

Internal distribution code:

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

D E C I S I O N
of 20 May 2003

Case Number: T 0876/02 - 3.4.2
Application Number: 98100917.8
Publication Number: 0854521
IPC: H01L 31/042, H01L 31/048

Language of the proceedings: EN

Title of invention:

Solar cell array and solar power generation apparatus using it

Applicant:

CANON KABUSHIKI KAISHA

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 111(1)

Keyword:

"Amended claims remitted to first instance"

Decisions cited:

-

Catchword:

-



Case Number: T 0876/02 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 20 May 2003

Appellant:

CANON KABUSHIKI KAISHA
30-2, 3-chome, Shimomaruko
Ohta-ku
Tokyo (JP)

Representative:

Pellmann, Hans-Bernd, Dipl.-Ing.
Patentanwaltsbüro
Tiedke, Bühling, Kinne & Partner
Bavariaring 4-6
D-80336 München (DE)

Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted 6 March 2002
refusing European patent application
No. 98 100 917.8 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: E. Turrini
Members: A. G. Klein
B. J. Schachenmann

Summary of Facts and Submissions

I. European patent No. 98 100 917.8 (publication No. 0 854 521) was refused by the Examining Division on the ground that the subject-matter of the independent claims then on file, which were all drafted as device claims directed to a solar cell array, was not patentable in view of the disclosure in documents:

D1: EP-A-0 751 576; and

D2: US-A-5 213 626.

II. The appellant (applicant) filed an appeal against the rejection of the patent application.

III. In its communication of 27 December 2002 pursuant to Article 11(2) of the Rules of Procedure of the Boards of Appeal, annexed to the summons to attend oral proceedings appointed at the appellant's request, the Board *inter alia* expressed its provisional opinion that from the description and the drawings of the application documents it appeared that the claimed provision of solar cells in parallel strings having different rated voltages aimed at designing a solar cell array for a given installation area having an increased output capacity, as compared to the capacity achievable if the same solar cells were conventionally distributed into strings of a same rated voltage, when such conventional distribution would lead to wasted installation space. The wording of the claims did not however appear to clearly define this essential aspect of the invention. On the contrary, the claims appeared to encompass solar cell designs which would either not lead to any identifiable technical effect whatsoever,

or result from the trivial removal of a single module from a conventional solar cell area, in order for instance to accommodate a ventilation opening or the mast of an antenna, with an expectable decrease of the output capacity.

IV. In response to the above communication, and following an interview with the rapporteur, the appellant with letter of 19 May 2003 filed as a basis of his main request a set of twelve method claims, of which claim 1, the only independent claim, reads as follows:

"1. A method of configuring a solar cell array, wherein said array

- is arranged on an installation area of given installation area shape and size,

- is connectable to a power converting unit having a specified input voltage range, and

- is composed of a plurality of solar cell strings connected in parallel, wherein

each of said solar cell strings comprises

a series connection of a plurality of solar cell modules,

each module occupying a module area having the same module shape and size,

the method comprising the steps of

- determining a maximum number of modules to be

accommodated within said installation area based on the installation area shape and size and on the module shape and size,

- defining a module number range of a number of modules per each string based on a rated voltage of each module and said input voltage range of said power converting unit,

- selecting a basic number of solar cell modules for each of said strings from within said module number range,

- determining a number of strings that can be accommodated within said installation area

as the integer part of the division of the maximum number of modules by said basic number,

- obtaining, by subtracting

the product of the number of strings and of the basic number from

the maximum number of modules,

a remaining number of solar cell modules that can still be accommodated within said installation area,

- distributing said remaining number among said number of strings such that

- at least one of said strings comprises

at least part of said remaining number in addition to said basic number of solar cell modules,

- said array has at least two rated voltages of said solar cell strings,

- a voltage-power characteristic of said solar cell array has one power peak, and

- a number of modules which each string has is within said module number range."

Additional sets of claims, on which earlier auxiliary requests were based and which comprised only device claims were upheld.

V. Oral proceedings were held on 20 May 2003, at which the appellant requested that the case be remitted to the first instance for further prosecution on the basis of the set of claims filed with letter of 19 May 2003.

The Board announced its decision at the end of the oral proceedings.

Reasons for the Decision

1. The appeal is admissible.
2. The decision under appeal was based on sets of device claims in which the appellant had attempted to define the invention in terms of a solar cell array.

For the reasons set out in its communication of 27 December 2002, these claims in the Board's opinion

covered trivial embodiments which indeed were not patentable in view of citations D1 and D2.

3. In contrast, the claims of the appellant's present main request, are now directed to a method of configuring a solar cell array and they set out in detail how, starting from a given installation area shape and size, a given power converting unit having a specified input voltage range and a given and same module shape and size of each module, an advantageous distribution of these modules among a number of strings is determined.

The reasons on which the rejection of the patent application by the Examining Division was founded clearly no longer apply to the present new formulation of independent claim 1. Documents D1 and D2 do not in particular in any way relate to optimizing the distribution of solar cell modules of a same shape and size over a given installation area.

The compliance of the present claims with the formal and substantial requirements of the EPC was not yet examined by the Examining Division, and an additional search taking due account of the amended formulation of the claims might be necessary.

Accordingly, the Board deems it appropriate in the circumstances to remit the case to the first instance for further prosecution, in accordance with the appellant's main request, as provided for in Article 111(1) EPC.

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 12 of the main request as filed with letter of 19 May 2003.

The Registrar:

The Chairman:

P. Martorana

E. Turrini



Case Number: T 0876/02 - 3.4.2

D E C I S I O N
of 24 June 2003
correcting error in the decision
of the Technical Board of Appeal 3.4.2
of 20 May 2003

Appellant: CANON KABUSHIKI KAISHA
30-2, 3-chome, Shimomaruko
Ohta-ku
Tokyo (JP)

Representative: Pellmann, Hans-Bernd, Dipl.-Ing.
Patentanwaltsbüro
Tiedke, Bühling, Kinne & Partner
Bavariaring 4-6
D-80336 München (DE)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 6 March 2002
refusing European patent application
No. 98 100 917.8 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: E. Turrini
Members: A. G. Klein
B. J. Schachenmann

In application of Rule 89 EPC page 2, point IV, line 5 of the Decision in the appeal case T 0876/02 - 3.4.2 is corrected by deleting of ", the only independent claim,".

The Registrar:

The Chairman:

P. Martorana

E. Turrini