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D E C I S I O N
of 17 September 1996

Case Number: T 0396/95 - 3.3.2

Application Number: 91917683.4

Publication Number: 0495094

IPC: B01F 3/04

Language of the proceedings: EN

Title of invention:
Water carbonator system

Applicant:
EBTECH, INC.

Opponent:
-

Headword:
Water carbonator/EBTECH

Relevant legal provisions:
EPC Art. 123(2) EPC

Keyword:
Deletion of essential feature - unallowable extension

Decisions cited:
T 0331/87, T 0623/92

Catchword:



Case Number: T 0396/95 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 17 September 1996

Appellant:

EBTECH, INC.
265 North Hamilton Road
US - Columbus, OH 43213-0150 (US)

Representative:

Ruschke, Hans Edvard, Dipl. -Ing.
Patentanwälte
Ruschke & Partner
Pienzenauerstrasse 2
DE - 81679 München (DE)

Decision under appeal:

Decision of the Examining Division of the
European Patent Office posted 07 December 1994
refusing European patent application
No. 91 917 683.4 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: M. M. Eberhard
Members: G. J. Wassenaar
R. E. Teschemacher

Summary of Facts and Submissions

I. European patent application No. 91 917 683.4 was refused by a decision of the Examining Division. The decision was taken on the basis of the amended claims 1 to 9 filed on 26 February 1993, as main request. Amended claim 1 reads as follows:

"1. A chilled beverage system, comprising:

a generally upright reservoir having upper and lower ends;

means for introducing a liquid beverage into said reservoir via an inlet generally at one of said upper and lower ends of said reservoir;

an elongated impeller shaft extending generally centrally and vertically within said reservoir;

means for rotatably supporting said shaft for rotation about its own axis within said reservoir;

drive means for rotatably driving said shaft about its own axis;

a plurality of vaneless impeller disks carried on said shaft in vertically spaced relation for rotation therewith;

refrigeration means including cooling coils mounted about the periphery of said reservoir to chill the beverage within said reservoir; and

dispensing outlet means disposed generally at the other of said upper and lower ends of said reservoir for drawing the chilled beverage from said reservoir, said disks upon rotation of said

shaft each pumping the beverage in the vicinity thereof in a generally radially outward direction toward the periphery of said reservoir into close heat exchange proximity with said cooling coils to chill the beverage, whereby said disks collectively pump beverage introduced into said reservoir into close heat exchange proximity with said cooling coils a plurality of times as such beverage travels between said upper and lower reservoir ends and before such beverage is drawn from said reservoir by said dispensing outlet means, and further whereby said disks collectively provide a plurality of radially outwardly directed beverage flows within said reservoir to minimize ice ring formation within said reservoir at the periphery thereof."

- II. The Examining Division held that the amended claims of the main request contained subject-matter which extended beyond the content of the application as filed so that the application did not fulfil the requirements of Article 123(2) EPC. According to the decision, the extension resulted from the deletion of the feature "carbonating", which was considered to be essential in an application with the title "Water Carbonator System", with all original claims concerning "a water carbonator system" and with a description constantly relating to carbonator systems and carbonated beverages. The Examining Division took the view that a patent could be granted on the basis of the claims according to the auxiliary request submitted on 5 September 1994.
- III. The Appellant lodged an appeal against this decision. In the Statement of the Grounds of Appeal, the Appellant argued that the deleted feature was not

essential for the performance of the invention so that its deletion would not violate Article 123(2) EPC. In particular, the following arguments were put forward:

- The title was only meant for identification and classification purposes and has always been considered of such little importance that the PCT and the EPC hardly deal with it. Therefore, the fact that a feature appeared in the title did not mean that said feature was essential for the invention.

- The Examining Division admitted that the "carbonating" feature was not indispensable for the function of the invention in the light of the technical problem it served to solve. Nowhere in the specification was an explanation to be found which directly and unambiguously explained the said feature as essential. On the contrary, some statements in the description suggested alternatives to the "carbonating" feature.

- Any original claims were really only the applicant's first attempt to formulate a reasonable scope of protection. It should be accepted that a particular feature could eventually be deleted when it became clear that such a feature was not essential for the performance of the invention.

- Any lay person knew that flavoured chilled beverages were available in carbonated and uncarbonated form and that dispensing devices for both types of beverages were often very similar. Therefore, when one primary objective of the invention was to achieve improved chilling, a lay person would have recognized the nonessential character of the "carbonated" feature.

Two US patent specifications, US-A-3 295 723 and US-A-5 160 461 and decision T 0331/87 (OJ EPO 1991, 22) were cited to support these arguments.

- IV. In a communication of the Board pursuant to Article 110(2) EPC the Appellant was informed of the Board's provisional opinion that the "means for introducing a carbonating gas into the reservoir" seemed to be an essential feature of the invention as originally filed and that its deletion would therefore violate Article 123(2) EPC.

In reply thereto the Appellant maintained their position that the said feature was only optional in a system to obtain chilled beverages as originally disclosed. In a telefax dated 19 August 1996 the Appellant indicated that they wished to fall back on amended claims 1 to 9 submitted on 5 September 1994 as auxiliary request if claims 1 to 9 according to the main request were unacceptable.

- V. During oral proceedings, which took place on 17 September 1996, the Appellant developed the arguments presented earlier in the proceedings and made reference to decision T 0623/92 (not published in OJ EPO). It was stressed that the means for introducing a carbonating gas were not indispensable for solving the problem of improving the chilling of the water in the reservoir. The fact that "carbonation" was consistently mentioned in the application as filed should be considered as a "misformulation" which would immediately be recognized as such by a skilled person. The Board also questioned the allowability of the amendments in claim 1 of the auxiliary request submitted on 5 September 1994, because the amendments appeared to imply that a beverage other than water could be present in the cooling and mixing reservoir, which was not disclosed in the application as

originally filed. In reply thereto, the Appellant abandoned this auxiliary request and requested that the set of claims 1 to 9 as originally filed be considered as new auxiliary request.

- VI. The Appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 9 filed on 26 February 1993 as a main request, or alternatively on the basis of claims 1 to 9 as filed in the original application as auxiliary request.

Reasons for the Decision

1. The appeal is admissible.
2. *Allowability of amendments in the main request*
 - 2.1 Present claim 1 differs from original claim 1 in that the original feature that the system comprises means for introducing a selected carbonating gas into a generally upright reservoir for mixture with the water therein to form carbonated water has been deleted.
 - 2.2 The problem whether deletion of a feature in a claim is an allowable amendment under Article 123(2) EPC, has been dealt with in various decisions of the Boards of Appeal. According to the cited decision T 0331/87, removal of a feature from a claim may not violate Article 123(2) EPC provided that the skilled man would directly and unambiguously recognise that (1) the feature was not explained as essential in the disclosure, (2) it is not, as such, indispensable for the function of the invention in the light of the technical problem it serves to solve, and (3) the removal requires no real modification of other features to compensate for the change (see point 6). This

position has been confirmed by the decision T 0623/92 to which the Appellant referred. In the present application, it is not expressly mentioned that the "carbonation" feature is essential for the invention but this follows implicitly from the whole presentation of the invention. The "carbonation" feature is indispensable for the function of the invention in the light of the technical problem it serves to solve, as will be explained below.

- 2.3 As indicated in the application as filed the invention concerns a water carbonator system and relates generally to improvements in systems for carbonating and chilling water (cf. page 1). Known carbonated water systems for mixing a carbonated gas with a fresh water supply and including a water reservoir are then described on pages 1 and 2, as well as their drawbacks. This review of the prior art carbonated water systems is followed by a statement concerning the technical problem to be solved by the invention: see paragraph bridging pages 2 and 3. The technical problem underlying the invention as presented in this paragraph is to improve carbonated water systems for use in preparing and dispensing carbonated beverages, wherein the residence time of each refill water volume within a refrigerated reservoir is increased to achieve substantially improved chilling and concurrent gas mixing despite dispensing of multiple servings in rapid succession, and further wherein the development of a reservoir ice ring is substantially eliminated.

Thus the technical problem underlying the invention includes both chilling of the water and concurrent gas mixing. The improved water carbonator system proposed to solve this problem and described in the general part of the description headed "SUMMARY OF THE INVENTION" includes an improved mixing impeller arrangement within a refrigerated refillable water reservoir and leads to

improved intermixing of the water with a carbonating gas and improved heat transfer for chilling purposes (cf. page 3). This implies that the water carbonator system has means for introducing a carbonating gas into the reservoir containing the water. This feature is correspondingly mentioned in the original claims and described in detail in the description of the preferred embodiment. Means for introducing a carbonating gas are further shown in the drawings. It is not directly and unambiguously derivable from the application as filed that the addition of a carbonating gas is only optional and that the invention also encompasses an apparatus without means for introducing a carbonating gas to prepare non-carbonated beverages.

Therefore, the "carbonation" feature is considered to be indispensable for the function of the invention in the light of the technical problem it serves to solve. It also follows from the preceding reasons that the "means for introducing a selected carbonating gas into said reservoir for mixture with the water therein to form carbonated water" as mentioned in original claim 1, is an essential feature of the invention, whose deletion extends the subject-matter of the application beyond the content of the application as filed.

- 2.4 The Appellant's allegation that there are many instances in the original specification which, by themselves, suggest alternatives to the "carbonating" feature, cannot be followed. The statements "more efficient gas-water mixing and chilling of the resultant beverage" in the first paragraph of the description, "a carbonating gas, such as carbon dioxide" in the second paragraph of the description and "In the preferred form, the reservoir includes separate injector nozzles at one end thereof for the respective introduction of water and carbonating gas, such as

carbon dioxide gas into the reservoir interior" on page 3 of the description, to which the Appellant referred in the Statement of Grounds, do not indicate that the "carbonation" feature is only optional. The first statement, when read in the context of the first paragraph, does not imply that the invention relates to chilling of a non-carbonated beverage. The indication "such as" in the second statement means that other carbonating gases may be used, but not that a carbonating gas is not necessary. The terms "in the preferred form" used in the third statement do not imply that the introduction of a carbonating gas is a preferred feature since the sentence also recites additional features (i.e. separate injector nozzles at one end of the reservoir) which are clearly preferred features.

2.5 The Appellant's arguments against the essential character of the "carbonation" feature, mentioned above under point III, cannot be followed for the following reasons:

2.5.1 The title, indicated on page 1 of the present application, is in full agreement with the description. Whatever the purpose of the title of the application is, in the present case it confirms that the "carbonation" feature is essential for the invention.

2.5.2 It can be accepted that elimination of the ice ring, which according to the application is observed in conventional chilled carbonated water systems, is a major problem which the inventor tried to solve.

Indeed, the skilled person would not regard the carbonation feature as indispensable for the function of the invention, if the invention concerned the obtaining of chilled beverages and the problem underlying the invention only lay in how to improve the

cooling of the water in order to provide cooled beverages. In the present case, however, the application as originally filed relates to a "water carbonator system" and the problem underlying the invention also comprises the improvement of gas/liquid mixing. In this case, the skilled person would regard the carbonation feature as indispensable for solving the problem underlying the invention.

2.5.3 In the European Patent system, there is no principle prohibiting the broadening of claims during examination. However, according to Article 123(2) EPC, the claims or any other part of the patent application may not be amended in such a way that they contain subject-matter which extends beyond the content of the application as filed. This requires that the subject-matter of the claims as amended was already disclosed in the description, claims and any drawings as filed. In order to prevent claims from being extended to include a more general teaching which was not originally disclosed, the case law has developed the criteria referred to under point 2.2. As explained in detail above, at least one of these criteria is not fulfilled in the present case. Therefore, the deletion of the "carbonation" feature is not justified.

2.5.4 It can be inferred from US-A-3 295 723 (column 2, lines 24-27) that dispensing devices for carbonated and uncarbonated beverages may be similar if tap water is used for the uncarbonated beverages and carbonated water is used for the carbonated beverages. The cooling device of the dispenser disclosed in US-A-3 295 723 and consisting of a simple cooling coil under cracked ice, is essentially different from the cooling device according to the present application. The said prior art device is not suitable for providing carbonated beverages starting with tap water as is the case in the present application, since it includes no means for

carbonating the tap water. Thus, the fact that the said prior art dispenser can be used for carbonated and non-carbonated beverages does not imply that the deleted "carbonation" feature is not an essential feature in the present application.

- 2.6 The Appellant's further argument that the consistent reference to carbonated water in the application as filed is due to a "misformulation" but that the skilled man would have readily understood that the feature of introducing a carbonating gas has nothing to do with the problem of avoiding the ice ring development has no factual basis.

Since description, figures and claims of the application as originally filed were in perfect agreement with each other, the skilled man had no reason to suppose that the consistent reference to carbonated water was due to a misformulation and that use of a carbonating gas was only optional.

- 2.7 The Appellant has submitted that the EPO should not overestimate the importance of the original claims in deviating from a more liberal approach taken in other patent systems. He has stated that the corresponding US patent was granted without the "carbonating" feature, apparently alleging that the broadening of claims was possible without affecting the filing date of the US patent. This cannot be confirmed on the basis of the data available to the Board. US-A-5 160 461, published after the filing date of the present application, is based on the application No. 831 803 of 3 February 1992, which is a continuation in part of Ser. No. 653 055 of 11 February 1991, which is itself a continuation in part of Ser. No. 562 244 of 3 August 1990 on which the priority of the present application is based. The main claim of US-A-5 160 461 is identical to the present amended main claim. The filing date

(3 February 1992) of the broader claim in the US patent 5 160 461 is thus later than the filing date (29 July 1991) of the present application. The priority document of the present application has resulted in a US patent (US-A-5 071 595) with claims identical to the claims of the present application as originally filed. Thus, in the United States the broadening of the main claim was allowed in a continuation in part with a later filing date. Therefore, the Appellant's arguments concerning a more liberal approach in the United States are not convincing.

- 2.8 For these reasons the Board is of the opinion that the amendments according to the main request extend the subject-matter of the application beyond the content as originally filed so that this request is not allowable under Article 123(2) EPC.

3. *Auxiliary request*

The set of claims as originally filed, which form the basis of the present auxiliary request, is in its unamended form not open to objections under Article 123(2) EPC. Since the contested decision only dealt with objections under Article 123(2) EPC and the set of claims as originally filed has not even been the subject of substantive examination by the Examining Division, the Board exercises its power under Article 111(1) EPC, to remit the case to the first instance for further prosecution.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution on the basis of claims 1 to 9 as filed in the original application.

The Registrar:

The Chairman:

P. Martorana

M. M. Eberhard