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Datasheet for the decision of 15 April 2015

Case Number: T 0335/11 - 3.2.04

Application Number: 04077697.3

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IPC: A01J5/003, A01J5/017, A01J7/02, A01J7/04, A01K1/01

Language of the proceedings: EN

Title of invention:
Assembly of a teat cup carrier and a movable feed platform

Patent Proprietor:
MAASLAND N.V.

Opponent:
DeLaval International AB

Headword:

Relevant legal provisions:
EPC Art. 83, 123(2), 54, 56

Keyword:
Sufficiency of disclosure - (yes)
Amendments - added subject-matter (no)
Novelty - (yes)
Inventive step - (yes)

Decisions cited:

Catchword:

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European Patent Office
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Case Number: T 0335/11 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 15 April 2015

Appellant: (Opponent)	DeLaval International AB P O Box 39 147 21 TUMBA (SE)
Representative:	Bennett, Adrian Robert J. A.A. Thornton & Co. 10 Old Bailey London EC4M 7NG (GB)
Respondent: (Patent Proprietor)	MAASLAND N.V. Weverskade 110 3147 PA Maassluis (NL)
Representative:	Corten, Maurice Jean F.M. Octrooibureau Van der Lely N.V. Cornelis van der Lelylaan 1 3147 PB Maassluis (NL)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 8 December 2010 rejecting the opposition filed against European patent No. 1523878 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman T. Bokor
Members: A. de Vries
E. Frank

Summary of Facts and Submissions

I. The Appellant (Opponent) lodged an appeal, received 14 February 2011, against the decision of the Opposition Division posted 8 December 2010 to reject the opposition against European patent No. 1 523 878 and simultaneously paid the appeal fee. The statement of the grounds of appeal was received 18 April 2011.

II. The opposition had been filed against the patent as a whole based on Article 100(a) EPC in combination with Articles 54 and 56 EPC for lack of novelty and inventive step, and on Article 100(b) EPC for insufficiency of disclosure and on Article 100(c) EPC for added subject-matter. It considered the following documents among others:
D1: EP 336 337 A2
D2: WO-00/74472 A1
D3: EP 689 761 A3
D4: US-A-4 508 058
D5: EP-A-1 188 368
D6: EP 1 1 188 366
D7: EP 1 188 367
D8: US-A-3 103 912
D9: US 2002/0033138
D10: SU-A-1777728

The Opposition Division held that none of the raised grounds prejudiced the patent as granted.

III. Oral proceedings were duly held before the Board on 15 April 2015.

IV. The Appellant requests that the decision under appeal be set aside and the patent be revoked in its entirety.

The Respondent (Proprietor) requests that the appeal be dismissed.

V. The wording of claim 1 as granted is as follows:

"Assembly of a teat cup carrier and a movable feed platform characterized in that, said teat cup carrier is freely movable relative to the feed platform, said freely movable teat cup carrier being a self-propelled autonomous mobile teat-cup-carrying robot and comprising a control unit for controlling the functioning of the mobile teat-cup-carrying robot, said assembly comprising a control unit for the feed platform, said robot being designed to be able to cooperate with a movable feed platform in that the control unit of the robot comprises a transmitting and receiving unit for communication with the control unit of the feed platform."

VI. The Appellant argued as follows:

The indication in the originally filed application that the teat cup carrier and the movable feed platform cooperate does not provide a basis for their definition as an "assembly", which implies some special interaction between constituent parts. There is no basis for this specific term in the original disclosure so that it adds subject-matter.

The patent contains no explanation as to the nature of the "assembly", i.e. the special interaction between carrier and platform, so that the skilled person does not know when he is operating within the scope of the claims. In this regard the invention is insufficiently disclosed.

The feature of a "freely movable teat cup carrier being a self-propelled autonomous mobile teat-cup-carrying robot" should be read broadly to include also the attachment robots shown in D2 and D3. These move independently of the carousel, implying autonomous and free movement. That there is some constraint is immaterial as in the patent also movement is constrained to two dimensions. D2 also discloses separate control systems for robot and platform. At the relevant date of D2, 15 years ago, technology was such that it could not operate without communication between the two control systems. D2, and by the same token D3, thus anticipate the assembly of granted claim 1.

In any case, the skilled person starting from D2 would consider 2-way communication between robot and platform and the use of a freely movable, autonomous, self-propelled robot to be obvious solutions to respective partial problems of improving cooperation respectively increasing flexibility. In its suggestion to extend the rail, D2 already includes a clear hint to improve flexibility. Starting from D1 showing a freely movable robot with a fixed stall arrangement it would be obvious to replace it by a movable feed platform in the light of common general knowledge of such platforms and their various benefits. Alternatively, the skilled person would draw on D3's teaching of movable feed platforms to improve efficiency.

VII. The Respondent argued as follows:

The originally filed application clearly considered the combination of carrier and platform. There is a defined, dedicated tie between the two, which are designed to cooperate.

The assembly and its constituent elements are clearly defined in the patent, and the skilled person would have no difficulty in determining when he is within the scope of the claims.

D2 and D3 concern rotary milking platforms with a milking robot constrained to reciprocate along a rail track and which is thus not freely movable, autonomous and self-propelled as in claim 1. Nor do D2 or D3 provide detail of the control and communication between robot and the overall system.

There is no incentive or hint to combine known movable feed platforms such as in D2 or D3 with freely movable autonomous self-propelled robots as in D1 or D5. Platforms that move past a milking station and robots that are freely movable in a fixed stall represent different, alternative concepts. The skilled person will use either one or the other but not both.

Reasons for the Decision

1. The appeal is admissible.

2. Background of the Invention

The patent is concerned with the way in which a teat carrier robot cooperates with a movable feed platform. In granted claim 1 directed at an “assembly” of the two the teat cup carrier is a self-propelled, autonomous mobile robot that is freely movable and has its own control unit with transmitting and receiving unit for communicating with the control unit of the feed platform with which the robot is designed to cooperate. As opposed to a prior art arrangement in which the robot is coupled to the platform at an attachment station this introduces a greater level of freedom, and results in higher feed consumption and milk production and is more animal friendly, see patent specification [0006].

3. Added subject-matter & Insufficiency

3.1 Both grounds are raised in respect of the term "assembly" added to the claims during examination. The term would impart more specific, new information extending beyond the original disclosure, while the patent specification fails to define the exact nature of the "assembly", so that the skilled person would not know when he is working within the scope of the claim. .

3.2 Firstly, the Board notes that the term "assembly" in fact appears in the original application, in particular to denote prior art arrangements, see page 2, line 30,

and at page 3, lines 2, 16 and 30, but also in reference to the embodiment of of figure 7, see page 9, lines 16-17. The term thus has a clear basis in the original description, though it may not have been present in the originally filed claims.

The term itself can cover a wide variety of meanings, from the "action or method of assembling a machine or composite article; the parts so assembled" to "a collection of things" as in "assemblage", see the OED for example. Its exact meaning in the original disclosure must therefore be inferred from context. In the original application focus is on the carrier's free movability in relation to the feed platform. Indeed original claim 1 defined the carrier unclearly in terms of that relationship. This is also abundantly clear from page 4, 2nd paragraph, which, after recognizing that freely movable teat cup carriers are known, states "however a combination of a movable feed platform and also a freely movable teat cup is neither disclosed nor suggested". It is thus immediately apparent from the original disclosure that it is the *combination* of the two and their relationship which is the real subject of the application. This is how the term "assembly" is to be understood in the original disclosure. The Board has no reason to believe that the term is meant to mean anything other than this in the granted claims, which apart from this addition closely follow the wording of the originally filed claims that provide their basis.

From the above the Board concludes that introduction of the term "assembly" in the claims does not add new subject-matter, Article 100(c) EPC.

3.3 From his clear understanding of the term it also follows that the skilled person will have no difficulty

at all in establishing whether or not he is working within the forbidden region of the claim or not. Given also that the description and figures consistently and in detail describe the interaction of robot and platform (nor is this disputed) the Board also does not doubt that the patent as a whole provides a clear and complete teaching as to realization of the invention.

The Board concludes that the claimed invention is sufficiently clearly and completely disclosed for it to be carried out by the skilled person, Article 100(b) EPC.

4. Novelty

4.1 In D2 (figure 1, page 3, lines 23 to 35, page 9, line 26, to page 10, line 15) an attachment robot 18 is constrained to reciprocate along an arc rail 17 so that it follows a trolley or stall 5 arranged on a milking carousel as it slowly revolves past the attachment station to allow the robot to couple to a rack 24 carrying teat-cups 49 for automatic attachment of the cups to the teat. The robot 18 is made to follow movement of an individual trolley or stall 5 mechanically by means of a gripper 41 and pin 42, or using a tracking system. This automatic milking configuration further includes an overall control system (page 6, top paragraph) and control systems associated with individual robots (page 13, first complete paragraph).

A similar carousel type arrangement with robotic attachment is described in D3, see figure 1 and column 3, lines 10 to 39, with a milking robot 15 constrained to move along rail track 16 to automatically connect

teat cups 9 placed separately on a carrier 14 provided at each of stalls of the carousel 2.

4.2 The Appellant contends that the teat cup attaching robot 18, which according to the bridging paragraph of pages 9 and 10, can "move along the rails 17 independently of the [carousel] trolley" under the action of drive motor 52, constitutes a "freely movable teat cup carrier [that is] a self-propelled autonomous mobile teat-cup carrying robot" in the broadest sense that can be given these terms in granted claim 1. Likewise, even if D2 does not explicitly describe communication between its control systems, the state of technology at the effective date of D2 meant that this could only be by two-way communication between robot and platform control systems.

4.3 According to general principles of claim interpretation, see Case Law of the Boards of Appeal, 7th edition 2013, II. A.6.1 the skilled person reads a claim with a mind willing to understand, giving the various terms their normal meaning and reading them contextually. The terms in the contested formulation may each in their own right have specific meanings that may be read on isolated aspects of the D2 configuration. Thus, the attachment robot 18, which in its movement along the rails is undoubtedly mobile, and through the provision of motor 52 (page 10, line 1) can be said to be self-propelled, could also be said to possess some degree of operational autonomy in that it moves along the rails "independently of the trolley" (page 9, line 39) using a tracking system (page 10, line 12).

However, considered together the terms convey to the skilled reader more specific information. In such a

contextual reading the term “self-propelled autonomous mobile ... robot” refers to a robot that moves by its own and of its own, and is essentially unfettered in that movement. This is further underlined by the central qualification in the claim of the carrier/robot as “freely movable”. In the preceding lines this is defined as “relative to the feed platform” but this does not lay down any constraint on the robot’s movement, rather it provides a framework (all movement being relative) in which it is to be considered, in particular so as to differentiate it from the coupled movement the invention starts out from (cf. specification paragraph [0006]). Thus also the robot’s free movability is not to be understood in an absolute sense as referring to movement in *all* dimensions, but rather those that are relevant in the present technical context, namely a feed platform which extends mainly in the horizontal plane. Applied to this context, and given its usual meaning, "freely movable" will be understood as meaning that the carrier/robot is essentially free to move to any point on or along the platform. This understanding of the claim is also consistent with the embodiments detailed in the description, cf. figure 1 showing an individual self-propelled autonomous mobile robot and figures 3 and 7 showing the robot in relation to the platform.

4.4 Turning to D2, the attachment robot 18 described there is indisputably constrained to move within the arc track or rail 17, so that its movement is not unfettered or free. This fact alone would prevent the skilled person from identifying the robot as a “freely movable teat-cup carrier that is a self-propelled autonomous mobile teat-cup carrying robot”. This is compounded by the robot’s arrangement on the platform as shown in the figures, which is such that -

irrespective of whether driven by mechanical coupling or using tracking sensors – the skilled person would not recognize robot 18 as a "self-propelled autonomous mobile ... robot".

4.5 The Board adds that the attachment robot 18 serves that sole purpose, attaching but not itself carrying the teat-cups (milking cups 49) which are mounted on the rack 24 provided in each stall 5 (figure 2, page 9, lines 28 to 29). This constitutes a further difference of the claimed assembly over D2. Finally, the D2 device is stated to be "controlled by a control system composed of various parts" (page 6, lines 1 to 2), which should logically include the control systems associated with each robot (page 13, lines 5 to 11). The exact system hierarchy is however unclear, so that even if it is reasonable to assume that the systems communicate amongst themselves in some way or another, it is not unequivocally clear from D2 *how* they will do so. In particular the Board has no reason to believe that communication must necessarily be two-way between a central platform control system and robot control system.

4.6 The same or similar considerations apply vis-a-vis the similar arrangement disclosed in D3.

4.7 In the light of the above the Board concludes that the subject-matter of claim 1 as granted is novel over the prior art of D2 and D3, Article 54 EPC.

5. Inventive Step

5.1 The Appellant has challenged inventive step in three basic lines of argument. The first two combine a rotary feed platform as in D2 or D3 (see above), or further

D4, D8 to D10 with a self-propelled autonomous mobile teat cup carrying robot as in D1, D5, D6 or D7, or vice versa. A third line of attack starts from the self-propelled autonomous mobile robot as in D1 and combines it with common general knowledge.

5.2 Critical to the first two approaches is the question whether the skilled person would consider combining the teaching of any one of D2 to D4 or D8 to D10 on the one hand and that of D1, D5, D6 or D7 on the other. This question is naturally to be considered within the standard problem-solution approach, that is, from the viewpoint of any perceived advantages and associated objective technical problem that the invention offers over the relevant starting point.

5.3 As detailed above, D2, D3 and further D4, D8 to D10 concern the same basic concept of a milking carousel with multiple stalls that rotate past a shared automatic or robotic attachment station with reciprocating robot.

5.4 D1, D5, D6 and D7 on the other hand concern self-propelled automatic mobile robotic milking units that roam or rove freely to carry out milking tasks where needed. To this end they carry and attach teat cups. Furthermore they include transmission and receiving means for communication with a central (computer) unit, see for example D1, figures 1 and 7 and paragraphs [0041], [0044], [0050], [0065]-[0067]; similar figures and passages can be found in the other documents.

5.5 In the Board's opinion, D2 to D4 and D8 to D10 on the one hand, and D1, D5, D6 and D7 on the other represent two different milking concepts or schemes. In the former – classical carousel with shared attachment

robot - the dedicated attachment robot is bound to the shared attachment station of the carousel, whereas in the latter multifunctional milking robots roam freely and independently of any structure. Indeed only D1 shows the robot in relation to an arrangement of stalls (a milking shed with fixed stalls); D5, D6 and D7 are entirely silent in this regard. The two schemes are based on opposing principles: the first brings the animal to the common station, whereas the second brings the station to the animal. For this reason they represent opposing alternatives, each offering their own respective advantages. Depending on the particular circumstances and requirements the skilled person will opt for either one or the other. However, in the Board's opinion he will not combine the two to produce a hybrid form. It holds that this goes beyond the normal skills of the notional skilled person, an agricultural engineer with an encyclopedic knowledge in the field of milking but with only average abilities in applying that knowledge. This skilled person is familiar with the widest range of technologies and solutions in the field and has a broad understanding of their function, but he does not generally possess the required finesse or the creative insight for identifying individual aspects of a given solution and abstracting them from their context and applying them in a different one. With his broad understanding of the two concepts as alternatives based on opposing principles, depending on the particular problem posed or advantage sought - whether this is increased flexibility starting from D2 or similar, or the particular benefits associated with moving platforms from the viewpoint of D1, D5, D6 or D7 - and how important that problem or advantage is to his situation, he will weigh up the advantages and

disadvantages and choose either of the two that suits his needs best, but he will not combine them.

Naturally, each document as a specific realization of its underlying alternative concept may offer scope for obvious improvement, but any such improvement that might occur to the skilled person as a matter of obviousness will remain within the confines of the underlying concept. The passages cited by the Appellant from D2, page 14, lines 1 and 2, suggesting lengthening the rail to pass multiple positions, and D1, paragraphs [0004] and [0044] referring to the use of rails (see also further below), relate to the possibility of such obvious modification. In particular these passages do not provide a motivation to alter the underlying concept of their respective teachings.

The Board concludes that these two lines of attack (starting from D2 or similar on the one hand or D1, D5, D6 or D7 on the other and combining their teaching with the other's teaching) must therefore fail.

5.6 The Board is also unconvinced that starting from D1 the skilled person already finds pointers in that document that would lead him via common general knowledge to the claimed invention. The reference in paragraphs [0004] and [0044] to rails, may or may not suggest using the roaming robot in conjunction with a rail - neither passage is entirely clear in this regard. Nonetheless, these passages are to be read in context, in particular that of paragraph [0002] which describes the prior art and is the only other passage in D1 to mention rails. As is inferred from paragraph [0002] and as can easily be ascertained by consulting the document cited there this prior art pertains to a milking arrangement in which the milking robot is moved on rails past the

stationary stalls. That prior art is thus based on the same concept of bringing the robot to the stall or animal as that to which D1 itself subscribes and builds upon. Therefore, even if these paragraphs might suggest the further use of rails, that would not be in anything other than an arrangement with stationary stalls. They might in obvious manner direct the skilled person's attention to similar such stationary arrangements with rail guided robot, but not to carousel type feed platforms that would be known to him from common general knowledge or any of the cited prior art.

5.7 All lines of argument fail to demonstrate lack of inventive step of the subject-matter of granted claim 1. The Board concludes that it involves an inventive step in the light of the cited prior art, Articles 52(1) and 56 EPC.

6. In the light of the above the Board confirms the appealed decision's finding that none of grounds raised under Article 100 EPC prejudice the maintenance of the granted patent.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Magouliotis T. Bokor

Decision electronically authenticated