

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 29 January 2019**

Case Number: T 0540/15 - 3.2.03

Application Number: 02753382.7

Publication Number: 1415113

IPC: F24D1/00, B01L7/00, C12Q1/68

Language of the proceedings: EN

Title of invention:
THERMAL CYCLING SYSTEM AND METHOD OF USE

Patent Proprietor:
BioFire Diagnostics, Inc.

Opponent:
Roche Molecular Systems, Inc.

Headword:

Relevant legal provisions:
EPC Art. 83

Keyword:
Sufficiency of disclosure - (no)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0540/15 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 29 January 2019

Appellant: Roche Molecular Systems, Inc.
(Opponent) 4300 Hacienda Drive
Pleasanton, CA 94588 (US)

Representative: Bösl, Raphael Konrad
Patentanwälte
Isenbruck Bösl Hörschler PartG mbB
Postfach 86 08 80
81635 München (DE)

Respondent: BioFire Diagnostics, Inc.
(Patent Proprietor) 390 Wakara Way
Salt Lake City, Utah 84108 (US)

Representative: Elsy, David
Withers & Rogers LLP
4 More London Riverside
London SE1 2AU (GB)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
16 January 2015 concerning maintenance of the
European Patent No. 1415113 in amended form.**

Composition of the Board:

Chairman G. Ashley
Members: C. Donnelly
G. Weiss

Summary of Facts and Submissions

- I. The appeal lies from the decision of the opposition division to maintain European Patent No. 1 415 113 in amended form.

The opponent ("appellant") lodged an appeal against this decision. In support of its case with respect to Article 83 EPC, it referred in particular to the following documents:

D10: "Robot manipulators" by Richard P. Paul, pp 41 to 49, 1981;

D14: Wikipedia article on "Orientation (geometry)", page last amended 19 November 2015;

D15: Wikipedia article on "Position", page last amended 7 October 2015.

- II. In reply to the grounds, the patent proprietor ("respondent") submitted counter-arguments. With respect to its submissions concerning Article 83 EPC, it referred in particular to the following document:

D12: excerpt from the Collins Concise Dictionary of the English Language, 1982 edition page 796, "orientation";

- III. In a communication, pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to the summons to oral proceedings, the Board informed the parties of its provisional opinion.

- IV. Oral proceedings were held on 29 January 2019. At the end of the debate the parties confirmed the following requests:

The appellant (opponent) requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed, alternatively, that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of one of the first, second or third auxiliary requests filed with the response to the grounds.

V. Both parties referred to the following feature analysis of claim 1 in the version which the opposition division considered could be maintained:

1) A temperature cycling apparatus for repeatedly heating and cooling a reaction mixture (16), the apparatus comprising:

2) a flexible reaction vessel (20),

2.1) the reaction vessel comprising a plurality of individual reaction vessels (18) coupled together to form a row of reaction vessels,

2.1.1) each individual reaction vessel configured to receive the reaction mixture therein,

2.1.2) each individual reaction vessel including a body having first and second portions coupled together, forming a row of the first body portions and a row of the second body portions;

3) a first heater movable between

3.1) a first orientation in which the first heater affects the temperature of the row of the first body portions and

3.2) a second orientation in which the first heater does not substantially affect the temperature of the row of the first body portions;

4) a second heater movable between

4.1) a first orientation in which the second heater affects the temperature of the reaction mixture in the row of the second body portions and

4.2) a second orientation in which the second heater does not substantially affect the temperature of the reaction mixture in the row of the second body portions,

5) wherein the first heater is configured to receive the row of the first body portions and

6) the second heater is configured to receive the row of the second body portions and

7) wherein the first heater is configured such that when the first heater is moved from the first orientation to the second orientation, the first heater forces the reaction mixture into the row of the second body portions and

8) wherein the second heater is configured such that when the second heater is moved from the first orientation to the second orientation, the second heater forces the reaction mixture into the row of the first body portions.

VI. *The appellant's submissions relevant to the final decision can be summarised as follows:*

Consideration of late filed document US 7,799,521 B2

This document was only handed over at the beginning of the oral proceedings. For this reason alone it should not be admitted into the proceedings since it could have been submitted much earlier. Furthermore, it is no more relevant than E2 which is already in the proceedings.

Main request, Insufficiency of disclosure, Article 83 EPC

The subject-matter of claim 1 does not meet the requirements of Article 83 EPC since the patent does not sufficiently disclose how the "orientation" of the heaters can be implemented in order to achieve the further functional requirements specified in the claim.

The expression "orientation" is not to be found in the description of the patent since it is only employed in the claims. The meaning of the term "orientation" in a technical context is well understood by those skilled in the art. However, even if it were necessary to clarify its meaning, the skilled person would consult a text such as D10, D14 or D15 from which it is clear that "orientation" is a particular placement or alignment of a body in space wherein the orientation of the body is defined by rotations about the x,y and/or z axes compared to an initial placement.

In contrast, D10 specifies the expression "position" as a translatory transformation; this definition is confirmed by D15. D12 also does not contradict this understanding. Therefore, the skilled person would understand that "orientation" of a body in space requires at least one rotational movement, but does not require a translatory movement, whereas the technical characteristic of "positioning" a body in space requires a translatory movement.

In conclusion, the meaning of the term "orientation" and the subject-matter of claim 1 is clear without any need to turn to the description for further interpretation. It follows that the opposition division erred in assuming that the terms "orientation" and "position" can be used equivalently.

Since there is no teaching in the patent as to how any change in "orientation" of the heaters as specified in claim 1 can be provided in order to implement the functional requirements specified in features 3.1, 3.2, 4.1, 4.2, 7 and 8, the requirements of Article 83 EPC are not met.

VII. The respondent's submissions relevant to the final decision can be summarised as follows:

Consideration of late filed document US 7,799,521 B2

US 7,799,521 B2 is relevant since it shows that the appellant apparently had no difficulty understanding what was meant by "orientation".

Main request, Insufficiency of disclosure, Article 83 EPC

The term "orientation" is clear and readily understood by the skilled person when read in the context of the patent. In particular, according to the definition given in D12 it is "the act or process of orienting or the state of being oriented", where "orient" means "to adjust or align (oneself or something else) according to the surroundings or circumstances.". Therefore, the skilled person would refer to the "position" as used in the specification without any confusion.

D10 is not relevant to the present invention since it is a far too complex and specialised reference which is limited to particular types of robotic manipulator. D14 and D15 are Wikipedia references which are written anonymously with no guarantee as to their accuracy. By contrast, D12 provides a widely accepted dictionary definition of the term "orient".

Reasons for the Decision

1. Consideration of late filed document, US 7,799,521 B2

US 7,799,521 B2 was filed for the first time at the beginning of the oral proceedings, since it also essentially comprises the same subject-matter as E2 which is already in the proceedings, it will not be taken into consideration (Article 13(1) RPBA).

2. *Relevance of D10, D14 and D15*

2.1 The appellant referred to these documents in support of its submission that the meanings of the terms "orientation" and "position" have accepted definitions in the art. However, the respondent is correct to point out that Wikipedia articles must be treated with caution since they are written by anonymous authors and can be modified at any time. Although the content of D10 comprises a complex mathematical analysis of robot manipulators, it must be remembered that the subject-matter of the patent is from a similar field with similar complexity. Therefore, it is to be expected that the person skilled in the art of robot manipulators for handling DNA samples would consult such a document as D10, and that the terminology used therein is representative of the conventions used in the art.

2.2 D12, cited by the respondent, provides a standard non-technical dictionary definition of the term "orientation" and as such would also be taken into account by the skilled person.

3. *Insufficiency of disclosure, Article 83 EPC*

3.1 *Definition of the term "Orientation"*

3.1.1 Paragraphs 2.2 and 2.3 of D10 provide a specification of the term "orientation" as used in robot manipulators, from which it is clear that some degree of rotation or sequence of rotations is involved.

3.1.2 D12 does not contradict this conclusion. Indeed, the second definition (2) of "orientation" provided by D12

confirms that some degree of rotation is required, since it states:

"positioning with relation to the compass or other specific directions"

The third definition (3) of "orientation" referred to by the respondent, namely:

"to adjust or align (oneself or something else) according to the surroundings or circumstances"

is also not in contradiction with this understanding since, in order to adjust or align something to its surroundings, some degree of rotation is usually required.

- 3.1.3 Thus, also from D12, it is clear that "orientation" is a specific form of "positioning" involving rotation or an angular alignment.
- 3.1.4 The term "orientation" also makes technical sense in the context of the claim, since configurations in which the heaters are rotated between first and second orientations are theoretically possible. In conclusion, the technical meaning of the term "orientation" is clear to the skilled person without any need to turn to the description for further interpretation.
- 3.2 *Disclosure in the patent relating to movement of the heaters*
- 3.2.1 The term "orientation" is only employed in the claims and is not to be found in the description of the patent. It must therefore be seen whether the skilled person is provided with enough information by the

patent as a whole to carry out the invention based on the above understanding of the term "orientation".

- 3.2.2 In the embodiments shown in figures 1A to 1E, 3, 4A to 4C, 5 and 6 of the patent, stepper motors 29,31 are provided to move the heaters 27,28 in a linear path between open and closed positions along an axis lying along the length of the shafts 34. Although stepper motors 29,31 are shown, any suitable type of actuator is possible (see paragraph [0030]). However, no mention or disclosure of an actuator providing a rotational movement of the heaters between the open and closed positions is given.
- 3.2.3 As explained in paragraph [0053] of the patent, in the embodiments shown in figures 8 and 9, sets 129, 130 of bladders 144, 146 and 148, 150 are provided to produce a rocking motion on respective movable heaters 27 and 28 to allow mechanical mixing of the samples within each temperature zone 66,68 in order to improve the temperature uniformity of the sample.
- 3.2.4 Although the bladders produce a change in orientation of the heaters when providing the rocking motion, this is not a movement as specified in claim 1, wherein the first heater is configured such that when it is moved from the first orientation to the second orientation, it forces the reaction mixture into the row of the second body portions, and wherein the second heater is configured such that when it is moved from the first orientation to the second orientation, it forces the reaction mixture into the row of the first body portions (features 7 and 8).
- 3.2.5 Also, this movement does not fulfil the requirements of claim 1, namely that in a first orientation the heater

affects the temperature of the reaction mixture in the row of the second body portions, and in a second orientation it does not substantially affect the temperature of the reaction mixture in the row of the second body portions, as required by features 32 (features 3.1, 3.2; 4.1, 4.2).

3.2.6 The patent does not disclose any way in which such a movement between a first and a second orientation can be carried out, nor is one obvious to the skilled person.

3.2.7 Consequently, the invention as defined in claim 1 of the main request does not meet the requirements of Article 83 EPC since the patent does not disclose in a manner sufficiently clear and complete how to implement the invention specified in claim 1.

4. *Auxiliary requests*

The same conclusion applies to claim 1 of the auxiliary requests 1 to 3 since the term "orientation" is also employed in the same manner.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



C. Spira

G. Ashley

Decision electronically authenticated