

Description

This invention pertains to carrier stock for machine application to substantially identical cans or other containers in accordance with the preamble of claim 1. This invention pertains, more particularly, to carrier stock that is severable to form individual carriers, which may have integral handles such as described in EP-A-318619.

Typically, carrier stock with individual container-receiving apertures for machine application to substantially identical containers is formed, as by die-cutting, from a single sheet of resilient polymeric material, such as low density polyethylene.

An example of such stock for machine application to substantially identical containers in three longitudinal rows of indeterminate length is disclosed in US-A-4,018,331. As disclosed therein, such stock may be transversely severed, after it has been applied to such containers, to produce packages with three containers, six containers, or other multiples of three containers. A suitable machine for applying such stock is disclosed in US-A-3,959,949.

An example of such stock for machine application to substantially identical containers in two longitudinal rows of indeterminate length is disclosed in US-A-4,219,117. Another example is disclosed in US-A-4,356,914, in which such stock is asymmetrical, so as to be particularly useful in machine applications utilizing nonsymmetrical application forces. It is disclosed in each of these patents that such stock may be transversely severed to form individual carriers. A suitable machine for applying such stock is disclosed in US-A-4,250,682.

Typically, such stock is formed with band segments, which define separate apertures to receive the individual containers. Moreover, the band segments define additional apertures, which eliminate excess material from such stock, and which may serve also as finger apertures. When such stock is applied, transverse forces are applied, whereby at least some of the band segments are stretched. Furthermore, such stock is reconfigured from an as-formed configuration to an application configuration, in which such stock is applied to such containers. The additional apertures tend to be transversely elongated so as to facilitate reconfiguration of such stock.

As exemplified in the above patents the carrier stock is severed transversely along band segments that do not extend completely between opposite edges of such stock. Specifically, such stock is severed transversely along band segments that are interrupted by such additional apertures.

According to this invention a carrier stock for machine application to substantially identical containers, the stock being formed from a single sheet

of resilient polymeric material, the stock having opposite edges and being severable to form individual carriers with opposite ends, with separate container-receiving apertures to receive the individual containers, and with at least one additional aperture, which facilitates reconfiguration of the stock from an as-formed configuration to an application configuration, the stock being formed with band segments defining the container-receiving and additional apertures, each container-receiving or additional aperture having a margin comprising certain of the segments, the container-receiving apertures for each individual carrier being in longitudinal rows including edge rows at the opposite edges of the stock and in transverse ranks including end ranks at the opposite ends of each such individual carrier, the container-receiving aperture at each end rank of each edge row being defined by certain of said segments including

(a) an outer cross segment, along which the stock is severable, the outer cross segment extending in a generally transverse direction when the stock is unstressed,

(b) an outer edge segment extending along one of the opposite edges of the stock and extending in a generally longitudinal direction when the stock is unstressed,

(c) an inner cross segment extending from the outer edge segment to the margin of one of the additional apertures and extending in a generally transverse direction when the stock is unstressed, is characterised in that the outer cross segment extends completely across the stock in the form of a continuous panel, between the opposite edges of the stock, and in that certain of the segments of the container-receiving aperture at each end rank of each edge row further include:

(d) an inner oblique segment extending from the outer cross segment to the margin of the same one of the additional apertures and extending in a generally oblique direction diverging away from the outer edge segment when the stock is unstressed.

Preferably, the outer cross segment is formed with a weakened line, such as a perforated line, which facilitates severance of such stock to form the individual carriers.

The inner oblique segment facilitates reconfiguration of such stock from the as-formed configuration to an acceptable application configuration due to stretchinhibiting characteristics of the end panels. It is preferred that the inner oblique segment and minor longitudinal sections are slit to define a folding line extending in the generally longitudinal direction when the carrier stock is applied to containers.

In a preferred arrangement, each transverse rank has three or more container-receiving apertures. Also, each container-receiving aperture in each end row, except for the container-receiving apertures in the end ranks, is defined partly by a band segment that extends in a generally longitudinal direction when such stock is unstressed.

The carrier stock may be also formed with an integral handle for each individual carrier. The handle has two opposite ends and is joined at its opposite ends to certain of the band segments, at one edge of such stock.

Preferably, each end of the handle is joined to one of the outer edge segments. Each end of the handle may be also joined to an adjoining one of the band segments. Each end of the handle may be bifurcated to form two feet, namely one foot joined to one of the outer edge segments and another foot joined to an adjoining one of the band segments. Thus, stresses from each end of the handle are distributed to multiple band segments, at the same edge of said stock.

Particular embodiments of carrier stock and packages in accordance with this invention will now be described with reference to the accompanying drawings; in which:-

Figure 1 is a perspective view of a package comprising twelve identical containers and a carrier severed from carrier stock;

Figure 2, on an enlarged scale, is a plan of carrier stock;

Figure 3, on a further enlarged scale, is a fragmentary, sectional detail taken along line 3--3 of Figure 1 in a direction indicated by arrows; and, Figure 4, on a slightly enlarged scale compared to Figure 2, is a plan view of another embodiment of carrier stock.

As shown in Figures 1 through 3, carrier stock 10 for machine application to substantially identical containers 12 constitutes a preferred embodiment of this invention. Such stock 10 is formed with separate apertures 14 to receive the individual containers 12. The carrier stock 10 is severable, along transverse lines to be later described, to form individual carriers 20 that are substantially identical.

As shown in Figure 1, the containers 12 are beverage cans of a type used commonly for beer, soft drinks, and other beverages. This invention is not limited, however, to usage with such cans but is useful with cans, bottles, and other containers of various types.

In Figure 1, a package is shown, which comprises twelve such containers 12 and one such carrier 20, as severed from such stock 10. One such carrier 20 is shown fully in Figure 2, which also shows fragmentary portions of the next carrier 20. Each carrier 20 is shown in an unstressed, condition in Figure 2.

The carrier stock 10 is formed in an indeterminate length, as by die-cutting, from a single sheet of resilient polymeric material. A preferred material is low density polyethylene. A preferred thickness for such stock 10 in an unstressed condition, if low density polyethylene is used, is about 15.5 mils (0.4mm).

The carrier stock 10 is formed, for each individual carrier 20, with integrally joined band segments defining the separate apertures 14. As shown in Figure 2, such apertures 14 are in a rectangular array with longitudinal rows and transverse ranks, namely three longitudinal rows and four transverse ranks for each individual carrier 20. Each aperture 14 has a distinctive contour, as shown, with rounded corners to avoid stress concentrations.

Specifically, the apertures 14 are in two edge rows and one middle row between the edge rows. For each individual carrier 20, the apertures 14 are in two end ranks and two middle ranks between the end ranks. As compared to the apertures 14 in the middle row, the apertures 14 in the edge rows are contoured differently. The apertures 14 in each end rank are contoured as mirror images of the apertures 14 in the other end rank. The apertures 14 in each edge row are contoured as mirror images of the apertures 14 in the other edge row.

The carrier stock 10 is applied to the respective containers 12 as the carrier stock disclosed in US-A-4,018,331 is applied. A suitable machine for applying such stock 10 is disclosed in US-A-3,959,949.

A preferred machine for applying the carrier stock 10 is disclosed in a co-pending European patent application number 91303390.8 filed simultaneously herewith, under Attorneys Reference 80/4013/02 and claiming priority from USSN 519,860.

The container-receiving aperture 14 of each end rank at each edge row, i.e., the container-receiving aperture 14 at each corner of each individual carrier 20, has a generally quadrilateral contour. Each such aperture 14 is defined by band segments including an outer cross segment 30, an outer edge segment 32, an inner cross segment 34, and an inner oblique segment 36. Each outer cross segment 30 extends completely across the carrier stock 10, between the opposite edges of such stock 10, and is shared by the three apertures 14 of one of the end ranks. The quadrilateral contour of the apertures creates a stress in the finished package that contributes to the overall stability and rigidity of the package.

Also, each outer cross segment 30 is panel-like and is shared by two successive carriers 20, until the successive carriers 20 are severed from the carrier stock 10. Each outer cross segment 30 is formed with a perforated (weakened) line 38, which

divides such outer cross segment 30 into half segments of approximately equal width. Such line 38 facilitates severance of such stock 10 to form the individual carriers 20.

The container-receiving aperture 14 of each middle rank at each edge row has a generally rectangular contour. Each such aperture 14 is defined by band segments including one of the inner cross segments 34, an outer edge segment 42, an inner cross segment 44, and an inner longitudinal segment 46. Each of the inner cross segments 34 is shared by two of the apertures 14 at each edge row. The inner cross segment 44 is shared by the apertures 14 of both middle ranks at each edge row.

The contour-receiving apertures 14 of each end rank at the middle row has an arbitrary contour. Each such aperture 14 is defined by band segments including one of the outer cross segments 30, both of the inner oblique segments 36, a diagonal segment 52, and an inner cross segment 48. Each aperture 14 of the middle ranks at the middle row has a generally lemon-shaped contour with truncated ends, as shown, and is defined by one of the inner cross segments 48, both of the inner longitudinal segments 46, and an inner cross segment 50.

Each aperture 16 has a generally rhomboid contour, as shown, with rounded corners to avoid stress concentrations. Each such aperture 16 is defined by four diagonal segments 52 comprising the margin of such aperture 16.

Each of the inner cross segments 34 is joined to certain of the segments 52 comprising the margin of one of the additional apertures 16. Also, one of the inner oblique segments 36, one of the inner longitudinal segments 46, and one of the inner cross segments 48 are joined respectively to certain of the same segments 52 at the same aperture 16.

Each inner oblique segment 36 is bifurcated at one end, as shown, where it joins one of the outer cross segments 30. The bifurcated ends of the inner oblique segments 36 and the outer cross segments 30 joined to such ends define the respective apertures 18. Such apertures 18 are generally triangular, as shown, with rounded corners to avoid stress concentrations.

When the carrier stock 10 is unstressed, each of the outer cross segments 30 extends in a generally transverse direction. Also, each of the outer edge segments 32, 42, extends in a generally longitudinal direction. Moreover, each of the inner cross segments 34, 44, 48, 50, extends in a generally transverse direction. However, each inner oblique segment 36 extends from one of the outer cross segments 30, namely the outer cross segment 30 to which such inner oblique segment 36 is

joined, in a generally oblique direction tending away from the outer edge segment 32 joined to the same one of the outer cross segments 30.

When the carrier stock 10 is applied by a machine (not shown) like the machine disclosed in US-A-3,959,949 or by a machine like the machine disclosed in the co-pending application noted above to containers like the containers 12, transverse forces are applied to the outer edge segments 32, 42, as suggested by arrows in Figure 2. Such forces tend to stretch the inner cross segments 34, 44, 48, 50. Also, such forces tend to reconfigure such stock 10 from an as-formed configuration, in which such stock 10 is shown in Figure 2, to an application configuration, in which such stock 10 is applied to containers exemplified by the containers 12. Diagonal segments 52 operate to transfer the forces in a manner designed to open each aperture 14 into a generally circular form. This phenomenon is described in the '331 patent.

The apertures 16 are configured, oriented, and located in such manner that the apertures 16 tend to be transversely elongated, as the band segments 52 comprising their margins and the band segments 34, 44, 48, 50, joined to the band segments 52 are stretched, when transverse forces are applied to the band segments 32, 42, as mentioned above. The apertures 16 function, therefore, to facilitate reconfiguration of the carrier stock 10 from the as-formed configuration to the application configuration. Since a diagonal segment 52 does not exist at the outer region of the end ranks, the apertures 18 do not tend to be similarly elongated and do not contribute significantly to reconfiguration of such stock 10 (more particularly to reconfiguration of each rank apertures 14) due to stretching characteristics of end panels 30.

When transverse forces are applied to the band segments 32, 42, as mentioned above, the carrier stock 10 is reconfigured from the as-formed configuration to the application configuration, and the oblique segments 36 and the longitudinal segments 46 tend to be longitudinally aligned with one another. Thus, each container-receiving aperture 14 tends to assume a nearly circular contour, which is slightly smaller than one of the containers 12. Stretching of the band segments to enable each such aperture 14 to assume a nearly circular contour adds to the tightness of the package that is created when the carrier stock 10 is applied to the respective containers 12.

The overall length of each individual carrier 20, when the carrier stock 10 is unstressed, is slightly greater than the overall length of the individual carrier 20 in a package, such as the package shown in Figure 1. However, the combined, longitudinal measurements of the four apertures 14 in

joint enables the middle leg 74 to be easily broken away from other portions of the handle 70.

Each end 72 of the handle 70 is joined to one of the outer edge segments 32' at the handle edge of the carrier stock 10'. Thus, stresses from the handle 70 are distributed to the inner cross segment 34' as well as to the outer cross segments 30', via the outer edge segments 32'.

Each outer cross segment 30' has a perforated (weakened) line 38' dividing such outer cross segment 30' into half segments. Such lines 38' facilitate severance of the carrier stock 10' transversely to form the individual carriers 20'.

Claims

1. Carrier stock (10) for machine application to substantially identical containers (12), the stock (10) being formed from a single sheet of resilient polymeric material, the stock having opposite edges and being severable to form individual carriers (20) with opposite ends, with separate container-receiving apertures (14) to receive the individual containers (12), and with at least one additional aperture (16, 18), which facilitates reconfiguration of the stock (10) from an as-formed configuration to an application configuration, the stock being formed with band segments (30, 32, 34, 36, 42, 44, 46, 48, 50, 52) defining the container-receiving (14) and additional apertures (16, 18), each container-receiving or additional aperture having a margin comprising certain of the segments, the container-receiving apertures (14) for each individual carrier being in longitudinal rows including edge rows at the opposite edges of the stock (10) and in transverse ranks including end ranks at the opposite ends of each such individual carrier (20), the container-receiving aperture (14) at each end rank of each edge row being defined by certain of said segments including:

(a) an outer cross segment (30), along which the stock is severable, the outer cross segment (30) extending in a generally transverse direction when the stock is unstressed,

(b) an outer edge segment (32) extending along one of the opposite edges of the stock and extending in a generally longitudinal direction when the stock is unstressed,

(c) an inner cross segment (34) extending from the outer edge segment (32) to the margin of one of the additional apertures (16) and extending in a generally transverse direction when the stock is unstressed;

characterised in that the outer cross segment (30) extends completely across the

stock (10) in the form of a continuous panel, between the opposite edges of the stock (10), and in that certain of the segments of the container-receiving aperture at each end rank of each edge row further include:

(d) an inner oblique segment (36) extending from the outer cross segment (30) to the margin of the same one of the additional apertures (16) and extending in a generally oblique direction diverging away from the outer edge segment (32) when the stock is unstressed.

2. A carrier stock according to claim 1, wherein the inner oblique segment (36) is slit to define a folding line extending in the generally oblique direction when the stock (10) is unstressed.

3. A carrier stock according to claim 1 or 2, wherein each transverse rank has more than two of the container-receiving apertures (14); wherein, except for the container-receiving apertures (14) in the end ranks, each container-receiving aperture (14) in each edge row is defined partly by one of the inner longitudinal segments, said one of the inner longitudinal segments (46) extending in a generally longitudinal direction when the stock is unstressed; and wherein the same one of the inner longitudinal segments (46) defines a folding line extending in a generally longitudinal direction when the stock (10) is unstressed.

4. A carrier stock according to any one of the preceding claims, wherein the stock (10) is formed for each individual carrier (20) with an integral handle (60) having opposite ends (62) and being joined at the opposite ends at one edge of the stock (10).

5. A carrier stock according to claim 4, wherein each end (62) of the handle (60) is bifurcated to form two feet (64, 66), one foot (66) being joined to one of the outer edge segments (42) and the other foot (64) joined to an adjoining one (32) of the band segments.

6. A carrier stock according to claim 5 wherein, at each end (62) of the integral handle (60), one foot (66) is joined to said one (42) of the outer edge segments, between one (44) of the cross segments and another (34) of the cross segments, and the other foot (64) is joined to the adjoining one of the outer edge segments (32), between the another (34) of the cross segments and another of the cross segments (30).

joint enables the middle leg 74 to be easily broken away from other portions of the handle 70.

Each end 72 of the handle 70 is joined to one of the outer edge segments 32' at the handle edge of the carrier stock 10'. Thus, stresses from the handle 70 are distributed to the inner cross segment 34' as well as to the outer cross segments 30', via the outer edge segments 32'.

Each outer cross segment 30' has a perforated (weakened) line 38' dividing such outer cross segment 30' into half segments. Such lines 38' facilitate severance of the carrier stock 10' transversely to form the individual carriers 20'.

Claims

1. Carrier stock (10) for machine application to substantially identical containers (12), the stock (10) being formed from a single sheet of resilient polymeric material, the stock having opposite edges and being severable to form individual carriers (20) with opposite ends, with separate container-receiving apertures (14) to receive the individual containers (12), and with at least one additional aperture (16, 18), which facilitates reconfiguration of the stock (10) from an as-formed configuration to an application configuration, the stock being formed with band segments (30, 32, 34, 36, 42, 44, 46, 48, 50, 52) defining the container-receiving (14) and additional apertures (16, 18), each container-receiving or additional aperture having a margin comprising certain of the segments, the container-receiving apertures (14) for each individual carrier being in longitudinal rows including edge rows at the opposite edges of the stock (10) and in transverse ranks including end ranks at the opposite ends of each such individual carrier (20), the container-receiving aperture (14) at each end rank of each edge row being defined by certain of said segments including:
 - (a) an outer cross segment (30), along which the stock is severable, the outer cross segment (30) extending in a generally transverse direction when the stock is unstressed,
 - (b) an outer edge segment (32) extending along one of the opposite edges of the stock and extending in a generally longitudinal direction when the stock is unstressed,
 - (c) an inner cross segment (34) extending from the outer edge segment (32) to the margin of one of the additional apertures (16) and extending in a generally transverse direction when the stock is unstressed;

characterised in that the outer cross segment (30) extends completely across the

stock (10) in the form of a continuous panel, between the opposite edges of the stock (10), and in that certain of the segments of the container-receiving aperture at each end rank of each edge row further include:

(d) an inner oblique segment (36) extending from the outer cross segment (30) to the margin of the same one of the additional apertures (16) and extending in a generally oblique direction diverging away from the outer edge segment (32) when the stock is unstressed.

2. A carrier stock according to claim 1, wherein the inner oblique segment (36) is slit to define a folding line extending in the generally oblique direction when the stock (10) is unstressed.
3. A carrier stock according to claim 1 or 2, wherein each transverse rank has more than two of the container-receiving apertures (14); wherein, except for the container-receiving apertures (14) in the end ranks, each container-receiving aperture (14) in each edge row is defined partly by one of the inner longitudinal segments, said one of the inner longitudinal segments (46) extending in a generally longitudinal direction when the stock is unstressed; and wherein the same one of the inner longitudinal segments (46) defines a folding line extending in a generally longitudinal direction when the stock (10) is unstressed.
4. A carrier stock according to any one of the preceding claims, wherein the stock (10) is formed for each individual carrier (20) with an integral handle (60) having opposite ends (62) and being joined at the opposite ends at one edge of the stock (10).
5. A carrier stock according to claim 4, wherein each end (62) of the handle (60) is bifurcated to form two feet (64, 66), one foot (66) being joined to one of the outer edge segments (42) and the other foot (64) joined to an adjoining one (32) of the band segments.
6. A carrier stock according to claim 5 wherein, at each end (62) of the integral handle (60), one foot (66) is joined to said one (42) of the outer edge segments, between one (44) of the cross segments and another (34) of the cross segments, and the other foot (64) is joined to the adjoining one of the outer edge segments (32), between the another (34) of the cross segments and another of the cross segments (30).



7. A carrier stock according to any one of the preceding claims, wherein the outer cross segment (30) is formed with a weakened line (38) facilitating severance of the stock (10) to form the individual carriers (20).

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8. A carrier stock according to claim 7, wherein the weakened line (38) is perforated.

9. A package comprising a carrier stock in accordance with any one of the preceding claims, combined with a rectangular array of containers (12), each container having a side wall, by which the container is gripped by the band segments (30, 32, 34, 36, 42, 44, 46, 48, 50, 52) comprising the margin of one of the container-receiving apertures (14).

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Patentansprüche

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1. Trägerband (10) für maschinelle Anwendung auf im wesentlichen identische Behälter (12), wobei das Band (10) aus einem einzelnen Blatt eines elastischen polymeren Materials geformt ist, das Band gegenüberliegende Kanten aufweist und zertrennbar ist zur Bildung individueller Träger (20) mit gegenüberliegenden Enden, mit separaten behälteraufnehmenden Öffnungen (14) zur Aufnahme der individuellen Behälter (12) und mit mindestens einer zusätzlichen Öffnung (16, 18), welche die Verformung des Bandes (10) von einer Bildungskonfiguration zu einer Anwendungskonfiguration fördert, das Band mit Bandsegmenten (30, 32, 34, 36, 42, 44, 46, 48, 50, 52), die die behälteraufnehmenden (14) und zusätzlichen Öffnungen (16, 18) definieren, geformt ist, jede behälteraufnehmende oder zusätzliche Öffnung eine Umrandung mit bestimmten dieser Segmente aufweist, die behälteraufnehmenden Öffnungen (14) für jeden individuellen Behälter in longitudinalen Reihen einschließlich Randreihen an den gegenüberliegenden Kanten des Bandes (10) und in transversalen Spalten einschließlich Endspalten an den gegenüberliegenden Enden jedes individuellen Trägers (20) angeordnet sind, und die behälteraufnehmende Öffnung (14) an jeder Endspalte jeder Randreihe definiert ist durch bestimmte der Segmente:

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(a) ein Außenquersegment (30), entlang dem das Band zerteilbar ist, wobei das Außenquersegment (30) sich in einer im allgemeinen transversalen Richtung erstreckt, wenn das Band unbelastet ist,

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(b) ein Außenrandsegment (32), das sich entlang einer der gegenüberliegenden Kanten des Bandes und in einer im allgemeinen longitudinalen Richtung erstreckt, wenn das

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Band unbelastet ist,

(c) ein Innenquersegment (34), das sich von dem Außenrandsegment (32) zu der Umrandung einer der zusätzlichen Öffnungen (16) und in einer im allgemeinen transversalen Richtung erstreckt, wenn das Band unbelastet ist;

dadurch gekennzeichnet, daß das Außenquersegment (30) sich vollständig quer über das Band (10) in Form eines kontinuierlichen Panels zwischen den gegenüberliegenden Kanten des Bandes (10) erstreckt, und daß bestimmte der Segmente der behälteraufnehmenden Öffnung an jeder Endspalte jeder Randreihe weiterhin aufweisen:

(d) ein Innenschragsegment (36), das sich vom Außenquersegment (30) zur Umrandung derselben der zusätzlichen Öffnungen (16) erstreckt und sich in einer im allgemeinen schrägen Richtung fort von dem Außenrandsegment (32) verzweigt, wenn das Band unbelastet ist.

2. Trägerband nach Anspruch 1, dadurch gekennzeichnet, daß das Innenschragsegment (36) geschlitzt ist zur Definition einer Faltlinie, die sich in der im allgemeinen schrägen Richtung erstreckt, wenn das Band (10) unbelastet ist.

3. Trägerband nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß jede transversale Spalte mehr als zwei der behälteraufnehmenden Öffnungen (14) aufweist, daß außer für die behälteraufnehmenden Öffnungen (14) in den Endspalten jede behälteraufnehmende Öffnung (14) in jeder Bandreihe teilweise durch eines der Innenlongitudinalsegmente teilweise definiert ist, wobei das eine der Innenlongitudinalsegmente (46) sich in einer im allgemeinen longitudinalen Richtung erstreckt, wenn das Band unbelastet ist; und daß dasselbe der Innenlongitudinalsegmente (46) eine Faltlinie definiert, die sich in einer im allgemeinen longitudinalen Richtung erstreckt, wenn das Band (10) unbelastet ist.

4. Trägerband nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß das Band (10) für jeden individuellen Träger (20) mit einer angeformten Griffvorrichtung (60) geformt ist, die gegenüberliegenden Enden (62) aufweist und an gegenüberliegenden Enden an einer Kante des Bandes (10) verbunden ist.

5. Trägerband nach Anspruch 4, dadurch gekennzeichnet, daß sich jedes Ende (62) der Griffvorrichtung (60) gabelt zur Bildung zweier



Füße (64, 66), wobei ein Fuß (66) mit einem der Außenrandsegmente (42) und der andere Fuß (64) mit einem angrenzenden (32) der Bandsegmente verbunden ist.

6. Trägerband nach Anspruch 5, dadurch gekennzeichnet, daß an jedem Ende (62) der angeformten Griffvorrichtung (60) ein Fuß (66) mit dem einen (42) der Außenrandsegmente zwischen einem (44) der Quersegmente und einem anderen (34) der Quersegmente verbunden ist, und der andere Fuß (64) mit dem angrenzenden einen der Außenrandsegmente (32) zwischen dem anderen (34) der Quersegmente und einem anderen der Quersegmente (30) verbunden ist. 10
7. Trägerband nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß das Außenquersegment (30) mit einer geschwächten Linie (38) geformt ist, was die Teilbarkeit des Bandes (10) zur Bildung individueller Träger (20) fördert. 20
8. Trägerband nach Anspruch 7, dadurch gekennzeichnet, daß die geschwächte Linie (38) perforiert ist. 25
9. Packung mit einem Trägerband nach einem der vorhergehenden Ansprüche, kombiniert mit einem rechteckigen Feld von Behältern (12), wobei jeder Behälter eine Seitenwand aufweist, mittels der der Behälter von den Bandsegmenten (30, 32, 34, 36, 42, 44, 46, 48, 50, 52) mit der Umrandung einer der behälteraufnehmenden Öffnungen (14) gegriffen ist. 30 35

Revendications

1. Structure de support (10) s'utilisant en machine pour des récipients sensiblement identiques (12), la structure (10) étant formée dans une feuille unique de polymère élastique, la structure ayant des bords opposés et pouvant être sectionnée pour former des supports individuels (20) ayant des extrémités opposées et comportant des trous séparés (14) de logement de récipients, destinés à loger des récipients individuels (12), ainsi qu'au moins un trou supplémentaire (16, 18) qui facilite la reconfiguration de la structure (10) de la conformation telle que venue de formage à une conformation d'utilisation, la structure comportant des segments de bande (30, 32, 34, 36, 42, 44, 46, 48, 50, 52) délimitant les trous (14) de logement de récipients et les trous supplémentaires (16, 18), chaque trou de logement d'un récipient ou trou supplémentaire compor- 40 45 50 55

tant un bord constitué de certains des segments, les trous (14) de logement de récipient de chaque support individuel se trouvant dans des files longitudinales comprenant des files de bord sur chaque bord opposé de la structure (10) et des rangées transversales comprenant des rangées d'extrémité aux extrémités opposées de chaque support individuel (20), les trous (14) de logement de récipient situés dans chaque rangée d'extrémité de chaque file de bord étant délimités par certains desdits segments qui comprennent :

(a) un segment transversal extérieur (30) le long duquel la structure peut être sectionnée, le segment transversal extérieur (30) étant orienté dans une direction sensiblement transversale lorsque la structure n'est pas sous contrainte,

(b) un segment extérieur de bord (32) disposé le long de l'un des bords opposés de la structure et orienté dans une direction sensiblement longitudinale lorsque la structure n'est pas sous contrainte,

(c) un segment transversal intérieur (34) partant du segment extérieur de bord (32) et allant vers le bord de l'un des trous supplémentaires (16) et orienté dans une direction sensiblement transversale lorsque la structure n'est pas sous contrainte ;

caractérisée en ce que le segment transversal extérieur (30) se prolonge en totalité en travers de la structure (10) sous la forme d'un panneau continu, entre les bords opposés de la structure (10) et en ce que certains des segments du trou de logement de récipient situé dans chaque rangée d'extrémité de chaque file de bord comprennent par ailleurs :

(d) un segment oblique intérieur (36) partant du segment transversal extérieur (30) et allant vers le bord du même trou supplémentaire (16) et orienté dans une direction sensiblement oblique divergeant de manière à s'éloigner du segment extérieur de bord (32) lorsque la structure n'est pas sous contrainte.

2. Structure de support selon la revendication 1, dans laquelle le segment oblique intérieur (36) est fendu de manière à constituer une ligne de pliage orientée dans la direction sensiblement oblique lorsque la structure (10) n'est pas sous contrainte.
3. Structure de support selon la revendication 1 ou 2, dans laquelle chaque rangée transversale comprend plus de deux trous (14) de logement de récipient ; dans laquelle, sauf pour les trous



(14) de logement de récipient se trouvant dans les rangées d'extrémité, chaque trou de logement de récipient (14) de chaque file de bord est délimité partiellement par l'un des segments longitudinaux intérieurs, ledit un segment longitudinal intérieur (46) étant orienté en direction sensiblement longitudinale lorsque la structure n'est pas sous contrainte ; et dans laquelle le même un segment longitudinal intérieur (46) délimite une ligne de pliage qui est orientée en direction sensiblement longitudinale lorsque la structure (10) n'est pas sous contrainte.

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4. Structure de support selon l'une quelconque des revendications précédentes, dans laquelle la structure (10) comporte pour chaque support individuel (20) une poignée (60) qui est monobloc avec lui, qui comporte des extrémités opposées (62) et qui est reliée aux extrémités opposées à un bord de la structure (10).

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5. Structure de support selon la revendication 4, dans laquelle chaque extrémité (62) de la poignée (60) est en fourche de manière à former deux pieds (64, 66), un pied (66) étant relié à l'un des segments extérieurs de bord (42) et l'autre pied (64) étant relié à l'un, contigu (32) des segments de bande.

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6. Structure de support selon la revendication 5, dans laquelle, à chaque extrémité (62) de la poignée monobloc (60), un pied (66) est relié audit un (42) segment de bord extérieur, entre l'un (44) des segments transversaux et un autre (34) des segments transversaux et l'autre pied (64) est relié à l'un, adjacent, des segments de bord extérieur (32), entre l'autre (34) des segments transversaux et un autre (30) des segments transversaux.

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7. Structure de support selon l'une quelconque des revendications précédentes, dans laquelle le segment transversal extérieur (30) comporte une ligne de faiblesse (38) facilitant le sectionnement de la structure (10) pour former des supports individuels (20).

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8. Structure de support selon la revendication 7, dans laquelle la ligne de faiblesse (38) est perforée.

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9. Paquet comprenant une structure de support selon l'une quelconque des revendications précédentes, combinée avec une matrice rectangulaire de récipients (12), chaque récipient ayant une cloison latérale par laquelle le récipient est enserré par les segments de bande

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(30, 32, 34, 36, 42, 44, 46, 48, 50, 52) comportant le bord de l'un des trous (14) de logement de récipient.

