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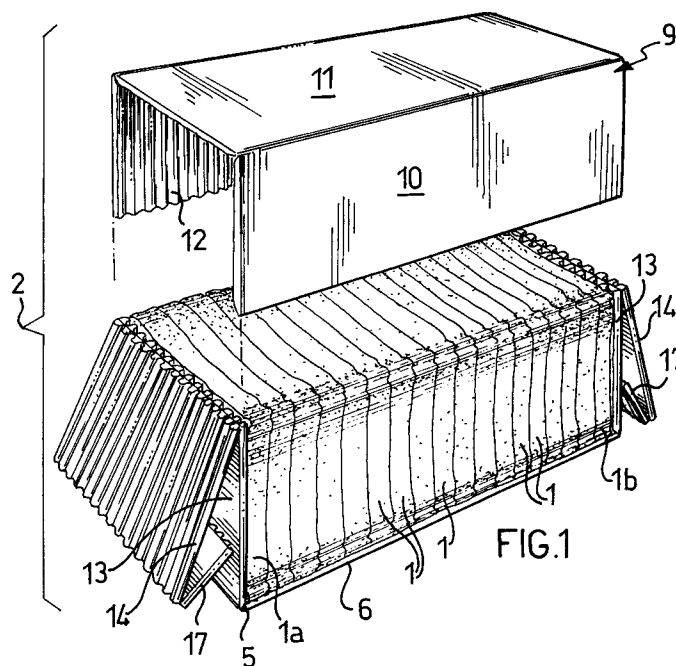
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I-20122 Milano (IT)(54) **Packaging for friable baked products, particularly toast slices.**

(57) A stick-wrapper is described for a plurality of toast slices (1), comprising a package (5,9) of corrugated cardboard having opposite ends (7,8) in face-to-face contact with respective toast slices (1a,

1b) at the ends of the stick, which ends (7,8) are each formed by two walls (13,14) associated by a spacer (17) constituted by an end flap obtained by folding a perimetral portion (17a) of a wall (13).

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The present invention relates generally to packaging for friable baked products such as slices of toasted bread (commonly called toast slices) and like food products which have a substantially regular flat form.

More particularly, this invention relates to a wrapper in which a plurality of baked products of the said type, for example toast slices, disposed in a stack in close alignment to protect one another, are tightly wrapped in a sheet of, for example, appropriate paper or card material to constitute a "stick".

Solely by way of example, hereinafter in the description and in the subsequent claims, reference will be made to a "stick-wrapper" of toasted slices, it being however clear that the invention is not limited to this, but extends to a stick-wrapper for any type of baked products which have similar characteristics of friability and generally flat form.

It is known that toast slices, especially when they best satisfy the organoleptic characteristics to which they aspire, have such a high degree of friability that even a small knock or stress, even if not accidental, is enough to break them into fragments; and it is known that the said friability is greatly accentuated in the central part of the toast slices where they have a reduced thickness with respect to the peripheral parts, and in particular the perimeter.

This makes the manual operation of spreading the toast slices with various ingredients such as butter, jam and the like particularly delicate.

Because of this friability it is especially necessary that the packaging of toast slices, in particular the stick-wrapper thereof, is structured to protect the toast slices from knocks and/or stresses which they may experience due to the various manipulations to which the packages are subjected from the time they leave the packaging machine to the point at which they are "opened" by the consumer.

Such protection must be particularly effective at the opposite ends or short sides of the stick-wrapper where the respective central portions of the first and last toast slice of the packet are located.

For this purpose the prior art packaging of toast slices considered here provides and teaches the use of an "appropriate wrapper", constituted by the so-called single faced corrugated cardboard, with which is formed a rectangular container having the same dimensions as those of the stack of toast slices intended for it.

The use of single faced corrugated cardboard, which has a smooth sheet associated with a sheet having sharp folds, makes it possible to obtain a packet which should be able to offer the dual advantage of being able to absorb small knocks and to provide a packet of dimensions strictly cor-

related to those of the stack of toast slices.

But the protection offered by the stick-wrappers of the prior art are not satisfactory, in particular and above all as far as the opposite end slices of the stack of slices are concerned.

In fact, it is known that in stick-wrappers of toast slices sold retail up to about 20% of slices are broken, in particular the slices at the end of the stack. Such a percentage, which until now has been accepted perforce, is greater if the stick-wrappers at the consumer's domicile are taken into consideration, that is to say those packets which have been subject to a further manipulation during purchase and transport from the point of sale.

It is known that this disadvantage can involve, over time, a degree of consumer disaffection with the product.

The problem on which the present invention is based is that of devising and making available a stick-wrapper for toast slices and similar such friable baked products, having a packaging system which also confers on the toast slices at the end of the packet a good protection against knocks and stresses even non-accidental ones, thus overcoming the disadvantages of the prior art.

This problem is resolved according to the present invention by a stick-wrapper for toast slices arranged in a stack, comprising a wrapper of card, corrugated card and like such flexible material shaped substantially as a rectangular container and having opposite ends in substantial face-to-face contact with respective toast slices at the ends of the stack, characterised in that each of the said end walls includes at least two associated walls in mutual relation spaced by the interposition of at least one spacer at respective perimetral portions of the said walls.

Characteristics and advantages of a stick-wrapper according to the invention will become more clearly apparent from the description of an embodiment thereof made hereinafter with reference to the attached drawings, given by way of indicative and non-limitative example.

In the drawings:

Figure 1 is a perspective view, partly exploded, of packaging for a stack of toast slices in a stick-wrapper according to the invention;

Figure 2 is a longitudinal, partially sectioned view of the same packaging for of toast slices as in Figure 1;

Figure 3 is a perspective view of a detail of Figure 1;

Figure 4 is a perspective view of a strip of corrugated cardboard forming a so-called starting "blank" from which the detail of Figure 3 is obtained;

Figure 5 is a variant of the detail of Figure 3.

With reference to Figures from 1 to 4, there is hereinafter described a stick-wrapper according to the invention for toast slices 1, disposed in a stack, protecting one another in a single aligned row.

The toast slices 1 are substantially square, having been obtained using conventional techniques from a sandwich loaf suitably treated and toast.

The said stick-wrapper comprises a packing generally indicated 2, preferably made from so-called single-faced corrugated cardboard, that is to say cardboard of the type constituted by a smooth sheet 3 associated with a folded sheet 4 having sharp folds as shown in Figure 4.

The packaging 2 is shaped substantially as a rectangular container, made in two parts: a part 5 defining a side wall 6 and the opposite ends 7, 8 of the said container, and the other part 9 defining the remaining side walls 10, 11 and 12 thereof.

In the closed stick-wrapper the said ends 7, 8 are in substantial face-to-face contact with respective toast slices 1a and 1b at the ends of the said stack of slices.

The ends 7, 8 are identical and identically structured, so that hereinafter only one will be described. In the drawings the components of the other end are indicated with the same reference numerals.

In a preferred embodiment, illustrated in Figures 3 and 4, each of the said ends 7, 8 comprises two adjacent walls 13, 14 the wall 13 being in contact with the corresponding toast slice (1a, 1b) and the wall 14 constituting the outer face of the end (7,8): the said walls 13,14 are obtained by folding corresponding portions 13a, 14a of a starting corrugated cardboard blank 15 about a folding line 16 incised preliminarily into the corrugated sheet 4 of the said blank 15.

Each end is then completed by an end flap 17 introduced between the walls 13, 14 of the end itself, to maintain them mutually spaced.

The said end flap 17 is obtained by folding a corresponding portion 17a of the blank 15 about a fold line 18 preliminarily incised into the blank. In particular this fold line 18 extends along the side of the said portion 14a opposite that of the fold line 16.

The end flap 17 substantially constitutes a spacer between the walls 13, 14 of each of the said ends 7,8.

In the finished package the walls 13, 13 of the said ends 7, 8 are maintained in substantial contact with the end toast slices 1a, 1b at the end of the stack of slices 1, whilst the walls 14, 14 are associated with the corresponding walls 13, 13 but spaced from them. In particular, the walls 14, 14 are slightly divergent with respect to the walls 13, 13 starting from the respective fold lines 18 be-

cause of the presence along the opposite side of the spacing end flap 17.

Consequently, when one or both of the ends 7, 8 of a stick-wrapper according to the invention should experience knocks or stresses (more or less accidental), before they can impinge on the end slices 1a, 1b of the pack of slices such knocks or stresses are absorbed first by the squashing deformation of the corrugated parts of the end flap 17, then by the flexure of the walls 14 on their respective lateral supports and then by the further squashing deformation of the corrugated parts of the walls 14, 13 which, because of the preceding flexure, are now in contact with one another.

It is thus evident that in the stick-wrapper of this invention the package provides an effective protection for the toast slices within it.

In practice it has been established that, thanks to the said stick-wrapper and, more precisely, the package utilised in it, fragmentation of the said toast slices, in particular of the end slices in the package itself, are drastically reduced to values of 1 to 2%.

Another particular advantage achieved by the present invention is constituted by the fact that the said package can be obtained without any difficulty using prescoring and blank-folding techniques (of the corrugated cardboard) already widely utilised in the art. Moreover, packages thus obtained can be equally easily manipulated in current automatic packaging machines and/or apparatus without any detailed modification of these.

The invention thus conceived is susceptible of variations and modifications all lying within the ambit of the inventive concept.

Thus, for example, with reference to Figure 5, each end 19 of the package of this invention can comprise a pair of walls 20, 21 adjacent and spaced from one another and mutually spaced by the presence between them of a spacer constituted by a frame 22. Preferably the said frame is made of the same material as that from which the walls 20, 21 are made, for example (and preferably) corrugated cardboard.

Other variants of the invention can be devised in relation, for example, to the shape and dimensions of the friable products to be wrapped; retaining the idea of forming the ends of the stick-wrapper with a pair of walls spaced in such a way as to allow the outermost wall thereof to "flex" on lateral supports thus absorbing all, or at least a major part, of the energy of possible knocks or stresses.

Claims

1. A stick-wrapper for toast slices arranged in a stack, comprising a package (5,9) of card-

board, corrugated cardboard and similar flexible material shaped substantially as a rectangular container having opposite ends (7,8,19) in substantial face-to-face contact with respective toast slices (1a,1b) at the ends of the said stack of slices, characterised in that each of the said ends (7,8,19) comprises at least two walls (13,14; 20,21) associated in mutually spaced relation by the interposition of at least one spacer (17,22) at respective perimetral portions of the said walls (13,14).

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2. A stick-wrapper according to Claim 1, characterised in that the said spacer (17,22) is made of the same material as that of the said package (5,9).
3. A stick-wrapper according to Claim 1, characterised by the fact that the said walls (13,14) are identical.
4. A stick-wrapper according to Claim 1, characterised in that the said walls (13,14) are obtained from the said starting blank (15) of cardboard, corrugated cardboard and similar flexible materials by folding about a fold line (16).
5. A stick-wrapper according to Claim 4, characterised by the fact that the said spacer is constituted by an end flap (17) obtained from the said starting blank (15) by folding a corresponding portion (17a) about a respective fold line (18) which separates the said portion (17a) from one of the said walls (13, 14a).
6. A stick-wrapper according to Claim 1, characterised in that the said spacer is constituted by a perimetral frame interposed between the said walls (20,21).

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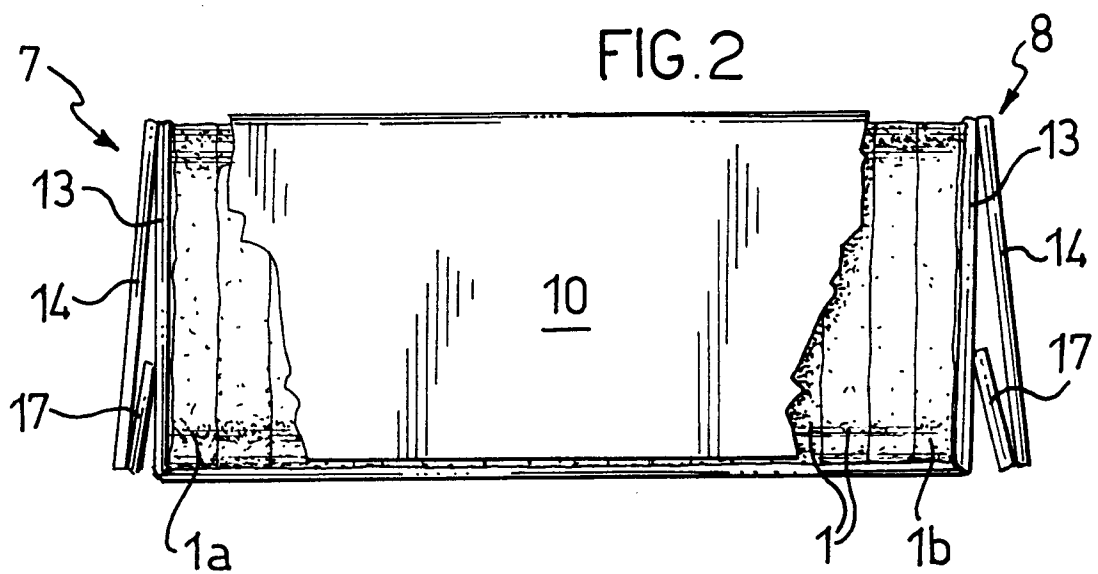
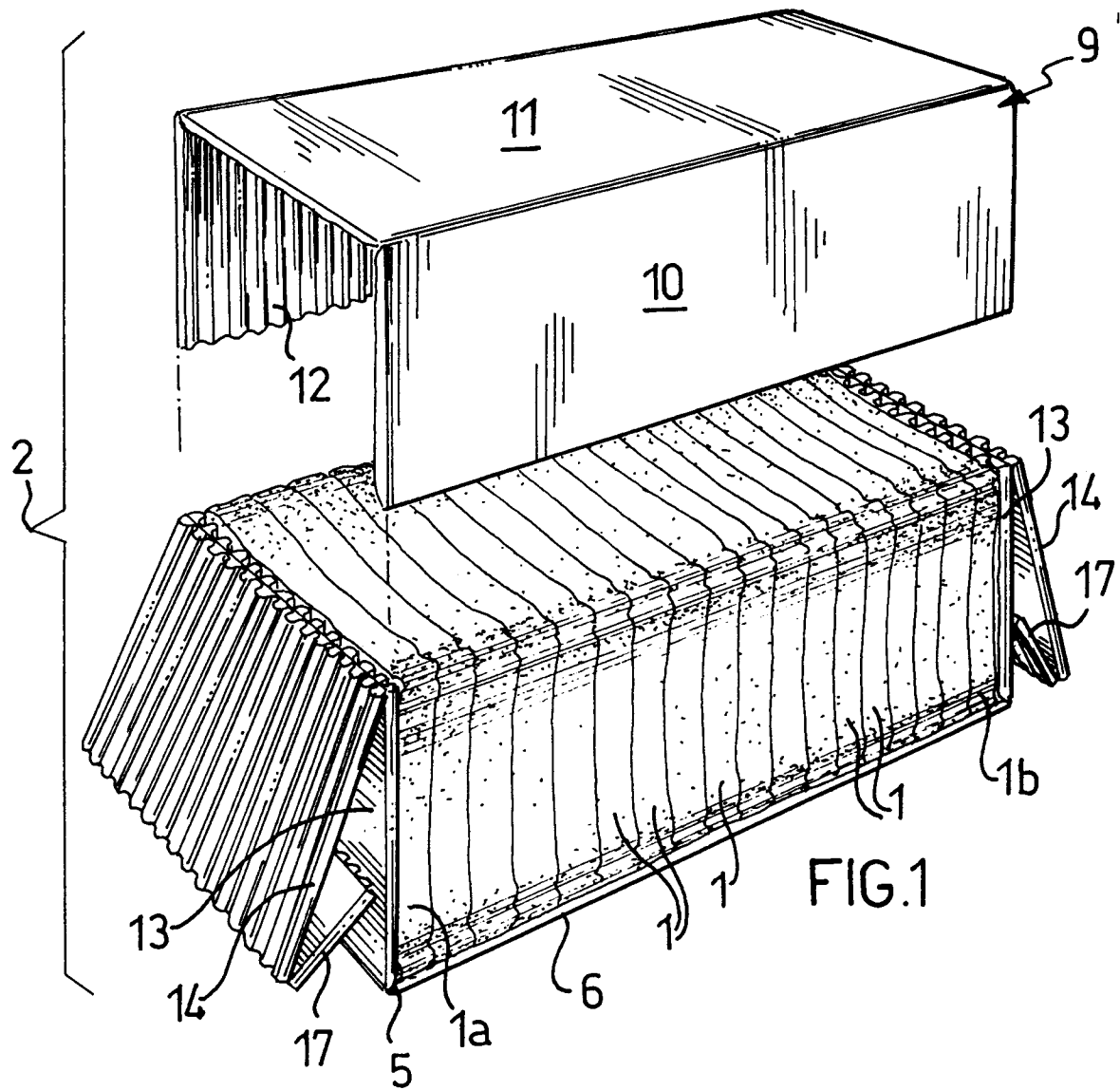
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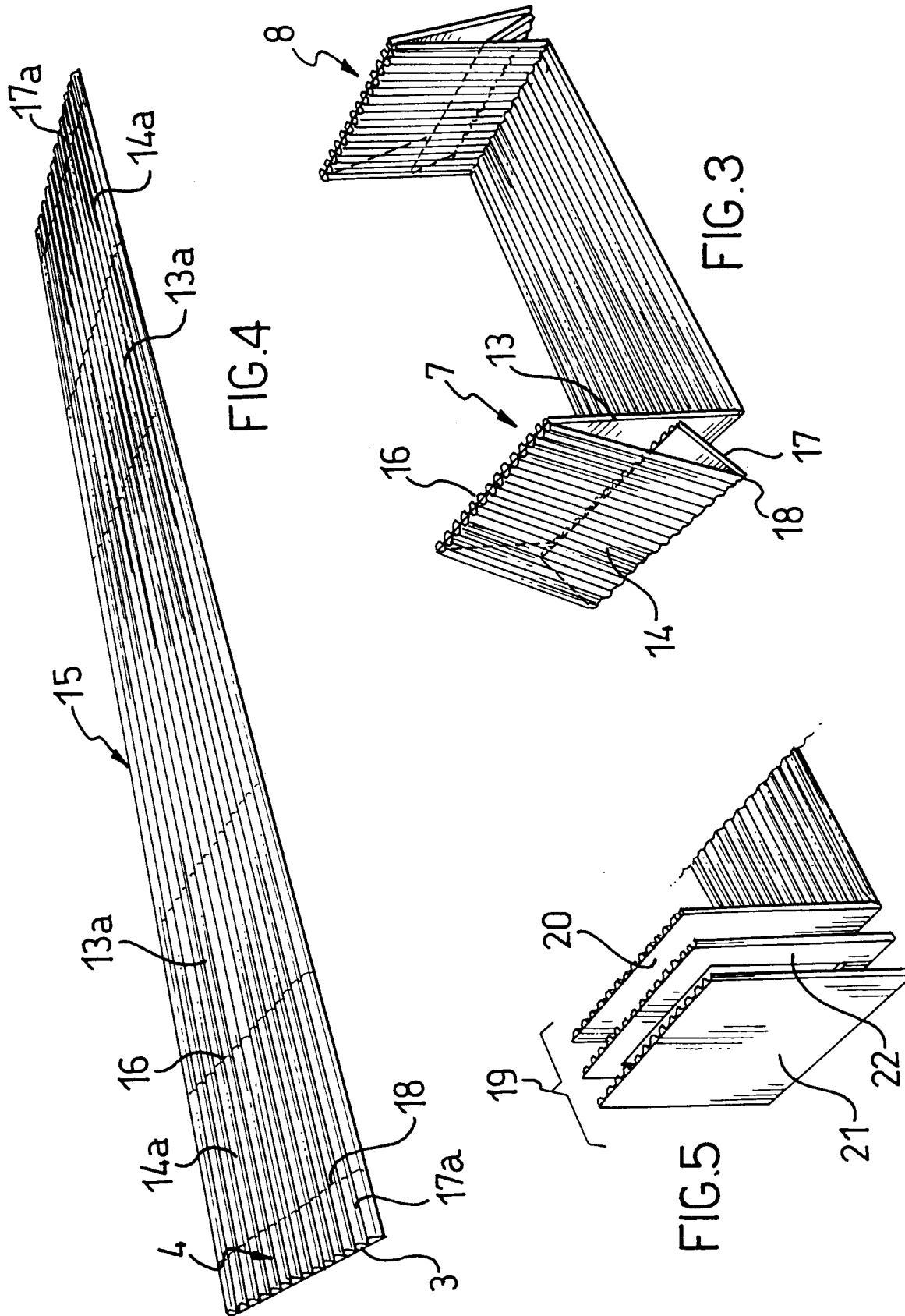
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EUROPEAN SEARCH REPORT

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 93203719.5
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 6)
Y	<u>DE - A - 2 627 733</u> (MICHELS S.A.) * Claims 1,2; fig. 1-5 *	1,2	B 65 D 85/36
Y	<u>GB - A - 986 335</u> (ALLIANCE BOX COMPANY LIM.) * Claim 1; page 1, lines 64-66; fig. 1 *	1,2	
A	-----	3-6	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 6)
			B 65 D 5/00 B 65 D 85/00
The present search report has been drawn up for all claims			
Type of search VIENNA		Date of completion of the search 09-12-1994	Examiner BISTRICH
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	