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**Datasheet for the decision  
of 29 October 2014**

**Case Number:** T 1593/12 - 3.2.07

**Application Number:** 08709498.3

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**Language of the proceedings:** EN

**Title of invention:**  
IMPROVEMENTS TO PACKAGING

**Applicant:**  
RTGP Limited

**Headword:**

**Relevant legal provisions:**  
EPC Art. 56, 84

**Keyword:**  
Inventive step - main request (no)  
Claims - clarity - auxiliary requests (no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern  
Boards of Appeal  
Chambres de recours**

European Patent Office  
D-80298 MUNICH  
GERMANY  
Tel. +49 (0) 89 2399-0  
Fax +49 (0) 89 2399-4465

Case Number: T 1593/12 - 3.2.07

**D E C I S I O N  
of Technical Board of Appeal 3.2.07  
of 29 October 2014**

**Appellant:** RTGP Limited  
(Applicant) Dalton Airfield  
Topcliffe  
Thirsk  
YO7 3HE (GB)

**Representative:** Wood, Graham  
Bailey Walsh & Co LLP  
1 York Place  
Leeds, LS1 2DR (GB)

**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted on 27 December  
2011 refusing European patent application No.  
08709498.3 pursuant to Article 97(2) EPC.

**Composition of the Board:**

**Chairman** H. Meinders  
**Members:** K. Poalas  
C. Brandt

## Summary of Facts and Submissions

- I. The appellant (applicant) lodged an appeal against the decision of the Examining Division refusing European patent application 08 709 498.3.
- II. In its decision, the Examining Division held that the subject-matters of the claims 1 of the main request filed with fax on 7 November 2011 and of the auxiliary request filed during the oral proceedings before the Examining Division do not involve an inventive step.
- III. Oral proceedings before the Board took place on 29 October 2014. The appellant requested at the end thereof that the decision under appeal be set aside and that a patent be granted on the basis of the main request or, alternatively on the basis of the auxiliary request, both requests filed with the letter dated 29 September 2014, or on the basis of the amended second auxiliary request filed during these oral proceedings.
- IV. The following documents of the examination proceedings are mentioned in the present decision:
- D1: US 5 679 421 A  
D3: US 5 178 469 A  
D4: WO 96 313 03 A.
- V. Claim 1 according to the **main request** reads as follows:
- "A retail pack (2) comprising a bag and foodstuff contents therein, said bag formed with panels including walls (12, 14) and a base (10) and defining a cavity (4) in which the contents of the retail pack are held, said bag having an opening (6) into the cavity, and the

retail pack is provided so that the bag and foodstuff contents are maintained substantially in their original form in the ambient environmental conditions in which the same is to be displayed for retail purposes and subsequently during the removal of the foodstuff contents from the retail pack for consumption and for the bag to be compostable once exposed to specific environmental conditions in which the temperature is at least 50 degrees Celsius and the humidity is at least 50% and which environmental conditions differ from the ambient environmental conditions, said panels are formed from only two layers of Kraft paper sheet material (16,18) and one layer of a compostable plastics sheet material (22) and a compostable adhesive, the compostable plastics sheet material forms the inner layer of the bag panels to act as a liner and retain moisture in the foodstuff contents and prevent migration of components of the foodstuff contents to the external surface of the bag and the outer face of at least one of the panels receives a water based ink thereon characterised in that the opposing parts of the layer of compostable plastics sheet material (22) on the interior of the bag at the said opening are adhered to each other by the application of heat to the compostable plastics sheet material layer once the foodstuff contents are in the cavity in order to heat seal the said opening (6)".

Claim 1 according to the **auxiliary request** discloses the following additional feature over claim 1 of the main request:

"thereby maintain the foodstuff in the bag in a condition for consumption for up to 12 months from sealing the bag".

Claim 1 according to the **second auxiliary request**

discloses the following additional feature over claim 1 of the auxiliary request:

"the said layer of compostable plastic sheet material (22) is Poly Lactic Acid which has a thickness of 20µm and the outer layer of Kraft paper sheet material (18) has a weight of 70gsm".

VI. In its annex to the summons the Board gave its negative preliminary opinion on inventive step, among others based on D1 as closest prior art.

VII. The appellant argued essentially as follows:

*Claim 1 according to the main request - Inventive step, Article 56 EPC*

The decision, based on D1 as closest prior art and establishing lack of inventive step in that respect, is wrong for the following reasons:

In D1 there is disclosed a bag which is provided initially in an empty condition and there is no disclosure or suggestion of using this bag as a retail pack in which the contents, more particularly foodstuff, are packaged. There is no purpose of maintaining the condition of its contents for a period of time.

The bag of D1 may be biodegradable, but this does not need to be the same as "compostable" under the conditions mentioned in claim 1.

According to column 3, lines 9 to 16 of D1 the polymer resin layer forms the inner layer of the bag when the originally empty bag is to be filled with moist material such as garbage, grass clippings and the like.

The purpose of this is to prevent leakage of water from the bag with the polymer resin layer forming a leakage barrier on the internal face of the bag.

It is further stated therein that when the bag is to be used to carry dry material then the resin layer forms the external surface of the bag. Furthermore, there is no disclosure or suggestion to the skilled person that the bag of D1 could be used for anything other than the temporary storage and transport of material awaiting disposal, so it is not a retail pack also for this reason. There would be no requirement or advantage of providing the bag of D1, in the relevant configuration with the resin layer on the inside, for long term storage purposes.

The heat sealing of the plastics inner layer at the opening of the bag is for maintaining the condition of the contents inside and is not obvious to the person skilled in the art.

The additional second Kraft paper layer improves the outer appearance and the rigidity of the bag and provides also an additional barrier against the migration of oils and fats over the bag known from D1, maintaining thereby the bag's contents in a condition suitable for consumption over a period of time, such as 12 months.

The retail pack according to claim 1 has to be evaluated as a whole and its above-mentioned differentiating features over the disclosure of D1 should not be considered as a mere aggregation of features, each one of those solving a different partial problem.

*Claim 1 according to the auxiliary request - Clarity, Article 84 EPC*

It is clear to the skilled person that the presence of two Kraft paper layers, one compostable plastics layer and one compostable adhesive as claimed in claim 1 of the auxiliary request allows the sealed bag to maintain the foodstuff in a condition proper for consumption for up to 12 months from sealing the bag.

Claim 1 according to the auxiliary request thus meets the requirements of Article 84 EPC.

*Claim 1 according to the second auxiliary request - Clarity, Article 84 EPC*

It is clear to the skilled person that the presence of two Kraft paper layers, the outer one having a weight of 70gsm, the presence of an inner Poly Lactic Acid (PLA) layer with a thickness of 20µm and also the presence of a compostable adhesive as claimed in claim 1 of the second auxiliary request allow the sealed bag to maintain the foodstuff in a condition proper for consumption for up to 12 months from sealing the bag.

Claim 1 according to the second auxiliary request thus meets the requirements of Article 84 EPC.

## **Reasons for the Decision**

1. *Claim 1 according to the main request - Inventive step, Article 56 EPC*

1.1 The appellant based its conclusion that the impugned decision as regards lack of inventive step over D1 was wrong on the following distinguishing features:

- the bag being compostable instead of biodegradable,
- the bag being a retail pack,
- the bag being heat sealed at its opening,
- the bag having an extra Kraft paper layer.

1.2 "*compostable*"

1.2.1 D1 discloses a bag formed from an outer Kraft paper layer and an inner PLA layer, said layers being adhered to each other by a starch based adhesive, i.e. by a compostable adhesive, see column 2, lines 53 to 65; column 3, lines 10 to 13; column 4, lines 12 to 15 and 34 to 39. The Board notes in this respect that the same materials forming the bag panels according to claim 1, namely Kraft paper, PLA and a compostable adhesive also form the wall of the bag known from D1.

1.2.2 As a result, the bag of D1 must of necessity also be compostable, since the fact that the bag according to claim 1 has an additional Kraft paper layer has no influence on the compostability, as such.

1.2.3 A further consequence of the above is that the impact of the ambient environmental conditions on maintaining said bag and its contents in their original form the impact of specific environmental conditions in which the temperature is at least 50°C and the humidity is at least 50% on the compostability of said bag wall materials are the same for both the bag known from D1 and the bag according to claim 1.



- 1.2.4 This means that the bag known from D1 is compostable also under the specific environmental conditions mentioned in claim 1.
- 1.3 "*retail pack*"
  - 1.3.1 According to the appellant, the designation "retail pack" implied an outer appearance of the bag remaining consistent, the bag being printable and maintaining the condition of the foodstuff over a period of time.
  - 1.3.2 In column 1, lines 9 to 13 is stated that the bag known from D1 breaks down within a few weeks time **after** placement in a composting environment, or other earth environment having microbial activity. This means, that said bag at least during the period of time prior to being exposed to such an aggressive environment remains consistent over said period.
  - 1.3.3 The Board notes in this respect that D1 discloses a biodegradable bag suitable for general use, i.e. without any limitation to the items to be contained in said bag, see column 1, lines 8 to 12 and 25 to 28. On the other hand, the items mentioned in column 3, lines 10 to 16 of D1, like dry powders or seeds, are "everyday items" which are normally packaged in different forms of containers or bags, as retail products, which remain in a condition for their intended use over a period of time.
  - 1.3.4 Furthermore, in column 3, lines 3 to 8 of D1 is stated that in D1 is *inter alia* contemplated the combination of thermoplastic resins and paper to contain materials that are desired to be shielded from ambient moisture.

- 1.3.5 For achieving said object it is imperative that the bag and implicitly its opening has to be sealed, and this after the bag has been filled with its contents, so as to be shielded from ambient moisture, this sealing providing obviously protection to the filled items over a period of time.
- 1.3.6 It is thus evident that such a filled and sealed bag is suitable to be purchased and can thus be seen as a retail pack, sealed against ambient moisture.
- 1.3.7 As far as it concerns the printability of the bag the Board notes that in the second paragraph of the present application is stated that it is well known to the person skilled in the art to provide SOS-type bags with ink printed patterns at the outer surface of at least one of the panels of such a bag. Although in the above-mentioned paragraph of the present application reference is made to printing on an outer layer of plastics material it is further well-known to the person skilled in the art that an outer Kraft paper layer of a bag, as it is the case with the bag known from D1, also provides an excellent printing surface, see for example D4, page 7, lines 22 to 23.
- 1.3.8 It is thus an obvious choice for the skilled person to provide printed patterns on the outer face of the Kraft paper layer of the compostable bag known from D1, suitable as it is, as a retail pack.
- 1.3.9 For the above-mentioned reasons, the bag known from D1 is suitable to be used as a retail pack, and therefore using it as such a retail pack does not require from the person skilled in the art the exercise of an inventive activity.

1.4 *"heat-sealed opening"*

1.4.1 According to the appellant, the heat-sealed opening kept the bag in a presentable form and maintained the condition of its contents over a period of time.

1.4.2 As stated under point 1.3.5 above, according to the teaching of D1 and in order to protect the bag's contents from ambient moisture, the bag's opening has to be properly closed.

1.4.3 The question at stake is that whether using heating for sealing the opening of the bag known from D1 involves an inventive step.

1.4.4 To answer the question of obviousness it is necessary in the present case to determine what the skilled reader of D1 would have done with reasonable expectation of success in order to close the bag's opening.

1.4.5 For the Board, the skilled person aiming to close the opening of the bag known from D1 against the ingress of moisture, would decide to seal it using known sealing means.

1.4.6 Given the fact that the interior of said bag is lined with a PLA layer and that transverse heat-sealed connections are already proposed in D1 in order to form, i.e. to close the bottom and/or top parts of the individual bags, see column 5, lines 7 to 47, the choice of heat-sealing for the opening of said bag does not require the exercise of an inventive activity.

1.4.7 For the above-mentioned reasons, heat sealing the bag known from D1 at its opening does not involve an inventive step.

1.5 "extra Kraft paper layer"

1.5.1 According to the appellant, this feature provides an additional barrier, so that the condition of the content over a period of time is even better maintained and the strength of the bag is improved.

1.5.2 The Board agrees with the appellant that said extra Kraft paper layer obviously improves the strength of the bag known from D1 and thus the problem to be solved can be seen in the improvement of the structural strength of the bag known from D1.

1.5.3 The fact that for this purpose a Kraft paper layer is normally used as part of the wall of a bag is part of the general technical knowledge of the person skilled in the art, as exemplified for example by D4, page 7, first paragraph, and D3, abstract, fifth sentence.

1.5.4 The person skilled in the art seeking to enhance the structural strength of the bag known from D1, said bag using already a Kraft paper layer providing a first level of structural strength, would regard it an obvious choice to provide an additional Kraft paper layer, just as it is done in supermarkets, with shopping bags.

1.5.5 The appellant argued that as an indication for the presence of an inventive step can be seen the fact that the additional Kraft paper layer not only improves the strength and the stability of the bag but that it also unexpectedly acts as an additional barrier against the

migration of oils and fats to the outer surface of the bag known from D1, allowing thereby the keeping of the bag's contents in a condition for their intended use over a period of time.

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

1.5.7 It is well known to the person skilled in the art that a PLA layer is a thermoplastic layer which prevents the migration of liquids, see column 1, lines 28 to 38 of D1 and that in a multiply laminate formed from a PLA layer and a Kraft paper layer it is the PLA layer which actually acts as the liquid barrier layer. This is also acknowledged in the present application, see page 4, second complete paragraph and page 9, third complete paragraph.

1.5.8 Although a Kraft paper layer is not per se a barrier layer against liquid migration, it is clear that any such layer applied additionally to the outer surface of the bag known from D1 for increasing strength and stability would inevitably increase, due to its mere presence, the difficulty of any kind of liquid to migrate through the wall of said bag, i.e. it will impede to some extent oils and fats from migrating outwards through the wall of the bag known from D1.

According to established jurisprudence of the Boards of Appeal, an additional effect achieved inevitably by the skilled person on the basis of an obvious measure simply represents a bonus effect, which cannot substantiate inventive step, even as a surprising effect, see Case Law of the Boards of Appeal, 7th edition 2013, I.D.10.8, second paragraph, last

sentence.

1.6 The appellant argues further that according to column 3, lines 13 to 16 of D1, when the bag according to D1 is used to contain dry materials, the resin layer forms the outer surface of the bag. Since foodstuffs, and especially ped foodstuffs, are normally dry material, a bag containing foodstuffs would have the resin layer on the outer surface of the bag, not inside as claimed in claim 1.

1.6.1 The Board cannot follow this argument, since there exists in claim 1 no limitation on the type of foodstuffs contained in the bag. Moreover, claim 1 states that "the compostable plastics sheet material forms the inner layer of the bag panels to act as a liner and **retain moisture in the foodstuff contents ...**" (emphasis added by the Board). This means that the claimed foodstuff contents possess a certain degree of moisture which should be retained due to the presence of the **inner** plastics layer.

1.7 A further argument from the appellant was that the subject-matter of claim 1 has to be seen as a whole and that the features mentioned under point 1.1 above provide a combinatory effect.

1.7.1 The Board notes firstly that it considers that the bag known from D1 is also compostable under the specific environmental conditions mentioned in claim 1, see point 1.2.4 above. It notes further that the appellant was not in position to provide any evidence for this combinatory effect for the remaining differentiating features, such as that these features mutually influence each other to achieve a technical success over and above the sum of the respective individual

effects, see Case Law of the Boards of Appeal, 7th edition 2013, I.D.9.2.2.2, first paragraph.

Also the Board could not recognise any combinatory effect between said features going beyond the sum of their individual effects.

- 1.8 For the above-mentioned reasons the arguments brought forward against the impugned decision, as far as it concerns inventive step starting from D1, cannot hold.
2. *Claim 1 according to the auxiliary request - Clarity, Article 84 EPC*
  - 2.1 According to the established case law of the Boards of Appeal Article 84 EPC has to be interpreted as meaning not only that **a claim** must be comprehensible from a technical point of view, but also that it **must** define the object of the invention clearly, that is to say **indicate all the essential features** which are necessary for solving the technical problem, i.e. for achieving the targeted technical effect, see in this respect Case Law of the Boards of Appeal, 7th edition 2013, II.A.3.2, first paragraph.
  - 2.2 Claim 1 according to the auxiliary request has the additional feature over claim 1 of the main request that the foodstuff is maintained in the bag "in a condition for consumption for up to 12 months from sealing the bag". This means that *inter alia* the ingress of ambient air into the sealed bag has to be avoided or at least has to be impeded for the contents to last for at least 12 months.
  - 2.3 In the first place, claim 1 does not require an adhesive (layer) to be present between the two Kraft

paper layers, which means that the extra Kraft paper layer on the outside has no function against the ingress of air at that location.

2.4 Further, for the skilled person seeking to provide such a bag acting as a barrier against the ingress of the ambient air it is not enough to know only the general type of material of said layers and of the adhesive, i.e. Kraft paper, compostable plastics and compostable adhesive, but it is indispensable to know the exact consistency and/or thickness of each of these three layers as well as the consistency and the extension of the compostable adhesive between the inner Kraft paper layer and the compostable plastics layer forming the panels of the bag.

2.5 None of the above-mentioned essential structural features of the components of the bag panels needed for maintaining the foodstuff in the sealed bag in a condition for consumption for up to 12 months from sealing the bag is present in claim 1.

Accordingly, the above-mentioned additional feature of claim 1, see point 2.2 above, expresses no more than a *desideratum*, without any indication of a causal link between the desired effect and the structure of the claimed retail pack. Insofar as claim 1 does not define any concrete measures on how to ensure that the claimed properties are effectively obtained, the claimed properties remain at an abstract or conceptual level.

2.6 The absence of said essential structural features of the bag panels in claim 1 therefore renders said claim unclear. Accordingly, claim 1 of the auxiliary request does not meet the requirements of Article 84 EPC.



3. *Claim 1 according to the second auxiliary request - Clarity, Article 84 EPC*
- 3.1 Claim 1 of the second auxiliary request defines over claim 1 of the auxiliary request that the compostable plastics layer is a PLA layer with a thickness of 20µm and that the outer Kraft paper layer has a weight of 70gsm.
- 3.2 As stated under point 2.1 above, all features which are necessary for achieving the targeted technical effect, i.e. **all essential features**, have to be present in claim 1 in order to meet the requirements of Article 84 EPC.
- 3.3 As further stated under point 2.3 above, the exact consistency and thickness of the inner Kraft paper layer and of the compostable plastics layer, as well as the consistency and the extension of the compostable adhesive between the inner Kraft paper layer and the compostable plastics layer forming the panels of the bag have to be present in claim 1 for overcoming the lack of clarity objection.
- 3.4 In claim 1 according to the second auxiliary request the consistency and thickness of the inner Kraft paper layer as well as the consistency and the extension of the compostable adhesive between the inner Kraft paper layer and the compostable plastics layer forming the panels of the bag are still missing and thus, still **not all essential features** are present in claim 1 of said request.

3.5 Accordingly, claim 1 of the second auxiliary request does not meet the requirements of Article 84 EPC either.

4. Since none of the objections against the impugned decision can hold, the appeal is to be dismissed.

### **Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:



G. Nachtigall

H. Meinders

Decision electronically authenticated