

**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 17 March 2006**

**Case Number:** T 0121/04 - 3.2.04

**Application Number:** 96906338.7

**Publication Number:** 0808093

**IPC:** A01C 5/06

**Language of the proceedings:** EN

**Title of invention:**  
Planting unit

**Patentee:**  
Baugher, Roger, et al

**Opponent:**  
Amazonen-Werke

**Headword:**

-

**Relevant legal provisions:**  
EPC Art. 54, 56, 123

**Keyword:**  
"Extension of the protection conferred (no)"  
"Novelty (yes)"  
"Inventive step (yes)"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0121/04 - 3.2.04

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.04  
of 17 March 2006

**Appellant:** Amazonen-Werke  
(Opponent) H. Dreyer GmbH & Co. KG  
Am Amazonenwerk 9-13  
D-49205 Hasbergen (DE)

**Representative:** Schuster, Thomas  
Grünecker, Kinkeldey,  
Stockmair & Schwanhäusser  
Anwaltssozietät  
Maximilianstrasse 58  
D-80538 München (DE)

**Respondent:** Baugher, Roger  
(Proprietor of the patent) P.O. Box 79-A  
McClure, IL 62967 (US)

**Representative:** Hano, Christian  
v. Fünér Ebbinghaus Finck Hano  
Mariahilfplatz 2 & 3  
D-81541 München (DE)

**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
14 January 2004 concerning maintenance of  
European patent No. 0808093 in amended form.

**Composition of the Board:**

**Chairman:** M. Ceyte  
**Members:** P. Petti  
M. B. Tardo-Dino

## Summary of Facts and Submissions

I. An opposition was filed against the European patent No. 0 808 093. In its interlocutory decision posted 14 January 2004 the opposition division found that the patent in an amended version based upon claim 1 filed during oral proceedings on 18 November 2003 met the requirements of the European Patent Convention.

Amended claim 1 reads as follows:

- "1. A single disk opener assembly adapted for attachment to a frame (12) and movable forwardly over the ground for opening a furrow therein comprising:
- opener arm or draw bar assembly (28) having a first end (32) adapted for attachment to the frame and a second end;
  - a disk (50) connected to the second end of the opener arm or draw bar assembly (28) for rotation about an axis offset at an angle to the direction transverse to the forward direction for forming a furrow, the angled disk (50) thus defining forwardly (108) and rearwardly (110) directed disk surfaces, the profile of the disk (50) defining a disk shadow when viewed from the rear,
  - a seed tube (213) located closely adjacent the rearwardly directed disk surface (110) for depositing material in the formed furrow; and
  - a gauge wheel (52), and means (166, 168) connecting the gauge wheel (52) to the opener arm or draw bar assembly (28) for rotation

adjacent the forwardly directed surface of the disk (50) about an axis generally parallel to but offset from the disk axis to limit the depth of penetration of the disk (50),

- the seed tube (213) including an upper portion which extends downwardly to a lower end portion terminating in an outlet opening (222) located below the axis of the disk (50) adjacent the bottom of the disk, and
- an extension (214) supported adjacent the lower end portion of the seed tube (213),

**characterized in that**

- the extension (214) extends forwardly of the seed tube (213) in the disk shadow, said extension (214) being adapted for holding loose soil on the side of furrow opposite the rearwardly directed surface (110) out of the furrow long enough for seed discharged from the outlet (222) to reach the bottom of the furrow as the opener moves forwardly without significantly contacting the side of the furrow."

II. On 23 January 2004 the opponent (hereinafter appellant) lodged an appeal against this decision and simultaneously paid the appeal fee. A statement setting out the grounds of appeal was received on 21 May 2004.

III. Oral proceedings before the board were held on 17 March 2006.

IV. The appellant requested that the decision under appeal be set aside and the patent be revoked.

As a main request the patent proprietor (hereinafter respondent) requested that the appeal be dismissed. Auxiliarily, the respondent requested that the patent be maintained on the basis of the independent claim 1 of one of the three auxiliary requests filed with the letter dated 3 March 2006.

V. With respect to Article 123 (3) EPC, the appellant essentially argued that the deletion of the terms "with minimal contact" in granted claim 1 and their replacement by "without significantly contacting" extend the protection conferred since claim 1 as granted also covers a device in which there is no contact between the extension and the side of the furrow.

With regard to Article 100 (a) EPC, the appellant essentially argued that the subject-matter of claim 1 of the main request either lacked novelty with respect to document US-A-4 760 806 (D4) or did not involve an inventive step having regard in particular to the combination of documents D4 and DE-3 122 714 (D3).

The respondent (patent proprietor) essentially contested the arguments of the appellant.

## Reasons for the Decision

1. The appeal is admissible.
2. *Article 123 EPC (main request)*
  - 2.1 The amended claim 1 differs from granted claim 1 in that the expression "**without significantly contacting** the side of the furrow" (in the characterising portion of the amended claim 1) has been introduced to replace the expression "**with only minimal contact with** the side of the furrow" in claim 1 as granted (emphasis added).
  - 2.2 The features of the characterising portion of both granted claim 1 and amended claim 1 define the extension by its relationship to the side of the furrow which is opened by the disk when the opener moves forwardly, in so far as they refer to the extension as being "adapted for holding loose soil" on the side of the furrow. The terms "for holding loose soil" make it clear that the extension has to be positioned within the disk shadow so as to be in contact with the side of the furrow sufficiently to prevent loose soil from falling into the furrow (in advance of seed to be deposited in the furrow). This contact is due not only to the shape of the extension and its positional relationship to the disk but also to the shape of the furrow wall which - due to the nature of the soil - cannot have a shape which perfectly corresponds to the profile shape of the disk leading edge.

The extension is further defined, according to granted claim 1, as being "adapted for holding loose soil... **with only minimal contact** with the side of the furrow"

and, according to the amended claim 1, as being "adapted for holding loose soil... **without significantly contacting** the side of the furrow". The expressions "with only minimal contact" and "without significantly contacting" define the contact as being minimal or non-significant.

Therefore, the appellant's argument that the wording "without significantly contacting" in the amended claim 1 also encompasses an extension having no contact with the side of the furrow and, thus, extends the protection conferred cannot be accepted.

2.3 In respect of this issue, the appellant also submitted that the amended claim 1 defines the extension as extending in the disk shadow (which is defined by the profile of the leading edge of the disk when viewed from the rear). According to the appellant, when the opener moves forwardly the extension moves behind the disk and cannot come into contact with the side of the furrow formed by the leading edge of the disk because it does not extend outwardly of the disk shadow defined by the disk.

However, as already explained in section 2.2 above, the claimed extension is "adapted for holding loose soil" and thus the capability of coming into contact with the furrow depends not only on how the extension is arranged relative to the disk but also on the nature of the soil. It is clear from the wording of the claim and from the description and drawings of the patent (see e.g. column 13, lines 36 to 41; Figure 9) that **there are no portions of the extension which extend outwardly of the disk shadow** but there is some contact between

the extension and the side of the furrow, the contact being such that the extension does not further "significantly form, firm or otherwise enlarge the furrow or disturb the adjacent soil" (column 13, lines 24 to 31). Thus, the fact that the extension extends in the disk shadow does not exclude a non-significant contact of the extension with the side of the furrow.

2.4 The amendment leading to the amended claim 1 has a basis in the description (page 21, lines 4 to 7 and in claim 14 of the application as filed (WO-A-96/24239)).

2.5 Therefore, the requirements of Articles 123(2) and (3) EPC are not contravened.

3. *Novelty (main request)*

3.1 Document D4 discloses a single disk opener assembly adapted for attachment to a frame and movable forwardly over the ground for opening a furrow therein comprising an "opener arm or draw bar assembly 28" (see column 4, lines 6 to 9)) having a first end adapted for attachment to the frame and a second end, a disk 38 connected to the second end of the open arm or draw bar assembly 28 for rotation about an axis offset at an angle to the direction transverse to the forward direction for forming a furrow, the angled disk thus defining forwardly and rearwardly directed disk surfaces, the profile of the disc 38 defining a disk shadow when viewed from the rear, a seed tube 52 (see *Figure 3*) located closely adjacent the rearwardly directed disk surface for depositing material in the formed furrow (according to column 7, lines 53 to 56,

the "upper portion 310 of the seed tube 52 extends ... adjacent the flange 230 of the hub 200" of the disc near the rearwardly directed surface 38b of the disc), a gauge wheel 42 and means connecting the gauge wheel to the opener arm or draw bar means for rotation adjacent the forwardly directed surface of the disk about an axis generally parallel to but offset from the disk axis to limit the depth of penetration of the disk, the seed tube 52 including an upper portion 310 which extends downwardly to a lower end portion (consisting of the "short angled portion 322", the "short inwardly portion 328" and the "end portion 334") terminating in an outlet opening 338 located below the axis of the disk adjacent the bottom of the disk, and a "furrow-firming and coulter-scraping extension 56" (see column 4, lines 33 to 39) which is connected to the lower end portion 322,328,334 of the seed tube 52.

Moreover, the extension 56 includes an inward scraping portion 342, which extends upwardly and forwardly from the lower edge of the lower end portion of the seed tube, and a "soil-deflecting plate 350, which extends rearwardly from the outlet opening 338" (see column 8, lines 11 to 14) of the seed tube. Therefore, both the inward scraping portion 342 and the soil-deflecting plate 350 can be considered as being supported adjacent the lower end portion 322,328,334 of the seed tube 52.

Having regard to Figures 4 to 6, the soil-deflecting plate 350 of the "furrow-firming and coulter-scraping extension 56" extends rearwardly of the seed tube. Furthermore, the "aft portion of the soil-deflecting plate 350 provides an extended seed deposit area to

keep loose soil from dropping in the furrow before the seed has settled..." (see column 8, lines 25 to 29).

The soil-deflecting plate 350 of the "furrow-firming and coulter-scraping extension 56" forms with the inward scraping portion (342) a "generally wedge-shaped leading section ... adjacent the lower portion of the seed tube" so as to define an inclined surface 358, "the outermost portion of which extends slightly outwardly of the shadow area 54...to help to firm the soil and prepare a good seed-bed for the seed being deposited therein" (see column 8, lines 11 to 23; emphasis added).

It follows from the foregoing that the "furrow-firming and coulter-scraping extension 56" does not extend in the disk shadow.

- 3.2 In this respect, the appellant argued that the extension defined in claim 1, which comes into contact with the furrow wall, necessarily extends slightly outwardly of the disk shadow.

Having regard to the foregoing considerations in section 2.3, the board cannot accept this argument.

- 3.3 For the reasons above, the subject-matter of claim 1 is novel over this prior art.

4. *Inventive step (main request)*

- 4.1 The subject-matter of claim 1 differs from the opener assembly known from document D4, which is considered as being the closest prior art, essentially in that the

extension extends in the disk shadow and is adapted for holding loose soil on the side of furrow opposite the rearwardly directed surface out of the furrow long enough for seed discharged from the outlet to reach the bottom as the opener moves forwardly without significantly contacting the side of the furrow.

These features result in providing an extension which does not significantly form or firm or otherwise enlarge the furrow or disturb the adjacent soil.

- 4.2 Therefore, the problem to be solved is to provide a opener assembly which allows accurate placement of seeds at the bottom of the furrow without forming or firming the side of the furrow.
- 4.3 The appellant submitted that document D3 teaches the use of an extension which extends forwardly of the seed tube in the disk shadow and is adapted for holding loose soil on the side of furrow without significantly contacting the side of the furrow and essentially argued that the skilled person would apply this teaching to the opener assembly of document D4 and arrive in an obvious way to the claimed subject-matter.
- 4.4 The board cannot accept the appellant's arguments for the following reasons:

Document D3 discloses an opener assembly comprising a disk 8, a seed tube 11 including a lower end portion terminating in an outlet opening 10 located near the axis of the disk and an extension 14 which is connected to the lower end portion of the seed tube, the extension 14 extending **downwardly of the outlet opening**

10 of seed tube 11 and parallel to the direction of travel.

The primary function of the extension 14 is to cooperate with the disk 8 to form a protected space between the outlet opening 10 of the seed tube and the furrow 15 (see page 7, lines 1 to 3).

The leading edge 18 of the extension 14 is positioned near the disk, so that the secondary function of the extension is to **prevent** plant or soil residues falling in the furrow before the seeds are placed therein (see page 7, 2nd paragraph).

The problem solved in document D3 is not the accurate placement of the seeds at the bottom of the furrow but to ensure that seeds are placed inside and not beside the furrow (see the paragraph bridging pages 4 and 5). Moreover, it does not address the problem of avoiding any consolidation of the furrow wall.

Although Figure 2 shows the disk 8 from the front with the extension 14 represented by dotted lines, document D3 does not clearly and unambiguously disclose the extension as being located in the shadow of the disk. This extension is also not disclosed as being adapted to **hold** loose soil on the side of the furrow while being in non-significant contact with the side of the furrow. In this respect, the depicted extension does not extend to the bottom of the furrow with the consequence that loose soil from the side of the furrow can fall into the furrow before the seed has been deposited.

Thus, even if the skilled person were to combine documents D3 and D4, he would not arrive at the claimed subject-matter.

4.5 Therefore, the subject-matter of claim 1 involves an inventive step.

5. Having regard to the above considerations, the patent can be maintained in the amended version accepted by the opposition division.

## **Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

G. Magouliotis

M. Ceyte