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**Datasheet for the decision
of 14 November 2019**

Case Number: T 2199/18 - 3.2.07

Application Number: 12753784.3

Publication Number: 2731884

IPC: B65D25/16, B31B7/00

Language of the proceedings: EN

Title of invention:

CONTAINER AND METHOD FOR MAKING THE SAME

Applicant:

Frugalpac Limited

Headword:

Relevant legal provisions:

EPC Art. 56, 123(2), 115

EPC R. 114, 103(1) (a)

Keyword:

Inventive step - after amendment

Amendments of application

Amendments - allowable (yes)

Reimbursement of appeal fee - (no) no substantiation

Decisions cited:

Catchword:



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Case Number: T 2199/18 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 14 November 2019

Appellant: Frugalpac Limited
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 15 March 2018
refusing European patent application No.
12753784.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman I. Beckedorf
Members: V. Bevilacqua
A. Pieracci

Summary of Facts and Submissions

I. The applicant (appellant) lodged an appeal against the decision of the examining division to refuse European patent application No. 12 753 784.3.

II. The following prior art was cited during examination:

D1: WO 99/50153;
D2: US 2542413;
D3: EP 2 314 518 A1;
D4: US 3085375;
D5: US 2685385
D6: US 4282984;
D7: US 5507409;
D7b: US 2008/0264937;
D8: DE 20306120 U1;
D9: US 4982872;
D10: US 408515.

III. The appellant requested

that the decision under appeal be set aside and that a patent be granted on the basis of one of the requests filed as new main request and as new first auxiliary request with letter dated 18 June 2019 and the amended description submitted therewith.

Oral proceedings were requested in the event that the Board intended to refuse the main request.

The request for reimbursement of the appeal fee submitted with the statement setting out the grounds of appeal was not mentioned in the letter dated

18 June 2019.

IV. The Board received by letters dated 4 April 2019 and 8 October 2019 observations by a third party in accordance with Article 115 EPC of which the former contained references to three patent documents (GB 954 345 (D11), US 4211339 (D12), GB 1 602 615 (D13)) and one Wikipedia article on plastics (D14). The third party observations were directed to an alleged lack of inventive step of the claimed subject-matter in view of the teaching of either document D9 or D3 chosen as closest prior art.

V. Independent **claim 1 of the new main request** reads as follows (amendments over claim 1 as originally filed, which did not contain reference signs, are highlighted by the Board):

"A method of making a ~~container~~ **cup for a beverage** (30) having a separable inner lining (34) and outer shell (32), the method comprising the steps of:

- forming an outer shell (32) of ~~the container~~ **said cup**, the shell being ~~made from a paperboard or plastics material~~ **a paper cup (36) made from a non-laminated or uncoated paperboard material, the shell being substantially conical or frustoconical, and the shell including a wall (38), a base (40) and a rolled rim (42);**

- pre-forming a flexible lining (34) from a thin sheet of ~~barrier polymeric~~ **barrier** material, **the sheet being bonded along at least one edge to form a bag having an open end**, at least a part of the lining (34) conforming to a complete internal shape of the shell (32);

- **applying an adhesive to an internal surface of the shell;**

- inserting the pre-formed lining (34) into the shell (32) so that a first part of the lining is within the shell and a second part of the lining **being an upper region (62) proximate the open end of the bag** protrudes from an opening (43) of the shell;

- adhering the first part of the lining (34) to ~~an~~ **the** internal surface of the shell (32) **by means of the adhesive;** and

- conforming the second part of the lining (34) to an external surface (84) **of an upper region (88)** of the shell (32) **proximate the rolled rim (42) by folding the second part of the lining over the rolled rim (42) such that the second part of the lining (34) is adjacent the external surface (86) of the upper region (88) of the shell (32) around the opening (43) and heating the second part of the lining such that the second part of the lining shrinks around the outside of the shell and the lining conforms to the rolled rim (42) and the upper region (88) of the shell,** wherein the adhesion between the **first part of the** lining (34) and the internal surface of the shell (32) is such that the **first part of the** lining (34) can subsequently be peeled away from the shell (32) ~~so that the lining remains intact and no lining remains on the shell, to fully separate the inner lining and the outer shell of the container."~~

Independent **claim 10 of the new main request** reads as follows (the feature numbering is the one used by the appellant, the amendments over originally filed claim 22 are highlighted by the Board):

10.A - "A ~~container~~**cup for a beverage (30)** having a separable inner lining and outer shell, wherein the ~~container~~**cup** comprises:

- 10.B - an outer shell (32) **being a paper cup (36)** made from a **non-laminated or uncoated** paperboard ~~or plastics~~ material,
- 10.C - **the shell being substantially conical or frustoconical**
- 10.D - **and having a wall (38), a base (50), and a rolled rim (42); and**
- 10.E - an inner lining (34), the lining comprising a pre-formed flexible lining of a thin sheet of ~~barrier~~ **polymeric** material,
- 10.F - **the pre-formed lining being in the form of a bag including at least one seam and having an open end,**
- 10.G - a first part of the lining (34) conforming to a complete internal shape of the shell (32)
- 10.H - and being adhered to an internal surface of the shell by a layer of adhesive,
- 10.I - and a second part of the lining (34) being **an upper region (62) proximate the open end of the bag being in contact with an external surface (86) of an upper region (88) of the shell (32) proximate the rolled rim (42)**
- 10.J - **and being heat shrunk around the external surface of the shell such that the lining conforms to the rolled rim (42) and the upper region (88) of the shell (32),**
- 10.K - wherein the adhesive adhering the first part of the lining (34) to the internal surface of the shell (32) is such that **the first part of the lining (34) is peelable from the shell**
~~such that the inner lining and outer shell of the container are fully separated."~~

VI. According to the impugned decision, the subject-matter of independent product claim 10 of the then first auxiliary request, corresponding to claim 10 of the present main request, was not allowable because of a lack of inventive step over the combination of the teachings of document D9 (taken as the starting point),

with either D4 or D6 (teaching feature 10,J- heat shrinking), and then with one of D1, D2, D7 or D8 (teaching feature 10.K- peelable adhesive) and the knowledge of a skilled person or one of D1 and D6 (teaching that the shell has a base -feature 10.D).

The appealed decision also contains an *obiter dictum* stating that claim 1 of the then first auxiliary request, corresponding to claim 1 of the present main request also lacked inventive step for the same reasons already discussed for claim 10.

VII. The appellant argues substantially as follows:

D9 did not relate to disposable beverage cups, and the cup-shaped container disclosed therein was therefore not an appropriate starting point to discuss inventive step of claims 1 and 10 of the main request.

D7b was instead to be considered as the most promising springboard to discuss inventive step. This document failed to disclose only features 10.F and 10.J of claim 10.

The above identified distinguishing features achieved in combination an effective connection between frame and lid in the upper region, without changing the shape of the rim and therefore without compromising drinking comfort.

None of the available documents taught that this result was achieved when the pre-formed lining was in the form of a bag including at least one seam and having an open end, and the upper portion thereof (second part of the lining) was heat shrunk around the external surface of

the shell such that the lining conforms to the rolled rim and the upper region of the shell.

Claim 1 of the main request, being directed towards a method of making a cup for a beverage having all of the features of claim 10, also comprised features 10.F and 10.J, and therefore also involved an inventive step.

Reasons for the Decision

1. Amendments

- 1.1 The amendments done to independent claims 1 and 10 are supported by the content of the originally filed documents.

The passage at page 15, lines 2-24, provides support for claiming that the container is a cup for a beverage, and that the shell is a paper cup made from a non-laminated or uncoated paperboard material, the shell being substantially conical or frustoconical, including a wall, a base and a rolled rim.

The feature that the sheet forming the liner is of polymeric material and bonded along at least one edge to form a bag having an open end is to be found in original claims 7 and 8.

The passage at page 6, lines 9-11, discloses the steps of applying an adhesive to an internal surface of the shell and adhering the first part of the lining to the internal surface of the shell by means of the adhesive.

That the second part of the lining is an upper region proximate the open end of the bag, proximate the rolled rim, which is folded over the rolled rim such that the second part of the lining is adjacent the external surface of the upper region of the shell around the opening and heating the second part of the lining such that the second part of the lining shrinks around the outside of the shell and the lining conforms to the rolled rim and the upper region of the shell is disclosed a page 22, lines 9-25.

The passage at page 4, lines 17-23, explains that the feature which has been removed with respect to originally filed claim 1, namely the full separation of the inner lining and the outer shell of the container, with the lining remaining intact (no lining remains on the shell) is not essential.

- 1.2 The amendments done to the dependent claims are also supported by the content of the originally filed documents.

Claim 2 is based on original claim 30.

Claim 4 and 13 are based on the passage going from page 23 line 31 to page 24 line 6 (see also original claims 31 and 6).

Claim 9 and claim 11 are based on the passage art page 15 lines 30-32.

- 1.3 The amendments done to the description do also not contravene the requirements of Articles 84 and 123(2) EPC.

2. Claim 10 - Inventive step

2.1 D7b - content of the disclosure

D7b discloses (see figures 5 and 6) a cup for a beverage having a separable inner lining and outer shell (see paragraph 6), wherein the cup comprises: an outer shell being a paper cup (see paragraph 1) made from a non-laminated or uncoated paperboard material (see paragraph 10, where the advantages of coated over non coated materials are explained, implicitly disclosing both alternatives), the shell being substantially conical or frustoconical (as clearly visible in figures 5 and 6) and having a wall (24), a base (21) and a rolled rim (5,7, see figures 2-4); and an inner lining (23), the lining comprising a pre-formed flexible lining of a thin sheet of polymeric material (see paragraph [6]), a first part (see figure 5) of the lining (34) conforming to a complete internal shape of the shell and being adhered to an internal surface of the shell by a layer of adhesive (as explained at paragraph [64]) wherein the adhesive adhering the first part of the lining to the internal surface of the shell is such that the first part of the lining is peelable from the shell.

2.2 D9 - content of the disclosure

D9 discloses (see figures 6 and 8) a cup-shaped vessel 54, suitable for containing a beverage, having a separable inner lining (77).

The Board concurs with point 1.2 of the appealed decision according to which features **10.J** (heat shrinking the upper second part of the lining onto the

rim) and **10.K** (peelable adhesive between the lower or first part of the lining and the shell) are not disclosed by this document.

D9 discloses (see column 8, lines 13-15) that the known paperboard shell is made from paperboard material which has to be coated.

D9 therefore also fails to disclose that the outer shell is a paper cup made from a non-laminated or uncoated paperboard material (feature **10.B**).

As none of the tubular shells shown in D9 (see the figures) could be considered as being said substantially conical or frustoconical, feature **10.C** is a further difference.

2.3 Most promising starting point

The above analysis shows that D7b not only has the most features in common with the subject-matter of claim 10, but also deals with separable inner linings for beverage paper cups.

The Board therefore concurs with the appellant arguing that D7b is to be considered as disclosing the most promising springboard for an inventive step discussion.

2.4 Differences

The lining of D7b is made of a material which is stiff enough to elastically grip around the rim of the outer shell (see paragraph [0013], see also figures 2-4).

D7b therefore fails to disclose that the pre-formed lining is in the form of a bag including at least one

seam and having an open end (**10.F**), and that the second part thereof (being an upper region proximate the open end thereof in contact with an external surface of an upper region of the shell proximate the rolled rim) is heat shrunk around the external surface of the shell such that the lining conforms to the rolled rim and the upper region of the shell (**10.J**).

2.5 Effect(s)

The Board concurs with the effect formulated in the appealed decision in relation to feature **10.J** (achieving conformance of the lining to the rim to separably connect these two elements in a leak proof way and facilitate drinking, point 1.4.1).

This effect is clearly mentioned in the passage comprised between page 22, line 27 and page 23 line 6 of the original description.

As noted by the appellant, feature 10.F, according to which the lining is a bag, therefore made of a **flexible** sheet of polymeric material clearly contributes thereto.

This is because, when compared with the stiff lining disclosed in D7b (see paragraph [0014], explaining that the liner is stiff enough to be reliably snap-fitted onto the rim), it is clearly easier to achieve that the liner conforms exactly to the rim, without forming undesired folds or pleats, when a thin, soft, non self-supporting sheet material is heat shrunk.

As a consequence of the above, the Board considers that the identified distinguishing features cannot be

discussed, for the purposes of assessing inventive step, independently from each other.

2.6 Problem to be solved

Based on the above identified effect, the problem to be solved starting from the drinking cup of D7b is formulated by the Board as how to achieve the above mentioned effect, thereby increasing drinking comfort, without compromising sealing (see from page 22, line 27 to page 23 line 6 of the original description).

2.7 Discussion of inventive step

2.7.1 Combination with D6

D6 (column 5, lines 32-56) teaches both distinguishing features, namely connecting a pre-formed lining in the form of a bag including at least one seam and having an open end (see figure 1 and column 5, lines 32-48) by shrinking the upper region thereof around the external surface of the shell such that the lining conforms to the rolled rim and the upper region of the shell (10.J).

D6 does not however relate to the field of beverage cups, does not mention issues related to drinking comfort and does not even mention the necessity of separating the liner from the shell for recycling purposes.

The Board therefore considers that a skilled person, starting from D7b and looking for a way to solve the above formulated problem, would not have considered this document.

2.7.2 Combination with D4

2.7.3 A skilled person learns from D4 (column 2, lines 15-17) that heat shrinking of a flexible liner can be applied when a close conformance of a liner onto the rim of a supporting shell is aimed at.

However D4 discloses completely wrapping of a dish like container, and does not teach that the pre-formed lining is in the form of a bag including at least one seam and having an open end.

As a consequence of the above, the skilled person would not arrive, by applying this teaching, to the subject-matter of claim 10 of the main request.

2.7.4 Combination with D9

D9, failing to disclose heat shrinking (features 10.J, see point 1.2 above), is not suitable, in combination with D7b, to cast doubts on inventive step.

2.7.5 Combination with D3

D3 is also not related to beverage cups, and fails to disclose heat shrinking (see paragraph [22]) as it teaches that the upper edge of the liner should be free to facilitate separation from the frame. Hence, D3 is not relevant for the discussion of inventive step.

3. Claim 1

Claim 1 is directed towards a method of making a cup for a beverage having all of the features of claim 10, also comprises method steps corresponding to distinguishing features 10.F and 10.J discussed above, and therefore also involves an inventive step.

4. As a consequence, the claimed subject-matter according to the new main request involves an inventive step. This holds true even in view of the third party observations which the Board considered in reaching the aforementioned conclusions.

5. Fee reimbursement

The Board does not see any reason under Rule 103 EPC for reimbursement of the appeal fee, which would be applicable to the present case. As a result, there is no substantiated request from the appellant, as the notice of appeal merely mentions the request for reimbursement without further submissions. There is thus no claim to the existence of any substantial procedural violation which, under Rule 103(1) (a) EPC, allows the reimbursement of the appeal fee on condition that it is equitable. Other reimbursement possibilities, all of which are linked to a withdrawal of the claim, are evidently irrelevant. The request for reimbursement of the appeal fee can therefore not be granted.

The Board in its communication dated 9 April 2019 invited the appellant to clarify the above issue, in case he intended to maintain said request. However, the appellant did not respond to this in the letter dated 18 June 2019.

Order

For these reasons it is decided that:

- I. The decision under appeal is set aside.
- II. The case is remitted to the examining division with order to grant a patent in the following version:

Description

Pages 1-40 of the main request filed with
letter of 18 June 2019,

Claims

No. 1-14 of the main request filed with
letter of 18 June 2019,

Drawings

Sheets 1/17-17/17 as originally filed.

The Registrar:

The Chairman:



G. Nachtigall

I. Beckedorf

Decision electronically authenticated