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ARTICLE CARRIER

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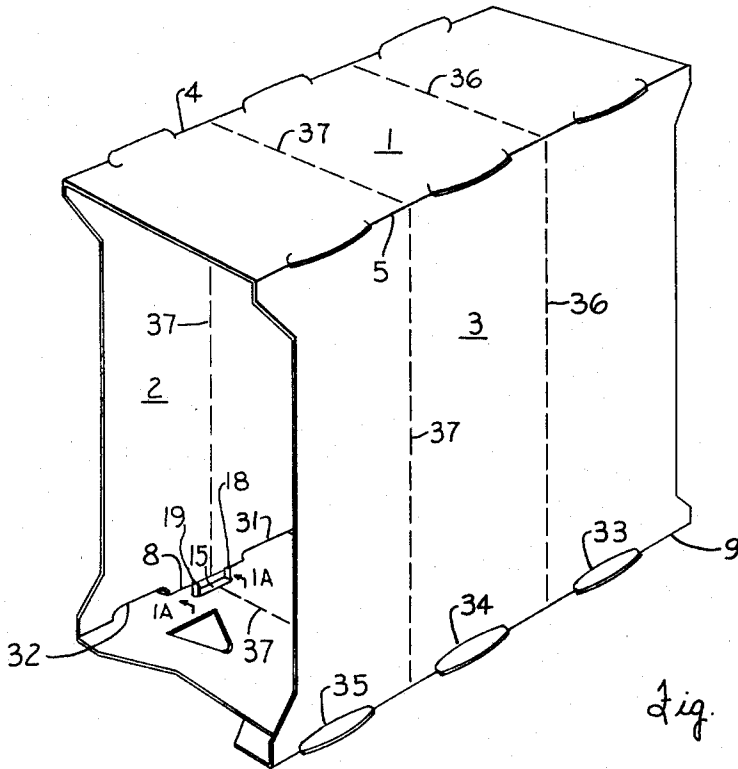


Fig. 1

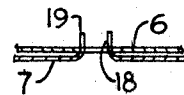


Fig. 1A

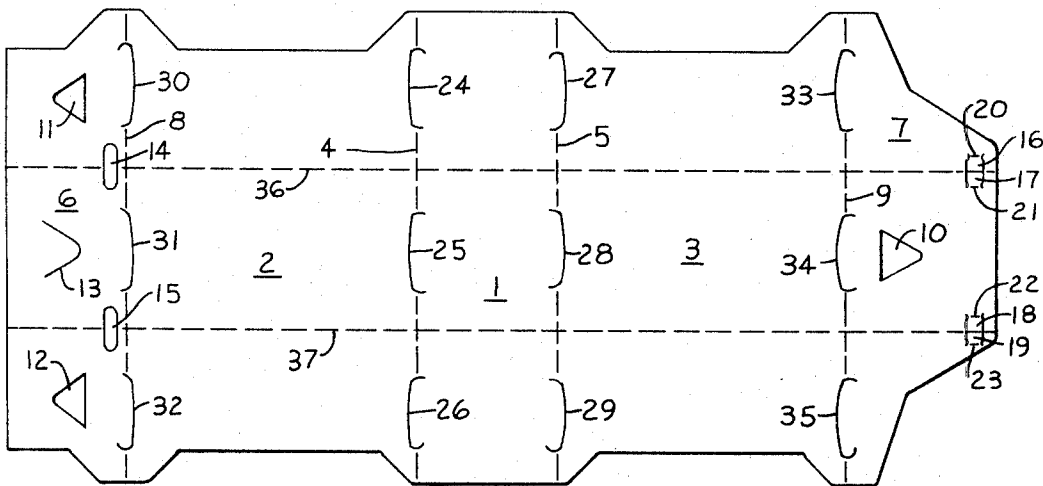


Fig. 2

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ARTICLE CARRIER

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ABSTRACT OF THE DISCLOSURE

An article carrier of the open-ended tubular type having top, bottom and side walls and wherein the bottom wall is formed of a pair of overlapping panels secured together by a pair of locks formed in the outer or lower panels which are disposed within an aperture formed in the inner overlapping panel is provided with at least one continuous longitudinal severance line which intersects the locking aperture in the inner bottom panel and extends between the locks formed in the outer locking panel so that the package may be separated into at least two parts, the locks being so arranged according to a feature of the invention that the packaged items are retained securely within the portions of the wrapper which are separated along the severance line.

According to the invention a tubular carrier is provided with a continuous longitudinal severance line disposed in the carrier walls to define a plane between adjacent articles in a row of articles and in addition the severance line is arranged so as to coincide with a locking aperture formed in one overlapping panel of the carrier and the severance line is disposed between a pair of opposed locking tabs formed in the other overlapping panel and inserted within the locking aperture.

For a better understanding of the invention reference may be had to the following detailed description taken in conjunction with the accompanying drawings in which FIG. 1 is a perspective view of an article carrier incorporating the invention and with the packaged articles removed for clarity; FIG. 1A is a detailed sectional view taken on line 1A-1A in FIG. 1; and in which FIG. 2 is a plan view of a blank from which the set-up carrier of FIG. 1 is formed.

In the drawings, the numeral 1 designates the top wall of the wrapper while the numerals 2 and 3 designate the side walls which are foldably joined respectively along fold lines 4 and 5 to the side edges of top wall 1. The bottom of the wrapper is a composite panel comprising overlapping panels 6 and 7. Panel 6 is foldably joined to the bottom edge of side wall 2 along a fold line 8 while panel 7 is foldably joined to the bottom edge of side wall 3 along fold line 9.

For the purpose of tightening the wrapper about a group of primary packages disposed therein, a tightening aperture 10 is formed in panel 7 and a pair of tightening apertures 11 and 12 are formed within panel 6. Thus with the panels 6 and 7 disposed underneath the group of articles to be packaged, a suitable machine element enters aperture 10 while suitable machine elements enter apertures 11 and 12. Thereafter these machine elements move transversely toward each other so as to effect a tightening operation of the wrapper in a manner well known in the art. Of course the tightening operation is facilitated by the generally V-shaped structure designated by the numeral 13 and formed within overlapping panel 6. Thus the cut line 13 allows clearance for the machine element disposed within aperture 10 in known manner.

Once the wrapper is suitably tightened, the panels 6 and 7 are secured together by suitable locking elements. For example, locking apertures 14 and 15 are formed within panel 6 and cooperating pairs of locking tabs 16,

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17, 18 and 19 are formed within panel 7. Thus locking tabs 16 and 17 are driven into locking aperture 14 and simultaneously locking tabs 18 and 19 are driven into locking aperture 15 and in this manner the wrapper is secured about a group of primary packages.

The tab 16 is foldably joined to panel 7 along a short longitudinal hinge line 20 while locking tab 17 is foldably joined to panel 7 along a short longitudinal hinge line 21. Thus the hinge lines 20 and 21, being approximately the same length as the locking aperture 14 in a longitudinal direction, constitute narrow throat portions which are secured within aperture 14 when the locking tabs 16 and 17 are driven into the locking aperture. In similar fashion the hinge lines 22 and 23 of the locking tabs 18 and 19 are shorter in a longitudinal direction than the main body portions of the locking tabs and the lengths of hinge lines 22 and 23 correspond approximately to the short dimension of locking aperture 15 which is in the longitudinal direction.

In order to aid in securing the packaged items within the wrapper, a plurality of corner slits 24-29 are formed in the upper portions of the side walls 2 and 3 as is clearly shown in the drawing. In addition, slits 30, 31 and 32 are formed along the fold line 8 while similar slits 33, 34 and 35 are formed along a fold line 9. As is well known, the slits 24-35 accommodate the chimes of the packaged cans and serve to secure the cans against dislodgement through the open ends of the wrapper.

For the purpose of rendering the package severable into separated portions while maintaining the primary packages such as cans securely wrapped within their associated portions, longitudinal continuous severance lines 36 and 37 are formed within the blank. Preferably these severance lines constitute a series of aligned perforations. Severance line 36 intersects locking aperture 14 and extends through panel 7 between the inner opposed ends of locking tabs 16 and 17. Similarly the continuous longitudinal severance line 37 intersects locking aperture 15 and extends between the locking tabs 18 and 19.

Thus with the package completely formed, it is possible to separate the package into three parts along the severance lines 36 and 37. Of course the end can which is engaged by the locking slits 26, 29, 32 and 35 is retained within the end portions of the wrapper due to the fact that the locking tab 19 is retained within the end portion of locking aperture 15. Of course retention of the locking tab is facilitated according to one feature of the invention by the fact that the hinge line 23 is shorter than the main body portion of the locking tab 19 and due to the fact that the hinge line 23 is approximately the same length as is the short dimension of the locking tab 15 which is in a longitudinal direction.

In like fashion, the middle can is retained securely within the mid-portion of the blank by the locking slits 25, 28, 31 and 34 and the locking tabs 17 and 18 are captured within the associated end portions of locking apertures 14 and 15 respectively. Similarly the remaining can is secured by corner slits 24, 27, 30 and 33 within the remaining portion of the wrapper and locking tab 16 remains securely disposed within the associated end of locking aperture 14 due in large part to the short throat portion defined by the hinge line 20.

The carrier shown in the drawings and described above is for use in conjunction with a single row of primary packages such as cans. It will be understood that the invention is not limited to an arrangement for packaging a single row of articles but may be applied to articles arranged in rectilinear side-by-side relation in more than one row if desired.

While a particular embodiment of the invention has been shown and described, the invention is not limited

thereto and it is intended in the appended claims to cover all such changes and modifications as fall within the true spirit and scope of the invention.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A tubular carrier for packaging a plurality of articles disposed in a rectilinear side-by-side arrangement of one or more rows and having a pair of overlapping panels forming one wall of the carrier, a locking aperture formed in one of said panels, a pair of opposed locking tabs formed in the other panel and disposed in said aperture to secure said panels together, and a continuous longitudinal severance line formed in the carrier walls and defining a plane which is disposed between adjacent articles in a row of articles and wherein the improvement comprises the fact that said severance line intersects said aperture so as to accommodate separation of the portion of the carrier on one side of said severance line and its contents from the portion of the carrier on the other side of said severance line and its contents while the articles are retained securely in their respective carrier portions,

said locking tabs being disposed on opposite sides of said severance line.

2. A carrier as defined in claim 1 wherein said locking tabs are foldably joined to the other panel along spaced longitudinal hinge lines and wherein said tabs are swung away from each other in opposite transverse directions when locked and wherein said severance line is disposed between said hinge lines, and the tab hinge lines being shorter than the width of the associated tabs in a longitudinal direction to define narrow throat portions and said aperture is dimensioned so that the width thereof in a longitudinal direction corresponds approximately with the narrow throat portions of the associated tabs.

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