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Datasheet for the decision of 20 September 2013

Case Number: T 1260/11 - 3.3.06

Application Number: 05761375.4

Publication Number: 1797168

IPC: C11D17/04, C11D3/395, C11D3/39

Language of the proceedings: EN

Title of invention:
Liquid composition

Patent Proprietor:
Reckitt Benckiser N.V.

Opponent:
Henkel AG & Co. KGaA

Headword:
Multi-chamber bottle/ RECKITT BENCKISER

Relevant legal provisions:
EPC Art. 100(b), 52(1), 56

Keyword:
Sufficiency of disclosure - (yes)
Inventive step - non-obvious improved article

Decisions cited:

Catchword:

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Case Number: T 1260/11 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 20 September 2013

Appellant: (Opponent)	Henkel AG & Co. KGaA Henkelstrasse 67 40589 Düsseldorf (DE)
Representative:	Henkel AG & Co. KGaA Patente (FJP) 40191 Düsseldorf (DE)
Respondent: (Patent Proprietor)	Reckitt Benckiser N.V. Siriusdreef 14 2132 WT Hoofddorp (NL)
Representative:	Hodgetts, Catherine Dawn Reckitt Benckiser Corporate Services Limited Legal Department - Patents Group Dansom Lane Hull HU8 7DS (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 12 April 2011 rejecting the opposition filed against European patent No. 1797168 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman: B. Czech
Members: L. Li Voti
J. Geschwind

Summary of Facts and Submissions

I. The present appeal is from the decision of the Opposition Division to reject the opposition against European patent no. 1 797 168.

II. In its notice of opposition the Opponent had sought the revocation of the patent on the grounds of Article 100(a) EPC 1973, alleging lack of inventive step, and of Article 100(b) EPC 1973.

The objections raised were based inter alia on the disclosures of documents D1: WO 01/60966 A1 and D4: WO 00/61712 A1.

III. The Opposition Division found in its decision, in particular, that the claimed invention was sufficiently disclosed and that the granted claims 1 to 15 involved an inventive step over the cited prior art.

Granted claim 1 reads as follows:

"1. *A multi-chamber bottle comprising in one chamber a bleaching composition and in another chamber a bleach sensitive formulation, the viscosity of the bleaching composition being controlled by an admixture of thickener and a hydrocarbon, and the density of the bleaching composition being controlled by the presence of an ionic salt.*"

Dependent claims 2 to 14 concern particular embodiments of the claimed bottle.

Independent claim 15 as granted reads as follows:

"15. *Use of the bottle as in any of claims 1 to 14 in an automatic dishwashing process.*".

IV. An appeal was filed against this decision by the Opponent (Appellant). In its statement setting out the grounds of appeal, the Appellant maintained its objections under Articles 100(a) (i.e. lack of inventive step) and (b) EPC 1973.

V. In its reply of 21 December 2011, the Respondent (Patent Proprietor) rebutted the objections raised, defended the patent in the version as granted (main request) and submitted nine sets of amended claims as auxiliary requests.

VI. At the oral proceedings held on 20 September 2013, the issues of sufficiency of disclosure and inventive step were addressed with regard to the patent as granted.

VII. The Appellant requested that the decision under appeal be set aside and that the patent be revoked.

The Respondent requested that the appeal be dismissed or, in the alternative, that the patent be maintained on the basis of the claims according to any of the first to ninth auxiliary requests submitted with letter of 21 December 2011.

VIII. As relevant here, the arguments of the parties can be summarised as follows:

The Appellant held that

- the invention was not sufficiently disclosed since not all the embodiments falling within the scope of claim 1 solved the technical problem underlying the

invention, which consisted in providing an equal or appropriate discharge from each of the chambers of the claimed bottle;

- in particular, claim 1 did not contain any technical feature defining the viscosity or stability of both the bleaching composition and the bleach sensitive formulation which were contained in separate chambers of the bottle; hence, the bleaching composition contained in one chamber could be present as an unstable suspension of a solid peracid which could aggregate and settle down upon storage, thereby forming a solid deposit which could not be discharged from the chamber;

- as regards inventive step document D1 represented the closest prior art and its disclosure rendered obvious the claimed subject-matter; however, even considering document D4 as starting point for the evaluation of inventive step, the claimed subject-matter lacked inventive step over the combination of documents D4 and D1;

- in fact, there was no evidence that any technical improvement had been achieved throughout the whole scope of claim 1 over the article disclosed in example I of document D4; therefore, it would have been obvious for the skilled person, by following the teaching of this document, to add an organic solvent, for example a paraffin as used in document D1, to the bleaching composition of example Ia, in order to obtain an alternative bleaching formulation in one chamber of the bottle;

- if it were to be accepted that the comparative test contained in the patent in suit showed some improvement

of the stability over time of the viscosity of the bleaching composition attributable to the addition of a hydrocarbon thereto, the technical problem underlying the invention could only be seen in the provision of a more stable bleaching composition within one chamber of the bottle; in this respect, it would have been obvious to the skilled person, aware of the teaching of document D1, to add a hydrocarbon such as a paraffin, to the bleaching formulation of example Ia of document D4 in order to increase the physical stability and the pourability of the bleaching composition.

The Respondent submitted that

- the components contained within the chambers of the bottle of claim 1 were well known to the skilled person; the description contained also examples of the individual components used and an example of a suitable composition; therefore, a skilled person would have been able to prepare an article as claimed; the invention thus was sufficiently disclosed;

- the technical problem underlying the invention could be formulated as the provision of a multi-chamber bottle wherein the viscosity of the bleaching formulation contained in one chamber remained constant even with prolonged storage and the amount of bleaching composition poured therefrom could thus be controlled over time; document D4 was the appropriate starting point for the evaluation of inventive step since it also concerned a multi-chamber bottle and addressed a similar technical problem;

- the tests contained in the patent in suit showed that the addition of a hydrocarbon to the bleaching

composition stabilized its viscosity over time and thus allowed the control over time of its pourability;

- the skilled person would not have combined the teaching of document D4, relating to multi-chamber bottles and dealing with a similar technical problem as the patent in suit, with that of document D1, which concerned very different articles, namely water-soluble pouches which already contained a unit dose of the compositions to be dispersed in the wash upon dissolution of the pouch, and did not concern the technical problem of controlling the viscosity and pourability over time of a bleaching composition;

- moreover, neither document D4 nor document D1 suggested that a hydrocarbon could stabilize over time the viscosity of a bleaching composition;

- therefore, the claimed subject-matter involved an inventive step.

Reasons for the Decision

Main request

1. Sufficiency of disclosure

1.1 Claim 1 concerns a multi-chamber bottle comprising in one chamber a bleaching composition containing an admixture of thickener and a hydrocarbon for controlling its viscosity and an ionic salt for controlling its density and in another chamber a bleach sensitive formulation.

1.2 The Appellant argued that the wording of claim 1 encompassed embodiments wherein the bleaching component, for example a peracid, could settle down in a way that it could no longer be properly discharged from the bottle.

The Board remarks that this hypothetical situation would imply that the deposited peracid could not be redispersed, for example by agitation of the bottle, and that the bleaching composition within one chamber would no longer be liquid enough to have a measurable viscosity.

1.3 In the Board's judgement such an embodiment is, however, clearly not encompassed by the wording of claim 1 as understood by the skilled person:

1.3.1 The ability to control viscosity is an inherent feature of a thickener and the ability to control density is an inherent feature of an ionic salt, such as an electrolyte. Moreover, an electrolyte can also be a thickener for the liquid containing it (see e.g. document D4, page 28, line 18).

1.3.2 Therefore, the wording of claim 1 must be understood to relate to a bleaching composition having a measurable viscosity, i.e. a liquid bleaching composition, containing a hydrocarbon, a thickener and an ionic salt or a hydrocarbon and an ionic salt capable of thickening.

1.4 As acknowledged in the patent in suit (paragraph [0005]), multi-chamber bottles containing a bleaching formulation in one chamber and a bleach sensitive formulation in another chamber were already known to the skilled person at the priority date of the patent

in suit. Moreover, it is undisputed that liquid bleaching compositions, bleaching sensitive formulations, thickeners, hydrocarbons and ionic salts were well known to the skilled person.

The patent in suit contains examples of suitable bleaching components, thickeners, hydrocarbons and ionic salts (see paragraphs [0011], [0015], [0016], [0019]) as well as an example of a suitable liquid bleaching composition and a suitable bleaching sensitive formulation (Example 1, paragraphs [0028] and [0029]).

1.5 Therefore, the Board concludes that the skilled person would have been able to prepare a multi-chamber bottle containing the components indicated in claim 1 by following the teaching of the description and by using common general knowledge.

1.6 As regards the use of the claimed multi-chamber bottle in an automatic dishwashing process (subject-matter of claim 15), it was undisputed that it was known to the skilled person how to use a multi-chamber bottle in an automatic dishwashing process.

1.7 As regards the further objection raised by the Appellant (see point VIII above) according to which not all embodiments encompassed by the wording of claim 1 solved the technical problem indicated in paragraph [0006] of the patent in suit, i.e. "*to achieve* ***equal / appropriate discharge of each*** *of the chambers so that the right amount of composition from* ***each*** *chamber is dispensed in to the washing machine*" (emphasis added by the Board", the Board remarks the following:

Although an allegation of this type can be relevant for the formulation of the objective technical problem solved by the claimed invention with respect to the closest prior art, it is not relevant insofar as the sufficiency of the invention **as claimed** is concerned. In fact, as regards the issue of sufficiency of disclosure, the question to be answered is whether the skilled person is enabled to carry out the invention **as defined in the claims**. In cases where, like in the present one, a particular technical problem is not included or reflected in the claims in form of technical features, it has not to be considered in the context of the assessment of sufficiency of disclosure whether said problem is actually solved by the subject-matter claimed.

1.8 Therefore, the Board concludes that the patent as granted discloses the invention in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art, taking into account the teaching of the description and common general knowledge. The patent thus is not objectionable under Article 100(b) EPC 1973.

2. Inventive step

2.1 The invention

The present invention concerns a multi-chamber bottle comprising in one chamber a liquid bleaching composition containing a thickener, a hydrocarbon and an ionic salt (which can represent by itself also the thickener component) and having a controlled viscosity, and in another chamber a bleach sensitive formulation (see claim 1 and paragraph [0008]).

As explained in the description, "*bleaching compositions are usually quite aggressive to other more sensitive components of a detergent formulation and need to be kept separate therefrom*" (see paragraph [0003]). One way of achieving this was to keep liquid bleaching compositions and bleach sensitive formulations in separate chambers of a multi-chamber bottle (see paragraph [0005]).

According to the patent in suit, "*a recognised problem with the use of multi-chamber bottles was the difficulty that can be experienced trying to achieve equal/appropriate discharge of each of the chambers so that the right amount of composition from each chamber is dispensed into the washing machine*" (see paragraph [0006]).

A stated object of the invention thus was to obviate or mitigate the problems outlined above over prolonged storage or transportation and throughout the use of the bottle (see paragraphs [0007] and [0009]).

2.2 The closest prior art

2.2.1 Document D4 also concerns the provision of a multi-chamber bottle containing in separate chambers, respectively, a bleaching formulation and a formulation containing components not storage stable in the presence of the former composition. Said formulations must be stable upon storage and are able to be dispensed simultaneously in appropriate envisaged amounts in order to give on mixing a thickened composition which clings to non-horizontal surfaces (see page 5, line 18 to page 6, line 10 and page 9, lines 5 to 11).

2.2.2 Since document D4 relates to the same type of articles as the patent in suit and addresses similar issues, it represents, for the Board, the closest prior art for the assessment of inventive step.

2.2.3 Document D1, invoked as closest prior art by the Appellant, concerns instead the provision of a water-soluble multi-compartment pouch containing in separate chambers a source of peracid and peracid incompatible ingredients, respectively, which pouch is dissolved upon use and is able to dispense the bleach ingredients in a more even manner (see page 2, line 16 to page 3, line 6).

2.2.4 This document thus neither concerns multi-chamber bottles nor issues of pourability of the compositions contained in the respective chambers of the pouch.

2.2.5 Accordingly, it is, in the Board's judgement, not to be considered as the closest prior art, since it is less appropriate than D4 as starting point for the evaluation of inventive step.

2.3 Technical problem

2.3.1 At the oral proceedings, the Respondent held that the technical problem to be solved in the light of the closest prior art as disclosed by D4 consisted in the provision of a multi-chamber bottle containing in one chamber a bleaching composition having an improved stability of its viscosity even after prolonged storage.

2.3.2 Merely for the sake of completeness, the Board remarks that at the oral proceedings the Respondent acknowledged that the subject-matter of claim 1 as

granted did not necessarily solve the technical problem of ascertaining equal or appropriate discharge from each of the chambers.

2.4 Solution

As a solution to the technical problem (point 2.3.1 above), the patent in suit proposes the multi-chamber bottle according to claim 1 which is characterized in particular in that the viscosity of the bleaching composition is "***controlled by*** *an admixture of thickener and a* ***hydrocarbon***" (emphasis added).

2.5 Success of the solution

2.5.1 The comparative tests reported in the patent in suit (paragraphs [0030] to [0032]) show that a bleaching composition containing paraffin oil, i.e. a hydrocarbon according to claim 1, has significantly greater viscosity stability over time than a composition not containing the paraffin oil.

2.5.2 More particularly, the experimental data show that within a time range of two weeks and at varying storage conditions (in terms of temperature and % RH) the viscosity value of the composition comprising 2% of paraffin oil remained in the relatively narrow range of from 11200 to 14900, whereas without the addition of paraffin oil the viscosity values varied within a substantially broader range of from 11500 to 19000.

2.5.3 The patent does not indicate the type of viscosity measured in these tests, i.e. the dynamic viscosity (η) or the kinematic viscosity, the latter being the ratio of the dynamic viscosity (η) to the density (δ) and being more representative of the pourability of a

liquid composition (see also page 2, lines 27 and 28 of the patent in suit). Nevertheless, the results of these tests show undoubtedly that the measured viscosity remains more stable over time when paraffin oil is included.

By virtue of the improved stability of the viscosity, and hence of the pourability of the composition, over time even with prolonged storage, it is ascertained that the amount of bleaching composition poured will remain more constant over time.

2.5.4 The results of these tests were not contested by the Appellant. The Appellant merely suggested, without submitting any evidence, that similar results would not be achieved by using other hydrocarbons or different thickeners or bleaching compounds. Hence it did not discharge the burden of proof resting on it in this respect.

2.5.5 The Board thus is convinced that the technical problem identified above is indeed solved over the full breadth of claim 1.

2.6 Obviousness

2.6.1 It remains to be assessed whether the claimed solution was obvious in the light of the prior art relied upon by the Appellant.

2.6.2 Document D4

Document D4 discloses in its example I a dual chamber container containing in one chamber a bleaching composition Ia comprising also sodium sulphate as electrolyte and thickener component and in the other

chamber a composition Ib containing bleach sensitive components such as cetyl-trimethylammonium bromide (see page 24, lines 6 to 15 of D4). Said bleaching formulation does not contain a hydrocarbon.

Document D4 itself contains nothing suggesting to add a hydrocarbon to the bleaching formulation, let alone to increase the stability over time of the viscosity of the composition. Even the indication that the liquid bleaching composition may contain an organic solvent (page 26, lines 7 to 12) cannot be considered to be a sufficient hint for the skilled person to try to add a hydrocarbon since D4 does not contain any disclosure of specific organic solvents and contains also the explicit warning that organic solvents may negatively affect the thickening capacity of the final cleaning formulation (page 26, lines 12 to 16).

Therefore, the Board finds that the skilled person, by following the teaching of document D4 taken alone, would rather not add an organic solvent to the compositions of example I.

2.6.3 Document D1

As regards the disclosure of document D1, the Board remarks that this document concerns water-soluble multi-compartment pouches, which only contain a unit dose of the compositions to be used during washing and which dissolve upon use, to thereby dispense the ingredients contained therein (see page 2, line 16 to page 3, line 6).

Therefore, this document concerns articles very different from the bottles of document D4. Accordingly, D1 does not address issues related to the pourability

of the compositions contained in the pouches, let alone to their pourability from the chambers of a bottle.

Furthermore, whilst the bleaching compositions to be used according to the teaching of document D4 have to be thin fluids (see page 16, lines 4 to 8 and example Ia, page 28, line 14), the peracid compositions of document D1, which indeed contain a hydrocarbon, are required to have a much higher viscosity (see page 22, lines 20 to 28).

In view of the differences between the disclosures of documents D4 and D1 in terms of the articles disclosed, their intended use and the problems associated therewith, the Board finds that the skilled person, starting from the disclosure of document D4, would not have considered document D1 at all when looking for a solution to the technical problem stated above (point 2.3.1).

2.6.4 The Board thus concludes that it was not obvious for the skilled person to modify the disclosure of document D4 in such a way to arrive at an article with all the features of claim 1 at issue.

2.6.5 Therefore, the subject-matter of claim 1 involves an inventive step (Articles 52(1) and 56 EPC 1973).

Consequently, the subject-matter of dependent claims 2 to 14, relating to specific embodiments of the inventive bottle of claim 1, and that of claim 15, relating to the use of the inventive bottle of claim 1, likewise involve an inventive step (Articles 52(1) and 56 EPC 1973).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Magliano B. Czech

Decision electronically authenticated