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**Datasheet for the decision
of 25 May 2022**

Case Number: T 0901/18 - 3.4.01

Application Number: 11738283.8

Publication Number: 2446705

IPC: H05B6/64

Language of the proceedings: EN

Title of invention:
LOSS PROFILE ANALYSIS

Patent Proprietor:
Goji Limited

Opponent:
Whirlpool EMEA S.p.A.

Headword:
RF heater

Relevant legal provisions:
EPC Art. 100(b)
EPC R. 103(4)(c)

Keyword:

Sufficiency of disclosure - (no)

Decision in written proceedings - (yes) - announcement of non-attendance of the oral proceedings

Partial reimbursement of appeal fee at 25% (yes)

Decisions cited:

T 0517/17, T 0202/18, T 0488/18



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 0901/18 - 3.4.01

D E C I S I O N
of Technical Board of Appeal 3.4.01
of 25 May 2022

Appellant: Whirlpool EMEA S.p.A.
(Opponent) Via Carlo Pisacane 1
Pero (MI) (IT)

Representative: Spina, Alessandro
Whirlpool Management EMEA S.R.L.
Via Carlo Pisacane, 1
20016 Pero (MI) (IT)

Respondent: Goji Limited
(Patent Proprietor) Beacon House
43 Cedar Avenue
Hamilton HM 12 (BM)

Representative: Korenberg, Alexander Tal
Kilburn & Strode LLP
Lacon London
84 Theobalds Road
London WC1X 8NL (GB)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
25 January 2018 concerning maintenance of the
European Patent No. 2446705 in amended form.**

Composition of the Board:

Chair P. Scriven
Members: A. Medeiros Gaspar
C. Almberg

Summary of Facts and Submissions

- I. The opponent appealed the Opposition Division's decision to the maintain European patent in amended form.
- II. The notice of opposition included objections of insufficient disclosure under Article 100(b) EPC.
- III. On appeal, the opponent requested that the decision be set aside and that the patent be revoked, arguing that the invention as defined in the amended patent was not sufficiently disclosed.
- IV. The proprietor/respondent requested, in its reply, that the appeal be dismissed.
- V. Both parties made conditional requests for oral proceedings.
- VI. Claim 1 of the amended patent reads:

Apparatus for applying RF energy to an object (50, 66, 68, 82, 830), the apparatus comprising:

*a radiating element (18, 32, 34)
arranged to provide RF energy to an
object in a cavity (20, 1800);*

a detector (40) coupled to the radiating element (18, 32, 34) configured to detect incident power, reflected power and/or transmitted power; and

a processor (30, 630) configured to:

(a1) discretize the cavity into discrete regions R_i

(a2) determine a plurality of predetermined RF field patterns;

(a3) cause RF energy to be applied to the object in the cavity such that the plurality of predetermined RF field patterns are excited in the cavity at an incident power each characterized by a field intensity I_{ij} with the regions R_i of the cavity;

(b) for each of the plurality of RF field patterns,

(b1) calculate a value of power P_j , dissipated in the cavity when the RF energy is applied to excite a respective field pattern, as a difference between the incident power and a power detected to leave the cavity, and

(b2) determine the respective field intensity I_{ij} within each region R_i ;

and

(c) calculate a characteristic σ_i of energy absorption for each region R_i across at least a portion of the cavity based on the values of the power P_j , the field intensities I_{ij} , and a relationship between σ_i, I_{ij} and P_j .

VII. In a communication sent with a summons to oral proceedings, the Board expressed its preliminary opinion (Articles 15(1) and 17(2) RPBA 2020), in particular its negative view on the matter of sufficiency of disclosure.

VIII. The sections of that communication that are relevant for this decision read:

...

The invention as disclosed

6. *The invention relates to apparatuses, such as microwave ovens, and methods for applying electromagnetic energy to an object placed in a cavity (to heat it).*

7. *Control of heating is difficult, because the distribution of the EM field in the cavity depends on unknown properties of the object placed within it.*

8. *According to the invention, it is possible to obtain information about the properties of the object, in the form of a spatially-resolved energy absorption characteristic σ_i for discretized regions R_i within the cavity, by exciting the cavity with a plurality of RF field patterns j (of known intensity I_{ij} distribution), and measuring the difference P_j between the incident power and the power detected to leave the cavity when the respective pattern is excited.*

Sufficiency of disclosure

9. *The opponent argues that the invention is insufficiently disclosed, because the skilled person would not know how to determine the plurality of field patterns to be excited in a cavity comprising an arbitrary object, since they depend on the unknown placement and electromagnetic properties of said object.*

10. *It seems uncontested that the presence of an object in the cavity will affect the field patterns excited within the cavity (see paragraph [0002] of the patent).*

11. *In fact, the disclosure seems directed at acquiring such information about the object placed within the cavity (paragraph [0006]).*

12. *Nevertheless, the disclosure seems to only teach the determination of field patterns for an empty cavity, or for a cavity containing idealised objects of very well defined properties (paragraphs [0082-0090]).*

13. *Concerning objects of unknown properties, which, contrary to what seems to be argued by the proprietor would represent the vast majority of the objects with which the claim is compatible, the teaching seems to be reduced to the one that, in such cases, field patterns may be*

determined ignoring the presence of said object in the cavity (e.g. paragraphs [0086]).

14. The Board has doubts that proceeding in such a way would enable sensible results to be obtained. The situation seems to be different from the one discussed in T 487/91, in which sensible results could be obtained on realistic examples.

15. Field patterns determined under the assumption of an empty cavity would, furthermore, not appear to enable the skilled person to implement feature a3 of claim 1, since this feature requires that RF energy is applied to the object in the cavity to actually to excite (i.e. generate) those predetermined field patterns. The interpretation and implementation of feature (b2) also seems to be at stake.

16. The questions that need to be answered appear then to be

(a) Whether or not the invention as defined in the claims requires the actual field patterns excited in the cavity in the presence of the object to be determined, or an estimation under the assumption of an empty cavity suffices, and whether or not the patent sufficiently discloses how to determine said actual patterns or estimations. At least for the first alternative

(determination of the actual field patterns) the information provided in paragraphs [0082-0090] does not seem sufficient to implement the determination of the field patterns; and

(b) Whether or not the invention as defined in the claims requires the fields determined to be the ones actually excited in the cavity and whether or not the patent sufficiently discloses how to cause RF energy to be applied to the object as defined in the claim. The claim wording would appear to suggest that the fields that are determined are the ones to be applied to the object, but the patent does not how to compensate for the presence of the object, such that field patterns determined under the assumption of an empty cavity can still be excited in a cavity with the object.

17. Should the skilled person be capable of determining the field patterns and respective intensities I_{ij} within each region R_i of the cavity, and capable of exciting said field patterns in the cavity with the object, neither the calculation of the power P_j dissipated in the cavity when each field pattern is excited, nor the determination of the characteristic energy absorption σ_i of each region R_i of the cavity, wouldn't seem to raise further difficulties. The disclosure of paragraphs

[0114] and [00115] seem sufficient to implement feature (c) of the claim.

...

- IX. After notification of this communication, the proprietor indicated that *neither applicant/respondent Goji Limited nor their representatives will attend the Oral Proceedings ... in relation to this appeal*, but made no substantive submission.
- X. The oral proceedings were cancelled.

Reasons for the Decision

1. The preliminary opinion, partly reproduced above, expressed and explained the Board's view that the subject-matter of claim 1 of the amended patent was not sufficiently disclosed (see points 12 to 15, in particular).
2. The Proprietor has not commented on, let alone contested, this preliminary opinion.
3. After reconsideration, the Board does not see any reason to depart from its preliminary opinion.
4. Therefore, it is concluded that the invention defined by claim 1 of the amended patent is not disclosed in a manner sufficiently clear and complete for it to be

carried out by a person skilled in the art and, hence, the only request on file is not allowable.

5. The proprietor's announcement that it would not attend the oral proceedings is equivalent to a withdrawal of its request that oral proceedings be held (Case Law of the Boards of Appeal, 9th ed., III. C.4.3.2).
6. Additionally, in view of the conclusions under point 4, above, the condition for the opponent's request for oral proceedings does not apply.
7. Consequently, the oral proceedings were cancelled and this decision issued on the basis of the parties' written submissions.
8. Moreover, since the proprietor's withdrawal of its request for oral proceedings was made within one month of notification of the communication issued by the Board in preparation for the oral proceedings, both conditions of Rule 103(4)(c) EPC, that (with emphasis added by the Board) *any request for oral proceedings is withdrawn ... and no oral proceedings take place*, are met. It makes no difference that the withdrawing party and the appealing party are not the same (cf. T517/17, reason 6; T 202/18, reason 1; cf. T 488/18, reason 8). Consequently, the appeal fee is to be reimbursed at 25%.

Order

For these reasons it is decided that:

1. The decision is set aside.
2. The patent is revoked.
3. The appeal fee is reimbursed at 25%.

The Registrar:

The Chair:



D. Meyfarth

P. Scriven

Decision electronically authenticated