

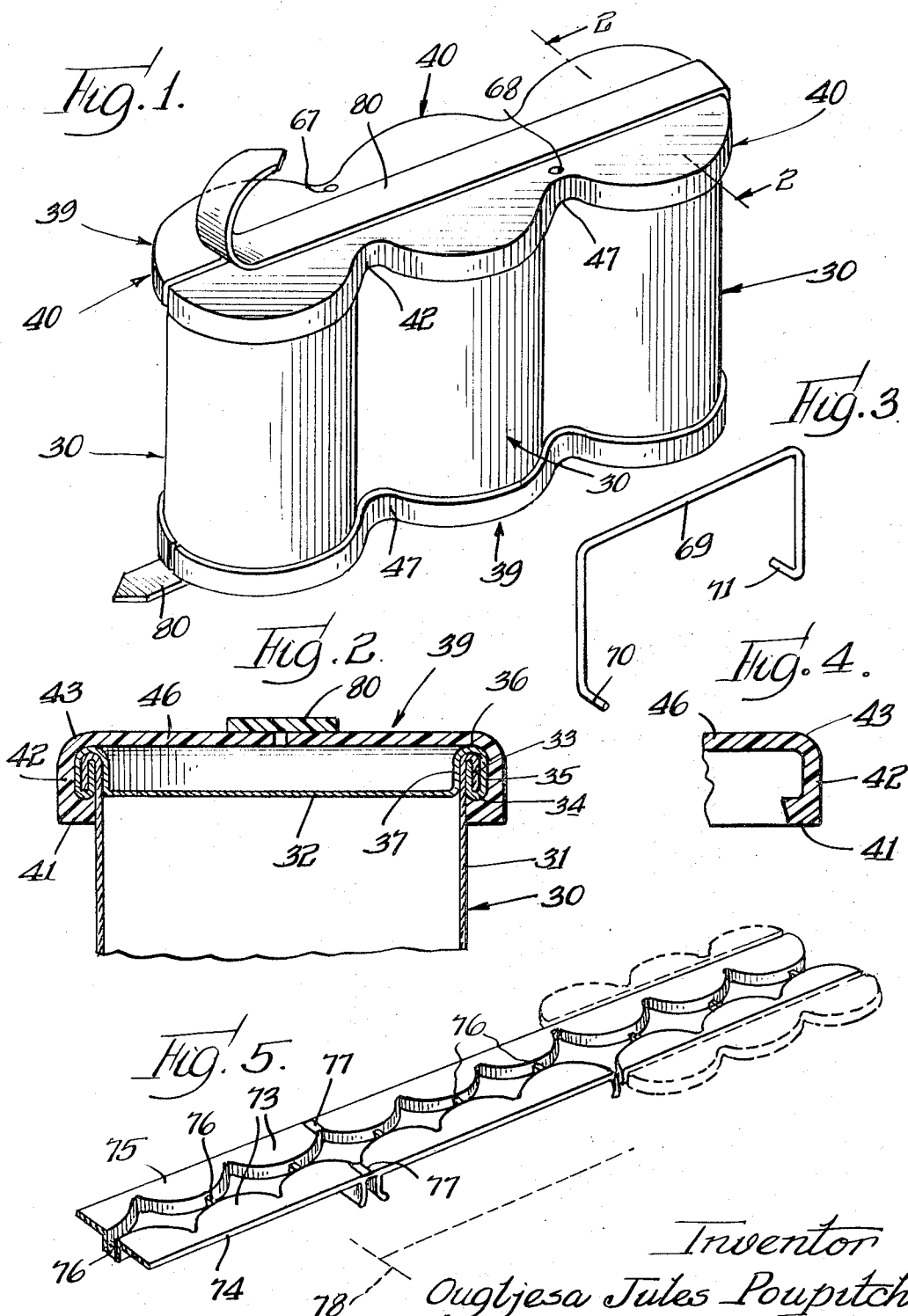
Sept. 12, 1967

O. J. POUPITCH

3,341,005

CONTAINER CARRIER AND PACKAGE

Original Filed July 17, 1959



Inventor
Ougjesa Jules Poupitch
 By: *Olson, Treple, Wollast & Bushnell*
 atty.

1

3,341,005

CONTAINER CARRIER AND PACKAGE

Ougljesa Jules Poupitch, Itasca, Ill., assignor to Illinois Tool Works Inc., Chicago, Ill., a corporation of Delaware

Original application July 17, 1959, Ser. No. 827,747.

Divided and this application Jan. 23, 1967, Ser. No. 611,045

6 Claims. (Cl. 206—65)

ABSTRACT OF THE DISCLOSURE

This invention relates generally to a package or article carrier and, more particularly to a receptacle or package device for holding and carrying containers, for example cans. The carrier comprises complementary sections for overlying can ends and interengaging the can beads. An adhesive strip retains the sections together.

This is a division of my copending application Serial No. 827,747, filed July 17, 1959.

It is now common commercial practice to package beverages, such as beer and soda pop, in cans. It has also been a long-time practice to package many foodstuffs in cans. Further, it is now becoming a common practice to package articles of almost every shape and character in containers, either for the purposes of unitizing and for ease of handling or for corrosion resistance considerations. While this invention relates to and has application for containers of almost all configurations and sizes, it will be described in connection with beverage cans, such as beer and soda pop cans.

In most instances, a plurality of such beverage cans, conveniently six in number, is supplied in a receptacle or carrier for home consumption. A plurality of units of six cans generally is shipped in a large carton and this carton is broken open at the retail outlet for sale of the units to the ultimate consumer.

The common older practice relative to beverage can carriers has been of two general types, the type of packaging unit where paper or pasteboard packages are surroundingly disposed to a group of cans, or the other type which utilizes metallic clips which engage the rim portions of adjacent cans.

Paper or pasteboard packaging devices which have been sufficiently strong to be accepted commercially, have been found to be unduly bulky and expensive and to require rather complicated packaging machinery. Such paper packaging devices substantially completely encase a plurality of cans, thus insulating the cans, and requiring that they be removed from the paper packaging device for efficient refrigeration. Further, the paper packaging devices do not stand up when disposed in high humidity areas or in cold water for cooling purposes. Another disability of such paper packaging devices is the difficulty in opening the packaging device to remove the individual beverage cans.

On the other hand, metallic connectors or clips have not found full commercial acceptance due to the difficulty of applying the clips to the cans in automatic machinery with sufficient permanence so that the cans will not become readily detached from one another. Furthermore, in some prior art one-piece metallic connectors of the bead engaging type which have been sufficiently strong to hold units of cans firmly together, the clips have held the discrete cans in a rigid relationship. That is, all of the six (or other number) cans in a unit have been more or less rigidly interconnected. When a carton of such rigid units, six being a common number, is dropped, the tendency is for each rigid unit to direct all of the impact simultaneously in one direction. This causes a substantial impact on the carton, tending to burst the car-

2

ton. An analogy may be to a solid ball and a mass of loosely retained shot. For equal masses, the ball when dropped, would create a given shock impact, while the loosely retained shot would dampen the shock substantially below said shock impact.

In my recently issued Patent 2,874,835, I have shown a number of means for resiliently interconnecting and carrying a group of cans by means of an apertured sheet of plastic stretched over a plurality of cans so as resiliently to grip the cans beneath the upper beads. My aforescribed patent device does not exemplify job of providing a carrier.

In view of the foregoing, it is a general object of this invention to provide a device for holding a plurality of containers together as a unit which simultaneously affords protection to at least the major portion of a peripheral bead of the individual containers.

It is a further object of this invention to provide a device as aforescribed which protects the peripheral bead against formation of nicks or burrs on the bead surfaces due to careless handling and which simultaneously insulates adjacent units of containers one from the other.

It is another object of this invention to provide a device which affords the foregoing functions while maintaining an elastic resilient interconnection between individual bead engaging protecting means, said interconnection absorbing and dampening impact shocks which may occur in handling a carton of units as well as in the handling of individual units.

It is still another object of this invention to provide a combination carrying means and sanitary cover which protects the major portion of the bead of a container from contact with foreign objects.

It is a further object of this invention to provide a carrier of the above stated general characteristics which may be provided either with a quick detachable manually graspable handle which may be inserted at the retail outlet or with apertures of suitable configuration for easy manual grasping by the person desiring to carry a unit of beverage containers.

Another object of the invention is to provide, in at least one form of the invention, a can carrier which may be easily formed from strip material by a stamping operation.

Another object of this invention is to provide can carrier devices of the aforescribed nature which afford a substantial planar area for manufacturers and retailers to dispose and display advertising matter upon.

The novel features that I consider characteristic of my invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and its method of operation, together with additional objects and advantages thereof, will best be understood by the following description of specific embodiments when read in connection with the accompanying drawings, in which:

FIG. 1 is an isometric perspective view of one form of my invention;

FIG. 2 is a sectional view taken along lines 2—2 of FIG. 1;

FIG. 3 is a perspective view of a handle member;

FIG. 4 is a fragmentary sectional view similar to FIG. 2 showing the bead engaging means in detached relation;

FIG. 5 is an isometric perspective view of stamped sheet stock which has been pre-formed and which will provide the construction shown in FIG. 1, as well as provide a six pack unit as shown in dotted lines in the upper righthand portion of FIG. 5.

Referring now to FIG. 1 of the drawings, a plurality of container means 30 is shown. Each container is shown as a conventional beer or soda pop can and is formed with a generally cylindrical outer wall 31 and opposed end portion walls 32. At the juncture of the side wall 31

and the end walls 32, a conventional bead 33 is formed, said bead having a bottom portion 34, a radially outward portion 35, a top portion 36 and a radially inwardly directed portion 37. While I have chosen to depict the inventive concepts with cylindrical container means 30, it is to be expressly noted that the inventive concepts apply with equal facility to containers of other and different configurations.

A receptacle in the form of a cover means 39 is adapted to fit over and snugly engage the individual containers 30. More particularly, the cover means 39 is formed with a plurality of separate, though interconnected, bead engaging means 40 which have substantially the same dimensions and a complementary conforming configuration to that of the bead 33 of the individual containers 30. As perhaps best shown in FIG. 4, the individual bead engaging means 40 is formed with complementary surfaces for engaging the bead 33, there being a first portion 41 which comprises the inwardly directed surface of a thickened depending lip for engaging bottom portion 34 of the bead, a second surface comprising a substantially vertical side portion 42 for engaging the radially outward side of the bead 35 and a third portion 43 complementary to and engageable with top portion 36 of the bead.

The lowermost depending outer end of the bead engaging means is formed with an inwardly directed surface 45, perhaps best shown in FIGS. 4 and 6, which assists in initial assembly as will become apparent. It should be noted that the cross-sectional views relating to thickness of materials are considerably enlarged for purposes of clarity. Further, in some types of materials, the thickened lower lip portion which defines surface 41 is not necessary where the strength of materials employed will afford a uniform cross-section in this area.

The individual bead engaging means 40 are aided in snug engagement of the bead by a substantially planar integral top or base portion 46 which joins and is flush with the portions 43 of the bead engaging means.

The individual bead engaging means 40 does not have a common wall or web therebetween on the inner side and surface portions 41, 42 and 45. These wall portions terminate at 47. Thus, the bead portions 35 of adjacent containers are in contact to thereby reduce the overall dimensions of the package.

The cover means 39 is preferably formed of a plastic material which is resilient, flexible, and elastic, and which will not readily tear. Polyethylene and polystyrene are preferred examples, but any other functionally similar material will serve equally well. In operation, the cover means 39 may be formed in elongated strips rolled on a reel or may be handled individually and are adapted to be inserted over units of cans by conventional food packaging machines. When the individual bead engaging means 40 are inserted over the beads 33, the inherent elasticity of the material allows deformation of the lower cammed rim 45 and portion 41 so that it may be forced over the bead 33. When the bead engaging portion 43 comes into engagement with the top portion 36 of the bead, portion 41 will return radially inwardly to snugly engage and underlie the bottom portion 34 of the bead, resisting unauthorized separation of the container means from the cover. It will be noted that in the final assembly portions 41, 42 and 43 respectively overlie and intimately engage portions 34, 35, and 36 of the bead. To remove the individual containers 30 from the bead engaging means 40, the individual containers may be grasped and twistingly pulled against the areas of the adjacent cans where the lower portion of the bead engaging means is interrupted. Due to the leverage that may be imparted by grasping the lower portion of the individual containers 30, they may be readily forcibly detached from the unit for serving purposes.

When the cover means 39 is disposed upon the containers, it protects the individual beads 33 from nicks and burrs that might be formed by rough handling of

the unit. Further, the individual units (discrete six packs) are protected one from the other in both up and down relationship and in a side to side relationship by virtue of the top and outer side portions of the cover means 39.

The top planar portion of the cover means serves as a dust cover and prevents contact with foreign objects thus keeping the bead surface more sanitary. It should be remembered that from the very nature of the manufacture and packaging of both the cans and the covers and the application of the latter to the cans all done by automatic machinery, the entire package is inherently susceptible to being kept sanitary to prevent a hazard to the user who imbibes directly from the beverage container 30. If desired a duplicate cover or carrier 39 may be applied to the bottom ends of the cans as shown.

Another important function results from the inherent elasticity of the material employed. More particularly, the resilient interconnecting means serve to absorb and dampen impact shocks both by causing a separation of units into individual though connected units, and by virtue of the characteristics of resilient materials per se. This is important because in ordinary handling of the units when they are packaged in, for example, a case lot containing eight discrete units of six packs or the like, it is very usual that the cases will be subjected to dropping distances of three to five feet. Without the resilient interconnection, it has been found, particularly where rigid covers or clips have been used, that a drop of three to five feet will often cause a case to burst due to the impact shock.

A pair of apertures 67 and 68 is oppositely disposed and formed in the planar surface 46 of cover 39 as shown to accommodate a wire handle 69 having offset ends 70 and 71 which will be disposed diagonally across the center can and the ends of which are insertable under the top portion 46 of the cover between the adjacent cans. The ends 70-71 are angularly disposed inwardly, or stated another way, the ends are parallel to each other while the main portion of the handle crosses the center can.

It is also within the contemplation of the invention that with the cover means 39 shown, that the apertures 51 may be formed with generally relatively large circular apertures (not shown) to afford a "bowling ball" type of grip for readily carrying a plurality of containers as a unit. It is also apparent that the apertures 51 in the form shown may be used for this purpose.

The top cover is centrally split along its longitudinal length except by a web portion at the end thereof (not shown in FIG. 1, but as shown in FIG. 5). The cover 39 may be conveniently formed by a combination stamping and semi-molding process from long straight sheet stock, and as shown in FIG. 5, the formed covers have oppositely disposed straight edges 74 and 75. A plurality of semi-circles 73 with depending lips which are complementary to the bead, form the bead engaging means 40. The cover means 39 may be formed in the elongated strip stock as shown by placing the semi-circles 73 in back to back relationship, the straight edges 74 and 75 being swung around into engagement one with the other to form closed circles which are then held in place by suitable pressure sensitive adhesive tape 80.

In the strip form shown in FIG. 5, the semi-circles are connected in horizontal relationship by cross webs 76. At the end of every three individual discrete semi-circles 73, a connecting end web 77 may be formed which will allow, when the central cross webs 76 are severed, the two individual halves of three semi-circles 73 to be placed together in the abutting relationship shown in FIGS. 1 and 2 to be held by the tape 80.

On the other hand, when it is desired to package, for example, six units, a generally T-shaped cutter tool 78 such as shown semi-diagrammatically in dotted lines below the strip in FIG. 5 may be applied to the strip so as to sever two of the end webs 77 and three of the center webs 76 while leaving three connected center webs 76 and

5

two of the end web 77. Then the two opposed split units of three semi-circles may be each swung 180° on the remaining end webs 77 to form a six pack cover as is shown in the dotted line relation in the righthand portion of FIG. 18. Two strips of tape 80 may then be applied to the centers to hold the covers in place.

Although specific embodiments of the invention have been shown and described, it is with full awareness that many modifications thereof are possible. The invention, therefore, is not to be restricted except insofar as is necessitated by the prior art and by the spirit of the appended claims.

The invention is claimed as follows:

1. A packaging device for retaining a plurality of containers each of which containers includes an axially and radially extending circumferential bead having top, bottom, and side portions located at one end thereof, said bead defining a closed figure having a major dimension, comprising carrier means including a plurality of separate and inter-connected bead engaging means respectively adapted to embrace at least a portion of said top and bottom portions of each circumferential bead so as to include said major dimension within the confines of the bead engaging means to prevent unauthorized separation of individual containers, said carrier means comprising a complementary pair of opposed substantially symmetrical sections each of which includes a portion of said bead engaging means, each of said generally symmetrical sections including edge portions disposed in opposing substantial abutting relationship, and tape means overlying and securing said edge portions of said sections and retaining said sections together.

6

2. A device, as defined in claim 1, wherein said sections include complementary substantially planar top panels for substantially completely covering the ends of the containers when the device is assembled with the containers.

3. A device as defined in claim 1, wherein each of said bead retaining means comprises a substantially semi-circular depending wall portion for extending along said side portion of an adjacent container bead, lip means projecting from said semi-circular side portion for engaging beneath said bottom of a bead, and a top portion projecting from an upper margin of said semi-circular side portion for overlying said top of a container bead.

4. A device, as defined in claim 1, which comprises generally planar means integral with and connecting said bead retaining means for substantially overlying ends of containers, and aperture means in said planar means for enabling the device to be engaged and carried.

5. A device, as defined in claim 4, which includes a handle member engageable in said aperture means.

6. A package comprising a plurality of containers as defined in claim 1 including said beads at opposite ends thereof, and a pair of carrier members as defined in claim 1 respectively engaging and retaining the beads at the opposite ends of the containers.

References Cited

UNITED STATES PATENTS

3,202,448	8/1965	Stern et al.	206—65
3,258,288	6/1966	Courter	206—65

LOUIS G. MANCENE, *Primary Examiner*.