

**Internal distribution code:**

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

**Datasheet for the decision  
of 10 October 2018**

**Case Number:** T 1235/14 - 3.2.04

**Application Number:** 04723262.4

**Publication Number:** 1608214

**IPC:** A01C5/06, A01C7/00, A01B49/06

**Language of the proceedings:** EN

**Title of invention:**  
IMPROVED SEED DRILL

**Patent Proprietor:**  
Claydon, Jeffrey Thomas

**Opponents:**  
Amazonen-Werke  
H. Dreyer GmbH & Co. KG  
Mzuri Limited

**Headword:**

**Relevant legal provisions:**  
EPC Art. 56, 105

**Keyword:**

Inventive step - (no)

Intervention of the assumed infringer - admissible (yes)

**Decisions cited:**

G 0001/94

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 1235/14 - 3.2.04

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.04**  
**of 10 October 2018**

**Appellant:**  
(Opponent )

Amazonen-Werke  
H. Dreyer GmbH & Co. KG  
Am Amazonenwerk 9-13  
49205 Hasbergen (DE)

**Representative:**

Grünecker Patent- und Rechtsanwälte  
PartG mbB  
Leopoldstraße 4  
80802 München (DE)

**Respondent:**  
(Patent Proprietor)

Claydon, Jeffrey Thomas  
Gaines Hall  
Wickhambrook  
Newmarket  
Suffolk CB8 7YA (GB)

**Representative:**

Nash, Keith Wilfrid  
Nash Matthews  
90-92 Regent Street  
Cambridge CB2 1DP (GB)

**Party as of right:**  
(Intervenor )

Mzuri Limited  
Windsor House  
Bayshill Road  
Cheltenham, Gloucestershire GL50 3AT (GB)

**Representative:**

Jackson, Derek Charles  
Derek Jackson Associates  
The Old Yard  
Lower Town  
Claines  
Worcestershire WR3 7RY (GB)

**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
25 March 2014 concerning maintenance of the  
European Patent No. 1608214 in amended form.

**Composition of the Board:**

**Chairman** G. Martin Gonzalez  
**Members:** S. Oechsner de Coninck  
W. Van der Eijk  
G. Martin Gonzalez

## Summary of Facts and Submissions

- I. The appellant-opponent lodged an appeal, received on 30 May 2014, against the interlocutory decision of the Opposition Division of the European Patent Office posted on 25 March 2014 concerning maintenance of the European Patent No. 1608214 in amended form, and paid the appeal fee at the same time. The statement setting out the grounds of appeal was received on 8 July 2014.
- II. Opposition was filed under Article 100(a) EPC based on lack of novelty and on lack of inventive step and under Article 100(c) EPC, added subject-matter.

The Opposition Division held that the claims as amended were new and inventive, having regard *inter alia* to the following documents:

(E2) US 4,244,306

- III. The appellant-opponent filed *inter alia* the following document with the statement of grounds:

(E12) US 5,161,472

- IV. The respondent-proprietor initiated infringement proceedings against Mzuri Limited before the High Court of England and Wales on 6 March 2018. Mzuri Limited filed a notice of intervention on 6 June 2018, and simultaneously paid the corresponding opposition fee.

The intervention was filed under Article 100(a) EPC based on lack of novelty and inventive step relying, *inter alia*, on document (E12).

- V. The appellant-opponent and the intervener request that the decision under appeal be set aside and that the European patent No. 1608214 be revoked.

The respondent-proprietor requests that the appeal be dismissed and the patent be maintained as upheld by the opposition division, or alternatively maintained on the basis of his first auxiliary request filed with letter of 14 November 2014. He further requests not to admit the intervention and the evidence introduced by the intervener, or, if admitted, to remit the case to the department of first instance, or, if not remitted, to admit his second auxiliary request filed with letter of 10 July 2018.

- VI. Oral proceedings were held on 10 October 2018.

- VII. The independent claims according to the relevant requests read as follows

(a) Main request - as upheld by the Opposition Division

"1. A method of sowing seed (102, 108, 114) comprising the steps of:

(a) breaking up soil by pulling laterally spaced apart first tines (16, 44, 104, 124) therethrough with the tines set to penetrate a depth which bears a fixed relationship to the depth at which the seed is to be sown, to create a corresponding plurality of shallow trenches of broken up soil with strips of undisturbed soil therebetween,

(b) at a distance behind the first tines (16, 44, 104, 124), introducing seed immediately to the rear of a second tine (14, 42, 120, 126) via seed delivery means

(12, 46, 48, 116) associated with the second tine, the penetration depth of the second tine being equal to the depth at which the seed is to be sown, the second tine including lateral wings which lift the disturbed and broken up soil in the trench created by the first tines, as the second tine moves therethrough, to allow seed to fall below the lifted soil which, as the second tine continues to move forward, will fall back to cover the seed, followed by

(c) flattening the soil in the trenches by levelling means (22, 128) aligned with and following the second tines, characterised in that,

(d) each second tine is in line with one of the first tines, so that the seed is planted only in the trenches formed by the first tines, whereby soil will only be disturbed in spaced apart linear regions determined by the lateral spacing of the tines, and the strips of soil therebetween will not be disturbed."

"7. Apparatus for cultivating soil and sowing seed comprising:

(a) a frame, adapted in use to be towed by, or attached to the rear of, a tractor,

(b) a first row of tines (16, 44, 104, 124) carried by the frame and spaced apart across the width of the frame, set to penetrate a depth which bears a fixed relationship to the depth at which seed is to be sown,

(c) a second row of tines (14, 42, 120, 126) also carried by the frame and spaced to the rear of the first row in the direction of forward motion of the apparatus when in use, and comprising lateral wings,

(d) a hopper means (10) containing seed (102, 108, 114),

(e) means (12, 46, 48, 116) for feeding seed therefrom down the rear and to the underside of each of the second tines,

(f) soil levelling means (22, 128) carried by the frame and located in alignment with the tines to the rear of the second row of tines relative to the said forward direction of motion when in use, so that in use as the apparatus moves in a forward direction, soil that has been disturbed by the first row of tines forms trenches of broken up soil, each second tine passing through a respective trench so that the lateral wings lift the disturbed and broken up soil to allow seed to fall below the lifted soil which, as the second tines continue to move forward, will fall back to cover the seed, which is generally flattened by the passage of the levelling means thereover, characterised in that

(g) the second row tines are spaced apart across the width of the frame so that each of the tines in the second row is aligned with one of the tines in the first row whereby in use soil will only be disturbed in spaced apart linear regions determined by the lateral spacing of the tines, and the strips of soil therebetween will not be disturbed."

(b) First auxiliary request

Both claims 1 and 7 are amended vis-a-vis the main request to introduce with respect to the first tines that "..., **and each tine comprising a knife or slotter**



**tine,...**" in feature (a) of claim 1 and in feature (b) of claim 7.

(c) Second auxiliary request

Claim 1 as in the first auxiliary request. Vis-à-vis the first auxiliary request, the apparatus claims 7-15 are removed.

VIII. The appellant-opponent and the intervener argued as follows:

The intervention is admissible. Document E12 is also admissible. Claims 1 of the main, first and second auxiliary requests lack inventive step in the light of E2 and E12.

IX. The respondent-proprietor argued as follows:

Document E12 has been late filed with the statement of grounds and should not be admitted. If Mzuri Limited are to be admitted as interveners, the additional facts, evidence and arguments should not be admitted. If the Board decides to admit new evidence, remittal to the department of first instance is requested. Claims 1 of the main, first and second auxiliary requests involve an inventive step in the light of E2 and E12.

### **Reasons for the Decision**

1. The appeal is admissible.

The notice of intervention has been timely filed within the three months time period after institution of the infringement proceedings, Rule 89(1) EPC. It also

fulfils the requirements of Article 105 EPC and Rule 76 EPC. Furthermore, the respondent-proprietor has not put forward substantive arguments against admissibility of the intervention. The intervention is admissible.

2. Background

The invention is concerned with a method and apparatus for planting seeds that can sow seed directly into unploughed or uncultivated land. The method and apparatus creates conservation or strip tillage in which soil between the newly sown rows is left undisturbed, which enhances weed control and deals with crop residues in an advantageous manner, see specification paragraphs [0004], [0036]-[0038]. According to the claimed method and apparatus a first row of spaced apart tines creates trenches of broken up soil. At a distance behind the first tines, seeding tines deposit the seeds in the trenches formed by the first tines. Finally a third row of levelling means, e.g. packer wheels, flattens the soil, see paragraphs [0005], [0009]. The seeding or second tines include lateral wings to lift the disturbed and broken up soil in the trench, deliver the seeds and subsequently let the soil fall back to cover the seed. It is so ensured that soil is lifted and deposited onto the seeds, covering them before soil flattening, see specification paragraph [0014]. The lateral wings also allow that seed can be spread across the width of the trench, see specification paragraphs [0026], [0090]-[0091].

3. Admissibility of E12

The respondent-proprietor objects to the introduction of E12 as late filed by the appellant-opponent, and also objects to its introduction by the intervener. The

intervener relies on evidence E12 in the notice of intervention, timely filed within the time period set out in Rule 89(1) EPC. In this context, the Enlarged Board of Appeal's decision G 1/94 (OJ, 1994, 787, reasons 13) establishes that an intervener should be entitled to all available means to attack the patent, including new grounds of opposition and the presentation of new facts and arguments in the appeal proceeding.

Thus in the present case, pursuant to decision G1/94, E12 is timely filed within the intervention period and thus not to be disregarded as late filed, regardless of the proximity of the date for a summoned oral proceedings.

4. Main request - inventive step

4.1 It is undisputed that document E2 can be considered as closest prior art to the subject-matter of claim 1. E2 discloses a method of sowing seed comprising the steps of breaking up soil by pulling laterally spaced apart first tines (chisel points and shanks 16,14), at a distance behind the first tines, introducing seed via seed delivery means 31 in the form of disc openers, followed by flattening the soil by levelling means (packer wheels 32), wherein each seed delivery means 31 is in line with one of the first tines 16, so that the seed is planted only in the trenches formed by the first tines 16, and the strips of soil therebetween will not be disturbed, see E2, column 3, lines 48-55.

4.2 The contested patent calls for creation of trenches by first tines (see e.g. figure 9 of the contested patent) wherein the soil is broken and disturbed so as to be

prepared for subsequent insertion of the seed, i.e. the first tines till the soil in trenches for subsequent sowing. The respondent-proprietor argues that the first tines 16,14 of E2 do not create trenches of broken up soil in this sense. According to the respondent-proprietor, the chisel points 16 only remove or disturb the soil along a very narrow strip and do not prepare the soil for sowing along a wider trench, as in the contested patent. The Board is not convinced by this argument. E2 explicitly describes a trench of tilled soil created by the first tines or chisels in column 3, lines 48-55, i.e. that the drill means (discs 31) rearward of the chisels 16 are "adapted to plant seeds within a seed-receiving trench along each tilled area...". Document E2 also describes that the chisel points provide a seed bed of soil broken up by them in preparation for subsequent planting, see column 2, lines 12-21, as they "till transversely spaced longitudinal areas parallel to the direction of movement", see column 2, lines 57-60. Thus in the Board's understanding E2 describes also tilled strips in the form of trenches of broken up soil, created by chisels 16, which are prepared to receive the seed, in the sense of present claim 1.

The Board is also not convinced by the argument of the respondent-proprietor that the first tines or chisel points 16 of E2 do not penetrate to a sufficient depth so as to adequately prepare the trenches for the subsequent seeding tool, as would be required by the contested claim 1. The Board, on the contrary, firstly notes that claim 1 of the main request does not require any minimum penetration difference between the first tines and the trailing seeding tines. Furthermore, dependent claims 2, 3 and 5 of this request, which are particular embodiments of the method claim 1, specify

that second (seeding) tines may penetrate "the same depth", "to part of the depth" or "to a greater depth" than the first tines. The Board thus sees no limitation in claim 1 to the penetration depth of the first tines with regard to the second tines or seed introducing means that can distinguish the claimed method from the one disclosed in E2.

4.3 Accordingly, in the Board's view, as also identified by the Opposition Division, the only feature not disclosed by the method in E2 is that the seed introducing means are in the form of second seeding tines including lateral wings to lift the disturbed and broken up soil in the trench, deliver the seeds and subsequently let the soil fall back to cover the seed. The associated technical problem can thus be expressed, as also formulated by the respondent-proprietor, as how to adapt the known seeding tines to ensure that loosened soil is lifted and deposited onto the seeds, see also specification paragraph [0014].

4.4 In this respect, document E12 teaches for the seeding tine or shoe 23 that its top surface or lateral wings cause "soil to be lifted off,... maintained above... until the seeds are deposited and then dropped back down on top of the seed to cover the same", see E12, claim 1, lines 45-50. Thus E12 provides the same technical advantages as is sought by the skilled person, who would therefore find it very relevant to solve the above formulated problem. Hence the skilled person would, in the light of the E12's teaching, replace the disc openers 31 of E2 by the seeding tines or shoes 23 with lateral wings taught by E12, as a matter of obviousness, in order to ensure that loosened soil is lifted and deposited onto the seeds.

4.5 The impugned decision held that the skilled person would not consider a tine equipped with lateral wings instead of disc openers for the method of E2 due to the risk that the fertilizer, previously applied in the method of E2 at a lower depth, be uplifted by the action of the lateral wings, giving rise to the risk of an unwanted contact of the fertilizer with the seed. However, in the Board's view, it appears from E2 itself that this undesirable effect is avoided by an appropriate depth difference between the fertilising and the seeding tools, see E2, column 3, lines 49-55, and not by the type of seeding or sowing tool. Additionally, as taught by E12, by using the seeding shoe 23 of E12 with lateral wings the seeds are deposited on either side of the vertical trench upon seed-supporting shelves 36, that keep the seeds from falling into or being too close to fertilizer deposited at the bottom, see E12, column 4, lines 36-42. It is thus immediately apparent to the skilled person that a risk of contact of the seeds with the fertilizer is further minimized with the seeding shoe 23 of E12. He would thus, in the Board's opinion, rather be motivated to substitute the disk openers of E2 by the seeding shoe 23 of E12 for this reason, than be discouraged by it.

4.6 The respondent-proprietor also submits that the seeding shoe of E12 would not be capable of lifting soil that has been previously loosened by an earlier digging tine, because seeding tine 23 of E12 has a width exceeding that of the trench created by the first tine 14 of E12 and it therefore does not lift soil of the trench disturbed by the first tine but substantially undisturbed soil outside the trench, see also claim 21 of E12. However, in the Board's understanding, the seeding shoe 23 not only is described, by its alignment

behind the first digging tine 14, as lifting the soil in the trench created by the forward tine 14 (see claim 1, lines 25-27), but it is also immediately apparent to the skilled person from the shape of the lateral wings that the seeding shoe 23 is capable of lifting soil, whether it has been previously loosened or not, placing the seed and let the soil fall back onto the seed, in the sense of the contested claim. This is also immediately apparent from the teaching in E12, that the top surface of the lateral wings precisely achieves this effect, see e.g. claim 1, lines 45-50, thus prompting the skilled person to use these seeding tines in the method of E2 in order to solve the above formulated technical problem, as also explained above.

4.7 The Board therefore holds that the subject-matter of claim 1 according to the main request does not involve an inventive step in the sense of Article 56 EPC.

5. Auxiliary requests - inventive step

Claim 1 of the first and second auxiliary requests are identical. They have been amended to include that each first tine comprises a knife or slotter tine. In the Board's understanding the chisel point and shank 16, 14 have a similar form as the first tines 16 described in the contested patent and, as explained above, must obtain the same result in terms of creating a trench of broken up soil. The Board thus considers that tines 14, 16 of E2 anticipate slotter tines in the sense of the contested patent.

In this respect, the Board is not convinced by the respondent-proprietor's argument that the chisels 16 of E2 do not break up the soil but only act on the surface to clear residue. On the contrary, the passage in

column 2, lines 18-21 of E2 quoted by the respondent in support of his argument, also explicitly states that the chisel points break up the soil.

Therefore, no further differentiating feature, than for the main request, of the subject-matter of these new requests with respect to E2 can be identified.

Furthermore, the provision of first slotter tines instead of first tines in general, having both the same effect, has no impact on the inventive step reasoning explained above for the main request. Thus the above arguments and conclusion for the main request, that claim 1 does not involve an inventive step in the light of documents E2 and E12, also holds for the first and second auxiliary requests.

6. Remittal

Since all the requests of the respondent-proprietor fail based on evidence filed before the notice of intervention, the request for remittal, that was made conditional upon admission or regard of the further evidence introduced by the intervener, does not need to be considered.

7. For the above reasons the Board holds that, taking into consideration the amendments made by the appellant-proprietor, the patent and the invention to which it relates do not meet the requirement of the Convention. The Board thus revokes the patent pursuant to Article 101(3)(b) EPC.



**Order**

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

1.       **The decision under appeal is set aside.**
  
2.       **The European patent No. 1608214 is revoked.**

The Registrar:

The Chairman:



G. Magouliotis

G. Martin Gonzalez

Decision electronically authenticated