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**Datasheet for the decision
of 20 December 2011**

Case Number: T 0047/11 - 3.2.07

Application Number: 04022993.2

Publication Number: 1493678

IPC: B65D 5/74, B65D 5/06

Language of the proceedings: EN

Title of invention:

Sealed package for pourable food products, and relative
production method

Patent Proprietor:

Tetra Laval Holdings & Finance SA

Opponent:

SIG Technology AG

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

"Novelty (main request): yes"
"Inventive step (main request): yes"

Decisions cited:

T 0540/09

Catchword:

-



Case Number: T 0047/11 - 3.2.07

DECISION
of the Technical Board of Appeal 3.2.07
of 20 December 2011

Appellant: SIG Technology AG
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Respondent: Tetra Laval Holdings & Finance SA
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 23 November 2010
rejecting the opposition filed against European
patent No. 1493678 pursuant to Article 101(2)
EPC.

Composition of the Board:

Chairman: H. Meinders
Members: K. Poalas
E. Dufrasne

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the decision of the Opposition Division rejecting its opposition filed against European patent No. 1 493 678.

II. Opposition had been filed against the patent as a whole, based on Article 100(a) EPC (lack of inventive step).

The Opposition Division found that the above-mentioned ground of opposition under Article 100(a) EPC does not prejudice the maintenance of the patent as granted.

III. The following documents are mentioned in the present decision:

D2: GB-A-593 278

D3: US-A-4 184 624

D4/T4: JP-A-11-91792 and its translation into German

D5 = EP-A-0 838 325.

IV. Oral proceedings took place before the Board on 20 December 2011, after the oral proceedings on the appeal case T 540/09 relating to the parent of the present patent had been held.

(a) The appellant requested that the decision under appeal be set aside and that European patent No. 1 493 678 be revoked.

(b) The respondent (patent proprietor) requested that the appeal be dismissed (main request) or, in the alternative, that the decision under appeal be set aside and the patent be maintained on the basis of

claim 1 of one of the first and second auxiliary requests filed with letter dated 18 November 2011.

V. Independent claims 1 and 10 according to the main request, i.e. of the patent as granted read as follows:

"1. A sealed package (1, 1') for pourable food products, made from sheet packaging material provided with a longitudinal sealing band (19) and comprising a top wall (6) crossed by at least one transverse sealing band (15) forming a flat projecting tab (21) folded coplanar with and onto the top wall (6) along a bend line (22), said package (1, 1') being provided with an opening device (8) fitted to a portion of said top wall (6) bounded on one side by said transverse sealing band (15); characterized in that said tab (21) comprises a non-sealed flat striplike auxiliary portion (25) interposed between said transverse sealing band (15) and said bend line (22), so that the area of the portion of said top wall (6) available for said opening device (8) is increased by the width of the auxiliary portion (25), and in that said opening device (8) extends over said auxiliary portion (25)".

"10. A method of producing a sealed package (1, 1') of a pourable food product from sheet packaging material provided with a longitudinal sealing band (19), said method comprising the steps of:

- forming a box-shaped element (60) open at the top and filled with said food product;
- forming a top wall (6) for closing said box-shaped element (60) and crossed by at least one transverse sealing band (15) forming a flat projecting tab (21) bounding, on one side, a portion of the top wall (6)

for receiving an opening device (8);
- folding said tab (21) coplanar with and onto said top wall (6) along a bend line (22) formed beforehand on said packaging material;
characterized in that said step of forming said top wall (6) is performed by sealing the top of said box-shaped element (60) at a predetermined distance (Z) from said bend line (22) on said packaging material, so that, when folded, said tab (21) comprises, between the bend line (22) and said transverse sealing band (15), a flat striplike auxiliary portion (25), the width of which increases the area of the portion of said top wall (6) available for receiving said opening device (8); said opening device (8) being fitted to said top wall (6) so as to extend over said auxiliary portion (25)".

In view of the outcome of the proceedings there is no need to recite the wording of the independent claims of the auxiliary requests.

VI. The appellant argued essentially as follows:

Claim 1: Novelty - Article 54 EPC

It has to be remarked first that claim 1 does not require the top wall with the opening device to be horizontal, when folded flat on the rearward top wall. This means that the claim allows for a slightly inclined top wall as well. Figures 2 and 3(b) of D4/T4 depict only a specific embodiment of a sealed package with a specific inclination angle for the top wall surface 3T induced by the corresponding inclination angle of the fold lines "e" in the side panels 2 and 4.

However, the second sentence of paragraph 0011 of D4/T4 allows for another package with a less inclined top wall ("in etwa schräg"), resulting in bend lines "e" on the side panels 2 and 4 running practically at right angles to the bend lines a - d and an additional bend line positioned on the rearward top wall surface 1T situated remote from the sealing band 3TP. This produces a portion between that bend line and the sealing band as claimed in the characterising part of claim 1. The opening device fitted to the top wall would then automatically extend over said auxiliary portion.

Claim 1: Inventive step - Article 56 EPC

The teaching of D4/T4 considered alone

The skilled person starting from the package according to figure 3(b) of D4/T4 would be confronted with the problem of minimising the headspace of said package, as the effect of the differing features is that the headspace is reduced. He would be guided by the above-mentioned teaching of the second sentence of paragraph 0011 of D4/T4 to decrease the inclination angle of the bend lines "e" of the side panels 2 and 4 in order to achieve this. During this modification the skilled person would neither modify the top wall surface 3T nor the width of the sealing band 3TP, but he would simply choose less inclined bend lines "e" in the side panels 2 and 4. Thus lowered bend lines "e" on the side panels 2 and 4 would have the same effect as discussed above for novelty.

Combination of the teachings of D4/T4 and D3 (and D5)

The problem of reducing headspace is mentioned in D3 in column 1, lines 26 to 29 and 39 to 42 and also in column 2, lines 47 to 52.

D3 teaches the person skilled in the art how to flatten the gable top part of a finished package by using an additional bend line 30 in one of the top walls which are not folded in.

The person skilled in the art seeking to reduce the headspace of the package known from figure 3(b) of D4/T4 would provide such an additional bend line to the rearward top wall 1T of said package without exercising an inventive activity. By doing so the person skilled in the art immediately recognises that this bend line increases the area of the top wall 3T available for an opening device positioned on that top wall.

The person skilled in the art is not hindered to implement the idea of the additional bend line 30, even though the package of D3 does not disclose an opening device and its top walls fold flat only temporarily for transportation purposes. In this respect, however, D5 documents that gable top containers, figures 1 and 1B, and flat top containers having opening devices on their corresponding top walls are well known to the person skilled in the art before the filing date of the patent in suit.

Combination of the teachings of D4/T4 and D2

The person skilled in the art starting from the package according to figure 3(b) of D4/T4 and seeking to solve the problem of reducing the headspace of said package would take into consideration the teaching derivable from the packages depicted in figures 5 and 12 of D2. Said figures show parallelepiped packages having each a non-sealed flat striplike portion on the top wall of said packages extending between the bend lines 15, 37 and the sealing bands 13, 35, whereby said portion increases the portion of the respective top wall available for an opening device. By applying said teaching of D2 to the package according to figure 3(b) of D4/T4 the person skilled in the art would arrive at the package according to claim 1 without the exercise of an inventive activity.

Claim 10: Novelty and inventive step – Articles 54 and 56 EPC

The arguments concerning novelty and inventive step of the subject-matter of the product claim 1 are accordingly applicable to the subject-matter of the method claim 10.

VII. The respondent argued essentially as follows:

Claim 1: Novelty – Article 54 EPC

The second sentence of paragraph 0011 of D4/T4 refers to the inclination angle of the top wall surface 3T of the package shown in figure 3(b) and accordingly also to the inclination angle of the bend lines "e" on the

side panels 2 and 4 shown in figure 2 of D4/T4. It clearly does not concern (a) different embodiment(s) with a bend line "e" at practically the same level in all panels 1 - 4, at right angles to the bend lines a - d. The additional bend line allegedly resulting in the top wall 1T cannot arise from itself; it has to have been provided in the blank before. No such bend line is derivable from D4/T4.

Accordingly, the appellant's line of arguments based on a particular interpretation of the above-mentioned sentence of D4/T4 is invalid and D4/T4 fails to disclose the characterising features of claim 1.

Claim 1: Inventive step – Article 56 EPC

The teaching of D4/T4 considered alone

Due to the fact that D4/T4 neither addresses the problem of reducing the headspace of the package depicted in figure 3(b) nor discloses any information towards the required modification of the existing bend lines and the addition of new bend lines in the panels 1T, 2T (partly) and 4T (partly), which are necessary to obtain what is proposed by the appellant, it is self-evident that the teaching of D4/T4 considered alone cannot lead the person skilled in the art to a package having a non-sealed flat striplike auxiliary portion according to the characterising part of claim 1 and therefore it cannot render the subject-matter of claim 1 obvious.

Combination of the teachings of D4/T4 and D3 (and D5)

The person skilled in the art would not consider the teaching of D3 in order to solve the problem of reducing the headspace of the package known from figure 3(b) of D4/T4 because the gable top flattening method disclosed in D3 is not applicable to a package provided with an opening device on its top wall, see in particular figure 2 of D3.

D3 discloses a package which instead of having an opening device positioned on the package's top wall is provided with a pouring spout, see column 2, lines 44 to 46.

In view of the above, the combination of the teachings proposed by the appellant would lead the person skilled in the art to a package in which the opening device of the package of figure 3(b) of D4/T4 is removed and replaced by the bend lines 29 for forming the pouring spout in combination with the bend line 30. Such a package would be completely different from the one of claim 1.

The fact that document D5 discloses a gable top package and a parallelepiped-shaped package, both provided with respective opening devices on their top walls, cannot change the situation in respect of D3, as the solution offered by the latter to the problem of reducing the stacking volume of a plurality of gable top packages always implies the prohibition of having an opening device on the corresponding top walls.

Even considering the portion bounded on one side by the bend line 30 and on the other side by the lower limit 26 of the sealing band 24 of figure 5 of D3 as equivalent to the non-sealed auxiliary portion claimed in claim 1, there is no indication in D3 that such a portion or its counterpart on the other top wall surface 22 is there to be used to receive an opening device. In practice, the characterising feature of claim 1 cannot be obtained by the combination of the teachings of D4/T4 and D3, even considered together with the teaching of D5, other than with hindsight.

Combination of the teachings of D4/T4 and D2

Since D2 discloses a parallelepiped package without an opening device and it does not address the problem of reducing the headspace of a package according to figure 3(b) of D4/T4 it would not be taken into consideration by the person skilled in the art seeking to solve the above-mentioned problem.

Even if the person skilled in the art would have taken into consideration the teaching of D2 he would not have arrived at a package according to claim 1 since it does not disclose any teaching concerning the positioning of an opening device within the region extending between the centreline 15, 37 and the bend line 14, 36 shown in figures 5 and 12 of D2.

Claim 10: Novelty and inventive step – Articles 54 and 56 EPC

The arguments concerning novelty and inventive step of the subject-matter of the product claim 1 are

accordingly applicable to the subject-matter of the method claim 10.

Reasons for the decision

1. *Claim 1: Novelty – Article 54 EPC*
- 1.1 A sealed package according to the preamble of claim 1 is undisputedly known from D4/T4.
- 1.2 The question at stake is therefore, whether also the characterising features of claim 1 that the tab comprises a non-sealed flat striplike auxiliary portion interposed between the sealing band and the bend line, so that the area of the portion of the top wall available for the opening device is increased by the width of the auxiliary portion, and that said opening device extends over said auxiliary portion are also known from D4/T4.
- 1.3 The appellant assumes that figures 2 and 3(b) of D4/T4 depict a specific embodiment of a sealed package with a specific, relatively steep, inclination angle for the top wall surface 3T induced by the specific, correspondingly relatively steep, inclination angle of the fold lines "e" in the side panels 2 and 4. The appellant assumes further that the second sentence of paragraph 0011 of D4/T4 mentioning that the top panel of the package is "slanted to some degree" ("etwa schräg") allows for an embodiment different from the one depicted in figures 2 and 3(b), said embodiment having a more horizontal top wall in the standing package, with bend lines "e" in the side panels 2 and 4

running almost at right angles to the bend lines a - d and continuing in the bend lines "e" in the panels 1 and 3. Folding a blank according to such an embodiment into a package with folded down top wall 3T would result automatically in the lowering of the level of the bend line "e" on the rear panel 1 and in the corresponding enlarging of the top wall surface 1T, producing thereby additional packaging material in the top wall 1T of the package. Due to said additional material an additional bend line situated on the top wall surface 1T positioned remote from the sealing band 3TP would be automatically generated. The strip corresponding therewith on the top wall surface 3T lying between said bend line and the sealing band 3TP would then define a non-sealed flat striplike auxiliary portion interposed between the sealing band and the bend line in the sense of the characterising portion of claim 1. The opening device fitted to the top wall would then automatically extend over said auxiliary portion.

1.4 The Board cannot follow this argument for the following reasons:

1.4.1 The Board notes that the first two sentences of paragraph 0011 of D4/T4 refer to one and the same embodiment of the invention described therein, namely the one depicted in figures 2 and 3(b), because of the start of the second sentence with "Hier wird ..." ("Here...", i.e. "In this package..."). The inclined top wall 1T, 3T referred to ("schräge" ... "in etwa schräg") is therefore the one shown in figure 3(b) requiring accordingly that the particular bend lines "e" on the side panels 2 and 4 are as shown in figure 2,

i.e. angled with respect to the fold lines a - d. The direct and unambiguous disclosure of D4/T4 is therefore contrary to what is argued by the appellant.

1.4.2 D4/T4 shows in figure 2 a specific blank out of which the package shown in figure 3(b) is made. In these two figures a specific inclination angle for the top wall 3T and the corresponding inclination angles of the bend lines "e" in the side panels 2 and 4 are depicted. No other specific inclination angle is disclosed in D4/T4, as it was also acknowledged by the appellant. An inclination angle different from the one shown in figures 2 and 3(b) creates automatically a new blank and its corresponding package which is, however, not disclosed in D4/T4. According to the appellant's argument, the presence of a bend line positioned on the top wall surface 1T remote from the sealing band is created automatically. However, the Board considers this not to be the case, since to have such a bend line a pre-scored line in the blank is required, running through panels 1T, 2T (partly) and 4T (partly). Such a pre-scored line is not disclosed as such in D4/T4, as also argued by the respondent.

1.4.3 The Board considers therefore that there is no disclosure in D4/T4 of a non-sealed flat striplike auxiliary portion as required by the characterising part of claim 1.

1.5 Accordingly, the subject-matter of claim 1 is novel and meets the requirements of Article 54 EPC.

2. *Claim 1: Inventive step – Article 56 EPC*

2.1 *The teaching of D4/T4 considered alone*

2.1.1 The appellant argues that the skilled person starting from the blank and the package according to figures 2 and 3(b) of D4/T4 and being confronted with the problem of minimising the headspace of said package, would be guided by the teaching of the second sentence of paragraph 0011 of D4/T4 to decrease the inclination angle of the bend lines "e" of the side panels 2 and 4 to an inclination angle of about 0°. Following this teaching, the skilled person would neither modify the top wall surface 3T (as it had already sufficient space for the opening device) nor the width of the sealing band 3TP, but he would simply realise less inclined bend lines "e" in the side panels 2 and 4. Less inclined bend lines "e" on the side panels 2 and 4 would induce lowering of the level of the bend line "e" on the rear panel 1 and so enlarging of the top wall surface 1T. Due to the additional material in the top wall surface 1T an additional bend line would be automatically generated (or would anyway be known to the person skilled in the art) when folding the blank to build the package having a configuration similar to the one shown in figure 3(b), but with a less inclined top wall 3T. The corresponding strip on the top wall surface 3T lying between said bend line and the sealing band 3TP would then define a non-sealed flat striplike auxiliary portion according to the characterising part of claim 1. The opening device fitted to the top wall would then automatically extend over said auxiliary portion.

2.1.2 The Board cannot follow this argument for the following reasons:

2.1.3 The object of the invention disclosed in D4/T4 is the provision of a package for liquids "which can be provided with a pourer having a relatively large opening device and having excellent performance as regards disposal for environmental relief", see last sentence of paragraph 0003 of D4/T4. It can therefore be accepted that the problem as defined in the patent is already solved in D4/T4: to maximise the space for the pourer.

2.1.4 The package of claim 1 differs from D4/T4's package by the characterising features. The effect of these is, as argued by the appellant, a reduction of the headspace.

2.1.5 The Board notes, in the first place, that D4/T4 is entirely silent about the headspace or any problems associated with it. It is also not "indifferent" regarding the angle the top wall needs to make. To the contrary, it requires that relatively pronounced angle for enlarging the space available for the pourer.

2.1.6 The argument of the appellant requires technically to lower the bend line "e" in the rear panel 1. This, however, goes against the teaching in D4/T4 that the inclination of the top wall is necessary to provide sufficient space to receive the pourer, by moving the bend line "e" in the front panel 3 downward. For the Board, this already means that the skilled person, starting from D4/T4's package and method, would not even consider such a measure.

2.1.7 Secondly, it requires the provision of a further bend line in the top wall 1T and in the sides 2T and 4T (partly), for which there is no indication available in D4/T4 either.

2.1.8 For the above-mentioned reasons the Board considers that the teaching of D4/T4 considered alone cannot lead the person skilled in the art to the subject-matter of claim 1 and therefore it cannot render the subject-matter of claim 1 obvious.

2.2 *Combination of the teachings of D4/T4 and D3 (and D5)*

2.2.1 D3 discloses a symmetrical gable top package, which is lacking an opening device and which can have two different configurations:

- a gable top configuration for normal use, as shown in figure 4 and in figure 5 in dotted line; and
- a flattened top configuration for transportation, as shown in figure 5 in continuous line.

The package top is flattened only for transportation but is raised again during normal use and in particular at the moment of opening.

2.2.2 In order to obtain flattening of the gable top the packages are forced by a push plate 38 to pass through a tunnel 42 having a slanted top plate 44 converging downwards in the advancing direction of the packages (arrow 36 of figure 2); as indicated in column 3, lines 33 to 37, of D3, "at the outlet end of the tunnel, i.e. to the left as viewed in Fig. 2 the vertical distance between converging plate 44 and surface 42 is only slightly in excess of the vertical dimension of the

side container panels is 14, 18". Under these conditions, an opening device cannot be present on the package's top wall, otherwise it would not be able to pass through the tunnel 42.

- 2.2.3 Therefore, even through the additional bend line 30 of the package of D3 **could** ease downward folding of the gable top, D3 does not present the skilled person with a solution which he **would** adopt in the package and method of D4/T4, as it would require to dispense with the opening device, exactly the feature for which the package of D4/T4 needed more space on the top wall.

The Board, contrary to the appellant, also does not see any indication in D3 that the additional bend line 30 can be isolated from the other features of the package disclosed therein.

- 2.2.4 The fact that D5 documents that both a gable top package with an opening device on its top wall and a parallelepiped-shaped package having also an opening device on its top wall were well known to the person skilled in the art before the filing date of the patent in suit, has no influence on the assessment of the teaching of D3 by the Board, as the solution offered by the latter to the problem of reducing the stacking volume of a plurality of gable top packages always requires the absence of an opening device positioned on that top wall. Furthermore, D5 does not address the problem of reducing the package headspace.

- 2.2.5 For the above mentioned reasons the Board considers that the person skilled in the art would not have

combined the teachings of D4/T4 and D3 (even together with the teaching D5).

2.3 *Combination of the teachings of D4/T4 and D2*

2.3.1 The appellant argues further that the person skilled in the art starting from the package according to figure 3(b) of D4/T4 and seeking to solve the problem of reducing the headspace of said package would take into consideration the teaching derivable from the packages depicted in figures 5 and 12 of D2. Said figures show parallelepiped packages having each a non-sealed flat striplike portion on the top wall of said packages extending between the bend lines 15, 37 and the sealing bands 13, 35, whereby said portion would increase the portion of the respective top wall available for an opening device. By applying said teaching of D2 to the package according to figure 3(b) of D4/T4 the person skilled in the art would arrive at the package according to claim 1 without the exercise of an inventive activity.

2.3.2 The Board cannot follow the above-mentioned appellant's argument for the following reasons:

The Board notes firstly that D2 discloses a package without an opening device. It notes further that D2 does not address the problem of reducing the headspace of a package. Finally, the manner in which the blank is folded into a package is different from the manner in which the gable top package of D4/T4 is produced.

2.3.3 In view of the above, the Board considers that the person skilled in the art is not prompted to take into

consideration the teaching of D2 in order to solve the problem of reducing the headspace of a package according to figure 3(b) of D4/T4.

2.4 From the above the Board concludes that the subject-matter of claim 1 involves an inventive step and meets therefore the requirements of Article 56 EPC.

3. *Claim 10: Novelty and inventive step – Articles 54 and 56 EPC*

Since, as also acknowledged by the parties, the arguments concerning novelty and inventive step of the subject-matter of the product claim 1 are accordingly applicable to the subject-matter of the method claim 10, also the subject-matter of claim 10 meets the requirements of Articles 54 and 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Nachtigall

H. Meinders