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Datasheet for the decision of 7 May 2021

Case Number: T 0809/17 - 3.3.09

Application Number: 10801148.7

Publication Number: 2519110

IPC: A23B4/01, A23B4/015, A23L1/025, A23L1/325

Language of the proceedings: EN

Title of invention:
PROCESSING OF FISH

Patent Proprietor:
Marel Iceland EHF

Opponents:
Nordischer Maschinenbau
Rud. Baader GmbH + Co. KG

Headword:
Processing of fish/NORDISCHER MASCHINENBAU

Relevant legal provisions:
EPC Art. 56, 100(a)

Keyword:
Claim 1 as granted: Inventive step - (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

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Case Number: T 0809/17 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 7 May 2021

Appellant: (Opponent)	Nordischer Maschinenbau Rud. Baader GmbH + Co. KG Geniner Strasse 249 23560 Lübeck (DE)
Representative:	Stork Bamberger Patentanwälte PartmbB Meiendorfer Strasse 89 22145 Hamburg (DE)
Respondent: (Patent Proprietor)	Marel Iceland EHF Austurhraun 9 210 Gardabaer (IS)
Representative:	Patentgruppen A/S Aaboulevarden 31, 4th Floor 8000 Aarhus C (DK)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 31 January 2017 rejecting the opposition filed against European patent No. 2519110 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	A. Haderlein
Members:	A. Veronese
	E. Kossonakou

Summary of Facts and Submissions

I. The appeal was filed by the opponent (appellant) against the opposition division's decision rejecting the opposition filed against European patent No. 2 519 110 B1.

II. With its notice of opposition the opponent had requested revocation of the patent in its entirety, *inter alia*, on the grounds under Article 100(a) EPC (lack of inventive step).

III. Claim 1 of the patent as granted reads:

"*1. Method of processing of fish, said method comprising the steps of*

- *providing a live fish,*
- *slaughtering the fish,*
- *subjecting the fish or part of the fish to an electrical stimulation prior to at least a further processing step of the fish or part of the fish, and*
- *wherein said at least one further processing step comprises the step of removing pin-bones from the fish or part of the fish.*"

IV. The documents submitted during the opposition proceedings included:

D1: JP 02023828 A
D1a: Translation of D1
D2: US 2004/0022930 A1

V. In its decision, the opposition division found, *inter alia*, that the subject-matter of claim 1 involved an inventive step over a combination of the teaching of D2 and D1. D2, the closest prior art, related to the provision of raw fish meat products having high sensorial and textural quality and low bacterial counts. D1 related to the provision of fish having a flesh exhibiting high freshness and tenderness. The skilled person would not have combined the teaching of these two documents.

VI. The arguments of the appellant relevant for the present decision were as follows.

D2, the closest prior art, taught that removing pin-bones from slaughtered fish was difficult before and during rigor mortis (hereinafter "rigor") and, furthermore, that the removal of pin-bones became progressively easier with the maturation of the meat and the resolution of rigor. The underlying problem was one of how to facilitate the removal of pin-bones from fresh fish after slaughtering. Confronted with this problem the skilled person would have considered subjecting fresh fish to an electrical stimulation, which according to D1 accelerated the softening and maturation of its meat. Taking into account this teaching, the skilled person would have arrived at the claimed solution without exercising inventive step.

VII. In its reply to the appellant's statement of grounds of appeal, the patent proprietor (respondent) did not address the appellant's arguments. It only stated that:

"*It is requested that the appeal be dismissed and that the patent is maintained in unamended form in*

accordance with the Decision of the Opposition Division dated 31 January 2017.

It is submitted by the Patent Proprietor that all arguments submitted in connection with the opposition, cf. e.g. the Written Submissions dated 23 September 2016, including claims relating to auxiliary requests, and the response of 23 March 2015 to the Opposition Division, are relied upon in connection with the appeal."

VIII. In a communication issued in preparation for the oral proceedings summoned for 7 May 2021, the board noted that neither the arguments nor the requests submitted by the respondent during the opposition proceedings were part of the respondent's case.

IX. Oral proceedings took place before the board as scheduled. As announced in writing, the respondent was not represented during the oral proceedings.

Final requests

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

XI. The respondent requested that the appeal be dismissed.

Reasons for the Decision

1. *Inventive step*

1.1 Claim 1 of the granted patent defines a method for processing fish in which the pin-bones are removed from the fish or from a part of the fish after slaughtering. The method includes a step in which the fish or part of the fish is subjected to an electrical stimulation.

1.2 Pin-bones are relatively thin bones extending sideways from the fish backbone and into the muscle tissue (see paragraph [0004] of the patent). They are anchored into the muscular system and give it more stability.

1.3 When describing the background of the invention, the patent acknowledges that the removal of pin-bones is a major challenge and that it is well known that their removal pre-rigor and during rigor is particularly difficult, because in these stages the pin-bones are firmly bound to the muscular tissue. Further, the energy of the muscles is gradually released during rigor, rendering the removal of pin-bones easier post-rigor. Removal post-rigor is considered the common practice, see paragraphs [0005] and [0006].

1.4 According to the patent, the removal of pin-bones can be facilitated if the fish or part of it is subjected to an electrical stimulation. This is said to accelerate the resolution of rigor and to loosen the binding between the pin-bones and the muscular system, allowing the removal of pin-bones before the onset of rigor.

1.5 D2, which focuses on the removal of pin-bones during the processing of fish fillets, is considered as the closest prior art. Like the patent, D2 acknowledges that the removal of pin-bones is difficult before and during rigor, when the meat becomes stiffer, but becomes easier after resolution of rigor because the pin-bones become less firmly bound to the surrounding tissue, paragraphs [0002], [0004] and [0034]. Further, removing pin-bones immediately after catch would be advantageous to obtain fresh products having an improved sensorial and textural quality, paragraph [0011]. According to D2, the removal of pin-bones from fish fillets in the pre-rigor stage is possible by cutting out the part of the meat containing the pin-bones or cutting the fillet so as to expose the pin-bones, which are then pulled out. Some of the meat which is attached to them is also removed in this step, paragraphs [0024], [0028] and [0029].

1.6 D2 conveys the following information to the skilled person:

- The removal of pin-bones is difficult before the onset and until resolution of rigor.

- The natural maturation of the meat occurring during rigor is accompanied by a loosening of the binding between the pin-bones and the surrounding tissue, which renders the removal easier after rigor.

- By the time rigor has resolved, the sensorial and textural properties of fresh meat are compromised.

- The removal of pin-bones pre-rigor is possible by carrying out particular cutting and extraction

procedures; however, these suffer from the drawback that part of the meat is lost.

1.7 D2 does not mention electrical stimulation. This is the only feature distinguishing the method defined in claim 1 as granted from that disclosed in D2.

1.8 As to the effect caused by the distinguishing feature, the experiments described in the patent show that if a fish is subjected to an electrical stimulation after slaughtering and in the pre-rigor stage, the force necessary to extract the pin-bones from the fillets decreases significantly. This facilitates the removal of pin-bones before the onset of rigor, see paragraphs [0073], [0107] to [0111] and Figure 9.

1.9 Starting from D2, and taking into account the results shown in the patent, the underlying problem can be formulated as one of facilitating the removal of pin-bones from fish or part of a fish, before the onset of rigor.

1.10 Concerning obviousness, as observed by the appellant, in view of the teaching of paragraphs [0002], [0004] and [0034] of D2, when confronted with this problem the skilled person would consider D1, a document in the same technical area, which describes a method for softening and accelerating the maturation of fish meet by applying an electrical stimulation. As explained in D1, subjecting a fish to an electrical stimulation immediately after catch softens its meat and accelerates its maturation, without negatively effecting the sensorial properties of the meat, see claims 1 to 4, page 2, lines 3 to 5 and 18 to 24, page 3, lines 5 to 12, page 4, lines 1 and 24 to 26, and Example 1.

1.11 Taking into account the teaching of D1, the skilled person would consider applying an electrical stimulation to a fish, before subjecting it to the processing steps for removing pin-bones which are described in D2. The skilled person would actually expect the processes of cutting the fillets and pulling out the pin-bones described in D2 to be facilitated if the meat has been softened and has matured to reach the consistency which is typically observed post-rigor. Moreover, less meat will remain attached to the pin-bones when they are pulled out, minimising losses. Finally, the electrical stimulation will not negatively affect the sensorial properties of the meat.

1.12 For these reasons it is concluded that, when confronted with the underlying technical problem, the skilled person would have arrived at the claimed solution without the exercise of inventive ingenuity.

1.13 Therefore, the subject-matter of claim 1 does not involve an inventive step.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

A. Nielsen-Hannerup A. Haderlein

Decision electronically authenticated