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**D E C I S I O N**  
of 31 July 2003

**Case Number:** T 0683/00 - 3.2.4

**Application Number:** 92203011.9

**Publication Number:** 0536836

**IPC:** A01J 7/00

**Language of the proceedings:** EN

**Title of invention:**

A method of cleaning teat cups and an implement for milking animals applying said method

**Patentee:**

MAASLAND N.V.

**Opponents:**

DeLaval International AB  
PROLION B.V.

**Headword:**

Cleaning/MAASLAND

**Relevant legal provisions:**

EPC Art. 100(a), 100(c), 123

**Keyword:**

"Extension of protection (yes; main request)"  
"Added subject-matter (no; first auxiliary request)"  
"Novelty (yes)"  
"Inventive step (yes)"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0683/00 - 3.2.4

**D E C I S I O N**  
**of the Technical Board of Appeal 3.2.4**  
**of 31 July 2003**

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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
2 May 2000 concerning maintenance of European  
patent No. 0536836 in amended form.

**Composition of the Board:**

**Chairman:** C. A. J. Andries  
**Members:** P. Petti  
M. K. S. Aúz Castro

## Summary of Facts and Submissions

I. The European patent No. 536 836, against which two oppositions (based upon Articles 100(a) and (c) EPC) were filed, was maintained in an amended version by the decision of the opposition division dispatched on 2 May 2000.

II. On 22 June 2000 opponent II (hereinafter appellant II) lodged an appeal against this decision and simultaneously paid the appeal fee. A statement setting out the grounds of appeal was received on 8 September 2000.

On 11 July 2000 a further appeal was lodged by opponent I (hereinafter appellant I) who simultaneously paid the appeal fee. The statement setting out the grounds of this further appeal was received on 30 August 2000.

III. Oral proceedings were held on 31 July 2003.

IV. The appellants requested that the decision under appeal be set aside and the patent be revoked.

V. The proprietor of the patent (hereinafter respondent) requested that the decision under appeal be set aside and the patent be maintained:

as the main request, on the basis of the independent method claim 1 filed on 26 June 2003 and of the independent apparatus claim 2 as well as dependent claims 3 to 11 of the patent as granted,

as a first auxiliary request, on the basis of the independent apparatus claim 1 and dependent claims 2 to 10 as filed during the oral proceedings on 31 July 2003, of columns 1 and 2 of the description as filed during the oral proceedings on 31 July 2003 and columns 3 to 14 of the description of the patent as granted and of Figures 1 to 17 of the patent as granted,

as a second auxiliary request, on the basis of a single method claim filed during the oral proceedings on 31 July 2003.

Moreover, the respondent declared that he was prepared to delete the amendments made with respect to claim 1 of the patent as granted which (amendments) had led to Claim 1 of both the main and the second auxiliary request.

VI. The independent method claim 1 of the main request of the respondent reads as follows:

"1. A method of automatically cleaning teat cups in an implement for milking animals, such as cows, wherein, after milking of an animal, the teat cups are removed from the animal's teats and cleaned automatically by means of a cleaning device, comprising spray nozzles for spraying a rinsing liquid, whereby the teat cups are moved to under the spray nozzles and moved upwardly until a spray nozzle engages the aperture at the upper side of each teat cup in such a way that a first flow-out aperture of said nozzle will be in a position below the upper edge of the teat cup characterized

in that in said position a second flow-out aperture of said nozzle will be almost directly above the upper edge of the teat cup, whereafter via separate channels a first flow of rinsing liquid is introduced into the teat cups, whilst a second flow of rinsing liquid is passed over the upper side of the teat cups, whereby the first and second flows of rinsing liquids, during cleaning of the teat cups, are not brought in contact with each other."

The independent apparatus claim 1 of the first auxiliary request of the respondent reads as follows:

"1. An implement for milking animals comprising a cleaning device (57; 68) for automatically cleaning teat cups (53; 54) including a rinsing liquid circuit with spray nozzles (58), around each of which the end of a teat cup (53, 54) incorporated in the rinsing liquid circuit can be fitted, each spray nozzle (58) having a first flow-out aperture (61), via which rinsing liquid applied to the spray nozzle (58) can be passed into the teat cup (53; 54) connected to the spray nozzle (58), characterized in that each nozzle furthermore comprises a second flow-out aperture (62) spaced from the first flow-out aperture along the spray nozzle, through which rinsing liquid can be passed over the upper edge of a teat cup (53; 54) connected thereto."

VII. With respect to claim 1 of the main request, both appellants essentially argued that this claim had been amended with respect to claim 1 of the patent as

granted in such a way as to extend the conferred protection (Article 123(3) EPC), in so far as the terms "a first rinsing liquid", "a second rinsing liquid" and "first and second rinsing liquids" in claim 1 of the patent as granted were replaced by the terms "a first flow of rinsing liquid", "a second flow of rinsing liquid" and "first and second flows of rinsing liquid" in the amended claim.

Appellant I also referred to the last feature in claim 1 of the main request, ie to the feature that "the first and second flows of rinsing liquid, during cleaning of the teat cups, are not brought into contact with each other", and argued that the application as filed did not disclose a method of cleaning the teat cups of a milking implement in which any contact between the rinsing liquid flowing out from the first aperture of the nozzle and the rinsing liquid flowing out from the second aperture of the nozzle is excluded.

With respect to claim 1 of the first auxiliary request, appellant I essentially argued that

- the ground for opposition according to Article 100(c) EPC prejudiced the maintenance of the patent on the basis of this claim,
- the subject-matter of this claim lacked novelty and inventive step with regard to documents US-A-3 629 005 (D9) and GB-A-628 761 (D7),
- the subject-matter of this claim did not involve an inventive step with regard to documents EP-A-320 496 (D4) and D7.

With respect to claim 1 of the first auxiliary request, appellant II essentially argued that the subject-matter of this claim did not involve an inventive step, neither with regard to document AU-B-21401/83 (D1) nor with regard to document AU-B-15912/83 (D8).

The respondent contested the arguments of the appellants. With respect to the last feature in claim 1 of the main request, the respondent essentially argued that Figure 4 of the application as filed clearly shows a nozzle engaging the end of a teat cup in such a way that the liquid flowing from the upper aperture and the liquid flowing from the lower aperture cannot come into contact with each other during cleaning of the teat cups.

### **Reasons for the decision**

1. The appeals are admissible.
2. *The independent claims of the patent as granted*
  - 2.1 The independent claim 1 of the patent as granted is directed to "a method of automatically cleaning teat cups in an implement for milking animals, such as cows" and specifies the following features:

A<sup>PAG</sup>)            after milking of an animal, the teat cups  
                         are removed from the animal's teats,

- B<sup>PAG</sup>) after milking of an animal, the teat cups are cleaned automatically by means of a cleaning device;
- B1<sup>PAG</sup>) the cleaning device comprises spray nozzles for spraying a rinsing liquid,
- B11<sup>PAG</sup>) the teat cups are moved to under the spray nozzles,
- B12<sup>PAG</sup>) the teat cups are moved upwardly until a spray nozzle engages the aperture at the upper side of each teat cup in such a way that a first flow-out aperture of said nozzle will be in a position below the upper edge of the teat cup,
- B13<sup>PAG</sup>) in said position a second flow-out aperture of said nozzle will be above the upper edge of the teat cup,
- B14<sup>PAG</sup>) whereafter via separate channels a first rinsing liquid is introduced into the teat cups, whilst a second rinsing liquid is passed over the upper side of a teat cup,
- B141<sup>PAG</sup>) whereby the first and second rinsing liquids, during cleaning of the teat cups, are not brought into contact with each other.

2.1.1.1 Features B12<sup>PAG</sup> and B13<sup>PAG</sup> refer to a first flow-out aperture and a second flow-out aperture while features B14<sup>PAG</sup> and B141<sup>PAG</sup> refer to a first rinsing liquid and a



second rinsing liquid. It is clear that these features have to be read in conjunction with each other. In other words, it is clear that the first rinsing liquid relates to the first flow-out aperture and the second rinsing liquid relates to the second flow-out aperture of the nozzle.

- 2.1.2 According to feature B12<sup>PAG</sup>, when a spraying nozzle "engages" the aperture at the upper side of the corresponding teat cup the first aperture of the nozzle is positioned below the upper edge of the corresponding teat cup. Moreover, according to feature B13<sup>PAG</sup>, in this "engagement" position the second aperture of the nozzle is positioned above the upper edge of the teat cup.

According to the description of the patent (column 1, lines 35 to 40 ), it is possible to rinse the exterior of the teat cups independently of the cleaning operation of the interior of the teat cups and the milking lines connected thereto.

Furthermore, it can be derived from Figure 4 of the patent, which is a cross-sectional view of a spraying nozzle connected to a teat cup, that there is contact between the spraying nozzle and the upper side of the teat cup connected to the spraying nozzle. It can also be derived from Figure 4 that the contact between the upper side of the teat cup and the spraying nozzle provides a separation between the first aperture and the second aperture so that the rinsing of the exterior of the teat cup by means of the liquid flowing from the second aperture 62 can be effected independently of the rinsing of the interior which is effected by means of the liquid flowing from the first aperture 61.

Thus, the engagement referred to in features B12<sup>PAG</sup> and B13<sup>PAG</sup> implies a separation between the flow-out apertures 61 and 62.

- 2.1.3 According to feature B14<sup>PAG</sup>, a **first rinsing liquid** is introduced into the teat cups, whilst a **second rinsing liquid** is passed over the upper side of the teat cups.

It is clear from the description and the drawings of the patent (column 8, lines 25 to 51; Figures 3 and 4) that the first flow-out apertures 61 of each nozzle are connected via a (first) duct 59 to a rinsing liquid supply line 63, while the supply lines 63 (of all nozzles) are connected via a pump to a rinsing liquid reservoir, and that the second flow-out aperture 62 of each nozzle is connected via a (second) duct 60 to a pipe section 64, while the pipe sections 64 (of all nozzles) are connected via a distributor element 65 to a rinsing liquid supply line 66. Furthermore, according to the description (see particularly column 9, lines 29 to 37), "it is of importance that the rinsing liquid supply line 66 is not connected to the rinsing liquid reservoir ...", this (second) liquid supply line 66 being connected to a water tap either directly or indirectly via an element in which a special cleaning agent or a disinfectant can be added.

Thus, the first and second rinsing liquids referred to in claim 1 of the "PAG", having regard to the description and the drawings of the patent, have to be construed as being two different liquids each having its own source.

2.1.4 According to feature B141<sup>PAG</sup>, the first and second rinsing **liquids**, during cleaning of the teat cups, are not brought into contact with each other. Thus, according to this feature, during cleaning of the teat cups, any contact between the two liquids is excluded. This would imply that in the engagement position of the nozzle (as referred to in features B12<sup>PAG</sup> and B13<sup>PAG</sup>) there is a tight sealing between the upper side of the teat cup and the nozzle.

2.2 Claim 2 of the patent as granted, which is identical with claim 1 of the first auxiliary request, is directed to "an implement for milking animals" and specifies the following features:

B'<sup>PAG</sup>) the implement comprises a cleaning device (57, 58) for automatically cleaning the teat cups (53, 54),

B'1<sup>PAG</sup>) the cleaning device includes an rinsing liquid circuit with spraying nozzles (58),

B'11<sup>PAG</sup>) around each of the spraying nozzles the end of a teat cup incorporated in the rinsing circuit can be fitted,

B'12<sup>PAG</sup>) each spray nozzle has a first flow-out aperture (61), via which rinsing liquid applied to the spray nozzle can be passed into the teat cup connected to the spray nozzle,

B'13<sup>PAG</sup>) each spray nozzle comprises a second flow-out aperture (62), through which rinsing liquid can be passed over the upper edge of a teat cup connected to the spray nozzle,

B'14<sup>PAG</sup>) the second flow-out aperture is spaced from the first flow-out aperture along the spray nozzle.

2.2.1 Feature B'<sup>PAG</sup> indicates the purpose of the cleaning device by defining it as being suitable for **automatically** cleaning the teat cups, while the remaining features of claim 1 define structurally and functionally the cleaning device with respect to its capabilities of incorporating the teat cups (feature B'11<sup>PAG</sup>) and of performing the rinsing operation (feature B'1<sup>PAG</sup> and B'12<sup>PAG</sup> to B'14<sup>PAG</sup>). Thus, it has to be understood that the term "automatically" refers not only to the capability of performing the rinsing operation of the teat cup but also to the capability of incorporating them into the rinsing circuit.

This interpretation is consistent with the description of the patent (column 8, lines 52 to 57) according to which the teat cups are connected to the relevant spraying nozzles of the cleaning device by means of the robot arm carrying the teat cups.

2.2.2 According to feature B'11<sup>PAG</sup>, the end of a teat cup incorporated in the rinsing circuit can be fitted around the relevant spraying nozzles. Thus, this feature implicitly defines the shape of the spraying nozzle in so far as it has to be of a shape such that the end of a teat cup can be fitted around it. The term

"fit" has to be considered as corresponding to the term "engage" in claim 1 (see section 2.1.2 above).

2.2.3 Feature B'13<sup>PAG</sup> refers to the "upper edge of a teat cup". According to the description and the drawings of the patent (Figure 4; column 9, lines 8 to 12), the upper edge of the teat cup is that portion of the teat cup in which the upper aperture is provided. In other words, the upper edge is a narrow and slightly resilient portion adjacent to the border line defining the upper aperture of the teat cup. This portion, which in the description of the patent is also defined as the upper side of the teat cup, surrounds the nozzle during cleaning of the teat cup so as to provide separation between the first flow-out aperture and the second flow-out aperture.

This interpretation is consistent with the passage on column 9, lines 47 to 53 of the description of the patent as granted, according to which the liquid can be forced between the lower edge of the second flow-out aperture 62 and the slightly resilient **upper edge** of the teat cup and be sprayed in a lateral direction.

It is also clear that this upper edge is an external portion of the teat cup. This interpretation is consistent with the portion of the description of the patent (column 1, lines 35 to 40) which defines the problem to be solved as making it possible to rinse the exterior of the teat cups independently of the interior of them.

3. *Article 123 EPC with respect to claim 1 of the main request*

3.1 Claim 1 of the main request differs from claim 1 of the patent as granted *inter alia* in that features B14<sup>PAG</sup> and B141<sup>PAG</sup> have been replaced by the following features:

B14)           whereafter via separate channels a first flow of rinsing liquid is introduced into the teat cups, whilst a second flow of rinsing liquid is passed over the upper side of a teat cup,

B141)          whereby the first and second flows of rinsing liquid, during cleaning of the teat cups, are not brought into contact with each other.

Due to the terms "**a first flow** of rinsing liquid", "**a second flow** of rinsing liquid" and "first and second **flows** of rinsing liquid", claim 1 also covers a method in which the same liquid, ie a liquid coming from a common source, flows from both apertures of the spraying nozzle. Having regard to the comments in section 2.1.3 above, this amendment extends the protection conferred with respect to that of claim 1 of the patent as granted and thus contravenes Article 123(3) EPC.

Therefore, the main request of the respondent has to be rejected.

3.2 During the oral proceedings, the respondent declared that he was prepared to delete the amendments to claim 1 of the patent as granted which had been made to arrive at claim 1 of the main request, if the board considered it as being appropriate (see section V above, last sentence).

This proposal of the respondent would lead to a request of maintaining the patent on the basis of claim 1 of the patent as granted, ie to a claim specifying *inter alia* feature B141<sup>PAG</sup> which had been objected to under Article 100(c) EPC during the first instance opposition proceedings.

Having regard to the comments in section 2.1.4 above, feature B141<sup>PAG</sup> implies that the spraying nozzle engages the aperture at the upper side of each teat cup so tightly that any contact between the first liquid (ie the liquid flowing from the first flow-out aperture) and the second liquid (ie the liquid flowing from the second flow-out aperture) is excluded.

3.2.1 The respondent referred to Figure 4 of the application as filed as clearly showing a spraying nozzle engaging the aperture at the upper side of the teat cup in such a way that the first flow-out aperture 61 and the second flow-out aperture 62 are separated by the upper edge of the teat cup and argued that feature B141<sup>PAG</sup> can clearly be derived from this Figure 4.

In this respect appellant I referred to the passage bridging pages 13 and 14 of the description of the application as filed and argued essentially as follows:

- (i) According to this passage, when the teat cups are connected to the spraying nozzles (as shown in Figure 4) and vacuum is produced, the teat cups are lifted slightly upwardly so that the second flow-out aperture 62 in each nozzle is closed. Furthermore, according to this passage, when the rinsing liquid is supplied at an increased pressure through the duct leading to the second flow-out aperture 62, the liquid will be forced between the lower edge of the second flow-out aperture 62 and the **slightly resilient** upper edge of the teat cup.
  
- (ii) This passage refers to the upper edge of the teat cup, ie the edge ensuring the separation between the first and the second flow-out apertures of the nozzle, as being "slightly resilient" and indicates that the second rinsing liquid - due to its pressure - can shift the slightly resilient upper edge of the teat cup downwardly.
  
- (iii) Having regard to this passage, it is possible that the second liquid, due to its increased pressure, bends the upper edge so as to penetrate into the teat cup and comes into contact with the first liquid during cleaning of the teat cups.

The board wishes to note that neither the claims nor the description of the application as filed explicitly refer to feature B141<sup>PAG</sup>. It is clear from the description and the drawings (in particular from Figure 4) of the application as filed that the first and the second flow-out apertures of each nozzle, when the nozzle is connected to the teat cup, are separated



by the upper edge of the teat cup which is in contact with the nozzle. However, the description of the application as filed does not contain any unequivocal indication that the contact of the upper edge of the teat cup ensures a tight sealing which excludes any contact between the liquids.

Furthermore, the board finds the above mentioned arguments of appellant I as being credible. Indeed, a person skilled in the art would understand from the description of the application as filed that the slightly resilient upper edge - even if it ensures the separation between the two flow-out apertures - could allow, depending on the resiliency involved on the one hand and the liquid pressure on the other hand, that a small amount of liquid (especially when the rinsing liquid starts to flow from the second aperture) is passed (in an axial direction) into the teat cup.

3.2.2 Having regard to these comments, the board found that a further amendment to claim 1 in order to replace features B14 and B141 by feature B14<sup>PAG</sup> and B141<sup>PAG</sup> would still have led to a claim whose subject-matter extends beyond the content of the application as filed and which would have contravened Article 100(c) EPC.

4. *Articles 100(c) and 123 EPC with respect to the first auxiliary request*

4.1 Claim 1 of the first auxiliary request is identical with claim 2 of the patent as granted. This claim was objected to under Article 100(c) EPC by appellant I who essentially argued as follows:

(i) The subject-matter of claim 1 of this request can be derived from the independent claim 6 and from the dependent claims 7 and 8 of the application as filed and differs from the subject-matter defined by these claims essentially in that

(a) the terms "cleaning device for **automatically** cleaning the teat cups" (see feature B'<sup>PAG</sup> in section 2.2. above; emphasis added) have replaced the terms "cleaning device for teat cups" in claim 6 of the application as filed,

(b) the terms "over **the upper edge** of a teat cup" (see feature B'13<sup>PAG</sup> in section 2.2. above; emphasis added) have replaced the terms "over the teat cups" in claim 7 of the Application as filed,

(c) feature B'14<sup>PAG</sup> has been added.

(ii) None of these features which further specify the subject-matter of claim 1 of the first auxiliary request with respect to that defined by claims 6 to 8 of the application as filed has a basis in the application as filed. In particular, feature B'14<sup>PAG</sup> constitutes an intermediate generalisation of the specific features disclosed on page 13, lines 33 to 35 of the application as filed according to which the spacing between the apertures is "relatively small ... e.g. in the range of from 5 to 10 mms", without there being a basis for this intermediate generalisation.

4.1.1 The board cannot accept these arguments of appellant I for the following reasons:

- With respect to item 4.1.i.a, it has to be noted that the independent apparatus claim 6 of the application as filed refers to the method claim 1 which specifies the feature that the teat cups are "cleaned automatically by means of a cleaning device". Therefore, feature B'<sup>PAG</sup> can be clearly derived from claim 1 of the application as filed.
  
- The upper edge of the teat cups is an external portion of the teat cup (see section 2.2.3 above). Thus, claim 1 of the first auxiliary request defines the passage of the rinsing liquid flowing from the second flow-out aperture more specifically than claims 6 to 8 of the application as filed. A specific reference to the upper edge can be found in the passage of the description of the application as filed which bridges pages 13 and 14 (from page 13, line 37 to page 14, line 4) which constitutes thus a basis for feature B'13<sup>PAG</sup>.
  
- According to features B'12<sup>PAG</sup> and B'13<sup>PAG</sup> in claim 1 of the first auxiliary request, each spraying nozzle is provided with two flow-out apertures, wherein the liquid flowing from the first aperture passes "into the teat cup" for rinsing the interior of the teat cup and the liquid flowing from the second aperture passes "over the upper edge" for rinsing the exterior of the teat cup. Since the upper edge of the teat cup ensures the separation between the two flow-out apertures (see section 2.2.3 above), features B'12<sup>PAG</sup> and B'13<sup>PAG</sup>

implicitly define a spacing between the flow-out apertures as explicitly indicated by feature B'14<sup>PAG</sup>.

Furthermore, feature B'14<sup>PAG</sup> can be clearly derived from the passage bridging pages 3 and 4 of the description of the application as filed (from page 3, line 31 to page 4, line 3) according to which the first flow-out aperture is arranged at a different height in the spraying nozzle with respect to the second flow-out aperture. The sentence following this passage (page 4, lines 3 to 5) refers to "**the** spacing" (and not to **a** spacing) in a concrete embodiment and indicates that it can be of approximately 5 to 10 mms. Thus, this passage represents an intermediate generalisation of the specific features disclosed on page 13, lines 33 to 35 of the application as filed and constitutes a basis for feature B'14<sup>PAG</sup>.

- 4.1.2 Having regard to the above comments, the objections raised by appellant I under Article 100(c) EPC do not prejudice the maintenance of the patent on the basis of claim 1 of the first auxiliary request.
  
- 4.2 The subject-matter of dependent claims 2 to 10 of the first auxiliary request is identical with that of claims 3 to 11 of the patent as granted. The amendments to these claims only concern the renumbering of the references to the preceding claims.

The amendments to the description concern its adaptation to the amended claims, ie the suppression of the parts relating to the method claim 1 of the patent as granted.

The amendments do not contravene Article 123 EPC.

5. *The prior art referred to by the parties*

5.1 Document D9 (see particularly Figures 2 and 3) discloses an implement for milking animals having the following features:

- the implement comprises a cleaning device for cleaning the teat cups 107-110,
- the cleaning device includes a rinsing liquid circuit provided with four teat cup rinsing units, each teat cup rinsing unit comprising a discharge conduit 89 associated with an upwardly projecting guide cup 97 and provided with a spraying nozzle 94,
- each teat cup rinsing unit is such that a teat cup 107 can be held with the aperture 119 at its "upper" end facing downwardly so that the milking chamber 118 of the teat cup 107 surrounds the discharge conduit 89 and the spraying nozzle 94 is positioned within the milking chamber 118 of the teat cup 107,
- each spraying nozzle 94 has a first flow-out aperture 127 and a plurality of second flow-out apertures 128, via which apertures 127 and 128

rinsing liquid applied to the discharge conduit 89 can be passed into the teat cup positioned in the teat cup rinsing unit,

- the first aperture 127 is spaced from the second apertures 128 along the spraying nozzle 94.

Document D9 concerns the cleaning of the interior of the teat cup (see column 2, lines 8 to 11) and does not indicate any measure for cleaning the exterior of the teat cup.

5.2 Document D7 (see particularly Figure 1) discloses an implement for milking animals having the following features:

- the implement comprises a cleaning device for cleaning the teat cups,
- the cleaning device includes a rinsing liquid circuit with spraying tubes 14 rotating around an axis,
- each teat cup can be placed on a spraying tube 14 so as to be incorporated in the rinsing circuit,
- each spraying tube 14 has a plurality of apertures, via which rinsing liquid applied to the spraying tube 14 can be passed into the teat cup placed on the spraying tube 14,
- the apertures are spaced from each other along the spraying tube 14,

- the rinsing liquid circuit is also provided with stationary spraying tubes 21 through which the rinsing liquid can be sprayed over the teat cups (externally) when they are placed on the spraying tubes 14.

Thus, document D7 concerns a device suitable for cleaning at the same time the interior of the teat cups (by means of the spraying tubes 14) and their exterior (by means of stationary spraying tubes 21) with the same liquid. However, this document does not suggest the possibility of rinsing the exterior of the teat cups independently of the cleaning operation of the interior.

- 5.3 Document D4 discloses (see column 8, lines 11 to 23; Figure 8) an implement for milking animals comprising a cleaning device 75 for automatically cleaning the teat cups 23, the cleaning device including an rinsing liquid circuit with spraying nozzles.

It has to be understood from document D4 that the spraying nozzles direct the rinsing liquid "in the teat cups" (see column 8, line 18). This document does not suggest the possibility of rinsing the exterior of the teat cups independently of the interior.

- 5.4 Document D1 (see particularly Figures 2 and 3) discloses an implement for milking animals having the following features:

- the implement comprises a cleaning device 10 for automatically cleaning the teat cups,

- the cleaning device 10 includes a rinsing liquid circuit with first spraying nozzles (teat cup attachments 18) and second spraying nozzles 26,
- around each of the first spraying nozzles 18 the end of a teat cup incorporated in the rinsing circuit can be fitted,
- each of the first spraying nozzles 18 has first flow-out apertures (outlets), via which rinsing liquid supplied to the first spraying nozzles from a chamber 29 provided within the cleaning device 10 can be passed into the teat cups connected to the corresponding first spraying nozzles 18,
- each of the second spraying nozzles 26 has a second flow-out aperture (outlet 28), through which rinsing liquid can be directed toward the teat cups.

According to the passage on page 8, lines 4 to 14, the same liquid flowing through the teat cups (ie through their interior) is directed toward their exterior. Thus, this document does not suggest the possibility of rinsing the exterior of the teat cups independently of their interior.

5.5 Document D8 refers to two different embodiments.

The first embodiment, which is described referring to Figure 3, concerns an implement for milking animals comprising a cleaning device for automatically cleaning the teat cups 10, including a rinsing liquid circuit with spraying nozzles 30, around each of which the end



of a teat cup incorporated in the rinsing circuit can be fitted, each spraying nozzle 30 having a flow-out aperture 32, via which rinsing liquid applied to the spraying nozzle can be passed into the teat cup connected to the spraying nozzle, wherein this flow-out aperture 32 is positioned below the upper edge of the teat cup. Thus, the cleaning device according to the first embodiment is suitable for cleaning only the interior of the teat cups.

The second embodiment, which is described referring to Figure 4, concerns an implement for milking animals comprising a cleaning device for automatically cleaning the teat cups 10, including a rinsing liquid circuit with spraying nozzles 40, around each of which the end of a teat cup incorporated in the rinsing circuit can be fitted, each spraying nozzle 40 having a flow-out aperture 43, via which rinsing liquid applied to the spraying nozzle can be passed into a washing chamber 49 (defined by the upper edge of the teat engaged with the nozzle 30, a portion of the nozzle 40 and a tubular skirt 48), wherein the flow-out aperture 43 is positioned above the upper edge of the teat cup. The nozzle is provided with a protrusion 51 which contributes to form a passage between the washing chamber 49 and the interior of the teat cup engaged with the nozzle such that the rinsing liquid can flow from the washing chamber 49 into the teat cup 10. In the cleaning device according to this second embodiment, the same rinsing liquid flowing into the washing chamber and from there into the teat cup allows the cleaning of both the external upper edge and the interior of the teat cup. However, in this cleaning device, it is not possible to rinse the external edge

of the teat cups independently of the cleaning operation of their interior.

6. *Novelty (claim 1 of the first auxiliary request)*

6.1 The subject-matter of claim 1 is novel with respect to the prior art cited by the parties.

6.2 During the oral proceedings appellant I alleged that the content of document D9 deprived the subject-matter of claim 1 of novelty. In this respect appellant I interpreted document D9 as relating to a device for automatically cleaning the teat cups. Furthermore, appellant I also attributed features B'11<sup>PAG</sup> and B'13<sup>PAG</sup> to the device disclosed in document D9 by arguing that in Figure 3 of this document the liquid is represented as passing over the "upper" edge of the teat cup (feature B'13<sup>PAG</sup>) and that the operation of this cleaning device implies that the end of a teat cup fits around the nozzle.

The board cannot accept this interpretation of document D9 for the following reasons:

- (i) According to the description of document D9 (column 4, lines 55 to 60), the milking unit comprising four teat cups **is held by the operator** so that the milk lines and the vacuum lines of the teat cups **dangle** the teat cups with their apertures facing downwardly. In other words, it has to be understood from this passage that the incorporation of teat cups into the cleaning device is not performed automatically. Moreover, it can be derived from this passage in conjunction

with Figure 4 that the teat cups hang loosely so that they are able to slightly swing and so that there is a gap between the upper (outer) edge of each teat cup and the bottom wall 125 of the corresponding guide cup 97. Therefore, document D9 does not disclose features B'<sup>PAG</sup> and B'11<sup>PAG</sup>.

- (ii) According to document D9 (column 4, lines 69 to 75; Figure 3) the sanitizing liquid 120 sprayed by the nozzle 94 flushes the milking chamber 118, whereafter "spent sanitizing and mixed milk solution 122" drains from the guide cups 97 through drain apertures 126. Figure 3 diagrammatically shows the solution 122 flowing from the milking chamber 118 of the teat cup through an aperture between the discharge conduit 89 and the aperture at the end of the teat cup into the gap between the upper (outer) edge of each teat cup and the bottom wall 125 of the guide cup 97, whereafter the solution 122 drains through the drain opening 126 in the bottom wall 125 of the guide cup 97. Therefore, document D9 does not disclose a cleaning device in which the rinsing liquid can pass over the upper edge of a teat cup connected to the spraying nozzle in order to clean the exterior of teat cup, as defined by feature B'13<sup>PAG</sup>.

- 6.3 During the written phase of the proceedings (see letter dated 30 August 2000), appellant I also argued that the subject-matter of claim 1 is not novel with regard to document D7. In this respect, appellant I considered the spraying tubes 14 of document D7 as being spraying nozzles around which the end of a teat cup incorporated

in the rinsing circuit can be fitted. In other words, appellant I assumed that the reference to the teat cups in feature B'11<sup>PAG</sup> did not define a structural feature of the implement defined by claim 1 and attributed feature B'11<sup>PAG</sup> to the implement disclosed in document D7.

The board cannot accept this argument for the following reasons:

- (i) The relationship between the spraying nozzle and the teat cup as indicated in feature B'11<sup>PAG</sup> defines in a functional way the spraying nozzle in so far as its shape has to be such that **the end** of a teat cup incorporated in the rinsing circuit can be **fitted** around the spraying nozzle (see section 2.2.2 above).
- (ii) It cannot be derived from document D7 that the spraying tubes 14 have a shape such that the end of the teat cup can be fitted around the tube. Thus, the cleaning device disclosed in document D7 does not disclose feature B'11<sup>PAG</sup>.

Moreover, it has to be noted that according to document D7 (page 2, lines 71 to 73) the teat cups to be cleaned are placed on the spraying tubes by an operator. Thus, having regard to the comments in section 2.2.1 above, this document does not concern a cleaning device for **automatically** cleaning the teat cups.

7. *Inventive step (claim 1 of the first auxiliary request)*

7.1 None of the documents referred to by the appellants discloses a cleaning device in which for each teat cup there is a spraying nozzle provided with a first flow-out aperture spraying the rinsing liquid for cleaning the interior of the teat cup and a second flow-out aperture spraying a rinsing liquid for cleaning its exterior as implicitly defined by features B'12<sup>PAG</sup>, B'13<sup>PAG</sup> and B'14<sup>PAG</sup>.

These features of claim 1 make it possible to rinse with a spraying nozzle the exterior of the teat cup connected thereto independently of the cleaning operation of the interior and of the milking lines connected to the teat cup.

Having regard to the comments in section 5 above, none of the documents referred to by the appellants suggests this possibility.

7.2 Appellant I referred to document D9 and adopted the hypothesis that the subject-matter of the present claim 1 is distinguished from the prior art disclosed in this document only by feature B'11<sup>PAG</sup>. In this respect, he argued that in order to arrive at the claimed subject-matter a skilled person just needs to modify the spraying nozzles (ie the spraying tubes 94-95) of the cleaning device disclosed in document D9 in such a way that the end of a teat cup can be fitted around the corresponding spraying nozzle. This modification would not imply an inventive step.

7.2.1 The board cannot accept this argument because it is clearly based on a *ex post facto* approach. When inventive step has to be assessed, the question is not whether the skilled person **could** have arrived at the claimed subject-matter but whether he **would** have done so because of a suggestion in the prior art which suggestion is linked to the problem to be solved. In the present case, it cannot be immediately understood why or how the skilled person should be led to modify the device known from document D9, since as has already been indicated in the above section 7.1 none of the available documents provides a person skilled in the art with a suggestion in this respect.

Moreover, even if the skilled person were to modify this known device as indicated by appellant I, this modification would not lead to the claimed subject-matter since document D9 does not disclose features B'<sup>PAG</sup> and B'13<sup>PAG</sup> (see section 6.2, items i) and ii)).

7.3 Appellant I also referred to documents D4 and D7 and argued as follows:

(i) The claimed subject-matter differs from the implement disclosed in document D4 in that there is a fitting relationship between nozzle and teat cup, as defined by feature B'11<sup>PAG</sup>, and in that the nozzle is provided with spaced flow-out apertures, as defined by features B'12<sup>PAG</sup>, B'13<sup>PAG</sup> and B'14<sup>PAG</sup>.

(ii) The cleaning device known from document D4 does not allow the teat cups to be sufficiently cleaned. Thus, the problem to be solved is to improve the cleaning of the teat cups.

(iii) The distinguishing features, ie features B'11<sup>PAG</sup>, B'12<sup>PAG</sup>, B'13<sup>PAG</sup> and B'14<sup>PAG</sup> are known from document D7, wherein it is clear that the cleaning device disclosed in this document improves the cleaning of the teat cups. Thus, it would be obvious for a skilled person to combine the teaching of document D7 with the content of document D4 and arrive at the claimed subject-matter.

7.3.1 The board cannot accept this argument for the following reasons:

- (i) Having regard to the comments in section 6.3 above, document D7 does not disclose feature B'11<sup>PAG</sup>. Thus, even the combination of documents D4 and D7 would not lead to the claimed subject-matter.
- (ii) The implement known from document D4 comprises a milking box provided with a support 15 connected to the milking box and carrying a milking cluster provided with four teat cups, the support being suitable for automatically connecting the cluster with the teat cups to the animal's udder. The cleaning device known from document D7 comprises a rotatable frame provided with four spraying tubes 14. In order to clean the teat cup of a cluster, the cluster has to be separated from the milking line and placed on the rotating frame by an operator, wherein the frame with the tubes 14 carrying the teat cups rotates during the rinsing operation. Due to the rotation of the frame, the operation mode of the device known from document

D7 is not compatible with the milking cluster disclosed in document D4 which is connected to the milking box. Therefore, it would not be obvious for the skilled person to combine these documents because of this incompatibility.

7.4 Appellant II referred to document D1 and argued as follows:

- (i) The claimed subject-matter differs from the implement disclosed in document D1 in that the first and the second flow-out apertures are in the same spraying nozzle, instead of in two separate nozzles.
- (ii) A nozzle provided with two flow-out apertures is a mere known construction having the same purpose of the nozzle of the device according to document D1. Thus, it would be obvious for the skilled person to arrive at the claimed matter.

7.4.1 This argument is also clearly based on a *ex post facto* approach because it cannot be understood why the skilled person would be induced to modify the structure of the cleaning device of document D1.

It has to be noted that in the cleaning device of document D1 the rinsing liquid is supplied via an inlet 31 to the chamber 29. From there the liquid flows through the flow-out apertures of the first spraying nozzles 18 into the teat cups and via the milking line into a container. Then, the rinsing liquid is recycled so that it flows from the container to the second spraying nozzles 26 and is sprayed via the flow-out



apertures 28 of these nozzles 26 onto the exterior of the teat cups. Thus, if the skilled person were to arrange the second flow-out aperture on the first nozzle 18, he would have to completely redesign the rinsing liquid circuit in order to arrive at the claimed subject-matter. Such a complete redesign would not be obvious.

7.5 Appellant II also referred to document D8 and argued that the skilled person would combine the embodiment according to Figure 3, in which the cleaning device is provided with a flow-out aperture positioned under the upper edge of the teat cup, with the embodiment according to Figure 4, in which the flow-aperture is positioned above the upper edge, and thus arrive at a cleaning with a nozzle having two spaced apertures as defined by claim 1.

The board cannot accept this argument for the following reasons:

- (i) It cannot be understood why the skilled person would combine two embodiments disclosed in the same document.
- (ii) The cleaning device according to the first embodiment (Figure 3) of document D8 only concerns the cleaning of the interior of the teat cups. In the device according to the second embodiment (Figure 4) the cleaning of the interior cannot be effected without cleaning the external upper edge of the teat cup. Therefore, not only is the idea of rinsing with only one spraying nozzle the exterior of the teat cup connected thereto

independently of the cleaning operation of the interior not mentioned in this document but it is also impossible to derive this idea from this document.

7.6 During the written phase of the proceedings appellant I also referred to document D7 and argued as follows:

- If it were to be considered that this document does not disclose an automatic cleaning device, it would be obvious for the skilled person, in the light of document EP-A-306 579 (D2), to include the necessary automation features so as to make the device of document D7 operable without the aid of an operator.

The board cannot accept this argument for the following reasons:

- Having regard to the comments in section 6.3 above, the feature concerning the automatic cleaning is not the only feature distinguishing the claimed subject-matter from document D7. Since neither document D7 nor document D2 discloses feature B'11<sup>PAG</sup>, the combination of these documents cannot lead to the claimed subject-matter.

7.7 Therefore, the prior art referred to by the appellants does not render obvious the claimed subject-matter.

8. Having regard to the comments in sections 6 and 7 above, the ground for opposition mentioned in Article 100(a) EPC does not prejudice the maintenance of the patent on the basis of claim 1 of the first auxiliary request.

## Order

### For these reasons it is decided that:

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

Claims: 1 to 10 filed in the oral proceedings as first auxiliary request;

Description: columns 1 and 2 filed in the oral proceedings as first auxiliary request;  
columns 3 to 14 of the patent specification;

Drawings: Figures 1 to 17 also according to the patent specification.

The Registrar:

The Chairman:

G. Magouliotis

C. Andries