Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 22 October 2018

Case Number: T 0086/15 - 3.2.04

Application Number: 09731700.2

Publication Number: 2268149

IPC: A22C21/00, A22C17/00, G01G19/14, G01G19/38, B07C5/16, G01G15/00, G01G19/387

Language of the proceedings: EN

Title of invention:
IN-LINE BATCHING

Patent Proprietor:
Marel Stork Poultry Processing B.V.

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

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0086/15 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 22 October 2018

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 Stork Poultry Processing B.V. Handelstraat 3 5831 AV Boxmeer (NL)
Representative:	EP&C P.O. Box 3241 2280 GE Rijswijk (NL)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 13 November 2014 concerning maintenance of the European Patent No. 2268149 in amended form.**

Composition of the Board:

Chairman C. Heath
Members: J. Wright
S. Oechsner de Coninck

Summary of Facts and Submissions

I. The appellant-opponent lodged an appeal, received 12 January 2015, against the interlocutory decision of the Opposition Division posted on 13 November 2014 concerning maintenance of the European Patent No. 2268149 in amended form, and paid the appeal fee at the same time. The statement setting out the grounds of appeal was filed on 20 March 2015.

II. The opposition was filed against the patent as a whole and based, *inter alia*, on Article 100(a) together with Articles 52(1) and 56 EPC for lack of inventive step. The opposition division held that the patent as amended met all the requirements of the EPC. *Inter alia* the division found that the subject matter of claim 1 as amended involved an inventive step, Article 56 EPC, having regard to the following documents, amongst others:

E1: US-A-4372099
E3: W0-A1-2005/095904

III. The appellant-opponent requests that the decision be set aside and that the patent be revoked.

The respondent-proprietor requests that the appeal be dismissed.

IV. Oral proceedings before the Board were held on 22 October 2018.

V. Claim 1 according to the main request (as maintained) reads as follows:

"Installation for processing slaughtered animal parts of slaughtered animals and forming batches each containing one or more slaughtered animal parts, which installation comprises:

- a conveying system with a single conveying device (1) or with a plurality of conveying devices, wherein each conveying device comprises:

- an endless conveyor track which follows a path (2),

- a large number of product carriers (3), which product carriers are coupled to the conveyor track in a hanging manner, wherein the product carriers are each configured for carrying one or more slaughtered animal parts, and

- drive means for displacing the product carriers in a direction of conveyance along the conveyor track,

wherein in the case of a plurality of conveying devices, there is provided between two conveying devices a transferring device which is configured to receive one or more slaughtered animal parts from a product carrier of a conveying device and to transfer it/them to a product carrier of the other conveying device,

- at least one slaughtered animal treatment device (10,11,12) which is positioned along the path of a conveying device and is configured to subject at least some of the passing slaughtered animal parts to a physical treatment,

- a first weighing device (20), which first weighing device is positioned along the path of a conveying device and is configured for determining the weight of the one or more slaughtered animal parts carried by a product carrier,

- an installation control device (30) comprising:

- slaughtered animal part position determining means which pertain to the conveying system and know substantially continuously the position of each slaughtered animal part in the conveying system,

- memory means wherein, for each slaughtered animal part in the conveying system, at least one memory field is present for the weight, determined by the first weighing device (20), of the slaughtered animal part,

- a batching device (40) which is positioned along the path of a conveying device for forming batches each containing one or more slaughtered animal parts, which batching device has a plurality of unload positions along the path of the conveying device,

wherein the batching device is coupled to the installation control device and is configured for selecting, on the basis of an associated batching algorithm, an unload position for the one or more slaughtered animal parts carried by a product carrier, wherein there is present in each unload position a collecting holder (42) wherein unloaded slaughtered animal parts are collected until the batch is complete,

wherein the batching algorithm is configured for assembling the batches on the basis of one or

optionally more different batching parameters, wherein the weight, as stored in the memory means of the installation control means, serves as the first batching parameter,

wherein a portion of the conveying system that is located directly upstream of the batching device forms a buffer section, the beginning of which is defined by the place at which, for each passing product carrier, each batching parameter of the one or more slaughtered animal parts carried by the product carrier is known in the installation control device and is available for the batching algorithm, so that the unload position is selectable on the basis of the batching algorithm, and

wherein the length of the buffer section is such that at least 50, preferably at least 100 product carriers are present therein".

VI. The appellant-opponent argued as follows:

Claim 1 lacks an inventive step starting from E1 in combination with the teaching of E3. The only difference between the subject matter of claim 1 and E1 is that the buffer contains 50 or more product carriers. The objective technical problem associated with this difference is to modify E1 to make it easier to achieve a high yield. E3 offers a solution to this problem, namely to expand the buffer into a large number of product carriers, and 50 or more is such a large number. Therefore the skilled person would combine the teachings of E1 and E3 and so arrive at the subject matter of claim 1 in an obvious manner.

VII. The respondent-proprietor argued as follows:

E1 does not disclose a buffer as claimed, let alone one with 50 or more product carriers. Nor does E1 disclose an algorithm as claimed. The skilled person would not combine the teachings of E1 and E3 because E3 is a compact stand alone batching solution which relies on recirculating products. Even if the skilled person did make such a combination they would not arrive at a buffer having 50 product carriers because E3 teaches to use a lower number such as 3 as shown in figure 7 of that document.

Reasons for the Decision

1. The appeal is admissible.

2. Background

The patent relates to an installation for processing animal parts of slaughtered animals and forming these into batches (published specification, paragraph [0001]). According to the invention, the installation has a conveying device and a batching device with a plurality of unload positions along the path of the conveying device. A batching algorithm calculates the selection of the unload positions according to at least the weight of individual parts. (published specification, paragraphs [0015] and [0018]). Furthermore, a portion of the conveying system that is located directly upstream of the batching device forms a buffer section (published specification, paragraphs [0017], [0056] and [0057]).

3. Main request, claim 1, inventive step starting from E1

3.1 E1 discloses (see abstract and column 4, line 39 to column 6, line 28 and figure 1, part with overhead conveyor 50) an installation for processing slaughtered animal parts. The animal parts are formed into batches of more than one slaughtered animal parts (see column 5, lines 45 to 59). The installation (here the Board considers the conveyor part 50 in isolation) comprises a single conveying device 50 with an endless conveyor track which follows a path (figure 1, clockwise path).

Implicitly, the conveying device, with its long track length, has a large number of product carriers. These carriers are shackles (column 4, line 41), so they hang from the conveyor track and each is configured to carry one or more slaughtered animal parts (carcass with or without giblets - column 5, lines 20 to 24). The conveying device 50 is driven and so must have a drive means.

Since the Board is considering the conveyor 50 as an installation in isolation, whether or not E1 also discloses transferring devices between conveyor lines (cf. claim 1 as maintained, in the alternative with a plurality of conveying devices) can be left undecided.

The line 50 comprises a slaughtered animal treatment device (giblet stuffing device 66, see column 5, lines 20 to 24) that is positioned along the path of the conveying device and which subjects the passing slaughtered animal parts to a physical treatment (giblet stuffing).

The line 50 also comprises a weighing device (column 5, lines 53 to 59 with figure 1, scale 67) positioned

along the path of the conveying device and that determines the weight of the animal parts.

The arrangement likewise comprises an installation control device (central processor, see column 4, lines 44 to 48 with figure 2) comprising:

- a slaughtered animal part position determining means pertaining to the conveying system and knowing substantially continuously the position of each slaughtered animal part in the conveying system (counting from zero shackle sensors 52 and 58),

- memory means (see column 5, lines 24 to 31 with figure 2), wherein, for each slaughtered animal part in the conveying system, at least one memory field is present for the weight determined by the weighing device 67.

The installation furthermore comprises a batching device (see column 5, lines 45 to 59 with figure 1, drop stations 64 A to G) for forming batches of more than one slaughtered animal part. The batching device has a plurality of unload positions (A to G) along the path of the conveying device and is coupled to the installation control device (column 5, lines 61 to 65 and column 6, lines 23 to 28 - the central processor controls batching). A collecting holder is present in each of the unload positions (as shown in figure 1, stations 64 A to G are separated receptacles, so each has a collection holder). Slaughtered animals are collected until a batch is complete (see column 5, lines 53 to 61).

3.1.1 Contrary to the respondent-proprietor's opinion, the Board considers that the batching algorithm of E1 is as claimed. Batches are assembled using a batching algorithm that uses, *inter alia*, the batching parameter of weight, as stored in the memory means. As explained by an example (column 6, lines 5 to 16), whether or not a bird is dropped at station 64A depends, *inter alia*, on its weight and the average weight of the birds already dropped. Thus the batching parameter weight determines how batches are assembled. As already explained, the central processor controls batching so batching is achieved by means of a batching algorithm using the weight data stored in the memory means.

Furthermore, the Board considers that the algorithm is configured for selecting an unload position for the one or more slaughtered animal parts carried by a product carrier (shackle). This can be seen from E1's example of batching (column 5, lines 53 to column 6, line 4). Birds are "selectively dropped" at the locations 64A, B and C, and the "selection" is made by the central processor, such that stations are sequentially filled. Thus, the batching algorithm selects where to unload each carcass, firstly on the basis of weight - a bird may be accepted or rejected at a certain location - and secondly on the basis of which unload position, for a given order, is to be filled according to a sequence. Thus, the control device is configured for selecting, on the basis of the algorithm, where to drop each bird.

3.1.2 In claim 1 (see penultimate feature), the buffer section is (as summarised by the Board) a section of conveyor carrying animal parts which have been weighed but which have not yet reached the batching device, the weight data being available to the batching algorithm.

In the Board's view, E1 discloses such a buffer section.

E1 (see figure 1) has a weighing scale 67 upstream of the batching device 64 A to G where stuffed birds are batched. It is not in dispute that on the relatively long run of conveyor 50 between scale 67 and batching station 64, a plurality of animal parts will be hanging.

As an animal part passes the scale 67, it is weighed. This data is passed to the installation control device (see column 5, lines 24 to 31 with figure 2). Thus, it becomes available to the batching algorithm (column 5, lines 53 to 57 and column 6, lines 8 to 16). Thus E1 discloses a buffer arranged as defined in claim 1, albeit of undefined length.

3.1.3 The respondent-proprietor has argued that the algorithm does not interact with the buffer as claimed. In particular, they argue that E1's algorithm does not use the full potential of all available weight data in the buffer to minimising over-weight when it selects a dropping location (cf. E1, column 6, lines 16 to 22), which, so their argument goes, is the case in claim 1. The Board takes a different view.

Other than defining the [weight data of the] buffer portion to be available to the batching algorithm (as is also the case in E1), the claim is silent as to how the batching algorithm interacts with the buffer. Therefore, whether the algorithm of E1 uses all the weight data available to it when selecting at which location to drop an animal part, or merely the weight data of the part that has just arrived at the batching

device as the respondent-proprietor argues, plays no role when reading E1 onto claim 1.

3.1.4 However, it is not in dispute that E1 does not disclose the length of buffer section to be such that at least 50 carriers (shackles) are present therein as claimed. As already explained (see figure 1 again), although there must be a plurality of carriers between the scales 67 and batching device 64, E1 does not say how many there are.

Therefore, in the Board's view, the sole difference between the subject matter of claim 1 and E1 is the length of the buffer being defined as having at least fifty carriers.

3.2 According to the patent (see published specification, paragraph [0057]), making the buffer section such that there are 50 product carriers means that the batching algorithm can easily obtain a high yield (that is to say, assemble batches of the intended composition, for example having the intended target weight).

3.2.1 The batching algorithm of E1 (see column 6, lines 8 to 20 again) already achieves a relatively high yield in terms of minimising over-weight. *Inter alia* it selects which bird to drop off next based on the known weight of each bird arriving at a drop-off station and the average weight of birds already dropped off. According to E1, this algorithm achieves an over-weight within one half the weight-range of the birds to be batched.

3.2.2 Consequently, in the light of E1, and having regard to the single differing feature (50 carrier buffer), the problem can be formulated as how to modify the installation of E1 to make it easier to achieve batches with a high yield.

3.3 Tasked with the above problem, the skilled person will be well aware of document E3 (see title and abstract) because it concerns packing articles, including animal parts, of non-uniform weights into batches having a sum weight in a predetermined range (paragraph bridging pages 4 and 5). Furthermore (see page 4, lines 23 to 25), E3 aims to produce batches with a high yield (in the words of E3, packages with as little over-weight as possible). The skilled person will therefore want to understand how E3 teaches to achieve this high yield.

3.4 E3 explains (page 5, line 15 to page 6 line 8 and page 6, lines 21 to 24) that in known batching systems articles are weighed, a batch is selected for them and they are physically added to the selected batch further down a conveyor, thus after a short delay. The skilled person will immediately recognise that this is much how batching is carried out in E1 (see above).

According to E3 (page 6, lines 13 to 20), a problem with these known systems is that they may allocate an article to a particular best choice position (batch) which, a little later, proves to have been a bad choice. This results in over-weight. E3 proposes (page 6, line 29 to page 7, line 23) to solve this problem "by delaying the decision and expanding the number of articles to be decided on from one at a time to a multiple of articles at the time". Put differently, E3 proposes to reduce overweight by allocating articles to batches from an expanded buffer of articles. Thus the

skilled person will see that E3 proposes a solution to the objective technical problem, and one that is applicable to the batching system of E1.

3.5 In more detail (page 7, lines 14 to 23), E3 proposes to use a computer [algorithm] to batch articles "on the basis of the weight of the recorded articles that are not yet positioned in one of the collection positions, and the content of the predetermined collection position". Moreover (page 8, lines 11 to 17), "it is advantageous that a high number of articles are not [yet] placed in the collection positions" - in other words a high number of articles should be weighed but not yet batched. Moreover (page 9, lines 8 to 14), exact batch combinations can be achieved "if the conveyor is long enough and holds a sufficient number of articles", so that "giveaway" [over-weight] is attractively low.

By way of example (see E3, page 15, line 1 to page 16, line 21 with figure 7), articles are weighed on a scale 1, move along a conveyor 3, before being allocated to batches in bins I to VI. By having a long buffer 21 (a long run-in 21 in the words of E3, see page 16, lines 19 to 21) a large number of articles are available for allocation.

From the above, the skilled person understands that the core of E3's teaching is to use an algorithm that builds batches by making use of weight data from a large number of pre-weighed but not yet batched articles [buffer]. The more articles in the buffer, the bigger the choice for making up batches so the higher the yield.

3.6 The Board holds that, on finding a solution to the objective technical problem (making it easier to achieve a high yield) in E3, the skilled person would, as a matter of obviousness, modify the installation of E1 by incorporating into it this core teaching of E3. In other words, they would expand the existing buffer of E1 to hold as many weighed articles as possible and use an algorithm processing this available weight data to produce high-yield batches (minimum over-weight).

3.7 The respondent-proprietor has argued that the skilled person would not make the above combination of E1 and E3's teachings, firstly because E3 discloses a compact stand alone batching system, rather than one integrated into a large installation as claimed, secondly because E3 discloses a conveyor belt based system, rather than one on which poultry are conveyed in a hanging manner and thirdly because E3 relates to a recirculating system so would only be applicable to batching systems in which non-allocated parts are recirculated. The Board does not find these arguments convincing.

3.8 As already explained, E1, from which the skilled person starts, already has a processing installation with integrated batching device (not a stand alone batching system) on an endless conveyor, along which animals are transported hanging (not on a conveyor belt) and E1 is not a recirculating installation (cf. E1, sentence bridging columns 5 and 6), which the respondent proprietor considers E3 to disclose. The above arguments turn on whether the skilled person would extract just E3's core idea of using a buffer with a large number of parts to be batched, and using an algorithm making use of these to build batches with minimum overweight and apply this to the installation of E1, without including the remaining features of the

batching device of E3 (stand-alone batching unit, conveyor belt etc.).

3.9 In the Board's view, the skilled person would do just this. The skilled person immediately sees that E3's core idea (algorithm making use of weight data from a long buffer) is applicable irrespective of whether the batching device is a dedicated compact unit or one of several in a large installation. In both cases batching simply works on a section of conveyor, whether or not items have been pre-processed on that conveyor or another. Similarly, the idea is applicable to any kind of conveyor. The algorithm is based on weight, and the buffer carries products of known weight regardless of whether these move along a conveyor belt or hang from an overhead track. Lastly, the above idea applies equally well to systems which re-circulate items for batching and those that do not. Irrespective of whether or not an item has already passed through the batching device, it is weighed at the beginning of the buffer and its data becomes available to the batching algorithm.

Therefore, faced with the objective technical problem, the skilled person would, as a matter of obviousness, modify the installation of E1 by incorporating just E3's core idea of using an expanded buffer and an algorithm that uses the weight data of all items in the buffer.

3.10 In expanding the buffer of E1's installation, the skilled person must inevitably define the length of the buffer, that is how many product carriers (with weighed but not yet batched animal parts) are to be in the buffer. In the Boards view, no inventive step can be

attributed to choosing this to be 50 product carriers or more as claimed.

3.11 As explained above, E3 teaches that, to solve the objective technical problem (high yield), the buffer should be chosen to have as many articles as possible. E3 also points out (page 8, lines 11 to 17) that this takes up more space. Therefore, the skilled person will simply choose a buffer having as many articles as the available space permits. The Board deduces that if there is enough space for a buffer of fifty or more articles then the skilled person will choose just such a buffer as a matter of routine.

3.12 Whether the buffer of E3 can be smaller if recirculating of articles is allowed (cf. E3, page 4, lines 17 to 25), as the respondent-proprietor has argued, plays no role in reaching the above deduction, since the skilled person starts from E1 (see sentence bridging columns 5 and 6 with figure 1) which does not recirculate articles for batching.

3.13 It may be that the skilled person realises from E3 (see page 16, lines 19 to 21 with figure 7, "run in [buffer] 21") that a buffer of just three items could improve yield somewhat. However, contrary to the respondent-proprietor's view, the Board does not consider that this would lead the skilled person to select a buffer size of 3 carriers when combining the teachings of E1 and E3.

This is because the skilled person is not mindlessly transposing any buffer they see in E3, for example that of figure 7, onto the installation of E1. Rather, they have their mind focused on maximising yield, in other words minimising over-weight. As already explained,

this requires the buffer to contain as many weighed items as space allows. In combining the teachings of E1 and E3 the skilled person would therefore ignore any specific number of items E3 may disclose and use a buffer containing as many product carriers as possible, the bigger the number used the lower the over-weight. If space permits, this would be fifty or more.

3.14 From the above, the Board concludes that by obvious combination of the teachings of E1 and E3 and applying routine skill, the skilled person would arrive at the subject matter of claim 1 in an obvious manner. Therefore the subject matter of claim 1 lacks an inventive step, so the main request must fail.

4. Since the respondent-proprietor's sole request fails, the Board must revoke the patent.

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:

G. Magouliotis C. Heath

Decision electronically authenticated