member is also provided with articulated end flaps which extend upwardly within or beyond the erected

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band portion and to which a suitable handle or carrying means is attached. Preferably there is an interlock between the bottom forming members. The band portion may further be provided with flaps partially died out from the body of the band portion and articulated to it along score lines, which flaps may be struck inwardly to provide partitions between the articles in the groups. It will be understood that the length of the band and the proportioning of the various parts hereinafter to be described can be varied as desired to accommodate different sizes and different groupings of the articles to be carried; the band when erected may form a figure rectangular in plan or, where the articles are round bottles or the like, the band may be so configured as to enclose a space beveled or rounded at the corners; and that the weight of the board or other flexible material from which the structure is made may be chosen with a view to service requirements and the weight of the articles to be carried. The width of the band portion will be chosen with regard to the height and configuration of the articles to be carried to extend sufficiently above the bottom upon which the articles rest to maintain the articles in assembly and to prevent their toppling from the carrier as they are being transported.

Referring to Figure 1, I have shown a blank comprising a band portion indicated generally at A and bottom forming portions indicated generally at B and C. A score line 1 demarks an attachment flap 2 adjacent one end of the band; a score line 3 demarks a corner wall 4; a score line 5 demarks a side wall 6; a score line 7 demarks a corner wall 8; a score line 9 demarks an end wall 10; a score line 11 demarks a corner wall 12; a score line 13 demarks a second side wall 14; and a score line 15 demarks a corner wall 16, leaving at the opposite end of the band an end wall 17. A bottom forming member 18 is articulated to the side wall 6, being score line 19. At a distance from the score line 19 equal to half the transverse width of the erected band, I form a score line 20 which articulates to the bottom forming member 18 a partition forming member 21. The width of the member 18—21 is preferably close to the length of the erected band as hereinafter described.

To the side wall 14 another bottom forming member 22 is articulated by means of a score line 23. Score lines 24 and 25 articulate to the bottom forming member 22, wings or flaps 26 and 27. The width of the member 22, between score lines 24 and 25, is preferably also substantially the

length of the erected carrier. The depth of the member 22 is greater than one-half the horizontal width of the erected carrier, so that when portions 18 and 22 coact to form the bottom, member 22 can underlie and give support to member 18. I prefer to cause member 22 to interlock with member 18 to which end I provide in member 18 a slit indicated at 28 and on member 22 a tongue 29 to enter the slit, as shown in Figure 5.

In the band portion A, I preferably form a series of tongues 30, 31, 32 and 33. These tongues are oppositely directed and are each formed in part by a cut line 34 and a score line 35, so that they may be struck inwardly to form partitions.

As a further incident to the manufacture of the carrier, the band portion A is tubed by being folded upon a pair of intermediate score lines, say, the score lines 7 and 15, so as to bring the attachment flaps 2 to a posiiton overlying the end wall 17. The attachment flap is then fastened to the end wall in some suitable manner. This may be done by means of a suitable adhesive, preferably, although not necessarily, a waterproof one; but, particularly with the heavier boards, it may be found more desirable to employ staples, grommets, or the like.

A handle device, preferably of bail form, can be attached to the flaps 26 and 27 which, as shown in the drawings, form the suspending means for the structure. Various forms of handle may be employed, including more or less rigid ones of wire or sheet metal, or flexible ones of tape or cord. It is, however, entirely satisfactory and very economical to provide a bail of boxboard indicated in Figure 2 at 36. This bail may, if desired, be formed of a tough and durable boxboard stock, say, a solid kraft, while the blank of Figure 1 may be formed of less durable and tear-resistant board or a board especially designed for color printing, or the like. The bail 36 may be attached to the flaps 26 and 27 in any suitable way. I prefer to form in these flaps slots 37 and 38 of a width to accept the bail while leaving adequate strength in the flaps themselves. The bail 36 may be passed through these slots, bent and fastened to the flaps adhesively or with grommets or staples. Or the bail 36 may be provided with ears extending beyond the ends of the slots, as shown in Figure 2. The handle band may be transversely scored at intervals throughout its length if desired for flexibility. It will usually be attached to the flaps 26, 27 after the structure has been tubed, as shown in Figure 3.

The structure with or without the handle attached may be shipped and stored in knocked-down form. In setting it up, the band is first expanded or erected to approximately its final shape, the bottom member C is bent along the score line 20 so that the member 21 may be inserted upwardly into the expanded band, and the bottom forming portion 18 is bent along the score line 19 to bring it substantially normal to the plane of the side wall 6.

The bail handle 36, if present, is then started upwardly through the erected band and the flaps 26 and 27 are bent along their score lines 25 and 24, and inserted upwardly into the band, while the member 22 is bent on the score line 23 to bring it substantially normal to the plane of the side wall 14. A portion of the member 22 is thus caused to underlie and support member 18; and upon the engagement of the tongue 29 in the slot formed by the cut 28, members 18 and 22 are interlocked and not only form a rigid bottom, but maintain the band portion A in its erected condition. The flaps

30 to 33 inclusive may be struck inwardly to form transverse partitions coacting with the longitudinal partition 21 and, incidentally, maintaining it upright in the erected carrier.

The flaps 26 and 27 on the bottom member 22 have been shown as extending upwardly within the band portion. It is also possible to position them so that they extend upwardly outside the band and lie over walls 10 and 17 instead of under them. In this event it will be well to have the bail 36 engage not only the flaps 26 and 27 but also the walls 10 and 17. This may be accomplished by providing the walls 10 and 17 with slots to match the slots 37 and 38, and also, preferably, with parallel slots above the termini of flaps 26 and 27. The bail 36 may be made attachable and detachable. This may be done by bending over ends of the bail and stapling the bent over ends to the bail. The slots are wide enough to pass these portions horizontally, but the bent over ends form abutments which engage the slot edges and prevent vertical withdrawal of the bail. After the carrier has been set up, the bail ends may first be passed outwardly through the upper slot in walls 10 or 17, then upwardly through the lower slot and through slot 37 or 38 in flaps 27 or 26; and this may be done whether the flaps 27 or 26 are inside or outside the walls 10 or 17.

Modificatitons 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. In a bottle carrier or like structure formed of flexible material, a band portion with its ends permanently joined for surrounding the sides and ends of an assembly of articles to be carried, said band portion in erected condition having pairs of opposite walls, bottom forming portions articulated respectively to one pair of opposite walls of the band portion, said bottom forming portions being dimensioned to lap when in bottom forming position with one bottom forming portion at least partially underlying the other both bottom forming portions extending at least to the median line of said band portion, the underlying bottom portion having articulated flaps adapted to be upwardly directed without interengagement therewith to parallel another pair of opposite walls and forming suspending means for said carrier, said bottom forming members being provided with interlocking means.

2. In a bottle carrier or like structure formed of flexible material, a band portion with its ends joined for surrounding an assembly of articles to be carried, said band portion in erected condition having opposite walls, bottom forming portions articulated respectively to a pair of opposite walls of the band portion, said bottom forming portions being dimensioned to lap when in bottom forming position with one bottom forming portion at least partially underlying the other, the underlying bottom portion having articulated end flaps upwardly directed and forming suspending means for said carrier, said bottom forming members being provided with interlocking means, the underlapped one of said bottom forming members being of a depth substantially equivalent to one-half the distance between said opposite pair of walls, and being provided with an articulated extension directed upwardly within said carrier to form a central partition therefor.

3. In a bottle carrier or like structure formed of flexible material, a band portion with its ends

joined for surrounding an assembly of articles to be carried, said band portion in erected condition having opposite walls, bottom forming portions articulated respectively to a pair of opposite walls of the band portion, said bottom forming portions being dimensioned to lap when in bottom forming position with one bottom forming portion at least partially underlying the other, the underlying bottom portion having articulated end flaps upwardly directed and forming suspending means for said carrier, said bottom forming members being provided with interlocking means, the underlapped one of said bottom forming members being of a depth substantially equivalent to one-half the distance between said opposite pair of walls, and being provided with an articulated extension directed upwardly within said carrier to form a central partition therefor, said band portion having flaps cut from it and articulated to it, which flaps extend inwardly of the carrier to form additional partition members substantially normal to the said central partition.

4. In a bottle carrier or like structure formed of flexible material, a band portion with its ends joined for surrounding an assembly of articles to be carried, said band portion in erected condition having opposite walls, bottom forming portions articulated respectively to a pair of opposite walls of the band portion, said bottom forming portions being dimensioned to lap when in bottom forming position with one bottom forming portion at least partially underlying the other, the underlying bottom portion having articulated end flaps upwardly directed and forming suspending means for said carrier, said bottom forming members being provided with interlocking means, the underlapped one of said bottom forming members being of a depth substantially equivalent to one-half the distance between said opposite pair of walls, and being provided with an articulated extension directed upwardly within said carrier to form a central partition therefor, said band portion having flaps cut from it and articulated to it, which flaps extend inwardly of the carrier to form additional partition members substantially normal to the said central partition, said flaps on the underlying bottom forming member extending upwardly within said band and being provided with a flexible self-sustaining bail-like handle.

5. In a bottle carrier or like structure formed of flexible material, a band portion with its ends joined for surrounding an assembly of articles to be carried, said band portion in erected condition having opposite walls, bottom forming portions articulated respectively to a pair of opposite walls of the band portion, said bottom forming portions being dimensioned to lap when in bottom forming position with one bottom forming portion at least partially underlying the other, the underlying bottom portion having articulated end flaps upwardly directed and forming suspending means for said carrier, said bottom forming members being provided with interlocking means, the underlapped one of said bottom forming members being of a depth substantially equivalent to one-half the distance between said opposite pair of walls, and being provided with an articulated extension directed upwardly within said carrier to form a central partition therefor, said band portion having flaps cut from it and articulated to it, which flaps extend inwardly of the carrier to form additional partition members substantially normal to the said central partition, said flaps on the underlying bottom forming member extending upwardly within said band and being provided with a flexible self-sustaining bail-like handle, said bail-like handle being a strip of flexible material, the ends of which pass respectively through slots in said last mentioned flaps and are fastened to said flaps.

6. In a blank of boxboard or the like for the purpose described, a band portion divided by lines of articulation into a series of walls including opposite pairs thereof and an attachment flap to be permanently fastened to a wall, bottom forming members articulated respectively to the walls of one opposite pair, one of said bottom forming members having a bottom forming depth substantially equivalent to one-half of the distance between said opposite walls when the band is erected to surround an assembly of articles, the other of said bottom forming members being greater in depth so as to be capable in part at least of underlying the other bottom forming member, the said bottom forming member of greater depth having articulated flaps adapted to parallel another pair of opposite walls and be folded upwardly to form suspending means for the carrier, the said bottom forming portions having interlocking means.

7. In a blank of boxboard or the like for the purpose described, a band portion divided by lines of articulation into a series of walls including an opposite pair thereof and an attachment flap to be fastened to a wall, bottom forming members articulated respectively to the walls of said opposite pair, one of said bottom forming members having a bottom forming depth substantially equivalent to one-half of the distance between said opposite walls when the band is erected to surround an assembly of articles, the other of said bottom forming members being greater in depth to be capable in part at least of underlying the other bottom forming member, the said bottom forming member of greater depth having articulated end flaps adapted to be folded upwardly to form suspending means for the carrier, the said bottom forming portions having interlocking means, the bottom forming portion which is less in depth having an articulated extension and forming a central partition in a carrier structure formed from said blank.

8. In a blank of boxboard or the like for the purpose described, a band portion divided by lines of articulation into a series of walls including an opposite pair thereof and an attachment flap to be fastened to a wall, bottom forming members articulated respectively to the walls of said opposite pair, one of said bottom forming members having a bottom forming depth substantially equivalent to one-half of the distance between said opposite walls when the band is erected to surround an assembly of articles, the other of said bottom forming members being greater in depth to be capable in part at least of underlying the other bottom forming member, the said bottom forming member of greater depth having articulated end flaps adapted to be folded upwardly to form suspending means for the carrier, the said bottom forming portions having interlocking means, the bottom forming portion which is less in depth having an articulated extension and forming a central partition in a carrier structure formed from said blank, and said band having articulated flaps formed therein to provide additional partitions.

9. In a bottle carrier or like structure formed of boxboard, a band portion with its ends permanently joined for surrounding the sides and

ends of an assembly of articles to be carried, said band portion in erected condition having pairs of opposite walls, bottom forming portions articulated respectively to one pair of opposite walls of the band portion, said bottom forming portions being dimensioned to lap when in bottom forming position, with one bottom forming portion at least partially underlying the other, the underlying bottom forming portion having flaps articulated to its ends and adapted to be upwardly directed to parallel another pair of opposite walls of the band portion, and forming suspending means for said carrier, the overlying bottom forming portion extending to the median line of said band portion and being provided with an articulated extension capable of being directed upwardly within said carried to form a central partition therefor.

WILLIAM A. RINGLER.

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