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3,396,841

READILY OPENABLE PACKAGE ASSEMBLY

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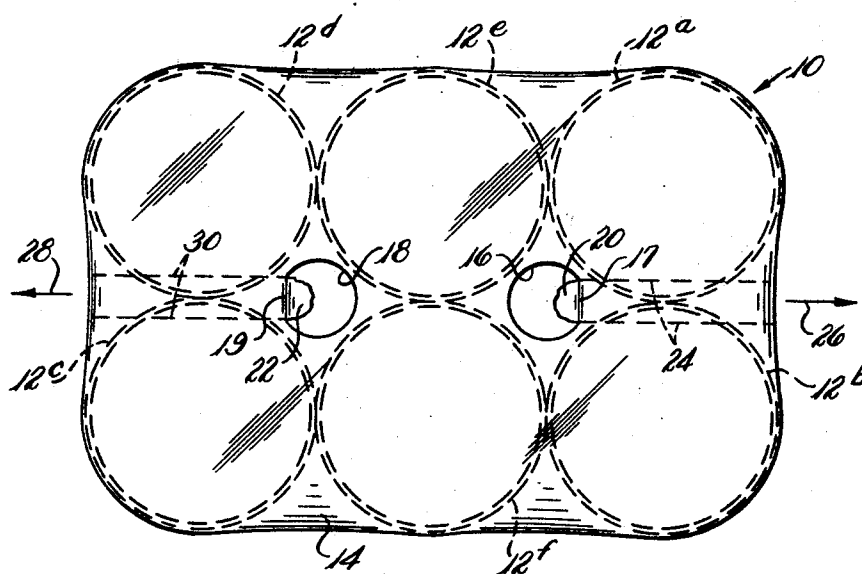
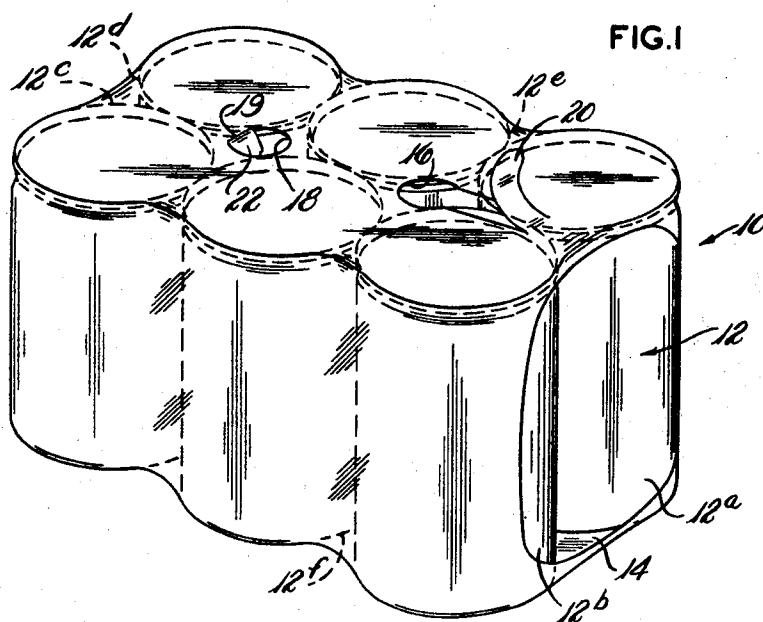


FIG. 2

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1

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READILY OPENABLE PACKAGE ASSEMBLY
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ABSTRACT OF THE DISCLOSURE

This invention relates to a carrier and/or package assembly, and particularly to such assemblies and to packaging means for a plurality of cylindrical articles, such as cans.

This application should be cross referenced with U.S. Patent No. 3,118,537.

This invention relates to an improved, novel carrier and/or package assembly for a plurality of cylindrical objects, such as cans, arranged, for example, in two abutted rows of three cans each, wherein the assembly includes an open ended heat shrunk band of plastic film which is operatively and tightly wrapped around and engaged with the cans from top to bottom thereof in order to present and retain the cans grouped together in a compact, unitary assembly. A pair of gripper holes are provided in the plastic film at the top of the assembly whereby the unitary assembly can be gripped and carried by a person inserting his thumb and a finger through such holes to engage the packaged articles. The package assembly is characterized by a pull tab or means, integral with said plastic film, being provided adjacent each gripper hole whereby the pull tab can be gripped and pulled towards an edge of the film in order to release some of the cans from the package assembly.

For a better understanding of the package assembly of the invention, reference should be had to the accompanying drawings wherein:

FIG. 1 is a perspective view of a carrier and package assembly embodying the principles of the invention; and

FIG. 2 is a top plan of the carrier and package assembly particularly illustrating the gripping holes and the pull tabs or means associated therewith.

Referring to the accompanying drawings in greater detail, the numeral 10 generally illustrates the carrier and/or package assembly of the invention. It basically consists in this example as shown in the drawings of six cylindrical cans 12 and a transparent plastic band or envelope 14. The cans 12 are arranged in pairs of longitudinally extending rows of abutted cans and the carrier and package assembly 10 of the invention is formed by wrapping the transparent plastic envelope 14 around the cans, with the envelope usually having heat applied thereto in any suitable manner to shrink the envelope into tight engagement with the cans 12. Such shrinkage of the envelope 14 brings it into snug engagement with the upper surfaces of the cans 12, and also draws the cylindrical outer surfaces of the cans into abutment with each other. The envelope 14 extends around the bottoms of the cans 12. The shrinkage of the envelope 14 holds the cans 12 against movement with relation to each other, and secures the lower and upper ends of the can in a fixed position with relation to each other.

This particular form of the carrier and package assembly 10 of the invention is particularly adapted to secure together cans which do not have protruding chimes at their ends, but it should be pointed out that the shrinkage of the plastic envelope 14 around the cans 12 in order to secure them together can be accomplished with cans having chimed ends.

The envelope or band 14 can be made of any of a

2

variety of well known heat-shrinkable plastic materials, such as polyvinyl chloride, or other similar materials. The envelope 14 is usually quite thin and can be, for example, about one-thousandth of an inch thick. In spite of this thickness, the film still has sufficient strength to form a sturdy enclosure for the cans 12. The films used normally have been stretched bi-axially and have a "plastic memory" so that when they are subjected to temperatures of approximately 300° F., they will form a tightly stretched skin over the cans to cling thereto and form a carrier assembly.

In order to allow the carrier and package assembly 10 of the invention to be gripped and carried, a pair of gripper holes 16 and 18 are provided in the top portion of the plastic envelope 14. These gripper holes 16 and 18 are of sufficient size wherein a thumb and a finger can be inserted therethrough and gripped against the middle cans 12 of the package assembly so that the entire assembly can be lifted. The gripper holes 16 and 18 are formed by suitably cutting the major portions of two circles or other suitable shape openings in the top portion of the plastic envelope 14. But, as is illustrated best by FIG. 2, the gripper holes are formed by cutting only a portion of a circle, or other shape, in the top of the plastic envelope 14 to leave flat edges 17 and 19, respectively, at the axially outer portions of each such hole.

The heat shrunk residual of the plastic envelope 14 where the holes 16 and 18 are cut therein, as by use of a heated die, normally form dependent handy pull tabs 20 and 22 which are provided so that end portions of the carrier and package assembly 10 can readily be opened. The pull tabs 20 and 22 are integral or unitary with the plastic envelope 14, and they are connected by sharp angles to the film at the openings defining the gripper holes 16 and 18 respectively, so that they can be individually gripped and pulled toward the adjacent end or edge of the carrier and package assembly 10 in order to release two of the end cans therefrom without destroying the rest of the package assembly.

Referring to FIG. 2, it is seen that pull tab 20, for example, can be gripped and pulled to tear the film normally substantially along dotted lines 24. The pull tab 20, similar to pull tab 22, forms a relatively sharp angle with the plastic envelope 14 at its joinder thereto so that pulling the pull tab 20 in the direction of arrow 26 will cause the envelope 14 to tear so that the two cans 12a and 12b can be released from the package assembly 10. In like manner, if pull tab 22 is pulled in the direction of arrow 28, the plastic envelope 14 readily tears substantially along dotted lines 30 so that cans 12c and 12d can be released from the package assembly. Of course, after cans 12a, 12b, 12c, and 12d are removed from the package assembly, the middle cans 12e and 12f can be easily removed and pulled away from the plastic envelope 14.

For the purposes of this invention, it is considered that a pull tab for easy opening of the package assembly is provided as long as the flat or straight edges 17 and 19 are formed in the axially outer portions of the holes 16 and 18. The actual film as cut or removed to form the holes 16 and 18 may remain bonded or connected to the film to form the pull tabs 20 and 22. The residual stresses in, or heat of the film cause such pull tabs to draw inwardly and downwardly normally of the package assembly 10. Hence in all events pull tab means 17, 19, 20, or 22 is provided at each end of the package assembly for convenient opening thereof.

It is well known that it is very desirable to have a nick in a plastic film at a location where it is desired to have a tear in the film originate. The straight pull tab means 17 and 19 by a sharp angle of connection to the re-

3

mainder of the film and/or the tabs 20 and 22 provide such points of tear origin at the lateral margins of the pull tab means.

While in accordance with the patent statutes only one best known embodiment of the invention has been illustrated and described in detail, it is to be particularly understood that the invention is not limited thereto or thereby, but that the inventive scope is defined in the appended claims.

What is claimed is:

1. A carrier and a package assembly for a plurality of cylindrical articles, such as cans, and comprising a plurality of articles positioned in a pair of abutted longitudinally extending rows of abutted articles, open-ended heat shrunk endless plastic film envelope means operatively and tightly engaging said articles from top to bottom thereof to retain said articles forced together into a compact unitary assembly, wherein the improvement comprises a pair of axially spaced gripper holes in the top face of the envelope means of sufficient size to allow a thumb and finger to be inserted therethrough whereby the unitary assembly can be gripped and carried, and pull tab means unitary with said envelope means and formed from the portion of said envelope means severed therefrom to form said gripper holes, said pull tab means being connected at sharp angles to

4

the envelope means at the openings defining the gripper holes, said pull tab means being positioned at the axially outer edge of each gripper hole and adapted to be pulled toward the adjacent end of the carrier and package assembly to tear said envelope means readily in order to release two of the end cans therefrom without destroying the rest of the package assembly.

2. The carrier and package assembly according to claim 1 wherein the gripper holes comprise the major portions of two circles in the top face of the envelope means, the heat shrunk residual of the envelope means where the holes are made forming pull tabs.

3. The carrier and package assembly according to claim 1 where said pull tab means connects by a substantially straight edge portion to the said envelope means at each of said gripper holes.

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