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DECISION
of 14 May 2004

Case Number: T 0468/01 - 3.2.4
Application Number: 93200754.5
Publication Number: 0564023
IPC: A01J 5/04

Language of the proceedings: EN

Title of invention:
A method of and an implement for automatically milking animals

Patentee:
MAASLAND N.V.

Opponents:
DeLaval International AB
Prolion B.V.

Headword:
Sampling/MAASLAND

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (no)"

Decisions cited:
-

Catchword:
-
Case Number: T 0468/01 - 3.2.4

DECISION
of the Technical Board of Appeal 3.2.4
of 14 May 2004

Appellant I: DeLaval International AB
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
14 February 2001 concerning maintenance of
European patent No. 0564023 in amended form.

Composition of the Board:
Chairman: M. Ceyte
Members: P. Petti
H. Preglau
Summary of Facts and Submissions

I. Two oppositions were filed against the European patent No. 564 023. By the interlocutory decision of the opposition division dispatched on 14 February 2001 the patent was maintained on the basis of an amended version submitted by the patent proprietor.

II. On 6 April 2001 opponent I (hereinafter appellant I) lodged an appeal against this decision and simultaneously paid the appeal fee. A statement setting out the grounds of appeal was received on 15 June 2001.

On 13 April 2001 opponent II (hereinafter appellant II) lodged a further appeal against this decision and simultaneously paid the appeal fee. A statement setting out the grounds of appeal was received on 25 June 2001.

III. Oral proceedings before the board were held on 14 May 2004.

The appellants requested that the appealed decision be set aside and the patent be revoked.

The respondent requested that the appealed decision be set aside and the patent be maintained on the basis of an amended claim 1 filed during the oral proceedings (hereinafter referred to as the present claim 1), which reads as follows:

"1. An implement for use in a method of computer-controlled automatically milking animals in a milking parlour, the method comprising successively the steps of: identifying an animal entering a milking parlour;"
using an animal identification system, recalling the instant at which a previous sample was taken of said animal from a computer memory and determining by means of the computer, on the basis of a time table, and said data, whether a sample of milk should be taken of the animal; milking the animal; collecting in a sample-taking device a fraction of the milk obtained from the animal, before the milk is discharged to a storage tank; and storing the data of the sampled animal, together with the instant at which the sample was taken, in the memory of the computer; said implement comprising said animal identification system and said milk sample-taking device (9, 35), wherein the milk sample-taking device (9, 35) is connected to a milk line (13, 17; 27) for discharging milk to said storage tank, the milk sample-taking device (9, 35) comprising a milk collecting element (55) in which a fraction of the milk passing through the milk line (13, 17; 27) can be collected, the computer of the implement determining based on the identity of the animal, the instant at which a previous sample was taken and the time table if a milk sample is to be taken."

Auxiliarily, the appellants requested that the case be remitted to the first instance for further examination on the basis of the present claim 1.

IV. In support of their requests, both appellants submitted that the amendments leading to the present claim 1 contravened the requirement of Article 123(2) EPC and resulted in an extension of the protection conferred (Article 123(3) EPC). This was contested by the respondent.
After deliberation on these issues, the board came to the conclusion that the present claim 1 did not contravene the requirements of Article 123(2) and (3) EPC.

V. The appellants also argued that the subject-matter of the present claim 1 did not involve an inventive step with respect to the prior art known from document EP-A-91 892 (hereinafter referred to as document D12) and to the content of the article by J. Lärn-Nilsson and I. Bjäresten, "Lantbruketshusdjur" (Farm Animals), 1982, pages 157 and 158, for which an English translation had been filed (hereinafter referred to as document D19).

The respondent rejected the arguments brought forward by the appellants and submitted the reasons for which the subject-matter of present claim 1 was considered as implying an inventive step over the combination of documents D12 and D19.

**Reasons for the decision**

1. The appeals are admissible.

2. **Analysis of the claimed subject-matter**

2.1 The present claim 1 recites the following features:

A) The implement is suitable for use in a method of computer-controlled automatically milking animals in a milking parlour,
wherein the method comprises successively the steps of

Aa) identifying an animal entering a milking parlour,

Ab) using the animal identification system, recalling the instant at which a previous sample was taken of said animal from a computer memory and determining by means of the computer, on the basis of a time table, and said data whether a sample of milk should be taken of the animal,

Ac) milking the animal,

Ad) collecting in a sample-taking device a fraction of the milk obtained from the animal, before the milk is discharged to a storage tank,

Ae) storing the data of the sampled animal, together with the instant at which the sample was taken, in the memory of the computer;

B) the implement comprises said animal identification system;

C) the implement comprises said milk sample-taking device (9, 35);

C1) the milk sample-taking device (9, 35) is connected to a milk line (13, 17; 27) for discharging milk to said storage tank;

C11) the milk sample-taking device (9, 35) comprises a milk connecting element (55) in
which a fraction of the milk passing through the milk line (13, 17; 27) can be collected;

D) the computer of the implement determines based on the identity of the animal, the instant at which a previous sample was taken and the time table if a milk sample is to be taken.

2.2 The above mentioned steps Aa to Ae implicitly define the following features of the implement:

A1) The implement is provided with means for computer-controlled automatically milking animals in a milking parlour (see feature A and step Ac).

B1) the animal identification system (referred to in feature B) is suitable for identifying an animal entering the milking parlour (see step Aa),

C11) the milk sample-taking device (referred to in features C, C1 and C1) is suitable for collecting said fraction of the milk passing through the milk line (13, 17; 27) before the milk is discharged to the storage tank (see step Ad),

D1) the computer (referred to in feature D) is suitable for storing the identification data of a sampled animal together with the instant at which the sample was taken (see step Ae),

D2) the computer is suitable for recalling the instant at which the sample was taken from its memory and for determining whether a sample of milk should be
taken on the basis of a time table and by means of the instant at which the previous sample was taken (see step Ab).

2.3 Therefore, the present claim 1 defines an implement provided with features A, A1, B, B1, C, C1, C11, C111, D, D1 and D2.

2.4 Features D and D2 refer to the expression "time table". This expression can also be found in the description of the patent (see column 7, lines 40 to 44) and in that of the application as filed (see page 10, lines 10 to 16). However, neither the patent nor the application as filed contains a specific definition or an example of a "time table". Therefore, it can be assumed that any schedule defining a planned sequence of times represents a time table.

3. The prior art

3.1 Document D12 discloses an implement provided with means for computer-controlled automatically milking animals in a milking parlour. This implement comprises an animal identification system for identifying an animal entering the milking parlour 1, milking means 6, a device 8 for automatically applying the milking means to the udder of the animal and a computer 5 (see claim 1 on page 12) which, using the animal identification system, controls the milking operation.

It is clear from document D12 that the computer of the implement is suitable for recording in its memory the identification data of any milked animal, together with the points of time at which the animals were milked,
and for determining, based on the identity of an animal entering the milking parlour and on the instant of the previous milking of the animal, whether this animal is to be milked again (see page 2, lines 10 to 20).

Moreover, document D12 refers to a milking plant to which the milking means are connected (see page 5, lines 13 to 18). Thus, it can be assumed that this document implicitly discloses a milking plant provided with a milk line for discharging milk to a storage tank.

Furthermore, document D12 refers to "means for sampling test volumes" (i.e. a milk sample-taking device) which "can also be connected to the computer". (see page 3, lines 20 to 24).

3.2 In the section headed "Cow Monitoring" of document D19 (see particularly page 157), it is referred to the sampling of the milk production of each individual cow of a herd and it is stated that the amount of milk is monitored "at sample milkings 11 times per year". Moreover, according to this document, "with hose and pipe plants, measuring instruments are used which extract a proportional part of the milk flow ...".

It is clear from document D19 that the sampling is made manually. The document also refers to a monitoring assistant who "determines on what day the milking test is to be done and, as a rule, visits the farms to take care of the milk samples ...".
4. **Inventive step**

4.1 The parties considered document D12 as representing the primary source of information (i.e. the closest prior art) and referred to document D19 which was considered by the appellants as being an important secondary source of information.

4.2 The appellants, when they argued that the subject-matter of the present claim 1 lacked an inventive step, based their arguments upon the assumption that the claimed subject-matter differs from the prior art disclosed in document D12 only in that the determination of whether the animal identified at the entrance of the milking parlour is to be sampled again is based upon the instant of the previous sampling and a time table.

4.3 The respondent asserted that the subject-matter of the present claim involved an inventive step over documents D12 and D19 essentially by arguing as follows:

(i) The skilled person starting from an implement for automatically milking animals as disclosed in document D12, which was published in 1983, would not take into consideration the prior art known from document D19 which was published in 1976 and refers to a manual milking. Therefore, it would not be logical to combine documents D12 and D19.
(ii) The idea of determining or deciding by means of a computer whether an animal entering the milking parlour is to be sampled is not disclosed either in document D12 or in document D19.

(iii) The claimed subject-matter differs from the prior art disclosed in document D12 not only in that "the determination of whether the animal identified at the entrance of the milking parlour is to be sampled again is based upon the instant of the previous sampling and a time table" (this feature will be referred to hereinafter as the first distinguishing feature) but also in that "the milk sample-taking device is connected to the milk line for discharging milk to the storage tank and comprises a milk connecting element in which a fraction of the milk passing through the milk line can be collected" (this feature will be referred to hereinafter as the second distinguishing feature).

(iv) Document D19 does not suggest the use of a time table as defined in the first distinguishing feature and does not disclose the second distinguishing feature.

4.4 The board cannot accept the arguments of the respondent for the following reasons:

(a) Document D12 concerns an implement in which a computer determines, on the basis of the identification data of an animal entering the milking parlour and the time elapsed since the
previous milking of said animal, whether the animal is to be milked again.

The passage on page 3, lines 20 to 24 of document D12 indicates that a milk sample-taking device can be connected to the computer. In the context of an automatic milking system, this passage implicitly discloses the idea of using the computer to determine whether a sample of milk of the animal entering the milking parlour is to be taken.

(b) The idea of determining (or deciding) by means of the computer whether an animal is to be sampled was already known in 1983 from document D12 in the context of an automatically performed milking. However, this document does not specifically indicate the criteria on the basis of which the above mentioned determination (or decision) was based. Therefore, it would be logical for a skilled person to consider any document indicating a criterion on the basis of which the decision of taking a milk sample is taken, even a document published before the publication date of document D12 and concerning manual sampling. Thus, the skilled person confronted with the problem of defining how to determine when an animal is to be sampled would take into consideration document D19.

(c) Document D19 refers to a milk sampling occurring 11 times per year. Having regard to the comments in section 2.4 above, the indications in document D19, that the sampling occurs 11 times per year and that the day on which the test milking is to be done is determined by the monitoring assistant,
implicitly define that the sampling is decided by an operator on the basis of a time table which includes information concerning the points of time at which the sampling occurs, i.e. which also takes into consideration the instant at which the previous sampling occurred.

(d) Document D19 suggests the possibility of extracting a proportional part of the milk flow by means of a measuring instrument in a hose and pipe plant. This represents an implicit disclosure of a milk sample-taking device connected to a milk line and of a milk collecting element in which a proportional part of the milk flow (i.e. a fraction of the milk passing through the milk line) can be collected.

(e) According to the passage on page 3, lines 20 to 24 of document D12, "means for sampling test volumes for checking with respect to bacterial content, the presence of mastitis and the like, can also be connected to the computer". The skilled person reading this passage is aware that milk obtained from an animal with mastitis has to be separated from the milk obtained from healthy animals. Therefore, this passage has to be understood as defining a milk sample-taking device which is suitable for collecting a fraction of milk passing through the milk line before the milk is discharged to the milk storage tank and, thus, is connected to the milk line.
Having regard to the above comments, the closest prior art is reflected by document D12 which suggests the idea of using a milk sample-taking device connected to the computer in order to determine whether a milk sample is to be taken.

If it assumed that document D12 also discloses the second distinguishing feature as referred to in the above section 4.3(iii), the subject-matter of the present claim 1 would be distinguished from the closest prior art only by the first distinguishing feature as referred to in section 4.3(iii).

The first distinguishing feature results in the practical definition of a criterion for determining when a sample is to be taken. Thus, the objective problem to be solved is to find a practical way to use the computer when milk samples are to be taken.

The skilled person confronted with this problem would consider document D19, which teaches the use of a time table according to the first distinguishing feature as a criterion for determining whether an animal is to be sampled (see the above section 4.4(c). As a result, the skilled person would apply this teaching to the implement known from document D12 and arrive at the subject-matter of the present claim 1 without exercising any inventive skill.

It has to be noted that even if it were to be assumed that document D12 does not disclose the above mentioned second distinguishing feature, the subject-matter of the present claim 1 would not involve an inventive step for the following reasons:
(i) Having regard to the comments in the above sections 3.3 and 4.4(d), document D19 also discloses the second distinguishing feature. Therefore, it would be obvious for the skilled person combining the contents of documents D12 and D19 to arrive at the claimed subject-matter.

(ii) The second distinguishing feature represents the only practical constructive possibility of arranging a milk sample-taking device in an implement for automatically milking animals. The skilled person applying the teaching concerning the time table as disclosed in document D19 to the implement according to the closest prior art would arrive with the help of his specialist knowledge in an obvious way at an implement provided not only with the first distinguishing feature but also with the second one.

Therefore, the subject-matter of the present claim 1 is rendered obvious by the combination of documents D12 and D19 and thus does not involve the inventive step required by Article 56 EPC.

5. Having regard to the above comments, the patent cannot be maintained on the basis of the present claim 1. Therefore, there is no need to examine the auxiliary request of the appellants referred in the above section III, last paragraph.
6. Since the arguments submitted by the appellants with respect to Article 123 EPC (see the above section IV) are not relevant for the findings of the present decision, there is no need to deal with these arguments in the present decision.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar:                The Chairman:

G. Magouliotis                  M. Ceyte