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(12) # EUROPEAN PATENT SPECIFICATION

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(54) **Bottle carrier adapted for location in a bottle crate.**

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DE-U- 7 503 830
DE-U- 8 512 516
FR-A- 2 250 688
US-A- 3 863 759

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Description

This invention relates to an article carrier, more particularly, a bottle carrier of the wraparound type. Wraparound type cartons are generally well known in the art but the present invention provides a "punch lock" type locking arrangement which is specifically adapted so that the carton can be used in conjunction with a particular type of bottle crate known as a "starpost" crate.

A "starpost" crate is a plastics crate for transporting bottles in bottle carriers and is divided into compartments each of which is of a size to receive a multi-pack comprising e.g. six filled bottles. Star shaped (when viewed in plan) spacers project up from the bottom of each compartment of the crate and extend up through corresponding holes in the bottom of the bottle carrier so as to be disposed between the bottles to prevent them from striking one another during shipment.

The crate can also be used to transport empty bottles, in which case the spacers prevent the bottles from striking one another whether or not they are in carriers. A bottle crate of this type is described and illustrated in US-A-3 863 759 to which the readers attention is directed.

Cartons of the wraparound type adapted for use with such crates have, in the past, had their base panels secured together by being glued in overlapping relationship. A preferred securing technique which is well known per se involves locking the base panels together in overlapping relationship by means of punch locks. One form of punch lock, a so-called multi-position lock, is adapted to form the basis of the present invention. A conventional form of multi-position lock is described and illustrated in US-A-4243143 to which the readers' attention is directed. DE-A-2 356 748 discloses a carton according to the preamble of claim 1 for use with a crate.

One aspect of the invention provides, in a carton of the type wherein a pair of base panels are interlocked by means of punch type locking elements and wherein the carton includes base panel openings to allow the carton to be impalled upon article separator posts in a crate, a locking tab of said locking elements is adapted to engage in one of said base panel openings such that locking is enhanced when the carton is impalled upon a separator post entering said opening.

According to a feature of this aspect of the invention a retaining tab may be hinged to the periphery of said one of said openings and is displaced by said locking tab to lock said pair of base panels together, said retaining tab being at least partially detached from its hinged connection when a separator post enters the opening in which said retaining tab is present.

According to another feature of this aspect of the invention said retaining tab may be an integral part of a larger tab which at least partially obscures said one of said base panel openings.

Another aspect of the present invention provides the combination of a bottle crate having separator posts upstanding from its base and a carton according to any one of the three immediately preceding paragraphs.

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

FIGURE 1 is a plan view of a wraparound carrier blank formed with panel interlocking means according to the invention;

FIGURE 2 is a more detailed plan view of each of the base panels of the blank shown in Figure 1; and

FIGURE 3 is a plan view of the base panels locked together.

Referring to the drawings, an elongate blank 10 formed from paperboard or like foldable sheet material comprises, in series, a first base panel 12, a first lower side wall panel 14, a first main side wall panel 16, a first upper side wall panel 18, a top panel 20, a second upper side wall panel 22, a second main side wall panel 24 and a second base panel 26 hinged one to the next along transverse fold lines 30-44, respectively.

The carton is adapted to enwrap a group of six bottles arranged in two parallel rows of three bottles per row. Accordingly, top panel 20 is formed with a group of six circular bottle neck receiving apertures such as aperture NA1, which includes associated expansion slits X1. Likewise, the first 14 and second 26 lower side wall panels are both provided with a group of like bottle heel receiving apertures such as aperture HA1 in panel 14. These bottle neck and heel receiving apertures are well known in the art and therefore do not require further explanation.

When the carton blank is wrapped about its group of bottles, the blank is secured by locking the base panels 12, 28 in overlapping relationship. In order to position the base panels relative to one another to ensure a tight wrap and reliable locking each of the base panels is formed with so called tightening apertures "A" another feature of a wraparound carton which is known per se.

In order to perform the base panel locking operation, base panel 12 is formed with a pair of locking tabs 46, 48, respectively each of which formed in accordance with those described in the aforesaid US Patent No 4243143 and thus has serrated form marginal edges.

The locking apertures into which locking tabs 46 and 48 engage to secure panels 12, 28 in overlapping relationship are defined by retaining

tabs T1 and T2 which have tip portions t1 and t2 similar to those described in US-A-4243143 each of which is struck from a generally deltoid spacer receiving aperture D1 and D2 and hinged to the opposed peripheral portions thereof at hinge points h1 and h2 respectively. Apertures D1 and D2 are provided each to receive one of the starpost separators referred to.

The carton is adapted to accommodate vertical ribs provided along the walls of a crate in which it is to be received by means of spaced elongate slits S1 and S2 in the base panel 12, first lower side panel 14 and first main side panel 16 and similar slits S3 and S4 in base panel 28, second lower side panel 26 and second main side panel 24.

When locking tabs 46 and 48 are locked into their respective locking apertures, they cooperate with retaining tabs T1 and T2 in a convential manner, i.e. as described in US-A-4243143. However, when the carton is introduced into a crate, the tip of a starpost separator enters each of the spacer receiving apertures D1, D2 and displaces and/or tears away the tabs T1 and T2 so that the locking tabs tend to be forced into a more upstanding attitude relative to base panel 12 and forced into the narrower "neck" of the locking apertures whereby the retaining tabs at least partially are broken away.

Claims

1. A carton of the type wherein a pair of base panels (12,28) are interlocked by means of punch type locking elements (46, 48; T1, T2) and wherein the carton includes base panel openings (D1,D2) to allow the carton to be impalled upon article separator posts in a crate, characterized in that a locking tab (46,48) of said locking elements engages in one of said base panel openings (D1,D2) such that locking is enhanced when the carton is impalled upon a separator post entering said opening.

2. A carton according to claim 1 wherein a retaining tab (T1, T2) is hinged to the periphery of said one of said openings (D1,D2) and is displaced by said locking tab (46,48) to lock said pair of base panels (12,28) together, said retaining tab being at least partially detached from its hinged connection when a separator post enters the opening in which said retaining tab is present.

3. A carton according to Claim 1 or Claim 2 wherein said retaining tab (T_1,T_2) at least partially obscures said one of said base panel openings (D1,D2).

4. The combination of a bottle crate having separator posts upstanding from its base and a carton according to any of the preceding claims.

Patentansprüche

1. Schachtel des Typs, in dem ein Paar Bodenflächen (12, 28) verriegelt sind mittels Verriegelungselementen des Stanztyps (46, 48; T1, T2), und wobei die Schachtel Bodenflächenöffnungen (D1, D2) aufweist, um die Schachtel auf Gegenstandseparierungsstangen in einem Kasten aufspießen zu können, dadurch gekennzeichnet, daß eine Verriegelungslasche (46, 48) der Verriegelungselemente in eine der Bodenflächenöffnungen (D1, D2) eingreift, so daß die Verriegelung verstärkt wird, wenn die Schachtel auf eine Separierungsstange aufgespießt wird, die in diese Öffnung eingeführt wird.

2. Schachtel nach Anspruch 1, wobei die Rückhaltelasche (T1, T2) an die Peripherie einer der Öffnungen (D1, D2) angelenkt ist und durch die Verriegelungslasche (46, 48) versetzt ist, um das Paar von Bodenflächen (12, 28) miteinander zu verriegeln, wobei die Rückhaltelasche wenigstens teilweise von ihrer angelenkten Verbindung gelöst wird, wenn eine Separierungsstange in die Öffnung eingeführt wird, in der die Rückhaltelasche vorliegt.

3. Schachtel nach Anspruch 1 oder Anspruch 2, wobei die Rückhaltelasche (T1, T2) die eine der Bodenflächenöffnungen (D1, D2) zumindest teilweise verdeckt.

4. Die Kombination eines Flaschenkastens mit Separierungsstangen, die von seiner Grundfläche nach oben wegstehen, mit einer Schachtel gemäß einem der vorstehenden Ansprüche.

Revendications

1. Carton du type dans lequel une paire de panneaux de base (12, 28) sont bloqués l'un dans l'autre au moyen d'éléments de blocage de type poinçonné (46, 48; T1, T2) et dans lequel le carton comporte des ouvertures (D1, D2) de panneau de base afin de permettre que le carton soit empalé sur des poteaux de séparation d'articles dans une caisse à claire-voie, caractérisé en ce qu'une languette de blocage (46, 48), des éléments de blocage, pénètre dans une desdites ouvertures (D1, D2) de pan-

neau de base de façon qu'un blocage soit amélioré lorsque le carton est empalé sur un poteau de séparation qui pénètre dans l'ouverture.

2. Carton suivant la revendication 1, caractérisé en ce qu'une languette de retenue (T1, T2) est articulée à la périphérie d'une des ouvertures précitée (D1, D2) et est déplacée par la languette de blocage (46, 48) pour bloquer l'un sur l'autre la paire précitée de panneaux de base (12, 28), la languette de retenue étant au moins partiellement détachée de sa liaison articulée lorsqu'un poteau de séparation pénètre dans l'ouverture dans laquelle est présente cette languette de retenue.

3. Carton suivant la revendication 1 ou la revendication 2, caractérisé en ce que la languette de retenue (T1, T2) masque au moins partiellement une précitée des ouvertures (D1, D2) de panneau de base.

4. Combinaison d'une caisse à claire-voie pour bouteilles, comportant des poteaux de séparation dressés à partir de sa base, et un carton suivant l'une quelconque des revendications précédentes.

FIG. 1.

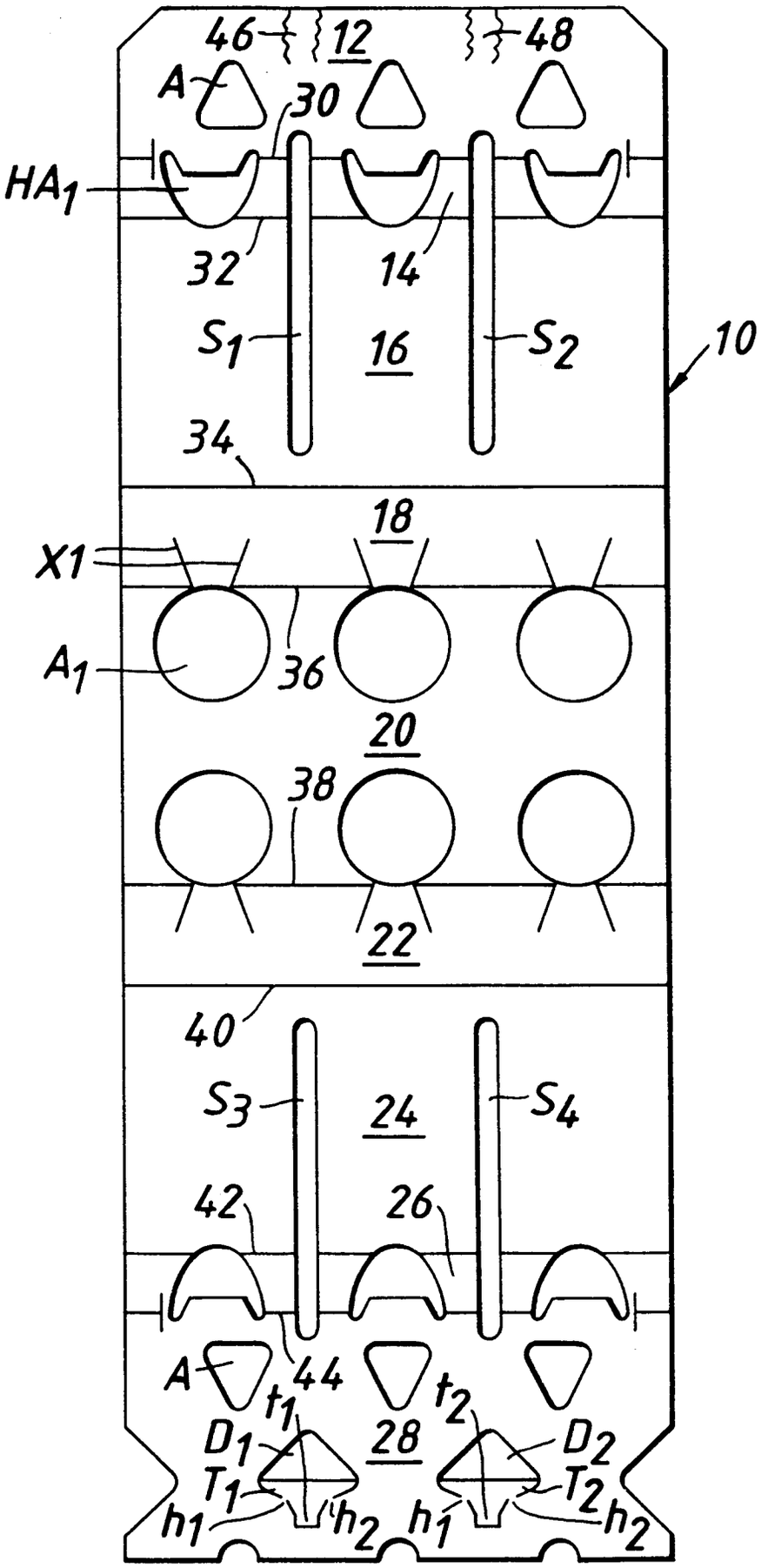

46
12
48
A
30
HA1
32
14
S1
16
S2
10
34
18
X1
A1
36
20
38
22
40
S3
24
S4
42
26
A
44
t1
t2
D1
28
D2
T1
T2
h1
h2
h1
h2

FIG.2.

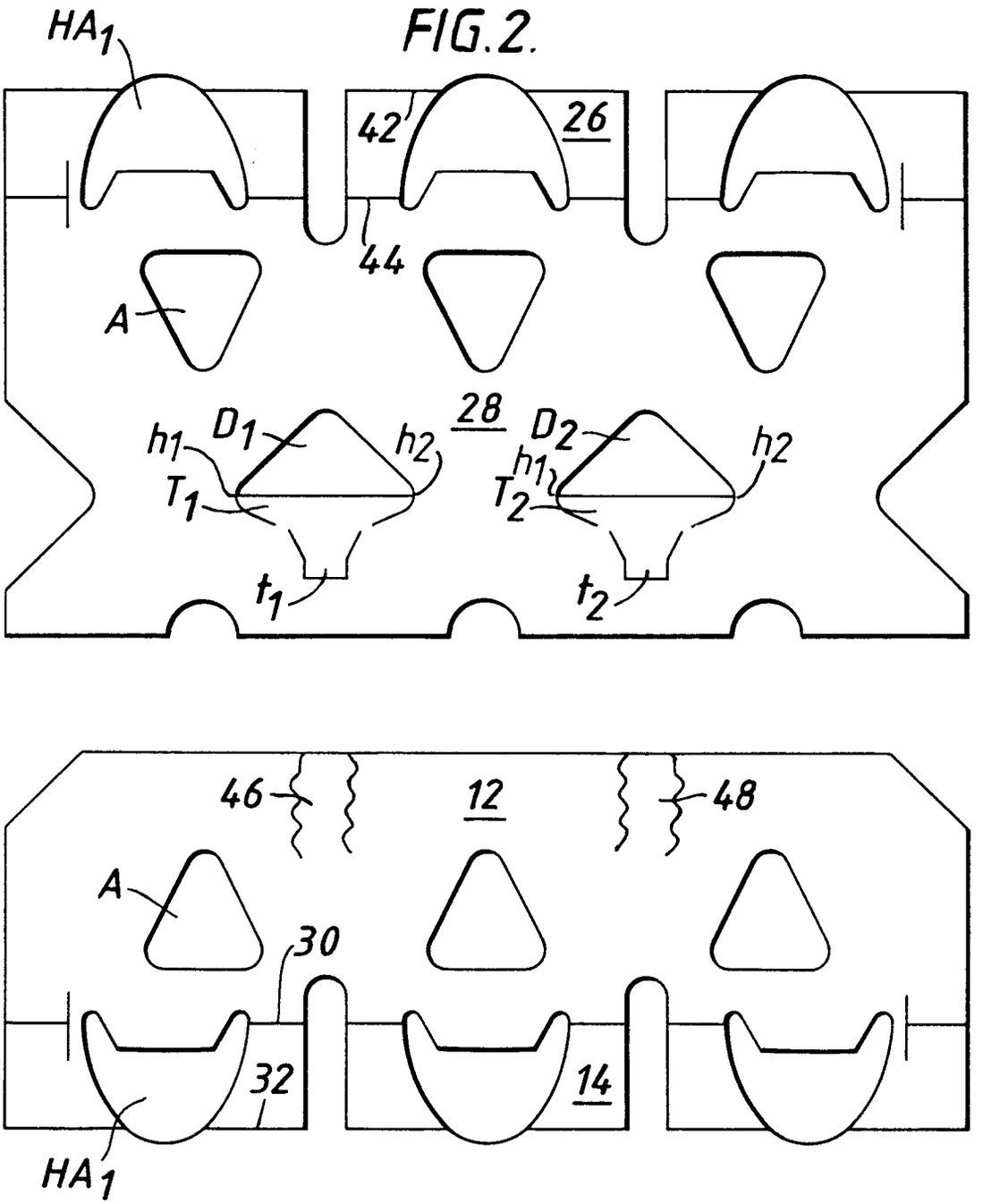


FIG.3.

