

**Internal distribution code:**

- (A) [ ] Publication in OJ  
(B) [ ] To Chairmen and Members  
(C) [X] To Chairmen

**D E C I S I O N**  
**of 3 February 2000**

**Case Number:** T 0828/95 - 3.3.2

**Application Number:** 88307446.0

**Publication Number:** 0311240

**IPC:** A21D 6/00

**Language of the proceedings:** EN

**Title of invention:**

A method of producing frozen dough

**Patentee:**

Rheon Automatic Machinery Co.Ltd.

**Opponent:**

A. Fritsch GmbH & Co. KG

**Headword:**

Frozen dough/RHEON AUTOMATIC MACHINERY

**Relevant legal provisions:**

EPC Art. 56

**Keyword:**

"Main request, first, third and fifth auxiliary requests"  
"Inventive step - no - determination of the closest state of  
the art"  
"Second and fourth auxiliary request - inventive step - no -  
arbitrary choice within the prior art teaching"

**Decisions cited:**

-

**Catchword:**

-



Europäisches  
Patentamt

European  
Patent Office

Office européen  
des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number: T 0828/95 - 3.3.2

**D E C I S I O N**  
**of the Technical Board of Appeal 3.3.2**  
**of 3 February 2000**

**Appellant:** A. Fritsch GmbH & Co.KG  
(Opponent) Bahnhofstr. 27 - 31  
D-97348 Markt Einersheim (DE)

**Representative:** Götz, Georg, Dipl.-Ing.  
Götz, Kuchler, Dameron  
Patent- und Rechtsanwälte  
Postfach 11 93 40  
D-90103 Nürnberg (DE)

**Respondent:** Rheon Automatic Machinery Co.Ltd.  
(Proprietor of the patent) 2-3, Nozawa-machi  
Utsunomiya-shi  
Tochigi-ken (JP)

**Representative:** Piésold, Alexander J.  
Frank B. Dehn & Co.  
European Patent Attorneys  
179 Queen Victoria Street  
London EC4V 4EL (GB)

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 31 July 1995  
rejecting the opposition filed against European  
patent No. 0 311 240 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

**Chairman:** P. A. M. Lançon  
**Members:** J. Riolo

M. B. Günzel  
U. Oswald  
C. Rennie-Smith

## Summary of Facts and Submissions

I. European Patent No. 0 311 240 based on application No. 88 307 446.0 was granted on the basis of 10 claims.

The independent claims as granted read as follows:

"1. A method of producing frozen dough for baking or frying to form bread, comprising the steps of:

- (a) mixing and kneading various materials such as yeast, water, sugar or flour required for producing a desired type of bread, to make dough having a gluten network,
- (b) stretching said dough while subjecting it to mechanically imparted vibrations such that a thixotropy effect appears in the dough and the gluten network in the dough is not damaged during this step,
- (c) cutting and shaping said dough into a desired form,
- (d) fermenting said dough, and
- (e) freezing said dough."

"10. A method of making bread using the frozen dough produced by a method as claimed in any preceding claim, comprising preserving the frozen dough for a desired length of time, and baking or frying the dough."

II. A notice of opposition was filed against the granted

patent by the appellant.

The patent was opposed under Article 100(a) EPC for lack of novelty and lack of inventive step.

The following documents were cited *inter alia* during the proceedings:

(1) EP-A-0145367

(7) US-A-4276317

(21) English translation of JP-A-49-41556

(22) English translation of JP-A-61-205437

(37) US-A-3 894 155

In order to demonstrate that the subject-matter of the patent in suit was available to the public before its priority date the opponent relied also on the content of a video tape called "Fritsch-Imagefilm" as well as on an alleged public prior use by the appellant and one of its customers, a Mr van Elsland.

III. The decision of the Opposition Division of 16 May 1995 posted on 31 July 1995 rejected the opposition under Article 102(2) EPC.

The Opposition Division took the view that the subject-matter of European Patent No. 0 311 240 met the requirements of Articles 52(1), 54 and 56 EPC.

As regards novelty, the Opposition Division was of the

opinion that the video tape could not be considered as prior art.

The Opposition Division considered also that no evidence was provided demonstrating that Mr van Elsland showed his process to third persons or informed them about it before the priority date of the patent in suit.

The compliance of the main claim with Article 54 EPC over the written prior art documents was also acknowledged by the Opposition Division.

Concerning inventive step, the Opposition Division took the view that document (1) was the closest state of the art.

The Opposition Division defined the problem to be solved as the provision of an alternative method which did not mandatorily require a proofing step before freezing and which allowed conventional freezing.

The problem was solved by the feature of step (b) of claim 1 of the patent in suit.

The Opposition Division considered that document (1) contained no hint that the step of stretching the dough might be of crucial importance. Document (7), which disclosed the feature of step b) of the patent in suit, could not be combined with document (1) as it was not dealing with dough **freezing**.

As a consequence, none of the cited prior art documents, rendered obvious the claimed subject-matter

of the patent in suit.

- IV. The appellant (opponent) lodged an appeal against the said decision.
- V. With respect to the alleged prior use, the Board decided to hear the appellant's witnesses subject to the outcome of the discussion of the written state of the art in the oral proceedings.
- VI. Oral proceedings were held on 3 February 2000 during which five auxiliary requests were filed by the respondent (patentee).

Claim 1 of these newly filed auxiliary requests corresponded to claim 1 as granted with the following amendments:

- in the first auxiliary request the sentence "wherein the steps are performed in the order stated" is added at the end of claim 1 as granted
- in the second auxiliary request the terms "frozen dough for baking or frying to form" are deleted in claim 1 as granted and a further step f) which reads "baking or frying the frozen dough to form bread" is added
- in the third auxiliary request the word "rapidly" is added at the beginning of step e) of claim 1 as granted
- in the fourth auxiliary request the terms "frozen dough for baking or frying to form" are deleted in



claim 1 as granted and a further step f) which reads "baking or frying the frozen dough to form bread wherein the steps are performed in the order stated" as well as the word "rapidly" at the beginning of step e) are added

- in the fifth auxiliary request step b) reads "stretching said dough **by imparting tension thereto** while subjecting **the dough** to mechanically ..." instead of the granted wording "stretching said dough while subjecting it to mechanically ...". (emphasis added)

VII. The appellant maintained the grounds of opposition under Article 100 (a) EPC as to the lack of novelty over the content of the promotional video tape and over the alleged public prior use of the invention of the patent in suit. Moreover, it filed inter alia the following document to support its submissions:

(37) US-A-3 894 155

As to the question of inventive step, the appellant argued that, having regard to the wording of claim 1 of the main and auxiliary requests and the evidence on file, the problem to be solved over (1) could only be defined as the provision of an alternative method for the preparation of bread.

Alternatively, starting from document (7), the problem to be solved would merely be the provision of a method for preserving dough. Having regard to documents (1) and (37), which disclosed freezing as a well-known method for doing that, the appellant concluded that the

solution provided by the patent in suit, ie freezing the dough, was to be regarded as obvious.

VIII. The respondent's arguments submitted both in the written procedure and at the oral proceedings can be summarised as follows:

Concerning the video tape (10), it pointed out that neither its content nor its date had been proved. It further maintained that the alleged public prior use was not substantiated.

As regards the inventive step objection, the respondent argued that document (1) which, like the invention of the patent in suit, addressed the problem of producing frozen dough suitable for baking without an intervening proofing step, provided an entirely different solution, ie special proofing and freezing steps. Moreover it did not contain the slightest suggestion that the way the dough was sheeted was important. Since document (7), disclosing a sheeting method according to claim 1 of the patent in suit was dealing with non frozen dough, the respondent contended that the skilled person would not consider such a document.

It disputed that (7) could be considered as the closest state of the art since it did not address the same technical objective as the present invention ie the production of frozen dough which can be baked immediately.

The respondent however contended that there clearly was an inventive step over this document as well. Since this document did not concern frozen dough, the

technical problem to be solved over (7), ie how to produce a frozen dough suitable for baking without an intervening proofing step, was not even remotely suggested therein.

It supported this argument by the observation that documents (1), (21), (22) and (37), which disclosed special measures for use in freezing proofed dough, showed a technical prejudice which would dissuade the skilled person from freezing the fermented dough of (7).

The respondent was therefore of the opinion that the subject-matter of the main request and of the auxiliary requests was inventive.

IX. The appellant (opponent) requested that the decision under appeal be set aside and that the European patent No. 311 240 be revoked.

The respondent (patentee) requested that the appeal be dismissed and that the patent be maintained as granted. As auxiliary requests the respondent requested that the decision under appeal be set aside and the patent be maintained on the basis of any of auxiliary requests 1 to 5 filed in the oral proceedings, in the numerical order indicated by the respondent.

## **Reasons for the Decision**

1. The appeal is admissible.

2. *Article 123(2) and (3) EPC*

No objection under Article 123(2) and (3) EPC was raised by the parties with respect to the set of claims as granted and to the sets of claims of the auxiliary requests 1 to 5 filed during the oral proceeding and the Board sees no reason to differ.

3. *Novelty*

Novelty, over the written documents, of claim 1 of the set of claims as granted and of the sets of claims of the auxiliary requests 1 to 5 was not contested by the appellant. The Board sees no reason to question the novelty over the **written** state of the art.

4. *Inventive step*

4.1 Main request (set of claims as granted)

4.1.1 Closest state of the art

The patent provides for a method of producing fermented frozen dough intended to be baked or fried in the frozen state. The subject-matter of claim 1 is however directed to the preparation of fermented frozen dough.

Document (7), relates to a method of producing fermented dough.

The respondent contested the choice of document (7) as starting point because it did not concern frozen dough and did therefore not address the same technical objective as the patent in suit ie how to produce a

frozen dough which is suitable for baking without an intervening proofing. It submitted that (1) was the closest prior art and the most appropriate starting point for the skilled person because it dealt with precisely this technical problem and because it had the greatest number of technical features in common with the contested process.

The Board agrees that the closest prior art document can often be the one having the greatest number of technical features in common with the invention and capable of performing the function of the invention. The problem to be solved by the invention is then to provide an alternative to the state of the art. Depending on the case, an alternative solution can be either very remote or very close.

The point at issue is however to find the closest starting point, which depends on the merits of each case, and is therefore not necessarily always a document as defined in the previous paragraph.

As regards the subject-matter of claim 1 of the patent in suit, the Board notes that it is directed to the preparation of a frozen dough and **not** to the preparation of a baked or fried dough from a frozen dough without a proofing step. The steps of the **claimed** process merely produce a frozen dough which can be proofed or not before baking or frying.

- 4.1.2 In the Board's judgement document (7) represents the closest prior art.

The description of document (7) discloses a method for

producing dough for bread and like products. It further recites that the dough is kneaded. It is moreover clear that the various ingredients required for producing bread dough are mixed and kneaded to make dough having a gluten network, since the purpose of the kneading step is to do precisely that.

The resulting dough is then stretched while subjected to repeated "beating" generating a dynamic vibratory effect which preserves the gluten network. The special apparatus used for the stretching step is moreover analogous to that of the process of the patent in suit.

Finally the dough is cut, shaped and fermented in a proofer (column 1, lines 9 and 10; column 1, lines 22 to 29; Figure 1 and column 4, lines 48 to 55 and lines 36 to 39; Figure 1 of (7) and Figure 3 of the patent in suit; Figure 1 and column 5, line 24 to column 6, line 4).

Having regard to claim 1 of the patent in suit, the only difference over this prior art resides in the presence of a further step which is added after the final proofing step of document (7), ie the fermented dough is frozen.

Accordingly, the problem to be solved by the subject-matter of claim 1 of the patent in suit as against document (7) can be seen as quite simply the provision of a method for preserving fermented dough.

4.1.3 This problem is solved by the freezing step (f) of claim 1, and, in the light of the examples of the patent in suit, the Board is satisfied that the problem

has been solved.

- 4.1.4 Thus, the question to be answered is whether the proposed solution, ie freezing the fermented dough, was obvious to the skilled person in the light of the prior art.

In that respect, it is noted that the technique of preserving perishable goods by freezing and, in particular, freezing food, has been common general knowledge for a long time. In the field of bakery, freezing as a means of preserving dough had been one of the best-known methods for almost forty years at the priority date of the patent in suit (e.g., (37) (column 1, lines 8 to 15)).

Therefore, the Board is satisfied that the skilled person faced with the problem of preserving the fermented dough obtained by the process of document (7), would immediately consider freezing the dough as a solution to this problem.

- 4.1.5 The respondent contended that the subject-matter of claim 1 was nevertheless clearly inventive over (7) because producing a frozen dough which is suitable for baking without an intervening proofing stage was not remotely suggested in (7).

Additionally, it argued that the skilled person would not freeze the dough obtained according to the process described in (7) because of a technical prejudice in the art. It pointed to the disclosures in (1), (21), (22) and (37) in order to substantiate this prejudice. In its opinion, the skilled person reading these

citations would deduce that special conditions are always required in the preparation of a fermented dough to be frozen, so he would not therefore freeze the fermented dough obtained by the process of (7).

- 4.1.6 The Board appreciates that document (1) (page 8, lines 8 to 17 and page 9, lines 17 to 24) describes a special process involving specific proofing conditions and a slow freezing of the fermented dough, which is then able to expand and set in the expanded form when baked from frozen; that documents (21) (page 2, last paragraph) and (22) (page 2 second paragraph and fourth paragraph) advocate either the use of chemical intumescent agents or the application of water-containing liquids on the fermented dough to the same end and that document (37) (column 1, lines 22 to 33) even recites that, in the case of bread, the quality obtained from the frozen fermented dough is not acceptable for a commercial product if a proofing step is not performed before baking it.

The Board notes however that the particular steps described in these documents are first and foremost intended to avoid the steps of thawing and proofing the frozen dough before baking it. In other words, such steps are only required in those cases where thawing and proofing the frozen dough before baking it is dispensed with. Accordingly, the Board sees no reason why the skilled person would not freeze the fermented dough obtained by the method of document (7). In that respect, the Board points out firstly that claim 1 does not exclude thawing and proofing the frozen dough before baking or frying it and secondly that the problem to be solved consists merely in preserving the



dough.

The Board does therefore not share the respondent's conclusion that these documents demonstrate the existence of a technical prejudice in the art which could prevent the skilled person from freezing the dough of document (7).

Accordingly, the Board judges that the subject-matter of claim 1 of the main request does not involve an inventive step as required by Article 56 EPC.

#### 4.2 First, third and fifth auxiliary requests

The above reasoning and conclusions apply equally to claim 1 of the sets of claims of auxiliary requests 1, 3 and 5 filed during the oral proceedings for the following reasons:

The intended clarification in claim 1 of the first auxiliary request that the steps of the process are to be performed in the order stated does in fact not change the subject-matter of the claim as the sequence is readily indicated by the alphabetical order of the main request.

Neither does the indication in claim 1 of the third auxiliary request that the freezing step d) has to be carried out "rapidly" modify the subject-matter of the claim. This relative term does not distinguish the freezing as in the patent from the prior art freezing. As a matter of fact, according to the only information available in the description of the patent in suit (page 7, lines 6 and 7) the "rapid" freezing is carried

out at  $-40^{\circ}\text{C}$  and according to the prior art (1) for instance the "slow" freezing can also be carried out at  $-40^{\circ}\text{C}$  (page 10, second paragraph).

The intended clarification in claim 1 of the fifth auxiliary request that a tension is imparted to the dough during the stretching step (b) is readily self evident from the term "stretching" so that the subject-matter of this claim remains identical to claim 1 of the main request.

#### 4.3 Second auxiliary request

4.3.1 Compared with the subject-matter of claim 1 of the previous requests, claim 1 of the second auxiliary request is directed to the preparation of bread from a frozen dough and it clearly involves the absence of an intervening proofing step before baking or frying the frozen dough.

In these circumstances, in the view of the Board and as acknowledged by the parties, it is clearly document (1) which qualifies as the closest state of the art since it is also directed to the preparation of bread from a frozen dough and since it also involves the absence of an intervening proofing step before baking the frozen dough.

4.3.2 Document (1) discloses a process for making bread comprising the following steps:

- (a) a dough for producing a desired type of bread is prepared by mixing the various materials (claim 1, step (a) and (b), page 12, lines 12 to 31 in combination with page 18, lines 32 and 33); then the dough is
- (b) sheeted by means of suitable procedures employed in the backing industry (claim 1, step (d)) and page 6, lines 25 to 30)
- (c) cut and shaped (claim 1, step (d) and (e))
- (d) fermented (claim 1, step (f))
- (e) frozen (claim 1, step (g)) and
- (f) finally, baked directly from the freezer without any additional proofing (page 10, lines 16 to 21).

In comparison with (1), the description of the patent in suit shows that the frozen dough obtained with the claimed process is also baked directly from the freezer without any additional proofing (page 2, lines 10 and 11, page 7, line 11) and step (f) of claim 1).

The comparative examples of table 1 of the patent do not indicate which prior art method has been used for comparison and the description of the patent in suit is silent about the process of document (1). Therefore no particular effect is shown by the patent over the prior art process of (1).

Furthermore, the only difference between claim 1 of the patent in suit and document (1) is that the dough is sheeted according to a special method ie by stretching the dough while subjecting it to mechanically imparted vibrations.

Accordingly, the problem to be solved by the subject-matter of claim 1 of the patent in suit as against document (1) can only be seen as the provision of an alternative method for preparing a frozen fermented dough which can be baked without any intervening proofing.

4.3.3 This problem is solved by the particular stretching step (b) of claim 1, and in the light of the examples of the patent in suit the Board is satisfied that the problem has been solved.

4.3.4 Thus the question to be answered is whether the proposed solution, ie sheeting the dough by stretching while subjecting it to mechanically imparted vibrations, would have been obvious to the skilled person in the light of the prior art.

Having regard to the description of document (1) (page 6, lines 25 to 30), the skilled person is taught that the sheeting of the dough can be performed by means of any suitable procedures employed in the baking industry.

Therefore choosing the method disclosed in document (7), ie sheeting the dough by stretching while subjecting it to mechanically imparted vibrations, would have been a mere arbitrary choice within the

teaching of document (1), involving no inventive step.

4.3.5 The main arguments raised by the respondent were that the subject-matter of claim 1 of the second auxiliary request was inventive over document (1) firstly because, contrary to the process of the patent in suit, the process disclosed therein involved specific proofing and freezing steps (step (f) and (g) of claim 1) as well as a supplementary fermentation step (step (c) of claim 1) and, secondly, because the skilled person would not use the apparatus disclosed in document (7) for sheeting the **mixed** dough obtained in (1) as this apparatus is first and foremost foreseen for preserving the gluten network obtained by kneading the dough.

4.3.6 The Board cannot accept the respondent's arguments.

It is indeed correct that specific proofing and freezing conditions as well as a further fermenting step are involved in the process of document (1). However having regard to the wording of claim 1 of the second auxiliary request, these differences cannot be taken into account for the assessment of inventive step. Neither does the term "comprising" in the claim exclude further fermenting steps, nor are particular proofing and freezing conditions indicated in steps (d) and (e).

In this respect, it is moreover to be observed that neither the use of chemical intumescent agents (see document (21)) nor the application of water-containing liquid on the fermented dough (see document (22)) are excluded from the subject-matter of claim 1.

As regards the second argument, the board concedes that document (1) only mentions the step of mixing the dough. The Board is however convinced that mixing the dough inevitably implies at the same time some kneading of the dough. This is moreover confirmed in document (1) (page 12, lines 12 to 32; page 3, lines 14 to 19; page 9, lines 21 to 24) which discloses that the dough prepared by the process of this document possesses a gluten film.

Since the wording of claim 1 does not distinguish its subject-matter from the kneading implied by the mixing step described in (1), this cannot form part of the assessment of inventive step.

It is however pointed out that, contrary to the respondent's opinion, the disclosure in (7) (column 4, lines 54 and 55) that the apparatus does not damage the gluten tissues of the dough would actually encourage the skilled person to use it in the process of document (1) since this document clearly recommends preserving the gluten structure (page 9, lines 21 to 24, page 3, lines 14 to 19).

Accordingly, the Board finds that the subject-matter of claim 1 of the set of claims of the second auxiliary request does not involve an inventive step as required by Article 56 EPC.

#### 4.4 Fourth auxiliary request

The same conclusions apply to claim 1 of the set of claims of the fourth auxiliary request as its subject-matter only differs from the second auxiliary request

by the indication of the order in which the steps are performed and the fact that the freezing has to be carried out rapidly (see under 4.2 paragraphs 1 and 2).

5. In view of the foregoing the Board judges that the subject-matter of claim 1 both of the set of claims as granted and of the sets of claims of the auxiliary requests 1 to 5 does not involve an inventive step as required by Article 56 EPC.

In these circumstances, there was no need for the Board to consider the remaining claims. There was also no need to hear the witnesses with respect to the content of the video tape and the alleged prior use.

## **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:

M. Dainese

P. Lançon