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**Datasheet for the decision  
of 9 December 2008**

**Case Number:** T 1169/07 - 3.2.04

**Application Number:** 00203607.7

**Publication Number:** 1093715

**IPC:** A01J 25/16

**Language of the proceedings:** EN

**Title of invention:**

A board for supporting foodstuffs and the process for realizing the same

**Patentee:**

AZ Gomma Ricambi S.R.L., et al

**Opponent:**

CASEIPLAST S.N.C. DI CHIODETTI GIULIANA & C.

**Headword:**

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**Relevant legal provisions:**

EPC Art. 100(a), 52, 56

**Keyword:**

"Novelty - yes"  
"Closest state of the art: prior use devices presented for physical inspection at the oral proceedings before the Board"  
"Inventive step - no (main request), - yes (1st auxiliary request)"  
"Product-by-process"

**Decisions cited:**

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**Catchword:**

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Case Number: T 1169/07 - 3.2.04

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.04  
of 9 December 2008

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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
24 May 2007 concerning maintenance of European  
patent No. 1093715 in amended form.

**Composition of the Board:**

**Chairman:** M. Ceyte  
**Members:** A. de Vries  
C. Heath  
C. Scheibling  
T. Bokor

## Summary of Facts and Submissions

- I. Both the Opponent and the Proprietor lodged appeals against the interlocutory decision of the Opposition Division posted 24 May 2007 on the amended form in which the Patent No. 1 093 715 can be maintained.

The appeal of the Appellant-Opponent was received 20 July 2007 together with payment of the appeal fee. The statement setting out the grounds followed on 24 September 2007.

The Appellant-Proprietor filed his appeal on 24 July 2007 together with payment of the appeal fee. The statement setting out the grounds was received 24 September 2007.

- II. Opposition had been filed against the patent as a whole and was based, amongst others, on Article 100(a) together with Articles 52(1) and 54 EPC for lack of novelty, and together with Articles 52(1) and 56 EPC for lack of inventive step.

The Opposition Division held that the grounds for opposition mentioned in Article 100 EPC did not prejudice the maintenance of the patent as amended having regard to the following prior art in particular:

D1: DE-37 03 935

D3: GB-1 420 614

D7: EP-0 919 358

"SERVI" prior use : established in particular on the basis of testimony of a witness, Mr Leonardi, heard during opposition oral proceedings on 29 March 2007, and further evidence.

III. The Appellant-Opponent requests that the decision under appeal be set aside and the patent be revoked in its entirety. An earlier request for apportionment of costs was withdrawn at oral proceedings before the Board.

The Appellant-Proprietor requests that the decision under appeal be set aside and that the patent be maintained as granted (main request), or, in the alternative, that the patent be maintained in amended form in accordance with claims 1 and 2 of a first auxiliary request filed during oral proceedings before the Board, or on the basis of a sole claim in accordance with a second auxiliary request filed with letter of 24 September 2007.

IV. Oral proceedings were duly held before the Board on 9 December 2008. At the oral proceedings both parties presented cheese maturing boards for inspection in order to establish the actual features of the board that was the subject of the SERVI prior use.

V. The wording of claim 1 of the requests that are relevant for this decision is as follows :

**Main Request**

"A board (1) out of plastic material for supporting foodstuff, having an upper level face (2) and a lower level face (3) fitting for the use, a hollow prismatic structure hermetically sealed, featuring two lateral faces (4 and 5) and two heads (6 and 7) for a connection without solution of continuity between said upper and lower faces (2) and (3), and stiffening

ribbings (8) which connect, without solution of continuity, said upper and lower level faces (2) and (3), characterized in that at least one of said upper and lower level faces (2) and (3) comprises microgrooves adapted to reduce the suction effect and favour the air exchange below the product resting on said board, and said microgrooves have a depth of less than 1 mm."

**First Auxiliary Request**

"A board (1) out of plastic material for supporting foodstuff, having an upper level face (2) and a lower level face (3) fitting for the use, a hollow prismatic structure *made by extrusion* hermetically sealed, featuring two lateral faces (4 and 5) and two heads (6 and 7) for a connection without solution of continuity between said upper and lower faces (2) and (3), and stiffening ribbings (8) *inside said board* which connect, without solution of continuity, said upper and lower level faces (2) and (3), characterized in that at least one of said upper and lower level faces (2) and (3) comprises microgrooves adapted to reduce the suction effect and favour the air exchange below the product resting on said board, and said microgrooves have a depth of less than 1 mm, *said microgrooves being longitudinally arranged and said microgrooves being obtained by drawing said prismatic structure through a suitable negative draw-plate during the extrusion phase.*"

(Emphasis added by the Board to indicate amendments made by insertion into the wording of claim 1 of the main request)

VI. The Appellant-Opponent argued as follows:

The SERVI boards presented at the oral proceedings possessed all the features of claim 1. In particular, the wood-grain pattern corresponded to the claimed "microgrooves", while the discrete welding points along the internal ribbings on the upper and lower (inner) surfaces and joining the upper and lower faces constituted a connection "without solution of continuity" as required by the claim.

In any case, extending the ribbing from upper to lower surfaces along their entire length - if "a connection without solution of continuity" were to be so interpreted - was an obvious modification of the SERVI board in order to make the board more rigid. D1, D3 and D7 in particular taught that by extruding the board it could be made more rigid with ribbings extending from side to side. The skilled person, a plastics engineer, would as matter of obviousness consider this known alternative of extrusion to manufacture a board.

Claim 1 of the amended first auxiliary request was unobjectionable under Article 123(2). However, disregarding the added references to the manufacturing process as not limiting the product, the only other amendment concerning "longitudinal" microgrooves did not add anything over the wood-grain texture already present on the SERVI board. Longitudinal was not defined in reference to any dimension of the board, and the wood-grain pattern was also, in a broad sense, longitudinal. At any rate, such a pattern could also be produced by extrusion using common techniques. In as far as extrusion might imply parallel, straight and

continuous microgrooves along the board length, the benefits of such features were not apparent from the original disclosure and thus represented mere design.

VII. The Appellant-Proprietor argued as follows:

It was acknowledged that the boards on display were the actual subject of the SERVI prior use and did belong to the prior art. However, these boards did not have the claimed continuous ribbings as was clear from the discrete point welding. Nor did their wood-grain pattern constitute "microgrooves" in the proper sense of the word, as the grooves in the pattern were not continuous or regular.

Moreover, the skilled person, a specialist in foodstuffs, would never consider documents in such far removed fields as those of D1, D3 or D7 if he were even interested in making a stiffer board. Even if he would consider extruding the board as an alternative, the fact that he would need an additional step to produce the pattern would deter him from considering extrusion.

As regards claim 1 of the first auxiliary request, the reference to extrusion implied that the microgrooves must be parallel, straight and continuous. Their production during extrusion of the board itself represented a simplification in manufacture over the SERVI board manufacturing process.

## **Reasons for the Decision**

1. Both appeals are admissible.

2. *Background of the Invention*

The invention according to granted claim 1 relates to a plastic foodstuff supporting board with a hermetically sealed hollow prismatic structure with upper, lower and lateral faces and two heads. Internal stiffening ribs connect - "without solution of continuity" - the upper and lower faces, at least one of which has microgrooves of depth less than 1mm. These favour exchange of air below a product resting on the surface and reduce suction effects.

3. *Prior use : SERVI*

3.1 The respective boards presented by each party in relation to the SERVI prior use are found to be identical as also acknowledged by both parties.

3.2 As verified by the Board, either maturing board is hollow and is made of a light green plastics material, completely sealed on all sides. Each bears a wood-grain-like pattern in shallow relief (easily less than 1mm) on both main surfaces, oriented across the board. Cross-cut sections reveal internal ribbings across and along the board projecting from either of its inner upper and lower surfaces and facing each other across a narrow gap. At their points of intersection thicker cylindrical projections jut out beyond the upper and lower ribbings to meet and form discrete welding points (visible on the outer board surface as slightly sunk circles). A trail extending midway along the sides of the board is clearly visible and shows where material has been shaved away; similarly, injection points are



clearly present on both sides of the board, confirming the assembly from two moulded halves described in the testimony of the witness, Mr Leonardi, heard in the opposition proceedings.

- 3.3 The Appellant-Proprietor has not seriously contested availability of the above SERVI board nor does the Board see any compelling reason to conclude otherwise from the offered evidence. Therefore, the board as described above is considered to belong to the prior art.

4. *Main Request : Novelty and Inventive Step*

- 4.1 For the purposes of novelty and inventive step the Board considers the SERVI board to represent the most pertinent prior art.

- 4.2 In the discussion of novelty, the only contentious features are those of the stiffening ribbings connecting the upper and lower board faces *without solution of continuity*, and of the microgrooves.

- 4.2.1 The meaning of the "without solution of continuity" - a literal translation of "senza soluzione di continuità" appearing in the authentic Italian text, - is not clear from the claim itself, even if it is replaced by its proper translation which should be "without interruption" or "seamless". The Board must thus turn to the description and figures for a full understanding of this feature.

All embodiments feature a connection of ribbings and upper and lower faces which extends continuously the

entire length of the ribbings. It is a necessary consequence of extrusion of the board in the first embodiment (figures 1 to 6), or of the gas assisted injection moulding process described in connection with the third embodiment (figure 8; paragraphs [0056] to [0058]). In the second embodiment of figure 7, the Board infers such a connection from figure 7 where the ribbings 8 are shown as having the same height as the sides 4 of the lower half 11, in conjunction with the use of energy directors on the cap 12 described in paragraph [0042], which in addition to those "placed near its outline" (and which must hermetically seal the board) are placed "in correspondence with the ribbings". Moreover, the phrase is also used in the preceding lines of the claim to describe the connection between the upper and lower faces in relation to the heads (and possibly lateral faces), see also paragraph [0022], where it must be read in the context of the hermetically sealed hollow structure, which is possible only if the connection extends continuously along the joining edges. Finally, the phrase does not appear to have been interpreted otherwise up to this point in the proceedings; for example, in his testimony of 29 March 2007 as minuted on page 3, 8th paragraph, the witness Mr Leonardi (incorrectly) recollects the ribbings, referred to as "fuses", as being of the same width as the board (3cm; see the first paragraph) and running along its length.

The Board thus reads this feature as meaning that the connection of the ribbings to the upper and lower faces *extends continuously along the entire length of the ribbing*. This is different from the discrete point

connection observed in the SERVI board as indicated above.

4.2.2 The Board sees no distinction with respect to the SERVI board in the feature of the microgrooves. The wood-grain like grooves on the SERVI board are clearly also less than 1 mm deep, and also very fine; they clearly must serve the same purpose as claimed and are thus also so adapted as claimed. Nor does the term "microgroove" imply anything other than what is implicit in "very fine groove". That the term may have been first coined in reference to the very fine grooves on gramophone records, does not mean that a microgroove must possess all features of gramophone record grooves (such as being approximately circular for example).

4.2.3 In conclusion, the board of claim 1 differs from the SERVI board in the sole feature of the continuous connection of the ribbing to both faces along the entire length of the ribbing. The claimed board is thus novel with regard to the SERVI board.

4.3 Turning to inventive step and applying the problem-solution approach, the effect of the sole difference is seen to improve the structural integrity or rigidity of such a hollow board. The technical problem can be formulated accordingly as *how to improve the rigidity of a hollow plastics board*.

4.3.1 In the field of manufacturing plastics boards it is known, see in particular any of D1, D3 or D7, to produce by extrusion a hollow board with a complex cross-section resulting in multiple chambers separated by ribs extending along the length of the board. This

cross section is associated with increased strength or rigidity. See in D1 column 3, lines 47 to 48, figure 3 showing the extruding or drawing plate and figure 6 the resultant board cross-section; in D2 page 1, lines 58 to 87, page 2, line 10 to 11, and figure 1; and in D3 paragraphs [0001] and [0002], which also highlight the cost benefit of extrusion. Although these documents are concerned with different types of hollow plastics board to that of the invention, namely scaffolding, concrete formwork, or packaging boards, which are not suitable for use with foodstuffs, the skilled person, who is a plastics engineer designing boards for the foodstuffs industry, will be familiar with their content and the underlying concepts belonging to the wider field of plastics design. Given the task of improving the rigidity of a hollow board such as the SERVI board he will therefore as a matter of obviousness draw upon this knowledge to modify manufacture and design of existing board, where the cost benefits of such known extrusion techniques will provide a further motivation.

- 4.3.2 It may be, as argued by the Appellant-Proprietor, that the wood-grain pattern on the SERVI board is formed during moulding of the separate halves (though this could not be ascertained by inspection of the board itself). Whether this is so or not, it is clear that if the board is to be extruded a further step will be necessary to produce the desired wood-grain surface pattern. A technique which is readily available to the person skilled in the field of plastics engineering if a surface is to be textured, is printing the pattern onto the surface - either when the extruded board is still malleable immediately following extrusion or using a hot printing plate after the board has cooled

down. Rather than the need to add such a further step deterring him from extrusion, it will motivate the skilled person to consider and apply such known techniques as a matter of course to produce a wood-grain pattern as in SERVI and to so arrive at a board falling within the terms of claim 1 of the main request without inventive activity.

- 4.3.3 In conclusion the subject-matter of claim 1 as granted lacks inventive step, contrary to the requirements of Article 52(1) in combination with Article 56 EPC. This ground, mentioned under Article 100(a) EPC, prejudices maintenance of the patent as granted.

5. First Auxiliary Request

5.1 *Article 123(2) EPC*

Claim 1 of this request clarifies that the stiffening ribbings are located within the board and adds (to claim 1 as granted) the information that the prismatic structure is made by extrusion with the now longitudinally arranged microgrooves being obtained during the extrusion phase by drawing the prismatic structure through a suitable negative draw-plate. The Board finds a basis for these amendments in as filed claim 2 (ribbings inside the board) and on as filed description page 4, lines 24 to 26 or a similar passage on page 10, lines 15 to 18 (extrusion and obtaining of longitudinal microgrooves).

The Board is satisfied that the these amendments do not infringe Article 123(2) EPC; this is also not contested by the Appellant-Opponent.

5.2 *Interpretation of the amended claim*

5.2.1 Claim 1 now defines the microgrooves in terms of the manufacturing process, and consequently the board of claim 1 is in part defined in terms of its method of manufacture. Though normally such a product-by-process type definition will fail to define any clear limitation of the product itself, in this particular case it does in fact imply features of the pattern that necessarily result from so obtaining the microgrooves during extrusion. In particular, by obtaining them in this phase by drawing the prismatic structure through a suitable drawing plate, each groove must extend *continuously the full length of the board* and all grooves must be *parallel*. In this context the qualification "longitudinally arranged" in claim 1 becomes entirely clear.

5.2.2 Even if the forming of the microgrooves as indicated in the claim might include the use of a separate plate which is laterally movable with respect to the direction of drawing, the resultant pattern will still retain the above features. The Board is at pains to see how such a plate could produce a wood-grain pattern as in the SERVI board arranged *across* the board, i.e. perpendicular to what would be its drawing direction, and which moreover includes *irregular* features, such as grooves of different lengths and different directionality, with some grooves extending across the entire breadth of the board, while others double back on themselves in a sideways oriented U or V shape.

5.3 *Novelty and Inventive Step*

5.3.1 In addition to the feature of the internal structure discussed previously, the board of claim 1 differs from the SERVI board in the implicit features of the microgroove pattern as mentioned above. The SERVI board as noted before bears a different, wood-grain-like pattern of microgrooves. Nor do any of the available citations disclose microgroove pattern so obtained during extrusion. The grid-like surface texture 50 of the scaffolding board of D1, see figure 5 and column 8, lines 49 to 59, is for example produced by subsequent printing of the extruded scaffolding board, and is any case not reproducible by extrusion due to the crossing grooves. The board of this claim is thus novel over all cited prior art.

5.3.2 This further difference is linked closely to the benefits associated with the method of manufacture of the board by extrusion. By obtaining the microgrooves *during* extrusion of the board main body (the prismatic structure including the surface texture) it can be formed in a single, simple extrusion step, which retains all the benefits over moulding as in SERVI - rationalized continuous production, complex cross-sections with improved rigidity - without having to introduce an additional surface texturizing step. Such a simplified manufacturing procedure requires concomitant adaptations of the design of the board's main body. The overall technical problem addressed by this difference and that of the internal structure - bearing in mind that the latter is already linked to extrusion by the improved rigidities realizable thereby - can be formulated accordingly as *how to adapt the*

*board main body design so that it can be produced in a single step by extrusion with the desired improved rigidity.*

The above problem and underlying effects are not expressly mentioned in the application as filed, which fails to acknowledge the SERVI prior use board. However, in the Board's view, the relationship between the SERVI board and the invention as claimed will be sufficiently clear to the skilled person using his knowledge of plastics engineering and design. In the light of the SERVI board therefore, the above problems and effects will be apparent to him in accordance with Rule 42(c) EPC.

- 5.3.3 None of the prior art cited by the Appellant-Opponent suggests the particular feature of modifying the surface pattern of the microgrooves in the manner claimed as noted above. In the field of foodstuffs plastic boards in particular there is no indication that microgrooves have been arranged in anything other than wood-grain like patterns, where they are intended to replicate the surface pattern and properties of wooden planks previously used in the foodstuffs industry and replaced for reasons of hygiene (see paragraphs [0004], [0005] and [0008] of the patent specification, cf. testimony of Mr Leonardi, page 2, 4th and 5th paragraphs). In this regard wood-grain patterns would appear to have been the norm. The idea to depart from this norm is a significant step in this field, and in the Board's view is inspired by an inventive insight that it makes a simplified extrusion possible.



Incidentally, the implied pattern of the grooves can also be associated with a more homogenous air exchange and suction over the length of the board as well as improved cleaning with respect to the irregular wood grain pattern of the SERVI board. These important board qualities are mentioned in patent specification paragraphs [003] and [0031].

For the above reasons the Board concludes that the subject-matter of claim 1 as amended according to the first auxiliary request involves an inventive step as required by Article 52(1) together with Article 56 EPC.

- 5.3.4 As noted above the novel features of the board and of its method of manufacture are closely linked and can, in this particular case, not be seen in separation. The claimed microgroove pattern is not merely an incidental otherwise meaningless consequence of a changed manufacturing process (as is often the case in chemical applications), but represents a purposive modification of the product that allows the process to be changed in an advantageous manner. The Board emphasizes that novelty of a manufacturing process does not automatically entail novelty of a product, and novelty of product and process must be assessed independently and separately. Similarly, an inventive process does not necessarily produce an inventive product, even if novel. However, as this case demonstrates, assessment of inventive step of the product may require a consideration of the relationship between the product's novel features and those of the process, and inventive step of the one can therefore not always be seen in strict isolation of that of the other.

5.4 As the amendments made to the description in consequence of the amendments to the claims are clearly unobjectionable, the Board concludes that the patent as amended according to the first auxiliary request meets the requirements of the Convention.

## Order

### **For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with order to maintain the patent as amended in the following version:

Description: Columns 1 to 8 as filed during the oral proceedings of 29 March 2007

Claims: No.: 1, 2 according to the first auxiliary request filed during the oral proceedings of 9 December 2008

Figures: No.: 1 to 8 of the patent specification

The Registrar

The Chairman

G. Magouliotis

M. Ceyte