

Internal distribution code:

- (A) Publication in OJ
(B) To Chairmen and Members
(C) To Chairmen

D E C I S I O N
of 5 November 1997

Case Number: T 0802/96 - 3.2.4

Application Number: 89202246.8

Publication Number: 0361573

IPC: A01D 34/66

Language of the proceedings: EN

Title of invention:
A mowing machine

Patentee:
MAASLAND N.V.

Opponent:
KUHN S.A.
Greenland Geldrop B.V.

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step - no"

Decisions cited:
T 0013/84

Catchword:
-



Case Number: T 0802/96 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 5 November 1997

Appellant: MAASLAND N.V.
(Proprietor of the patent) Weverskade 10
NL - 3155 PD Massland (NL)

Representative: Mulder, Herman
Octrooibureau Van der Lely N.V.
Weverskade 10
NL - 3155 PD Maasland (NL)

Respondents: KUHN S.A.
(Opponent 1) 4, Impasse des Fabriques
F - 67700 Saverne (FR)

Representative: -

(Opponent 2) Greenland Geldrop B.V.
Postbus 9
NL - 5660 AA Geldrop (NL)

(Representative) Grünecker, Kinkeldey,
Stockmair & Schwanhäusser
Anwaltssozietät
Maximilianstr. 58
D - 80538 München (DE)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 25 July 1996
revoking European patent No. 0 361 573 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: C. A. J. Andries
Members: R. E. Gryc
M. Lewenton

Summary of facts and submissions

- I. The appellant (patent proprietor) lodged an appeal, received at the EPO on 5 September 1996, against the opposition division's decision revoking European patent n° 0 361 573 notified by post on 25 July 1996.

The appeal fee was paid on 5 September 1996 and the statement of grounds of appeal was filed on 21 November 1996.

- II. Two oppositions were filed requesting revocation of the patent as a whole on the basis of Article 100(a) EPC. The opposition division held that lack of inventive step (Articles 56 EPC) prejudiced the maintenance of the patent having regard to the following documents:

- E1: DE-B-2 118 914 and
- E14: US-A-3 672 136

- III. In the statement of the grounds of appeal, the appellant agreed that the state of the art closest to the invention could be found in document E1. He pointed out that the problem to be solved is not only the adaptation of the mowing members to unevennesses of the soil but also the maintaining of the stability of the machine. Moreover, he contended that, in E14, there was no indication that the given solution maintained the required stability of the machine.

Respondent 01 (opponent 01) contradicted the contentions of the appellant and drew attention to the pivotable mounting of the beams (81) provided in E1 to support the mowing members rotatably with respect to the frame of the machine.

Respondent 02 (opponent 02) referred to new documents:

- E3: US-A-4 182 099 and
- E4: US-A-4 177 625

and contended that, with regard to the problem to be solved, it does not make any difference if the machine is of the pull type or partially supported by a tractor. In his opinion, it was obvious for the skilled person to combine E1 with either E14, E3 or E4 and to arrive at the invention.

In his reply, the appellant contended further that E14 only teaches to equip the mowing machine with spring-loaded ground wheels and that a skilled person would not combine the teachings of E1 and E3 since E1 describes a machine which is carried by a three-point hitch of a tractor and is provided with drum-shaped mowing members not resting on the ground during operation whereas E3 relates to a pulled machine having a mower bar resting on the ground. The appellant argued also that, with a hinging quadrangle structure of E3, the mowing machine of E1 would not function well and the skilled person would thus not use such a structure in the expectation of an adaptation of the mowing members to unevennesses of the soil.

IV. Oral proceedings took place on 5 November 1997.

The appellant filed a main request comprising two independent claims 1 and 2 and two auxiliary requests based respectively on each of said independent claims of the main request.

With regard to the subject-matter of Claim 1 common to the main and first auxiliary requests, the appellant considered that E1 described the closest state of the art.

He argued that E1 did not teach clearly that the mowing members can move upward and downward with respect to the frame supported by the ground wheels and he pointed out that, in the machines according to E3 and E14, the mowing members and the crusher devices were not independent but associated and jointly movable with respect to the ground wheels. The appellant was also of the opinion that, on the machine of E1, the spring (120) was a weight relief member which fulfills a different function as the spring-loaded member according to claim 1 and therefore did not contribute in the same way to a smooth accommodation of the machine to the soil.

Respondent 01 stated that the problem to be solved was not new, that E1 disclosed already a spring-loaded member (114, 118 and 120) and means allowing the mowing members to move in upward and downward direction relative to the frame of the machine and that the skilled person would also learn the use of spring-loaded members from E3. Respondent 01 took also the view that the subject-matter of claim 1 differed from the embodiment shown on figures 1 to 3 of E1 only in that the spring-loaded members were provided at each side of the machine.

Respondent 02 argued also that E3 taught the use of springs and that the skilled person could easily arrive at the invention by transposing this teaching on the machine known from E1.

With regard to claim 2 of the main request corresponding to claim 1 of the second auxiliary request, the appellant argued that the skilled person would not combine the teachings of E3 or E4 with the teaching of E1 since E3 and E4 concern pull-type machines whereas the machine of E1, as the machine according to the invention, is designed so as to be

connected to the three-point lifting hitch of a tractor. Moreover, in E3, the spring (112) should be a weight relief spring and not a spring for smoothing the movement of the mowing members on the soil.

According to respondent 01, the subject-matter of claim 2 was already anticipated by the embodiment shown on figures 4 to 6 of E1 and respondent 02 argued that to adapt the hinging means of E3 (figure 2) on the machine of E1 would not go beyond the normal skill of the person skilled in the art.

The respondents were also of the opinion that it was not justified to distinguish between a pulled machine and a machine carried by a tractor since the problems were the same with regard to stability and adaptation to the unevenness of the soil during operation.

At the end of the oral proceedings, the appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of a set of claims according to either the main request or the auxiliary requests as submitted during the oral proceedings.

The respondents requested that the appeal be dismissed.

V. Claim 1 common to the main and first auxiliary requests reads as follows:

"A mowing machine comprising a carrier frame (5) provided with coupling points for connecting the mowing machine to the lifting hitch (17) of a tractor (8), a further frame (2) supported by at least two ground wheels (48) and connected pivotably to the carrier frame (5) about a substantially horizontal shaft (3) in the direction of operative travel, mowing members (10) connected to the further frame (2) and drivable about

upwardly extending rotary shafts, and at least one weight relief member (37), active during operation of the machine between the carrier frame (5) and the further frame (2), the machine further comprising means allowing a movement of the mowing members (10) in upward and downward direction relative to the further frame (2) and to the ground wheels (48), means (36), connected between the carrier frame (5) and the further frame (2), allowing upward pivotal movement of the further frame (2) relative to the carrier frame (5) about said shaft (3), and a crusher device (49) and the mowing members (10) being mounted in the further frame (2) capably of movement in upward and downward direction relative to the crusher device (49) characterized in that the means allowing a movement of the mowing members (10) in upward and downward direction relative to the further frame (2) comprise a spring-loaded member (46) at each side of the machine."

- Claim 2 of the main request corresponding to Claim 1 of the second auxiliary request reads as follows:

"A mowing machine comprising a carrier frame (5) provided with coupling points for connecting the mowing machine to the lifting hitch (17) of a tractor (8), a further frame (2) supported by at least two ground wheels (48) and connected pivotably to the carrier frame (5) about a substantially horizontal shaft (3) in the direction of operative travel, mowing members (10) connected to the further frame (2) and drivable about upwardly extending rotary shafts, and at least one weight relief member (37), active during operation of the machine between the carrier frame (5) and the further frame (2), the machine further comprising means allowing a movement of the mowing members (10) in upward and downward

direction relative to the further frame (2) and to the ground wheels (48), means (36), connected between the carrier frame (5) and the further frame (2), allowing upward pivotal movement of the further frame (2) relative to the carrier frame (5) about said shaft (3), and a crusher device (49) characterized in that the means allowing a movement of the mowing members (10) in upward and downward direction relative to the further frame (2) comprise a spring-loaded member (46) such that a cutter bar and the crusher device bear on the soil wherein the mowing members being constructed as mowing discs and the rotatable crusher rotor is having a fixed position with respect of said mowing members."

Reasons for the decision.

1. *Admissibility of the appeal*

After examination the appeal has been found to be admissible.

2. *Appellant's main and first auxiliary requests*

2.1 *Modifications to claim 1 (Article 123 EPC)*

The new features incorporated in claim 1 common to appellant's main and first auxiliary requests compared to claim 1 as granted can be clearly derived from claim 3 as granted and from the description and the figures of the patent application as originally filed (see page 6, lines 12 to 15; page 9, lines 2 to 8 and 18 to 21 and figures 1, 2 and 4). Since moreover they restrict the scope of protection of claim 1 as granted, no objection can be made under Article 123 EPC.

2.2 Novelty (Article 54 EPC)

The board is satisfied that none of the cited documents discloses a mowing machine comprising in combination all the features described in claim 1.

Since this has not been disputed by the respondents, there is no need for further detailed substantiation and the subject-matter as set forth in claim 1 is to be considered as novel within the meaning of Article 54 EPC.

2.3 Closest state of the art.

A machine of the type described in the precharacterising portion of claim 1 is represented in figures 1 to 3 of E1. In this known embodiment, the mowing members (39, 48, 49) are supported by a beam (45), the extremities of which are fixed to the forward ends of two rocking beams (81) pivotably mounted on a rockshaft (90) at each side of the machine. Bolts (82) fixed to the frame extend vertically through loose openings made in the horizontal webs of the beams (81) at their rearward ends and a nut (85) is screwed at the upper end of each bolt (82) and bears against the top side of the web of the beam (81) (see E1: column 6, lines 32 to 47 and figures 1 and 2) so that the rearward ends of the beams can move between the frame and the screws, allowing the forward ends of the beams and the mowing members supported thereby to move in upward and downward direction relative to the frame as according to the invention.

Therefore, this known embodiment comprises all the features described in the preamble of claim 1 including the means allowing a movement of the mowing members (10) in upward and downward direction relative

to the supporting frame and can be considered as the closest state of the art.

The subject-matter of Claim 1 differs from the embodiment shown in figures 1 to 3 of E1 in that the means allowing a movement of the mowing members in upward and downward direction are spring-loaded.

2.4 Problem and solution

Starting from the aforementioned closest state of the art, the Board sees the problem as objectively determined (see in particular decision T 13/84, OJ EPO 1986, 253) as being to damp down the oscillations of the beams (81) supporting the mowing members (10) so that the stability of the machine be improved particularly when it travels over the field at high speed (see page 1, lines 25 to 30 of the description filed with appellant's letter of 7 October 1997).

The Board is satisfied that to replace the rocking beams (81) of the machine known from E1 by spring-loaded means as claimed in claim 1 brings a solution to the objective determined problem.

2.5 Inventive step (Article 56 EPC)

On the machine according to E1, the floating arrangement of the supporting beams (81) for mounting the mowing members on the framework is advantageous in that, during operation over the field at high speed, a rapid adaptation of said members to the unevennesses of the soil could be performed as according to the machine of claim 1. However, the undamped oscillations of the mowing members with respect to the main framework could also be detrimental to the stability of the structure and the skilled person would not fail to notice this

drawback. Therefore, he would be naturally incited to damp the free up and down movements of the entire cutter assembly in order to obviate the above-mentioned disadvantage.

Since, in the field of mower-conditioners, spring-loaded members have already been implemented as damping devices or shock-absorbers on floating suspensions of mowing members as disclosed in E3 and E4, to add such spring-loaded members to the floating arrangement of the machine according to E1 would only be common sense for the skilled person.

The normal task of the person skilled in the art being in particular to recognise drawbacks and to search for improvements capable of overcoming these drawbacks, the perception of the problem in this specific case cannot be seen as a contribution to the inventive step of the solution and the present solution itself appears to belong to the very few solutions which come immediately and logically to the mind of the skilled person confronted with the problem.

Since, moreover, the mechanical adaptation of such spring-loaded members to the suspension of the mowers is no more than a simple and usual technical measure which should not involve the exercise of any skill or ability beyond that to be expected of the person skilled in the art, the solution claimed in claim 1 common to the appellant's main and first auxiliary requests does not involve an inventive step in the meaning of Article 56 EPC.

2.6 These main and first auxiliary requests therefore have to be refused.

3. *Appellant's second auxiliary request*

3.1 Modifications to claim 1 (Article 123 EPC)

Claim 1 of the second auxiliary request corresponding to claim 2 of the appellant's main request has been amended with respect to claim 1 of the patent as granted so as to incorporate features which can be clearly derived from the description and the figures of the patent application as originally filed (see page 6, lines 2 to 8, and 12 to 15; page 9, lines 2 to 8; page 11, lines 1 to 21 and figures 6 and 7). Since, moreover, they restrict the scope of protection of claim 1 as granted, no objection can be made under Article 123 EPC.

3.2 Novelty (Article 54 EPC)

During the oral proceedings, respondent 01 contended that the subject-matter of claim 1 of the appellant's second auxiliary request was totally anticipated by the embodiment represented on figures 4 to 6 of E1.

The Board cannot agree with this assertion because in said embodiment, the beam structure (160) supporting the mowing members is mounted in a fixed position with respect to the frame and the weight relief spring arrangement (120), provided between the hitch structure (107) and the frame, cannot be compared to the spring-loaded member of the means supporting the mowing members according to claim 1. Therefore, the subject-matter of claim 1 is new in comparison with said disclosure of E1.

As regards the other cited documents E3, E4 and E14, they concern pull-type agricultural machines which are equipped neither with a carrier frame in the meaning of

the invention nor with means connected between said carrier frame and a further frame for allowing upward pivotal movement of the further frame relative to the carrier frame about a substantially horizontal shaft in the direction of operative travel. Therefore the subject-matter of claim 1 is also different from the machines disclosed in the other cited documents and it is to be considered as new within the meaning of Article 54 EPC.

3.3 Closest state of the art.

The Board considers that the second embodiment illustrated in figures 4 to 6 of E1 constitutes the state of the art closest to the machine as claimed in claim 1 because, in addition to all the features described in the precharacterising portion of claim 1 with the exception of the means allowing a movement of the mowing members relative to the frame, said embodiment comprises mowing discs, a crusher device, a cutter bar bearing on the soil (as represented on figure 4 of E1) and a crusher rotor having a fixed position with respect of the mowing members.

The mowing machine of claim 1 differs from said second embodiment of E1 in that it comprises means allowing a movement of the mowing members in upward and downward direction relative to the supporting frame, said means comprising a spring-loaded member.

3.4 Problem and solution

In view of the aforementioned closest state of the art, the problem as objectively determined appears to be to obtain a well balanced machine having mowing discs which keep a correct position with respect to the

ground even at high speed (see the description as amended filed on 11 October 1997: page 2, lines 11 to 16).

To support floatingly the header assembly of the embodiment shown in figure 4 to 6 of E1 with spring-loaded means as claimed in claim 1 appears to bring an effective solution to the objective determined problem.

3.5 Inventive step

In operation on the field, the mowing machine described in E1 has its harvesting mechanism partly being carried by ground wheels (see E1: column 6, lines 61, 62) and partly bearing on the soil (see E1: figure 4).

As the one described in column 1, lines 32 to 36 of the patent under appeal, the mower conditioner known from E1 operates thus as "a tractor-hauled one, whereby part of weight is compensated by supporting the machine in the lifting hitch of the tractor and by using a weight relief member" and cannot be compared to a conventional lifted machine whose header is cantilevered on the tractor.

The appellant's argument saying that the skilled person would not combine the teachings of E1 and E3 because E3 relate to a tractor drawn mower-conditioner i.e. a machine of a different category as the one of E1 thus cannot be accepted.

On the contrary since E3 and E4 describe, as E1, mowing mechanisms partly carried by ground wheels and partly bearing on the soil, the skilled person who intends to improve the stability of the machine of E1 and the adaptation of its mowing members to the ground would be incited to consult these documents and would learn therefrom to support the header assembly floatingly on

the frame with the use of spring-loaded members (see for example E3: column 4, lines 30 to 33; from column 4, line 62 to column 5, line 18 and figures 1 and 2 and E4: from column 2, line 64 to column 3, line 5) so that the header can follow the contour of the ground and accommodate ground undulations (see for example E4: column 4, lines 8 to 10 and column 8, lines 44 to 54).

Therefore, since the results announced in these documents correspond to the improvement he was searching for, the skilled person would be incited to adopt on the machine according to E1 the suspension assemblies for suspending the header disclosed in E3 and E4.

Since moreover, the adaptation of said assemblies on the machine of E1 appears to be no more than a constructive measure which does not involve the exercise of any skill or ability beyond that to be expected of the person skilled in the art, the subject-matter of claim 1 does not imply an inventive step within the meaning of Article 56 EPC and therefore is not patentable according to Article 52 EPC.

3.6 The appellant's second auxiliary request therefore has to be refused.

Order

For these reasons, it is decided that:

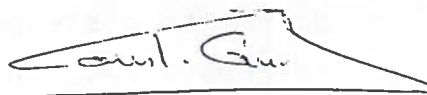
The appeal is dismissed.

The Registrar:



N. Maslin

The Chairman:



C. Andries