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Datasheet for the decision
of 11 March 2008

Case Number: T 1570/05 - 3.5.02

Application Number: 95930412.2

Publication Number: 0781172

IPC: B07C 5/18

Language of the proceedings: EN

Title of invention:
Method and apparatus for weight controlled portioning of
articles having non-uniform weight

Applicant:
Scanvaegt A/S

Opponent 01:
Meyn Food Processing Technology B.V.

Former Opponent 02:
Delford Sortaweigh Ltd.

Headword:
-

Relevant legal provisions:
EPC Art. 123(2),(3), 84

Keyword:
"Admissibility of late-filed amendments - yes"
"Added subject-matter - no, main request"
"Clarity - yes, main request"

Decisions cited:
-

Catchword:
see sections 11.2 and 11.3 of the reasons

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Case Number: T 1570/05 - 3.5.02

D E C I S I O N
of the Technical Board of Appeal 3.5.02
of 11 March 2008

Appellant: Scanvaegt A/S
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Representative: Bayliss, Geoffrey Cyril
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Decision under appeal: **Decision of the Opposition Division of the
                            European Patent Office posted 24 October 2005
                            revoking European patent No. 0781172 pursuant
                            to Article 102(1) EPC.**

Composition of the Board:

Chairman: M. Ruggiu
Members: M. Rognoni
                   P. Mühlens

Summary of Facts and Submissions

I.   The patent proprietor (appellant) appealed against the
        decision of the opposition division revoking European
        patent No. 0 781 172.

II.   In the contested decision, the opposition division held,
        inter alia, that the deletion of the feature concerning
        a calculation of a preference by statistical
        probability calculations from the original claim 1 had
        no basis in the application documents as originally
        filed. Therefore, the subject-matter of claim 1 of the
        contested patent extended beyond the content of the
        original application (Article 123 (2) EPC).

III.   With a letter dated 6 November 2006, the representative
        of the opponent 02 (Delford Sortaweigh Ltd.) informed
        the Board that he had been instructed to withdraw the
        submissions made in response to the present appeal and
        the opposition filed against the grant of the patent in
        suit. Besides, the opponent 02 did not wish to have any
        further part in the opposition proceedings.

IV.   In reply to a communication from the Board accompanying
        the summons to oral proceedings, the appellant filed,
        with a letter dated 25 February 2008, new sets of
        claims by way of a main request and first, second and
        third auxiliary requests.

V.   Oral proceedings before the Board were held on 11 March
        2008.

VI.   The appellant requested that the decision under appeal
        be set aside and, as a main request, that the case be

remitted to the first instance for further prosecution
on the basis of claim 1 of the main request filed in
the oral proceedings and claims 2 to 28 of the main
request filed with the letter of 25 February 2008.

The respondent (opponent 01) requested that the appeal
be dismissed.

VII. Claim 1 according to the appellant's main request reads
as follows:
    "A method of accumulating articles having
different weights into plural batches wherein each
completed batch comprises a plurality of articles and
has a sum weight within a predetermined weight range,
the method comprising:
    weighing the single articles;
    using a computer to keep track of the articles
according to their weights and to calculate a
preference for each article to control the allocation
of the articles to make up the batches, and the method
being characterised in that an historical frequency
distribution of article weights is established from the
weights of the articles so weighed, which is a factual
weight distribution of a substantial number of newly
weighed articles, and based thereon, said computer
calculates said preferences by statistical probability
calculations and allocates said articles to make up the
batches in dependence upon said historical frequency
distribution in order to generally enhance the
probability of the batches being built up to a target
weight, said established frequency distribution being
updated to take account of a change in the factual
weight distribution of the incoming articles to be
batched."

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Claims 2 to 25 are dependent on claim 1.

Claim 26 reads as follows:

"A batching system adapted and arranged to carry out a method as claimed in any of the preceding claims."

Claim 27 is dependent on claim 26.

Claim 28 reads as follows:

"A computer program which when loaded into a computer will enable it to operate in a batching system as claimed in claim 26."

In view of the tenor of the present decision, there is no need to quote the wording of the independent claims of the auxiliary requests.

VIII. As to the admissibility of claim 1 of the main request, the appellant essentially argued that the amendments made in the oral proceedings to claim 1 according to the main request filed with the letter of 25 February 2008 addressed specific issues which were first raised by the respondent and the Board during such proceedings. The late filing of the amendments was thus a legitimate attempt on the part of the patent proprietor to defend the patent in suit.

Furthermore, the amended claim 1 complied with the requirements of Articles 84 and 123 (2) EPC because it was fully supported by the application as originally

filed and defined in a clear and complete manner the
method of the invention.

IX.   The respondent's arguments relevant to the present
       decision can be summarized as follows:

       Claim 1 submitted by the appellant in the oral
       proceeding raised a number of new issues concerning
       added subject-matter and clarity and thus rendered the
       present case more complex. Furthermore, as the
       appellant had already been given many opportunities to
       modify the previous requests and file new requests,
       there was no reason to admit further amendments at such
       a late stage in the appeal proceedings.

       Claim 1 of the main request specified that a
       "*historical frequency distribution*" corresponded in
       fact to a "*factual weight distribution of a substantial
       number of newly weighed articles*". However, the
       definition of an undisclosed expression provided
       information which clearly extended beyond the content
       of the application as originally filed.

       As to the last feature of the claim, it related to the
       step of updating the established frequency distribution
       to take account of changes in the weights of the
       incoming articles. However, the step of establishing a
       weight distribution by continuously monitoring and
       recording the weights of the incoming articles, on
       which the contested patent relied, implied also the
       continuous updating of the weight distribution. It was
       thus not clear whether the amended claim contained a
       repetition of an intrinsic step of updating according
       to the present invention, or whether such claim

referred to a different and undisclosed manner of updating the *"established frequency distribution".*

Furthermore, according to claim 1, the computer allocated the articles merely in dependence upon the historical frequency distribution, whereas the application as originally filed made clear that the allocation of an article to a bin was based on the frequency distribution of the article weights and a *"preference"* calculated for each incoming article*.*

As claim 1 of the main request lacked clarity and contained subject-matter which was not originally disclosed, it violated Articles 84 and 123 (2) EPC.

Reasons for the decision

1.   The appeal is admissible.

Admissibility of claim 1 filed in the oral proceedings

2.1   Claim 1 according to the appellant's main request is based on claim 1 of the main request filed with the letter dated 25 February 2008 and includes amendments relating to the definition of the *"historical frequency distribution"* and to the step of updating the established frequency distribution.

The Board agrees with the appellant that these amendments are essentially directed to addressing specific objections under Articles 84 and 123 (2) EPC, which were first raised in the oral proceedings before the Board, and that the subject-matter now claimed is

not substantially different from the method according
to claim 1 of the previous main request.

2.2   In the exercise of its discretion, the Board thus
decides to admit the amended claim 1 according to the
appellant's main request into the appeal proceedings.

Subject-matter of the original application

3.1   According to the application as filed and published
(WO-A-96/08322) the present invention relates to a
"*Method and apparatus for weight controlled portioning
of articles having non-uniform weight*" (page 1, lines 1
and 2; all quoted passages are from the application as
published).

An essential problem in the food-processing industry is
to obtain portions consisting of a <u>predetermined number
of parts</u> (such as pieces of fish, meat or poultry)
which add up to a given weight, in particular when the
weight distribution of the individual pieces is non-
uniform or changing (page 1, lines 3 to 12).

In order to solve this problem, it can be assumed that
the weights of the parts to be portioned have a 'normal
distribution', *i. e.* the largest number of parts have a
respective weight corresponding to the mean value of
the weight distribution, whereas the spread of weight
distribution on either side of the mean value is
symmetrical. Hence, "*parts with a weight above and
below the average, respectively, are brought together
to make part portions which in order to fill to the
desired weight need only one or a few parts which have
the average weight*" (page 3, lines 1 to 5).

However, as pointed out in the description (page 3, lines 23 to page 4, line 1), both the mean value and the spread of the weight distribution of parts to be portioned may fluctuate, while the actual weight distribution may not correspond to a normal distribution.

3.2   The present invention is based on the realization (page 5, last two lines to page 6, line 5) "*that whatever the starting conditions are, the first higher number of individually weighed articles will be indicative of some factual weight distribution, which can be assumed to be maintained in the future*".

In other words, it is possible to "*create a specific picture of the factual weight distribution without relying on any predetermined or preexpected distribution curve based on general statistics*" (page 6, last line to page 7, line 3).

3.3   The application (page 6, lines 6 to 9) proposes "*to arrange for a control unit keeping track of the weights of a plurality of previous articles for determining the factual weight distribution of the received articles*".

An aspect of the present invention consists therefore in recording the weights of a number of consecutive parts in order to "*form a histogram or a similar representation of the number of parts located within narrow weight ranges*" (page 7, lines 9 to 11).

"*Based on the histogram it is easy to calculate the probability of the occurrence of parts in the*

individual weight groups, and it is correspondingly easy to determine which two parts should be brought together in order to form a basic sub portion qualified to be completed with parts, not necessarily of any average weight, but otherwise being predominantly present in the supply flow in order to make up a portion of the desired total weight" (page 8, lines 17 to 25).

3.4   The results of the analysis of the weight distribution of the incoming parts can be used in two different ways, namely (see page 8, lines 26 to 34) "*in deciding for which bin or bins any new part will be suitable*", or "*in deciding whether that particular part is suited better for one than for others of these bins, instead of the conventional designation of the parts just to the first available recipient calling for or accepting a new part of a specific weight subrange.*"

         The probability of a particular bin reaching the target weight is assessed under the assumption that a particular incoming part is added to it and in the light of the weight distribution derivable from the histogram of the recorded part weights (see page 8, line 35 to page 9, line 4).

         This can be done by calculating "*how an allocation of the new part for that bin would affect the probability of the bin to thereafter be successfully filled to target weight, IF the part be delivered to that bin*" (page 14, lines 1 to 6).

3.5   In summary, the gist of the present invention consists in using the weight distribution of the incoming items,

established on the basis of a sample of newly weighed
articles, in order to calculate the probability for a
bin to achieve its target weight when the item under
consideration is added to it, and in allocating such
item to a bin on the basis of such probability
calculations.

Article 123 (2) and (3) EPC

4.1   Claim 1 according to the appellant's main request
       differs from claim 1 of the contested patent in that it
       further comprises the following features:

       (a)   "*weighing the single articles*",

       (b)   using a computer "*to calculate a preference for
             each article*",

       (c)   an historical frequency distribution is
             established "*from the weights of the articles so
             weighed, which is a factual weight distribution of
             a substantial number of articles and*",

       (d)   "*based thereon, said computer calculates said
             preferences by statistical probability
             calculations*",

       (e)   and allocates said articles…."*in order to
             generally enhance the probability of the batches
             being built up to a target weight*",

       (f)   "*said established frequency distribution being
             updated to take account of a change in the factual*

weight distribution of the incoming articles to be batched."

4.2   Feature (a) is supported by claim 1 as originally filed which is directed to a "*method of forming article portions of one or more predetermined weights based on a serial supply of articles to weighing means weighing the single articles*", and by page 9, lines 23 and 24 of the description which specifies that the "*invention is not limited to the use of a single feeding line, nor to the use of a dynamic weigher.*"

Feature (b) corresponds essentially to the following feature recited in claim 1 as originally filed:

"*whereby the computer is programmed so as to ….. calculate a preference for each newly weighed article..*".

Feature (d) corresponds to the last feature of the original claim 1 which reads as follows:

"*based thereon, calculating the said preference by statistical probability calculations*".

Feature (e) is specified in claim 1 as filed, (see page 16, lines 15 to 18 of the published application).

5.1   As to feature (c), the appellant has acknowledged that the expression "*an historical frequency distribution*" (emphasis added) does not appear in the original application documents. However, the word "*historical*" merely implied that a record of the weights of a number of previously weighed articles was kept and that the

factual weight distribution of such articles was in
fact the distribution used to calculate the allocation
preferences.

5.2   According to the respondent, the definition of a
      "*historical weight distribution*" as a "*factual weight
      distribution of a substantial number of articles*" was
      not provided in the application as originally filed and
      thus constituted added subject-matter.

5.3   It is specified in the description (page 6, lines 6 to
      12), that "*it is proposed by the invention to arrange
      for a control unit keeping track of the weights of a
      plurality of previous articles for determining the
      factual weight distribution of the received articles.
      Based thereon, it is possible to statistically
      calculate the probability of the incoming articles to
      fit into the already partly established portions...*"

      Furthermore (see page 7, lines 3 to 11), "*the weights
      of the incoming and currently weighed parts are
      methodically registered in a serial register….such that
      the different weights of a representative number of
      consecutive parts….are recorded in a manner that it is
      possible to form a histogram..*"

      "*according to the invention [the model of "expected
      probability"] is changed into a current analysis of
      "factual probability", based on the said histogrammic
      resolution of the observed weight distribution*"
      (page 8, lines 9 to 12).

      Thus, in the opinion of the Board, there can be no
      doubt that the "*historical frequency distribution of*

factual weighs" referred to in claim 1 of the granted
claim is established on the basis of the actual weights
of the incoming articles and that, as such, it
represents the factual weight distribution of a
substantial number of previously weighed articles.

5.4   As the definition of "*historical frequency
        distribution*" provided in claim 1 of the appellant's
        request is merely a clarification of the meaning that a
        skilled person, reading claim 1 as granted in the
        context of the whole disclosure, would attribute to
        such expression, feature (c) does not constitute added
        subject-matter.

6.1   As to feature (f), the respondent has essentially
        objected that the definition of the established
        frequency distribution as a factual weight distribution
        of a substantial number of articles according to
        feature (c) already implied a continuous updating of
        the data used to establish such frequency distribution.
        However, the wording of the claim gave the impression
        that the step of updating was carried out independently
        of the monitoring and recording of the weights of the
        incoming articles.

6.2   It is true that, as long as the weights of the incoming
        articles "*are methodically registered in a serial
        register basically of the FIFO type (First In, First
        Out)*" (see page 7, lines 5 and 6) in order to establish
        the weight distribution histogram referred to in the
        description (page 7, lines 22 to 30), the corresponding
        frequency distribution of article weights will be
        continuously updated. However, it is pointed out in the
        description (page 9, lines 10 to 19) that the

"*computer …. should also keep track of the histogram of the incoming parts, but this will be a less urgent matter because a noticeable change of the weight of, say, 10 – 20 new parts will not essentially change the histogram of e. g. 200 preceding parts. It is of course important to register such changes, but for the computer capacity it is very advantageous that these changes should not necessarily be registered immediately.*"

Thus, although an intrinsic updating of the weight distribution histogram occurs when the weights of the incoming articles replace older data in the FIFO register, the application as originally filed teaches that it is not necessary to update continuously the weight frequency distribution, and that such updating may occur occasionally when, for instance, "*a new histogram has been more or less stabilized*" (page 9, line 22).

6.3   As far as feature (f) implies that updating of the established frequency distribution can be stopped and resumed when there is a significant change in the factual weight distribution of the incoming articles, it relates to a possible operation of the method of the invention which, in the Board's opinion, is clearly supported by the application documents.

7.1   In summary all the features of claim 1 of the appellant's main request correspond to features recited in claim 1 as originally filed (see features (a), (b), (d) and (e) above) or specified in the description (see features (c) and (f) above). In fact, the subject-matter of claim 1 results from a combination of the

method of claim 1 as originally filed with a feature directed to clarifying that the historical weight distribution of article weights is simply a factual weight distribution, and with a feature relating to the possibility of updating such distribution.

A feature of claim 1 as originally filed which is not explicitly recited in claim 1 of the appellant's main request is that:

- "*the articles, now registered in a computer with respect to individual weight and position, are moved in a distribution system having means operated by said computer*",

7.2   However, according to the method of claim 1 of the appellant's request, a computer is used to keep track of the articles according to their weights and to allocate them to make up the batches. This necessarily implies that not only the weight but also the position of each article must be monitored by the computer, and that the computer controls a distribution system responsible for physically allocating the articles to the appropriate batches.

8.   In conclusion, the Board finds that claim 1 of the appellant's main request does not contain subject-matter which extends beyond the content of the application as originally filed (Article 123 (2) EPC), and that the amendments made to claim 1 of the granted patent do not extend the protection conferred (Article 123 (3) EPC).

Article 84 EPC

9.1   As to the question of clarity pursuant to Article 84,
        claim 1 now specifies the following salient aspects of
        the invention as disclosed in the original application
        documents:

        –   a substantial number of weighed articles is used
                to establish a historical frequency distribution
                of article weights, which is in effect a factual
                weight distribution of said number of articles
                (see features (a) and (c)),

        –   the frequency distribution is updated to take
                account of changes in the factual weight
                distribution of the weighed articles (feature (f)),

        –   a computer calculates, by statistical probability
                calculations, a preference for each article on the
                basis of the historical frequency distribution of
                article weights and controls the allocation of the
                articles (features (b) and (d)),

        –   the allocation of the articles aims at enhancing
                the probability of batches being built up to a
                target weight (feature (e)).

9.2   According to the respondent, it was not clear from the
        wording of claim 1 that the incoming articles were
        allocated according to the weight distribution and the
        calculated "*preferences*". In fact, the characterising
        portion of the claim merely specified that the computer
        allocated the articles to make up the batches "*in*

dependence upon said historical frequency distribution".

9.3   Because of the two-part form of claim 1, it is recited in the preamble that a computer is used "*to calculate a preference for each article to control the allocation of the articles to make up the batches*", while the characterising part specifies that the "*computer calculates said preferences by statistical probability calculations and allocates said articles to make up the batches in dependence upon said historical frequency distribution*".

The two statements in combination clearly imply that <u>both</u> the preferences and the historical frequency distribution of the article weights are involved in the allocation of the articles because the preferences, calculated by statistical probability, depend on the historical frequency distribution.

9.4   It could also be objected that the claim does not define any criteria for calculating the "*preferences*". However, as the stated purpose of the allocation of an article is to "*enhance the probability of the batches being built up to a target weight*", it should be clear to the skilled person, how to determine the preferred allocation of a specific article on the basis of fundamental concepts and laws of probability.

9.5   In summary, the Board considers that claim 1 defines in a sufficiently clear manner the subject-matter for which protection is sought (Article 84 EPC).

Claims 2 to 28

10.   Claims 2 to 25 relate to a method and are directly or
       indirectly dependent on claim 1. In the oral
       proceedings before the Board, the respondent did not
       raise any objections under Article 84 or Article 123 (2)
       EPC specifically directed against these dependent
       claims

       Under these circumstances and in view of the fact that
       the opposition proceedings are not concluded, the Board
       considers that it would not be expedient, at this stage
       in the proceedings, to examine whether all dependent
       claims comply with Articles 84 and 123 (2) EPC.

11.1   Claim 26 of the appellant's request relates to a
       "*Batching system adapted and arranged to carry out a
       method as claimed in any of the preceding claims*".

       Claim 7 of the application as originally filed is
       directed to a "*system for forming article portions of
       one or more predetermined weights*" and specifies that
       this system comprises "*means for weighing articles*",
       "*distribution means operated by a control unit*" and "*a
       control unit adapted to effect control in accordance
       with any of the preceding claims*".

       As the method of claim 1 according to the appellant's
       main request comprises the steps of weighing the single
       article, allocating the articles to the various batches
       and using a computer, it is implicit that a claim
       directed to a system adapted and arranged to carry out
       such method must comprise all the means recited in
       claim 7 of the application as originally filed.

11.2   Claim 28 is directed to a "*computer program which when loaded into a computer will enable it to operate in a batching system as claimed in claim 26*".

The application as originally filed specifies that the method of the invention can be carried out by means of a portioning machine "*known per se, but operable to work in accordance with the present invention*" (see page 9, last paragraph of the published application), and that the present invention is "*focussed on the programming of the computer or control unit 10 in order to provide for a highly improved performance of the batching system*" (page 11, lines 11 to 15). Furthermore, throughout the application, it is made clear that the portioning of articles according to the invention is controlled by a computer.

Thus, a person skilled in the art, reading the application as originally filed, understands that a computer program is essential for operating a batching system according to the present invention and that such a program is part of the original disclosure.

11.3   In summary, both claim 26 and claim 28 meet the requirements of Articles 84 and 123 (2) EPC.

12.   In the result, the Board comes to the conclusion that claims 1, 26 and 28 of the appellant's main request do not infringe Articles 123 (2) and (3) EPC and that their subject-matter is clear within the meaning of Article 84 EPC.

The case can thus be remitted to the department of first instance for further prosecution in accordance with the appellant's main request.

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 for further prosecution.

The Registrar: The Chairman:

U. Bultmann   M. Ruggiu