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Datasheet for the decision of 2 September 2015

Case Number: T 1021/12 - 3.2.04

Application Number: 05388059.7

Publication Number: 1616474

IPC: A01D75/30

Language of the proceedings: EN

Title of invention:
A towed mower comprising a running frame and two mowing aggregates

Patent Proprietor:
Kongskilde Industries A/S

Opponent:
KUHN S.A.

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - main request (yes)

Decisions cited:

Catchword:

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Case Number: T 1021/12 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 2 September 2015

Appellant: (Opponent)	KUHN S.A. 4, Impasse des Fabriques 67700 Saverne (FR)
Representative:	Nuss, Laurent Cabinet Nuss 10, rue Jacques Kablé 67080 Strasbourg Cedex (FR)
Respondent: (Patent Proprietor)	Kongskilde Industries A/S Skælskørvej 64 4180 Sorø (DK)
Representative:	Joergensen, Bjoern Barker Awapatent A/S Rigensgade 11 1316 Copenhagen K (DK)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 6 March 2012 rejecting the opposition filed against European patent No. 1616474 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	A. de Vries
Members:	J. Wright
	C. Heath

Summary of Facts and Submissions

I. On 30 April 2012, the appellant (opponent) lodged an appeal against the decision of the opposition division, dated 6 March 2012, to reject the opposition against the patent No. EP 1616474. The appellant paid the appeal fee simultaneously. The statement setting out the grounds of appeal was received on 25 June 2012.

The opposition was based on Article 100(a) EPC (inventive step). The opposition division held that the subject matter of claim 1 as granted involved an inventive step, having regard to the following documents:

D1: EP 0900515 A2 (incorrectly cited in the impugned decision as EP 0900512)
D2: US 4402367
D3: FR 2623690
D4: US 4715172
D5: DE 3814690 A1
D6: FR 2752356
D7: FR 2712137
D8: EP 1321022 A1
D9: EP 0882386 A1

II. Oral proceedings before the Board were duly held on 2 September 2015.

III. The appellant requests that the decision be set aside and the patent be revoked in its entirety.

The respondent (proprietor) requests that the appeal be dismissed and the patent be maintained as granted, or in the alternative, that the patent be maintained

according to the claims of one of 11 auxiliary requests, all received on 17 July 2015.

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

"A towed mower (1) comprising a running frame (2) and two mowing aggregates (8), the running frame (2) being designed to be connected with a tractor (7) to be towed thereby and being provided with ground wheels (5), the mowing aggregates (8) being mounted by a hinge (9) on each respective side of the running frame (2) to swing in a horizontal plane between a laterally extending working position and a transport position, characterized in that said hinges (9) of the mowing aggregates (8) are positioned at the front end of the running frame (2) and that the mowing aggregates (8) in the transport position extend rearwards from the hinges (9) and above the rearmost end of the running frame (2)".

V. The appellant argued as follows:

Claim 1 requires that mowing aggregates be mounted to a frame and able to swing between their lateral working position and rearward extending transport positions, but not that the aggregates are directly joined to the frame by means of a hinge. In the only embodiment shown in the patent the mower has beams 11 between a hinge 9 and a rigid frame. Since the beam is merely an optional part of the mowing aggregate it could equally well be part of the frame, so the claim covers the possibility that the hinge does not represent where the frame ends and the mowing aggregate begins. Document D1 discloses a mower. The mower of claim 1 differs from that of D1 only in that the aggregates extend above the rearmost

end of the running frame when in the transport position. Even if claim 1 were to be interpreted narrowly such that the mowing aggregates were considered to begin at the hinge where the frame ends and the mower aggregate begins, this is then an artificial demarcation of the mower as a whole into a part said to be the frame and a part said to be the aggregate. It can therefore equally well be said of D1 that the aggregates begin at the hinges 27 shown in figure 1. Therefore the only difference between the subject matter of claim 1 and D1 is that the mower aggregates extend above the rearmost end of the frame. It would be obvious to modify the arrangement of D1 to include this feature.

VI. The respondent argued as follows:

Claim 1 defines that the hinge which allows aggregates to move horizontally between working and transport positions is also the means by which the aggregates are mounted to the frame. This is not the case in D1 which has a frame having arms and a rigid part, the arms being attached to the rigid part by the hinges that allow aggregates to move between working and transport positions. The aggregates are mounted to the arms at hitching points remote from the hinges, not at the hinges as claimed. The central idea of the arrangement of D1 is to provide a universal frame with standard tractor hitching points. The skilled person would therefore not change the hitching points of the frame of D1 to hinges as claimed since in so doing the central idea of being able to hitch standard aggregates to a universal frame would be lost.

It would not be obvious to make the aggregates of D1 extend beyond the end of the frame, and D1 does not show specific embodiments with mower aggregates.

Reasons for the Decision

1. Background

1.1 The invention relates to a mower towed behind a tractor. The mower has a running frame and two mowing aggregates hinged to respective sides of the frame. The mowing aggregates can adopt a laterally extending working position or a transport position (specification, paragraph [0001]). It is always preferable to mow a field in as few passes as possible (specification paragraph [0007]). However, the need to transport the mower by road and house it implies size limitations on the mower aggregates (specification paragraph [0008]).

To this end claim 1 proposes, *inter alia*, that the hinges are at the front end of the running frame, whereby the mowing aggregates swing in a horizontal plane between a laterally extending working position (figure 4, ref. 8a) and a rearward extending transport position (figure 4, ref. 8b). According to the patent, this allows aggregates to be large, so that mowing can take place with few passes [0011].

2. Main request inventive step

The appellant's only objection against claim 1 as granted is that its subject matter lacks inventive step starting from D1.

2.1 An important feature of the invention is the hinge defined by the claim feature "the two mowing aggregates 8 being mounted by a hinge 9 on each respective side of the running frame 2 to swing in a horizontal plane between a laterally extending working position and a transport position". The Board considers it appropriate to first examine how this feature should be interpreted.

2.1.1 The appellant has argued that the feature can be interpreted broadly to merely define that the two moving aggregates are mounted on respective sides of the running frame in such a way that they can turn in a horizontal plane between working and transport positions by means of the hinge. By contrast, the respondent has interpreted the feature more narrowly to further define that the hinge is the means by which the mowing aggregates are attached to the running frame. In other words that the hinge is the junction at which the running frame ends and the mowing aggregate begins.

2.1.2 The Board finds that the feature should indeed be interpreted narrowly as the respondent has argued, the reasons being as follows:

Giving the claim words "the mowing aggregates being mounted by a hinge" their normal meaning, the skilled person will understand the claim to specify that it is the hinge *by* which the aggregates are mounted on respective sides of the running frame (emphasis added by the Board). In other words the hinge is the mounting means for the aggregates.

Nothing in the patent suggests a different interpretation. The figures show different views of a single embodiment. These are said to show mowing

aggregates mounted on the running frame (specification paragraph [0019]). The same paragraph goes on to explain that each mowing aggregate 8 is "mounted at a first hinge 9". Thus in the only described embodiment the hinge 9 is the point at which the mowing aggregate is mounted.

All the figures also show a beam 11 extending from the hinge (reference 11 in figures 1 to 3). It is true that it is said the mowing aggregate "*preferably* comprises a beam extending from the hinge on the running frame..." (specification, paragraph [0016], emphasis added by the Board, cf. claim 9). Here it is the beam itself that is defined as preferable, not its position in the overall scheme. At best, that the beam is preferable might imply that it was merely an optional part of the aggregate. Thus claim 1 might cover non-specified embodiments with mowing aggregates provided with some means other than a beam for extending from the hinge. However, such a hypothetical aggregate would still be mounted on the running frame 2 at the hinge 9. Nothing in the patent suggests that the beam 11 is optionally part of frame as the appellant would have it. Such an interpretation contradicts not only the general statement in paragraph [0018] that the mowing aggregates are mounted at the hinge 9, but also the normal interpretation of the same feature as it is worded in claim 1, "aggregates being mounted by a hinge".

Thus the Board holds that the "mowing aggregates...mounted by a hinge..." claim feature must be interpreted narrowly to mean not only that the hinge allows the aggregate to swing in a horizontal plane between its working and transport positions, but also

that the hinge is the *means* by which the aggregates are mounted to the frame.

2.1.3 Armed with this interpretation of the claimed hinge feature, the Board must now consider inventive step of claim 1 starting from D1.

D1 discloses an implement carrier (title), its main parts can be seen in figure 1. The main idea of D1 is to provide a universal frame 1 with a plurality of hitching points B, each being like the hitching points on a tractor so that a plurality of standard implement aggregates 24 can be towed behind the tractor (abstract). Thus D1 discloses a running frame 1, having running wheels 10, that is designed to be towed by a tractor 8. Furthermore the aggregates 24 are mounted on each respective side of the running frame 2 (figures 1 to 3, 6 and 7). It is also not disputed that they can swing in a horizontal plane between a laterally extending working position (figures 1, 4 or 6) and a transport position in which they extend rearwards (figure 7).

It is common ground that D1 does not disclose that the aggregates 24 extend above the rearmost end of the running frame when in the transport position (cf. D1, figure 7). Therefore the subject matter of claim 1 is indisputably novel with respect to D1.

It is however disputed whether D1 discloses that the aggregates 24 are mowing aggregates, as the appellant has argued, and whether D1 discloses the aggregates as being *mounted by a hinge* on each respective side of the running frame to swing in the horizontal plane between the laterally extending working position and the transport position, as the appellant has also argued.

2.1.4 In the following the Board will first deal with this latter feature, whilst leaving aside for the moment the questions as to whether or not D1 discloses embodiments in which the implement aggregates 24 are mowers, and if not whether it would be obvious to make the aggregates of D1 mowers and, lastly, whether or not it would be obvious to modify the arrangement of D1 so that the aggregates 24 extended above the rear end of the running frame in the transport position.

It is common ground that the only hinges disclosed in D1 that are capable of swinging the implement aggregates 24 horizontally between working and transport positions, as the claimed hinge must do, are the hinges 27 at the front of the running frame 1 (figures 1 and 7 and paragraph [0020]). Whilst there may be further hinges at the points B, it is also common ground that these would only be for finely adjusting the angle β between the aggregates 24 and the support arms 3 and 4, not moving between working and transport positions as claimed (figures 1 and 7 and column 7, lines 29-38). Thus, bearing in mind the above interpretation of the claimed hinge feature, in order for D1 to disclose that feature, the hinges 27 must also be the means by which the aggregates 24 are mounted to the running frame 2. In other words the hinges 27 must be the points at which the running frame 2 ends and the aggregates 24 begin.

The Board holds that this is not the case. As explained in the abstract of D1, the frame 1 includes hitches 21 at locations B by means of which implements 24 can be mounted to the frame. As can immediately be seen from figure 1, the points B are remote from the hinges 27, the arms 3 and 4 lying between these two points. The

arms 3 and 4 are not part of the aggregates but of the frame 1, "...the carrier comprises a frame 1 having... and supporting arms 3 and 4..." (Paragraph [0017]). The description also confirms the locations B as the hitching locations for the implement aggregates 24 and that these are on the supporting arms 3 and 4 "...each of the hitching locations .... B...on the supporting arms 3 and 4..." (Paragraph [0019]). Thus it is at points B, not at the hinges 27, that the aggregates 24 are hitched, in other words mounted, to the frame 1. If the aggregates 24 were unhitched from the points B, the mower would separate into a frame, including the arms 3 and 4, and aggregates 24. In other words the aggregates 24 do not include the arms 3 and 4.

Thus, far from being an artificial demarcation between aggregate and frame, the fact that the points B are hitching points means that these and only these constitute the points where the frame really ends and the aggregates really begin. The Board concludes that D1 does not disclose the claim feature of hinges to swing aggregates between working and transport positions *and* by means of which the aggregates are mounted to the running frame.

2.1.5 Thus the subject matter of claim 1 differs from document D1, not only in that the the aggregates extend above the rearmost end of the running frame in the transport position, but also at least in the above hinge feature. In order to take away the inventive step of claim 1 it must therefore at least be obvious to modify D1 in such a way as to arrive at this latter feature.

2.1.6 Mounting the aggregates with the claimed hinge arrangement enables swinging in a horizontal plane

between working and transport positions (specification, paragraph [0019]). As explained above, this allows larger aggregates to be used (cf. specification paragraphs [0008] and [0011]).

2.1.7 The arrangement of D1, with its frame having hinges 27 and support arms 3 and 4, likewise allows aggregates to be swung in a horizontal plane so that the aggregates face rearwards in the transport position (paragraph [0026], figures 6 and 7). Thus the size of the aggregates of D1 are also not limited by needing to be transported and housed in a vertical orientation. Furthermore, since arms 3 and 4 are length-adjustable ("telescopic", column 7, lines 18-22) and hinged to the front of the fixed part 2 of the frame 1, the arrangement of D1 is also seen to be able to carry large implement aggregates. The Board therefore believes that, with respect to the differing hinge feature, D1 has the same advantages as the claimed invention. Consequently, in the light of D1, and having regard to this feature only, it is appropriate to define a less ambitious objective technical problem than the problem solved in the patent (see Case Law of the Boards of Appeal, 7th edition, 2013 (CLBA) I.D. 4.4).

The problem can therefore be formulated as how to modify D1 to provide an alternative mounting arrangement for the implement aggregates.

2.1.8 From D1 alone the Board holds that it would not be obvious to modify any of the arrangements disclosed therein so as to arrive at the feature of mounting aggregates by a hinge to swing in a horizontal plane between lateral extending working positions and rearward extending transport positions as claimed.

D1 sets out to enable a plurality of implement aggregates of whatever kind to be hitched to a tractor (paragraph [0003]). To this end, the central idea of D1 is to provide a universal implement carrying running frame to which a plurality of implements can be attached as if they were being directly hitched to the rear of a tractor (abstract, paragraph [0005], sentence bridging columns 4 and 5, and claim 1). In other words the central idea is for the frame to be versatile, allowing a plurality of standard implement aggregates to be hitched to it at the same time just as if they were being hitched directly to a tractor.

Tasked with finding an alternative mounting arrangement, the skilled person might seek out other standard aggregate/tractor hitching arrangements as alternatives to the known three hitching point arrangement used on the universal frame (column 1, lines 53-55). However, he would never consider replacing a standard tractor hitching arrangement with a non-standard hinge that allowed horizontal movement between a working and a transport position, because in so doing he would be abandoning the universal functionality of the frame, the central idea of D1.

By the same token, any such modification to the frame 1 leading to a non-standard implement attachment arrangement would necessitate non-standard implement aggregates which could no longer be hitched directly to a tractor, thus moving even further away from the central idea of D1. For example attaching implements directly to the frame 1 by means of the hinges 27 (see figures 1, 6 and 7) would require each and every implement aggregate not only to incorporate a non-standard hinge coupling arrangement, but also to

provide the functions of the telescopic arms 3 and 4. All such aggregates would be non-standard and could no longer be directly hitched behind a tractor. Thus, tasked with finding an alternative mounting arrangement for the aggregates of D1, it would not be obvious for the skilled person to modify the universal frame 1 of D1 to arrive at the hinge mounting points feature of claim 1 from D1 alone.

2.1.9 Furthermore, the Board does not think that the teaching of D1 combined with any of the prior art D2 to D9 cited by the appellant in his grounds of appeal would obviously lead to the hinge feature as claimed for a towed mower, since none of the latter documents disclose the hinge mounting feature as claimed. This has indeed not been argued.

Like D1, D2 discloses hitching implements to a frame using a standard three point hitch, not a hinge as claimed (figures 1-6, 8, column 4, lines 24-44, column 6, lines 45-66). D3 discloses a sprayer, with articulated sprayer arms 30, but these are not hitched to a frame (figure 1, abstract). D4 discloses a harvesting machine which is pushed, not towed (figure 1, column 1, lines 49-65). D5, D8 and D9 disclose arrangements in which towed implement aggregates are turned through a vertical, not a horizontal plane to extend upwards in the transport position (D5, figures 1 and 2 and claim 1; D8 paragraph [0031]; and D9, column 4, lines 7-17). D6 discloses a single towed mower mounted by a set of rods 9 to a frame 1, not by a hinge as claimed (figure 1, page 4, lines 27-33). Finally, D7 discloses a mower in which two mowing aggregates are attached not to the front but to the middle of a frame 7 by a hinge 8, so that one of the mowing aggregates extends forwards not rearwards of the hinge in the

transport position (figures 1 and 2, page 4, lines 8-23).

2.1.10 In summary, starting from D1, even when considering documents D2 to D9, it would not be obvious for the skilled person to arrive at the feature of the two mowing aggregates being mounted by a hinge on each respective side of the running frame to swing in a horizontal plane between a laterally extending working position and a transport position. Thus, for this reason alone, the Board holds that the cited documents do not prejudice the inventive step of claim 1 as granted. The Board therefore holds that the subject matter of claim 1 is not obvious and so involves an inventive step, Article 56 EPC.

Consequently, the further questions as to whether or not it would be obvious to modify the arrangement of D1 so that the aggregates extended above the rearmost end of the running frame, whether or not D1 discloses embodiments with mowers, and if not whether or not it would be obvious to fit mowers to the frame of D1, have no relevance for this decision and can remain unanswered.

3. The Board therefore confirms the impugned decision of the opposition division to reject the opposition, Article 101(2) EPC. Thus, there is no need for the Board to consider the respondent's auxiliary requests.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Magouliotis A. de Vries

Decision electronically authenticated