

BESCHWERDEKAMMERN  
DES EUROPÄISCHEN  
PATENTAMTS

BOARDS OF APPEAL OF  
THE EUROPEAN PATENT  
OFFICE

CHAMBRES DE RECOURS  
DE L'OFFICE EUROPEEN  
DES BREVETS

**Internal distribution code:**

- (A)  Publication in OJ  
(B)  To Chairmen and Members  
(C)  To Chairmen

**D E C I S I O N**  
of 25 April 1996

**Case Number:** T 0248/94 - 3.2.4

**Application Number:** 86201254.9

**Publication Number:** 0209205

**IPC:** A01J 5/04

**Language of the proceedings:** EN

**Title of invention:**

An implement for milking animals, such as cows, in a parlour

**Patentee:**

C. van der Lely N.V.

**Opponent:**

Prolion Development B.V.

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 56, 100(c), 123

**Keyword:**

"Amendments to the claims (non-allowable deletion of features)"  
"Inventive step (yes): inventive merits both in the formulation  
of the problem and in the finding of the solution"  
"Problem and solution approach (avoiding hindsight by the  
definition of the problem)"

**Decisions cited:**

T 0181/82, T 0099/85, T 0229/85

**Catchword:**

-



Case Number: T 0248/94 - 3.2.4

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.4  
of 25 April 1996

**Appellant:** C. van der Lely N.V.  
(Proprietor of the patent) Weverskade 10  
P.O. Box 26  
NL-3155 PD Maasland (NL)

**Representative:** Mulder, Herman  
Octrooibureau Van der Lely N.V.  
Weverskade 10  
3155 PD Maasland (NL)

**Respondent:** Prolion Development B.V.  
(Opponent) Kromme Spieringweg 289B  
2141 BS Vijfhuizen (NL)

**Representative:** van Westenbrugge, Andries  
Nederlandsch Octrooibureau  
Scheveningseweg 82  
P.O. Box 29720  
NL-2502 LS The Hague (NL)

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 12 January 1994  
revoking European patent No. 0 209 205 pursuant to  
Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** C. A. J. Andries  
**Members:** P. Petti  
J. P. B. Seitz

### Summary of Facts and Submissions

- I. The European patent No. 209 205, against which an opposition based upon Articles 100(a) and (c) EPC was filed, was revoked by the decision of the opposition division dispatched on 12 January 1994.
- II. On 8 March 1994 the appellant (proprietor of the patent) lodged an appeal against this decision and simultaneously paid the appeal fee. A statement setting out the grounds of appeal was received on 4 May 1994 (letter dated 3 May 1994).
- III. Oral proceedings were held on 25 April 1996.
- IV. The appellant requested that the decision under appeal be set aside and the patent be maintained on the basis of Claims 1 to 4 as filed with the letter dated 3 May 1994 (main request). Subsidiarily the appellant requested the maintenance of the patent on the basis of Claim 1 as filed during the oral proceedings.

The respondent (opponent) requested that the appeal be dismissed and that the decision to revoke the patent be upheld.

- V. The appellant argued that the subject-matter of Claim 1 according to the main request could clearly be derived from the application as filed (Article 100(c) EPC). The respondent contested the arguments of the appellant in this respect.

With respect to the auxiliary request of the appellant the respondent essentially argued that starting from the milking device according to document GB-A-918 766 (D5), which was considered as the closest prior art, the

subject-matter of Claim 1 according to this request did not involve an inventive step having regard to either the prior art disclosed in the document SU-A-820 747 (D2) or the prior art disclosed in the document WO-A-85/2973 (D1). The appellant contested the arguments of the respondent in this respect.

- V. (i) Claim 1 according to the main request of the appellant reads as follows:

"1. A milking implement for animals, such as cows, comprising teat cups (14) which can be attached to the teats (31) of an animal's udder, each of said teat cups (14) being provided with a teat holder (33) encompassing the teat (31) when the latter is present in the teat cup (14) and with a sensor (37) for controlling the position of a teat cup (14) with respect to a teat (31) of the animal, characterized in that each of said sensors (37) is attached to a respective teat holder (33), at a distance spaced from the upper open end thereof to detect whether the teats occupy a correct position in the teat holders."

- (ii) Claim 1 according to the subsidiary request reads as follows:

"1. A milking implement for animals, such as cows, comprising teat cups (14) which can be attached to the teats (31) of an animal's udder, each of said teat cups (14) being provided with a teat holder (33) encompassing the teat (31) when the latter is present in the teat cup (14); means being provided which are able to keep the teat cups (14) attached to said teats for a period of time substantially longer than the milking operation, characterised in that each teat cup (14) is provided with a sensor

for checking, before starting the milking operation, whether the teat is correctly engaged by said teat cup and in that each of said sensors (37) is attached to a respective teat holder (33) at a distance spaced from the upper open end thereof."

### Reasons for the Decision

1. The appeal is admissible.
2. *The main request*
  - 2.1 Claim 1 according to the main request is based on the independent Claim 9 of the original application. However, the first characterising feature of the original Claim 1, namely the feature that "means are available for keeping the teat cups attached to the udder of the animal for an ample period of time" (page 16, lines 4 to 6), has been deleted.
    - 2.1.1 The deleted feature, due to the vague meaning of the expression "for an ample period of time", has to be interpreted as follows.

According to the original description "the milking implement may be permanently connected to the udder" (page 9, lines 35 to 37). Furthermore, according to the original independent Claim 1 the milking implement is provided with means for attaching the milking cluster to the udder "for a period substantially longer than the milking operation" and according to the original independent Claim 7, the milking cluster may remain "uninterruptedly attached to the udder for a longer period of time". It is clear from the whole content of the original application, i.e. description, drawings and

independent claims that this is achieved by **additional attachment means**, namely - as disclosed in the specific example - by means of the straps (13). Moreover, the above mentioned feature is described as permitting the milking of the cow "many times in a 24 hours' period in an efficient manner", i.e. without disconnecting the milking cluster from the cow (see the original description, page 1, lines 22 to 25).

Thus, this feature has to be interpreted as defining "means suitable for keeping the teat cups attached to the udder of the animal for a period of time substantially longer than the milking operation" and, therefore, cannot be compared with the means providing the vacuum in the teat cups.

- 2.1.2 According to the description of the original application (page 4, lines 24 to 28), the object of the invention is to provide a milking implement with a milking cluster "ensuring an uninterrupted and reliable attachment to the udder of the animal". Moreover, all three independent claims (Claims 1, 7 and 9) of the original application relate to a milking implement and contain either the expression "for a period substantially longer ..." or "uninterruptedly attached ... for a longer period of time..." or "for an ample period of time...", which expressions explicitly or implicitly relate to means for keeping the teat cups attached to the udder of the animal (see section 2.1.1 above).

Thus, the original application as a whole unequivocally refers only to a milking implement provided with additional attachment means suitable for keeping the teat cups attached to the udder of the animal for a period of time substantially longer than the milking

operation. Milking implements without such additional attachment means cannot be derived directly and unambiguously from the application as filed.

2.2 The appellant considered the following passages of the description of the application as originally filed as a basis for the deletion of the above mentioned feature:

- (a) "According to another aspect of the invention, means are available for keeping the teat cups attached ... for a longer period of time" (page 1, lines 19 to 22);
- (b) "The installation ... may comprise, according to another aspect of the invention, means to ensure the attachment of the teat cups ... for an ample period of time, one or more sensors being provided ..." (page 3, lines 26 to 34);
- (c) "It is preferable that the animals should occupy their place ... throughout the year and that the udder remain permanently attached to the milking installation" (page 7, lines 31 to 34);
- (d) "... a milking cluster, which may be permanently connected to the udder of the cow" (page 9, lines 36 to 37);
- (e) "Although certain features of the implement .. will be set forth in the following claims as inventive features, it is emphasized that the invention is not necessarily limited to those features and that it includes within its scope each of the parts of the implements ... both individually and in various combinations" (page 14, lines 15 to 23).

With regard to these passages the appellant argued that the permanent attachment of the implement to the udder of the cow was presented as a "preferable feature" (i.e. a feature of facultative character) and that it is not necessary that the implement remains attached for a period of time longer than the milking operation. Furthermore, the appellant asserted that the skilled person would immediately realize that the sensors mounted in the teat cups can also be used in an installation which is not provided with means for keeping the teat cups permanently attached to the teats of the cow.

The Board cannot accept the arguments of the appellant for the following reasons.

The statement (a) forms part of a passage referring to the invention as claimed in Claim 1 of the original application and, therefore, cannot justify in any way the deletion of the feature from Claim 9.

The passage (b) refers to the invention as claimed in Claim 9 and therefore defines the combination of the feature concerning the attachment means with the feature concerning the sensors. On the contrary, this passage indicates the presence of a link between the deleted feature and the remaining features, which enforces the essential character of the deleted feature. The fact that the verb "may be" is used in this passage does not mean that an installation without attachment means is implicitly disclosed.

The passages (c) and (d) relate to the time for which the milking cluster remains attached to the udder of the cow. According to the appellant this period of time is a preferable feature and not a structural limitation. The Board wishes to emphasize that the deleted feature does



not directly define a period of time but the means for keeping the cluster attached to the udder for a period of time. In other words it is not necessary to hold the milking cluster permanently connected to the udder but it is essential that the milking cluster is provided with attachment means which permit it to be permanently connected to the udder.

The passage (e) constitutes a vague statement which cannot define in a clear way any technical teaching.

It may be that a person skilled in the art realizes afterwards that the sensors mounted in the teat cups of the implement according to Claim 1 can be used in other installations. Important is however what has been disclosed at the date at which the application was filed. The applicant has the opportunity and the freedom of presenting the application according to its wishes. However, once an application has been filed, its content is fixed.

According to the Board, in the present case a skilled person can only find in the original disclosure the consistent teaching of a milking implement provided with means for keeping it attached to the udder of the animal for a certain time. An implement without such attachment means cannot be derived directly and unambiguously from the application as originally filed.

2.3 Therefore, the subject-matter of Claim 1 of the main request contravenes Article 100(c) EPC.

Thus, the main request of the appellant has to be rejected.

3. *The subsidiary request (admissibility of the amendments)*

3.1 The above mentioned deleted feature, as defined in section 2.1.1 (last paragraph), has been introduced into Claim 1 according to the subsidiary request.

Moreover following amendments with respect to Claim 1 of the patent as granted have been made:

- (1) The expression "comprising one or more teat cups" has been changed to "comprising teat cups";
- (2) the expression "said teat cups is provided with a sensor" has been changed to "each teat cup is provided with a sensor";
- (3) the expression "sensor for controlling the position of the teat cup ... to detect full insertion of the teat into the teat holder" has been changed to "sensor for checking, before starting the milking operation, whether the teat is correctly engaged with the teat cup".

The amendments according to items (1) and (2), which clearly limit the scope of the claim, have a basis in the granted claim and in the original Claim 9 and in the original drawings.

The amendment according to item (3) has a basis in the description of the original application (page 3, line 35 to page 4, line 1; page 12, lines 10 to 12; and page 13, lines 2 to 4).

The expression used in the present Claim 1 (see item (3) above) has substantially the same meaning as the corresponding expression in the granted claim in so far as a correct position of the teat in the holder is also

a position in which the teat is fully inserted into the teat holder. Thus, the expression in the present Claim 1 and that in the granted Claim 1 has to be considered as being equivalent in scope (Article 123(3) EPC).

- 3.2 Claim 2 as granted differs from the present Claim 2 in that the expression "for controlling the introduction of a vacuum ..." has been changed to "for applying an under pressure ..." .

This amendment has a basis in the description of the original application (page 3, lines 35 to 38).

Since this amendment clearly resulted from the fact that in the Notice of opposition the granted Claim 2 was attacked with respect to Article 100(c) EPC, it complies with Rule 57a EPC.

- 3.3 Claims 3 and 4 correspond to Claims 3 and 4 of the patent as granted.

- 3.4 The amendments of the description consist in its adaptation to the amended claims and in the indication of the prior art (GB-A-918 766).

- 3.5 The Board is satisfied that the amendments according to the subsidiary request of the appellant do not contravene Articles 100(c), 123(2) and (3) EPC. In fact, this has not been disputed.

4. *The prior art*

4.1 The parties essentially based their arguments upon documents D1, D2 and D5.

4.2 Document D1 discloses a milking robot having a milking unit for milking animals comprising teat cups which can be attached to the teats of an animal's udder, each of said teat cups being provided with a teat holder (35) encompassing the teat when the latter is present in the teat cup (see particularly Figure 7).

According to the description of document D1 (page 9, lines 1 to 10) sensors may be provided in the top part of the cup "in order to have check whether the teat is engaged correctly". This document also refers to "magnetically inductive coils in the top part of the cup". However, it cannot be derived from document D1 that the sensors are attached to the teat holder of the teat cup at a distance spaced from the upper open end.

In any case, the above mentioned expression "engaged correctly" refers to the upwardly engaging movement of the milking unit by a robot. In other words, the function of the sensors is to provide information relating to the position of the teats with respect to the teat cups during the movement of application of the milking unit. This can be clearly derived from a passage on page 9 (lines 1 to 7) according to which other means may be provided to give a warning signal if the teat is not correctly engaged, to stop the movement of application of the milking unit and to "cause it to move down again and repeat the upwardly engaging movement".

4.3 Document D2, for which the respondent filed an English translation, discloses an instrument for registering milking process parameters comprising inter alia "a sensor 5 for sensing completion of putting on milking cups". This sensor is "a limit switch mounted on the milking cup to be put on the last". Figure 1 shows in a very diagrammatic manner a vertical elongated element provided with the reference number 11, which is attributed in the description to the teat cups and a small square having a side common to the outside of the elongated element, this small square being connected by a line to a block provided with the reference number 5, which is attributed in the description to the above mentioned sensor.

According to the description (translation, page 3, last paragraph) the milking cups are put on manually by an operator. The function of the sensor is to register the completion of putting on the last milking cup. i.e. the moment of beginning of milking ( $t_1$ ).

No information relating to an incorrect positioning of the teat in the teat cup can be derived from document D2. Moreover, the sensor referred to in document D2 is not described either as being attached to the teat holder of the teat cup or as being positioned at a distance spaced from the upper open end of the teat cup. These features cannot be derived unequivocally from the drawings.

4.4 Document D5 discloses a milking implement for animals, comprising teat cups (TP, Figure 2) which can be attached to the teats of an animal's udder, each of said teat cups being provided with a teat holder (membrane TCL) encompassing the teat when the latter is present in the teat cup; means (straps HS) being provided which are

able to keep the teat cups attached to said teats for a period of time substantially longer than the milking operation (see particularly page 1, lines 65 to 71; Figures 2 and 3).

The teat cups of the implement according to document D5 are also provided with an automatic washing system having a water and cleansing liquid circulation. The liquids are introduced into the top part of the teat cup via the tube (ICT), spray out through a ring of holes (CH) on the teat and the teat holder (membrane (TCL), flow by gravity towards the bottom of the teat cup and pass out by the milk tube (IMT), see particularly page 3, lines 74 to 81.

5. *Novelty (subsidiary request)*

The subject-matter of independent Claim 1 is novel. In fact, novelty has not been disputed.

6. *Inventive step (subsidiary request)*

6.1 The parties and the Board consider document D5 as being the **closest prior art** because it is the only document which concerns a milking implement provided with attachment means allowing the teat cups to be kept attached to the udder of the animal for a period of time including two or more milking operations and which can therefore give rise to problems related with such an attachment.

6.2 The subject-matter of Claim 1 differs from the closest prior art in that

(A) each teat cup is provided with a sensor for checking, before starting the milking operation, whether the teat is correctly engaged by said teat cup

and in that

(B) each of said sensors is attached to a respective teat holder at a distance spaced from the upper open end thereof.

These distinguishing features result in providing the information of whether all teats of the animal are still correctly positioned within the teat cups, i.e. whether the teats are fully inserted into the teat holders.

This information is particularly important when the animal is milked by an implement which may remain attached to the udder of the animal such that further milking operations can be made without disconnecting the implement from the udder of the animal. In such cases, if a further milking operation were to be started while a teat is not correctly engaged by the teat cups, the use of the milking implement will result in the inconveniences that the milking operation is made in an incomplete fashion and/or that the incorrectly positioned teat is damaged. Starting from a milking implement according to the prior art, the problem to be solved therefore is to avoid such inconveniences.

The Board is satisfied that the above mentioned problem is solved by the combination of features specified in Claim 1.

6.2.1 As explained above, when the milking implement according to the closest prior art remains attached to the udder of an animal for a period of time including two or more milking operations, it can happen that the extraction of milk is incomplete and/or one or more teats are damaged. These phenomena can be easily observed when the milking implement is in use. However, in order to find a solution avoiding the occurrence of the observed phenomena, an insight into their cause must be gained. In other words, it must be firstly realized that these phenomena are due to the fact that one or more teats are not correctly engaged by the teat cups of the milking cluster.

During the oral proceedings the Board asked the parties to take a position on whether a skilled person would immediately arrive at this insight. A reasoned answer to this question was given by the appellant who argued that other possible causes can be attributed to these phenomena and asserted that a health disease of the animal, such as the "mastitis", may prevent the milk extraction from a part of the udder and give some teats of the udder a "damaged" aspect.

In the absence of other more convincing arguments contesting this argument of the appellant and having regard to the fact that a disease like mastitis can be generated also by pathogenic agents independently of an incorrect positioning of the teats, the Board arrived at the conclusion that a skilled person would not immediately and unambiguously realize that the above mentioned inconveniences are due to the incorrect position of the teat.

Therefore, the arrival at this insight contributes to give the solution an inventive character.



6.3 Even if it were to be considered that the perception of the problem does not contribute to the inventive merit of the solution, the skilled person would not directly be guided by the available prior art to the solution.

6.3.1 The documents referred to by the respondent in the appeal proceedings (documents D1 and D2, see sections 4.2 and 4.3 above) neither unequivocally disclose the above mentioned distinguishing features (A) and (B) nor point towards the solution of the problem stated above.

In particular, the idea of detecting the correct position of the teats in the teat cups when the teat cups are in a static condition cannot be derived from document D1 which only discloses the use of sensors for detecting the position of the teat cups in a dynamic condition of the teat cups.

Moreover, the sensor of the milking cup according to document D2 is described as being mounted only on one teat cup and as detecting the completion of the application of the last teat cup to the udder of the animal.

Furthermore, the milk extraction with an implement as described in document D1 or D2 is made immediately after the application of the teat cups to the udder of the animal. When these implements are used, the teat cups are applied to the udder either automatically by a robot (document D1) whereby the relative position of the teats with respect to the teat cups is checked by means of sensors or manually by an operator (document D2) who can do it carefully. Then, the milking operation is started whereby the teats are held in the teat cups by means of the vacuum. At the end of the milking operation, the teat cups are disconnected from the udder. Therefore, in an implement as described in document D1 or D2, it is

not crucial to check whether the teat are correctly positioned in the teat cups, because it is very unlikely that a teat will leave its correct position after the correct application of the teat cups to the udder of the animal.

6.3.2 According to the Board, the remaining documents referred to in the opposition proceedings are less relevant than documents D5, D1 and D2.

6.3.3 The change from a correct engagement into an incorrect engagement of the teats with the teat cups of a device according to the closest prior art (document D5) can occur particularly during the time interval between two milking operations, when the implement is already mounted on the udder, due to a relative movement between the animal and the implement. Since the application of this milking implement to the udder of the animal is made manually by an operator, it is very unlikely that an incorrect positioning will occur during the application. Therefore, even if the skilled person were immediately to realize that the observed phenomena (see section 6.2 above) are correlated with the incorrect position of the teats in the teat cup (due to a relative movement between the animal and the implement), he would probably improve the additional attachment means keeping the implement attached to the udder in order to avoid the relative movement between the animal and the implement.

Therefore, the skilled person on the basis of his general knowledge would not inevitably arrive at the subject-matter of Claim 1.

6.4 The respondent argued that the incorrect position of a teat in a teat cup may also occur during the washing of the teats. According to the respondent, when the washing and cleansing liquids are introduced into the teat cup from a milk conduit opening in the bottom of the teat cup - as is the case in the milking implement according to the patent in suit - the teat can be pushed out of the teat holder by these liquids. In this context, the respondent referred to a passage on column 6 (lines 18 to 21) of the patent in suit according to which during cleansing or drying of the teat "a sufficient exceed pressure is brought about in the milk hose". According to the respondent, when a milking implement having not only all the features of the preamble of Claim 1 but also a washing and cleansing system of the type referred to in column 6 of the description of the patent in suit is in use, the skilled person would immediately realize that the phenomena referred to in section 6.2 above (first paragraph) are the result of the incorrect position of a teat in the teat cup due to the fact that the teat is pushed out of the teat cup by the overpressure during washing or cleansing. Once the skilled person has realized this, the problem to be solved would only consist in providing information about the presence of the teats in their respective teat cups. The solution of such a problem would be obvious in light of document D2 or document D1.

The Board cannot accept this argument of the respondent because it is clearly the result of an *a posteriori* analysis. When the "problem and solution approach" is used for assessing obviousness, any hindsight has to be avoided, especially in the definition of the problem.

The problem as formulated by the respondent relates to a phenomenon which - as pointed out by the respondent itself - cannot occur in the milking implement according to the closest prior art (document D1), because in this implement the washing and cleansing liquids are introduced by gravity into the teat cup from the top of it, such that a teat cannot be pushed out by these liquids. Therefore, this problem has not been formulated from the viewpoint of the closest prior art but from that of the invention (see T 181/82, OJ EPO 1984, 401).

Moreover, if the technical problem to be solved were to be formulated as being to provide information as to whether the teats are present in the teat cups, it would partially anticipate the solution (see T 99/85, OJ EPO 1987, 413 and T 229/85, OJ 1987, 237).

- 6.5 Therefore, having regard to the cited prior art, the subject-matter of Claim 1 would not be obvious for a skilled person. The invention defined in Claim 1 is inventive both by the arrival at an insight into the cause of the observed phenomena and by finding the solution which prevents the occurrence of these phenomena.

Therefore, the subject-matter of Claim 1 meets the requirements of Article 56 EPC. Dependent Claims 2 to 4 concern particular embodiments of the invention defined in Claim 1.

7. The patent can therefore be maintained according to the subsidiary request of the appellant.

**Order**

**For these reasons it is decided that:**

- The decision under appeal is set aside.
- The case is remitted to the first instance with the order to maintain the patent in the following version:

Claim: 1 as filed during the oral proceedings  
(Subsidiary request)

Claims: 2 to 4 as filed with letter dated  
4 January 1996

Description: columns 1 and 2 as filed during the oral  
proceedings (Subsidiary request)  
columns 3 to 6 as granted

Drawings: 1 to 9 as granted.

The Registrar:



N. Maslin

The Chairman:



C. Andries



