

Description

Field of the Invention

This invention relates to wrap-around article carriers of the type commonly used to hold soft drink or beer containers according to the preamble of claims 7 and 11 (known from US—A—3395791). More particularly, it relates to carriers of this type which are more economical to produce yet function the same.

Background of the Prior Art

Wrap-around article carriers have been in use for many years and have been developed to the point where they are a highly efficient and economical carrier, capable of being formed from blanks at the high speeds required by modern packaging or bottling facilities. In general, their construction is such that their sides completely enclose the articles contained in the package except for cutouts located to hold the heels or bases of the articles in place and, where appropriate, to retain the necks of the articles. The ends of the carrier are open. Finger holes in the top wall of the carrier permit easy handling by the purchaser. This construction basically supports the bottoms of the articles and is designed so that the end portions of the carrier blanks, which join together to form the bottom wall of the carrier, mechanically interlock to provide a secure construction. An example of a wrap-around carrier having such a bottom wall construction is disclosed in US—A—3,395,791.

A competitive carrier is the plastic type that holds the articles in place through support means engaging the upper portions of the articles. With this type of carrier the articles are suspended from the carrier rather than supported by it, as in the wrap-around design.

The wrap-around design has several advantages over the cheaper plastic type. The articles are better protected against breakage due to the fuller coverage afforded by the wrap-around design. This is important to the bottlers, to store owners and to the customers. The carriers permit convenient stacking and are easy to handle and to carry. Further, advertising can be printed on the sides of the carriers, which is important to the producer of the articles being carried.

In order to continue providing the added advantages of wrap-around carriers it is important that the industry find ways to reduce costs without adversely affecting the basic design. This is considerably more difficult than it might first seem. The general design used throughout the industry is the result of countless improvements made over the years. This honing of the design has resulted in a carrier the features of which the industry would be reluctant to change. Certainly changes which would adversely affect the speed and efficiency of the packaging machines now in use would not be welcome.

The dilemma, therefore, is to reduce costs without changing the basic functional design.

Summary of the Invention

The present invention as identified in the independent claims solves all the above problems by making use of relatively minor reinforcing along the length of the blank and at the locking tab area to strengthen the carrier to the point where it can function properly even though a thinner caliper material is used. In a preferred embodiment, reinforcing strands are adhered to the carrier blank at strategic locations and the overlapping end portions of the blank in the area of the locking tabs are further adhered together.

The use of reinforcing material to strengthen paper is known in a general sense, as disclosed, for example, in US—A—4,301,961, wherein a mesh of extruded plastic strips are fused to paper used in the manufacture of paper bags.

The invention permits the use of paperboard having a thinner caliper than normal, which reduces the cost of the paperboard. The tendency of the thinner paperboard to tear or collapse at the finger holes and at the bottom cutouts when the filled carrier is lifted is overcome by the added strength provided by the combined effects of the adhesively secured bottom panel flaps and by the reinforcing strands. This arrangement also overcomes the tendency of the locking tabs in the bottom flaps to disengage when stored or used in areas of high humidity.

Brief Description of the Drawings

FIG. 1 is a perspective view of a typical filled wrap-around carrier depicting the general design of carrier in popular use today;

FIG. 2 is a plan view of the inside face of a blank used to form a carrier of the type shown in FIG. 1, but containing reinforcing in accordance with the present invention;

FIG. 3 is a plan view of the outer faces of the two end portions of the blank of FIG. 2 as they would appear just prior to being mechanically interlocked; and

FIG. 4 is a plan view of the outer faces of the same two end portions shown in FIG. 3, but now in their locked position.

Description of the Invention

Referring to FIG. 1, a typical wrap-around carrier 10 of the general type to which this invention relates is comprised of side walls 12 connected to a top wall 14 by sloped portions 16. The sloped portions are integral with the top and the side walls and are foldably connected thereto. This allows for articles of a generally uniform shape to be carried but permits the shape or the placement within the carrier to vary to a small degree. In the illustrated carrier 10, soft drink bottles are shown as fitting securely in the space provided between the side walls 12 and sloped portions 16. Neck retainers 18 consisting of folded flaps concentrically arranged around openings in the top wall 14 serve to hold the necks of the bottles in place. Finger holes, now shown, would be located in the top wall 14 to permit the carrier to be readily lifted. The bottom wall 20 is formed

by the joined or locked end portions of the carrier blank, and heel cutouts 21 are provided to receive the outer base or bottom portion of the bottles to help hold them in place. This overall design is typical of both the prior art carriers and the carrier of the present invention.

Referring to FIG. 2, a blank 22 of generally rectangular shape, comprised of generally parallel long edges 23 and generally parallel short edges 25, is used to form the carrier 10 shown in FIG. 1. The intermediate portions of the blank corresponding to side walls 12, central portion of the blank corresponding to top wall 14, and the sloped portions 16 are correspondingly numbered in this view and can be seen to be connected to each other by fold lines 13 and 15. It should be understood that although the sloped wall portion 16 is described herein it is not essential to the invention that it be present. For purposes of the invention the sloped portion can just as readily be considered as part of the top wall or side wall or it can even be considered as comprising part of the foldable connection between the top and side walls.

Neck retainers 18 are shown in top wall 14 for use when the articles being packaged are bottles. Tabs 27 are cut out along the solid border 24 and are adapted to be punched out and folded along the inner facing fold lines 26 by the purchaser to form finger holes. The heel cutouts 21 are also shown on the blank.

End portions 28 and 30 of the blank 22 are adapted to overlap each other in the formation of the carrier and to be mechanically held together by an interlocking tab arrangement. A typical arrangement is shown in FIG. 2 as consisting of tabs 32 and 34 on the left side of the blank, and a similar pair of tabs 32a and 34a on the other side. These are arranged on a score or fold line 36 and are adapted to fit under cutouts 38 or 40 and 38a or 40a. Although any type of locking means that adequately holds the end portions 28 and 30 together could be used, the type shown is adapted to selectively use, on the left side, tab 32 and cutout 38 or tab 34 and cutout 40, while on the right side either tab 32a and cutout 38a would be engaged or tab 34a and cutout 40a would be engaged. This permits selectively operable locks to accommodate different package perimeters, and is described more fully in U.S. Patent Nos. 3,395,791 and 3,478,951, both of which are incorporated herein by reference.

The action of the locking tabs is shown further in FIGS. 3 and 4. FIG. 3 shows the end portions 28 and 30 in alignment just prior to being moved into interlocking relationship and FIG. 4 shows the bottom wall 20 formed from the two end portions, with end portion 28 overlying end portion 30. Although the details of the locking mechanism do not form a part of this invention, for purpose of clarity it will be understood that one or more of the operable tabs 32, 34, 32a and 34a engage the underside of cutouts 38, 40, 38a and 40a, and that further, the scored ends

of tabs 42 and 44 fit into openings 46 and 48 to complete the locking mechanism.

Typically, wrap-around carriers of the prior art have been formed from blanks comprised of paperboard having a caliper in the approximate range of 23—25 points, where one point equals 0.0254 mm (0.001 inch). To reduce the thickness enough to produce a significant economic benefit, it has been found that two modifications are necessary. Reinforcing strands 50, shown in FIG. 2, are provided, and the end portions 28 and 30 are further adhered together as shown in FIG. 3 by adhesive layer 52. It has been found that this combination of strengthening surprisingly allows paperboard having a caliper of only 18—20 points to be used.

The strands 50 can be of any material capable of adding reinforcing strength when adhered to the blank, such as cotton, fiber glass or other synthetic fibers. In practice, it was found that a cotton/polyester blend sold by H. B. Fuller Co. under the mark "String King" 1093 worked very well. This material, which is supplied with heat activated adhesive preapplied to the strands, can be applied directly to the blank stock by suitable guide and pressure rolls well known in the art and will adhere to the stock upon exposure to temperatures sufficient to activate the adhesive. In the case of the H. B. Fuller material, the temperature was about 163°C (325°F). Preferably the strands should be located closely adjacent to the outer heel cutouts, between the cutouts and the outer edge of the blank.

The adhesive material 52 which supplements the mechanical locking tabs to hold the end portions 28 and 30 together to form the bottom wall 14 of the carrier can be any suitable adhesive which has sufficient bonding strength. The amount of adhesive and its bonding strength will vary depending on the caliper of the paperboard and the efficiency of the locking tabs. In practice, it has been found that a cold pressure activated adhesive works well since this would prevent inadvertent adherence of the adhesive to the other surfaces before the blank is formed into the carrier. As an example, 528G adhesive sold by S&R Adhesive Corporation was applied to the outer surface of the end portions of the carrier blanks and, upon being overlapped by the other end portions during formation of the carriers, the end portions adhered together due to the ordinary pressures encountered in the carrier forming process. A heat activated adhesive of the type which can be printed directly onto the blank stock and then activated by hot air, for example, would also work well. Obviously, the adhesive could just as well be applied to the underside of the overlapping portion instead of to the outer side of the end portion to be overlapped, or it could be applied to both surfaces if desired. The amount and type of adhesive used, in any event, must be sufficient to prevent failure of the mechanical locking system through ordinary use of a carrier

formed from thinner stock than is conventionally used in wrap-around carriers.

As a further improvement, reinforcing strands 50, as shown in FIG. 2, can also be applied closely adjacent the inner extremities or fold lines 26 of the carrier finger holes to prevent crushing of the stock at these stress points. Preferably, the strands should be located as close as possible to the fold lines forming the inner extremities of the finger holes. Normally, these strands would not be needed if the caliper of the stock is at least 20 points. It has been found desirable, however, when paperboard having a lesser caliper is used, such as in the range of 16—17 points.

Claims

1. An open-ended wrap-around article carrier of the type comprising:

a top wall (14);

side walls (12) integral with and foldably connected to the top wall (14);

bottom wall portions (28, 30) integral with and foldably connected to the side walls (12), the bottom wall portions (28, 30) having means (32, 34, 38, 40) for structurally interlocking with each other in overlapping relationship to form a bottom wall (20);

characterised in that:

reinforcing strands (50) are adhered to the side walls (12) and bottom wall portions (28, 30) adjacent to the foldable connections therebetween; and

means (52) are provided for adhesively connecting the interlocking and overlapping bottom wall portions (28, 30).

2. A wrap-around article carrier according to claim 1, wherein the side walls (12) have cutouts (21) therein adjacent the foldable connections to the bottom wall portions to receive base portions of the articles to be carried.

3. A wrap-around article carrier according to claim 2, wherein the reinforcing strands (50) extend generally parallel to the edges of the side walls (12).

4. A wrap-around article carrier according to claim 3, wherein the walls (12, 14, 28, 30) are comprised of paperboard having a caliper of at least 18 points.

5. A wrap-around article carrier according to claim 4, wherein the reinforcing strands (50) are continuous strands adhesively connected to the inner surface of the carrier adjacent the edges forming the open ends of the carrier.

6. A wrap-around article carrier according to claim 5, wherein the reinforcing strands (50) are generally parallel to the edges forming the open ends of the carrier and are located between said edges and the cutout portions (21).

7. A wrap-around article carrier according to claim 6, wherein the reinforcing strands (50) comprise a cotton/polyester blend.

8. A wrap-around article carrier according to claim 2, wherein the top wall (14) has finger

holes (27) therein and wherein additional reinforcing strands (50) are located adjacent to and between the finger holes (27).

9. A wrap-around article carrier according to claim 8, wherein at least four reinforcing strands (50) are continuous strands connected to the inner surface of the carrier, two of which are located generally parallel to the edges forming the open ends of the carrier between said edges and the cutout portions (21), and the other two of which are parallel to the first two strands and are located adjacent to and between the finger holes (27).

10. A wrap-around article carrier according to claim 9, wherein the walls (12, 14, 28, 30) of the carrier are comprised of paperboard having a caliper of at least about 16 points.

11. A blank adapted to be folded to form a wrap-around article carrier, the blank being of the type comprising:

two generally parallel edges (23) connected by two generally parallel short edges (25) to form an elongated generally rectangular shape;

a central portion (14) of the rectangle intended to become the top wall of the carrier, end portions (28, 30) of the rectangle intended to interlock and form the bottom wall of the carrier when the blank is folded into carrier shape, and intermediate portions (12) between the central portion (14) and the end portions (28, 30) intended to become the side wall of the carrier;

the blank having cutouts (21) adjacent the juncture between the intermediate portions (12) and the end portions (28, 30), the cutouts (21) being adapted to receive base portions of the articles to be carried after the blank is folded into carrier shape;

characterised in that:

at least one of the end portions (28, 30) includes an adhesive coating (52) adapted to adhesively contact the other end portion when the blank is folded into carrier shape; and

reinforcing strands (50) are located between the cutouts (21) and the long edges (23) and are generally parallel to the long edges (23).

12. A blank according to claim 11, wherein the blank is comprised of paperboard having a caliper of at least about 18 points.

13. A blank according to claim 12, wherein the reinforcing strands (50) are continuous strands adhesively connected to the surface of the blank intended to become the inner surface of the carrier.

14. A blank according to claim 13, wherein the reinforcing strands (50) comprise a cotton/polyester blend.

15. A blank according to claim 13, wherein the central portion (14) contains means (24, 26, 27) adapted to become finger holes in the top wall of the carrier and wherein additional reinforcing strands (50) are located adjacent to and between the finger hole means (24, 26, 27).

16. A blank according to claim 15, wherein the additional reinforcing strands (50) comprise continuous strands adhesively connected to the sur-



formed from thinner stock than is conventionally used in wrap-around carriers.

As a further improvement, reinforcing strands 50, as shown in FIG. 2, can also be applied closely adjacent the inner extremities or fold lines 26 of the carrier finger holes to prevent crushing of the stock at these stress points. Preferably, the strands should be located as close as possible to the fold lines forming the inner extremities of the finger holes. Normally, these strands would not be needed if the caliper of the stock is at least 20 points. It has been found desirable, however, when paperboard having a lesser caliper is used, such as in the range of 16—17 points.

Claims

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side walls (12) integral with and foldably connected to the top wall (14);

bottom wall portions (28, 30) integral with and foldably connected to the side walls (12), the bottom wall portions (28, 30) having means (32, 34, 38, 40) for structurally interlocking with each other in overlapping relationship to form a bottom wall (20);

characterised in that:

reinforcing strands (50) are adhered to the side walls (12) and bottom wall portions (28, 30) adjacent to the foldable connections therebetween; and

means (52) are provided for adhesively connecting the interlocking and overlapping bottom wall portions (28, 30).

2. A wrap-around article carrier according to claim 1, wherein the side walls (12) have cutouts (21) therein adjacent the foldable connections to the bottom wall portions to receive base portions of the articles to be carried.

3. A wrap-around article carrier according to claim 2, wherein the reinforcing strands (50) extend generally parallel to the edges of the side walls (12).

4. A wrap-around article carrier according to claim 3, wherein the walls (12, 14, 28, 30) are comprised of paperboard having a caliper of at least 18 points.

5. A wrap-around article carrier according to claim 4, wherein the reinforcing strands (50) are continuous strands adhesively connected to the inner surface of the carrier adjacent the edges forming the open ends of the carrier.

6. A wrap-around article carrier according to claim 5, wherein the reinforcing strands (50) are generally parallel to the edges forming the open ends of the carrier and are located between said edges and the cutout portions (21).

7. A wrap-around article carrier according to claim 6, wherein the reinforcing strands (50) comprise a cotton/polyester blend.

8. A wrap-around article carrier according to claim 2, wherein the top wall (14) has finger

holes (27) therein and wherein additional reinforcing strands (50) are located adjacent to and between the finger holes (27).

9. A wrap-around article carrier according to claim 8, wherein at least four reinforcing strands (50) are continuous strands connected to the inner surface of the carrier, two of which are located generally parallel to the edges forming the open ends of the carrier between said edges and the cutout portions (21), and the other two of which are parallel to the first two strands and are located adjacent to and between the finger holes (27).

10. A wrap-around article carrier according to claim 9, wherein the walls (12, 14, 28, 30) of the carrier are comprised of paperboard having a caliper of at least about 16 points.

11. A blank adapted to be folded to form a wrap-around article carrier, the blank being of the type comprising:

two generally parallel edges (23) connected by two generally parallel short edges (25) to form an elongated generally rectangular shape;

a central portion (14) of the rectangle intended to become the top wall of the carrier, end portions (28, 30) of the rectangle intended to interlock and form the bottom wall of the carrier when the blank is folded into carrier shape, and intermediate portions (12) between the central portion (14) and the end portions (28, 30) intended to become the side wall of the carrier;

the blank having cutouts (21) adjacent the juncture between the intermediate portions (12) and the end portions (28, 30), the cutouts (21) being adapted to receive base portions of the articles to be carried after the blank is folded into carrier shape;

characterised in that:

at least one of the end portions (28, 30) includes an adhesive coating (52) adapted to adhesively contact the other end portion when the blank is folded into carrier shape; and

reinforcing strands (50) are located between the cutouts (21) and the long edges (23) and are generally parallel to the long edges (23).

12. A blank according to claim 11, wherein the blank is comprised of paperboard having a caliper of at least about 18 points.

13. A blank according to claim 12, wherein the reinforcing strands (50) are continuous strands adhesively connected to the surface of the blank intended to become the inner surface of the carrier.

14. A blank according to claim 13, wherein the reinforcing strands (50) comprise a cotton/polyester blend.

15. A blank according to claim 13, wherein the central portion (14) contains means (24, 26, 27) adapted to become finger holes in the top wall of the carrier and wherein additional reinforcing strands (50) are located adjacent to and between the finger hole means (24, 26, 27).

16. A blank according to claim 15, wherein the additional reinforcing strands (50) comprise continuous strands adhesively connected to the sur-

face of the blank intended to become the inner surface of the carrier.

17. A blank according to claim 15, wherein the blank is comprised of paperboard having a caliper of at least about 16 points.

Patentansprüche

1. An den Enden offener Umschlag-Träger für Gegenstände, welche folgendes umfaßt:

eine Deckenwand (14);

Seitenwände (12), welche einen integrierten Teil der Deckenwand (14) bilden und faltbar mit dieser verbunden sind;

Bodenwandbereich (28, 30), welche einen integrierten Teil der Seitenwände (12) bilden und mit diesen faltbar verbunden sind, wobei die Bodenwandbereiche (28, 30) Elemente (32, 34, 38, 40) aufweisen, welche strukturell ineinandergreifen und sich überlappen, um eine Bodenwand (20) zu bilden;

dadurch gekennzeichnet, daß verstärkende Litzen (50) an die Seitenwände (12) und die Bodenwandbereiche (28, 30) geklebt sind, und zwar benachbart zu den dazwischenliegenden faltbaren Verbindungen; und

daß Elemente (52) vorgesehen sind, im die ineinandergreifenden und sich überlappenden Bodenwandbereiche (28, 30) klebend zu verbinden.

2. Umschlag-Träger für Gegenstände nach Anspruch 1, dadurch gekennzeichnet, daß die Seitenwände (12) Aussparungen (21) benachbart zu den faltbaren Verbindung zu den Bodenwandbereichen für die Aufnahme von unteren Bereichen der zu tragenden Gegenstände aufweisen.

3. Umschlag-Träger für Gegenstände nach Anspruch 2, dadurch gekennzeichnet, daß sich die verstärkenden Litzen (50) im allgemeinen parallel zu den Kanten der Seitenwände (12) erstrecken.

4. Umschlag-Träger für Gegenstände nach Anspruch 3, dadurch gekennzeichnet, daß die Wände (12, 14, 28, 30) aus Pappe bestehen, deren Stärke mindestens 18 Punkte beträgt.

5. Umschlag-Träger für Gegenstände nach Anspruch 4, dadurch gekennzeichnet, daß die verstärkenden Litzen (50) ununterbrochene Litzen sind, welche benachbart zu den Kanten, die die offenen Enden des Trägers bilden, klebend mit der Innenfläche des Trägers verbunden sind.

6. Umschlag-Träger für Gegenstände nach Anspruch 5, dadurch gekennzeichnet, daß die verstärkenden Litzen (50) im allgemeinen parallel zu den Kanten verlaufen, welche die offenen Enden der Träger bilden, und daß die Litzen zwischen diesen Kanten und den Aussparungen (21) angeordnet sind.

7. Umschlag-Träger für Gegenstände nach Anspruch 6, dadurch gekennzeichnet, daß die verstärkenden Litzen (50) eine Baumwoll/Polyester-Mischung umfassen.

8. Umschlag-Träger für Gegenstände nach Anspruch 2, dadurch gekennzeichnet, daß die Deckenwand (14) Fingerlöcher (27) aufweist und daß zusätzliche verstärkende Litzen (50) benach-

bart zu und zwischen den Fingerlöchern (27) angeordnet sind.

9. Umschlag-Träger für Gegenstände nach Anspruch 8, dadurch gekennzeichnet, daß mindestens vier verstärkende Litzen (50) ununterbrochene Litzen sind, die mit der Innenfläche des Trägers verbunden sind und von denen zwei im allgemeinen parallel zu den Kanten, welche die offenen Enden des Trägers zwischen den Kanten und den Aussparungen (21) bilden, angeordnet sind und von denen die anderen zwei parallel zu den ersten beiden Litzen sind und benachbart zu und zwischen den Fingerlöchern (27) angeordnet sind.

10. Umschlag-Träger für Gegenstände nach Anspruch 9, dadurch gekennzeichnet, daß die Wände (12, 14, 28, 30) des Trägers aus Pappe bestehen, deren Stärke mindestens ungefähr 16 Punkte beträgt.

11. Zuschnitt, der geeignet ist, zu einem Umschlag-Träger für Gegenstände gefaltet zu werden, und der folgendes umfaßt;

zwei im allgemeinen parallele lange Kanten (23), welche durch zwei im allgemeinen parallele kurze Kanten (25) verbunden sind, wodurch eine verlängerte im allgemeinen rechteckige Form gebildet wird;

einen mittleren Bereich (14) des Rechtecks, welcher zur Deckenwand des Trägers umgewandelt werden soll, Endbereiche (28, 30) des Rechtecks, welche ineinandergreifen und die Bodenwand des Trägers bilden sollen, wenn der Zuschnitt in die Form des Trägers gefaltet wird, und Zwischenbereiche (12) zwischen dem mittleren Bereich (14) und den Endbereichen (28, 30), welche die Seitenwände des Trägers werden sollen; der Zuschnitt weist Aussparungen (21) benachbart zu der Verbindungsstelle zwischen den Zwischenbereichen (12) und den Endbereichen (28, 30) auf, wobei die Aussparungen (21) geeignet sind, untere Bereiche der zu tragenden Gegenstände aufzunehmen, nachdem der Zuschnitt in die Trägerform gefaltet ist;

dadurch gekennzeichnet, daß mindestens einer der Endbereiche (28, 30) eine klebende Schicht (52) umfaßt, die geeignet ist, den anderen Endbereich bei Berührung klebend an sich zu heften, wenn der Zuschnitt in Trägerform gefaltet wird; und

daß verstärkende Litzen (50) zwischen den Aussparungen (21) und den langen Kanten (23) angeordnet sind und im allgemeinen parallel zu den langen Kanten (23) verlaufen.

12. Zuschnitt nach Anspruch 11, dadurch gekennzeichnet, daß der Zuschnitt aus Pappe besteht, deren Stärke mindestens ungefähr 18 Punkte beträgt.

13. Zuschnitt nach Anspruch 11, dadurch gekennzeichnet, daß die verstärkenden Litzen (50) ununterbrochene Litzen sind, die an die Oberfläche des Zuschnitts geklebt sind, welche die Innenfläche des Trägers werden soll.

14. Zuschnitt nach Anspruch 13, dadurch gekennzeichnet, daß die verstärkenden Litzen (50) eine Baumwoll/Polyester-Mischung umfassen.

15. Zuschnitt nach Anspruch 13, dadurch



gekennzeichnet, daß der mittlere Bereich (14) Elemente (24, 26, 27) enthält, die geeignet sind, in Fingerlöcher in der Deckenwand des Trägers umgewandelt zu werden, und daß zusätzliche verstärkende Litzen (50) benachbart zu und zwischen den Fingerlochelementen (24, 26, 27) angeordnet sind.

16. Zuschnitt nach Anspruch 15, dadurch gekennzeichnet, daß die zusätzlichen verstärkenden Litzen (50) ununterbrochene Litzen umfassen, die klebend mit der Oberfläche des Zuschnitts verbunden sind, welche die Innenflächen des Trägers werden soll.

17. Zuschnitt nach Anspruch 15, dadurch gekennzeichnet, daß der Zuschnitt aus Pappe besteht, deren Stärke mindestens ungefähr 16 Punkte beträgt.

Revendications

1. Support d'articles enveloppant, ouvert aux extrémités, du type comprenant:

une paroi supérieure (14);

des parois latérales (12) réalisées d'une seule pièce avec la paroi supérieure (14) et reliées de façon pliable à la paroi supérieure (14);

des parties (28, 30) de paroi inférieure réalisées d'une seule pièce avec les parois latérales (12) et reliées de façon pliable aux parois latérales (12), les parties de paroi inférieure (28, 30) ayant des moyens (32, 34, 38, 40) destinés à se verrouiller structurellement entre elles, dans une disposition superposée, pour former une paroi inférieure (20);

caractérisé en ce que:

des fils (50) de renfort sont collés aux parois latérales (12) et aux parties (28, 30) de la paroi inférieure à proximité immédiate de leurs liaisons mutuelles pliables; et

des moyens (52) sont prévus pour relier par adhésif les parties (28, 30) de la paroi inférieure se verrouillant et se chevauchant.

2. Support d'articles enveloppant selon la revendication 1, dans lequel les parois latérales (12) présentant des découpures (21) adjacentes aux liaisons pliables avec les parties de la paroi inférieure pour recevoir des parties de base des articles à porter.

3. Support d'articles enveloppant selon la revendication 2, dans lequel les fils (50) de renfort s'étendent globalement parallèlement aux bords des parois latérales (12).

4. Support d'articles enveloppant selon la revendication 3, dans lequel les parois (12, 14, 28, 30) sont constituées de carton ayant une épaisseur d'au moins 18 points.

5. Support d'articles enveloppant selon la revendication 4, dans lequel les fils (50) de renfort sont des fils continus reliés par adhésif à la surface intérieure du support à proximité immédiate des bords formant les extrémités ouvertes du support.

6. Support d'articles enveloppant selon la revendication 5, dans lequel les fils (50) de renfort sont globalement parallèles aux bords formant

les extrémités ouvertes du support et sont situés entre lesdits bords et les parties découpées (21).

7. Support d'articles enveloppant selon la revendication 6, dans lequel les fils (50) de renfort comprennent un mélange coton/polyester.

8. Support d'articles enveloppant selon la revendication 2, dans lequel la paroi supérieure (14) présente des trous (27) pour les doigts et dans lequel des fils additionnels (50) de renfort sont placés à proximité immédiate des trous (27) pour les doigts et entre ces trous.

9. Support d'articles enveloppant selon la revendication 8, dans lequel au moins quatre fils (50) de renfort sont des fils continus reliés à la surface intérieure du support, dont deux sont situés globalement parallèlement aux bords formant les extrémités ouvertes du support entre lesdits bords et les parties découpées (21), et dont les deux autres sont parallèles aux deux premiers fils et sont situés à proximité immédiate des trous (27) pour les doigts et entre ces trous.

10. Support d'articles enveloppant selon la revendication 9, dans lequel les parois (12, 14, 28, 30) du support sont constituées de carton ayant une épaisseur d'au moins environ 16 points.

11. Flanc conçu pour être plié pour former un support d'articles enveloppant, le flan étant du type comprenant:

deux bords longs globalement parallèles (23) reliés par deux bords courts globalement parallèles (25) pour constituer une forme allongée globalement rectangulaire;

une partie centrale (14) du rectangle destinée à devenir la paroi supérieure du support, des parties extrêmes (28, 30) du rectangle destinées à se verrouiller et former la paroi inférieure du support lorsque le flan est plié en forme de support, et des parties intermédiaires (12) entre la partie centrale (14) et les parties extrêmes (28, 30) destinées à devenir la paroi latérale du support;

le flan présentant des découpures (21) adjacentes à la jonction entre les parties intermédiaires (12) et les parties extrêmes (28, 30), les découpures (21) étant conçues pour recevoir des parties de base des articles devant être supportés après que le flan a été plié en forme de support;

caractérisé en ce que:

au moins l'une des parties extrêmes (28, 30) comprend un revêtement adhésif (52) conçu pour entrer en contact adhésif avec l'autre partie extrême lorsque le flan est plié en forme de support; et

des fils (50) de renfort sont disposés entre les découpures (21) et les bords longs (23) et sont globalement parallèles aux bords longs (23).

12. Flan selon la revendication 11, dans lequel le flan est constitué de carton ayant une épaisseur d'au moins environ 18 points.

13. Flan selon la revendication 12, dans lequel les fils (50) de renfort sont des fils continus reliés par adhésif à la surface du flan destinée à devenir la surface intérieure du support.

14. Flan selon la revendication 13, dans lequel les fils (50) de renfort comprennent un mélange coton/polyester.



15. Flan selon la revendication 13, dans lequel la partie centrale (14) contient des moyens (24, 26, 27) conçus pour devenir des trous pour les doigts dans la paroi supérieure du support, et dans lequel des fils additionnels (50) de renfort sont placés à proximité immédiate des moyens (24, 26, 27) à trous pour les doigts et entre ces moyens.

16. Flan selon la revendication 15, dans lequel

les fils additionnels (50) de renfort comprennent des fils continus reliés par adhésif à la surface du flan destinée à devenir la surface intérieure du support.

5 17. Flan selon la revendication 15, dans lequel le flan est constitué de carton ayant une épaisseur d'au moins environ 16 points.

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