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**Datasheet for the decision
of 12 June 2012**

Case Number: T 1139/09 - 3.2.07
Application Number: 04250364.9
Publication Number: 1440907
IPC: B65D 81/00, A47J 31/40
Language of the proceedings: EN

Title of invention:
Cartridge for the preparation of beverages

Patentee:
Kraft Foods R&D, Inc.

Opponent:
Friesland Brands B.V.

Headword:

-

Relevant legal provisions:
EPC Art. 56, 84, 100(b), 123(2)
EPC R. 115(2)
RPBA Art. 15(3)

Keyword:
"Amendment: allowable"
"Clarity: yes"
"Inventive step: yes"
"Sufficiency of disclosure: yes"

Decisions cited:
T 0017/86, T 0435/91, T 0284/94

Catchword:

-



Case Number: T 1139/09 - 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 12 June 2012

Appellant: Friesland Brands B.V.
(Opponent) Blankenstein 142
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
2 April 2009 concerning maintenance of European
patent No. 1440907 in amended form.

Composition of the Board:

Chairman: H. Meinders
Members: K. Poalas
E. Kossonakou

Summary of Facts and Submissions

- I. The appellant (opponent) lodged an appeal against the interlocutory decision of the opposition division concerning maintenance of the European patent No. 1 440 907 in amended form.
- II. Opposition had been filed against the patent as a whole based on Article 100(a) EPC (lack of novelty and inventive step) and on Article 100(b) EPC (insufficient disclosure).

The opposition division found that the patent in amended form according to the first auxiliary request filed during the oral proceedings meets the requirements of the EPC.

- III. The following documents of the opposition proceedings are mentioned in the present decision:

D1 = EP-A-0 638 486,

D2 = WO-A-02/074661.

- IV. Oral proceedings took place before the Board on 12 June 2012. Although having been duly summoned, the appellant did not attend, as announced with its letter dated 11 May 2012. According to Rule 115(2) EPC and Article 15(3) RPBA, proceedings were continued without the party.

The appellant requested in its written submissions that the decision under appeal be set aside and that the European patent No. 1 440 907 be revoked.

The respondent (patent proprietor) requested that the decision under appeal be upheld and the appeal by the opponent be dismissed (main request). Otherwise, that the patent be maintained in accordance with one of auxiliary requests 1 to 4 as filed with the submissions of 11 May 2012.

- V. The independent claim 1 according to the main request, i.e. of the patent as upheld by the opposition division reads as follows (amendments over claim 1 as granted are marked in bold):

"A **sealed** cartridge (1) containing one or more liquid beverage ingredients (200) and being formed from substantially air- and water-impermeable materials, the cartridge comprising an inlet (121) for the introduction of an aqueous medium into the cartridge, a compartment (134) containing the one or more liquid beverage ingredients and an outlet (122) for a beverage produced by dilution of the one or more liquid beverage ingredients by the aqueous medium, the compartment including means for controlling dilution of at least a proportion of the one or more liquid beverage ingredients on introduction of the aqueous medium into the compartment, characterized in that the means for controlling dilution delays dilution of at least a proportion of the one or more liquid beverage ingredients on introduction of the aqueous medium into the compartment **containing the one or more liquid beverage ingredients**, wherein in use, an aqueous medium flow path is established from the inlet **through the compartment containing the one or more liquid beverage ingredients** to the outlet, the means for delaying dilution

comprising a partition (100) **in the compartment** which hinders **within the compartment** entry of at least a proportion of the one or more liquid beverage ingredients into the aqueous medium flow path."

In view of the outcome of the proceedings there is no need to recite the wording of the independent claims of the auxiliary requests.

VI. The appellant argued in respect of claim 1 according to the main request essentially as follows:

Amendments - Article 123(2) EPC

The amendments in claim 1 that the partition should be "in the compartment" and that it should hinder entry of the ingredients into the aqueous flow path "within the compartment" are based exclusively on the description of the fourth embodiment, said last being a very specific embodiment with a very specific cup-shaped member forming the partition which delays dilution.

Merely positioning a partition within the compartment containing the ingredients does in itself not solve the problem of improving beverage consistency.

According to the decisions T 17/86 (OJ EPO 1989, 297) and T 284/94 (OJ EPO 1999, 464) it is allowed to add a technical feature in isolation from an embodiment in the description to a claim, provided the new combination solves a problem unambiguously derivable from the application in isolation from any other element of the embodiment not included in the claim. This is presently not the case.

The above-mentioned amendments in claim 1 isolate the desired result (hindering entrance into the aqueous flow path should take place within the compartment) from the technical features of the fourth embodiment, as for example the cup-form of the partition and the presence of apertures at its lower part, required to obtain that result. Isolating the desired result as a separate feature and adding it to claim 1 in isolation from the technical features of the fourth embodiment - which together are necessary to achieve that result - is in breach with the requirements of Article 123(2) EPC.

Clarity – Article 84 EPC

The added feature that hindering entry into the aqueous flow path should take place "within the compartment" is not a technical feature but a desired result to be achieved. The technical features required to achieve that result are not included in the amended claim rendering it thereby unclear.

Furthermore, merely positioning a partition "within the compartment", i.e. without any further specification of its configuration, does not in itself hinder entry of the ingredients into the aqueous flow path within the compartment.

Sufficiency of disclosure - Article 100(b) EPC

Besides its positioning within the compartment containing the ingredient(s), claim 1 does not further specify the "partition". Thus, claim 1 covers any type

of partitions: horizontal, vertical, straight or cup-shaped partitions, with or without apertures, etc. However, merely positioning a partition within the compartment does, as such, not solve the problem underlying the patent in suit. Nowhere does the patent disclose information as to how the desired delay of entry of the ingredients into the aqueous flow path can be realized, except by having in the partition at least one opening exiting into the aqueous flow path, which requires at least some back pressure, such as gravity, to get the ingredients to enter the flow path.

Reading the patent in suit and with the knowledge of the practitioner skilled in the art one would not be able to practice the invention over the whole range of possible "means of delaying dilution" and "partitions" claimed, see T 435/91 (OJ EPO 1995, 188).

Furthermore, claim 1 of the patent in suit is drafted in functional and abstract terms seeking to define the expression "means for controlling dilution" by its function.

Consequently, the patent in suit does not disclose the invention in a manner sufficiently clear and complete to be carried out by a person skilled in the art.

Novelty - Article 54 EPC

D1

The dilution of the ingredients in the cartridge known from D1 is delayed on introduction of the aqueous medium into the compartment 9 containing the liquid

beverage ingredient(s). The aqueous medium flow path is established from the inlet through the compartment 9 containing the one or more liquid beverage ingredients to the outlet. The partition (the wall separating channel 6 from the rest of compartment 9) is in the compartment. The syrup in compartment 9 is hindered to enter the flow path section in channel 6 and forced to stay in the compartment 9. This means that the hindrance takes place within the compartment 9.

Accordingly, the subject-matter of claim 1 is not novel over the cartridge known from D1.

D2

In the cartridge shown in figure 15 of D2 the bypass conduit 114 and the beverage ingredient chamber 106 form a single compartment and are in open connection with each other. Accordingly, the partition between the bypass conduit and the ingredient chamber is within the compartment containing the beverage ingredients. An aqueous flow path runs from the inlets 104 to the outlet 130 through this compartment. The partition delays dilution of the beverage ingredients by hindering entry of the beverage ingredients into the aqueous flow path via the bypass conduit in the compartment.

Consequently, the cartridge shown in figure 15 discloses all the features of claim 1.

Figures 12 and 13 show a cartridge comprising an inlet, an outlet and a compartment containing beverage ingredient(s). Said cartridge comprises further a

partition (divider 128) within the compartment containing the beverage ingredient(s). This partition delays dilution of the ingredients in the second extraction chamber 106 until the moment the water reaches the second chamber. The partition hinders entry of the ingredients in the second chamber into the aqueous flow path as long as the water has not yet reached the second chamber.

Consequently, the cartridge shown in figures 12 and 13 discloses all the features of claim 1.

Figure 14 shows a cartridge having a compartment divided in two sections by a longitudinal partition, both sections containing beverage ingredient(s). The larger upper section contains more beverage ingredients than the smaller lower section. A user can customize the beverage by selecting the brewing water to pass through either only one or both section(s). If the user selects only one section, the partition hinders entry of a proportion of the beverage ingredients into the aqueous flow path. If the user selects both sections of the compartment, the average strength flow coming from the largest section is further diluted in a delayed dilution step in the collection chamber 110 by the mild strength flow coming from the smaller section.

Hence, the cartridge shown in figure 14 discloses all the features of claim 1.

Inventive step – Article 56 EPC

Starting from D1 and faced with the problem of improving strength uniformity, the skilled person would

be motivated to consult D2, said last dealing also with the problem of brewing consistency of the final beverage product, see page 2, first complete paragraph. D2 teaches the use of a partition within the cartridge to create a bypass conduit and/or multiple extraction chambers, each comprising a proportion of the beverage ingredients. An example of such a bypass is shown in figure 15. The bypass is confined by a partition separating it from the rest of the compartment. As a result, dilution of the ingredients is delayed and takes place only in the extraction collection chamber at the end. It will be obvious for the skilled person that the solutions proposed in D2 can also be used for the D1 cartridge to make it suitable for customized beverage brewing of consistent, homogeneous quality.

Therefore, the subject-matter of claim 1 lacks inventive step over the combination of the teachings of D1 and D2.

VII. The respondent argued concerning claim 1 according to the main request in writing and at the oral proceedings essentially as follows:

Amendments - Article 123(2) EPC

Claim 1 as granted being a combination of the originally filed claims 1 to 3 and/or a combination of the fifth, ninth and tenth paragraphs of the originally filed description, specifies that the means for controlling dilution delays dilution of at least a proportion of the one or more liquid beverage ingredients on introduction of the aqueous medium into the compartment (containing the said one or more liquid

beverage ingredients) and that an aqueous medium flow path is established from the inlet through the compartment (containing the said one or more liquid beverage ingredients) to the outlet. It is therefore immediately apparent that the partition has to be located in the compartment (containing the said one or more liquid beverage ingredients) and hinders, within the compartment, entry of at least a proportion of the one or more liquid beverage ingredients into the aqueous medium flow path. The aqueous medium flow path is defined as the path from the inlet through the compartment to the outlet. The only item that can be divided is the compartment (the compartment includes the partition) and, plainly, the partition can only achieve this if it is within the compartment. If the partition were outside the compartment, then the compartment could not be claimed to include means for controlling/delaying dilution, said means comprising the partition. Consequently, it is clear that claim 1 as granted, i.e. the originally filed claims 1 to 3 and/or the combination of the fifth, ninth and tenth paragraphs of the originally filed description requires that the partition is in the compartment and hinders within the compartment entry into the aqueous medium flow path.

Accordingly, there is clear and unambiguous support in the originally filed application for the amendments made to claim 1 and the requirements of Article 123(2) EPC are therefore not contravened.

Clarity - Article 84 EPC

The expressions "in the compartment" and "within the

compartment" added into claim 1 define the space within which the partition is positioned and within which it performs its hindering effect. These expressions have therefore a clear and unambiguous technical meaning and they cannot be considered as describing only a "result to be achieved", as argued by the appellant.

Thus, the requirements of Article 84 EPC are met.

Sufficiency of disclosure - Article 100(b) EPC

According to the established case law of the Boards of Appeal an invention is in principle sufficiently disclosed if at least one way is clearly indicated enabling the person skilled in the art to carry out the invention and sufficient information is present to extend the example over the breadth of the claim. This is here the case due to information present in the general description part and due to the description part concerning the fourth embodiment. The skilled person would therefore have no difficulty putting the invention into effect, based on the teaching of the description, drawings and claims, together with his common general knowledge.

In any case, the Appellant did not provide any evidence that the present invention cannot be performed within the ambit of claim 1.

T 435/91 (*supra*), referred to by the appellant, was concerned with an invention relating to a composition, which is not the same as the present invention, which is directed to a cartridge containing one or more liquid beverage ingredients.

Thus, the ground of opposition according to Article 100(b) EPC does not hold.

Novelty – Article 54 EPC

The slots 7 cannot delay dilution of at least a proportion of the one or more liquid beverage ingredients once aqueous medium has been introduced into the compartment 9 since the aqueous medium is introduced into compartment 9 through the slots 7 themselves. Therefore, the slots 7 cannot delay or control movement of the aqueous medium or the liquid beverage ingredients within compartment 9.

Thus, the slots 7 and the wall in which the slots are provided do not hinder entry of at least a proportion of the one or more liquid beverage ingredients into the aqueous medium flow path since the beverage ingredients are already within the aqueous medium flow path of the cartridge of D1.

The cartridge known from D1 therefore does not disclose the means for delaying dilution according to the characterising part of claim 1.

D2

D2 discloses a sealed cartridge for use with dry ingredients, and so it does not contain one or more liquid beverage ingredients as claimed in claim 1 according to the main request.

In the embodiment of figure 15 of D2 there is no possibility for beverage ingredients within chamber 106

to enter the bypass flow conduit 114 as there is no means of communication between the two. Thus, the beverage ingredients in chamber 106 are not hindered or delayed from entering the aqueous medium flow path in the bypass conduit 114 but are completely barred from entry into that flow. Furthermore, all of the beverage ingredients contained in chamber 106 are immediately diluted/acted upon by the aqueous medium entering the compartment through the inlet 104 associated with the chamber 106.

Also the embodiments of figures 12, 13 and 14 of D2 do not disclose means for delaying dilution of the liquid beverage ingredients.

The cartridge known from D2 therefore does not disclose means for delaying dilution as claimed in the characterising part of claim 1.

Inventive step – Article 56 EPC

Starting from a cartridge known from D1 the problem to be solved is how to dispense liquid beverage products into the aqueous medium flow path more evenly over the operating cycle rather than being dispensed all at the start of the operating cycle, followed by a substantially pure aqueous medium. This steady dispensation of the liquid beverage ingredients leads to improved homogeneity of the dispensed liquid beverage.

In the beverage cartridges of D1 and D2 there is no provision for holding back or delaying entry into the aqueous flow path of a proportion of the liquid

beverage ingredient contained within the compartment so that it dilutes later and thus enters later the aqueous medium flow path.

The aim of D2 is to produce a cartridge that allows the end strength of the beverage in the cup to be adjusted by allowing some water to flow through the cartridge without ever contacting the beverage ingredients in chamber 106. Since the skilled person reading D2 is not taught about the problem of enabling the liquid beverage ingredient to be dispensed more evenly over the operating cycle he would have no motivation to combine the teachings of D1 and D2. Even if such a combination were to be made the skilled person would still not arrive at the subject-matter of claim 1. This is at least for the reason that neither D1 nor D2 teaches means for delaying dilution as claimed in the characterising portion of claim 1.

Accordingly, the subject-matter of claim 1 involves an inventive step.

Reasons for the decision

Claim 1 of the main request

1. Amendments - Article 123(2) EPC

- 1.1 The appellant argued that the amendment in claim 1 that the partition is **in the compartment** and hinders **in the compartment** entry of at least a proportion of the liquid beverage ingredient(s) into the aqueous medium flow path is based exclusively on the description of

the fourth embodiment, said last having a cup-shaped partition with a specific shape, configuration and orientation relative to the aqueous flow path, which do not figure in the claim. Isolating the desired result (hindering entrance into the aqueous flow path within the compartment) as a separate feature and adding it to claim 1 in isolation from the technical features of the fourth embodiment necessary to achieve that result contravenes the requirements of Article 123(2) EPC.

1.2 The Board establishes first that basis in the originally filed application for a cartridge according to claim 1 as granted cannot only be found in the combination of the features of the originally filed claims 1 to 3 but also in the combination of the features disclosed in the paragraphs 5, 9 and 10 of the general part of the originally filed description. None of the above-mentioned parts of the application has any reference to the specific fourth embodiment referred to by the appellant. The Board notes further that the appellant did not originally raise the ground of opposition according to Article 100(c) EPC against claim 1 as granted.

1.3 The cartridge according to claim 1 as granted, i.e. according to the combination of the originally filed claims 1 to 3 and according to the combination of the paragraphs 5, 9 and 10 of the general part of the originally filed description involves an **inlet** for the introduction of the aqueous medium, an **outlet** for discharging the diluted liquid beverage ingredient(s) and a **compartment** containing the liquid beverage ingredient(s),

wherein, in use, an **aqueous medium flow path** is established from the inlet to the outlet.

- 1.4 Claim 1 as granted defines that the above-mentioned **compartment includes means for controlling/delaying dilution** of at least a proportion of the liquid beverage ingredient(s) contained in said compartment. Claim 1 as granted specifies further that said means for controlling/delaying dilution performs its effect of delaying the dilution of at least a proportion of the liquid beverage ingredient(s) **on introduction** of the aqueous medium into the compartment.

According to the Board's understanding the expression "**on introduction**" unambiguously defines that the action of delaying the dilution of at least a proportion of the liquid beverage ingredient(s) takes place after the introduction of the aqueous medium into the compartment containing said ingredient(s) and that therefore the effect of delaying dilution takes place within said compartment containing said ingredient(s). Thus, said means for controlling/delaying dilution have to be **within said compartment**.

The expression "on introduction of the aqueous medium into the compartment" establishes further that the aqueous medium flows through the interior of said compartment. Accordingly, the established aqueous medium flow path for the dilution of said at least a proportion of the liquid beverage ingredient(s) runs from the inlet to the outlet via the interior of said compartment.

Moreover, according to claim 1 as granted said means

for controlling/delaying dilution comprises a **partition** which hinders entry of at least a proportion of the liquid beverage ingredient(s) into the aqueous medium flow path, the latter being defined as above, i.e. running from the inlet to the outlet via the interior of the compartment which contains the liquid beverage ingredients.

Finally, considering the partition to be outside of said compartment would deny it performing its claimed function, would be technically meaningless and would have no basis in the originally filed application.

1.5 Therefore, the cartridge as disclosed in the combination of the originally filed claims 1 to 3 and in the combination of paragraphs 5, 9 and 10 of the originally filed description already includes inherently the above-mentioned added features that the partition is **in the compartment** and hinders **in the compartment** entry of at least a proportion of the one or more liquid beverage ingredients into the aqueous medium flow path. None of the above mentioned parts of the originally filed application is specifically linked to the fourth embodiment. Thus, the Board sees no need for an introduction of any kind of additional limitation, for example in the form of the features disclosed in the description of the fourth embodiment concerning the specific shape, configuration and orientation of the partition, into claim 1 in addition to the above-mentioned amendments in order for it to comply with the requirements of Article 123(2) EPC.

1.6 The Board remarks further that decisions T 284/94 (*supra*) and T 17/86 (*supra*) referred to by the

appellant are not applicable to the present case, since they concern the addition to a claim of a technical feature taken in isolation from an embodiment in the description, whereas in the present case the above-mentioned amendments in claim 1 have not necessarily been taken from a specific embodiment but were inherently disclosed in the combination of the originally filed claims 1 to 3 and in the combination of paragraphs 5, 9 and 10 of the general part of the originally filed description, the latter containing no reference at all to any specific embodiment.

- 1.7 For the aforementioned reasons, the above-mentioned amendments in claim 1 do not contravene the requirements of Article 123(2) EPC.

2. *Clarity – Article 84 EPC*

The Board considers, in accordance with its preliminary opinion expressed under point 3 of the annex to the summons to oral proceedings, that in claim 1 the added terms "in the compartment" and "within the compartment" have a clear and unambiguous technical meaning and they do not describe a "result to be achieved". This was not contested by the appellant.

The Board considers further that the feature of claim 1 as granted that the partition hinders entry of a proportion of the liquid beverage ingredient(s) into the aqueous medium flow path defines the partition's function. The above-mentioned added expressions "in the compartment" and "within the compartment" are specific technical features indicating the space within which the partition is positioned and within which said

partition performs that function. The appellant's argument that these expressions define "a desired result to be achieved" cannot thus be followed by the Board.

Therefore, claim 1 meets the requirements of Article 84 EPC.

3. *Sufficiency of disclosure - Article 100(b) EPC*

3.1 According to the established case law of the Boards of Appeal an invention is in principle sufficiently disclosed if at least one way is clearly indicated enabling the person skilled in the art to carry out the invention and sufficient information is present to extend the example over the breadth of the claim, see Case Law of the Boards of Appeal of the EPO, 6th edition 2010, II.A.3.b. and II.A.3.c. In the present case one way of carrying out the invention is indisputably described in the patent, in the form of the fourth embodiment.

3.2 Although the Board agrees with the appellant that, since no further specification as far as it concerns the specific structure or configuration of the partition is given in claim 1, said claim covers any type of partition: "horizontal, vertical, straight or cup-shaped partitions, partitions with or without apertures, etc", the Board, on the other hand, is of the opinion that the skilled person guided by the teaching of claim 1 in connection with the description and using his common general knowledge would not just position any type of partition arbitrarily within any kind of compartment, as argued by the appellant, but

instead, depending on the circumstances and on the configuration of the other parts of the cartridge, in particular of the compartment, he would choose, without any undue burden and by trial and error, an appropriate type of partition and would position it so that the claimed effect can be obtained therein.

The presentation of a specific realisation of such a partition in the fourth embodiment is especially supportive in this sense for the skilled person. Since the form of the partition of the fourth embodiment is obviously adapted to the corresponding, inverted-cup form of the cartridge, the skilled person realises that in case of a different cartridge form also a different partition form is needed. In this respect the Board wishes to point out that the skilled person in any case will not try out arrangements of partitions and compartments which will, from the outset, not function anyway.

3.3 Furthermore, the appellant, who raised the objection of insufficient disclosure and who thus bears the burden of proof, did not provide any evidence that the present invention cannot be performed within the ambit of claim 1.

3.4 The Board notes further that the decision T 435/91 (*supra*) referred to by the appellant was concerned with an invention relating to a composition; this is not the same as the present invention, which is directed to a cartridge containing structural parts in the form of a compartment and a partition. Therefore, the above-mentioned decision is not applicable to the present

case.

3.5 The Board is therefore satisfied that the patent in suit discloses the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art and that the opposition ground according to Article 100(b) EPC does not hold.

4. *Novelty – Article 54 EPC*

4.1 D1

4.1.1 In D1, the aqueous medium flow path is from the inlet of the cartridge along the side channels 6 through the slots 7 into the compartment 9 and then upwardly through the beverage ingredients and through the filter material 10 into passages 11 and onward to the outlet of the cartridge. Thus, all of the beverage ingredients contained within the compartment 9 are always in the aqueous medium flow path of the cartridge. The slots 7 and the wall 8 in which the slots are provided do not hinder entry of at least a proportion of the one or more liquid beverage ingredients into the aqueous medium flow path since the beverage ingredients are already within the aqueous medium flow path of the cartridge of D1.

4.1.2 The cartridge known from D1 does not disclose therefore means for delaying dilution having a partition as claimed in the characterising part of claim 1.

4.2 D2

4.2.1 The Board notes firstly that D2 does not disclose a **sealed** cartridge containing **liquid** beverage ingredient(s).

4.2.2 Cartridge shown in figures 15 and 16

The cartridge shown in figures 15 and 16 has two inlets 104 and an ingredient extraction chamber 106 containing beverage ingredients, see page 26, first paragraph. It further comprises a bypass conduit 114, the purpose of said last being to allow the brewing fluid to pass directly from the fluid introduction site to the extraction exit site without having to pass through an ingredient extraction chamber, see page 16, chapter (vii) and page 21, chapter (i)(2).

Considering the entire cartridge 100 of the embodiment of figure 15 as corresponding to the compartment as claimed in claim 1 of the patent in suit, there are three different possibilities of using said cartridge. In the case where only the bypass conduit 114 is provided with aqueous medium the beverage ingredients being positioned within the chamber 106 are **not at all diluted** and thus the cartridge 100 does not contain **means for delaying** the dilution of the beverage ingredients, because no dilution takes place.

In the case where the aqueous medium enters through either both inlets 104 or only through the inlet 104 corresponding to the ingredient extraction chamber 106, still **all** of the beverage ingredients contained in chamber 106 are **immediately diluted**/acted upon by the aqueous medium entering the compartment through the inlet 104 associated with said chamber. Thus, there is

again **no delaying of dilution** of a proportion of the beverage ingredients on introduction of the aqueous medium into the compartment.

If the aqueous medium enters through both inlets, the wall between the conduit 114 and the chamber 106 may delay dilution by only later (or downstream) adding it to already diluted ingredients, said wall cannot however be the claimed "partition which hinders entry of at least a portion of the liquid beverage ingredients into the aqueous medium flow path", as the latter (see point 1.4) is defined as going **through** the liquid ingredients.

The cartridge according to figures 15 and 16 does not provide therefore **means for delaying dilution** of a proportion of the beverage ingredients on introduction of the aqueous medium into the compartment as claimed in the characterised part of claim 1.

4.2.3 Cartridge shown in figure 14

Considering the whole cartridge 100 as corresponding to the compartment according to claim 1, then in the case where aqueous medium is introduced for example **only** into the larger of the chambers 106, all of the beverage ingredients contained in said chamber are **immediately diluted**/acted upon by the aqueous medium entering that chamber. At the same time the beverage ingredient contained in the smaller chamber is **not diluted** at all. Thus, also here **no delaying of dilution** of a proportion of the beverage ingredients on introduction of the aqueous medium into the compartment takes place, so **no means for delaying dilution** as

claimed in the characterising part of claim 1 is provided. The same applies, naturally, in case the aqueous medium enters only the smaller of the two chambers 106.

In the case where aqueous medium is introduced at the same time into both chambers 106, then all of the beverage ingredients contained in both chambers are **immediately diluted**/acted upon by the aqueous medium. Again, **no delaying** of dilution takes place and as a result **no means for delaying dilution** as claimed in the characterising part of claim 1 is provided.

Even accepting the appellant's argument that a further dilution takes place in the collection chamber 110 then this is only a further dilution of the already diluted beverage ingredients but, as stated in the previous paragraph, when aqueous medium is introduced at the same time into both chambers 106 then all of the beverage ingredients contained in both chambers are **immediately diluted**/acted upon by the aqueous medium entering the said chambers 106, so **no delaying** of dilution takes place.

4.2.4 Cartridge shown in figures 12 and 13

The Board cannot see how the apertures of the divider 128, said apertures optionally containing filter media, hinder or delay entrance of a proportion of the liquid beverage ingredients into the aqueous medium flow path from the first chamber 106 into the second chamber 106, as it is one and the same aqueous medium entering via the inlets 104 going through the first and second chambers. Accordingly, said divider 128 cannot be seen

as the claimed means for delaying dilution.

4.2.5 Following the above the Board concludes that D2 not only does not disclose a sealed cartridge containing liquid beverage ingredient(s) but also that a cartridge known from the above-mentioned figures and the rather limited description of D2 does not involve the means for delaying dilution on introduction of the aqueous medium into the compartment as claimed in the characterising part of claim 1.

4.3 Accordingly, the subject-matter of claim 1 is novel and meets the requirements Article 54 EPC.

5. *Inventive step – Article 56 EPC*

5.1 The cartridge according to claim 1 differs from the one known from D1 in that it involves means for delaying dilution as claimed in the characterising part of claim 1.

These distinguishing features lead to the effect that the liquid beverage ingredient(s) contained within the compartment is/are not all diluted at the same time in the brewing process, but the dilution of at least a proportion thereof is delayed and this diluted product therefore enters the aqueous medium flow path later or at a slower rate.

5.2 The problem to be solved can therefore be seen in the provision of a cartridge enabling the liquid beverage ingredient(s) to be dispensed in a more even concentration over the operating cycle, see paragraph

[0009] of the patent.

- 5.3 D1 is directed to the cartridges operating at a relatively low pressure which is capable of producing whipped beverages, see column 2, lines 6 to 8. D1 itself does not recognise this problem.

The available prior art does not indicate any solutions going in the direction of the claimed dilution delaying means, in the compartment containing the ingredients.

The aim of D2 is to produce a cartridge that allows the end strength of the beverage in the cup to be adjusted, at most by allowing some water to flow through the cartridge without ever contacting the beverage ingredients in the ingredient extraction chamber, see page 1, second paragraph; page 16, last complete paragraph; page 21, last complete paragraph. The first complete paragraph on page 2 of D2 refers to the consistency of the quality of the end product and not to the consistency of the dilution process in the compartment, the problem solved by the cartridge of claim 1.

- 5.4 From the above it follows that the skilled person is not provided with any teachings leading him to the subject-matter of claim 1, nor can it be expected of him to arrive, by application of his general technical knowledge, at that subject-matter.

- 5.5 The Board therefore concludes that the subject-matter of claim 1 involves an inventive step and meets therefore the requirements of Article 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Nachtigall

H. Meinders