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D E C I S I O N
of 7 February 1997

Case Number: T 0919/94 - 3.3.2

Application Number: 88905588.5

Publication Number: 0321527

IPC: B01J 2/20

Language of the proceedings: EN

Title of invention:
Water dispersible granules

Patentee:
ICI AUSTRALIA OPERATIONS PROPRIETARY LIMITED

Opponent:
Monsanto Company
DOWELANCO

Headword:
Water dispersible granules - ICI AUSTRALIA

Relevant legal provisions:
EPC Art. 83, 100(b)

Keyword:
"Sufficiency of disclosure - yes"

Decisions cited:
T 0226/85, T 0409/91, T 0435/91, T 0212/88, T 0281/86

Catchword:
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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0919/94 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 7 February 1997

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 4 October 1994 revoking European patent No. 0 321 527 pursuant to Article 102(1) EPC.**

Composition of the Board:

Chairman: F. Antony
Members: G. J. Wassenaar
J. H. Van Moer

Summary of Facts and Submissions

I. European patent No. 0 321 527 was granted with 10 process claims in response to European patent application No. 88 905 588.5, filed on 23 June 1988. The mention of the grant was published in European Patent Bulletin 92/33 of 12 August 1992.
Granted claim 1 reads as follows:

"1. A process for the preparation of water dispersible granules containing an agricultural chemical as active ingredient, said active ingredient being selected from herbicides and/or fungicides and/or insecticides, comprising mixing the desired ingredients comprising an active ingredient component of at least one agricultural chemical and a surfactant component in the presence of water to form an extrudable wet mix, extruding the wet mix and then rolling the wet extrusions in a rotating bowl type apparatus for a period of at least 30 s with the drum rotating at a speed in the range of from 1 to 100 rpm to break down said extrusions to form granules, and optionally drying the granules."

II. Notices of Opposition were filed against the European patent by both Respondents on 12 May 1993. Revocation of the patent was requested on the grounds of lack of inventive step and insufficient disclosure (Articles 100(a) and (b) EPC).

The oppositions were supported, inter alia, by the following documents:

M. J. Gamlen: Pellet Manufacture for Controlled Release (D9)

US-A-3 775 331 (D13).

III. With its decision of 14 September 1994, issued on 4 October 1994, the Opposition Division revoked the patent. It held that the claimed process was not sufficiently disclosed so that the patent in suit did not fulfil the requirements of Article 83 EPC. More particularly, it was considered that the expression in Claim 1: "a rotating bowl type apparatus .. with the drum rotating.." was self-contradictory and that the patent in suit did not unambiguously disclose the meaning of the word "drum" in connection with a rotating bowl type apparatus. It was further considered that the "Marumerizer" according to D9 or D13 fulfilled the criteria of the rotating bowl type apparatus according to Claim 1, whereas according to the Appellant's own submission the claimed process could not be performed in such a Marumerizer. Furthermore experiments conducted by Respondent 01 showed that the claimed process could only succeed if the rotating bowl type apparatus was rotated in a **tilted** position, which essential feature was not disclosed in the patent in suit. The argument that the said feature was implicitly disclosed because the description mentioned that the extrusions roll or tumble against each other was rejected. It was considered that even when the rotating bowl type apparatus was rotated in the upright position some rolling or tumbling of the extrusions against each other would take place.

IV. An appeal against that decision was lodged by the Proprietor (Appellant) on 2 December 1994, with payment of the fee. The Statement of Grounds was filed on 13 February 1995.

With the Statement of Grounds excerpts from general textbooks were cited to show that the terms "tumbling" or "tumbler" and "drum" were common in the art and used in their normal meaning. Reference was made inter alia to:

1987 BPRC Mono. No. 39 "Application to Seeds and Soil", page 208 (D16) and

Chemical Engineering Practice, Cremer and Davies, volume 3, 1957, pages 369 to 371 (D17).

The Appellant argued that the requirement that the wet mix extrusions were **"broken down by rolling in a tumbling action"** as set out in the description, implied that the rotating bowl type apparatus had a horizontal or inclined rotational axis. A rotating bowl or vessel could be called a "drum" irrespective of its exact geometrical shape and such a drum need not have a cylindrical shape.

For the purpose of Article 83 EPC the question "what was intended to be included" was considered irrelevant. The question whether use of the known "Marumerizer" was comprised by claim 1 had nothing to do with insufficiency under Article 83 EPC.

At the oral proceedings, which took place on 7 February 1997, the Appellant made the binding statement that he did not consider the use of a Marumerizer to be an infringement of the patent in suit.

V. The Respondents maintained their position that the invention as claimed was not sufficiently clear and complete to be carried out by a person skilled in the art. Their arguments can be summarised as follows:

(i) With respect to the apparatus and the operating conditions to be used for breaking down the extrusions the wording of the patent in suit was inconsistent and/or contradictory and there were no illustrations to clarify the matter.

(ii) It would be an undue burden for the skilled person having to find out suitable equipment and operating conditions.

(iii) When wanting to break down the extrusions to form granules, the first apparatus of which the skilled person would think was a Marumerizer. The Patentee, however, had declared that a Marumerizer was not suitable and was not intended to be covered by the patent in suit.

(iv) The claimed process could not be performed over the whole claimed range. There was evidence on file that a rotation of the bowl around a vertical axis did not result in the required breakdown of the extrusions; nevertheless, such a rotation was not excluded by Claim 1. Furthermore, with a rotation speed of 1 rpm, as comprised by Claim 1, it was very unlikely that the required effect could be obtained. In this connection, reference was made to decisions T 226/85 (OJ EPO 1988, 336), T 409/91 (OJ EPO 1994, 653) and T 435/91 (OJ EPO 1995, 188).

(v) The examples did not contain sufficient information for reproducing them; it was even unclear if they satisfied the requirements of Claim 1. In this connection reference was made to decisions T 212/88 (OJ EPO 1992, 28)and T 281/86 (OJ EPO 1989, 202).

VI. The Appellant requested that the decision under appeal be set aside and that the case be remitted to the first instance fcr further prosecution.

The Respondents requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

2. The decision under appeal revoked the patent in suit on the sole ground that the claimed process was not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Other grounds for opposition were not considered there, and are, therefore, not to be decided in the present appeal.

3. Claim 1 contains the terms "rotating bowl" and "drum" which, according to the Appellant, are intended to indicate the same kind of vessel. The Board cannot accept the purely geometrical argument of the decision under appeal that a bowl has a concave or spherelike shape, while a drum has a cylindrical shape so that it is not clear what is meant. In the technical field of milling, mixing and granulation, the terms "bowl" and "drum" are not limited to strictly defined geometrical shapes. In particular, the term "drum" is often used for vessels having a concave or spherelike shape; see D16 and D17. Moreover, in the patent in suit the term "drum" only appears in Claim 1. In the description and examples the "rotating bowl type" apparatus is

consistently referred to as "rotating bowl apparatus" (page 4, line 44) or "open-mouth bowl" (page 5, lines 38 and 56). The skilled person, therefore, would readily recognize that the terms "bowl" and "drum" are interchangeable and intended to have the same meaning.

4. According to the description of the patent in suit, the action to be performed in the rotating bowl type apparatus is a breakdown of the wet extrusions by "rolling in a tumbling action". There is a general statement on page 4, lines 39 to 41, reading: "In this specification the term rolling is used to means causing the extrusions to roll or tumble against each other or a fixed or moving surface." This is shortly followed by the more specific statement on page 4, lines 43 to 44: "The rolling process is carried out on a commercial scale in a rotating bowl apparatus, which causes the extrusions to break down into discrete sections which in turn are rounded to some extend by the rolling process". In the Board's opinion, this will make it clear to the skilled person that the "rotating bowl apparatus" of the latter sentence is a special embodiment of the "means" mentioned in the earlier sentence and that the "rolling or tumbling against a **fixed** surface" referred to in the more general statement does not apply to the more specific rotating bowl apparatus, which of course does not have such a fixed surface. Thus, while it may be expedient, in view of the more limited scope of Claim 1, to cancel the words "fixed or" of the quoted phrase, there is no contradiction or serious ambiguity which would prevent the skilled person from using available apparatus carrying a rotating bowl capable of rolling wet extrusions in a tumbling action.

5. There is no evidence on file that existing apparatus comprising a rotating bowl, such as granulators, tablet coating drums or cement mixers are not suitable. Since the claimed process can be performed with readily available equipment of simple construction and is said to be not critically dependent upon the kind of mixer, there was no need for providing illustrations, nor is it an undue burden to choose among available apparatus. Relevant parameters for using the mixer are its size, its speed and the inclination of its rotational axis. The size is directly related to the amount of wet extrusions to be treated and can easily be determined; the rotation speed is given in Claim 1; the inclination of the rotation axis is not very critical, the optimum angle can easily be determined by the skilled person. Thus finding the optimal working conditions does not put an undue burden on the person skilled in the art.

6. A Marumerizer is a known device for breaking down extrusions to form granules. It comprises a horizontally situated disc or plate which can turn at high speed within a stationary upright cylinder. The statement in point 13c of the decision under appeal that according to D9 and D13 a Marumerizer consists of a plate which can have the shape of a bowl is due to a misinterpretation. D9 discloses that a firm called Nica manufactures a spheroniser which will accept a range of different bowls and plate **materials** (page 57, left column, second complete paragraph). This disclosure does, however, not mean that the plate can be a bowl; it rather indicates that the stationary drum or bowl and the rotating plate of the spheroniser can be made of various materials.

In D13, the term "bowl" does not appear at all. The rotating table on which the rolling is said to take place is called a plate, a disc or a dish. The slightly curved rotating member 53 in Figure 2 is called a plate. In the Board's opinion such a slightly curved plate cannot be regarded as a bowl in its normal technical meaning. Moreover, even if the apparatus disclosed in D13 were considered to be a rotating bowl type apparatus in the meaning of the patent in suit, this would not imply that the claimed process cannot be performed.

7. While the Board agrees with the cited decisions that the disclosure of a patent should be such that it enables the skilled person to perform the respective invention over the whole ambit of its claims, this principle must be applied in a reasonable way. In the present case the claimed process is, inter alia, limited to a range of rotating periods (at least 30s) and rotating speeds (1 to 100 rpm). In mixing and milling operations, these are not independent variables. Generally, at higher speeds the rotating period can be reduced. In the present case this means that the meaning of the claim does not necessarily extend to any combination of these ranges. Higher values of one range may have to be combined with lower values of the other range. Moreover, the size of the rotating bowl will also have a certain influence. Thus the fact that, with a rotation speed of 1 rpm during 30s (a combination of the extreme lower limits) it is doubtful whether the desired result is achieved, does not mean that the invention lacks sufficient disclosure. A claim is also limited by practical boundaries which need not be explicitly stated if they are obvious to a skilled person. For example, although not explicitly excluded by Claim 1, it is also unlikely that after a rotation of 1 month at 100 rpm a suitable product will be obtained. Likewise, it is obvious to

the skilled person that the tumbling action of the particles will be greatly reduced if the angle of the rotation axis approaches 90° (axis vertical); hence no skilled person will seriously think of working like that and these positions are implicitly excluded.

8. There is no requirement under Article 83 EPC to the effect that a specifically described example of a process must be exactly repeatable. It is sufficient that the description as a whole enables the skilled person to put the claimed process into practice without undue burden (T 212/88, point 3.3 and T 281/86, point 6). If the invention can be performed without knowledge of the examples, deficiencies in the examples which may make it difficult or even impossible to repeat these, do not prevent the skilled person from performing the invention. Moreover, if an invention can be sufficiently disclosed without containing any examples, it would be against common sense to consider the same invention, with the same description plus certain additional information in the form of defective examples, to be insufficiently disclosed.

9. In summary, Article 83 does not require the disclosure of a patent specification to be perfect, nor must the ability of the notional skilled person to carry out an invention be measured by applying unreasonable standards to his knowledge. For these reasons the Board is satisfied that the invention as claimed is sufficiently disclosed within the meaning of Article 83 EPC.

10. Amendments as offered by the Appellant were not taken into account at this stage of the proceedings as being irrelevant for the issue to be decided. Furthermore, the question of inventive step being so far undecided

by the first instance, the Board exercises its power under Article 111(1) EPC to remit the case for further prosecution. So as to keep the resulting delay to the possible minimum, it is recommended to expedite such further prosecution as far as is feasible.

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.

The Registrar: The Chairman:

P. Martorana F. Antony

13.3.97