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**Datasheet for the decision  
of 29 September 2021**

**Case Number:** T 0119/19 - 3.2.04

**Application Number:** 12792108.8

**Publication Number:** 2713689

**IPC:** A01B5/00, A01C5/06

**Language of the proceedings:** EN

**Title of invention:**

AGRICULTURAL ROW UNIT APPARATUS, SYSTEMS, AND METHODS

**Patent Proprietor:**

Precision Planting LLC

**Opponent:**

Lemken GmbH & Co. KG

**Headword:**

**Relevant legal provisions:**

EPC Art. 100(c)  
RPBA 2020 Art. 11

**Keyword:**

Amendments - added subject-matter (no)  
Remittal - (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**

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Case Number: T 0119/19 - 3.2.04

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.04**  
**of 29 September 2021**

**Appellant:**  
(Patent Proprietor)

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**Representative:**

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**Respondent:**  
(Opponent)

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**Representative:**

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**Decision under appeal:**

**Decision of the Opposition Division of the  
European Patent Office posted on 15 November  
2018 revoking European patent No. 2713689  
pursuant to Article 101(3)(b) EPC.**

**Composition of the Board:**

**Chairman** A. de Vries  
**Members:** S. Oechsner de Coninck  
T. Bokor

## **Summary of Facts and Submissions**

- I. The appellant (proprietor) lodged an appeal against the decision of the Opposition Division of the European Patent Office revoking European patent No. 2713689 pursuant to Article 101(3)(b) EPC.
- II. The opposition was based on Articles 100(a), 100(b) and 100(c) EPC. The opposition division came to the conclusion that the subject-matter of the independent claim 1 according to the main and auxiliary request contained subject-matter extending beyond the content of the application as filed.
- III. In a communication following the summons to oral proceedings, the Board gave its provisional opinion in relation to Article 100(c) EPC.
- IV. Oral proceedings were held on 29 September 2021 in the form of a videoconference.
- V. The appellant (patent proprietor) requests that the decision under appeal be set aside, and that the patent be maintained in an amended form (main request), or that the patent be maintained in an amended form on the basis of an auxiliary request, both filed with the grounds of appeal dated 19 March 2019.
- VI. The respondent (opponent) requests that the appeal be dismissed.

VII. The wording of claim 1 of the main request is as follows:

1. An agricultural row unit (10), said row unit (10) comprising:  
a first opener disc (220-1) having a leading edge and a trailing edge; and  
a second opener disc (210-1) having an axis of rotation (218), wherein the agricultural row unit (10) is configured to travel along a travel direction, characterized in that:  
said first opener disc (220-1) is substantially vertically oriented; and  
said second opener disc (210-1) is disposed to contact said first opener disc (220-1) at a contact area near a perimeter of said first opener disc (220-1), said second opener disc (210-1) disposed at an offset angle (AV) from said first opener disc (220-1), said axis of rotation (218) of said second opener disc (210-1) lying in a plane (219) disposed at an angle (AH) from horizontal that intersects said contact area and a soil surface, and wherein said leading edge of said first opener disc (220-1) lies in a vertical plane parallel to said travel direction, and wherein said trailing edge of said first opener disc (220-1) lies in said vertical plane;  
wherein said first opener disc (220-1) includes a bevel (222-1) near a perimeter of said first opener disc (220-1), said bevel (222-1) oriented toward said second opener disc (210-1).

VIII. The appellant argues that the features of the leading edge and trailing edge are merely explanatory, and the terms are normal and known in the art. No extension of the protection beyond the original application as filed derives from these added features.

IX. The respondent argues that already the feature "edge" is problematic and must be properly construed. The edge can be associated with the bevel of the disc as shown in Figure 16. This leads to another vertical plane, being different from the plane of the opener disc. This demonstrates that subject-matter was added.

## Reasons for the Decision

1. The appeal meets the requirements of Article 108 and Rule 99(2) EPC 2000, and is therefore admissible.
2. Added subject-matter - Article 100(c) EPC
  - 2.1 The present European patent EP 2 713 689 B1 was filed as an international application PCT/US2012/040729 which was published as WO2012/167244 A1, taking the place of the publication of the European application pursuant to Article 153(3) EPC. The content of the published international application is identical to the content of the application as filed for the purpose of checking compliance with Articles 100(c) and 123(2) EPC.
  - 2.2 In the international phase, during examination of the application, Claim 1 has been amended pursuant to Article 34 PCT *inter alia* by specifying the orientation of the discs using new terms "leading edge" and a "trailing edge" for the first opener disc as follows (*emphasis added by the board to indicate what has been added*):

"a first opener disc .. *having a leading edge and a trailing edge; and...*"

"said first opener disc .. *is substantially vertically oriented;*" and

"said second opener disc .. disposed at an offset angle from said first opener disc .. *and wherein said leading edge of said first opener disc lies in a vertical plane substantially parallel to said travel direction and wherein said trailing edge of said first opener disc (220-1) lies in said vertical plane*".

Claim 1 as granted combined this claim with originally filed claim 2. Claim 1 of the main request now on file adds further features (adding an axis of rotation of the second disc and how this is oriented), which have not been objected to. More importantly, Claim 1 of the main request retains those amended features that were held to contravene Article 123(2) EPC in the impugned decision, with the reasoning that *"the meaning of the wordings "leading edge" and "trailing edge" as introduced into claim 1 is not mentioned in the application as filed"*, decision, page 5, 3rd paragraph.

2.3 According to Article 123(2) EPC the European patent application or the European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed. The application's content, or its disclosure, is the complete set of information that the skilled person derives directly and unambiguously from the description, drawings and claims, and that define the boundaries of the technical teaching of a patent. Amendments may not add to subject-matter that extends beyond those boundaries and that imparts new technical information to the skilled person, as this would allow an applicant or proprietor to improve their position at the expense of legal security of third parties, cf. Case Law of the Boards of Appeal, 9th edition, 2019, II.E.1.1.

2.4 In the present case the question is therefore whether the terms "leading edge" and "trailing edge" of the disc, and the added feature that both lie in the vertical plane substantially parallel to the travel direction, impart new technical information beyond the boundaries of the filed application's technical

teaching that improved the then applicant's position to the detriment of legal security. In the present case, whereas the term "leading edge" was used in the published (WO) application as filed, paragraph 0041, the term "trailing edge" and the location of either has no explicit basis. This was undisputed between the parties.

## 2.5 Terms "leading edge" and "trailing edge"

2.5.1 The Board accepts that appellant proprietor's argument that the terms "leading edge" and "trailing edge" are in common use and have well recognized meanings. Thus, in the OED the "leading edge" is "the forward edge of a moving body", and "trailing edge" is "the rear edge of a moving body"; similar definitions are found in other dictionaries, e.g. Collins. These meanings are not specific to the context of aerodynamics, where each term implies a position with respect to the flow of air that contacts a moving body. Here, for an agricultural row, the first opener disc inherently has an edge. Because the first opener disc moves in a forward direction, it also inherently has a *leading* edge, namely at the disc's forward edge, as well as a *trailing* edge, namely at the disc's rearward edge considered in the direction of travel of the disc. Thus, the addition of the terms "leading edge" and "trailing edge" due to their general broad meaning do not themselves bring any new information or limitation on the opener disc they seek to define. The Board adds that "edge" does not refer to a specific point but is the (part of the) line in which two surfaces of a solid object meet (cf. OED), i.e. a boundary line.



2.5.2 Thus, the terms "leading edge" as well "trailing edge" are of a pure declaratory nature in the present patent, putting a name or label on the edge of the disc on opposite sides with respect to its direction of movement, i.e. its forward facing edge - the leading edge - and the rearward facing edge - its trailing edge. The fact that the body in question is a disc that rotates around an axis does not change this very broad understanding of either term. Although the opener disc is a three dimensional object, its thickness is so reduced that for all practical purposes it can be considered as substantially flat and planar with a peripheral cutting edge. Thus for a disc in motion the forward facing part of its cutting edge would broadly be seen as a forward edge and thus a leading edge, whereas the other half perimeter would in contrast be interpreted as its trailing edge. This understanding of "leading edge" fits perfectly with its mention in paragraph 0041 of the WO publication in reference to figure 16B. Naturally, the disc first penetrates the soil at its forward facing edge. This remains so as the disc travels forward: the term does not define a set part of the edge of the disc that moves round with the disc, as argued by the respondent. Rather, in the normal use of the term, it always refers to what is at any given moment the forward facing edge of the disc.

2.5.3 The respondent refers to paragraph 041 of the WO publication that explicitly mentions a leading edge. They argue, firstly, that this mention only relates to the embodiment of figure 16B, which is not covered by the claims. Moreover, that mention would not unambiguously define a trailing edge: the point constituting a trailing edge could also lie on the point of the inner edge of the bevel immediately behind

(in the direction of travel) the point on the forward edge of the bevel that is the leading edge. If the vertical plane through these two points is parallel to the travel direction, then the first opener disc must be in a different plane at an angle (namely of the bevel) to the direction of travel. Such a configuration was not originally disclosed.

2.5.4 The Board is not convinced.

Firstly, an opener disc that rolls forward always penetrates the ground at its leading edge. This merely gives a name to that part of the disc and applies to all opener discs. It is thus not specific to the embodiment of figure 16B described in paragraph 0041. This paragraph is indeed merely concerned with how the inner discs compress the soil between them as they enter the soil at their respective leading edges. Paragraph 041 compares the different effects on the soil of outwardly facing bevels of the inner discs in figure 16A with respect to the opposite configuration with inwardly facing bevels as in figure 16B. These different effects do not change the fact that in both cases the discs penetrate the soil at their forward or leading edge.

Moreover, the skilled person would not reasonably in their normal understanding of these terms interpret an edge as a point, nor that part of the inner edge which is nearest the forward part of the outer edge as a "trailing edge" *of the first opener disc*. For them the term "edge" can only refer to a part of the boundary line, see above, while "leading" and "trailing" qualify the relative location of the boundary line *on the disc*. For them the only meaningful reading can be that leading and forward edges refer to the forward and

rearward parts of the same edge of the disc, which will be its main edge, namely its cutting or opening edge. Only then can they lie in the same (vertical) plane as required by the claim. Because the inner and outer edges of the bevel lie on different (vertical) planes they or parts thereof do not lie in the same plane.

## 2.6 Vertical plane parallel to the travel direction

All embodiments feature opener disc assemblies in which discs are arranged in pairs, one 220 vertical, the other 210 at an angle, see figures 6-8 and 10-12, and the sections "Opener disc assemblies" and "Opener discs", and paragraphs 036 and 040. As is immediately clear to the skilled person, an agricultural engineer who designs agricultural row units, from figures 1 to 3 the unit is configured to be attached by its mounting assembly 20 to a tractor with the travel direction along the longitudinal symmetry axis. From figure 15 in conjunction with figures 1 and 2, showing the laying of a trench from above, it is clear that the vertical plane of the disc 220 is oriented parallel to the direction of travel. Indeed this corresponds to the Board's understanding of the general construction and functioning of row units. The peripheral or outer cutting edge of the first opener disc 220 corresponding to the vertical disc is then also in a vertical plane, substantially parallel to the direction of travel. The leading and trailing parts of that edge are perforce also in that vertical plane. Naturally, the orientation of a vertical plane parallel to the direction of travel is uniquely and clearly defined: basic geometry states that a plane is defined by two non coincident vectors or directions, in this case the vertical and the horizontal direction of travel.

- 2.7 The respondent has also challenged the definition in method claim 8 (which is based on originally filed claim 12) of a vertical plane by the trough of the trench. As can be inferred from paragraph 044, final sentence, the trough is understood to be the hollow, the bed or channel (cf. OED) formed at the bottom of the trench 1500. As follows from paragraph 045, see also original claim 12, this trough or bottom of the trench, just like the trench itself, is defined by the vertical and angled sidewalls 1420 and 1430 created by the two discs. The trough can thus be seen to define in the vertical of its sidewalls a vertical plane, which vertical plane is formed by the vertical disc oriented parallel to the travel direction, and therefor it is also oriented parallel in that direction. This geometrically clear definition of the plane (see preceding section) defined by the trough thus has a clear basis in the application as filed.
- 2.8 No other objections were raised by the respondent against the amendments to claims 1 and 8. These add features of a bevel of the first opener disc from claim 2 as originally filed, and of the contact area of the two discs and of the angled rotation axis of the second disc, from paragraphs 036 with figure 11 and paragraph 39 with figure 12b respectively.
- 2.9 In the light of the above and contrary to the decision's finding on added subject-matter, the Board concludes that the amendments made to Claims 1 and 8 of the main request comply with Article 123(2) EPC.

3. Remittal

3.1 In accordance with Article 111(1) EPC, second sentence, the Board of Appeal may either exercise any power within the competence of the department which was responsible for the decision appealed or remit the case to that department for further prosecution. Since the main purpose of the appeal proceedings is to give a losing party a possibility to challenge a decision on its merits (see G0010/91, point 18), remittal in accordance with Article 111(1) EPC has normally been considered by the Boards in cases where a decision was issued solely upon a particular issue (e.g. novelty) and leaves other substantive issues e.g. regarding inventive step undecided. This existing practice realizes the primary object of appeal proceedings to review the decision under appeal in a judicial manner as expressed in Art 12(2) RPBA 2020.

3.2 The Board has examined the opposition ground of Article 100(c) together with 123(2) EPC, as decided by the opposition division in its decision and challenged in the appeal. However, the opposition division did not examine and decide on the opposition grounds of Articles 100(b) and 100(a) EPC. These issues were neither the subject of the appeal, nor have they been addressed fully by the parties in their submissions.

3.3 The Board considers that the above reasons justify a remittal of the case to the opposition division in accordance with Article 11 RPBA 2020, also in view of the fact that both parties agree to the remittal.

## Order

**For these reasons it is decided that:**

1. **The decision under appeal is set aside.**
2. **The case is remitted to the Opposition Division for further prosecution.**

The Registrar:

The Chairman:



G. Magouliotis

A. de Vries

Decision electronically authenticated