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**Datasheet for the decision
of 15 November 2011**

Case Number: T 1889/09 - 3.2.04

Application Number: 03717841.5

Publication Number: 1492401

IPC: A01K 1/12, A01J 5/017

Language of the proceedings: EN

Title of invention:
Method and arrangement at a dairy farm

Patent Proprietor:
DeLaval Holding AB

Opponent:
Octrooibureau Van der Lely N.V.

Headword:
Counting the number of animals/DELAVAL

Relevant legal provisions:
EPC Art. 52, 54, 123

Keyword:
"Inventive step - main request (yes)"

Decisions cited:
-

Catchword:
-



Case Number: T 1889/09 - 3.2.04

D E C I S I O N
of the Technical Board of Appeal 3.2.04
of 15 November 2011

Appellant: Octrooibureau Van der Lely N.V.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 16 July 2009
rejecting the opposition filed against European
patent No. 1492401 pursuant to Article 101(2)
EPC.

Composition of the Board:

Chairman: M. Ceyte
Members: P. Petti
T. Bokor

Summary of Facts and Submissions

- I. The opposition division, by its decision dispatched on 16 July 2009, rejected the opposition filed against the European patent No. 1 492 401.
- II. The opponent (hereinafter appellant) lodged an appeal against this decision on 21 September 2009 and simultaneously paid the appeal fee. A statement setting out the grounds of appeal was received on 26 November 2009.
- III. Oral proceedings before the board were held on 15 November 2011.
- IV. The appellant requested that the decision under appeal be set aside and the patent be revoked and that the main and first auxiliary request filed during the oral proceedings before the board not be admitted.
- V. The respondent (patent proprietor) requested that the decision under appeal be set aside and the patent be maintained in an amended form according to the main or the first auxiliary request and an adapted description filed during the oral proceedings before the board. During the oral proceedings the respondent withdrew his previous main, first and second auxiliary requests filed by letter dated 14 October 2011.
- VI. Claims 1 and 17 of the main request read as follows:

"1. A method of automatically milking animals, which are allowed to move in an area (1) intended therefore and to visit individually a milking station (9)

including an automatic milking machine (14) and an animal identification device (20), wherein each of said animals is given a milking priority and wherein each of said animals visiting the milking station is identified and is admitted to be milked automatically by said automatic milking machine depending on its milking priority,

characterized by the steps of:

- counting the number of animals in a portion (51) of said area, in which said milking animals are allowed to move, by means of an animal counting detector (56), said portion being capable of housing a plurality of said animals and being located adjacent to said milking station;

- identifying an animal, which presents itself at the milking station, by means of said animal identification device; and

- admitting said identified animal to be milked automatically by said automatic milking machine depending on the detected number of animals in said portion located adjacent to said milking station."

"16. An arrangement for managing milking animals, each of which being given a milking priority, comprising:

- an area (1), in which the animals are allowed to move;

- a milking station (9), which the animals are capable to visit individually, the milking station including an animal identification device (20) for identifying an animal presenting itself at the milking station (9), and an automatic milking machine (14) capable of automatically milking said identified animal; and

- a control device (32) for receiving an identification of said animal presenting itself at the milking station (9), for retrieving the milking priority of said identified animal, and for controlling said automatic milking machine to milk said identified animal depending on its milking priority, characterized in
- an animal counting detector (56) for counting the number of animals in portion (51) of said area, in which said milking animals are allowed to move, said portion being capable of housing a plurality of said animals and being located adjacent to said milking station, wherein
- said control device is adapted to control said automatic milking machine to milk said identified animal depending on the detected number of animals in said portion located adjacent to said milking station."

VII. The appellant essentially submitted that the claimed subject-matter of the main request lacked novelty over WO-A-01/17339 (D1), WO-A-99/25176 (D2) or WO-A-96/03031 (D3) and did not involve an inventive step either over D1 in combination with D2 or WO-A-96/19916 (D6) or over EP-A-551 957 (D5) taking account of common general knowledge as illustrated by R. van der Linde et al, "*Robotic milking system (RMS) design and performance*", in "*Prospect for automatic milking*", EAAP Publication NO, 65, 1992, pages 55 to 59 (E1) and in combination with D2, D3 or D6.

VIII. The respondent essentially contested the appellant's arguments.

Reasons for the Decision

1. The appeal is admissible.

2. *Main request (admissibility)*

The appellant objected to the admission of the revised main request filed at the oral proceedings. However, this revised main request was filed in reply to the appellant's objections under Article 123 EPC raised for the first time during the oral proceedings before the board. The revised main request is thus a reaction to the fresh objections made by the appellant and cannot therefore be rejected on the grounds of being late.

3. *Main request (amendments)*

3.1 Compared with claim 1 as granted, claim 1 of the main request has been amended as follows:

The wording in claim 1 as granted "*detecting presence of animals in a portion of said area ... by means of an animal detection device*" has been amended to read "*counting the number of animals in a portion of said area ... by means of an animal counting detector*", and "*admitting said identified animal ... depending on the detection of presence of animals ...*" has been amended to read "*admitting said identified animal ... depending on the detected number of animals ...*".

Compared with claim 17 as granted, claim 16 of the main request has been amended as follows:

The feature in granted claim 17 "*animal detection device for detecting presence of animals*" has been

amended to read "animal counting detector for counting the number of animals", and "*detection of presence*" has been amended to read "*detected number*".

- 3.2 Since the terms "animal counting detector", "counting the number of ..." and "detected number" are respectively more specific than the terms "animal detection device", "detecting presence of ..." and "detection of presence", these amendments do not extend the protection conferred with respect to the granted claims (Article 123 (3) EPC).
- 3.3 These amendments are also directly and unambiguously derivable from the originally filed dependent claims 12 and 25 (Article 123 (2) EPC).
- 3.4 Dependent claims 8 and 22 have been amended accordingly. The amendment made, "*said animal detection device is an animal identification device*" is also directly and unambiguously derivable from page 10, lines 20 to 27 and page 17, line 25 to page 18, line 2 of the application as originally filed, which makes it clear that the animal identification device can be used as an animal counting device, or that even a simple counter may be used.
- 3.5 The board therefore concludes that the amended claims of the main request do not contravene Article 123 EPC.

4. *Main request (novelty)*

4.1 *Document D1*

4.1.1 The method of automatically milking animals according to claim 1 comprises the step of

- counting the number of animals in a portion (51) of the area, in which the milking animals are allowed to move, by means of an animal counting detector (56), said portion being capable of housing a plurality of said animals and being located adjacent to the milking station.

D1 does not disclose this method step. In this citation (see particularly Figure 1 and claim 1) the animals are allowed to move in an area intended therefore. The animals are capable to visit individually a waiting area located adjacent to the milking station. This waiting area comprises "a plurality of waiting stations (3) ... wherein each waiting station (3) is arranged to receive one animal" (see claim 1). Therefore, the waiting area of D1 is not a portion in which the animals are allowed to move. Furthermore, D1 does not disclose an animal counting detector by means of which the number of animals present in said portion is counted.

4.1.2 In this respect, the appellant essentially submitted the following arguments:

- i) In the claims, the expression "in which said milking animals are allowed to move" does not refer to the "portion" but to the "area". Thus,

this feature does not distinguish the claimed subject-matter from the method and arrangement of D1 in which there is an area in which the animals are allowed to move.

ii) Furthermore, it is clear from D1 that the animals can freely enter the waiting stations (3) which therefore constitute a portion into which the animals are to allowed to move.

iii) The waiting stations of D1 are provided with animal identification devices which - in order to identify the animals - necessarily detect how many animals are present, wherein an identified animal is admitted to be milked depending on the detected number of animals.

4.1.3 The board does not find these arguments convincing for the following reasons:

i) The pre-characterising part of claim 1 and 16 refers to an area in which the animals are allowed to move, while the characterising part refers to "a portion of said area, in which said animals are allowed to move". Thus, these claims define a waiting area located adjacent to the milking station as a portion of the whole area in which area the animals are allowed to move and thus make it clear that the animals are allowed to move also in that portion. This interpretation is consistent with the description and drawings of the patent specification, according to which the portion 51 is either enclosed or not enclosed by a fence and large enough to house a plurality of animals which

can move within this portion (see particularly Figures 1 to 3 in conjunction with paragraphs [0042] and [0055]).

ii) Each waiting station (3) of D1 is arranged to receive *only one* animal and is provided with an entry gate (13) and an exit gate (14), wherein after an animal has entered one of the waiting stations the gates (13 and 14) of that station are closed, so that the animal is not allowed to move from that waiting station to another one. Therefore, the plurality of waiting stations (3) of D1 does not constitute a waiting area within which the animals are allowed to move in the sense of the patent.

iii) According to D1 each identification device (7) identifies the animal present in the respective waiting station. D1 does not disclose identification devices which are used as a cow counting device. Although the patent specification makes it clear that an identification device can be used as a cow counting device, this does not necessarily imply that each identification device performs a counting of the identified animals or is adapted for counting them.

4.1.4 It follows that the subject-matter of claim 1 for a method is novel over D1.

The same applies to the subject-matter of claim 16 for an arrangement comprising "an animal counting detector for counting the number of animals in a portion (51) of said areas, in which said milking animals are allowed

to move, said portion being capable of housing a plurality of said animals and being located adjacent to said milking station".

4.2 *Document D2*

4.2.1 D2 discloses (see Figure 1) a method of automatically milking animals and an arrangement for managing animals, which are allowed to move in an area intended therefore and to visit individually a milking station (1) including an automatic milking machine (7) and an animal identification device (6), wherein each of said animals is given a milking priority (based upon the lactation period) and wherein each of said animals visiting the milking station is identified by means of said animal identification device (6) and is admitted to be milked automatically by the automatic milking machine (7) depending on its priority. D2 does not disclose either an animal counting detector or the use of the animal identification device (6) as an animal counting detector because - as has been explained - the presence of an identification device does not necessarily imply a counting of the identified animals.

4.3 *Document D3*

4.3.1 D3 discloses a method of automatically milking animals and an arrangement for managing animals, which are allowed to move in a first area ("lying and walking area 1") intended therefore and to visit individually a milking station (5) including an automatic milking machine (24) and a first animal identification device (12), wherein each of said animals visiting the milking station is identified and is admitted to be milked

depending on whether a milking criterion is met, the method further comprising the steps of

- identifying the animals passing from the first area (1), in which they are allowed to move, to a second area ("waiting area 2") in which they are also allowed to move by means of a second animal identification device (11), said second area (2) being capable of housing a plurality of said animals and being located adjacent to said milking station (5),
- identifying an animal, which presents itself at the milking station (5), by means of said first animal identification device (12), and
- admitting the identified animal to the milking station.

D3 does not disclose either an animal counting detector or an animal identification device which is also an animal counting detector.

4.3.2 In this respect, the appellant essentially submitted that if the waiting area (2) in D3 is full, milk-ripe animals are not admitted from the lying and walking area (1) into the waiting area (page 5, lines 28 to 40) and thus this citation teaches that the admission of animals to the milking station indirectly depends on the number of animals present in the waiting area.

The board does not find this argument as being relevant not only because D3 discloses neither the step of counting the animals present in the waiting zone nor the use of a counting detector for counting the number of animals but also because D3 only refers to the

possibility of denying admission to animals when they present themselves at the entrance of the waiting area, while the claimed invention clearly relates to the admittance of an animal in dependence on the detected number of animals present in the portion (51) when the animal presents itself at the milking station.

4.4 Therefore, the method according to claim 1 and the arrangement according to claim 16 are novel over D1, D2 or D3.

5. *Main request (inventive step)*

5.1 *Document D1*

5.1.1 D1 discloses a method and an arrangement in which if an animal present in a waiting station (3) is not qualified for milking, it is not admitted to the milking station (see particularly page 10, line 13 to page 11, line 2 in conjunction with Figure 1) even if no further animals are present in the remaining waiting stations, while if more animals qualified for milking are present in different waiting stations (3), the identities of these animals are detected by means of the animal identification devices of the respective waiting boxes. The milking priorities of these animals are compared with each other in order to admit the animal having the greatest priority to the milking station (see page 11, lines 21 to 30; Figure 3 of D1). In D1, it may happen that an animal which is almost qualified for milking is refused to be milked despite there being no other animal in the waiting area and, sometimes, that an animal qualified for milking but having a milking priority lower than the milking

priorities of other animals present in the waiting stations has to wait in the waiting station without being allowed to move. Thus, in the method and the arrangement of D1 the decision to admit an animal to the milking station may depend on the presence of further animals in the waiting stations (3) but not on the number of animals.

5.1.2 The method according to claim 1 differs from D1, considered as closest prior art, in that

- a) the animals are allowed to move in the portion located adjacent the milking station, i.e. in the waiting area,
- b) the number of animals in said portion is counted by means of an animal counting detector,
- c) an identified animal is admitted to be milked depending on the detected number of animals in said portion,

and the arrangement according to claim 16 of the main request differs from D1 by feature a) and in that

- b') there is an animal counting detector for counting the number of animals in said portion,
- c') the control device is adapted to control the automatic milking machine depending on the detected number of animals in said portion.

5.1.3 Feature a) provides the advantage of giving freedom of movement to the animals which are in the surroundings of the milking station.

Features b) and c), or b') and c'), make it possible that an animal willing to be milked and presenting itself at the milking station may be admitted to milking in dependence on the detected number N of animals present in the portion located adjacent the milking station. Thus, features b) and c), or b') and c'), provide the advantage of increasing the freedom of the animals with respect to the voluntary choice to be milked.

All distinguishing features contribute together to providing more comfort to the animals.

Thus, the problem to be solved by the claimed invention is how to improve the comfort of the milking animals with regard to their freedom of movement when they are waiting for being milking and to their freedom of choosing when they wish to be milked.

- 5.1.4 The idea of counting the animals present in the waiting area and making the decision to admit an animal to the milking station dependent on the detected number of animals is neither disclosed nor suggested in the cited prior art. Furthermore, in D1 the presence of a plurality of waiting stations defining a waiting area in which the animals cannot move is presented as an essential feature of the invention (see claim 1), which is necessary to perform a comparison between the milking priorities of the animals present in the waiting stations in order to select the animal having the greatest milking priority. Thus D1 teaches away from the claimed invention, in so far as this citation relates to a waiting area in which the animals are not allowed to move. The skilled person starting from D1

would have not arrived at the claimed invention without exercising inventive skill.

5.1.5 With respect to inventive step, the appellant essentially submitted the following arguments:

- D2 (page 5, lines 4 to 10; Figure 3) relates to a method of milking animals allowing an animal in the beginning of its lactation period to be milked more often than in a later stage thereof, in which the animals from a residing area (15) may have access to a waiting area (13) located adjacent to the milking station, in which (waiting area) they are allowed to move, provided that they are identified by a first identification device (18) as being qualified for milking. Moreover, since the animals present in the waiting area (13) are identified at the milking station by means of a second animal identification device (6) and priority is given to an animal standing at a first distance from the second animal identification device in a relation to an animal standing at a second distance which is larger than the first distance, D2 teaches that the identified animal is admitted to the milking station depending on the number of animals present in the waiting area.

- D6 (Figures 5 to 7) relates to an arrangement for milking animals comprising a resting area (22) and a waiting area (21) in which the milking station (2) is arranged and in which the animals are allowed to move. Resting and waiting areas (22, 21) are connected by a two-way gate (24) allowing the animal coming from the resting area (22) to enter

the waiting area (21) and vice versa. The two-way gate (24) is provided with an animal identification device (25) by means of which the identities of the animals and the number of the animal entering and leaving the waiting area (21) are detected.

- The skilled person confronted with the problem of increasing the freedom of movement of the animals in the waiting area would automatically arrive with the aid of the teaching of either D2 or D6 at the claimed subject-matter.

5.1.6 The board does not find these arguments convincing for the following reasons:

- D2 discloses neither an animal counting detector for counting the animals present nor an animal identification device which is also an animal counting detector. The fact that in D2 priority is given to the animal standing at shorter distance from the milking station than an other animal does not imply that the animals present in the waiting area are counted.
- In D6 the identification device (25) arranged in proximity of the two-way gate (24) is not disclosed as being used as an animal counting detector.
- Thus, even if D2 or D6 were to suggest replacing the plurality of milking stations of D1 by a waiting area in which the animals are allowed to move, they would not suggest the idea of counting

the animals present in the waiting area. Therefore, even if the skilled person were to combine D1 with D2 or D6, he would not arrive at the solution as claimed in claim 1 or 16.

5.2 *Document D5*

5.2.1 This citation discloses (see particularly claims 1 and 9; column 2, line 54 to column 3, line 2; column 9, lines 22 to 27) a method of automatically milking animals and an arrangement for managing milking animals,

- the arrangement comprising an area in which the animals are allowed to move, a milking station which the animals are capable to visit individually, the milking station including an animal identification device for identifying an animal presenting itself at the milking station and an automatic milking machine capable of automatically milking said identified animal, and a control device for receiving an identification of said animal presenting itself at the milking station, for retrieving the milking priority of said identified animal, and for controlling said automatic milking machine to milk said identified animal depending on its milking priority,

- the method comprising the steps of allowing the animals to move in said area and to visit individually the milking station including the automatic milking machine and said first animal identification device, wherein each of said animals is given a milking priority and wherein each of said animals visiting the milking station

is identified and is admitted to be milked automatically by said automatic milking machine depending on its milking priority.

Moreover, according to D5 (column 10, lines 12 to 44; claims 9 and 10) the computer of the control device comprises a program to ensure that an animal which is at the beginning of its lactation period is given priority for entering the milking station over animals which are at the end of the lactation period, wherein the control system may allow an animal to enter the milking station "dependently of the sequence in which it is recorded in the computer" so that an animal may be milked independently of a predetermined period of time elapsed since the previous milking.

D5 discloses neither a waiting area located adjacent to the milking station nor any means for distinguishing the animals which are in the surroundings of the milking station from animals which are far therefrom. Therefore, in the system of D5 the admission of the identified animal to the milking station only depends on the milking priority of the individual, without there being any comparison of the respective milking priorities of animals which are in the surroundings of the milking station, and is thus independent of the presence of animals in the surroundings of the milking station.

The method according to claims 1 and the arrangement according to claim 16 differ from D5 not only by the above mentioned features a), b) and c) and a'), b') and c'), respectively, but also in that there is a waiting area, i.e. the portion (51), adjacent to the milking station and in that the admission of an identified

animal depends on the presence of other animals in the waiting zone.

Starting from D5 the technical problem to be solved may be seen in providing a method and an arrangement in which the decision to admit an animal to the milking station takes account of the presence of further animals in the surroundings of the milking station, while maintaining the comfort of the milking animals with regard to their freedom of movement when they are waiting for being milked and to their freedom of choosing when they wish to be milked.

5.2.2 The appellant essentially submitted that the provision of a holding pen before a milking parlour is part of the common general knowledge of the skilled person as illustrated by E1. He further submitted that D6 or D2 or D3 suggests the distinguishing features of claims 1 and 16.

E1 refers to a holding pen with a pre-identification device by means of which the animals identified as due for milking are admitted into the holding pen. However, E1 does not suggest detecting the number of animals present in the holding pen by means of a counting detector. Moreover, the idea of making the admission to the milking station dependent on the detected number of animals present in the waiting area is not suggested in D3, D2 or D6. Therefore, the skilled person starting from D5 would not arrive at the claimed subject-matter with the aid of E1 or D3 or D2 or D6.

5.2.3 Furthermore, the skilled person starting from D5 needs to perform a series of steps to arrive at the claimed

subject-matter: Firstly, the step of providing a waiting area adjacent to the milking station in which the animals are allowed to move and secondly, the step of counting the number of animals present in the waiting area, wherein each animal visiting the milking station is admitted to be milked automatically depending on the number of animals present in the waiting area.

5.2.4 Since none of the prior art citations provides the teaching to make the admission to the milking station dependent on the number of animals present in the waiting area, the skilled person starting from D5 would not arrive at the claimed invention.

5.3 The board therefore concludes that the subject-matter of claim 1 and that of claim 16 involve an inventive step.

6. *Auxiliary request*

Having regard to the above considerations the patent may be maintained on the basis of the main request. Therefore, there is no need to deal with the auxiliary request.

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 the patent as amended in the following version:

Description: columns 1-11 as filed during the oral proceedings before the board

Claims: Nos 1-24 according to the main request filed during the oral proceedings before the board

Drawings: Figs. 1-3 of the patent specification

The Registrar:

The Chairman:

D. Hampe

M. Ceyte