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**Datasheet for the decision
of 8 March 2007**

Case Number: T 0458/05 - 3.2.07

Application Number: 97201848.5

Publication Number: 0814025

IPC: B65D 5/02

Language of the proceedings: EN

Title of invention:

Blank for a box with at least one curved wall

Patentee:

Nampak Cartons Europe B.V.

Opponent:

GENERALE BISCUIT

Headword:

-

Relevant legal provisions:

EPC Art. 84, 123(2)

Keyword:

"Allowable amendment - all requests (no)"

Decisions cited:

G 0009/92, G 0001/93

Catchword:

-



Case Number: T 0458/05 - 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 8 March 2007

Appellant: GENERAL BISCUIT
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
10 February 2005 concerning maintenance of
European patent No. 0814025 in amended form.

Composition of the Board:

Chairman: H. Meinders
Members: H.-P. Felgenhauer
E. Lachacinski

Summary of Facts and Submissions

- I. This decision concerns the appeal of the opponent (appellant) against the interlocutory decision of the Opposition Division finding European patent No. 0 814 025 in amended form to meet the requirements of the EPC.
- II. Opposition was filed against the patent as a whole based on the grounds of opposition according to Article 100(a) (lack of novelty and of inventive step), 100(b) (insufficiency of disclosure) and 100(c) EPC (subject-matter of the European patent extends beyond the content of the application as filed).
- III. According to the impugned decision the claims 1 of the main request and the first auxiliary request contravene Article 123(2) EPC. Claim 1 of the second auxiliary request was considered as satisfying the requirement of Article 123(2) EPC and as being novel and involving an inventive step in the sense of Articles 54 and 56 EPC.
- IV. In its response dated 18 October 2005 to the grounds of appeal the respondent (patent proprietor) maintained the version of the second auxiliary request and reserved the right to request maintenance of the patent on the basis of the third, fourth and fifth auxiliary request filed during the opposition proceedings or any further request.
- V. In the annex to the summons to oral proceedings dated 12 December 2006 the Board expressed its preliminary opinion in view of the claims of the then pending request, namely the second auxiliary request underlying

the impugned decision, and indicated that the third, fourth and fifth auxiliary request of the opposition proceedings, referred to by the respondent as possible further requests appeared as not being admissible in view of G 9/92 (OJ EPO 1994, 875), the non-appealing respondent being restricted to defending the patent as maintained by the decision under appeal.

VI. Both parties replied to the preliminary opinion, the respondent filing auxiliary sixth to tenth requests with submission dated 8 February 2007.

VII. Oral proceedings before the Board were held on 8 March 2007.

At the oral proceedings the appellant withdrew the third, fourth and fifth auxiliary requests referred to in his response to the grounds of appeal.

VIII. The appellant requested the decision under appeal to be set aside and that the patent be revoked.

The respondent requested as main request that the appeal be dismissed or that the patent be maintained based on the claims of any of the sixth to tenth auxiliary request filed with letter of 8 February 2007.

IX. Claim 1 according to the second auxiliary request underlying the decision under appeal reads as follows:

"1. Blank (1) with main (2,4,3,5,6,6') and auxiliary (10,11,12) surfaces, which main surfaces (2,4,3,5,6,6') forms the walls (18,19,20,21) of the corresponding box, wherein the main surfaces (2,4,3,5,6,6') are mutually

separated from the auxiliary surfaces (10,11,12) by substantially straight folding edges (A) and wherein at least one main surface is adapted as a curving main surface (3,5) which defines a curved outer wall (19) in the corresponding box, wherein the auxiliary surfaces (10,11,12) are adapted to be mounted at right angles to the curved outer wall (19) in the corresponding box and wherein at least one folding edge (A) of the curving main surface (3,5) of the blank (1) is coupled to at least one curving auxiliary surface (10,11,12), and wherein at least one main surface is adapted as a flat main surface (2,4) characterized in that

- the at least one flat main surface (2,4) and the at least one curving main surface (3,5) are mutually separated by a further straight folding edge (B), and
- the folding edge (A) of the curving main surface (3,5) of the blank (1) is coupled to at least two curving auxiliary surfaces (10,11) located at mutual distance and separated by a cut edge along the folding edge (A), at least one of the two curving auxiliary surfaces (10,11) being located at the further straight folding edge (B) between the flat main surface (2,4) and curving main surface (3,5)".

Claim 1 according to the sixth auxiliary request differs therefrom in that as last feature the feature is added "a space (13, 14) is provided between the curving auxiliary surfaces which space is bounded by a cut edge".

This feature has likewise been introduced into claim 1 according to the seventh auxiliary request, to which furthermore the characterising feature has been added according to which "- the at least one curving main

surface (5) is coupled to a peripheral auxiliary surface (7) along substantially the full length of the further straight folding edge (B), wherein the peripheral auxiliary surface (7) is fixed to one of the flat main surfaces (2) in the corresponding box".

Claim 1 according to the eighth auxiliary request comprises as additional feature over claim 1 according to the second auxiliary request the last mentioned additional feature of claim 1 according to the seventh auxiliary request referring the at least one curving main surface being coupled to a peripheral auxiliary surface.

Claim 1 according to the ninth auxiliary request reads as follows:

"1. Blank (1) comprising auxiliary (10,11,12) surfaces and six main surfaces (2,4,3,5,6,6') forming the walls (18,19,20,21) of the corresponding box: two curving main surfaces (3,5), two flat main surfaces (2,4) and two main end surfaces (6,6') forming the substantially flat end walls (18,21) of the box, wherein the main surfaces (2,4,3,5,6,6') are mutually separated from the auxiliary surfaces (10,11,12) by substantially straight folding edges (A) and wherein two main surfaces are adapted as curving main surfaces (3,5) which define curved outer walls (19) in the corresponding box, wherein the auxiliary surfaces (10,11,12) are adapted to be mounted at right angles to the curved outer wall (19) in the corresponding box and wherein the curving main surfaces are provided with two mutually opposite folding edges (A), wherein each folding edge (A) is

coupled to at least one curving auxiliary surface (10,11,12),
characterized in that

- the at least one flat main surface (2,4) and the at least one curving main surface (3,5) are mutually separated by a further straight folding edge (B), and
- the folding edge (A) of the curving main surface (3,5) of the blank (1) is coupled to at least two curving auxiliary surfaces (10,11) located at mutual distance and separated by a cut edge along the folding edge (A), the at least two curving auxiliary surfaces (10,11) being located at the further straight folding edge (B) between the flat main surface (2,4) and curving main surface (3,5) in a mirror-symmetrical pattern relative to the middle of folding edge (A)."

Claim 1 according to the tenth auxiliary request reads as follows:

"1. Blank (1) with main (2,4,3,5,6,6') and auxiliary (10,11,12) surfaces, which main surfaces (2,4,3,5,6,6') forms the walls (18,19,20,21) of the corresponding box, wherein the main surfaces (2,4,3,5,6,6') are mutually separated from the auxiliary surfaces (10,11,12) by substantially straight folding edges (A) and wherein at least one main surface is adapted as a curving main surface (3,5) which defines a curved outer wall (19) in the corresponding box, wherein the auxiliary surfaces (10,11,12) are adapted to be mounted at right angles to the curved outer wall (19) in the corresponding box and wherein at least one folding edge (A) of the curving main surface (3,5) of the blank (1) is coupled to at least one curving auxiliary surface (10,11,12), and

wherein at least one main surface is adapted as a flat main surface (2,4) characterized in that

- the at least one flat main surface (2,4) and the at least one curving main surface (3,5) are mutually separated by a further straight folding edge (B),
- the folding edge (A) of the curving main surface (3,5) of the blank (1) is coupled to at least two curving auxiliary surfaces (10,11) located at mutual distance and separated by a cut edge along the folding edge (A), at least one of the two curving auxiliary surfaces (10,11) being located at the further straight folding edge (B) between the flat main surface (2,4) and curving main surface (3,5), and
- at least a further intermediate curving auxiliary surface (12) is provided, wherein two adjacent curving auxiliary surfaces (10,12;11,12) enclose a space (13,14) which is bounded by a cut edge."

X. The facts, evidence and arguments relied upon by the appellant may be summarised as follows:

- (a) The sixth to tenth auxiliary requests have been late filed and should not be admitted for that reason. Furthermore the claims 1 according to these requests do not satisfy the requirement of Article 123(2) EPC and, due to the introduction of matter from the description and/or the drawings, new issues are raised since it is not apparent whether and to what extent this matter has been considered in the search with respect to the application leading to the patent in suit.
- (b) The features added to claim 1 according to the second auxiliary request, as compared to claim 1

as granted, concern essentially the connection of the curving auxiliary surfaces to the folding edge of a curving main surface. Thus features have been added concerning the number, namely at least two, of curving auxiliary surfaces coupled to the folding edge, the manner in which these curving auxiliary surfaces are positioned with respect to each other, namely being located at mutual distance and separated by a cut edge along the folding edge A, and the manner in which one of the at least two curving auxiliary surfaces is positioned on the folding edge, namely located at the further straight folding edge B between a flat main surface and the curving main surface in question.

- (c) It needs to be considered that the features introduced into claim 1 do not have a basis in the description of the application as filed. Moreover they have been isolated from features also shown in figures 1 - 4 with respect to the arrangement of curving auxiliary surfaces including their location along the folding edge A they have in common with the respective curving main surface, which are equally important for solving the problem disclosed in the application as filed. Consequently the combination of features of claim 1, comprising added features taken in isolation, is not disclosed directly and unambiguously in the application as filed, such that the requirement of Article 123(2) EPC is not fulfilled.

- (d) The grounds of the impugned decision are not correct in this respect. According to this decision the skilled person understands from the application as a whole, that the curving auxiliary surfaces and the cut edge(s) along folding edge A cooperate and solve in combination the same problem of providing a regular curvature and a good maintenance of the curving main surface. Based on this consideration the opposition division concluded that claim 1 according to the second auxiliary request meets the requirements of Article 123(2) EPC since in this claim the curving auxiliary surfaces and the cut edge are referred to in combination.

This conclusion is not based on the disclosure of the application as originally filed, since from the content of this application it is evident, that the necessary definition of at least the shape, the mutual arrangement of the curving auxiliary surfaces and the location of the curving auxiliary surfaces along folding edge A, in order to solve the disclosed problem, is missing in the claim.

- (e) The deficiency outlined above with respect to claim 1 according to the second auxiliary request exists likewise with respect to the claims 1 according to the sixth to the tenth auxiliary requests, since these claims comprise the same isolated features as the ones objected to with respect to claim 1 according to the second auxiliary request and since furthermore in none of

these claims the further features introduced do not lead to these objections being overcome.

(f) Claim 1 according to the sixth, seventh and eighth auxiliary requests comprise a further feature according to which a space is provided between the curving auxiliary surfaces, which space is bounded by a cut edge. Concerning this feature it needs to be considered that the space remains largely undefined with respect to its shape and its position in respect of the curving auxiliary surfaces adjacent thereto. Consequently the introduction of a feature by which a space between curving auxiliary surfaces is not defined, the deficiency existing with respect to Article 123(2) EPC cannot be overcome, since this additional feature does not contribute to further define the curving auxiliary surfaces, their mutual relationship and their location along folding edge A.

(g) With respect to the provision and position of curving auxiliary surfaces claim 1 according to the ninth auxiliary request comprises the additional feature according to which the at least two curving auxiliary surfaces are located at the further straight folding edge B in a mirror-symmetrical pattern relative to the middle of the folding edge A. Apart from being unclear, due to only one folding line B being defined, the subject-matter according to this claim neither satisfies the requirement of Article 123(2) EPC. One reason is that the arrangement of the curving auxiliary surfaces still lacks the further

necessary definition of the manner in which the curving auxiliary surfaces are coupled to folding edge A.

- (h) This applies correspondingly with respect to claim 1 according to the tenth auxiliary request. Although in this claim three curving auxiliary surfaces are defined as associated with one curving main surface as shown in the figures of the application, the shape of these curving auxiliary surfaces, their mutual arrangement and location along folding edge A, remains largely undefined. This applies equally with respect to the further added feature defining a space being provided between adjacent curving auxiliary surfaces.

XI. The facts, evidence and arguments relied upon by the respondent may be summarised as follows:

- (a) The sixth to tenth auxiliary requests have been filed in direct response to issues raised in the Boards annex to the summons to oral proceedings and within the time limit set therein and should thus be admitted.
- (b) Claim 1 according to the second auxiliary request satisfies the requirement of Article 123(2) EPC since such a blank can be derived by the person skilled in the art directly and unambiguously from the content of the application as filed. Taking into account that figures 1 - 4 and the associated portion of the description of the application disclose a preferred embodiment and that in the

application it is clearly stated that the number and the shape of the curving auxiliary surfaces will depend on the desired curve of the curving wall and on the desired closure of the curving wall relative to the end wall, it is evident for the person skilled in the art that the features defined in claim 1 according to the second auxiliary request are the ones required to solve the problem stated in the application as filed, namely to cause the curved wall of the corresponding box to connect well onto the end walls and to obtain the stated effect of holding the curving surface in its curved position. The features of claim 1 relating to the number and mutual arrangement of curving auxiliary surfaces coupled to a curving main surface via folding edge A thus suffice, within the combination of features of claim 1, to solve the problem and to obtain the desired effect to hold, in a box formed from a blank according to claim 1, the associated curving main surface in its curved position. Claim 1 according to the second auxiliary request thus can be seen as an admissible generalisation of the particular embodiments disclosed in detail in the application as filed which can, directly and unambiguously, be derived from the content of the application as filed.

- (c) The number, shape and mutual arrangement of the three curving auxiliary surfaces coupled to a curving main surface, as well as the location of the curving auxiliary surfaces along folding edge A, as shown for two embodiments in figures 1 and 2 of the application lead to a particularly

advantageous manner of mutual cooperation between these elements and additionally to a particularly advantageous manner of connection to end walls in a box folded from this blank as shown in figures 3 and 4. It can, however, directly and unambiguously be derived from the disclosure with respect to these embodiments, that the features leading to the desired curved position of the curving main surface being maintained and the curved walls being well connected to end walls, are the ones defined in claim 1 according to the second auxiliary request. Contrary to prior art blanks and boxes resulting therefrom, the curving auxiliary surfaces are not positioned side by side but at a mutual distance and are separated by a cut edge along the folding edge A. This arrangement leads to the flexibility of the folding edge A and thus of the corresponding curving main surface being increased due to the provision of portions of the folding edge A, at which the folding edge A is formed as cut edge separating adjacent curving auxiliary surfaces. This increased flexibility in turn has the effect that an associated curving main surface can easily be brought into the desired curved form in a box folded from such a blank. Due to the increased flexibility of the curved main surface and the presence of curved auxiliary surfaces coupled to its folding edge A, which can be of substantial size without reducing the flexibility of the associated curving main surface, the requirements for a good connection between a curving main surface having been formed into a curved wall and

the end walls of a box via the associated curving auxiliary surfaces are fulfilled.

- (d) Consequently in the decision under appeal it has correctly been indicated that claim 1 of the second auxiliary request satisfies the requirement of Article 123(2) EPC. The cooperation of the curving auxiliary surfaces and the cut edge(s) along the folding edge A referred to in the decision under appeal suffices to solve the problem of providing a regular curvature and a good maintenance in place of the curving main surface. For the person skilled in the art this relationship is directly and unambiguously derivable from the application as filed.

- (e) This applies even more with respect to the claims 1 according to the sixth, seventh and tenth auxiliary request which, in order to further define the relationship between the curving auxiliary surfaces and the folding edge A to which they are coupled, comprise additionally the feature according to which a space is provided between the curving auxiliary surfaces, which space is bounded by a cut edge.

- (f) Claim 1 according to the eighth auxiliary request comprises, as compared to claim 1 according to the second auxiliary request, a feature defining that at least one curving main surface is coupled to a peripheral auxiliary surface. This feature adds a further aspect to the problem referred to in the application as filed being solved and is clearly derivable from figures 1 - 4 of the application.

The same feature has been added to claim 1 according to the seventh auxiliary request.

- (g) Claim 1 according to the ninth auxiliary request comprises with respect to the provision and position of curving auxiliary surfaces and their cooperation with the folding edge A they are coupled to, the additional feature that the at least two curving auxiliary surfaces are located at the further straight folding edge B in a mirror-symmetrical pattern relative to the middle of the folding edge A. By locating each curving auxiliary surface at a folding edge B, the associated curving main surface can be held particularly well in its curved position, considering that, as can be directly and unambiguously derived from the application as filed, folding line B marks the transition between a flat main surface and a curving main surface and furthermore that it can be of particular importance that the curving main surface is held in its curved position in its end portions starting at the folding lines B.
- (h) Claim 1 according to the tenth auxiliary request, with respect to the number and the arrangement of the curving auxiliary surfaces, defines that at least two curving auxiliary surfaces are located at mutual distance and are separated by a cut edge along a folding edge, that at least one of these curving auxiliary surfaces is located at the further straight folding edge and that, in addition, at least a further curving auxiliary surface is provided. The fact that the further

curving auxiliary surface is called "intermediate" has to be understood as defining that it is provided between two other curving auxiliary surfaces. The number and the arrangement of curving auxiliary surfaces defined in this claim correspond to those according to the embodiments shown in the figures of the application as filed. This claim furthermore is not rendered unclear by reference to "a cut edge" in the features defining the arrangement of at least two curving auxiliary surfaces on the folding edge A on the one hand and the cut edge defining the boundary of a space on the other hand. These cut edges will be understood by the person skilled in the art as being the same, as long as the space extends along the folding edge A. However, if so required for further clarification, claim 1 according to the tenth auxiliary request could be amended accordingly.

- (i) Providing two curving auxiliary surfaces on a folding edge and a further, intermediate one, leads simultaneously to the curving main surface, to which these curving auxiliary surfaces are coupled, being held efficiently in its curved position once a box is folded out of the blank defined by claim 1 according to the tenth auxiliary request, as well as to this curving main surface connecting well onto the end walls of the box. The features of this claim being disclosed directly and unambiguously by the embodiments described with reference to figures 1 - 4 in the application as filed, no further limitation of the claim is required to satisfy the requirement of Article 123(2) EPC.

Reasons for the decision

1. The Board consents to the opinion of the respondent that the sixth to tenth auxiliary requests have been filed in response to issues raised in the preliminary opinion of the Board given in the annex to the summons to oral proceedings and that these requests were filed *inter alia* in order to overcome objections raised in this opinion with respect to the requirements of Article 123(2) EPC. These requests, which furthermore have been filed within the time limit set in the annex, are thus admitted.

2. The main issue with respect to all of the requests on file is, whether or not claim 1 of each of these requests fulfils the requirement of Article 123(2) EPC.

Although the ground of opposition according to Article 100(c) EPC has been raised with respect to claim 1 as granted (cf. notice of opposition dated 13 December 2002, paragraph III) the subject of the appeal proceedings is whether or not the amendments to the claims 1 according to all requests lead to the patent with the amended claims satisfying the requirements of the EPC, i.e. also those of Article 123(2) EPC.

3. *Amended claims*
 - 3.1 Claim 1 according to the second auxiliary request, on which the decision under appeal is based, differs from claim 1 as granted *inter alia* by the following features

- (a) the folding edge A of the curving main surface of the blank is coupled to at least two curving auxiliary surfaces located at mutual distance and separated by a cut edge along the folding edge A,
- (b) at least one of the two curving auxiliary surfaces being located at the further straight folding edge B between the flat main surface and curving main surface.

Feature a) is the one which has been extensively discussed in the oral proceedings with respect to the requirement of Article 123(2) EPC.

Features a) and b) are common to the claims 1 of all requests.

3.2 In the following it is indicated, for ease of reference, which additional features, as compared to claim 1 according to the second auxiliary request, have been added to the claims 1 of the further requests.

3.2.1 Claim 1 according to the sixth auxiliary request comprises the additional feature according to which "a space (13, 14) is provided between the curving auxiliary surfaces which space is bounded by a cut edge".

3.2.2 Claim 1 according to the seventh auxiliary request comprises in addition to the features of the sixth auxiliary request the feature according to which "the at least one curving main surface is coupled to a peripheral auxiliary surface along substantially the

full length of the further straight folding edge, wherein the peripheral auxiliary surface is fixed to one of the flat main surfaces in the corresponding box".

- 3.2.3 Claim 1 according to the eighth auxiliary request comprises as additional feature the previously mentioned feature as added to claim 1 according to the seventh auxiliary request.
- 3.2.4 Claim 1 according to the ninth auxiliary request comprises the following additional features: "blank comprising auxiliary surfaces and six main surfaces forming the walls of the corresponding box: two curving main surfaces, two flat main surfaces and two main end surfaces forming the substantially flat end walls of the box", "the curving main surfaces are provided with two mutually opposite folding edges (A), wherein each folding edge (A) is coupled to at least one curving auxiliary surface" and "the at least two curving auxiliary surfaces being located at the further straight folding edge (B) between the flat main surface and curving main surface in a mirror-symmetrical pattern relative to the middle of folding edge".
- 3.2.5 Claim 1 according to the tenth auxiliary request comprises the following additional features "at least a further intermediate curving auxiliary surface is provided, wherein two adjacent curving auxiliary surfaces enclose a space which is bounded by a cut edge".

4. *Requirements of Article 123(2) EPC*

According to Article 123(2) EPC "a European patent application or a European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed".

The purpose of Article 123(2) EPC is that the applicant or patent proprietor shall not be allowed to improve his position by adding subject-matter not disclosed in the application as filed, which would give him an unwarranted advantage and could be damaging to the legal certainty of third parties relying on the content of the original application (see G 1/93, OJ EPO 1994, 541, point 9 of the Reasons).

According to the established jurisprudence of the Boards of Appeal an amendment to a claim meets the requirements of Article 123(2) EPC if the skilled person can derive the subject-matter of the amended claim directly and unambiguously, using common general knowledge, from the application as filed.

Consequently an amendment is not allowable under Article 123(2) EPC if as a result of it the skilled person is confronted with technical information which is new in respect of the application as filed.

5. *Disclosure of the application as filed*

According to the respondent the disclosure of the application as filed with respect to the subject-matter of the claims 1 according to all requests is primarily provided by the two embodiments shown in figures 1, 3

and 2, 4 of the application as filed and described with reference to these figures on pages 2, 3 of that application.

In addition the respondent referred to the following statements of the description of the application as filed:

- (i) "The invention has for its object to cause the curved wall of the corresponding box to connect well onto the end walls and provides for this purpose a blank as according to claim 1" (page 1, lines 12 - 15);
- (ii) "The blank according to the invention preferably has at least two, and more preferably at least three, curving auxiliary surfaces located at a mutual distance on at least one and preferably two folding edge(s) of one and preferably two curving main surface(s). The number and shape of the curving auxiliary surfaces of a blank according to the invention will depend on the desired curve of the curving wall and on the desired closure of the curving wall relative to the end wall" (page 1, lines 22 - 30),
- (iii) "Each curving surface 3, 5 preferably has two opposite folding edges A which are provided with a number of, and preferably three, curving auxiliary surfaces 10, 11, 12" (page 2, lines 14 - 17) and

(iv) "The invention is further elucidated with reference to the following figure description of a number of preferred embodiments of the invention" (page 1, lines 31 - 33) and correspondingly "figures 1 and 2 show preferred embodiments of a blank according to the invention in top view" (page 2, lines 2, 3).

5.1 Concerning the disclosure of the application as filed it is undisputed that figures 1 - 4 are, besides the description, a means of disclosure. In line with the established jurisprudence of the Boards of Appeal (cf. Case Law of the Boards of Appeal, fifth edition, December 2006, III.A.1.3) the Board considers figures 1 - 4 of the application as filed to be an integral part of the documents of the application disclosing the invention.

6. *Content of the application as filed*

6.1 The Board agrees with the respondent that the content of the application as filed concerns a blank for a box, comprising a curving main surface to be formed into a curved surface when folding the blank into a box, the blank being such that two conflicting requirements are to be reconciled.

According to the first requirement the structure of the blank has to be such that the curved main surface has sufficient flexibility to be easily transformed in the desired curved shape, when the blank is folded into a box.

According to the second requirement the structure of the blank has simultaneously to be such, that each curved main surface connects well onto the end walls of the box (page 1, lines 12 - 15).

In other words the content of the application as filed concerns the structure of a blank of which each curving main surface can easily be formed into the desired curved shape and then be well maintained in this curved shape.

- 6.2 As explained by the respondent, the basis for fulfilling these requirements is the manner in which a curving main surface, which is to be transformed into a curved form in the folded box, is coupled to curving auxiliary surfaces, by means of which the curving main surface is later maintained in its curved shape within the folded box, with the help of the end surface(s).

This is achieved by curving auxiliary surfaces being coupled to an associated curving main surface, as defined by features a) and b), particularly feature a), of claim 1 of each request, in mutual distance and separated by a cut edge along folding edge A and furthermore in that the curving auxiliary surfaces are arranged along that folding edge in such a manner that the relationship between the lengths of the folding edge A over which the curving auxiliary surfaces are coupled to the curving main surface and the length of the folding edge A existing between adjacent curving auxiliary surfaces (that part of the folding edge being formed as cut edge) is chosen to satisfy certain criteria (in the following: the relationship condition).

According to the relationship condition the relationship between these two types of length portions of the folding edge A has to be chosen such that on the one hand the curving main surface has sufficient flexibility - due to the length and arrangement of the portion of the folding edge A between two curving auxiliary surfaces, formed as cutting edge - to be easily brought and held in the required curved shape. On the other hand the length over which each curving auxiliary surface is coupled to the folding edge A has to be chosen such that it does not oppose the formation of the associated curving main surface into a curved shape and that it allows for the curving main surface, having been bent into its curved shape, to be securely maintained in this shape by means of the associated curving auxiliary surfaces.

This means that for allowing a smooth curve of the curving main surface one would rather not have a curving auxiliary surface intermediate the two curving auxiliary surfaces at the opposite ends of the folding edge in common with the associated curved main surface, but one should provide such an intermediate curving auxiliary surface to maintain the curvature. The above is however difficult to reconcile with the further requirement for the solution of the problem, namely that the curving auxiliary surfaces have to have a sufficiently large area in order to be able to connect well onto end walls of the blank, when the latter is folded into a box. Such large surface areas of the curving auxiliary surfaces would obstruct the curving of the curving main surface in the folded box when resulting in long lengths of the folding edge in common with the curving main surface.

Therefore these coupling lengths should be as short as possible, to allow the curving of the curving main surface and to allow the proper fixation of that surface to the end walls of the box.

- 6.3 While the Board agrees that feature a) needs to be considered as being of particular importance with respect to the invention disclosed by the application as filed it considers the relationship condition imposed on feature a) as being of equal importance, since without the resulting combination of feature a) with the relationship condition the problem underlying the application as filed (page 1, lines 12 - 15) cannot be considered as being solved by the invention, as explained by the respondent and as disclosed in the application as filed.

7. *Subject-matters of the claims 1 of all requests*

- 7.1 Claim 1 according to each request comprises feature a) as referred to above. None of the claims 1 comprises a feature defining that the curving auxiliary surfaces coupled to the folding edge A as defined by feature a) are additionally arranged such that also the relationship condition is fulfilled, when the blank is folded into a box.

Since, as indicated above (sections 6.2 and 6.3), according to the invention disclosed by the application as filed it is indispensable that the relationship condition as imposed on feature a) is met, these claims relate to new subject-matter which is not comprised within the content of the application as filed.

In this connection it also needs to be taken into consideration that according to the content of the application as filed (cf. section 6.3 above) feature a) cannot be considered isolated from the relationship condition, since only then curving auxiliary surfaces are coupled to the folding edge A of an associated curving main surface, in such a way that the conflicting requirements as discussed in sections 6.1 and 6.2 above are reconciled.

- 7.2 Defining a blank comprising feature a) without the relationship condition imposed on it, as it is the case with respect to the claims 1 according to all requests, leads to a teaching different from the one given by the content of the application as filed.

Seen from a different point of view (in line with an argument of the respondent) feature a), without the imposed relationship condition, needs to be considered as having been taken in isolation from the relationship condition and thus from the invention as disclosed in the application as filed. Introducing feature a) in the claims 1 without that condition thus leads to an amendment of claims 1 according to all requests, which extends beyond the content of the application as filed.

Consequently the subject-matters of the claims 1 according to all requests do not fulfil the requirement of Article 123(2) EPC.

8. The respondent contended with respect to the claims 1 according to all requests, referring to portions i) - iv) of the description (cf. section 5 above), that the

disclosure of the application as filed is not limited to the two embodiments shown in figures 1 - 4 and that consequently these claims 1 comprise all features necessary to define subject-matter as disclosed in the application as filed.

- 8.1 In this respect the respondent argued in particular that according to the description these two embodiments are preferred ones and that it is apparent from of the description as filed (section 5, ii)) that "the number and shape of the curving of the curving auxiliary surfaces of a blank according to the invention will depend on the desired curve of the curving wall and on the desired closure of the curving wall relative to the end wall".

Concerning the before mentioned closure of the curving wall relative to the end wall, the respondent further contended that figures 1 - 4, in particular 3 and 4, show two embodiments in which the closure is particularly advantageous due to the manner in which curving auxiliary surfaces are interwoven with an end wall and an auxiliary end wall (cf. page 3, lines 20 - 26) and that features defining such an advantageous closure need not be comprised in claim 1 of any of the requests.

- 8.2 The Board agrees, in so far as not every detail of the embodiments shown in figures 1 - 4 needs to be taken into account when considering the disclosure by this figure. It is, however, of the opinion that the relationship condition imposed on feature a) as indicated above (sections 6.2 and 6.3) is, due to its fundamental importance for the invention as disclosed

in the application as filed, indispensable for the main claim to satisfy the requirement of Article 123(2) EPC.

The Board also agrees that in a main claim the curving auxiliary surfaces coupled to the folding edge A do not have to be defined in number and shape exactly as disclosed by the two embodiments.

In this respect the Board, however, is also of the opinion that it is indispensable for a definition of the arrangement of curving auxiliary surfaces on the folding edge A of a curving main surface in the main claim, such that it does not extend beyond the content of the application as filed, that besides feature a) also the imposed relationship condition is reflected in this claim.

9. Concerning the argument of the respondent referring to the impugned decision as being correct with regard to the examination of the requirement of Article 123(2) EPC, with respect to claim 1 according to the second auxiliary request, the following needs to be considered.

9.1 According to this decision "The skilled man understands from the application as a whole that the curving auxiliary surfaces and the cut edge(s) along the folding edge (A) cooperate and solve in combination the same problem of providing a regular curvature and a good maintain (sic) of the curving main surface" (Reasons for the Decision, page 4, paragraph "Amendment", No. 1.).

According to the decision under appeal claim 1 according to the main request and the first auxiliary

request have been found to extend beyond the content of the application as filed.

Claim 1 according to the second auxiliary request has been found, in the impugned decision, to meet the requirements of Article 123(2) EPC since it "recites the curving auxiliary surfaces and the cut edge in combination" (reasons, page 4, paragraph 2.).

9.2 As can be derived from the reasons given above with respect to feature a) the "combination" referred to in the decision under appeal, which corresponds to only feature a), does not suffice for amended claim 1 to satisfy the requirement of Article 123(2) EPC, since this claim comprises feature a) in isolation from the relationship condition, which according to the disclosure of the application as filed must be met as well.

10. The reasons given above apply directly to the claims 1 according to all requests since all these claims comprise feature a) and since none of these claims has been further amended such that the lack of the relationship condition imposed on feature a) has been sufficiently compensated by other features added to these claims.

10.1 Concerning the arrangement of the curving auxiliary surfaces on the folding edge, the claims 1 according to the sixth, seventh and tenth auxiliary request comprise the additional feature that "a space (13, 14) is provided between the curving auxiliary surfaces which space is bounded by a cut edge". The wording of this feature corresponds to a passage of the description of

the application as filed (page 2, lines 17 - 19) and such a space is shown in figures 1 - 4 as being provided within the "confines" of the two curving auxiliary surfaces at two opposite ends of the folding edge. The Board is of the opinion that the argument of the respondent, that the provision of such a space, as shown in the figures, is advantageous, as by means of this space it is avoided that after folding of a box from the blank portions of curving auxiliary surfaces would extend beyond the circumference of the then curved curving main surface, can be followed.

Such a space as shown can, due to its location relative to the folding edge and within the "confines" of the respective curving auxiliary surfaces, have an impact on the relationship condition. However, this space has remained undefined in the claims 1 of these requests. Presently, as a consequence of not being further defined as indicated, the feature as added does not compensate for the lack of the relationship condition as imposed on feature a).

In addition to the feature defining the provision of a space, claim 1 according to the seventh auxiliary request comprises the further feature "the at least one curving main surface is coupled to a peripheral auxiliary surface along substantially the full length of the further straight folding edge, wherein the peripheral auxiliary surface is fixed to one of the flat main surfaces in the corresponding box". This feature does not help in further defining feature a). It concerns a solution to an entirely different, separate problem: how to maintain the box in the form of a tube via the main (curving and flat) surfaces (see

paragraph [0015] of the patent in suit. This applies likewise with respect to claim 1 according to the eighth auxiliary request, which, as only additional feature over the features of claim 1 according to the second auxiliary request, comprises the aforementioned feature as well.

- 10.2 Claim 1 according to the ninth auxiliary request comprises in addition to claim 1 according to the second auxiliary request the following features: "blank comprising auxiliary surfaces and six main surfaces forming the walls of the corresponding box: two curving main surfaces, two flat main surfaces and two main end surfaces forming the substantially flat end walls of the box", "the curving main surfaces are provided with two mutually opposite folding edges (A), wherein each folding edge (A) is coupled to at least one curving auxiliary surface" and "the at least two curving auxiliary surfaces being located at the further straight folding edge (B) between the flat main surface and curving main surface in a mirror-symmetrical pattern relative to the middle of folding edge".

Of these added features only the feature concerning the mirror-symmetrical arrangement of at least two curving auxiliary surfaces concerns the curving auxiliary surfaces. This feature modifies feature b). It does, however, not contribute to feature a) being further defined with respect to the relationship condition imposed on it.

- 10.3 Claim 1 according to the tenth auxiliary request differs from claim 1 according to the second auxiliary request by the following features: "at least a further

intermediate curving auxiliary surface is provided, wherein two adjacent curving auxiliary surfaces enclose a space which is bounded by a cut edge" and by the feature according to which a "space" is provided as has already been considered with respect to the claims 1 according to the sixth and seventh auxiliary request.

For the sake of argument the feature concerning the provision of at least a "further intermediate curving auxiliary surface" has been considered as defining that a further auxiliary curving surface is provided and that this surface is located intermediate of, i.e. between, the at least two curving auxiliary surfaces previously defined in this claim.

Although by these features the arrangement of curving auxiliary surfaces according to feature a) is further defined with regard to the necessary number of such surfaces located on the folding edge A (see point 6.2 above, penultimate paragraph), they fail to further define feature a) with respect to the remainder of the imposed relationship condition (see also the discussion of the sixth, seventh and tenth auxiliary request in point 10.1 above).

Concerning the above finding the argument of the respondent that claim 1 according to the tenth auxiliary request is composed of features of dependent claims of the application as filed bears no significance.

10.4 Summarising it can be concluded that for the reasons given above none of the claims 1 according to the second auxiliary request and the sixth to tenth

auxiliary requests can be considered as satisfying the requirements of Article 123(2) EPC for the reason that into all of these claims feature a) has been introduced in isolation from the relationship condition (cf. sections 6.2 and 6.3), imposed on it according to the content of the application as filed.

11. The claims 1 according to all requests not satisfying the requirement of Article 123(2) EPC for the reasons given above, there was no need to further examine whether or not the amended claims satisfy the requirement of Article 84 EPC and whether or not the features added to the claims 1 according to the sixth to tenth auxiliary requests in comparison with claim 1 according to the second auxiliary request - which presently have been regarded exclusively in view of their relationship to feature a) - can, considered by themselves, lead to objections with respect to the requirement of Article 123(2) EPC.

Likewise, the possible amendments proposed by the appellant at the oral proceedings, to overcome deficiencies of the amended claims with respect to Article 84 EPC as brought forward in these proceedings, need not be further considered. Such a proposal concerned in particular claim 1 according to the tenth auxiliary request and involved the deletion of a feature present in claim 1 as maintained by the opposition division. If further pursued also its admissibility would have had to be considered with respect to the principle of *reformatio in peius* (cf. G 9/92, *supra*), as in the present case the opponent is the only appellant.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

G. Nachtigall

H. Meinders