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D E C I S I O N
of 15 April 2005

Case Number: T 0210/03 - 3.2.4

Application Number: 95939700.1

Publication Number: 0794700

IPC: A01K 1/12

Language of the proceedings: EN

Title of invention:
Non-conductive dairy parlor entry gate

Patentee:
DeLaval International AB

Opponent:
Maasland N.V.

Headword:
Gate/DeLaval

Relevant legal provisions:
EPC Art. 84, 100(a), 100(c), 123

Keyword:
"Added subject-matter (no)"
"Extension of protection (no)"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0210/03 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 15 April 2005

Appellant I: (Opponent)
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Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted 19 December 2002 concerning maintenance of European patent No. 0794700 in amended form.**

Composition of the Board:

Chairman: M. Ceyte
Members: P. Petti
T. Bokor

Summary of Facts and Submissions

I. The European patent No. 794 700, against which an opposition (based upon Articles 100(a) and (c) EPC) had been filed, was maintained in amended form by decision of the opposition division dispatched on 19 December 2002.

II. Both the opponent (hereinafter appellant I) and the patent proprietor (hereinafter appellant II) lodged an appeal against this decision on 4 February 2003 and on 20 February 2003 respectively and simultaneously paid the appeal fee. Statements setting out the grounds of appeal were received respectively on 21 March 2003 (appellant I) and on 17 April 2003 (appellant II).

III. Oral proceedings before the board were held on 15 April 2005.

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

Appellant II requested that the decision under appeal be set aside and that the patent be maintained on the basis of the following documents (sole request):

- claims 1 to 14 filed during oral proceedings on 15 April 2005;

- description, columns 1 to 4 filed during oral proceedings on 15 April 2005 and columns 5 to 8 of the patent as granted;

- Figures 1 to 5 of the patent as granted.

The independent claims 1 and 7 of this request read as follows:

"1. A gate (10) adapted for swingable mounting in a dairy parlor (11) to control the entry of animals (13) into a milking area, characterised in that the gale (10) comprises:

a first magnetically conductive member (18) defining a first loop portion (24);
a second magnetically conductive member (20) defining a second loop portion (26); and non-magnetic coupling means (22) rigidly interconnecting said first and second magnetically conductive members (18,20), wherein said first and second magnetically conductive members (18,20) are tubular and said non-magnetic coupling means (22) presents a pair of inserts (36) for extending into said first and second magnetically conductive members (18,20) and a radially extending shoulder (38) for interrupting any magnetic connection therebetween, whereby the coupling means (22) interconnects the first and second magnetically conductive members (18,20) preventing contact therebetween to form a loop without permitting the creation of a magnetically conductive loop placable in an electromagnetic field.

7. A gate (10) in combination with a dairy parlour (11), the combination characterised by:

substantially opposed stanchion members (48) defining an animal passage lane (50);

an identification system (16) including portal structure (12) for creating an electromagnetic field positioned in the animal passage lane (50) for energizing identification tags (63) worn by the animals (13) passing through said portal structure (12);
a gate (10) including magnetically conductive material without a magnetically conductive loop placable within said electromagnetic field; and
means (40,42,44) swingably mounting said gate (10) adjacent said portal structure (12) for selective movement of said gate (10) into said electromagnetic field, the gate having one or more closed loop portions movable into the electromagnetic field during swinging of the gate, and each said closed loop portion including non-magnetic material so that the loop is not magnetically conductive and is movable into the magnetic field without interfering with the operation of the identification system (16)."

V. Appellant I essentially argued that

(i) claim 1 contravened the requirements of Articles 123(2) and (3) EPC and claims 1 and 7 the requirements of Article 100(c) EPC,

(ii) the subject-matter of claims 1 and 7 did not involve an inventive step having regard to the prior art acknowledged to be known in the patent in suit in combination with common general knowledge,

(iii) claims 1 and 7 lacked clarity (Article 84 EPC).

VI. Appellant II rejected the arguments brought forward by appellant I and submitted that

(i) the subject-matter of claims 1 and 7 did not extend beyond the content of the application as filed (WO-A-96/13971),

(ii) the amendments to the claims did not extend the protection conferred (Article 123(3) EPC), and

(iii) the subject-matter of claims 1 and 7 involved an inventive step.

Reasons for the Decision

1. The appeal is admissible.

2. *The claimed subject-matter*

2.1 Amended claim 1 is directed to a gate having the following features:

(A) the gate (10) is adapted for swingable mounting in a dairy parlour (11) to control the entry of animals (13) into a milking area,

(B) the gate comprises a first magnetically conductive member (18) defining a first loop portion (24),

(C) the gate comprises a second magnetically conductive member (20) defining a second loop portion (26),

(D) the gate comprises non-magnetic coupling means (22) interconnecting said first and second magnetically conductive members (18, 20) to form a loop,

(D1) the coupling means (22) rigidly interconnects said first and second magnetically conductive members (18, 20),

(D2) said first and second magnetically conductive members (18, 20) are tubular and said non-magnetic coupling means (22) presents a pair of inserts (36) for extending into said first and second magnetically conductive members (18, 20) and a radially extending shoulder (38) for interrupting any magnetic connection therebetween,

(D3) the coupling means (22) interconnects said first and second magnetically conductive members (18, 20) preventing contact therebetween to form a loop without permitting the creation of a magnetically conductive loop placeable in an electromagnetic field.

2.1.1 Features B and C - read in combination with features D, D1 and D3 - make it clear that the first loop portion, the second loop portions and the coupling means form a **structural loop** which is not magnetically conductive.

2.1.2 The description of the patent as granted does not explicitly refer to a "rigid" interconnection as stated in feature D1. However, it is clear from the description of the patent that "the stanchions and gates in the dairy parlour must be strong to withstand the stress of controlling cows weighing in excess of half a ton" (column 2, lines 17 to 29) and that "a gate embodying the invention can be durable with sufficient strength to withstand impact by large animals ..." (column 3, lines 9 to 15).

Therefore, it has to be understood that the terms "rigidly interconnecting" define a connection between first and second magnetically conductive members which is sufficiently strong to withstand impact by large animals.

2.2 Claim 7 which corresponds to Claim 10 of the patent as granted is directed to the combination of a gate (10) with a daily parlour (11) having the following features:

(E) the combination comprises substantially opposed stanchion members (48) defining an animal passage lane (50),

(F) the combination comprises an identification system (16) including portal structure (12) for creating an electromagnetic field positioned in the animal passage lane (50) for energizing identification tags (63) worn by the animal (13) passing through said portal structure (12),

(G1) the gate includes magnetically conductive material without a magnetically conductive loop placeable within said electromagnetic field,

(H) the combination comprises means (40, 42, 44) swingably mounting said gate adjacent said portal structure (12) for selective movement of said gate (10) into said electromagnetic field,

(G2) the gate (10) has one or more closed loop portions movable into the electromagnetic field during swinging of the gate,

(G21) each said closed loop portion includes non-magnetic material so that the loop is not magnetically conductive and is movable into the magnetic field without interfering with the operation of the identification system (16).

2.2.1 It is clear from the context of the claim that "**the** magnetic field" (emphasis added) in feature G21 is the same as the electromagnetic field referred to in features F, G1, H and G2.

2.2.2 It is clear from feature G21, read in conjunction with feature G2, that the loop portions including non-magnetic material are those loop portions which are **movable** into the electromagnetic field.

It has to be understood from features G1, G2 and G21 that the non-magnetic material interrupts the formation of any magnetic loop in each of the structural loop portions which are movable into the electromagnetic field.

It has to be noted that feature G21 refers to "non-magnetic material". The word "non-magnetic" has the same meaning as the terms "magnetically non-conductive" stated in claim 8. Reference is also made to claim 1 as granted which refers to a "non-magnetic coupling means" and to the description (column 4, lines 50 and 51) which refers to a "non-magnetic coupler".

3. *Amendments (Articles 123(2), 123(3) and 84 EPC)*

3.1 The amended independent claim 1 differs from claim 1 of the patent as granted in that

(i) the expression "preventing contact therebetween" (see feature D3) has replaced the expression "preventing relative shifting therebetween [i.e. between said first and second magnetically conductive members]",

(ii) feature D2 has been added.

3.2 The above amendments (i) and (ii) are directly and unambiguously derivable from claim 7 and page 9, lines 20 to 24 of the application as filed and thus do not contravene the requirements of Article 123(2) EPC. Therefore, the question arises whether these amendments represent an extension of the scope of protection (Article 123(3) EPC).

3.2.1 In these respects, Appellant I argued as follows:

(i) Claim 1 of the patent as granted defines a gate in which shifting between first and second

magnetically conductive members is prevented not only to avoid that the two conductive members come closer to each other (so as to prevent contact) but also to avoid that the two conductive members move away from each other.

(ii) The amended claim 1 defines a gate in which the contact between first and second magnetically conductive members is prevented without avoiding that the two conductive members are shifted away from each other. The replacement of the terms "preventing relative shifting" by "preventing contact" thus represents an extension of the scope of protection and is therefore not allowable having regard to Article 123(3) EPC.

3.2.2 The board cannot accept this argument of appellant I for the following reasons:

(i) Claim 1 of the patent as granted contains the feature that the coupling means **"**[interconnect] said first and second magnetically conductive members (18, 20) preventing **relative shifting** therebetween to form a loop without permitting the creation of a magnetically conductive loop placable in an electromagnetic field" (emphasis added).

Furthermore, the coupling means, which is magnetically non-conductive, forms with the first and second loop portions, which are magnetically conductive, a structural loop without forming a magnetically conductive loop. Thus, it is clear that the terms "preventing relative shifting" has

to be construed as preventing a shifting between said first and second magnetically conductive members in order to **prevent contact** between them.

This interpretation of claim 1 of the patent as granted is consistent with the description and the drawings of the patent, according to which (see column 6, lines 10 to 14 and 42 to 45; Figure 5) the coupling means includes "a pair of opposed insert portions 36 connected by a radially extending shoulder portion 38", which "**prevents contact** between the conductive portions 18 and 20 and prevents the formation of a magnetically conductive loop" (emphasis added) as well as with dependent claim 7 of the patent as granted which refers to a "shoulder (38) for interrupting any connection [between said first and second magnetically conductive members]".

(ii) The interpretation of appellant II is not supported by the description of the patent as granted which does not refer to a coupling means preventing shifting between the two magnetically conductive members in order to avoid that the two magnetically conductive members move away from each other. Moreover, it is clear from the patent specification that there is no need to prevent such a shifting.

3.2.3 Thus, on a fair interpretation of the amendment replacing the terms "preventing relative shifting" by "preventing contact" in the light of the totality of the disclosure, the extent of protection has not been extended in comparison to that of granted claim 1,

since, as substantiated above, the terms "preventing relative shifting" and "preventing contact" indicate the same desired result to be achieved by the invention, that is preventing formation of a magnetically conductive loop. Moreover the means for achieving the result are defined by the amendment according to item 3.1.(ii) which refers to a coupling means presenting "a pair of inserts (36) for extending into said first and second magnetically conductive members (18, 20) and a radially extending shoulder (38) for interrupting any magnetic connection therebetween". It is evident that the coupling means prevents contact between the first and second magnetically conductive members and thus the formation of a magnetically conductive loop.

3.2.4 Therefore, these amendments do not contravene the requirements of Article 123(3) EPC.

3.3 The further amendments to the patent concern the renumbering of dependent claims 2 to 4 and 6 to 14 which are identical with claims 2 to 4 and 11 to 17 of the patent as granted and the adaptation of the description to the amended claims. These amendments do not contravene the requirements of Article 123 EPC.

3.4 Appellant I argued that the amended claims do not specify the essential feature of the invention according to which the coupling means is made of an electrically non-conductive material.

This objection under Article 84 EPC does not concern amendments made in the course of opposition and appeal proceedings in so far as it could have also been raised against the claims of the patent as granted. Therefore,

it has to be rejected as being inadmissible, Article 84 EPC not being a ground for opposition.

4. *Article 100(c) EPC*

4.1 Claim 1 according to the present request differs from claim 7 (i.e. from the combination of features specified in claims 1 and 7) of the application as filed in that features D1 and D3 have been added.

4.1.1 Having regard to the comments in section 3.3 above feature D3 can unequivocally be derived from the application as filed.

4.1.2 Appellant I asserted that feature D1 contravened the requirements of Article 100(c) EPC. He essentially pointed out that rigidity and strength are different concepts and essentially argued that even if it could be derived from the description of the patent that the interconnection is strong, there is no disclosure of a rigid interconnection.

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

(i) It is evident from the application as filed (see page 3, lines 3 to 5 and page 4, lines 3 to 11) that the interconnection according to the invention has to allow that the gate to be sufficiently strong to withstand impact by large diary animals.

(ii) The claimed gate has first and second magnetically conductive members and a coupler

joining these members together so as to permit the formation of a closed loop without the creation of a magnetically conductive loop. It is evident to the skilled reader that the essential function of the coupler is to interconnect the magnetically conductive members to prevent (1) the formation of a magnetically conductive loop and (2) the weakening of the gate structure, since the overall strength and rigidity of the gate are essential in order that the gate will successfully and reliably perform its fundamental task of controlling animal movements. The claimed coupler presents a pair of inserts extending into the first and second magnetically conductive members and a radially extending shoulder to prevent contact between the first and second magnetically conductive members interconnected thereby. The skilled person from a complete reading of the application understands that the task of this coupler is also to provide a strong and rigid interconnection between the first and second magnetically conductive members, since a coupler flexibly interconnecting these members would result in a weakening of the loop and thus of the gate structure in comparison to the prior art gate acknowledged in the introductory part of the patent specification, which includes an homogenous closed loop consisting of the same magnetically conductive material.

4.2 Claim 7 according to the present request, which is identical with claim 10 of the patent as granted differs from claim 10 of the application as filed in that in that features G1, G2 and G21 have been added.

These features can unequivocally be derived from claim 11 of the application as filed.

4.2.1 Appellant I pointed out that the terms "non-magnetic material" define "a material which is not a permanent magnet" and thus have a meaning which is different than that of the terms "magnetically non-conductive material". On the basis of this assumption appellant I argued that the claim 7 - due to feature G21 - also encompasses the use of iron, nickel or cobalt as non-magnetic materials and thus extends beyond the content of the application as filed which refers only to a "magnetically non-conductive material" but not to a "non-magnetic material".

The board cannot accept this argument because it relies upon an interpretation of the terms "non-magnetic material" which does not take into account the content of the description of the patent. As already stated in section 2.2.3, the patent specification refers to a non-magnetic material for the coupling means as a magnetically non-conductive material. In the patent specification there is no reference to permanent magnets.

The application as filed - in so far as it refers to a "non-magnetic coupling means" (claim 1) and to a "non-magnetic coupler" (page 6, lines 14 to 17) - discloses a gate made *inter alia* of non-magnetic material.

4.2.2 Therefore, the ground for opposition according to Article 100(c) EPC does not prejudice the maintenance of the patent on the basis of claims 1 and 7.

5. *Novelty and inventive step*

5.1 The claimed subject-matter is novel. Novelty was not disputed.

5.2 Both parties agree that the closest prior art is the prior art acknowledged to be known in the introductory part of the patent specification (column 1, line 19 to column 2, line 43). In this prior art the gate comprises a structural loop made of stainless steel or galvanized steel including significant quantities of magnetically conductive material, this structural loop forming a magnetically conductive loop interfering with the operation of the animal identification system.

5.3 The subject-matter of independent claim 7 differs from this prior art essentially in that

(i) the gate includes magnetically conductive material without forming a magnetically conductive loop within the electromagnetic field of the identification system, and

(ii) the gate forms one or more structural loop including not only magnetically conductive material but also non magnetic material so that the loop is not magnetically conductive.

The measure according to item 5.3.(i) represents a step which results in avoiding the creation of a structural (closed) loop which is magnetically conductive so that there is no interference with the electromagnetic field of the identification system.

The measure according to item 5.3.(ii) represents a further step which results in providing a structural (closed) loop which ensures a sufficient strength of the gate without forming a magnetically conductive loop.

Therefore, the technical problem to be solved by the present invention may be seen in providing a gate which can be placed adjacent to the electromagnetic field of the identification system without interfering with its operation (first aspect of the problem), this being achieved without weakening the gate structure (second aspect of the problem).

5.4 Appellant I essentially asserted that the subject-matter of independent claim 7 does not involve an inventive step by arguing as follows:

(i) The skilled person analyzing the gate according to the closest prior art would immediately discover the inconveniences of this gate which are due to the interference of a magnetically conductive loop with the electromagnetic field of the identification system. Thus, the formulation of the technical problem does not contribute to the inventive merits of the solution.

(ii) The skilled person confronted with the problem to be solved knows that synthetic resin or aluminium gates have been unsatisfactory (as indicated in column 2, lines 24 to 29 of the description of the patent). Thus, the skilled person - on the basis of his general knowledge and without exercising any inventive skill - would immediately arrive at a gate made of magnetically

conductive material and non-magnetic material so as to prevent formation of a magnetically conductive loop.

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

- The skilled person confronted with a problem concerning the efficiency of the animal identification system has to realize firstly that the efficiency of the identification is negatively influenced by the interference between the magnetically conductive loop of the gate and the electromagnetic field. This means that the problem to be solved concerns the relationship between the gate and the electromagnetic field of the animal identification system.

- Then, the skilled person has to perform a second step of choosing to modify the structure of the gate without acting on the animal identification system and without changing the relative position of the gate which remains adjacent to the animal identification system

- Moreover, the skilled person needs a third step consisting in the measure according to item 5.3.(i) above. This third step could easily be performed by "opening" the structural loop of the gate according to closest prior art so as to avoid the formation of a magnetically conductive loop.

- If the skilled person were to perform these three steps without exercising any inventive skill, he

would improve the efficiency of the animal identification system and solve the first aspect of the problem. However, a further step would still be needed in order to arrive at the claimed subject-matter, this further step consisting in the measure according to item 5.3.(ii) above. This further step represents the solution of the second aspect of the problem that is to prevent weakening of the gate structure and failure of the gate to fulfil its duty of controlling animal movements.

- The two aspects of the problem are not independent from each other in so far as the second aspect arises only when the first one has been solved.

- Moreover, the skilled person trying to solve the second aspect of the problem is not in "one-way street" situation leading him in a compulsory way to the claimed solution. Other solutions are possible which ensure a sufficient strength of the gate without using non-magnetic material, for instance a gate having an "open" loop of increased size or made of a more resistant magnetically conductive material, such as steel of a better quality.

Therefore, the skilled person starting from the closest prior art would not arrive on the basis of his general knowledge to the subject-matter of claim 7.

5.5 During the written phase of the proceedings, appellant I also argued that the skilled person would combine document US-A-4 513 690 (D2) with the closest prior art and arrive in an obvious way to the subject-matter of claim 7.

The board cannot accept this argument of appellant I because document D2 does not concern a gate adapted to be moved in a magnetic field. This document does not provide any indication of the first aspect of the problem to solved. Therefore the skilled person would disregard it when searching for a solution to his problem.

5.6 The subject-matter of claim 1 differs from the closest prior art not only by the measures according to items 5.3.(i) and 5.3.(ii) above but also by the specific features of the non-magnetic coupling means (see for instance feature D2). Therefore, the considerations in sections 5.4 to 5.5 above apply *a fortiori* for claim 1.

5.7 Having regard to the above considerations, the ground for opposition according to Article 100(a) EPC does not prejudice the maintenance of the patent on the basis of the independent claims 1 and 7.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to maintain the patent on the basis of the following documents:

   - claims 1 to 14 filed during the oral proceedings on 15 April 2005;

   - description, columns 1 to 4 filed during the oral proceedings on 15 April 2005 and columns 5 to 8 of the patent specification;

   - Figures 1 to 5 of the patent specification.

The Registrar: The Chairman:

G. Magouliotis M. Ceyte