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

Case Number: T 0515/16 - 3.2.04

Application Number: 10166203.9

Publication Number: 2308280

IPC: A01D41/12

Language of the proceedings: EN

Title of invention:

Spreading member and combine harvester with spreading member

Patent Proprietor:

REKORDVERKEN SWEDEN AB

Opponent:

Deere & Company/John Deere GmbH & Co. KG

Headword:

Relevant legal provisions:

EPC Art. 76(1), 54(2), 56

Keyword:

Divisional application - subject-matter extends beyond content of earlier application (yes) - subject-matter extends beyond content of earlier application (no, after amendment)

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

T 0331/87

Catchword:



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Chambres de recours

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Case Number: T 0515/16 - 3.2.04

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

Appellant: Deere & Company/John Deere GmbH & Co. KG
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 13 January 2016
rejecting the opposition filed against European
patent No. 2308280 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman A. de Vries
Members: G. Martin Gonzalez
C. Schmidt

Summary of Facts and Submissions

- I. The appellant-opponent lodged an appeal, received on 27 February 2016, against the decision of the Opposition Division of the European Patent Office posted on 13 January 2016 rejecting the opposition filed against European patent No. 2 308 280 pursuant to Article 101(2) EPC and simultaneously paid the required fee. The statement setting out the grounds of appeal was received on 6 May 2016.
- II. Opposition was filed against the patent as a whole under Article 100(a) based on lack of novelty and lack of inventive step and under Article 100(c) objecting extension of subject-matter beyond the contents of the parent application as filed and published as (P) WO 2008/156419 A1.

In their written decision, the Division held that there was no added matter beyond the parent application as filed. They also held that claim 1 of the patent as granted was new and involved an inventive step, having regard *inter-alia* to the following documents

- (D1) EP 1 859 668 A1
- (D2) EP 1 532 858 A1
- (D3) US 2007/0026912 A1
- (D4) US 2007/0015556 A1
- (D7) DE 100 29 715 A1

- III. In the appeal proceedings the following documents were filed by the appellant-opponent with the statement of grounds:

- (D9) DE 25 29 019 A1
- (D10) DE 28 15 936 C2

- IV. Oral proceedings before the Board were duly held on 10 January 2018.
- V. The appellant-opponent requests that the decision under appeal be set aside and that the European patent No. 2308280 be revoked.

The respondent-proprietor requests that the appeal be dismissed and that the patent be maintained as granted, or, as an auxiliary measure, that the patent be maintained on the basis of auxiliary request 4.5, filed at the oral proceedings before the Board, or on the basis of the auxiliary requests 1 to 9, all filed with letter dated 26 September 2016.

Both parties request oral proceedings.

- VI. The wording of claim 1 of the requests relevant to this decision is as follows:

Main request - as granted

" A spreading arrangement adapted to be arranged after a straw chopper of a combine harvester (1), said spreading arrangement including two spreader fans and a spreading member (14), characterized in that said spreading member is wedge shaped and comprises two vertical sides and a shaft (22), wherein said sides are arranged at an angle to each other, said spreading member is disposed between and downstream of said two spreader fans, and said spreading member is pivotable around said shaft (22) between a first and second outer position, wherein the spreading member is arranged to oscillate between the first and second outer positions at suitable frequency."

Auxiliary request 1

Vis-a-vis claim 1 of the main request claim 1 is amended as follows (emphasis added by board to indicate added text)

"...said spreading member is disposed between and downstream of said two spreader fans, so that the apex of the spreading member is positioned closer to the back end of the combine harvester than a respective center of the two spreader fans when the spreading arrangement is arranged to the combine harvester and ...".

Auxiliary request 2

Vis-a-vis claim 1 of the main request claim 1 adds the following final feature:

"and wherein the spreading member (14) is arranged and configured such that an apex of said spreading member is to be placed forwards as seen in the direction of the combine harvester (1), when the spreading".

Auxiliary request 3

Vis-a-vis claim 1 of the main request claim 1 adds the following text at the end of the final feature:

"and wherein the shaft (22) is provided at the apex of the spreading member".

Auxiliary request 3

Vis-a-vis claim 1 of the main request claim 1 adds the following text at the end of the final feature:

"and wherein the spreading member (14) comprises two spreading surfaces, which are provided such that they oscillate together".

Auxiliary request "4.5"

Vis-a-vis claim 1 of the main request the opening lines of claim 1 are amended as follows (emphasis again added by the Board to indicate deleted or added text):

" *A combine harvester (1) comprising a straw chopper (2). having an inlet for unchopped straw and an outlet (21) for chopped straw, and a spreading arrangement arranged downstream of said outlet for chopped straw, wherein the spreading arrangement is adapted to be arranged after ~~a~~ the straw chopper of ~~a~~ the combine harvester (1), said spreading arrangement including two spreader fans and a spreading member (14), characterized in that said spreading member is wedge shaped and comprises two vertical sides and a shaft (22), wherein said sides are arranged at an angle to each other, said spreading member is disposed between and downstream of said two spreader fans, and said spreading member is pivotable around said shaft (22) between a first and second outer position, wherein the spreading member is arranged to oscillate between the first and second outer positions at suitable frequency.*"

Auxiliary request 5

" *A combine harvester (1) comprising a straw chopper (2), having an inlet for unchopped straw and an outlet*

(21) for chopped straw, and a spreading arrangement arranged downstream of said outlet for chopped straw, wherein said combine harvester further comprises a guide member (13) which is arranged to deflect at least a part of a stream of chopped straw to an axial intake of the spreader fan (8) such that said part of chopped straw material meets the blades (16) of the spreader fan (8) in the direction of transport of the chopped straw material through the spreader fan (8), in the region in which the transport action of the spreader fan (8) is equidirectional with the incoming stream of chopped straw material, at an acute angle (α) relative to the plane of rotation of the spreader fan (8), whereby said part of the stream of chopped straw material contributes to the material movement through the spreader fan (8), wherein said spreading arrangement including two spreader fans and a spreading member (14), characterized in that said spreading member is wedge shaped and comprises two vertical sides and a shaft (22), wherein said sides are arranged at an angle to each other, said spreading member is disposed between and downstream of said two spreader fans, and said spreading member is pivotable around said shaft (22) between a first and second outer position, wherein the spreading member is arranged to oscillate between the first and second outer positions at suitable frequency."

VII. The appellant-opponent argues as follows:

The subject-matter of claim 1 according to the main request and auxiliary requests 1-4 extends beyond the contents of the parent application as filed. This is due to the deletion of certain features from claim 1, namely a combine harvester comprising a chopper and a

guide plate. Late filed auxiliary request 4.5 is not admissible. The subject-matter of auxiliary request 5 is furthermore not new in the light of D1 or D2 nor inventive starting from D3/D4 or D1 combined with D7 and D9 or D10.

VIII. The respondent-proprietor replied as follows:

The skilled person can clearly derive from the original parent application description that the spreading arrangement, as claimed in the contested divisional patent, is a separate invention. As such it does not have to be claimed together with a combine harvester or a guide plate. Late filed auxiliary request 4.5 successfully addresses the added subject-matter objections on file and is admissible. The late filed documents D9 and D10 should not be admitted into the appeal proceedings due to their insufficient relevance. Finally, the subject-matter of claim 1 according to all requests is new and inventive because the submitted prior art documents neither disclose nor suggest the combination of two spreader fans and a spreading member arranged to oscillate at suitable frequency in a combine harvester.

Reasons for the Decision

1. The appeal is admissible.
2. *Added subject-matter - main and auxiliary requests 1-4*
 - 2.1 The appellant-opponent objects that, contrary to the provisions of Article 76(1) EPC, the subject-matter of claim 1 according to the main request and auxiliary requests 1-4 extends beyond the contents of the

originally filed parent application, published with number WO 2008/156419 A1.

Whether subject-matter of the divisional, e.g. of its granted claims, extends beyond the originally filed earlier (parent) application, Art 76(1), is assessed by applying the same principles used for determining compliance with Art 123(2) EPC (Case Law of the Boards of Appeal of the EPO, 8th edition 2016 - or CLBA - II.F.2.1), namely according to the "gold standard" of direct and unambiguous disclosure (CLBA, II.E.1.2.1). According to said standard an amendment can only be made within the limits of what a skilled person would derive directly and unambiguously, using common general knowledge, from the whole of the earlier application as filed.

2.2 In the present case, the features of a combine harvester comprising a straw chopper and a guide member appear in independent claim 1 of the parent application as filed, whereas claim 1 of the main and auxiliary requests 1-4 is directed to a spreading arrangement per-se, not including said features. Thus, unless a basis exists elsewhere in the parent application as filed (description & figures), their omission must result in a generalization of claim scope to include embodiments not considered in the original parent disclosure, contrary to Art 76(1) EPC, e.g. spreader arrangements that may be stand alone or (in the combine harvester) have no guide member.

2.3 The contents of the parent application description and figures as filed need thus be considered. The description of the parent application is mainly concerned with the improvements achieved in a combine harvester by the implementation of a guide member at

the intake of the spreader fans, see "Summary of the invention" pages 2-4 of the published parent application P. The guide member of the combine harvester is in particular presented as an essential feature of the invention aimed at increasing the spreading width of the chopped straw over the field, see page 2, line 11-23. The spreading member at the fan's outlet is first presented as an additional improvement to the combine harvester comprising the guide member. Indeed, the advantages of the spreading member are introduced in section "Summary of the invention", on page 4, line 27 after the description of the combine harvester comprising the guide member, with the statement: "Preferably, the combine harvester, additionally has a spreading member, which..." (emphasis added). In the detailed description of the preferred embodiments and following sections describing the guide member and combine-harvester, on pages 7-14 the optional spreading member is introduced, by the statement "In order further to improve the spreading of the chopped straw..." (emphasis added) on page 12, lines 1-4.

Thus the parent description consistently describes the spreading member 14 at the fans outlet as an additional improvement, and not as a separate invention, to the combine harvester comprising said guide member. Consequently an arrangement omitting the combine harvester and the guide member cannot be inferred from the general context of the description.

- 2.4 The respondent-proprietor submits that the bridging paragraphs of pages 12-13 and 13-14 nonetheless clearly suggest embodiments where the combine-harvester and the guide member may be omitted. The Board, however, cannot endorse that opinion for the following reasons:

The respondent-proprietor contends in particular that the bridging paragraph pages 13-14 of the parent description states that "the type of combine harvester 1 and straw chopper 2 ... in itself, does not have any major bearing upon the present invention". They read this passage of the description as suggesting embodiments that may not include a combine harvester. In the Board's view, on the contrary, this passage merely emphasises that the described invention can be embodied on different types of combine harvesters. Thus the referred paragraph does not suggest that the combine harvester can or may be omitted but merely that it may be substituted by a different type of combine harvester.

The respondent-proprietor also submits that last sentence of page 12 continued onto page 13 points out that "the spreading member 14 is not dependent on the spreader fans 8 for its working and construction, but can also work without spreader fans 8 as these are described in the present invention". In the opinion of the Board this assertion amounts to a suggestion that spreader fans can be of a different type than the ones previously described, if not dispensed with altogether. There is however no reference to the guide member or that this may be omitted. Therefore, whether the guide member provided for feeding the fans, may be omitted or not is not derivable by the skilled person from this cited passage of the parent description. In any case, claim 1 is directed at an arrangement that does include spreader fans. Where the parent disclosure refers to the combination of spreader fans and spreading member it is consistently presented as part of a combine harvester.

Similarly, the opening lines 27 to 29 of this paragraph ("The spreading member 14 ,during use, is placed after a straw chopper 2 in a combine harvester") refers at best to the spreading member 14, but not the arrangement of fans and spreader, as a separate component.

2.5 The respondent-proprietor also contends that the skilled person immediately recognizes that the guide member and the spreading member are two technically unconnected teachings of the parent application disclosure, so that they can be claimed separately. They cite the whole disclosure of the spreading member of pages 4-6, pages 10 and 12 and figure 6 of the parent application documents in support of the argument, pointing out that the guide member is not mentioned in those parts of the description. The Board, on the contrary, sees an important technical relationship of the guide member with the spreader fans and the spreading arrangement disclosed in the parent application. In particular, due to the guide member contribution a part of the stream of the chopped straw material is fed into the spreader fans so that a certain part of its kinetic energy is utilized in the spreading of crop residues, see page 2, lines 22-28, i.e. to obtain increased departing speed of the chopped straw. The kinetic energy so obtained at the outlet of the spreader fans by use of the guide member at the inlet already achieves an improved spreading width. That width is then further increased by use of the spreading member, see parent description page 12, lines 1-2. Thus in the embodiments comprising the spreading member, the final spreading width is the result of the combined effect of the guide member, the fans and the spreading member. Therefore, the Board does not concur with the view that the guide member and the spreading

arrangement are described as two technically unconnected teachings in the earlier application. Furthermore, the original parent disclosure in the parts cited by the respondent-proprietor consistently describes the spreading arrangement as an additional improvement in combination with the combine harvester comprising said guide member, and not as a separate invention, see section 2.3 above.

With respect to the also cited figure 6, said figure, according to page 12, lines 6,7, "shows schematically how the chopped straw is spread over the field 9" in the context of the description on page 12 of the embodiment comprising the combine harvester and the guide member. Thus, it is a schematic illustration of the operating principle of the fan and spreading member, i.e. how they cooperate to spread the straw. The main focus of this figure is thus the spreading, and it is not concerned with the overall construction other than showing the relevant components that produce this effect. The skilled person would not reasonably interpret such a schematic figure beyond the operation principle it is meant to illustrate. In particular therefore he would not infer therefrom, as a matter of direct and unambiguous disclosure, that fan and spreader together form a stand alone self-contained device. For constructional detail he would rather refer to figure 7, which is however expressly described (page 7, lines 2 to 3) as showing in plan view "parts of the rear part of the combine harvester in Fig.1", i.e. as integral part of the latter which also includes the guide member. This is again entirely consistent with the overall disclosure of the parent application.

2.6 The Board, thus, concludes from the above, that the skilled person would not clearly and unambiguously

derive, as required by the "gold standard", either from the general context of the description or from the particular passages or figures cited by the respondent-proprietor or from the technical relationships of the features, the subject-matter of granted claim 1 or of claim 1 according to auxiliary requests 1-4 from the contents of the parent application as filed.

2.7 The respondent-proprietor also applies the three-point or essentiality test of **T 331/87**, notably to justify the omission of the guide member 13. Notwithstanding that said test cannot replace the need to meet the "gold standard", CLBA, II.E.1.2.4, the Board's view is that the omission of the guide member does not meet the three-point test either. In the first place, the guide member is in the parent description presented as an essential feature of the invention, see section 2.3 above. Further, due to the technical relationship between guide member and spreading member, the omission of the guide member would lead to a lower level of kinetic energy of the departing stream of chopped straw which would need compensation, e.g. through more powerful fans, to secure the same high level of kinetic energy in order to obtain the same result. Therefore, the omission of the guide member does not meet, at least, the first and third conditions of the three-point test.

2.8 The Board, consequently, holds that the subject-matter of the main request and auxiliary requests 1-4 extends beyond the contents of the earlier application as filed, contrary to the provisions of Article 76(1) EPC.

3. *Auxiliary request 4.5*

Claim 1 of auxiliary request 4.5 as compared to the main request further comprises a combine harvester, but as in claim 1 of the main request still omits the guide member. It follows immediately from the reasoning given above in respect of the main and auxiliary requests 1 to 4 that the subject-matter of this request extends beyond the contents of the earlier (parent) application as filed for the reasons given above for the omission of the guide member. Consequently, and irrespective of the question of its formal admissibility, this request is clearly not allowable due to lack of compliance with the provisions of Article 76(1) EPC.

4. *Auxiliary request 5*

4.1 *Article 123(2), (3)*

Claim 1 according to auxiliary request 5 is amended with respect to granted claim 1 to include the combine-harvester comprising a straw chopper and the guide member as claimed in claim 1 of the originally filed parent application. This amendment clearly overcomes the above extended subject-matter objections. Indeed, the appellant-opponent has not raised any objections in respect of added subject-matter for this auxiliary request. The Board is also satisfied that the claims according to auxiliary request 5 meet the requirements of Article 76(1) EPC and Article 123(2) and(3) EPC for the following reasons.

New claim 1 is a combination of originally filed parent claims 1, 8, 9 and 10, with further detail from the description, that the spreading member comprises two vertical sides arranged at an angle to each other, which are pivotally disposed about a shaft, the spreading member being arranged to oscillate between

the first and second outer position at suitable frequency, as described on page 12, lines 2-4 and lines 27-31 of the parent application description. Insofar as not already implicit (vertical sides at angle from wedge shape; shaft for pivoting) it is immediately clear that these further features of the spreader member can be considered in isolation from other features of the combine harvester arrangement.

The new claim also finds basis in the originally filed application as the combination of originally filed claims 1,2,8,9 and 10, minus basic inherent features of any combine harvester with chopper (inlet, outlet) and with further detail added from paragraphs [0006] and [0032] of the originally filed description for the features of the guide member and the feature that the spreading member is arranged to oscillate between the first and second outer positions at suitable frequency.

Claim 1 is also restricted in scope with respect to the granted version.

4.2 *Novelty and Inventive Step*

The appellant-opponent has not raised any novelty or inventive step objection against claim 1 of auxiliary request 5. The Board also does not see any compelling reason to deny patentability to claim 1 according to this request.

- 4.2.1 With regard to novelty, in the Board's view, the feature of claim 1 "arranged to oscillate .. at suitable frequency" implies specific adaptations of the claimed device. In particular, the formulation "arranged to" in normal usage implies much more than a mere suitability, contrary to the appellant-opponent's

argument. Rather it is understood to imply the provision of appropriate means to realize the claimed function, namely an appropriately configured control system including a frequency drive or similar, that can drive the spreading arrangement and make it oscillate at a frequency. In the available prior art, such an oscillatory arrangement is only disclosed in D7. However, D7 does not disclose spreader fans as required by claim 1. The subject-matter of claim 1 is therefore new.

- 4.2.2 Either D3 or D4, as is common ground, can be considered as starting point for assessing inventive step, as they describe a combine harvester comprising a spreading member downstream of the spreader fans and forming part of an ejection port. An essential difference of the claimed subject-matter with respect to either document is that the spreading member is arranged to oscillate at suitable frequency. The spreading by the spreader fans is deflected sideways in alternate directions. The resulting two sinuous swathes (figure 6) result both in more even and a wider spread with respect to a non-oscillating spreading member. The spreading effect of the fans is consequently improved both in evenness and in width. The associated problem can be expressed as how to modify the known combine harvester to improve spreading by the spreading fans both in regard of evenness and spreading width, i.e. to produce a more even and wider spread.

Applying the problem-solution approach, the critical question is whether it would be obvious in the light of the cited prior art to modify the known spreading member at the outlet of the spreader fans of D3 or D4 so that it is arranged to oscillate at suitable frequency. In this respect it appears that D7 is the

only document, even considering the late filed documents D9 and D10, that teaches a swinging movement at suitable frequency at the chaff and chopped straw outlet for improving the spreading effect, see D7, paragraphs [0005]-[0009].

In D7, the swinging movement is applied to a plurality of guide vanes 64 distributed along the breadth of the opening of a guide plate or baffle 62 as spreader arrangement directly downstream of the straw chopper 42 that drops or distributes the crop residue behind the spreader. The plurality of oscillating vanes act primarily to improve distribution evenness of the stream of crop residue. The teaching of D7 is not of a general character but is adapted and specific to the particular type of spreading arrangement and associated effects. In particular, document D7 does not address improvements in the outflowing stream of crop residue that is propelled by fans with higher kinetic energy and corresponding velocity, as in D3 and in the contested patent. Nor is D7 concerned with improving the width of the spreading result as in the claimed device. Rather it focuses on improving homogeneity of the spread residue within the otherwise unchanged spreading width of the guide plate or baffle 62. Document D7 thus addresses a different technical problem and achieves a different effect.

In the light of the fundamentally different spreading arrangement and associated effects, the Board holds that the skilled person would not consider the teaching of D7 when tasked to improve evenness and spread width of a spreader as in D3 or D4, as he does not find any indication in D7 that addresses the above identified objective technical problem that the invention tries to solve. Thus the skilled person would not apply the

specific teachings of D7 to modify the spreading member of D3 or D4 as a matter of obviousness. Even if he were to consider applying D7 he would first need to abstract therefrom the idea of oscillatory movement as not merely specific to guide vanes but more broadly applicable. Moreover, he would need to recognize that such oscillatory movement in conjunction with spreader fans would have the added advantage of a wider spread. In the Board's view these insights are squarely beyond his routine skills and abilities.

Therefore, the application of an oscillatory movement at suitable frequency to the guide member at the outlet of a spreader fan, as claimed by auxiliary request 5, which results in a wider and more even spread of the fan, is not suggested in an obvious manner by the available prior art and in the Board's view confers inventive activity in the sense of Article 56 EPC.

5. For the above reasons the Board holds that the claims as amended according to auxiliary request 5 meet the requirements of the EPC. The Board is furthermore satisfied that the consequential amendments to the description bringing it into line with the amended claims are unobjectionable. These were also not objected to by the appellant-opponent. The Board concludes that the patent can be maintained as amended pursuant to Article 101(3)(a) EPC.

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 with the order to maintain a patent in the following version:

Claims:

1 to 11 of the 5th auxiliary request, filed with letter dated 26 September 2016,

Description:

pages 2, 3 and 5 as filed at the oral proceedings before the Board and

page 4 of the published patent specification,

Drawings:

Figures 1 to 8 of the the published patent specification.

The Registrar:

The Chairman:



G. Magouliotis

A. de Vries

Decision electronically authenticated