CARRIER FOR CONTAINERS AND THE LIKE
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The present invention relates to an article carrier or receptacle, and more particularly, to a carrier or receptacle for retaining and transporting a plurality of articles, such as beverage cans and the like, as well as to the resulting package or beverage unit.

Recent developments in the packaging of a plurality of beverage cans and the like depart quite conspicuously from the well known paper or pasteboard carriers of the compartmentalized or wrap-around type. The most recent carriers devised are of the connector clip or plastic sheet carrier variety which are designed to engage only the upper bead or rim of adjacently positioned beverage cans, and retain them together as a unit until it is desired to accomplish removal. I have found that carriers of this last mentioned type are superior from an overall standpoint, yet there are instances where it would be desirable to employ certain additional features by way of improvements to these carriers.

Since the connector clips and plastic sheet carrier devices normally embrace only the upper bead or rim of the containers, the lower ends of the containers have a tendency to laterally shift away from each other when they are inclined relative to their substantially vertically extending axes. In addition, most of these recently developed carrier devices do not protect the tops of these containers from dirt, dust and other undesirable materials which are adapted to be lodged within the upwardly extending peripheral bead or rim adjacent the upper ends of the containers. Some paperboard carriers overlie the tops and bottoms are well as envelop the sides of the containers, but in so doing, they are either too weak to absorb these shocks developed upon accidental dropping of the containers, or they are so strong that removal of the containers is made quite difficult.

Accordingly, it is an object of the present invention to provide an improved article or container carrier package which overcomes prior art deficiencies and difficulties.

Another object of the present invention is to provide an improved article or container carrier which prevents lateral shifting of the containers while securing said containers together as a unit.

A further object of the present invention is to provide an improved carrier or receptacle for retaining a plurality of containers which, in addition to preventing lateral displacement of said containers, provides a clean and sanitary cover for the tops of the containers.

Still another object of the present invention is to provide an improved carrier or receptacle for retaining and transporting a plurality of containers which, in addition to the above mentioned objects, provides large areas for printing and advertising purposes.

A still further object of the present invention is the provision of an improved carrier or receptacle for embracing a plurality of containers together as a unit, and which is provided either with a separate or integral cover element for enveloping a substantial portion of the container sides as well as the tops of the containers if desired.

Another object of the present invention is the provision of a container carrier and package which while accomplishing the above mentioned objects, is also readily removable by hand.

Still a further object of the present invention relates to an improved container carrier receptacle which can accommodate a wide variety of handle structures or transporting means without extensive modifications.

Yet another object of the present invention is the provision of a container carrier or receptacle which can be economically manufactured in large numbers by present manufacturing techniques, and rapidly and efficiently assembled to a plurality of adjacently positioned containers for retaining them together as a unit.

Other objects and advantages will become apparent from the following description when taken in connection with the accompanying drawings wherein:

FIG. 1 is a perspective view of one form of article or container package constructed in accordance with the principles of the present invention;

FIG. 2 is an exploded perspective view illustrating the various components constituting the article or container package shown in FIG. 1;

FIG. 3 is a front elevational view, partly in section, of the article or container package shown in FIG. 1, and taken along line 3—3 thereof;

FIG. 4 is a top plan view, partly in section, of the FIG. 1 article or container package with the tops of the containers exposed;

FIG. 5 is a front elevational view of another form of article or container package coming within the purview of the present invention;

FIG. 6 is a perspective view of yet still another form of article or container package constructed in accordance with the teachings of the present invention;

FIG. 7 is a front elevational view, partly in section, of the article or container package shown in FIG. 6 and taken along line 7—7 thereof;

FIG. 8 is a perspective view of still another form of article or container package coming within the scope of the present invention;

FIG. 9 is an enlarged fragmentary front elevational view, partly in section, of the article or container package shown in FIG. 8, and particularly illustrating the disposition and functioning of a handle structure associated therewith;

FIG. 10 is a perspective view of another form of article or container package coming within the teachings of the present invention;

FIG. 11 is a perspective view of a plurality of stacked carriers or receptacles which are used in providing the package or beverage unit shown in FIG. 10;

FIG. 12 is a perspective view of another form of article or container package which is similar to the form shown in FIG. 10, but having the tops of the containers protected;

FIG. 13 is an enlarged fragmentary sectional view of the containers shown in FIG. 12 and illustrating the manner in which the tops thereof are protected;

FIG. 14 is a top plan view depicting a carrier or receptacle blank which is used to provide the package unit shown in FIG. 15;

FIG. 15 is a perspective view of yet still another form of article or container package having the carrier blank of FIG. 14 positioned in embracing engagement over a plurality of containers.

Referring now in greater particularity to the drawings, and first to the form of invention depicted in FIGS. 1—4, there is shown an article or container package 10 which generally comprises a plurality of containers 20, here illustrated as six in number, which are retained together as a unit by the plastic sheet carrier 30, and are thereafter encased within or enveloped by the cover element 40.

The containers 20 shown in the drawings are of the beverage or beer can variety; however, it is to be understood that the term "containers" includes other objects and articles which can be engaged and retained as a
Containers of the beverage variety generally are provided with a substantially flat top and bottom, respectively, with a sidewall substantially cylindrical in form, extending therebetween. The outer ends of the sidewall are curved or rolled with an outer marginal area of both the top and bottom whereby to provide the annular enlargements or beads at each end of the container.

Since the beads of the containers project outwardly from the sidewalls of the containers, they can be effectively used in securing a plurality of containers together as a unit. While plastic sheet carriers of the type disclosed and claimed in U.S. Patent No. 2,874,835, dated February 24, 1959, to O. J. Poupitch, are preferably employed to accomplish this, metallic or plastic connector clips such as shown in U.S. Patent No. 3,002,612, dated October 3, 1961, and also issued in the name of O. J. Poupitch, can be used if desired.

The use of such plastic sheet carriers or in the alternative, metallic connector clips, are an effective way of securing a plurality of containers in a closely assembled array for carrying thereof. Since these carrier devices are designed to engage the uppermost annular enlargement or bead of the containers, there is some difficulty in preventing sideways displacement of the containers at a lower end. This is particularly the case where it is attempted to position a group of containers retained by carriers of this type within a shopping or grocery bag, or where the containers as a group are otherwise displaced from their substantially vertically extending axes. In addition, the tops of the containers are left unprotected with metallic clip or plastic sheet carriers, and this is desirable since this is the area where the mouth of the user rests in order to receive the beverage or other food product from the container. While some paper or pasteboard carriers prevent the tops of the containers and prevent sideways displacement, they are either too weak to absorb the shock upon an accidental dropping of the containers, or they are so strong that removal of the containers therefrom is quite difficult.

By using the cover element of the present invention in combination with plastic sheet carriers, or other such similar devices, it has been found that all the advantages of these carrier devices are retained while obtaining several improvements thereover. As shown in FIG. 2 of the drawings, the cover element of the FIGS. 1-4 embodiment comprises a substantially flat or planar surface element 42 with a peripherally continuous skirt means 44 extending downwardly therefrom. As will be evident from a discussion of the other embodiments of this invention, the skirt means 44 may be interrupted at selected locations thereof to enhance removal from the containers. The cover elements shown in FIGS. 1-4 are preferably made of paper or other similar material, and is serrated on its lower edge at 46 to permit tearing thereof. In order to prevent lateral shifting of the containers 20 adjacent the bottoms 24 thereof, the internal peripheral dimension of the skirt means 44 is preferably the same or smaller than the peripheral measurement of the container 20 as a group taken along the sides 26 thereof while assembled to the carrier 30. The skirt means 44 when applied to the containers envelopes a substantial portion of the container sides, and whether or not used in conjunction with the substantially planar carrier element 42, provides effective printing areas for advertising the contents of the package.

Apertures 48 are provided in the substantially flat or planar element 42 of the cover element and are aligned with the apertures 34 of the carrier means to permit the insertion of a user's fingers therewithin for grasping the material adjacent each of the apertures so as to transport the package.

While depending skirt 44 of the cover element preferably envelopes or encases substantially the entire sides of the containers, it has been found that lateral shifting of the containers at points remote from the skirt means 44 can be avoided even though the skirt means does not engage the entire sidewall area of the containers. In FIG. 5, there is shown a package 10a which is similar to the embodiment of FIGS. 1-4 as indicated by the application of identical reference numerals with the suffix "a" employed to designate like parts. Instead of having the skirt means 44a engaging substantially the entire sidewall area of the containers, it is just as possible to prevent or hinder lateral displacement of the containers 20a by engaging only a portion of the container sidewall area. Essentially this will mean that the peripheral dimension of the skirt means 44a as related to the container as a group taken along the sides thereof should be such as to prevent movement of the containers in areas not engaged by the skirt means, and this will normally require relatively tight fitting mechanical engagement with the containers.

As will be seen from an inspection of FIG. 3 of the drawings, the substantially planar element 42 is spacedly positioned above the upper surface of the carrier means 30 and this relationship of the elements may, in certain instances, preclude effective carrying of the package. As a prime example, if the cover element 40 is made of paper or other readily tearable material, effective carrying of the package might well be prevented if only the material adjacent the apertures 48 of the cover element is gripped since these areas may not be strong enough to lift the containers. One way of avoiding this is by assuring the insertion of the user's fingers within the apertures 34 of the carrier 30 so as to permit the user's fingers to engage the material of the carrier adjacent its apertures since the material of the carrier is made strong enough to permit lifting and carrying of the containers. This is shown in the FIG. 6-7 embodiment which is similar to the above described structure as indicated by the application of identical reference numerals with the suffix "b" employed to designate like parts. As will be seen in this form of the invention, the material adjacent the apertures 48b of the cover element, constituting a part of the package 10b, is provided with a plurality of radially extending slits 50 whereby to prevent the user's fingers from grasping only the cover element of the package. Upon insertion of the user's fingers within these apertures 48b, the material adjacent and surrounding the same will deflect to provide a generally tapering surface 52 which converges toward the finger gripping apertures of the carrier. Thark this will have the effect of impossible to grasp only the cover element of the package in an engaging and transporting the same.

Another effective way of transporting the package without relying on the cover element is to use a separate
handle structure such as shown in FIGS. 8-9 of the drawings. This form of the invention is substantially similar to the previously described as indicated by the application of identical reference numerals with the suffix "b" employed to designate like parts similar to the previous embodiments. The embodiment resides in the latticework construction of the skirt means 43b of the cover element 40b. Such a skirt means will, like the other embodiements, effectively prevent lateral shifting of the containers at points remote from the carrier 30b. To form such a skirt means, the carrier blank 80b shown in FIG. 14 is provided with an endless band which surrounds and is integrally attached to the flat carrier means 30b. This endless band 82b is provided with a plurality of circumferentially extending rows of overlapping perforations 42b which will take the form of diamond-shaped apertures as illustrated in FIG. 15, when the endless band 82b is stretched around the sides of the containers. Thus, the endless band 82b will function in substantially the same manner as "expanded metal" in that when stretched around the sides of the containers, a skirt means of latticework construction will be provided.

From the foregoing, it will now be apparent that the present invention contemplates novel and unique carrier or receptacle devices as well as novel package or beverage units to retain and prevent lateral shifting of the containers. It will also be apparent that the various carriers and packages herein described can be used to prevent the entry of foreign particles within the annular enlargement or bead at the upper end of the containers, and incorporate any one of a variety of handle structures for transporting the packages. Removal of the cover element and carrier means, whether integrally or separately associated with each other, is quite easily effected by following the teachings of the present invention.

While the preferred embodiments of the present invention have been shown and described herein, it is obvious that many structural details may be changed without departing from the spirit and scope of the appended claims.

I claim:
1. A carrier package comprising at least one pair of adjacentiy positioned containers arranged in side by side substantially abutting relationship, of one-piece carrier means made of sheet material assembled to said containers adjacent one end thereof for embracing and securing said container thereto in positions generally corresponding to the container placement, said carrier means including a cover element for at least the sides of said containers including a substantially peripherally continuous skirt means associated with said carrier means and enveloping a substantial portion of the container sides, the peripheral measurement of said skirt means relative to the peripheral dimension of said containers as a group taken around the sides thereof preventing lateral displacement of said containers at points remote from said carrier means, and means for transporting the package.
2. The carrier package as defined in claim 1 wherein said cover element includes a top covering element for overlying an upper end of each of said containers.
3. The carrier package as defined in claim 1 wherein said skirt means is perforated at selected locations to provide a plurality of individual container embracing segments, each of said segments being provided with a tear tab to aid in separating each of said segments from the skirt means.
4. A receptacle for retaining at least one pair of adjacentiy positioned containers arranged in side by side substantially abutting relationship, comprising integral first and secondiy positioned container engaging portions, said first portion extending substantially normal to the plane of each container and being provided with individual container embracing and securing areas in the form of constrictive apertures arranged in juxtaposed rows, said second portion extending downwardly from said first portion and including a substantially peripherally continuous skirt.
means for enveloping a major portion of the container sides, said skirt means having an internal peripheral measurement of said containers as a group taken along the sides thereof to prevent lateral displacement of said containers at points remote from said first portion.

5. The receptacle as defined in claim 4 wherein said first portion includes means spanning each of said constrictive apertures for overlying an upper end of said containers.

6. The receptacle as defined in claim 4 wherein the said skirt means is provided with a plurality of container embracing segments separated from each other by a substantially vertically extending row of perforations, each of said container embracing segments having a tear tab associated therewith whereby to permit removal of each segment from said skirt means.

7. The receptacle as defined in claim 4 wherein the configuration of said receptacle affords stacking of a plurality of similarly configured receptacles in telescoped nested relationship with each other.

8. A carrier blank adapted to be distorted for engaging and embracing a substantial portion of each of a plurality of containers arranged in side by side substantially abutting relationship, comprising a substantially unsupported sheet of elastic material having a plurality of elongated apertures provided therein corresponding to the number of containers, and an endless band surrounding said sheet and integrally attached thereto, said endless band having a plurality of circumferentially extending rows of overlapping perforations whereby upon the application of said carrier blank to the containers, said elongated apertures will be deformed transversely of said sheet for receiving and retaining said containers, and said rows of perforations will provide a latticework construction suitable for engaging the container sides at discrete locations spaced from said sheet, said endless band when stretched and deformed to provide the aforementioned latticework construction retaining sufficient elasticity to resiliently grip and hold the containers in a tight cluster throughout the entire weight thereof.

9. A carrier package comprising at least one pair of adjacently positioned containers arranged in side by side substantially abutting relationship, carrier means assembled to said containers adjacent one end thereof for embracing and securing said containers thereto in positions generally corresponding to the container placement, a cover element for at least the sides of said containers including a substantially peripherally continuous skirt means associated with said carrier means and enveloping a substantial portion of the container sides, the peripheral measurement of said skirt means relative to the peripheral dimension of said containers as a group taken around the sides thereof preventing lateral displacement of said containers at points remote from said carrier means, and means for transporting the package including a pair of spaced finger gripping apertures provided in said carrier means, the material adjacent each of said apertures affording grasping thereof by a user for carrying the package, said cover element including a substantially planar surface for overlying an open upper end of said containers in spaced relationship to said carrier means, and cover element having apertures formed therein aligned with the finger gripping apertures of said carrier means, the material adjacent the apertures in said cover element being provided with a plurality of radially extending slits whereby to insure insertion of a user's fingers within the apertures of said carrier means.

10. A carrier package comprising at least one pair of adjacently positioned containers arranged in side by side substantially abutting relationship, and one-piece carrier means made of elastic material having a plurality of apertures therein corresponding to the number of containers in said package, the material adjacent each aperture being of a size and construction whereby to cause it to stretch and deform to the shape of axially directed necks for engaging said containers to resist their withdrawal from said carrier means, said carrier means including a cover element for at least the sides of said containers formed from an endless band which is integrally attached to and surrounds said carrier means, said endless band being provided with a plurality of circumferentially extending rows of overlapping perforations whereby upon the application of said carrier to the containers, the elongated apertures are deformed transversely of said sheet for receiving the containers and said endless band is stretched to provide an elastic skirt means of lattice type construction embracing the container sides to prevent lateral displacement of said containers at points remote from the axially directed necks of said carrier means, and means for transporting the package.

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