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D E C I S I O N
of 20 December 2000

Case Number: T 0535/98 - 3.2.4

Application Number: 89107975.8

Publication Number: 0332230

IPC: A01K 1/12

Language of the proceedings: EN

Title of invention:

Device for milking animals, such as cows

Patentee:

MAASLAND N.V.

Opponents:

- (I) Alfa Laval AB
(II) PROLION B.V.

Headword:

Mobile milking device/MAASLAND

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step (yes)"

Decisions cited:

T 0775/90

Catchword:



Case Number: T 0535/98 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 20 December 2000

Appellant: MAASLAND N.V.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 19 March 1998
revoking European patent No. 0 332 230 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: C. A. J. Andries

Members: P. Petti
H. Preglau

Summary of facts and submissions

I. The European patent No. 332 230 results from European patent application No. 89 107 975.8 filed as a divisional application of the earlier European patent application No. 86 200 064.3 published under the number EP-A-189 954 (hereinafter referred to as the parent application).

Two oppositions were filed against this patent, the first opposition being based upon Articles 100(a) and (c) EPC, the second one being based only upon Article 100(a) EPC. During the opposition proceedings opponent I also raised an objection under Article 100(b) EPC.

With its decision (hereinafter referred to as the decision under appeal) dispatched on 19 March 1998 the opposition division revoked the patent pursuant to Article 102(1) EPC.

The opposition division found that the ground according to Article 100(c) EPC prejudiced the patentability of the subject-matter of Claim 1 of the main request of the proprietor of the patent and that the subject-matter of the independent claims of each of the three subsidiary requests of the proprietor did not involve an inventive step according to Article 56 EPC. The opposition division considered the objection under Article 100(b) EPC as not being relevant.

II. On 7 May 1998 the proprietor (hereinafter appellant) lodged an appeal against this decision and simultaneously paid the appeal fee. A statement setting out the grounds of appeal was received on 20 July 1998.

III. Oral proceedings were held on 20 December 2000. During the oral proceedings the appellant filed an amended Claim 1 and based its sole request on it. This Claim 1 reads as follows:

"A device for milking animals, such as cows, comprising a milking parlour with a computer controlled fodder supply unit and a computer controlled milking machine with a milking unit (29) and a cleaning unit (28) for the udder and the teats of the animal, characterized in that the device is mobile and comprises at least one storage container (11) for storing milk, a storage container (10) for storing fodder and a storage container (12) for storing cleaning liquid, the device further being provided with computer controlled transporting means (18) for the supply of milk from the animal (2) to a respective storage container (11) and a computer controlled transporting means (20) for the supply of a cleaning liquid from a respective storage container (12) to the cleaning unit (28)."

IV. During the oral proceedings opponents I and II (hereinafter respondents I and II) referred *inter alia* to the documents EP-A-91 892 (D2), DD-A-74 974 (D11), US-A-4 010 714 (D6), US-A-3 019 763 (D12) and EP-A-55 628 (D3).

V. Respondent I essentially argued that the subject-matter of Claim 1 did not involve an inventive step having regard to the content of documents D2 and D11.

Respondent II essentially argued that the subject-matter of Claim 1 did not involve an inventive step having regard to the content of documents D12 and D6.

The appellant contested the arguments of the respondents.

VI. The appellant requested that the impugned decision be set aside and that the patent be maintained on the basis of the following documents:

Claims: 1, 2 and 3 as filed during the oral proceedings;

Description: columns 1-4 and 7 as filed during the oral proceedings, columns 5 and 6 as granted;

Drawings: Figures 1-7 as granted.

The respondents requested that the appeal be dismissed.

Reasons for the decision

1. The appeal is admissible.
2. *The claimed subject-matter and the admissibility of the amendments*
 - 2.1 Claim 1 has been analysed as being directed to a device for milking animals having the following features:
 - A) the device comprises a milking parlour,
 - A1) the milking parlour is provided with a fodder supply unit,
 - A11) the fodder supply unit is computer controlled;
 - A2) the milking parlour is provided with a milking machine,

- A21) the milking machine is computer controlled,
- A22) the milking machine is provided with a milking unit (29),
- A23) the milking machine is provided with a cleaning unit (28) for the udder and the teats of the animal,
- B) the device is mobile,
- C) the device comprises at least one storage container (11) for storing milk,
- D) the device comprises a storage container (10) for storing fodder,
- E) the device comprises a storage container (12) for storing cleaning liquid,
- F) the device is provided with a transporting means (18) for the supply of milk from the animal (2) to a respective storage container (11),
- F1) the transporting means (18) is computer controlled,
- G) the device is provided with a transporting means (20) for the supply of a cleaning liquid from a respective storage container (12) to the cleaning unit (28),
- G1) the transporting means (20) is computer controlled.

2.1.1 The group of features A to A23 have to be understood as defining a device comprising **at least one** milking parlour.

The term "milking parlour" has to be interpreted as defining a box comprising the area in which the animal stands during the milking process and the space or spaces in which the milking unit and the cleaning unit are located, see Figures 1 and 2 and the description, column 2, lines 13 to 17 and column 3, lines 37 to 40,

of the patent.

If the device comprises more milking parlours (see Claim 3), features A1, A2, A21 and A22 mean that **each** milking parlour is provided with a fodder supply unit and a milking machine and that **each** milking machine comprises a milking unit and a cleaning unit.

Feature A23 defines a cleaning device which is suitable for cleaning both **the teats and the udder** of the animal. Feature G refers to a cleaning liquid supplied from a storage container to the cleaning unit. Therefore, features A23 and G define a cleaning unit using a cleaning liquid for cleaning all the teats of the animal and the udder, for instance by spraying the cleaning liquid against the animal's udder.

2.2 Claim 1 differs from Claim 1 as granted in that

- (i) feature A11 has been added;
- (ii) feature A23 has replaced the feature that the milking machine comprises "a cleaning unit (28) **for the animal's teats**" (emphasis added);
- (iii) feature B has been added;
- (iv) features F1 and G1 have been added;
- (v) feature G has replaced the feature that "the device is provided with a transporting means (20) for the supply of a cleaning liquid from a respective storage container (12) to the cleaning unit (28) **and/or to other parts of the device coming into contact with milk**" (emphasis added).

2.2.1 These amendments can be derived from the description and the drawings of the parent application as filed

(PA) and of the divisional application as filed (DA).

In particular:

For the amendment according to item (i), see PA, page 1, lines 24 to 26, and DA, page 1, lines 21 to 23;

for the amendment according to item (ii), see PA, Figure 3, page 16, lines 12 to 18 and DA, page 5, lines 29 to 35;

for the amendment according to item (iii), see PA, page 9, lines 17 to 19, and DA, Claim 4;

for the amendment according to item (iv), see PA, Figure 1, page 15, lines 24 to 26, and DA, page 5, lines 5 to 7; and

for the amendment according to item (v), see PA, Figure 1, and DA, Figure 1.

The amendment according to item (v) results in deleting two alternatives concerning the supply of cleaning liquid which were defined by the term "and/or" in Claim 1 as granted.

These amendments do not extend the scope of the amended patent beyond that of the granted patent.

- 2.2.2 The amendments to the dependent claims and to the description concern the adaptation of these parts of the patent to the amended Claim 1 as well as the excision of some elements which had no basis in the parent application as originally filed (Article 100(c) EPC).

2.3 The amendments to the patent do not contravene the requirements of Article 123 EPC.

3. *The opposition grounds under Article 100(b) and (c) EPC*

3.1 The amendments to the patent also overcome the objections under Article 100(c) EPC raised by the respondents during the written phase of the proceedings. The board finds that the ground under Article 100(c) EPC does not prejudice the maintenance of the patent as amended. These objections were no longer pursued during the oral proceedings.

3.2 The objection under Article 100(b) EPC raised by respondent I during the written phase of the appeal proceedings was withdrawn during the oral proceedings. The board agreed with the findings of the opposition division according to which this objection is not relevant.

4. *Novelty*

The subject-matter of Claim 1 is novel (Article 54 EPC) with respect to the cited prior art. Novelty was not disputed.

5. *Inventive step*

5.1 Respondent I asserted that the subject-matter of Claim 1 differs from the mobile milking device disclosed in document D11 substantially in that parts of the device, namely the fodder supply unit, the milking machine and the transporting means are computer controlled (features A11, A21, F1 and G1). In this respect respondent I, referring to the decision

T 775/90, argued that the mere automation of functions previously performed by human operators is in line with the general trend in technology and cannot be considered as involving an inventive step.

- 5.1.1 The board cannot accept this argument because the invention as claimed - as explained below (see section 5.2.1) - does not consist in the mere automation of the functions performed by human operators in the device according to document D11. Indeed, mere automation would mean that in the mobile device according to document D11 also the cleaning and disinfecting unit which is arranged at the entrance of the stable is, if possible, automated. However, a common automated cleaning unit at the entrance of a large stable is different from an automated cleaning unit for each milking parlour as defined in Claim 1 of the patent.

Since the mere automation of the device according to document D11 does not result in the claimed device, decision T 775/90 is not relevant for the present case.

- 5.2 Starting from the milking device according to document D11 respondent I also argued as follows:

The technical problem to be solved is to further reduce the manual effort of the operator. Document D2 teaches the use of a computer to control the milking machine, the transport of milk from the milking units to a milk tank (page 5, lines 13 to 18), the fodder supply unit (Figure 3) and the cleaning unit for the udder and the teats of the animal (page 6, lines 1 to 8) but does not indicate how the cleaning unit for the udder and the teats operates. The skilled person would apply the teaching of document D2 to the milking device known

from document D11 and arrive at a milking device in which the fodder supply unit, the transport of milk and the operations of the cleaning unit for the udder and teats of the animals are computer controlled. With respect to the system for cleaning the udder, the skilled person has to choose between two options, namely a "dry" cleaning system (for instance using brushes) and a "wet" cleaning system using a cleaning liquid. The skilled person, knowing that the most popular way to clean the animal's teats is to spray a liquid on the udder, would choose this option and thus arrive at the subject-matter of Claim 1.

5.2.1 The board cannot accept these arguments for the following reasons:

- (i) Document D11 discloses a mobile device for milking animal comprising a plurality of milking parlours, which can be arranged according to a double herringbone layout (see Figure 1) or to other layouts (see column 3, lines 10 to 14), each milking parlour being provided with a fodder supply unit 15 and with a milking unit. The mobile device also comprises a cleaning and disinfecting unit ("Desinfektions- und Reinigungseinrichtung", see column 4, lines 13 to 16) arranged at the entrance 18 of the mobile device, so that it could be assumed that this cleaning and disinfecting unit is suitable for cleaning and disinfecting the teats and the udder of the animal.

Moreover, this mobile device comprises an apparatus for cleaning the milking parlours and the milking units ("Anlage zur Reinigung der

Melkanlage und des Melkstandes", see column 3, lines 27 to 30), a storage container 13 for storing milk, a storage container 10 for storing fodder and a storage container 11 for storing chemicals. Moreover, it can be assumed that this mobile device is provided with a transporting means for the supply of milk from the milking units to the milk storage container 13. According to the passage in column 3, lines 27 to 30, a cleaning **substance** is supplied from a storage container to the apparatus for cleaning the milking parlours and the milking units.

Document D11 does not refer explicitly to a **cleaning liquid** either for cleaning the milking parlours and the milking units or to be supplied to the cleaning and disinfecting unit.

Thus, the subject-matter of Claim 1 differs from this mobile device not only by features A11, A21, F1 and G1 but also by features A23 (at least in so far as the cleaning unit is associated to the milking machine), E and G (in so far as document D11 does not refer to cleaning liquid for the cleaning of the udder and teats).

- (ii) Document D2 discloses a stationary device for milking animals comprising a plurality of milking parlours 1, each parlour being provided with a computer controlled fodder supply unit 9 and with a milking unit 6. The device comprises a computer controlled robot 8, common to all parlours and suitable for applying the milking units to teats of the animal. It can be assumed that this stationary device is associated with a milking

plant comprising a storage container for storing milk, that the milking units 6 are connected to the milking plant and that the milking operations are controlled by the computer.

Moreover, the milking device according to document D2 can be provided with means for cleaning the teats and means for effecting massage of udder and teats (see page 6, lines 1 to 8). Such means may either be associated to the robot 8 or be installed in each milking parlour. However, document D2 neither specifies the structure and function of the cleaning means (or of the massaging means) nor refers to any **cleaning liquid** for cleaning the teats.

(iii) Starting from a device according to document D11 the skilled person trying to reduce the manual effort of the operator would have to carry out the following steps in order to arrive at the claimed subject-matter:

- (a) he would have to arrive at the idea of using a computer in a mobile device;
- (b) he would have to define the operations which have to be controlled by the computer;
- (c) he would have to arrive at the idea of providing each milking machine with a cleaning unit, i.e. of associating a cleaning unit to each milking parlour;
- (d) he would have to arrive at the idea of

using a cleaning liquid for cleaning the udder and the teats.

With respect to steps (a) and (b), it can be assumed that document D2 suggests the use of a computer to control the operation of the milking unit, of the means for cleaning the teats (features A21), of the fodder supply unit (feature A11) and of the means for transporting the milk from the milking unit to the milking plant. Therefore, the teaching of document D2 could lead the skilled person to use in the device known from document D11 a computer to control these operations, although the mobility of the device implies (see Figure 6 of the patent) a self-supporting structure.

With respect to the arrangement of the cleaning unit (see step (c)), document D2 refers to two alternatives (i.e. either a cleaning unit associated with each milking unit or to a cleaning unit arranged as an attachment to the robot so that it is common to all milking parlours) but does not indicate the respective advantages of each alternative. Thus, having regard to the information content of document D2, the skilled person would have no reasons for associating a cleaning unit to each parlour. He would therefore instead maintain the arrangement disclosed in document D11 according to which the cleaning and disinfecting unit is arranged at the entrance of the mobile milking device.

Furthermore, neither document D11 nor document D2 suggests step (d). In this respect, it has also

to be noted that step (d) has to be combined with step (b) i.e. with feature G1. Thus, even if the skilled person were to arrive at step (d) by selecting a cleaning unit using a cleaning liquid for cleaning the teats, he would not arrive at the claimed subject-matter because he would have to perform a further subsequent step consisting in using the computer for controlling the transporting means for the supply of cleaning liquid to cleaning units.

It has also to be noted that it is not decisive for the issue of inventive step whether the skilled person **could** have arrived at the claimed invention by modifying the device according to document D11, but whether he **would** have done so in view of clear suggestions in document D2 and in the expectation of some advantages. However, document D2 neither suggests step (d) nor indicates the advantages of step (c), which would have guided him towards its use.

Therefore, the combination of the disclosures D11 and D2 would not lead the skilled person to the claimed subject-matter.

5.3 Starting from the milking device according to Figure 1 of document D2, respondent I also argued as follows:

The claimed subject-matter differs from this device substantially by features B, E, G and G1. Thus, starting from this device, a two-part problem has to be solved, this problem consisting, on the one hand, in applying the milking system to a different animal management scheme and, on the other hand, in defining

how to organize the teat cleaning. The first part of the problem can be solved by considering document D11 in so far as this document refers to a mobile device (feature B). The solution of the second part of the problem, which solely represents the filling of a gap in the information content of document D2 (in so far as this document does not specify how the teats are cleaned), would not be inventive because the skilled person only has to choose between two options (a "dry" cleaning system and a "wet" cleaning system).

5.3.1 The skilled person starting from a device according to Figure 1 of document D2 would have to carry out the following steps in order to arrive at the claimed subject-matter:

- (e) he would have to make the device mobile and therefore self-supported,
- (f) he would have to **provide** the device with storage containers for storing milk, cleaning fluid and fodder and with the respective transporting means,
- (c') he would have to choose the alternative of providing each milking unit with a cleaning unit, i.e. of associating the cleaning unit with the milking parlour;
- (d) he would have to arrive at the idea of using a cleaning liquid for cleaning the udder and the teats.

Having regard to the comments in sections 5.2.1 above, at least steps (c') and (d) cannot be considered as

being obvious in view of documents D2 and D11.

In particular, as far as step (c') is concerned, it has to be noted that document D11 suggests the use of a cleaning and disinfecting unit arranged at the entrance 18 of the mobile device, i.e. document D11 would lead the skilled person to the alternative of using a cleaning unit common to all parlours. Moreover, it would be unlikely that the skilled person would choose the other alternative in a mobile device, especially when this device comprises a plurality of milking parlours. According to the board, there is - in view of the above - no guidance towards the feature resulting from steps (c') and (d).

5.4 Respondent II asserted that the subject-matter of Claim 1 does not involve an inventive step having regard to document D12. He argued that the subject-matter of Claim 1 substantially differs from the mobile installation disclosed in this document in that the operation of the milking machine, of the fodder supply unit and of the transporting means for the milk and the cleaning liquid are computer controlled and that - having regard to document D6 which discloses a computer operated milking device - it would be obvious to use a computer for controlling these operations. A further difference consisting in that the milking device according to Claim 1 comprises a storage container for a cleaning liquid would not involve any inventive step having regard to the general knowledge of the skilled person (see also document D3).

5.4.1 The board cannot accept these arguments for the following reasons:

- (i) Document D12 discloses a device for milking animals which is mobile because it is mounted in a trailer. This mobile device comprises a plurality of open milking parlours 29, which are arranged according to a herringbone layout (see Figure 3), each parlour being provided with a fodder supply unit 33 and with a milking unit (see Claim 1). The mobile device also comprises a storage container 34 for storing fodder, a storage container 52 for storing milk and transporting means 50 for the supply of milk from the animal to the milk storage container. The trailer on which the device is mounted is provided with hose connectors 56, 57 for hot and cold water, the connectors being connected to a line 58 extending over the milking parlours. Alternatively to the connection for hot water, the trailer may have a heater for heating water (see column 3, line 71 to column 4, line 7), implying that the connection for cold water remains. Document D12 also indicates that a series of drains 60 are provided for cleaning the trailer but does not refer to any device for cleaning the teats and the udder of the animal. Aim of the improvement disclosed in document D12 is to provide a mobile milking device with which a milking service can be offered to different farms with the trailer travelling to a farm twice a day.

Therefore, the subject-matter of Claim 1 differs from the milking device known from document D12 by features A11, A21, A23, E, F, G and G1.

- (ii) Thus, starting from a device according to

document D12 the skilled person trying to reduce the manual effort of the operator would have to carry not only the steps (a), (b), (c) and (d) referred to in section 5.2.1(iii) above but also the step of providing the trailer with a storage container for the cleaning liquid.

Document D6 discloses two embodiments (see respectively Figures 1 to 4 and 5 to 7) of a milking plant whose operations are computer controlled. This device is provided with a milking unit 5 or 105 and with a cleaning unit 6 or 106 for cleaning the teats and the udder of the animal (see Figures 4 or 5).

The milking unit and the cleaning unit of the milking plant known from document D6 are mounted on large platforms 13, 28 or 113, 128 and are movable on rails 12 or 112 mounted on the bottom of a pit 11 or 111 formed in the ground. Thus, this structure of this plant makes it very unlikely that the skilled person would arrive at the idea of associating to **each** milking parlour of the mobile trailer disclosed in document D12 a milking machine comprising not only a milking unit but also a cleaning unit for the teats and udder of the animal. It has also to be noted that the second embodiment concerns a plant with a plurality of milking parlours associated to a common milking unit 105 and to a common cleaning unit 106.

Moreover, there is no reason for the skilled person to arrange a storage container for hot or cold water in the trailer according to document

D12 since this trailer has been conceived for travelling to and being used in different farms in which cold and hot water or at least cold water are normally available.

The fact that document D3 discloses a movable milking machine comprising at least one container for cleaning fluid does not help either. A skilled person could of course have provided a cleaning fluid container but - in view of documents D12, D6 and D3 - there is no incentive to do so.

- 5.5 Having regard to the comments above it would not be obvious for a skilled person to arrive at the subject-matter of Claim 1 on the basis of the documents referred to by the respondents during the oral proceedings.
6. The further arguments put forward by the respondents during the written phase of the appeal proceedings were not any longer pursued during the oral proceedings. In any case the board considers these arguments as being less relevant. Moreover, the board considers that the further documents referred by the respondents during the written phase of the appeal proceedings as well during the previous opposition proceedings are not prejudicial for the inventiveness of the claimed subject-matter.
7. Therefore, the patent can be maintained on the basis of the sole request of the appellant.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the First Instance with order to maintain the patent in the following version:

Claims: 1, 2 and 3 as filed during the oral proceedings;

Description: columns 1-4 and 7 as filed during the oral proceedings, columns 5 and 6 as granted;

Drawings: Figures 1-7 as granted.

The Registrar:

The Chairman:

G. Magouliotis

C. Andries