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(54) **Crate sleeve**

Kasten-Manschette

Gaine pour casier

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(56) References cited:  
**US-A- 4 373 627**                      **US-A- 4 948 033**

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## Description

The invention relates to a crate for bottles which crate includes a sleeve for displaying printed matter which is disposed around the outside of the crate. Such crates are made from cardboard or plastics material. The invention is particularly useful in relation to rigid plastics crates for carrying beer bottles. Typically such a crate contains four parallel rows of six bottles per row.

The outside of such bottle crates often bear a trade mark advertising the product contained within the articles which themselves are contained within the crates. The present invention seeks to provide a crate sleeve which can be used to carry secondary printed matter, possibly of an advertising or trade mark nature, which can cover up the advertising literature printed directly on the crate.

US-A-4 373 627 relates to a plastics crate according to the preamble of claim 1 suitable for accommodating six bottles and which includes an outer sleeve of paperboard material in circumambient disposition about the outer faces of the crate. The sleeve is secured in position either by locking tabs which are pushed into complementary locking apertures formed in the side walls of the crate or by tongues which engage in slots provided in the side walls of the crate.

In the present invention a sleeve utilises locking flaps to engage in handle apertures provided by a crate.

Accordingly, there is provided a crate for bottles which crate includes a sleeve in circumambient disposition about the outer face of the crate, the sleeve comprises foldable interlocking means for locking cooperation with complementary means provided by the crate to hold the sleeve in position said crate interlocking means comprising a central foldable flap and two opposed marginal flaps on opposite sides of said central flap characterised in that said central flaps are sized to pass through a handle aperture in said crate and said marginal flaps are foldable relative to said central flaps and act to prevent said crate interlocking means from disengaging said crate handle aperture.

Thus, the crate sleeve is securely attached to a crate by interlocking the sleeve with handle apertures in the crate. The sleeve provides the desired result of presenting secondary printed information over the information printed on the crate where this secondary information is reasonably securely attached but still allows it to be removed due to the nature of the sleeve.

According to a feature of the invention said sleeve may comprise two or more like parts which are substantially structurally identical and which are secured together to form said sleeve.

According to another feature of the invention each of said sleeve parts may comprise one of said crate interlocking means.

According to a further feature of the invention all the parts making up the sleeve may be initially cut from a single sheet of material and the parts frangibly joined to adjacent parts in the sheet of material.

This aspect of the invention allows the collapsed sleeve to be cut from a sheet of material whose width is approximately the length of any one part which makes up the sleeve. Thus the parts can be detached from one another and joined to form an erected crate sleeve without having to provide very large sheets of material and the consequent dimensionally large processing machinery such as sheet cutting apparatus.

In constructions where the sleeve comprises two or more like parts, the sleeve parts may be frangibly joined along their upper edge.

An embodiment of a crate sleeve according to the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:-

Figure 1 shows a schematic elevation view of an unformed crate sleeve according to the invention;

Figure 2 shows a perspective view of a crate sleeve in a formed structure;

Figure 3 shows a crate sleeve according to the invention which has been placed on an article carrier, namely a crate; and

Figure 4 shows the same perspective elevation drawing of the crate sleeve on a crate as shown in the Figure 3 but where crate sleeve attachment means are inserted into the handle apertures of the crate.

Referring to the drawings, there is shown a crate sleeve 1 made from paperboard or similar foldable sheet material and which comprises two like parts 2 and 3 which comprise two main panels each. The crate sleeve comprises four panels 10, 12, 14 and 16. Part 2 comprises panels 10 and 12 which are foldably hinged along fold region 28 whilst part 3 comprises panels 14 and 16 which are foldably hinged along fold region 24. Both parts 2 and 3 which further comprise a tab each, 30 and 32 respectively, which tabs are used to glue parts 2 and 3 together. In this specific example of the invention the securing means to secure parts 2 and 3 together is glue in combination with tabs, but it is envisaged that any known panel securing device or agents may be employed. Tabs 30 and 32 are foldably hinged along fold regions 26 and 22 to panels 12 and 14 respectively.

The crate sleeve further comprises two crate interlocking means 36 and 38. Interlocking means 36 comprises flaps 40, 42 and 44 whilst means 38 comprises flaps 50, 52 and 54. Flaps 42 and 44 are foldably joined to opposite ends of flap 40 and flap 40 is foldably joined to panel 14 along hinge 46. Flaps 52 and 54 are foldably joined to opposite ends of flap 50 and flap 50 is foldably joined to panel 12 along hinge 56.

In Figure 1 the crate sleeve 1 is shown in a collapsed form where the two parts 2 and 3 are joined together along a longitudinal frangible score line 20,

whilst Figure 2 shows the crate sleeve in a completed and erected formation. Crate sleeve 1 can be cut from a single sheet of paperboard material which has a length approximately half the overall length of panels 10, 12, 14 and 16 laid end to end. Frangible score line 20 can be broken, thus separating parts 2 and 3; tabs 30 and 32 can be glued to panels 16 and 10 respectively and hinge regions 22, 24, 26 and 28 also bent to create an erected crate sleeve of rectilinear configuration as shown in Figure 2.

In Figure 3 carton sleeve 1 is positioned around a crate C but where the crate interlocking means 36 and 38 have not been located in a locking position. Figure 4 shows the crate interlocking means inserted in the handle apertures A1 and A2 of the crate C. The interlocking means thereby provides the means by which the sleeve is supported and secured to the crate. As shown in Figure 4 flaps 52 and 54 are folded into approximately a perpendicular position relative to flap 50. The length of flaps 52 and 54 is greater than the vertical height of aperture A2 and flaps 54 and 52 therefore act to secure the crate sleeve to the crate. Flap 50 as shown is just less than the width of aperture A2 therefore allowing the overall interlocking means 38 to be inserted into aperture A2. Similarly interlocking means 36 can be inserted in aperture A1 and means 36 also acts to lock the crate sleeve 1 to crate C.

#### Claims

1. A crate (C) for bottles which crate includes a sleeve (1) in circumambient disposition about the outer face of the crate, the sleeve (1) comprises foldable interlocking means (36, 38) for locking co-operation with complementary means (A1, A2) provided by the crate (C) to hold the sleeve (1) in position, said crate interlocking means (36, 38) comprising a central foldable flap (40, 50) and two opposed marginal flaps (42, 44, 52, 54) on opposite sides of said central flap (40, 50) characterised in that said central flaps (40, 50) are sized to pass through a handle aperture (A1, A2) in said crate (C) and said marginal flaps (42, 44, 52, 54) are foldable relative to said central flaps (40, 50) and act to prevent said crate interlocking means from disengaging said crate handle aperture.
2. A crate as claimed in claim 1 wherein said sleeve (1) comprises two or more like parts (2, 3) which are substantially structurally identical and which are secured together to form said sleeve.
3. A crate as claimed in claim 2 wherein each of said sleeve parts comprises one of said crate interlocking means (36, 38).
4. A crate as claimed in any of the previous claims wherein all said parts (2, 3) making up the sleeve (1) are initially cut from a single sheet of material and the parts are frangibly joined to adjacent parts in the sheet of material.
5. A crate as claimed in claim 4 wherein said sleeve parts are frangibly joined along their upper edge.

#### Patentansprüche

1. Kasten (C) für Flaschen, wobei der Kasten eine Manschette (1) in ringsum einschließender Anordnung über die Außenfläche des Kastens beinhaltet, wobei die Manschette (1) faltbare Verschlußmittel (36,38) zum zusammenwirkenden Verschließen mit komplementären Mitteln (A1,A2) beinhaltet, die durch den Kasten (C) vorgesehen sind, um die Manschette (1) in Position zu halten, wobei die Verschlußmittel (36,38) eine zentrale faltbare Klappe (40,50) und zwei gegenüberliegende Randklappen (42,44,52,54) an entgegengesetzten Seiten der zentralen Klappe (40,50) beinhalten, dadurch gekennzeichnet, daß die zentralen Klappen (40,50) so dimensioniert sind, um durch eine Grifföffnung (A1,A2) in dem Kasten (C) eingeführt zu werden, und die Klappen (40,50) faltbar sind und dazu dienen, ein Herausrutschen der Kastenverschlußmittel aus der Kastengrifföffnung zu verhindern.
2. Kasten nach Anspruch 1, wobei die Manschette (1) zwei oder mehr ähnliche Abschnitte (2,3) enthält, die im wesentlichen in ihrer Struktur identisch sind und die zusammengehalten werden, um die Manschette zu formen.
3. Kasten nach Anspruch 2, wobei jeder Manschentenabschnitt eines der Kastenverschlußmittel (36,38) beinhaltet.
4. Kasten nach einem der vorhergehenden Ansprüche, wobei alle Abschnitte (2,3), die die Manschette (1) bilden, zunächst aus einem einzigen Blattmaterial ausgestanzt werden und die Abschnitte zerbrechlich mit angrenzenden Abschnitten in dem Blattmaterial verbunden sind.
5. Kasten nach Anspruch 4, wobei die Manschettenabschnitte zerbrechlich entlang ihrer oberen Kante verbunden sind.

#### Revendications

1. Caisse (C) pour des bouteilles, cette caisse comprenant un manchon (1) dans un agencement enroulé, autour de la face externe de la caisse, le manchon (1) comprenant des moyens de liaison réciproque pliables (36, 38) pour une coopération de liaison avec des moyens complémentaires (A1, A2) procurés par la caisse (C) pour maintenir en position le manchon (1), les moyens de liaison réciproque (36, 38) à la caisse comprenant un rabat

central pliable (40, 50) et deux rabats opposés marginaux (42, 44, 52, 54) sur des côtés opposés du rabat central (40, 50), caractérisée en ce que les rabats centraux (40, 50) sont dimensionnés pour passer à travers une ouverture de poignée (A1, A2) de la caisse (C) et en ce que les rabats marginaux (42, 44, 52, 54) sont pliables par rapport aux rabats centraux (40, 50) et agissent pour empêcher les moyens de liaison réciproque à la caisse de se dégager de l'ouverture de poignée de la caisse.

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2. Caisse suivant la revendication 1, caractérisée en ce que le manchon (1) comprend deux ou plusieurs parties semblables (2, 3) qui sont sensiblement identiques en structure et qui sont fixées l'une à l'autre pour former le manchon.
3. Caisse suivant la revendication 2, caractérisée en ce que chacune des parties de manchon comprend un des moyens de liaison réciproque (36, 38) à la caisse.
4. Caisse suivant l'une quelconque des revendications précédentes, caractérisée en ce que toutes les parties (2, 3) qui forment le manchon (1) sont coupées au départ à partir d'une feuille unique de matière et en ce que les parties sont jointes de façon cassable à des parties adjacentes dans la feuille de matière.
5. Caisse suivant la revendication 4, caractérisée en ce que les parties de manchon sont jointes de façon cassable le long de leur bord supérieur.

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