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**Datasheet for the decision
of 5 June 2019**

Case Number: T 0593/15 - 3.4.02

Application Number: 06769432.3

Publication Number: 1947933

IPC: G02B27/00, A01M7/00

Language of the proceedings: EN

Title of invention:

SYSTEM FOR CONTROLLED APPLICATION OF HERBICIDES

Patent Proprietor:

Dimensions Agri Technologies AS

Opponent:

Agri Con GmbH Precision Farming Company

Relevant legal provisions:

EPC 1973 Art. 100(b), 100(c), 111(1)

Keyword:

Added subject-matter (no)
Sufficiency of disclosure (yes)
Remittal for further prosecution (yes)



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Case Number: T 0593/15 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 5 June 2019

Appellant: Dimensions Agri Technologies AS
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Respondent: Agri Con GmbH Precision Farming Company
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 26 January 2015
revoking European patent No. 1947933 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman A. Hornung
Members: F. J. Narganes-Quijano
B. Müller

Summary of Facts and Submissions

- I. The appellant (patent proprietor) lodged an appeal against the decision of the opposition division revoking European patent No. 1947933.

The opposition filed by the respondent (opponent) against the patent as a whole was based on the grounds for opposition of

- added subject-matter (Article 100(c) EPC),
 - insufficiency of disclosure (Article 100(b) EPC),
- and
- lack of novelty and lack of inventive step (Article 100(a) EPC, together with Articles 54(1) and 56 EPC).

- II. In its decision the opposition division held that
- the grounds for opposition under Article 100(c) EPC were not persuasive, and that
 - the invention defined in claim 1 of the patent as granted (main request) and in claim 1 of auxiliary requests 1 to 5 then on file was not sufficiently disclosed within the meaning of Article 100(b) EPC.

In an *obiter dictum* of the decision the opposition division expressed its view that the subject-matter of claim 1 as granted was new (Article 54(1) EPC), but that the subject-matter of independent claim 1 and also that of claim 7 as granted, which contained a reference to claim 1, did not involve an inventive step (Article 56 EPC) in view of the documents considered during the proceedings.

- III. With the statement setting out the grounds of appeal the appellant submitted a set of claims according to a

main request identical to the claims as granted, and sets of claims according to a first to a fifth auxiliary request.

The appellant also filed, among other documents, the following documents:

D35: "Fluid Mechanics", F. M. White; McGraw-Hill, 3rd ed., 1994; bibliographic pages, and Chapter 6 (7 pages)

D38: "Viscous Fluid Flow", F. M. White; McGraw-Hill, International edition 1991; bibliographic page, and pages 470 and 471.

IV. In reply to the statement of grounds of appeal the respondent submitted the following documents:

D40: US 6 157 501 A

D41: US 5 680 260 A

D42: "Fluid Mechanics", J. F. Douglas et al.; Pearson Education Limited, 5th ed. 2005; bibliographic pages, and page 338.

The respondent requested that the appeal be dismissed and, as a precaution, oral proceedings.

V. In a communication annexed to the summons to oral proceedings the board gave a preliminary assessment of the case.

VI. By a letter dated 3 May 2019 the respondent maintained its request that the appeal be dismissed, withdrew the auxiliary request for oral proceedings, and announced that it would not be present at the oral proceedings.

VII. Oral proceedings before the board were held on 5 June 2019.

As previously announced, the respondent was not present at the oral proceedings.

The appellant requested that

- the decision under appeal be set aside and the patent be maintained as granted (main request), or, if the patent as granted was found to fulfil the requirement of sufficiency of disclosure, to remit the case to the opposition division for further prosecution, or

- that the decision under appeal be set aside and the patent be maintained on the basis of one of the sets of claims according to one of the five auxiliary requests filed with the statement of grounds of appeal.

At the end of the oral proceedings the chairman announced the decision of the board.

VIII. Claim 1 and dependent claim 2 of the patent as granted read as follows:

"1. A machine vision assembly (200) for use in a system for the controlled spraying of herbicides over large areas in which there may exist an environment with dust and spray mist, wherein the machine vision assembly (200) at least comprises means for the sequential capturing of pictures using a digital camera (230) and signal processing means for interpreting the pictures, the machine vision assembly (200) further comprising an air inlet (210) and a pipe (345) surrounding the lens (240) of the digital camera (230), as well as means to direct an airflow from the air inlet (210) into the pipe (345), creating an over pressure around the lens

(240), characterized in that an outlet for the air flow is concentric around the pipe (345) to the lens providing a uniform airflow away from the lens (240) and out of the pipe (345), preventing dust and spray mist from adhering to the lens."

"2. The machine vision assembly (200) of claim 1, characterized in that it further comprises one or more fans (330) connected to the air inlet (210)."

Reasons for the Decision

1. The appeal is admissible.
2. *Main request - Article 100(c) EPC 1973*
 - 2.1 In its decision the opposition division held that the ground for opposition raised by the respondent under Article 100(c) EPC was not persuasive. In particular, the opposition division found that the omission in the characterizing portion of claim 1 as granted of the fan disclosed in the passage on page 5, lines 18 to 20 of the description of the application as originally filed did not extend beyond the content of the application as originally filed (Article 100(c) EPC 1973).

During the appeal proceedings the respondent has contested the opposition division's finding in this respect. The respondent has essentially submitted that the application as originally filed disclosed that both a fan and a concentric outlet for the air flow were

required to arrive at a uniform air flow away from the lens and out of the pipe, and that the provision of a fan was defined in granted dependent claim 2, but omitted in granted claim 1.

- 2.1.1 The board first notes that, contrary to the respondent's submissions, the skilled person would not construe the "one or more fans (330) connected to the air inlet" defined in dependent claim 2 as granted in the technical context of the claimed invention as constituting an additional component of the claimed assembly different from the "means to direct an air flow from the air inlet (210) into the pipe (345), creating an overpressure around the lens" defined in claim 1, but as a component included within these means, this interpretation being, in addition, supported by the description of the patent specification (see paragraphs [0024] to [0026]). Furthermore, the mentioned means defined in both claim 1 as originally filed and in claim 1 as granted are not only required to be arranged "to direct an air flow" as claimed, but also to perform the function of "creating an overpressure around the lens". The functional feature of "preventing dust and spray mist from adhering to the lens" (see claim 1 as granted, and the corresponding feature of claim 1 as originally filed) would therefore be understood by the skilled person as a concretization of the functional feature disclosed on page 5, lines 15 to 18 of the description of the application as originally filed relating to "prevent[ing, among other components, the lens] from being affected by dust and spray mist", and not - as submitted by the respondent - as a different or unrelated functional feature.

2.1.2 In addition, claim 1 as originally filed already defined "means to direct an air flow from the air inlet (210) into the pipe (345), creating an overpressure around the lens (240)", and according to the description as originally filed these means may incorporate one or more fans, without however requiring them (see page 5, lines 12 and 13, and lines 15 to 18 of the application as published). In this context, the skilled person would understand the subsequent sentence "This may be implemented using a fan, and having the outlet concentric around a pipe 345 to the lens 240, so that a uniform air flow will be established away from the lens 240 and out of the pipe 345." on page 5, lines 18 to 20 of the description of the application as originally filed in the sense that the outlet of the air flow formed by the mentioned means is concentric around the pipe to the lens providing a uniform air flow away from the lens and out of the pipe, without the mentioned means necessarily requiring the mentioned fan as long as these means are - as already required by the claimed subject-matter - arranged to direct the air flow from the air inlet into the pipe, creating an overpressure around the lens.

2.2 The board is therefore of the opinion that, as concluded by the opposition division, claim 1 as granted does not contain added subject-matter (Article 100(c) EPC 1973), and more particularly that the claim does not constitute an unallowable generalization of the content of the application as originally filed.

3. *Main request - Article 100(b) EPC 1973*

3.1 In its decision the opposition division found that the invention defined in claim 1 of the patent as granted

was not sufficiently disclosed within the meaning of Article 100(b) EPC. The opposition division held in this respect that Fig. 2 and 3 of the patent specification provided some technical details concerning the arrangement of the pipe 345 surrounding the lens 240 and leading the air flow towards the lens to prevent dust and spray mist from adhering to the lens, but that the disclosure of the patent did not contain sufficient details to enable the skilled person to carry out, without an undue burden of experimentation, the constructional and functional features of the characterising portion of claim 1 as granted relating to the outlet of the air flow being concentric around the pipe to the lens to provide a uniform air flow away from the lens and out of the pipe. More particularly, the opposition division objected that the mentioned claimed features, and in particular the feature "outlet for the air flow is concentric around the pipe (345) to the lens", were ambiguous as to whether the outlet of the air flow was or was not part of the pipe and whether it was centred with the lens or concentric around the pipe up to the position of the lens within the pipe, and that the disclosure of the patent specification did not provide any clarification in this respect as both the description (paragraphs [0024] to [0026]) and the schematic representations shown in the figures failed to disclose specific details concerning the shape of the outlet and the position of the outlet with respect to both the pipe and the lens.

The appellant has disputed the opposition division's view in this respect and has essentially submitted that the claimed features were not ambiguous, and that the skilled person would understand that the arrangement of

the pipe with the lens inserted therein constituted the claimed air flow outlet.

3.1.1 While according to the appellant the "uniform air flow" referred to in claim 1 would presuppose a laminar air flow, according to the respondent a uniform air flow as claimed could also be established in a turbulent regime (document D42, page 338, section 10.4). In the board's view, however, in the present context, the term "uniform" has only a relative meaning not implying any precisely defined characteristics of the air flow. In particular, neither the claims nor the description of the patent specification give a specific technical meaning to the expression "uniform air flow" (uniform in respect of a point-by-point comparison in terms of instantaneous or possibly of time average values, the values relating to velocity, or possibly to pressure, etc.). In addition, the claimed expression "uniform air flow" does not require a particular degree of uniformity of the air flow other than that derivable from the remaining claimed features, it being noted that the appellant itself, during the appeal proceedings, has referred to the claimed uniform air flow as consisting of a "more or less uniform" and a "smooth (uniform)" air flow. For these reasons, in the opinion of the board, the skilled person would construe the term "uniform" in the claimed feature "providing a uniform air flow away from the lens (240) and out of the pipe (345), preventing dust and spray mist from adhering to the lens" in its technical context in the sense that the air flow is uniform to the extent of preventing dust and spray mist from adhering to the lens.

3.1.2 In addition, assuming that - as submitted by the respondent and concluded by the opposition division in

its decision - the disclosure in the patent specification relating to the structural features of the constructional arrangement schematically represented in Fig. 2 and 3 involving the pipe and the lens were not complete and/or not consistent, this assumption alone would not be sufficient to justify the conclusion that the claimed invention is not sufficiently disclosed, as this issue also depends on the question of whether the pertinent skilled person would, notwithstanding the deficiencies referred to by the opposition division, still be in a position to carry out the claimed invention.

Claim 1 is directed to an assembly comprising, among other components, an air inlet, a pipe surrounding a lens, and means for directing the air flow from the air inlet into the pipe, creating an overpressure around the lens. In the board's opinion the skilled person would interpret the "outlet for the air flow" in the claimed context as the air flow outlet formed or determined by the pipe and the lens themselves - as supported by the description of the patent, see paragraph [0026] -, and not as possibly constituting an additional structural component the features of which would remain indeterminate in both the granted claim 1 and the disclosure of the invention. In its submissions the respondent has referred to the relationship between the claimed components and a possible housing not specified in the claim, but the corresponding submissions would concern the clarity of claim 1 and/or the scope of the claimed invention, and in the board's opinion the claimed air flow outlet is determined by the structural components of the assembly defined in claim 1, irrespective of the provision of a housing enclosing, at least partially, these components.

3.1.3 In view of the above considerations, and since claim 1 requires that the pipe surrounds the lens, in the board's opinion the skilled person would resolve any ambiguity present in the claimed expression "outlet for the air flow is concentric around the pipe (345) to the lens" by construing claim 1 in the sense that the lens is at least partially arranged within the pipe, so that - as submitted by the appellant - the air flow outlet formed by the pipe and the lens would then be concentric to both the pipe and the lens. Furthermore, the characteristics of the air flow outlet would then be determined by the shape of the pipe and the lens and by the relative position of the pipe and the lens.

In addition, in view of the submissions of the appellant concerning the common general knowledge relating to the formation of a uniform, smooth flow, especially in a laminar flow (see document D35, Fig. 6.27 and the corresponding description, and document D38, Fig. 6-36 and the corresponding description), in the board's view, there is no undue specific technical burden of experimentation from the part of the skilled person in the implementation of the claimed invention - irrespective of whether the patent specification fails to specify details of the structural features of the claimed components and also irrespective of possible inconsistencies between the example(s) schematically represented in Fig. 2 and 3 of the patent specification. In particular, in the board's opinion the pertinent skilled person would be in a position to find, without an undue amount of experimentation, an appropriate shape for the pipe and an appropriate relative position of the lens within the pipe so that the air flow emerging from the space between the pipe and the lens objective would, away from the lens, be sufficiently uniform to the extent of achieving the

claimed result relating to dust and spray mist being prevented from adhering to the lens (cf. point 3.1.1 above), even in the case mentioned by the respondent that the cross-section of the lens would depart from the circular shape (see documents D40 and D41).

- 3.2 In view of the above considerations, the board concludes that the ground of opposition raised by the respondent under Article 100(b) EPC 1973 does not prejudice the maintenance of the patent as granted.

4. *Main request - Novelty and inventive step - Request for remittal*

The appellant requested the remittal of the case for further prosecution in the event that the board concluded that the patent as granted fulfilled the requirement of sufficiency of disclosure. In support of this request the appellant submitted that the issues of novelty and inventive step had not been discussed during the first-instance oral proceedings and that a remittal would give it the opportunity to defend its case before two instances.

In view of the written submissions presented by the parties during the first-instance proceedings and during the present appeal proceedings, and also in view of the opinion already expressed by the opposition division in an *obiter dictum* of the decision on the issues of novelty and of inventive step of the subject-matter of the claims as granted, the board initially considered that the remittal of the case for further prosecution would not have been justified for reasons of procedural economy. However, during the oral proceedings before the board it became apparent that

the interpretation of the subject-matter of claim 1, and in particular of the claimed feature "uniform air flow" (see point 3.1.1 above), as well as the concretization of the capability of the pertinent skilled person and of the common general knowledge (see point 3.1.3 above) underlying the board's conclusion on the issue of Article 100(b) EPC 1973 (see point 3 above) might have an impact on both the parties' submissions and the view expressed by the opposition division in its decision on the issues of novelty and inventive step. In addition, during the oral proceedings before the board, the appellant submitted orally a series of considerations relating to the interpretation of certain features of claim 1 that had not previously been considered during the proceedings and that might have an impact on the assessment of the issues of novelty and inventive step with respect to the documents considered during the proceedings.

In view of the foregoing, the board found that the above-mentioned circumstances required a more detailed assessment, and possibly reconsideration under a new light, of the parties' submissions and of the opinion expressed by the opposition division in an *obiter dictum* of the decision on the issues of novelty and inventive step. In view of these particular circumstances, the board considered it appropriate to make use of its discretionary power under Article 111(1) EPC 1973 and to remit the case to the opposition division 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 department of first instance for further prosecution.

The Registrar:

The Chairman:



M. Kiehl

A. Hornung

Decision electronically authenticated