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Datasheet for the decision of 11 December 2008

Case Number: T 0218/07 - 3.2.04

Application Number: 99913422.4

Publication Number: 1065923

IPC: A01J 5/08

Language of the proceedings: EN

Title of invention:
Teat cup liner for a milking machine

Patentee:
Silclear Limited

Opponent:
WestfaliaSurge GmbH

Headword:
-

Relevant legal provisions:
-

Relevant legal provisions (EPC 1973):
EPC Art. 100a)

Keyword:
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:
T 0002/83, T 0007/86, T 0219/87, T 0200/94, T 0455/94, T 0885/97, T 0414/98, T 0190/99, T 0396/99

Catchword:
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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0218/07 - 3.2.04

D E C I S I O N
of the Technical Board of Appeal 3.2.04
of 11 December 2008

Appellant: (Opponent)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 4 December 2006 rejecting the opposition filed against European patent No. 1065923 pursuant to Article 102(2) EPC.

Composition of the Board:

Chairman: M. Ceyte
Members: C. Scheibling
T. Bokor

Summary of Facts and Submissions

I. By its decision dated 4 December 2006 the Opposition Division rejected the opposition. On 5 February 2007 the Appellant (opponent) filed an appeal and paid the appeal fee simultaneously. The statement setting out the grounds of appeal was received on 4 April 2007.

II. The patent was opposed on the grounds based on Article 100(a) EPC 1973 (lack of novelty and inventive step).

III. The following documents played a role in the present proceedings:

D1: EP-A-0 124 118
E1: WO-A-95/ 33366

IV. Claims 1, 8, 12 and 13 as granted read as follows:

"1. An elongate tubular teat cup liner (1) for milking a domestic animal, comprising: an inlet end (4) with an opening (8) into which a animal's teat (70) may be inserted; an outlet end (6) for discharging milk from the animal; inside the opening (8) a teat engaging portion (10) with annular walls (7, 107); a collapsible portion adjacent and downstream from the teat engaging portion (10), the collapsible portion having inner (113) and outer (13) walls being thinner than the walls (7,107) of the teat engaging portion (10); an outlet tube (14) leading from the collapsible portion (12) to the outlet end (6); and a first sealing means (60) and a second sealing means (66) between which lies all of the collapsible portion (12), the first sealing means

(60) being closer to the inlet end (4) than the second sealing means (66) and said first and second sealing means (60,66) being adapted for making a seal between the outer surface of the liner (1) and a tubular teat cup shell (32) so that a pulsating differential vacuum pressure may be applied to the inner and outer walls (113,13) of the collapsible portion (12) to cause the collapsible portion (12) to collapse and open repeatedly and so milk the animal, the distance from the opening (8) to a point (76) at which the collapsible portion (12) collapses being sufficient so that the collapsible portion (12) collapses substantially completely away from the animal's teat (70), characterised in that the collapsible portion (12) has an elongate cross-section with a minor cross-sectional axis (3) and a major cross-sectional axis (5), there being a tapering section (17) between the teat engaging portion (10) and the collapsible portion (12), the tapering portion having outer and inner walls (11,111) the thickness of which tapers more gradually along a plane encompassing the minor cross-sectional axis (3) than along a plane encompassing the major cross-sectional axis (5), so that the tapering section (17) may collapse gently on the teat (70) as the collapsible portion (12) collapses."

"8. A teat cup assembly (30) that may be connected to a vacuum source, the assembly comprising an elongate teat cup liner (1) and a teat cup shell (32) around the teat cup liner (1), in which the teat cup liner (1) is as claimed in any preceding claim."

"12. A teat cup cluster (20) comprising a manifold inlet (22) of a vacuum source, a plurality of teat cup

assemblies (30) each teat cup assembly (30) being connected to a nipple (34) of the manifold inlet (22) and being as claimed in Claim 11, in which the nipple (34) is rounded so that the nipple (34) does not cut into the stiffened support region (36) when the closure region (50) is bent to pinch shut the closure region (50)."

"13. A method of milking a domestic animal using a teat cup assembly (30) as claimed in any of Claims 8 to 11, when said teat cup assembly (30) is connected to a vacuum source, in which the method comprises the steps of:
a) inserting a teat (70) of the animal into the inlet end (4) of the teat cup liner (1);
b) applying a differential vacuum pressure to the inner and outer walls (113,13) of the collapsible portion (12) to cause the collapsible portion (12) to collapse and open repeatedly and so milk the animal, the collapsible portion (12) being spaced sufficiently from the inlet end (4) so that the collapsible portion (12) collapses substantially completely away from the teat (70);
characterised in that tapering section has tapering walls (11,111) that collapse partially to gently compress the end of the animal's teat (70)."

V. Oral proceedings took place on 11 December 2008 before the Board of Appeal.

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

He mainly argued as follows:

D1 discloses the features of the prior art portion of claim 1. In this document the upper part of the teat liner is of circular cross-section and the lower part of elliptic cross-section. These two portions are joined by a tapered transition portion. Any attempt of a skilled person to realise such a transition portion would unavoidably result in a transition portion as claimed. Moreover, with respect to D1 the problem to be solved is to further improve the way the teat cup liner collapses when atmospheric pressure is applied. This problem is addressed and solved in E1 by providing the teat liner with a thickness that tapers more gradually along the minor cross-sectional axis than along the major cross-sectional axis. The feature that in E1 the thickness along the major cross-sectional axis increases instead of decreasing as shown in the figures of the patent under appeal is not claimed and thus not relevant for the assessment of inventive step.

The Respondent (patentee) contested the arguments of the Appellant. He mainly submitted that D1 does not show a transition portion as claimed, neither explicitly nor implicitly. Starting from D1 the problem can be seen in improving the useful life of the teat cup liner. The solution proposed in D1 is to compensate the thickness reduction along the minor axis by a thickness increase along the major axis so that the cross-section area of the teat cup liner remains constant along its longitudinal axis. Therefore, applying the teaching of E1 to D1 would not result in the claimed teat cup liner.

The Respondent requested that the appeal be dismissed, i.e. that the patent be maintained as granted.

Reasons for the Decision

1. The appeal is admissible.

2. *Novelty:*

2.1 D1 discloses an elongate tubular teat cup liner of the type stated in the prior art portion of claim 1.

Contrary to the Appellant's submissions, D1 does disclose neither explicitly nor implicitly the claimed feature that the thickness of the tapering portion tapers "more gradually along a plane encompassing the minor cross-sectional axis (3) than along a plane encompassing the major cross-sectional axis (5), so that the tapering section (17) may collapse gently on the teat (70) as the collapsible portion (12) collapses."

Figure 1 of D1 depicts a cross-sectional view along a plane encompassing the major cross-sectional axis of the teat cup liner. There is however no further Figure showing a cross-section of the teat-cup liner along a plane encompassing the minor cross-sectional axis of the teat cup liner, so that the Figures of D1 do not show the specific arrangement of claim 1 in which the thickness of the tapering portion tapers "more gradually along a plane encompassing the minor cross-sectional axis (3) than along a plane encompassing the major cross-sectional axis (5)". Furthermore, the description of D1 is wholly silent as to the above quoted feature.

2.2 The Appellant argued that the passages of D1, page 2, lines 23 to 24 and page 4, lines 22 to 25 which read: "… the upper portion joins the lower portion over a tapered portion" and "From section 17 an upper tube-like portion 14 extends downwardly and is connected with a lower tube-like portion 16 through a transition portion 23 having a tapered outer surface" would make it clear for a skilled person that the tapering portion has the same axial extension or height around its circumference. Since the tapering section should be provided with a circumferentially uniform axial extension height, the thickness of the tapering section will inevitably taper more gradually along a plane encompassing the minor cross-sectional axis than along a plane encompassing the major cross-sectional axis.

2.3 The Board is unable to follow the Appellant's submissions on this point. D1 is wholly silent as to the height of the tapering portion. The feature in question is also not implicitly disclosed in D1, since as with Article 123(2) EPC, the feature has also to be "directly and unambiguously derivable" from the disclosure and this is here clearly not the case. There can be no question of filling a gap in the disclosure of D1 starting from a mere assumption that the tapering section should have the same axial extension or height around its circumference. Thus, novelty of the subject-matter of claim 1 is given with respect to D1.

3. *Inventive step:*

3.1 The Board agrees with the parties that D1 represents the closest prior art disclosing the features of the prior art portion of claim 1.

As has been explained, D1 does disclose neither explicitly nor implicitly the claimed feature that the thickness of the tapering portion tapers "more gradually along a plane encompassing the minor cross-sectional axis (3) than along a plane encompassing the major cross-sectional axis (5)". The effect which is achieved is a "gentle and partial collapse of the liner in one direction or plane" on an animal's teat, see paragraphs [0029] and [0030] of the patent specification.
As explained in paragraph [0029] the tapering section in the plane encompassing the minor cross-sectional axis collapses partially and gently on an animal's teat whereas the tapering section in the plane encompassing the major cross-sectional axis does not significantly collapse.

Thus starting from D1 as closest prior art, the problem solved by the present invention may be seen in providing an elongate tubular teat cup liner, in which the tapering section may collapse more gently on the teat as the collapsible portion collapses.

It is not disputed that, as submitted by the Appellant, the skilled person could have provided without difficulty the circumferentially tapering section of D1 with two different tapers directed in the same direction. However, it is the Boards' established case

law that the question is not whether a skilled person could have carried out the invention, but whether he would have done so in the hope of solving the underlying technical problem or in expectation of some improvement or advantage - the so called "could - would approach" (T2/83, OJ EPO 1984, 265; T90/84, T7/86 OJ EPO 1988, 381; T200/94, T885/97). So the point is not whether the skilled person could have arrived at the invention by modifying the prior art, but rather whether, in expectation of the advantages actually achieved (i.e. in the light of the technical problem addressed), he would have done so because of promptings in the prior art (T219/87, T455/94, T414/98) see case law of the Boards of Appeal, 5th edition 2006, page 132.

In the present case D1 aims at proposing a teat cup liner which minimizes the mechanical damages done to the teat and udder tissue (page 2, lines 1 to 3). This object is achieved by the specific cross-sections and thicknesses of the upper and lower parts of the teat cup liner.
Consequently, D1 does not suggest a tapering section having two different tapers directed in the same direction. Neither does it address the same problem nor provide the same solution as the present invention.

3.2 D1 in combination with the teaching of E1:

3.2.1 E1 seeks to improve a teat cup liner as disclosed in D1 in such a way that it provides a sufficient massaging to the teat without reducing the useful life of the teat cup liner (page 2, first paragraph).
In E1 this problem is solved in that the wall thickness of the teat cup liner progressively diminishes from the

upper to the lower end in a first axial plane and progressively increases from the upper to lower end in a second perpendicular axial plane (page 2, second paragraph; Figures 1 to 4). The result of providing two oppositely directed tapers in wall thickness is that the teat cup liner has in the upper region 2 and in the lower region 3 "practically identical cross-sectional surfaces in these regions" (page 5, lines 5 - 9). In other words the invention of E1 provides a "uniform cross-sectional surface area" (page 6, lines 11 - 14) in the upper and lower regions.

3.2.2 The skilled person starting from D1 as closest prior art and wanting to improve the teat cup liner so that the tapering section may collapse more gently on the teat as the collapsible portion collapses, would learn little or nothing from E1. The main improvement disclosed in E1 is that the material fatigue in the teat cup liner can be reduced in order to improve service lifetime by providing two oppositely directed tapers in wall thickness. E1 does not teach that the arrangement could improve the teat cup liner so that the tapering section may collapse more gently on the teat. In other words E1 does not address the problem solved by the present invention.

Even if the skilled person wanting to solve this problem did consider E1 and combine the features of D1 and E1, then the result would be to modify the collapsing section of the teat cup liner of D1 so that the walls have two oppositely directed tapers in wall thickness, as viewed in two axial planes at right angles to each other, which is different from the claimed arrangement in which there are two different tapers, both of which are directed from the thicker

walled engaging portion to the thinner walled collapsible portion.

3.2.3 The Appellant submitted that claim 1 of the patent in suit solely requires that the wall thickness tapers more gradually along a plane encompassing the minor cross-sectional axis than along a plane encompassing the major cross-sectional axis. This does not exclude that the wall thickness along the plane encompassing the major cross-sectional axis may increase although the wall thickness along the plane encompassing the minor cross-sectional axis decreases.

However, when interpreting a claim of a patent a skilled person should rule out interpretations which are illogical or which do not make technical sense in the light of the disclosure of the patent. He should try to arrive at an interpretation which is technically sensible and takes into account the whole of the disclosure of the patent (see decisions T396/99, T190/99, not published). That the wall thickness could increase in one plane while decreasing in the other plane is clearly not envisaged by the disclosure of the patent in suit and shall not therefore be considered when interpreting claim 1.

3.2.4 Moreover, claim 1 in its prior art portion requires the walls of the lower collapsible portion to be thinner that the upper engaging portion. Thus, the lower end of the tapering transition portion should have thinner walls than its upper end all around its circumference to fit with the lower thinner walled collapsible portion of the teat cup liner, practically excluding therefore the possibility of a wall thickness along the

plane encompassing the major cross-sectional axis increasing from the upper to the lower end.

3.2.5 For these reasons the subject-matter of claim 1 involves an inventive step with respect to D1 taken alone or in combination with E1.

4. *Claims 8, 12, 13:*

Claim 8 comprises a teat cup liner according to claim 1; claim 12 comprises a teat cup assembly according to claim 11 which refers back to claim 8 and claim 13 uses a teat cup assembly according to claim 8. It is not disputed that these claims are patentable by virtue of the patentability of claim 1.

Order

For these reasons it is decided that:

The appeal is dismissed.

The registrar: The Chairman:

G. Magouliotis M. Ceyte