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D E C I S I O N
of 9 February 2001

Case Number: T 0797/99 - 3.2.4

Application Number: 93901268.8

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Language of the proceedings: EN

Title of invention:
Cellulose food casing, method and apparatus

Patentee:
VISKASE CORPORATION

Opponent:
Devro-Teepak, Inc.
Wolff Walsrode AG
Kalle Nalo GmbH & Co. KG

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:
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Catchword:
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Case Number: T 0797/99 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 9 February 2001

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 25 June 1999 rejecting the oppositions filed against European patent No. 0 577 790 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: C. A. J. Andries
Members: R. E. Gryc
C. Holtz

Summary of Facts and Submissions

I. The appellants (opponents I and III) lodged appeals (received at the EPO respectively on 12 and 30 August 1999) against the decision of the Opposition Division, dispatched on 25 June 1999, rejecting the oppositions against the European patent EP-B-0 577 790.

The appeal fees were paid simultaneously and the statements setting out the grounds of appeal were received at the EPO respectively on 25 (opponent I) and 23 (opponent III) October 1999.

II. The appellants and the party as of right (opponent II) filed oppositions against the patent as a whole on the ground of lack of novelty and inventive step (Article 100(a) EPC) of the subject-matter of the independent claims 1, 16 and 27.

Mainly the following prior art documents were cited:

F1: EP-A-0 006 601

F2: "New Materials from Cellulose ...", A. Peguy, National Center for Scientific Research, publ. 1989, Elsevier Appl. Sci., Paperchem NO: 61-03487

F3: US-A-4 246 221

F6: US-A-3 158 492

F7: DD-A-218 121

F8: US-A-2 176 925

F10: CA-A-1 171 615

F11: US-A-4 196 282

F13: US-A-1 163 740

F14: US-A-3 508 941

F15: US-A-4 416 698

During the proceedings, the following documents were also cited:

F16: Book "Sausage casing technology", E. Karmas, Noyes Data Corporation, London 1974, pages 150 to 155 and 166, 167, 178 and 179.

F17: Book "Wursthüllen - Kunstdarm", G. Effenberger, Holzmann Buchverlag, 2. Auflage 1991, pages 21 and 22.

The Opposition Division held that the grounds for opposition did not prejudice the maintenance of the patent unamended and rejected the oppositions.

III. In his statement of the grounds of appeal, appellant I (opponent I) contended that the concept of producing food casings by the NMMO process was a matter of common general knowledge and that the use of a water soluble softener to avoid embrittlement of the casing was accepted practice in the art recited in F16 and also was acknowledged in the description of the background of the invention in the patent in suit.

It was appellant I's contention that based on either

F10 or F14 alone and in the light of the common general knowledge of the skilled person claim 27 was not patentable.

More generally, appellant I was of the opinion that the prior art documents (in particular F15) should be considered in the light of the knowledge of the skilled person, since they clearly disclosed a method and apparatus for the production of cellulose extruded articles using the NMMO process so that at least independent method claim 1 of the patent in suit was not patentable.

In his statement of the grounds of appeal, appellant II (opponent III) acknowledged novelty of the independent claims of the patent in suit. He contended that the closest state of the art was the fabrication of cellulose food casings by the N-Methyl-Morpholine-N-Oxide (NMMO) process described in F14 or F15. According to him, these documents disclosed the production of seamless tubings as sausage casings containing a water soluble softener according to a well known common practice as described in F8 or F10. In his opinion, a combination of the teachings of F14 and either F8 or F10 would lead the skilled person to the subject-matter of Claim 27.

Appellant II contended also that method Claim 1 lacked inventive step in view of a combination of the teachings of F13 and F14 or F11.

As regards apparatus Claim 16, appellant II was of the opinion that the main features of said claim were disclosed by F13 in combination with F6 and that, therefore, neither the subject-matter of claim 1 or 27,

nor the subject-matter of Claim 16 was patentable.

IV. Oral proceedings took place on 9 February 2001.

The party as of right (Opponent II), although duly summoned, was not present. He had informed the Board with letter dated 5 February 2001 that he would not attend the oral proceedings. In accordance with the provisions of Rule 71(2) EPC the proceedings were continued without that party.

The respondent (patentee) filed three new auxiliary requests numbered 2, 4 and 5 with the auxiliary requests A and B filed on 5 January 2001 being renumbered respectively 1 and 3.

As regards Claims 1 and 16, the respondent explained that, according to the invention, the outside of the vertically moving extruded tubing must contact air in an air gap before, during its vertical movement, it enters into a bath and that the phrase: "downwardly from the orifice .... and then into the bath" (see the specification: page 11, lines 3 and 4 and page 12, lines 16 to 19) should be interpreted as follows: "the tube is extruded vertically, so that during its vertical movement, the tube first moves through an airspace (gap) before entering directly into the bath of nonsolvent liquid positioned right under the extrusion nozzle".

Appellant I having objected that Claim 27 was not new, the patentee drew the attention of the Board to the fact that, in the proceedings before the first instance, this novelty objection was filed late and not upheld. The patentee requested, therefore, that the

case be transferred back to the first instance, if the Board were to agree to this novelty objection, since it had not been examined by the first instance.

As regards inventive step, appellant I contended that, at the priority date, the skilled person had many good reasons, for example curiosity or economical reasons, for trying the new NMMO process in place of the usual "viscose process". He considered that F13 disclosed the state of the art closest to the method of Claim 1 and that the only difference between said state of the art and the method of Claim 1 was the material used, which was only a matter of choice for the skilled person, who gained the benefit of having a sulfur free final product by using the NMMO process.

Appellant II was of the opinion that the nature of the cellulose (I or II) used as a starting product did not play any role in the end product and that to manufacture seamless tubes by extrusion was well known in the art at the priority date, for example through the teaching of F8 ("sausage casings"), F15 ("tubing") or F17.

He contended also that F8 would give the skilled person most of the technical instructions for carrying out the invention and that F15 would provide the missing instructions relative to the use of nonderivatized cellulose so that a combination of the teachings of F8 and F15 would automatically lead the skilled person to an article as claimed in Claim 27 of the patent in suit.

According to appellant II, the indication in F13 that, in the manufacture of sausage casings, viscose could be

replaced by other materials such as gelatine (see F13, page 3, lines 55 to 63) opened the door to using any other appropriate product for manufacturing tubings, in particular, nonderivatized cellulose as suggested by F15.

Appellant I raised no objection against Claim 16 whereas appellant II considered that F13 represented the closest state of the art and that the main features of Claim 16 were neither novel nor inventive in comparison with said disclosure.

The respondent pointed out that most of the main features of the independent claims of the opposed patent could not be found in the cited documents so that any combination of teachings made by the appellants was in fact the result of an unallowable ex-post-facto analysis, taking the knowledge of the patent in suit into account.

V. At the end of the oral proceedings, the appellants (opponents I and III) requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patentee) requested that the appeals be dismissed, alternatively that the decision under appeal be set aside and that the patent be maintained on the basis of either of auxiliary request A filed on 5 January 2001, the second auxiliary request filed in the oral proceedings, the third auxiliary request consisting of claims 1 to 26 as granted, or the fourth or fifth auxiliary requests filed in the oral proceedings.

VI. Independent claims 1, 16 and 27 as granted (respondent's main request) read as follows:

Claim 1:

"A method of forming a seamless cellulosic tube of nonderivatized cellulose suitable for use as a food casing, the method comprising the steps of:

(a) providing a solution comprising nonderivatized cellulose dissolved in an amine oxide solvent;

(b) downwardly extruding the solution from an annular orifice to form a seamless tube;

(c) passing the extruded seamless tube of solution downwardly from the orifice first through an air gap and then into a bath of nonsolvent liquid;

(d) causing a stream of nonsolvent liquid to flow downwardly co-currently with the inner surface of the downwardly moving extruded seamless tube of solution as the tube moves through the air gap and contacting the inner surface of the solution in the course of the concurrent flow;

(e) maintaining the extruded seamless tube of solution in the bath with its inner and outer surfaces in direct contact with the nonsolvent liquid thereby precipitating the nonderivatized cellulose from the solution and forming a nonderivatized cellulose tube; and

(f) removing the nonderivatized cellulose tube from the bath and contacting it with a water soluble

softener."

Claim 16:

"Apparatus for forming from a solution of nonderivatized cellulose and an amine oxide solvent a seamless cellulosic tube of nonderivatized cellulose suitable for use as a food casing, the apparatus comprising:

(a) a bath (24; 82) of nonsolvent liquid for precipitating nonderivatized cellulose from the solution;

(b) an extrusion nozzle (18; 40-48) disposed above the level (56) of liquid in the bath and having an annular extrusion outlet (38; 44) arranged to downwardly extrude a seamless tube (22; 78) of the solution into the bath, the annular extrusion outlet being located above the level of liquid in the bath so as to define an air gap therebetween;

(c) a hollow mandrel (32; 52) depending from the extrusion nozzle and having an upper portion encircled by the annular extrusion outlet such that a said seamless tube extruded from the nozzle surrounds the mandrel which has upper and lower portions;

(d) the mandrel upper portion having a diameter smaller than the annular extrusion outlet (38; 44) such that the outer surface (58) of the mandrel upper portion and the inner surface of a said tube extruded from the annular outlet define an annular space therebetween, and the mandrel upper portion

outer surface having at least one port (80) opening into the annular space;

(e) the mandrel lower portion (54) having a larger diameter than the mandrel upper portion;

(f) a first conduit (74, 70) extending into the mandrel for conducting nonsolvent liquid (84) to the port(s) (80), whereby nonsolvent liquid issuing from the port(s) (80) can flow downwardly co-currently with the inner surface of the extruded tube; and

(g) a second conduit (60) extending through the mandrel and communicating with an inlet in the mandrel lower portion, the inlet opening into the bath for removal of nonsolvent liquid (86) from within the extruded tube."

Claim 27:

"A cellulosic food casing article comprising a seamless extruded tubular film of nonderivatized cellulose precipitated from an amine oxide cellulose solution in a nonsolvent liquid, the article containing a water soluble softener."

Reasons for the Decision

1. Admissibility of the appeal.

The appeal is admissible.

2. *Main request (Claims 1, 16 and 27 as granted)*

2.1 Interpretation of the wording of claims 1 and 16

In view of the patent description and the drawings (see respectively page 5, lines 1 and 2; page 8, lines 15, 22 to 23 and 28 to 29 and Figures 1 and 3) and in accordance with the respondent's explanations given during the oral proceedings, the following features of claims 1 and 16:

"passing the extruded seamless tube of solution downwardly.... into a bath" (see the specification, page 11, lines 3 and 4) and "arranged to downwardly extrude a seamless tube (22; 78) of the solution into the bath" (see page 12, line 17),

should be interpreted as meaning that the annular extrusion outlet is so positioned above the level of the precipitating bath that the extruded tube passes vertically from said outlet first through an air gap and then directly down into the bath.

2.2 Novelty (Article 54 EPC)

Lack of novelty of the subject-matter of either of the independent claims of the patent in suit was not a ground for opposition during the opposition proceedings. Although appellant I later filed a novelty objection against Claim 27, he did not uphold this objection during the oral proceedings before the opposition division so that novelty of the granted claims was not examined by this instance.

Moreover, lack of novelty was objected in neither of the statements of grounds of appeal of the appellants.

Therefore, the Board considers that a novelty objection cannot, without the approval of the patentee, be reintroduced at this late stage, i.e. in the oral proceedings before the Board and that the subject-matter of the granted claims therefore must be considered new in the meaning of Article 54 EPC.

2.3 Closest state of the art

2.3.1 Product Claim 27:

The Board considers that the state of the art closest to the cellulosic food casing article claimed in Claim 27 is disclosed in F8 since this document refers to the same technical field as the invention (see for example F8: page 1, lines 1 to 14) and relates to the same type of article (i.e. food casing - see page 1, lines 35 to 44 and page 2, lines 4 to 7) in the form of seamless tubings softened with a water soluble softener (see F8: page 6, lines 9 to 12).

However, the article claimed in Claim 27 differs in that the tube is not extruded from a cellulose derivative as the tubings of F8 but from a nonderivatized cellulose and that its cellulose is precipitated from an amine oxide cellulose solution in a nonsolvent liquid.

F10, disclosing a dialysis membrane of cellulose, as well as a method for producing such a dialysis membrane, cannot be considered as a serious starting point to asses inventive step, since such a document would guide a person skilled in the art without knowing the invention to a further developed or

modified dialysis membrane (be it in the form of a tubular foil), instead of to a food casing article, which has to withstand other forces.

The same applies to F15 ad F14. Although it is true that F15 (as well as F3) mentions only once the term "tubing" (in the abstract) there is in the whole document i.e. description, claims and Figures, not a single indication that its claimed shaped cellulose article could be used as a food casing, on the contrary what is intended is to form either a film or a filament to be used in articles having properties similar to those of corresponding cotton articles. To start from such a document, then to arrive at a food casing, would rather be the result of an ex-post-facto analysis. Also F14, requiring (see the claims) the manufacture of a compound of at least two different natural or synthetic polymeric compounds, could never lead a person skilled in the art - not knowing the invention - in an obvious manner to the claimed subject-matter.

2.3.2 Method Claim 1:

The Board considers that the state of the art closest to the method of Claim 1 is disclosed in F13 since this document refers to a process for making seamless cellulosic tubes suitable for use as casings for sausages (see for example F13: Figure 8; page 1, lines 13 to 22) and teaches the following process steps (see for example F13: Figure 8; page 1, lines 31 to 49 and from page 3, line 25 to page 4, line 46):

- extruding downwardly a plastic material from an

annular orifice to form a seamless tube (page 3: lines 25 to 50);

- causing a stream of nonsolvent liquid to flow downwardly co-currently with the inner surface of the downwardly moving extruded seamless tube and contacting the inner surface in the course of the co-current flow (page 3: lines 74 to 77 and 99 to 101);

- passing the extruded seamless tube into a bath of nonsolvent liquid and maintaining it in the bath with its inner and outer surfaces in direct contact with the nonsolvent liquid (page 3: lines 109 to 119 and page 2, lines 88 to 95); and

- removing the cellulosic tube from the bath and contacting it with a water soluble softener (page 4: lines 40 to 46).

The method of Claim 1 differs from the process of F13:

- in that the extruded tube is not made from a cellulose derivative as in F13 (see for example F13: page 1, lines 21 and 50 or page 3, lines 27, 55, and 83 or process-claims 10, 11 and 12 to 19) but from a solution of nonderivatized cellulose dissolved in an amine oxide solvent,

- in that the extruded tube is vertically passed from the orifice first through an air gap and then directly (see the interpretation of Claims 1 and 16 - section 2.1. above) into the bath of nonsolvent liquid and

- in that the nonderivatized cellulose is precipitated from the solution in order to form a nonderivatized cellulose tube.

2.3.3 Apparatus Claim 16:

Again the Board considers that the state of the art closest to the apparatus of Claim 16 is disclosed in F13 since this document refers to an apparatus for forming seamless cellulosic tubes suitable for use as casings for sausages (see F13: page 1, lines 13 to 22), said apparatus comprising (see for example F13: page 2, lines 43 to 107 and Figures 4, 8 and 9) several components similar to the components of the apparatus claimed in Claim 16 such as a bath of nonsolvent liquid, an extrusion nozzle having an annular extrusion outlet arranged to downwardly extrude a seamless tube and a hollow mandrel having an upper portion encircled by the annular extrusion outlet, a lower portion having a larger diameter than the upper portion and a conduit extending through the mandrel and communicating with an inlet in the mandrel lower portion.

The apparatus of Claim 16 differs from said apparatus of F13 in that:

- it is used for forming a tube of nonderivatized cellulose from a solution of nonderivatized cellulose and an amine oxide solvent (implying different operating temperatures);

- the nonsolvent liquid of its bath is for precipitating nonderivatized cellulose from the solution (this is however not a constructional

feature of the claimed apparatus - as such);

- the extrusion outlet of its extrusion nozzle is arranged in such a manner with respect to the bath, that it is possible to downwardly extrude the tube **directly** vertically into the bath (see the interpretation of the claims - section 2.1. above);

- the outer surface of the upper portion of its mandrel has at least one port opening into the annular space between the upper portion of the mandrel and the extruded tube;

- its mandrel comprises an inner conduit for conducting nonsolvent liquid to said port(s), whereby nonsolvent liquid issuing from the port(s) can flow downwardly co-currently with the inner surface of the extruded tube (implying a specific connection with a reservoir of nonsolvent liquid); and

- the conduit which extends through the mandrel and communicates with an inlet in the mandrel lower portion as according to F13 opens into the bath of nonsolvent liquid for removal of said liquid from within the tube (see Figure 3).

2.4 Problems and solutions

When taking into account the aforementioned differences with the closest states of the art (see sections 2.3.1, 2.3.2, and 2.3.3), the problems appear to be to provide an improved alternative to the usual food casing, to the usual process, known as

"viscose process" and to the apparatuses for manufacturing tubular cellulose food casings (see the patent in suit: from page 2, line 10 to page 3, line 8).

The Board is satisfied that the solutions proposed in Claims 1, 16 and 27 do solve the problems.

2.5 Inventive step (Article 56 EPC)

2.5.1 Product Claim 27:

2.5.1.1 The question to be answered is whether the skilled person, starting from the food casing article of F8 made of derivatized cellulose according to the "viscose process" and willing to provide an improved alternative to said known article, would find in the documents cited during the proceedings either some teaching or at least some hints which could lead him to a casing according to Claim 27.

2.5.1.2 Among all the documents cited during the proceedings, those documents which relate to the same technical field as the invention (i.e. making cellulose food casings: F1, F6, F8, F13, F14, F16 and F17) do not disclose or suggest a food casing comprising a tubular film of nonderivatized cellulose precipitated from an amine oxide cellulose solution in a nonsolvent liquid.

Since, apart from F14, all the other documents mentioned above teach to make sausage casings from cellulose derivatives regenerated from viscose solutions, the skilled person starting from F8 would not be inclined to abandon the "viscose process" of

F8, which was commonly used in said other disclosures concerning food casings, so that he would not be guided in an obvious manner towards the claimed product.

Moreover, the sole document (F14) which relates to the NMMO process for making food casings teaches to dissolve at least two different polymers in an amine oxide (see for example F14: column 1, lines 29 and 70, column 2, lines 47 to 53 and claim 1). The new composed polymer resulting from this process provides some unexpected new properties, although retaining some properties of the individual constituent polymers (see column 1, lines 55 to 57). The skilled person starting from F8, taking into account the process of F14, would however not be guided to the claimed product, since the process of F14 does not need only cellulose, but also additional polymers.

2.5.1.3 Since all the other cited documents i.e. F2, F3, F7, F10, F11 and F15, teach the use of the NMMO process mainly for manufacturing fibres, films, membranes or sponges, the skilled person willing to improve the way of making food casings as disclosed in F8 would have no reason to consult these documents. And even if he would do it, since F10 also discloses a membrane in the form of a tubular foil and since F3 and F15 both disclose to form a tubing, albeit solely in the abstract on their front page, the skilled person would neither get any hint to use a film of nonderivatized cellulose in place of the regenerated cellulose film of F8, nor a hint suggesting the appropriateness of the tubular foil or the tubing for a food casing and he could thus not be led to the subject-matter of Claim 27 even by combining the

teachings of all the cited disclosures.

This conclusion is furthermore supported by the fact that F16 and particularly F17 (1991), although describing the sausage casing technology, apparently do not develop the NMMO process any further.

2.5.2 Method Claim 1:

As already stated (see sections 2.5.1.2 and 2.5.1.3 above), apart from F14 which teaches the use of solutions of at least two polymers, none of the documents referring to the so called "NMMO process" and to nonderivatized cellulose (i.e. F2, F3, F7, F10, F11 and F15) is concerned with food casings but with fibres, yarns, filaments or dialysis membranes (be it in the form of a tubular foil) whereas all the documents concerning food casings (i.e. F1, F6, F8, F13, F16 and F17) relate to the so called "viscose process" and to derivatized cellulose or cellulose regenerated from viscose. Therefore, the idea of starting from a solution of nonderivatized cellulose dissolved in an amine oxide solvent for making food casings is neither disclosed nor even suggested in the state of the art and there is no reason why, without any further hint, the skilled person starting from F13 should abandon and replace the commonly used "viscose process" by the NMMO process, particularly since F17, published just before the priority date of the patent in suit, does not disclose the slightest hint in that direction. Even the indication in F13 that gelatine could be used as a starting material cannot lead in an obvious way to the NMMO process, since there is no link between the use of gelatine on the one hand and the NMMO process on the other.

As regards F14, the skilled person would not be inclined to replace the cellulose derivative of F13 by the polymer compositions of F14 comprising at least two polymers dissolved together in a common solvent and, even if he would combine the teachings of these two documents, he could not arrive at the invention using a solution comprising solely non derivatized cellulose dissolved in an amine oxide solvent.

Also, since F13 teaches explicitly (see the claims) to issue a hardening fluid as an annular curtain directed against the wall of the tube of extruded material issuing from the die (see F13: process-claims 10 to 13; page 2, lines 60 to 76; page 3, lines 64 to 67 and Figure 4) and to transport the tube on a belt conveyor from the die outlet to a tank, the skilled person starting from F13 would have a priori no reason for passing the extruded tube vertically from the die orifice first through an air gap and then directly into a bath of nonsolvent liquid as according to the invention (see step (c) of Claim 1).

The subject-matter of claim 1 therefore involves an inventive step.

2.5.3 Apparatus Claim 16:

For assessing inventive step, the questions to be answered is whether starting from the apparatus of F13 and in view of the state of the art, the skilled person, would:

(a) use the known apparatus for forming a tube from

a solution of nonderivatized cellulose and an amine oxide solvent, (which implies operating at a specific temperature)

(b) suppress the travelling belt carrying the extruded tube along into the bath and arrange the extrusion outlet of the nozzle to downwardly extrude the tube **directly** into the bath of nonsolvent liquid (see section 2.1. above), and

whether he would:

(c) provide the upper portion of the mandrel with at least one port and an inner conduit for conducting nonsolvent liquid to the annular space between said upper portion and the extruded tube and

(d) use the conduit extending through the mandrel of F13 for removal of the nonsolvent liquid from within the tube.

Starting from the state of the art disclosed by F13, the skilled person would learn from said document that the apparatus must be adapted to the nature of the material from which the tubes are being made (see F13: page 3, lines 17 to 25 and lines 55 to 63). However since all the apparatuses of the state of the art concerned with producing food casings (i.e. F6 and F8) are all used for shaping tubings from viscose, cellulose derivatives or regenerated cellulose and none from a solution of nonderivatized cellulose, the skilled person would not get any incentive to use the device of F13 for shaping tubing from such a solution. Moreover, since neither F6 nor

F8 would give him an indication about the way of adapting the device of F13 to such a specific use, it is not clear which features of F6 or F8 could be taken into account.

Furthermore, since F13 teaches to carry the extruded tube along a continuously moving trough-shaped belt (Figure 8) partially filled by the coagulant flowing down the outside of the tube until it has had sufficient exposure to the coagulant (see F13: page 3, lines 106 to 113), a priori, the skilled person would have no reason to suppress said moving trough-shaped belt and for arranging the extrusion nozzle to solely vertically, extrude the tube **directly** downwardly into the bath of nonsolvent liquid. Also, the provision of an inner conduit inside the mandrel for conducting nonsolvent liquid to the annular space between the mandrel and the extruded tube would not be self evident to the skilled person in view of the state of the art since the extrusion head of F6 does not even suggest the use of a mandrel and F8 does not suggest to let a nonsolvent liquid flow downwardly inside the annular space between the mandrel and the extruded tube. A combination of these two features could only be the result of an ex-post facto analysis.

Since moreover, the conduit extending through the mandrel 62 of the apparatus according to F13 (see Figure 9) serves to introduce air into the extruded tube, a priori, the skilled person also would have no reason for interrupting distending the tube and for using said air conduit for removal of the nonsolvent liquid from within the tube. Also such a modification could only be the result of an ex-post-facto

analysis.

2.6 Conclusion:

For the abovementioned reasons, the Board considers that to modify the food casing article of F8 and the method and apparatus of F13 in order to arrive at the subject-matter described respectively in Claim 27, Claim 1 and Claim 16 as granted does not follow plainly and logically from the closest state of the art disclosed in the documents cited during the proceedings and thus implies an inventive step within the meaning of Article 56 EPC.

Therefore the invention as described and claimed in the European patent under appeal meets the requirements of the EPC and the patent can be maintained as granted.

3. *Respondent's auxiliary requests*

Since the board has acknowledged the main request as allowable, there is no need to consider the respondent's auxiliary requests.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar: The Chairman:

G. Magouliotis C. Andries