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Datasheet for the decision of 1 September 2021

Case Number: T 1977/18 - 3.2.04

Application Number: 05736061.2

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Language of the proceedings: EN

Title of invention:
MILKING EQUIPMENT

Patent Proprietor:
An Udder IP Company Ltd

Opponent:
GEA Farm Technologies GmbH

Headword:

Relevant legal provisions:
EPC Art. 123(2), 54, 56, 114(2)

Keyword:

Amendments - added subject-matter (no)
Novelty - (yes)
Inventive step - (yes)
Late submitted material - document admitted by first instance (no) - document admitted (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

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Case Number: T 1977/18 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 1 September 2021

Appellant: (Opponent)	GEA Farm Technologies GmbH Postfach 1348 59195 Bönen (DE)
Representative:	Keenway Patentanwälte Neumann Heine Taruttis PartG mbB Postfach 10 33 63 40024 Düsseldorf (DE)
Respondent: (Patent Proprietor)	An Udder IP Company Ltd 1 Camelia Court Shellbridge Road Slindon West Sussex BN18 0LT (GB)
Representative:	Ashton, Gareth Mark Baron Warren Redfern 1000 Great West Road Brentford TW8 9DW (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 31 May 2018 concerning maintenance of the European Patent No. 1737291 in amended form.**

Composition of the Board:

Chairman	A. de Vries
Members:	S. Hillebrand
	T. Bokor

Summary of Facts and Submissions

I. The appeal was filed by the Opponent against the interlocutory decision of the Opposition Division finding that the patent in suit in an amended form according to the ("second") auxiliary request met the requirements of the EPC.

In particular, the Opposition Division held that
- the subject-matter of claim 1 and the method of claim 13 according to the ("second") auxiliary request did not extend beyond the content of the application as filed; and
- the subject-matter of claim 1 and the method of claim 13 according to the ("second") auxiliary request was novel and involved an inventive step.

II. In a communication pursuant to Rule 15(1) RPBA, the Board expressed its preliminary opinion confirming the findings of the decision under appeal.

III. Oral proceedings were held before the Board in the form of a videoconference attended remotely by both parties.

IV. The Appellant (Opponent) requests that the decision under appeal be set aside and that the patent be revoked.

The Respondent (Proprietor) requests that the appeal be dismissed, i.e. maintenance of the patent in the form held allowable by the Opposition Division.
Alternatively the decision under appeal should be set aside and the patent be maintained with one of the first to fifth auxiliary requests filed with the response to the grounds of appeal dated 4 February

2019, partly resubmitting earlier requests.

V. The independent claims of the main request read as follows:

"*1. A milking cluster (102) comprising a plurality of teat cups (1), each of which includes a flexible liner (3) for engaging about a teat of an animal to be milked, said liner having an head portion (6), at one end, provided with a mouth (7) through which the teat is engageable with the liner, and a milk discharge passageway (4a) at the opposite end, a clawpiece (106) coupled to the milk discharge passageways for collecting milk from the teat cups for onward delivery, nozzle means (13) for discharging treatment fluid into the head portions (6) of the liners, and a distributor (111) mounted on the clawpiece (106) for distributing treatment fluid to the to nozzle means of the liners and comprising an inlet (114) for treatment fluid and outlets (115) connected to the nozzle means, characterized by a valve (126) for connecting the distributor inlet (114) to a delivery line (112) for treatment fluid under pressure, said valve operating to maintain the delivery line primed with treatment fluid up to the milking cluster (102).*"

"*13. A method of milking comprising the steps of applying teat cups (1) of a milking cluster (102) to the teats of an animal to be milked, each of the teat cups including a flexible liner (3) engaging about a teat and having a head portion (6), at one end, provided with a mouth (7) through which the teat is engaged with the liner, and a milk discharge passageway (4a) at the opposite end, activating the flexible liners (3) to perform a milking cycle and, when the milking cycle is terminated, supplying treatment fluid*

to the milking cluster via a delivery line (112) connected to the inlet (114) of a distributor (111) mounted on the clawpiece of the milking cluster, and discharging treatment fluid fed through the distributor (111) into the head portions (6) of the liners (3), and withdrawing the teat cups (1) from the teats characterized by maintaining the delivery line (112), at least substantially up to the milking cluster (102), primed with treatment fluid preparatory to discharge of the treatment fluid into the head portions (6), and wherein the discharge of the treatment fluid into the head portions (6) is at the point of or during removal of the teat cups (1) from the animal, thereby utilizing withdrawal of the teat cups to wipe the fluid down the teats,".

VI. In the present decision, reference is made to the following documents:

D1: DD 261 300 A1
D3: R. J. Grindal et al.: "Automatic application of teat disinfectant through the milking machine cluster", Journal of Dairy Research, 1 February 1989
D9: EP 1 222 853 A2
D10: DE 101 60 161 A1
D17: DE 26 22 794 A1.

VII. The Appellant's arguments can be summarised as follows: Independent claims 1 and 13 are based on original claims 16 and 18. However, during grant and opposition procedure, features and steps have been added to these original claims, which were not originally disclosed in combination with their respective features and steps. The subject-matter of claim 1 and the method of claim 13 are not new or at least not inventive over the

disclosure of D1 when taking into account the common general knowledge of the person skilled in the art. Furthermore, they do not involve an inventive step with regard to the disclosure of D17, which should have been admitted to the proceedings.

The Respondent's arguments can be summarised as follows:
D17 should not be admitted to the proceedings for being late-filed and lacking relevance as already decided by the Opposition Division.
There is clear basis of disclosure in the embodiment of Figs. 1 to 5 and the corresponding description of the international patent publication for the amendments made in claims 1 and 13.
Their subject-matter is new and inventive over the cited prior art, also when taking into account common general knowledge of the person skilled in the art.

Reasons for the Decision

1. The appeal is admissible.

2. **The Patent and its Technical Background**

2.1 The patent relates to the cleaning of teat cups of a milking cluster after termination of automatic milking. Two basic types of cleaning arrangements can be distinguished: Fluids such as air, water, cleaning or disinfectant solutions are directed to the lower part of the liner in a teat cup (when attached to a teat) as in D9 (Fig. 1), D10 (Figs. 1, 2) or into its head portion as in D1 (Figs. 1, 2). Although the patent specification deals with both options, the claims are only directed to head portion injection. Typically, a distributor connected to one or several delivery lines for fluids distributes the fluids to four teat cups, which are arranged to deliver milk to a central clawpiece of the milking cluster.

2.2 According to the invention as defined in the independent device claim, a valve 126 of the milking cluster for connecting a delivery line 112 for treatment fluid (not part of the milking cluster) with the distributor inlet 114 is operable to maintain the delivery line primed (vented, without air) up to the valve/the milking cluster.
Because of "primed", a person skilled in the art, who in the present case is a mechanical engineer with specific knowledge in the filed of automatic milking, will understand that the treatment fluid is not air in this case, but liquid.
As can be seen from Fig. 5 of the patent specification, the distributor inlet 114 does not have to be located

at the outside of the distributor 11, but can also be a common internal inlet for several delivery lines 112, 113 joining each other inside the distributor.

2.3 By means of the above arrangement, the patent aims to solve the problem of promptly providing treatment fluid without a preceding air charge into the teat cups, paragraph [0008] of the patent specification.

3. **Main Request - Claim 1 - Added Subject-matter**

3.1 Claim 1 as maintained by the Opposition Division is based on original claim 16 and includes the following additional features (in italics):
- *a clawpiece coupled to the milk discharge passageways for collecting milk from the teat cups for onward delivery;*
- [distributor] *mounted on the clawpiece;*
- [said valve operating to maintain the delivery line primed with treatment fluid] *up to the milking cluster.*

3.2 In section 1.1.1 of its communication according to Article 15(1) RPBA, the Board had identified the following possible basis for claim 1's first two amendments:

"*The first amendment is seen to stem from page 10, lines 7 - 11 and page 11, lines 27 - 30 of the international publication of the application.*
The second amendment is seen to stem from page 7, lines 2/3, page 11, lines 11/12, page 13, lines 20/21 and 27 as well as Fig. 1 of the international publication."

3.3 According to the Appellant, all these citations did not relate to the second invention defined in original independent claim 16, but to the first invention

defined in original claim 1 or at least to an embodiment shown in Figs. 1 - 5, in which both inventions were mixed.
In this embodiment, three aspects of these inventions were realized, namely vacuum control, cleaning of the teat cups and dipping, of which the first two belonged to the first invention (original claims 1 and 7) and only the third to the second invention (original claim 16). On page 7, line 2, page 10, lines 1 - 8, page 11, lines 11 - 15, line 30 to page 12, line 4, page 13, lines 18 - 28, the added features involving the clawpiece were only disclosed together with stall control unit 103, disinfectant products and ambient or atmospheric air, all assigned to the aspects vacuum control and cleaning of the first invention. It was not allowable to isolate these features from their original context with the first invention and to claim them in combination with features of original claim 16, i.e. of the second invention.

3.4 The Board considers clawpiece and stall control for selectively delivering fluids and air to a distributor to be related to the general aspect of automatic milking (see point 2.1, above) rather than to be separately attributable to respective ones of the two inventions that were the subject of original claims 1 and 16. Those two claims were rather directed at different aspects of a common embodiment.

The salient features of this common embodiment are described on page 9 to 13 of the published international application with reference to Figs. 1 to 4, which depict milking equipment and teat cups. Figs. 5 and 6 (see page 9, 19 to 25, and page 17, lines 19 - 26) then focus on alternative valve control systems of the common application. Fig. 5 in particular

illustrates valve control comprising only a priming valve 126 as in original claim 16, but without a further (ambient) air supply 130 or a valve 132 for regulating vacuum by admitting (ambient) air. The latter are then added in the variant of Fig. 6 which forms the subject of original claim 1. Otherwise the two figures are identical, so that Fig. 6 in fact combines both aspects.

From the presentation of the figures and relevant passages it will be immediately clear to the skilled person that the features of either diagram (of figures 5 and 6) and corresponding parts of the description can be considered in conjunction with those of figures 1 to 4 and their description on pages 9 to 13. Accordingly, Figs. 1 - 5 and the corresponding description of the published international application can serve as basis for amending original claim 16.

This is also not contradicted by the fact that (filtered) ambient or atmospheric air is already mentioned on page 10, line 4 and page 11, lines 14, 31 as one of the fluids controlled by the stall control unit 103 and distributed by the distributor 11. The person skilled in the art immediately understands from a comparison of Figs. 5 and 6 that these references in the original description of Figs. 1 - 4 apply only for the embodiment of Fig. 6 and are solely made in preparation of the description of that further variant. The Board adds that the Appellant did not argue that there might be some close structural and functional relationship linking the features added to claim 1 and those remaining in the common embodiment. Nor is such a relationship apparent to the Board. Rather, the added features merely define the particular application of

the valve systems in a well-known and general manner.

3.5 Concerning the third amendment of claim 1, the Board agrees with the Appellant that a valve, which is operable to maintain a delivery for treatment line primed according to original claim 16, is operable to maintain this line primed up to the valve. The valve is furthermore part of the claimed milking cluster and arranged between its distributor and the external delivery line, the latter not forming part of the milking cluster, i.e. the valve is "at the border" of the system milking cluster. Consequently, "primed up to the valve" means nothing else than "primed *up to the milking cluster*".
Therefore, the third amendment is a mere clarification of features already present in original claim 16.

3.6 For the above reasons, claim 1 according to the main request has not been amended such that its subject-matter extends beyond the content of the application as originally filed, Article 100c), 123(2) EPC.

4. **Main Request - Claim 13 -Added Subject-matter**

4.1 Claim 13 as maintained by the Opposition Division is based on original claim 18 with amendments corresponding essentially to the first two amendments of claim 1 and the following additional amendments:
- The order, in which the steps "discharging the treatment fluid into the head portions (6) of the liners (3) and withdrawing the teat cups" and "supplying treatment fluid to the milking cluster via a delivery line (112)" are mentioned in original claim 18, has been reversed in claim 13;
- the discharge of treatment fluid into the head portions is specified as being "*at the point of or*

during removal of the teat cups (1) from the animal".

4.2 For the first two amendments, which regard the features involving a clawpiece, the reasoning given under sections 3.2 to 3.4, above, applies *mutatis mutandis*.

4.3 The additional amendments were addressed in sections 1.2.1, 1.2.2 of the Board's communication as follows:

"*Original claim 18 does not appear to specifically define a particular sequence of method steps. In claim 13, the steps of original claim 18 seem to have merely been rearranged according to their logical and timely sequence: Only when treatment fluid has been supplied to the distributor 111 in a first step, it can be fed through the distributor and finally discharged into the head portions 6 of the liners 3.*
Therefore, the Board presently considers this first additional amendment as a mere clarification of original claim 18."

"*The second additional amendment stems from page 8, lines 18 - 21 of the international publication. Although shut-off valves are mentioned in this passage, they are not mandatory parts of the milking cluster, see page 6, lines 15 to 22. Even when incorporated, other events can alternatively trigger the discharge of treatment fluid such that injection occurs upon or immediately prior to actuation of the cluster remover, see page 15, line 21 to page 16, line 10 and Fig. 7. The original specification appears thus neither to present the shut-off valves, nor the cluster remover as being functionally or structurally closely linked to the timing of treatment fluid discharge.*"

4.4 As the appellant refrained from comment the Board sees no reason to change its preliminary view. It thus concludes that claim 13 according to the main request has not been amended such that its method extends beyond the content of the application as originally filed, Articles 100c), 123(2) EPC.

5. **Admission of D17**

5.1 In its communication the Board indicated why it was inclined not to overrule the non-admission of D17 by the Opposition Division, see sections 4.1 - 4.3:

"*Late filed document D17 was not admitted by the Opposition Division to the proceedings as it was held not to be prima facie relevant, see points 5.1 to 5.3 of the impugned decision.*
The Appellant-Opponent has not put forward any reasons as to why the Opposition Division would have exercised its discretion under Article 114(2) EPC without taking into account the right criteria, by applying wrong criteria or in an unreasonable way, nor can the Board recognize such reasons, see CLBA 2019 IV.C.4.5.2.
The Board shares the Opposition Division's view that the milking cluster as shown in Fig. 1 of D17 does not have a delivery line for treatment fluid connected to a distributor according to claim 1. Instead, treatment fluid is discharged from a fluid container 20 mounted onto a pump 16 into lower portions of a liner 7, not into head portions as claimed. D17's milking cluster seems thus to be of another type, which operates rather differently and would have to be completely redesigned in order to obtain the claimed milking cluster.
Therefore, the Opposition Division appears to have been correct in considering D17 to be neither prima facie relevant for novelty, nor a promising starting point

for inventive step. The obvious solution for the technical problem "fully wetting the teats" proposed by the Appellant-Opponent appears to be the choice of a more suitable type of milking cluster, e.g. the one of D1 or D3.

Since the Appellant-Opponent was furthermore heard during oral proceedings on this issue, see minutes, second half of page 2, the Board is currently not inclined to overrule the impugned decision with regard to the non-admission of D17 into the proceedings."

5.2 As the appellant refrained from further comment, the Board maintains this view and confirms the Opposition Division's decision not to admit D17 into the proceedings.

6. **Main Request - Novelty**

6.1 D1 discloses a milking cluster according to the preamble of claim 1, which comprises in particular teat cups 1 including flexible liners 8, a clawpiece 2 and a distributor 5 for distributing treatment fluid 13 to nozzle means 9 of the liners 8, see first four paragraphs of section "Ausführungsbeispiel" on page 2, Figs. 1 and 2. The distributor 5 is mounted on the clawpiece 2. It has an inlet for treatment fluid supplied by a delivery line and an outlet in fluid communication with the nozzle means 9 via a delivery tube 6 and a joint piece 7.

A person skilled in the art assumes that all lines shown with two open ends in Fig. 1, i.e. drain 12, line 17 for not consumable milk, milk line 16 and line for treatment fluid 13 and air, will be main lines serving

a plurality of milking clusters.

6.2 It is common ground that some valve must be present in the arrangement shown in Fig. 1 of D1 for controlling delivery of treatment fluid 13, at least for turning it on and off in order to allow switching between the different operation modes "pre-milking", "teat cleaning", "milking" and again "teat cleaning" (third to eight paragraph of section "Ausführungsbeispiel"). Otherwise treatment fluid 13 would be sucked into the liner 8 during the pre-milking and milking modes.

Since such a valve is neither described, nor depicted, D1 does not clearly and unambiguously disclose, that it forms part of an individual milking cluster as claimed. It could, for example, also be a central valve controlling a common or "main" line delivering treatment fluid 13 to a plurality of milking clusters, which might be represented in Fig. 1 above the common milk line 16.

6.3 Wherever the implicit valve might be located in the arrangement of D1, it is not necessarily or inherently, operable to maintain the delivery line *primed* with treatment fluid as required by claim 1. Firstly, this functional feature implies of course, that the valve as such is capable of priming, e.g. that it does not have a bleed port for draining residual treatment fluid present in the line. Since D1 is completely silent about the valve, and not all valves can be primed, already this basic capability cannot be clearly and unambiguously derived from its disclosure. Moreover, D1 indicates that after each cleaning and disinfection air is periodically input into the delivery line 13 to purge the system of treatment fluid, see 5th and last paragraph from the bottom of page 2. Such an air purge

via the same delivery line as the treatment fluid after each cleaning cycle excludes that the (implicit) valve is primed: after all treatment fluid is purged from the system, the valve must be closed *before* it is again filled with treatment fluid (otherwise treatment fluid would again flow into the system and contaminate it). Thus the valve is closed with the delivery line empty of treatment fluid but full of air: The valve is thus unprimed.

Indeed, the functional feature of priming necessitates an arrangement for delivering air and treatment fluid different from that of D1: Maintaining a delivery line for treatment fluid 13 primed by means of a valve requires the presence of a supplemental, separate delivery line for air, which joins the delivery line for treatment fluid 13 at or downstream of this valve.

6.4 Therefore, the milking cluster of claim 1 differs from that according to D1 by the characterising features, i.e. by comprising a valve for connecting the distributor inlet to a delivery line for treatment fluid under pressure, said valve operating to maintain the delivery line for treatment fluid primed with treatment fluid up to the milking cluster.

It is thus new in the sense of Article 54(1), (2) EPC.

6.5 This applies for corresponding reasons also to the method of claim 13.

As a method step, D1 does not address *preparatory* priming at all, neither explicitly, nor implicitly.

Furthermore, as expressed in the communication under Article 15(1) RPBA in section 2.5,

"*it appears not to be unambiguously disclosed in D1 that treatment fluid is discharged into the head portion "at the point or during removal of the teat cups".*
Treatment fluid is discharged into the teat cups 1 when those are still attached to an udder, i.e. before their removal, see second paragraph of section "Wesen der Erfindung" and penultimate paragraph of section "Ausführungsbeispiel". After removal of the teat cup 1, treatment fluid flows over the liner 8 head portion, see ultimate paragraph of section "Ausführungsbeipiel"".

Since the Appellant did not counter the above provisional opinion, the Board does see no reason for deviating from it.

7. **Main Request - Inventive Step**

7.1 Vis-a-vis D1 the differing features of priming a valve connecting the distributor inlet to the delivery line can be seen to enable timely delivery of cleaning liquid to the teat cups, as it is no longer preceded by a charge of air to purge liquid from the delivery line, see paragraph [0007] of the patent. The associated objective technical problem can thus be formulated as how to ensure timely delivery of cleaning liquid to the teat cups.

7.2 Whereas the choice of location for the implicit valve for delivery of cleaning liquid might not require any special insight, as illustrated by D9 and D10 cited by way of example, priming it to speed up delivery does not appear obvious starting from D1 as a matter of common general knowledge, as mainly argued by the Appellant. The Board does not doubt that primed valves

are known per se, also in the field of milking. However, it follows from the discussion of novelty that the implicit delivery valve of D1, which is unprimed because it must also deliver the purging air, for this very reason cannot simply be replaced by a primed valve. That would require modification of the purging arrangement which in the Board's view is neither straightforward nor routine, nor indeed suggested by any of the cited prior art.

7.3 Since a person skilled the art would therefore not obtain the subject-matter of claim 1 in an obvious manner, when starting from the milking cluster of D1 and taking into account their general knowledge and the cited prior art, it involves an inventive step in the sense of Article 56 EPC.

Since preparatory priming of D1's delivery line as a method step is not obvious from this prior art and common general knowledge for corresponding reasons, also the method of claim 13 involves an inventive step in the sense of Article 56 EPC.

8. **Conclusion**

None of the Opponent's challenges against the findings of the decision are successful. Consequently, the appeal fails.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Magouliotis A. de Vries

Decision electronically authenticated