

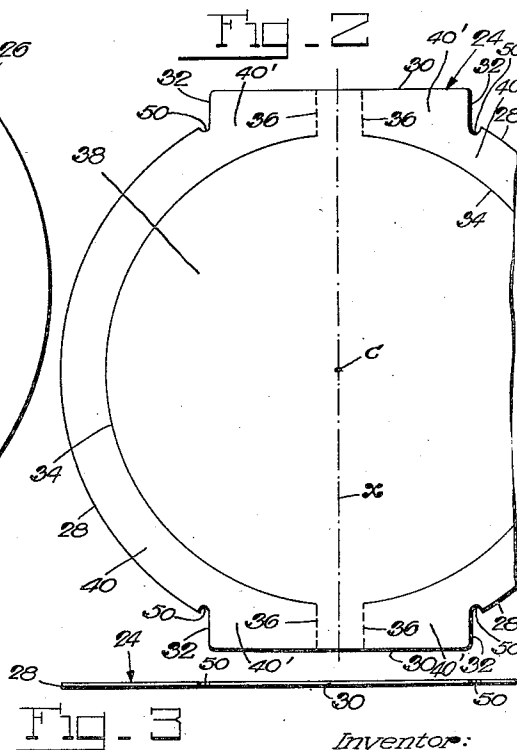
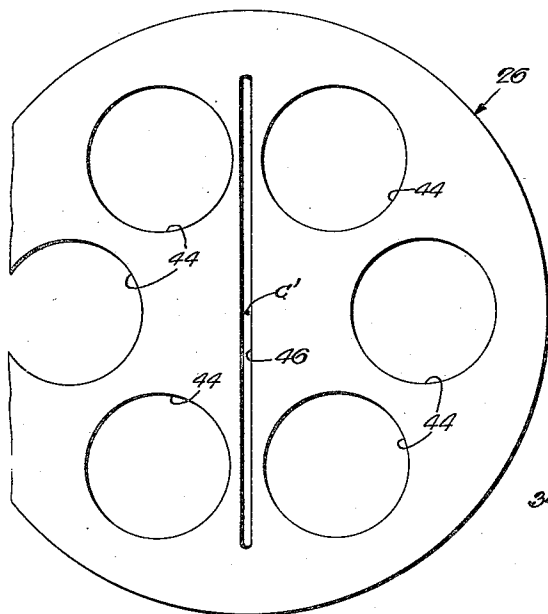
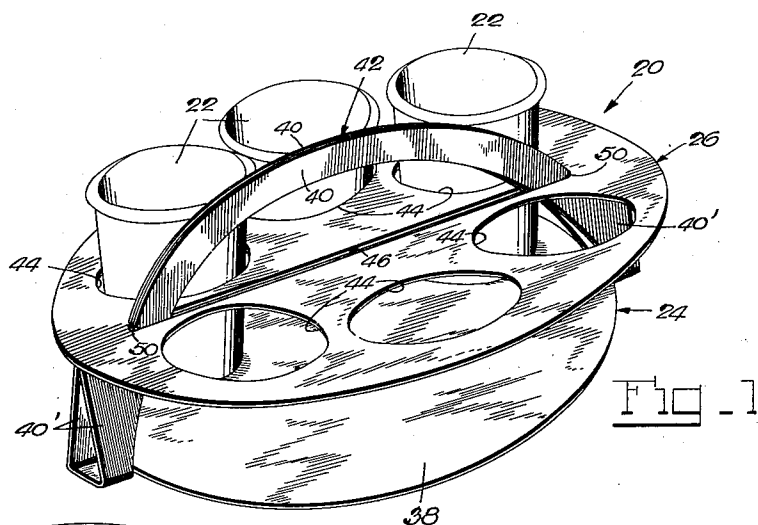
Aug. 21, 1956

R. C. SARGENT
CONTAINER CARRIER

2,759,629

Filed March 2, 1953

4 Sheets-Sheet 1



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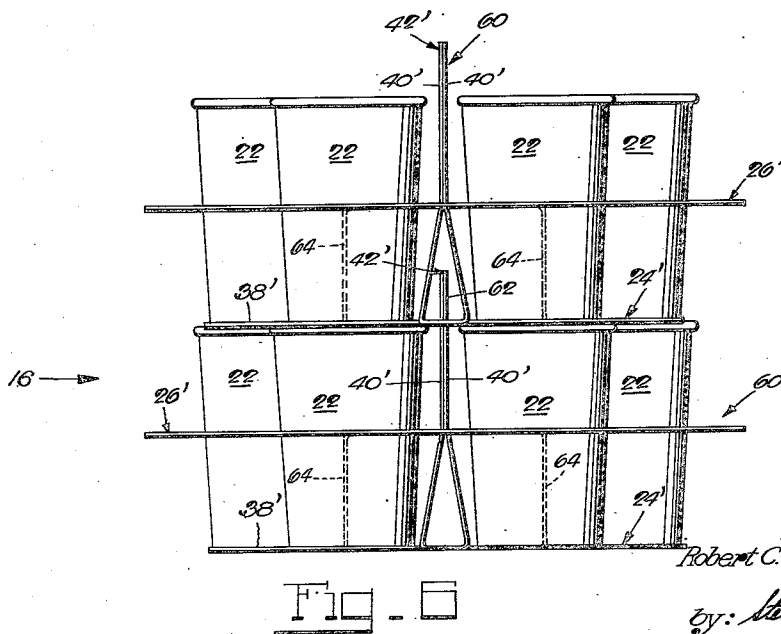
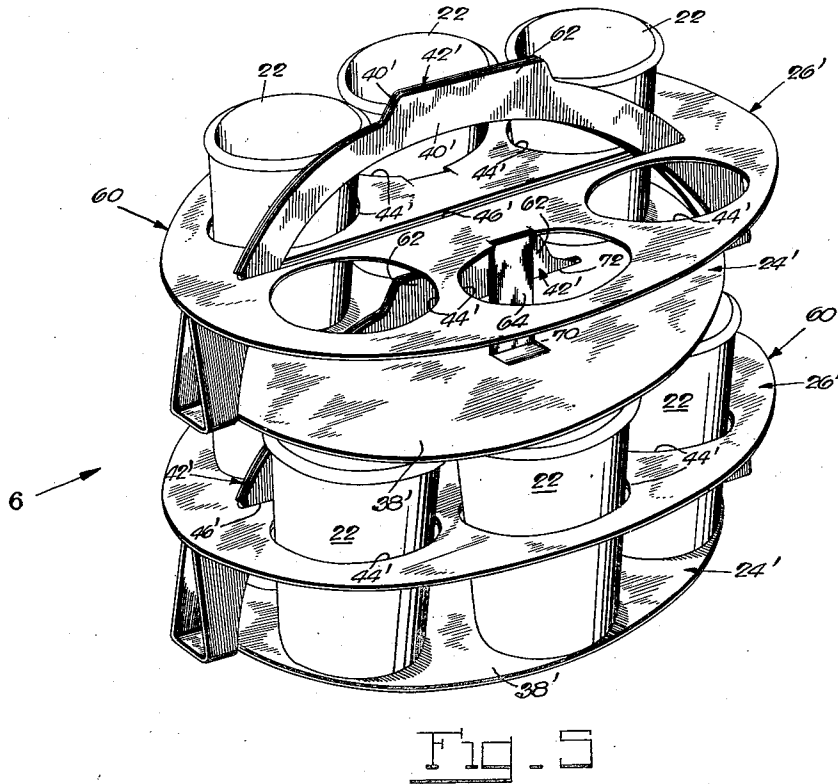
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R. C. SARGENT
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4 Sheets-Sheet 2



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R. C. SARGENT
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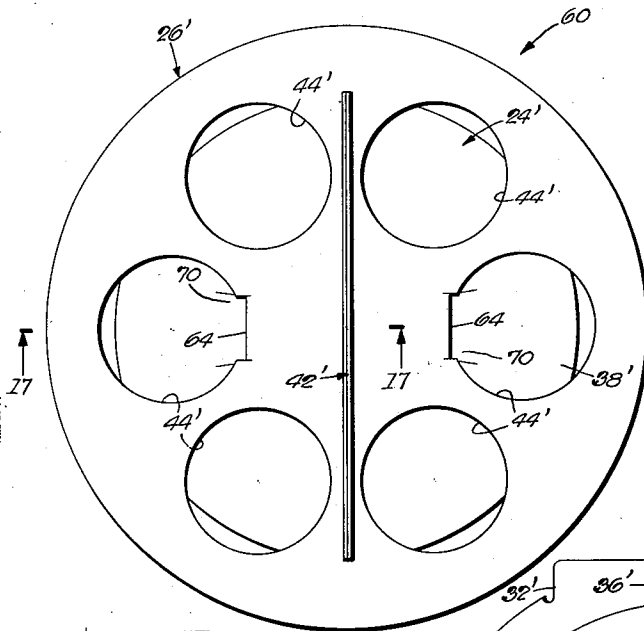


Fig. 7

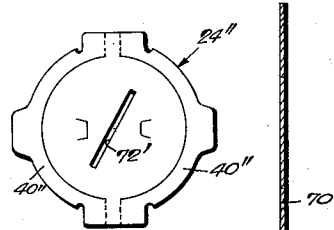


Fig. 5

Fig. 10

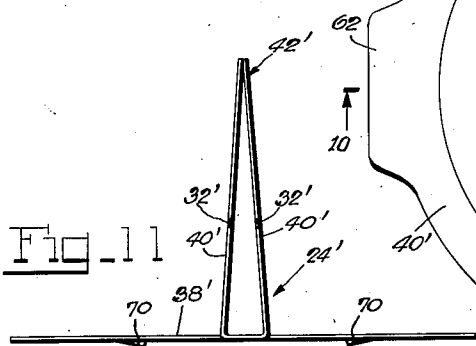
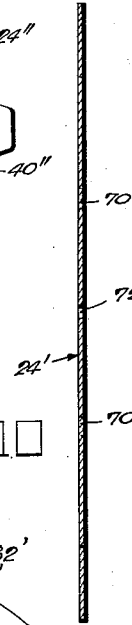


Fig. 11

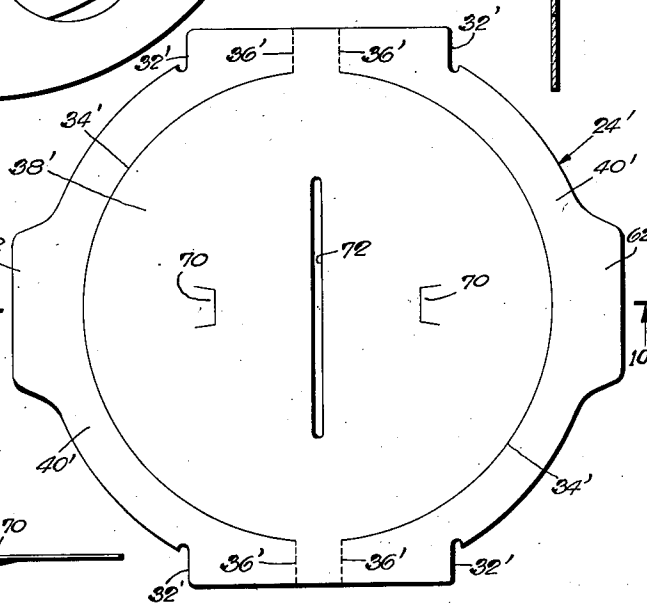


Fig. 8

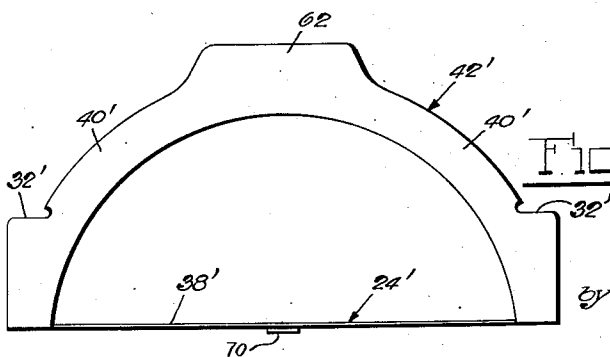


Fig. 12

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4 Sheets-Sheet 4

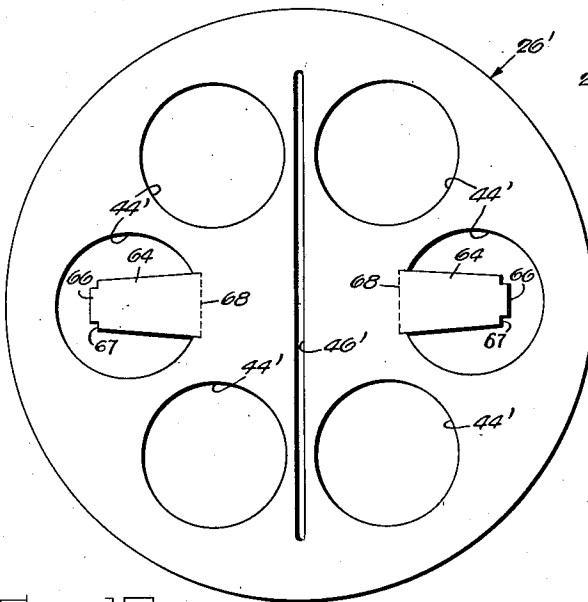


Fig. 13

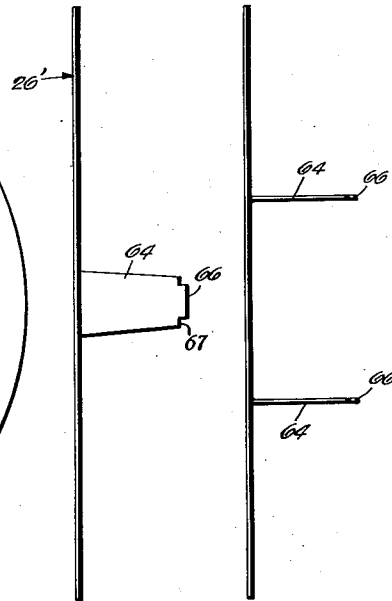


Fig. 14

Fig. 15

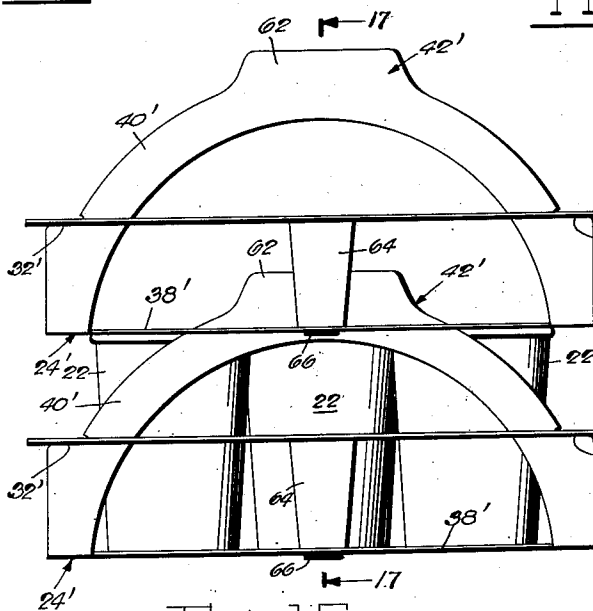


Fig. 16

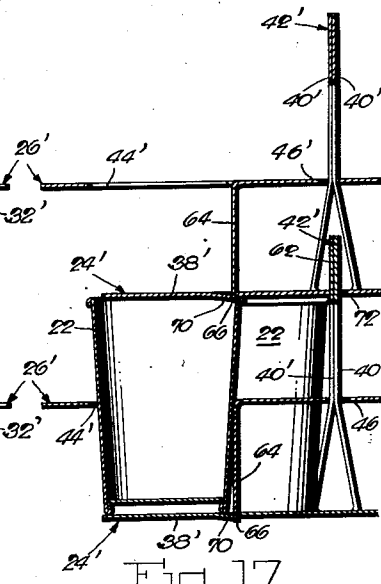


Fig. 17

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2,759,629

CONTAINER CARRIER

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Application March 2, 1953, Serial No. 339,619

6 Claims. (Cl. 220—110)

This invention relates in general to carriers for containers such as tumblers, jars, bottles, cups and other receptacles, and it relates particularly to carriers of the type made of flexible sheet material such as paperboard and so formed as to be shipped or packed flat but easily assembled into usable condition.

It is an object of the present invention to provide a carrier of this type in which containers are received in apertures in an upper horizontally disposed member and supported on a base therebeneath, and which is formed on merely setting up a died-out and pre-creased blank and quickly and simply interlocking it with another died-out blank, forming the upper member.

It is another object of the present invention to provide a carrier of this type of which the aforementioned upper member is apertured to receive the containers, and the creased blank forms not only the base of the carrier but also a handle therefor which, on being interlocked with the upper member, will not only support the latter above the base but serve also as a convenient handle for the entire carrier.

It is a further object of the present invention to provide a carrier of this type of which the aforementioned handle is formed by complementary portions of the base member which are spaced from each other at their bases and interlocked with the upper member of the carrier by being passed in their erect disposition through a narrow slot in the upper member in which they are held in side-by-side engagement with each other, so that the erect handle portions beneath the upper member form fairly rigid supporting columns for the latter and the side-by-side engaged handle portions above the upper member form an exceptionally strong and convenient handle for the entire carrier at the top thereof.

Another object of the present invention is to provide the aforementioned complementary handle portions of the base member with intermediate shoulders which in the erect disposition of these handle portions serve as spaced seats for the upper member in its raised disposition above the base of the carrier.

It is another object of the present invention to have provisions in carriers of this type for permitting the secure stacking of any number of them on top of each other when they are filled, or partly filled, with containers, without experiencing any interference from the handles which project from the top of the carriers.

A further object of the present invention is to construct carriers of this type which are readily stackable on top of each other so that they rest with their bases on the containers in the carriers immediately therebeneath, whereby the containers in the carriers, rather than the carriers themselves, hold the carriers in their stacked erect disposition.

Another object of the present invention is to construct stackable carriers of this type so that the load of the containers in the stacked carriers is carried not at all, or only partly, by the stacked carriers, whereby even rela-

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tively heavy containers may safely be held in the carriers when stacked relatively high.

It is another object of the present invention to provide for the releasable interlock between stackable carriers of this type when they are arranged in orderly stacked fashion, so that the carriers may not slide on top of each other.

It is a further object of the present invention to provide for the aforementioned releasable interlock between stacked carriers of this type by extending their handles above the containers therein and simply projecting them through substantially fitting slots in the bases of the immediately overlying carrier, so that the carriers, while securely held against sliding movement on top of each other, may nevertheless be instantly released from interlock with each other on simply being lifted from the top of the stack.

Further objects and advantages will appear to those skilled in the art from the following, considered in conjunction with the accompanying drawings.

In the accompanying drawings, in which certain modes of carrying out the present invention are shown for illustrative purposes:

Fig. 1 is a perspective view of one form of carrier embodying the present invention;

Fig. 2 is a fragmentary plan view of a base blank of the carrier of Fig. 1;

Fig. 3 is an edge view of the base blank of Fig. 2;

Fig. 4 is a fragmentary plan view of the upper member of the carrier shown of Fig. 1;

Fig. 5 is a perspective view of another form of carrier embodying the present invention, two carriers being shown stacked one above the other with some of the containers removed;

Fig. 6 is a side elevation of the stack of carriers as viewed in the direction of the arrow 6 in Fig. 5, the carriers being filled with containers;

Fig. 7 is a top view of one of the carriers shown in Figs. 5 and 6, with the containers removed;

Fig. 8 is a plan view of a base blank of the carrier shown in Figs. 5-7;

Fig. 9 is a plan view of reduced size of a modification of the base blank shown in Fig. 8;

Fig. 10 is a section taken on the line 10—10 of Fig. 8;

Figs. 11 and 12 are different side views of the base member shown in Fig. 8 or 9, with the handle portions folded up;

Fig. 13 is a plan view of a blank which forms the upper member of the carrier shown in Figs. 5-7;

Figs. 14 and 15 are different side views of the upper member shown in Fig. 13, with its leg portions folded down;

Fig. 16 is a side elevation of the stack of carriers as viewed in the direction of the arrow 16 in Fig. 6, with most of the containers removed; and

Fig. 17 is a fragmentary cross-section through the stack of containers as taken on the line 17—17 of Fig. 16.

Referring to the drawings, and more particularly to Fig. 1 thereof, the reference numeral 20 designates a carrier for containers of any kind, in this instance for tumblers or cups 22. The instant carrier 20 is of the type which is easily set-up or knocked-down and is formed from a base blank 24 (Fig. 2) and an upper blank 26 (Fig. 4).

The base blank 24, which is symmetrical to the center line *x* (Fig. 2), is made of any suitable bendable material, such as paperboard, and has opposite side edges 28 which in this instance are circular about the blank's center *c*, and opposite end edges 30 which in this instance extend at right angles to the center line *x* and meet with offset edges 32 that are parallel to and equally spaced

from the center line *x* and lead to the circular side edges 28. The blank 24 is further provided with opposite cuts 34 which in this instance are concentric with the side edges 28 of the blank and have their ends spaced from the center line *x* equally but at considerably shorter distances than the offset edge 32. The blank 24 is preferably provided with crease lines 36 which extend parallel to the center line *x* from the ends of the circular cuts 34 to the adjacent end edges 30 of the blank.

The cuts 34 in the base blank 24 divide the latter into a generally circular base portion or tray 38 and generally curved opposite handle portions 40 of which the latter may readily be folded from the plane of the blank by bending them along the crease lines 36. In setting up the handle portions 40, they are bent toward and into juxtaposition with each other to form an upwardly projecting handle 42 on the base portion 38 (Fig. 1).

The other or upper blank 26 is in this instance of circular shape (Fig. 4), and is provided with a plurality of orderly arranged cut-outs or apertures 44 which are adapted for the reception of containers 22. The apertures 44 are, in the present instance, circular in shape and are equiangularly spaced from each other and also equally spaced from the center *c'* of the blank 26. The blank 26 is further provided with a central slot 46 which in this instance extends between adjacent apertures 44 and is, for a reason hereinafter explained, of a width substantially twice the thickness of the base blank 24. Since the upper member 26 is in nowise folded, the same may be made of any suitable material, but is preferably made of paperboard the same as the base blank 24.

To assemble the carrier 20, the handle portions 40 of the base member 24 are set up as described to form the projecting handle 42 on the base portion 38. The upper member 26 is thereupon placed on the outwardly projecting shoulders on the handle 42 which are formed by the offset edges 32 of the handle portions 40. Thus, the handle 42 is inserted in the slot 46 of the upper member 26, and the curved tops of the erected handle portions 40 are brought together as the upper member is lowered onto the shoulders on the projecting handle 42. Since the handle portions 40 are made in this instance of paperboard, and since the width of the slot 46 in the upper member 26 is approximately twice the thickness of the base member 24 as explained, the slot 46 in the seated upper member 26 will hold the handle portions thereabove in yielding engagement with each other and will compel the handle portions therebeneath to converge yieldingly toward the shoulders on the handle on which the upper member is seated.

The carrier 20, thus assembled is ready for the reception of as many containers 22 as there are apertures in the upper member 26. The assembled carrier 20 is more or less self-sustaining and will not readily collapse in the absence of containers therein. In order to make the assembled carrier more sturdy, the base member 24 may be provided, at the convergence of each circular side edge 28 with the offset edge 32, with a notch 50 (Figs. 1 and 2), and the slot 46 in the upper member 26 may be of such length that the same will have to be sprung into these notches and will become interlocked therewith when the top blank is forced into seating engagement with the shoulders on the handle 42. In this connection, the curved extension of the handle 42 above the seated upper member 26 is not only advantageous from the viewpoint of good appearance and convenience in carrying the rack, but is further advantageous in that the upper member may be lowered freely over the handle until it is almost seated on the shoulders thereon, and only then is a slight downward thrust on the top blank required in order to spring it into interlock with the notches 50.

While the base portion 38 and the upper member 26 of the carrier 20 are, in the present instance, shown to be generally circular, they may obviously be of different shapes without departing from the scope of the invention.

Further, the handle portions 40 beneath or above the seated upper member may have shapes different from those shown by way of example, and the apertures 44 in the top blank 26 may be arranged as desired and may have any desired shapes to accommodate containers of specific forms. Also, while the members 24 and 26 are preferably made of paperboard, they may be made of any other material as long as the member 24 is made of bendable material. Thus, the base member 24 may, if desired, be made of thin gauge sheet metal, in which case the blank would not have to be creased along the lines 36. Further, while the slot 46 in the upper member is preferably of a width substantially twice the thickness of the base member 24 as described, the same may be made wider, if desired, so that the handle portions above the seated upper member would be closed against each other only when gripped by hand. Also, while each handle portion 40 is preferably provided with opposite seats 32 for the upper member 26, only one of these handle portions may be provided with these seats, or both handle portions may each have one seat spaced from the other. Furthermore, since the tumblers or other containers held in the carrier maintain it upright, the notches 50 in handle portions 40 may be omitted if desired.

Reference is now had to Figs. 5 to 17 inclusive, which show another and actually more desirable form of carrier whereby the carriers 60 may be stacked one on top of the other as shown in Figs. 5, 6, 16 and 17. The container carrier 60 is constructed essentially the same as the carrier 20 of Fig. 1, except as hereinafter pointed out. Thus, the carrier 60 is formed from a base blank 24' (Fig. 8) which by cuts 34' is divided into a base portion 38' and handle portions 40' that are foldable at the crease lines 36' into erect disposition on the base portion 38' to form a handle 42' (Figs. 11 and 12). The handle portions 40' are in this instance formed wider at their tops 62 than the corresponding handle portions of the previously described carrier 20.

The carrier 60 is further provided with an upper member 26' (Fig. 7) which has the orderly arranged cut-outs or apertures 44' for the reception of containers 22, as well as a central slot 46' for the reception of the top part of the projecting handle 42' when the upper member is lowered into seating engagement with the shoulders 32' on the handle (Figs. 12 and 16).

The instant member 26' is in one respect more desirably formed differently from the corresponding member 26 of the previously described rack 20. Thus, the blank for forming the upper member 26' (Fig. 13) is provided, on opposite sides of the slot 46', with legs 64 died-out within two of the apertures 44'. Legs 64 have narrower tab ends 66, and are preferably creased along lines 68 for ready folding of the legs from the plane of the blank into depending disposition thereon (Figs. 14 and 15). The portion 38' of the base member 24' is provided, for the reception of and releasable interlock with the tab ends 66 of the legs 64, with U-shaped cuts forming tongues 70, which most desirably bears against the inserted tab ends 66 in the downwardly bent fashion shown in Fig. 17. While the tongues 70 may be bent upwardly in order to insert the tab end 66, it is much easier to assemble the parts by simply pressing the end 66 of the leg 64 against the tongue 70 to bend the latter downward. Furthermore, the tongue 70 firmly grips the tab 66 against withdrawal of the leg 64 because once it has been inserted in the base, any movement of the tab out of engagement with the base tends to squeeze the tab between the tongue 70 and the main body of the base 38', as is readily apparent from Fig. 17. Since the U-shaped cuts in the base member are of substantially the same width as the tabs 66, the legs are prevented from extending too far through the base of the carrier by the shoulders 67 formed by the end tabs 66. Consequently, when the legs 64 are in assembled position, they are securely held against dropping through the base and are

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restrained from being easily withdrawn from engagement with the base.

The base member 24' and upper member 26' are assembled into the rack 60 the same as the base and upper members 24 and 26 of the previously described carrier 20, except that the legs 64 of the upper member 26' are interlocked with the base 38' in the described manner. The legs 64 will lend added stability to the carrier 60, and will especially sustain the seated upper member 26' in level or horizontal disposition above the base 38'.

The instant carrier 60 differs in a most important respect from the previously described carrier 20 by being arranged so that the carriers may be stacked on top of each other. To this end, the handle 42' of the carrier 60 is extended above the containers 22 which are adapted to be held in the carrier, and the base member 24' is provided with a central slot 72 (Figs. 8 and 10). In stacking carriers of this type, it is imperative that all but the topmost of the carriers hold at least sufficient containers 22 to provide for the stable support of the next carrier thereabove. Thus, it is an important characteristic of carriers of the instant construction that they are, in their stacked arrangement, resting against and supported by the containers in the carrier next below (Figs. 5, 6 16 and 17).

In order that the handle 42' of the lower one of two stacked carriers 60 may not interfere with the disposition of the upper carrier on the containers 22 in the lower one, the top part 62 of the handle of the lower carrier extends through the slot 72 in the base 38' of the one above (see especially Figs. 5 and 17). Thus, in order to stack any number of loaded carriers 60, it is merely necessary to place one on top of the other while guiding the top part 62 of the handle of the carrier below into the slot 72 in the base 38' of the carrier being placed on top. The length and width of the slot 72 in the base 38' are preferably selected for substantially fitted reception by said slot of the top part 62 of the handle 42' of a carrier therebeneath when the one above rests with its base 38' on top of the containers 22 in the lower carrier (Fig. 5), so that the carriers thus stacked are interlocked with each other and prevented from sliding on top of each other. On the other hand, the explained interlock between the carriers is instantly released on merely lifting one or more of the carriers from the stack, as will be readily understood.

The explained support of the stacked carriers 60 on the containers 22 therein is of considerable advantage, in that they may hold fairly heavy containers which in a single carrier may safely be carried by the base 38' thereof even if it is made of paperboard, but which would constitute a prohibitive load in a stack of carriers if this entire load had to be carried by the carriers themselves. Thus, Figs. 5 and 6 clearly show that the containers in a stack of carriers are fairly accurately superimposed on each other and separated only by interposed portions of the bases 38' of the carriers. If the containers are of the kind which are closed on top, the carriers themselves support none of the container load when they are stacked. If the containers are of the kind which are open on top and which are of substantially the same size and shape at their bottoms as they are at their tops, the carriers will still support none of the container load. However, if the containers are, as shown by way of example, open at the top and of conical shape (Fig. 6), those portions of the bases of the stacked carriers which are within the confines of the open tops of the containers will carry part of the overall load of the containers in these racks, but this overall load of the containers must indeed be relatively great before the bases of the stacked carriers will give way, even if these bases should be of paperboard as preferred.

In order that the containers of any kind in carriers which are intended to be stacked one on top of the other

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may impose no part of their load on the carriers under any circumstances, the carriers may be slightly modified by using modified base members 24'' of the kind shown in Fig. 9. The modified base member 24'' is in all respects like the base member 24' in Fig. 8, except that the slot 72' therein is inclined to the opposite handle portions 40' thereof. The inclination of the slot 72' in the modified base member is such that containers in stacked carriers using these modified base members 24'' will be partly within and partly without the confines of the nearest containers thereabove and therebelow, with the result that these carriers, and especially the bases thereof, are free of any supporting function insofar as the stacking of the containers is concerned.

It is readily apparent from the foregoing that the carrier in either of the forms shown in Figs. 1 and 5 has quite a number of important advantages. Thus, the carrier with its handle for convenient carrying may quickly be set up by simply folding the handle portions of one blank and interlocking it with another blank, only two simple blanks being required for the formation of the carrier. The assembled carrier may serve for the storage and/or display of containers sold in bulk, be the containers open or sealed. It may further be used as an inexpensive tray on which to serve refreshments in tumblers or other containers to people at social or other gatherings. The carrier, by being structurally exceedingly simple, may be mass-produced at such low cost that the same may without a feeling of loss be discarded after one-time use thereof. However, it readily lends itself to disassembly and knock-down after each successive use thereof for further use in the future. The construction of the carrier in its one form for ready stackability with other loaded carriers permits the storage and full display of a large quantity of containers on a small space on a counter or storage place in a store or on a table for serving a large number of people with refreshments, for instance. Due to the mutual interlock between the carriers in a stack, they may be stacked unusually high without fear of slippage of the carriers on top of each other. Furthermore, the support of the loaded carriers on the tops of the containers in the carriers below makes not only for greater stability of the stack on a table or counter support, but permits the carriers to be made of relatively weak paperboard despite considerable weight of the individual containers therein.

The carriers may be shipped either completely disassembled or partially assembled in sets, but in either case they are ordinarily shipped flat so as to consume the least amount of space. If shipped in partially assembled condition, the handles of the base member are bent into upright position and inserted into the slot in the upper member. The upper member is not pressed down into the notches on the handles, however, so that both handle portions may be folded over to one side at the base member, thereby collapsing the carrier into flat condition with the upper member lying flush with the base member. When the carrier is to be assembled from this condition, all that is necessary to do is to raise the handle portions to their erect position, which lifts the upper member away from the base. The upper member is then pressed into the notches of the handle and, if provided, the support legs hereinbefore described are bent down into position. The containers or tumblers are then placed in the spaces provided therefor. In large bulk shipments, however, the blanks may be shipped separately and the carrier completely assembled by the customer.

What is claimed is:

1. A paperboard carrier for containers formed from a first blank having two opposite cuts extending along and inwardly spaced from the circumference of said blank and having their adjacent ends equally spaced from each other to divide said blank into a base and opposite handle portions, said handle portions being foldable at their ends from the plane of said base toward and into juxtaposition

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with each other to form a projecting handle, the outer edges of said handle portions being shaped to form on said projecting handle two opposite pairs of shoulders facing away from said base and equally spaced therefrom, another blank adapted to be seated on said shoulders and having a slot for the extension therethrough of the part of said projecting handle above said shoulders, said other blank having apertures therein serving for the reception of containers supported on the base of said first blank, and legs formed within certain of said apertures and bendable adjacent the peripheries of their apertures from the plane of said other blank into engagement with the base of said first blank to maintain said other blank in a position substantially parallel to the base of said first blank.

2. A carrier for containers as set forth in claim 1 wherein said first blank has substantially U-shaped slits with which said legs are releasably interlockable.

3. A carrier for containers as set forth in claim 1 in which said slot in said other blank is of a width substantially twice the thickness of said first blank so as to compel the handle portions beneath the shoulders on said projecting handle to converge toward said shoulders and to hold the handle portions above said shoulders in engagement with each other, the outer edges of said handle portions being provided with shallow notches from which said shoulders extend, and said slot in said other blank being of a length such that its ends snap into releasable interlock with said notches when said other blank is assembled on said projecting handle in engagement with said shoulders on the handle portions of said first blank.

4. A combined package and carrier for containers, comprising a first member of bendable material having two opposite cuts extending along and inwardly spaced from the circumference thereof and having their ends spaced from each other to divide said member into a base on which the containers are supported and opposite handle portions which are substantially symmetrical to a center line of said member passing midway between the spaced ends of said cuts, said handle portions being bendable at their ends from the plane of said base toward and into

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juxtaposition with each other to form a carrying handle extending between the containers and having a top part extending above said containers and centrally of said carrier, the outer edge of at least one of said handle portions being shaped to form on the projecting handle intermediate its height two opposite shoulders facing away from said base and equally spaced therefrom beneath the tops of the containers on said base, a second member adapted to be seated on said shoulders on the projecting handle and having a slot for the extension therethrough of the part of the handle above said shoulders, said second member having apertures therein for the reception of containers supported on the base of said first member, said base having a slot located centrally thereof and adapted for substantially fitted reception of the top part of said handle of the lower one of two stacked carriers, the upper one of which rests with its base on the top of the containers in the lower carrier.

5. A combined package and carrier for containers as set forth in claim 4 in which said second member is provided with legs formed within certain of said apertures and bendable from the plane of said other blank adjacent the periphery of the aperture into engagement with the base of said first member to maintain said second member in a position substantially parallel to the base of said first member.

6. A combined package and carrier for containers as set forth in claim 4 wherein said base has substantially U-shaped slits with which said legs are releasably interlockable.

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