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**Datasheet for the decision  
of 11 November 2016**

**Case Number:** T 1195/12 - 3.2.04

**Application Number:** 08152853.1

**Publication Number:** 1969941

**IPC:** A21B3/04, A21D15/02, A21D15/06

**Language of the proceedings:** EN

**Title of invention:**  
Device and method for preparing bread

**Patent Proprietor:**  
Bakkersland IP B.V.

**Opponent:**  
Cetravac AG

**Headword:**

**Relevant legal provisions:**  
EPC Art. 56  
RPBA Art. 13

**Keyword:**

Inventive step - (no)

Late-filed auxiliary requests - amendments after arrangement  
of oral proceedings

Late-filed auxiliary request V - adjournment of oral  
proceedings would have been required (yes) - admitted (no)

Late-filed auxiliary request VI - admitted (yes)

**Decisions cited:**

T 0183/09

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

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Case Number: T 1195/12 - 3.2.04

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.04**  
**of 11 November 2016**

**Appellant:** Bakkersland IP B.V.  
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**Decision under appeal:** **Interlocutory decision of the Opposition**  
**Division of the European Patent Office posted on**  
**17 April 2012 concerning maintenance of the**  
**European Patent No. 1969941 in amended form.**

**Composition of the Board:**

**Chairman** A. de Vries  
**Members:** J. Wright  
C. Heath

## Summary of Facts and Submissions

I. The appellant-proprietor lodged an appeal, received 23 May 2012, against the interlocutory decision of the opposition division of 17 April 2012 on the amended form in which European patent no. 1969941 can be maintained, and paid the appeal fee at the same time. Their statement setting out the grounds of appeal was filed on 27 August 2012.

The appellant-opponent also lodged an appeal against the above decision on 8 June 2012, paying the appeal fee at the same time. They filed their grounds of appeal on 7 August 2012.

II. 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. In its decision, the division held, inter alia, that the patent as amended according to an auxiliary request met all requirements of the EPC, amongst other reasons, because the subject matter of claim 1 of that request, which was as granted claim 1, involved an inventive step having regard to the following documents, amongst others:

D1: GB 17750

D3: DE 10328631 A

D6: GB 2247815 A

III. Oral proceedings before the Board were duly held on 11 November 2016.

IV. The appellant-proprietor requests that the decision under appeal be set aside and that the patent be maintained as granted, alternatively that the patent be

maintained in amended form according to auxiliary requests I to III, filed with the grounds of appeal on 27 August 2012, or according to auxiliary request IV, filed during the oral proceedings before the opposition division on 16 February 2012 and as upheld in the decision under appeal, or according to one of auxiliary requests V and VI, filed during the oral proceedings before the Board on 11 November 2016.

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

V. The wording of the claims relevant for this decision is as follows:

Claim 1 of the main request and auxiliary requests I to IV (claim as granted):

"Method for preparing fresh bread, such as white bread, brown bread , wholemeal bread, French bread, small products such as rolls, laminated dough products such as croissants and apple turnovers, pizzas and other dough products for baking, comprising the following steps of:

- preparing at least preprocessed bread;
- creating a vacuum in the interior of the oven prior to heating of the bread by using steam;
- baking off the at least preprocessed bread in the oven by heating the bread by means of supplying steam to the interior of the oven; and
- after baking-off of the preprocessed bread, the thus baked-off bread is cooled in the oven by means of vacuum cooling."

Claim 10 of the main request and auxiliary requests I to IV (as granted):

"Method as claimed in any of the foregoing claims, wherein the method is performed at a retail location and that the at least preprocessed bread is formed by prebaked bread or by baked-off bread".

Claim 11 of the main request and auxiliary requests I to IV (as granted):

"Method as claimed in any of the claims 1-11, wherein the method is performed at a retail location and the preprocessed bread is formed by dough."

Auxiliary request V, claim 1:

"Method for preparing fresh bread, such as white bread, brown bread, wholemeal bread, French bread, small products such as rolls, laminated dough products such as croissants and apple turnovers, pizzas and other dough products for baking, comprising the following steps of:

- preparing at least preprocessed bread, wherein the at least preprocessed bread is formed by prebaked bread or by baked-off bread;
- creating a vacuum in the interior of the oven prior to heating of the bread by using steam;
- baking off the at least preprocessed bread in the oven by heating the bread by means of supplying steam to the interior of the oven, wherein the steam is supplied at a temperature higher than 60°C and wherein the oven is heated until the crust temperature has reached a value which lies above the dew point of the steam during heating of the oven by means of steam; and
- after baking-off of the preprocessed bread, the thus baked-off bread is cooled in the oven by means of vacuum cooling;

wherein the interior of the oven is heated by means of IR radiation prior to heating of the bread by means of steam and wherein the method is performed at a retail location."

Auxiliary request VI, claim 1

"Method for preparing fresh bread, such as white bread, brown bread , wholemeal bread, French bread, small products such as rolls, laminated dough products such as croissants and apple turnovers, pizzas and other dough products for baking, comprising the following steps of:

- preparing at least preprocessed bread, wherein the at least preprocessed bread is formed by prebaked bread or baked-off bread
- creating a vacuum in the interior of the oven prior to heating of the bread by using steam;
- baking off the at least preprocessed bread in the oven by heating the bread by means of supplying steam to the interior of the oven; and
- after baking-off of the preprocessed bread, the thus baked-off bread is cooled in the oven by means of vacuum cooling, wherein the method is performed at a retail location".

VI. The appellant-proprietor argued as follows:

Main request and auxiliary requests I to IV

In claim 1 as granted, the term preprocessed bread means bread that has undergone a baking process and baking off means baking to completion bread that has been at least partly baked. Granted claim 11 merely explains that bread originates from dough. Therefore neither D1 nor D6 are suitable starting documents for assessing inventive step.

Even if the skilled person were to start from D1, it discloses using a vacuum to raise the bread, not as part of a baking process with steam as claimed. Nor does D1 disclose using steam for baking, it is only used for hardening the crust prior to baking which starts at 60°C. D1 does not disclose vacuum cooling. The synergic effect between the claimed steam baking under vacuum and vacuum cooling makes the cooling more efficient, and this is not obvious from D6 which discloses vacuum cooling following baking at above atmospheric pressure.

Admissibility of auxiliary requests V and VI

These requests should be admitted into the proceedings because they make clear that the invention is about baking to completion bread that has already been at least partly baked. Both have independent claims that combine granted claims. Auxiliary request VI combines only two claims.

Auxiliary request VI, claim 1, inventive step

D3 does not disclose creating a vacuum before baking with steam, rather it discloses moistening bread which could be with a water mist, not baking with steam. D3 discloses a fan-assisted oven, not a steam-baking oven. Because in the invention as claimed the bread is steam baked in a vacuum, vacuum cooling is more efficient. This would not be apparent to the skilled person from D3 and D6, so they would not make this combination.

VII. The appellant-opponent argued as follows:

Main request and auxiliary requests I to IV

In claim 1 as granted, the term baking off at least preprocessed bread should be interpreted broadly to



include fully baking dough as both the description and claim 11 make clear.

D1 is a good starting point for assessing inventive step, since it discloses a method of baking dough. D1 discloses creating a vacuum and then adding dry steam via sprinkler pipes, into the interior of the oven. It is not relevant that the vacuum assists raising the bread since claim 1 only specifies creating a vacuum prior to heating the bread with steam. The injected steam inevitably bakes the bread. The baking of bread starts at low temperatures whenever dough turns to bread, hardening the crust is part of this process. The only difference between the subject matter of claim 1 and D1 is the step of vacuum cooling. This is well known for speeding up cooling, for example from D6. So the skilled person would apply this step to the method of D1 as a matter of obviousness.

Admissibility of auxiliary requests V and VI

Neither request should be admitted because they are filed at the last minute. Auxiliary request V combines claim 1 with four dependent claims, which throws up new and complex issues which could only be dealt with if the proceedings were adjourned.

Auxiliary request VI, claim 1, inventive step

D3 discloses all features of claim 1 except the vacuum cooling step. In particular D3 discloses creating a vacuum at the very start of the baking process so it must be prior to the addition of steam. Steam is injected during the baking process so bakes off the part-baked bread. The vacuum cooling step is known to the skilled person, for example from D6. In order to speed up the preparation of bread, the skilled person would add a vacuum cooling step to the method known

from D3 as a matter of obviousness, and so arrive at the subject matter of claim 1.

### **Reasons for the Decision**

1. The appeals are admissible.
2. Background and certain aspects of claim 1 in all its versions
  - 2.1 The patent relates to bread baking. Amongst other things, the invention concerns a method for reducing the time required to prepare fresh bread (specification, paragraphs [0008] and [0009]). In particular the patent aims to reduce both the baking time (specification, paragraph [0016]) and the cooling time after baking (paragraphs [0033] and [0034]) through the use of vacuum prior to and after baking.
  - 2.2 The Board notes that claim 1 in all its versions is directed at a method for preparing fresh bread comprising a set of steps. The second of these steps defines creating a vacuum and that this happens prior to heating of the bread using steam. However neither this step nor the rest of the claim defines how the pressure in the oven might change after the vacuum has been created. For example this second step does not say whether there will still be a vacuum in the oven when the bread is heated by steam or whether by then the pressure in the oven might have increased to atmospheric pressure, for example. The immediately following third step (baking off by heating bread with steam), in all versions, makes no mention of pressure in the oven when steam is supplied at baking off. Therefore claim 1 leaves open, whether or not there is a vacuum in the oven when steam is supplied. Nor is

this at odds with the description. Paragraph [0032] explains the third (steam heating) step in detail. There it is suggested (column 6, lines 50 to 53) that the effectiveness of the heating step can be enhanced if steam heating begins with a vacuum. This can but mean that, when the effectiveness of the step is not to be enhanced, then steam heating could begin without a vacuum. Thus supplying steam under vacuum is optional.

- 2.3 The Board furthermore notes that, whilst the above mentioned baking off step defines that the bread is heated by supplying steam to the interior of the oven, this does not exclude supplying additional heat by other means (cf. specification, claim 6 and paragraph [0030]).
3. Inventive step of claim 1, main request and auxiliary requests I to IV (in which claim 1 is as granted)
- 3.1 In the impugned decision, the division assessed inventive step of this claim starting from D1 and from D6 (see reasons point 7.1). In appeal, the appellant-proprietor has argued that "preprocessed bread" in claim 1 means at least partly baked bread. Therefore, neither D1 nor D6 is an appropriate starting document since both relate to preparing bread by baking dough (cf. D1, page 2, lines 5 to 7 and D6, abstract).
- 3.2 An issue the Board must consider is therefore how the claim 1 terms "baking off" and "preprocessed bread" are to be interpreted.

In the Board's view, the skilled person, a process engineer familiar with the baking industry, would normally understand the term "baking off", as such, to mean the baking to completion of a part-baked product.

The Board is not aware of the term "preprocessed bread" having a particular meaning in baking, it could simply mean dough. However, given their normal understanding of the term "baking off", the skilled person might understand "baking off...preprocessed bread" in isolation to mean baking to completion pre-baked bread, in other words at least "preprocessed bread" might mean at least partly-baked bread.

However, the skilled person does not read these terms in isolation, they read them in the context of the whole claim set and indeed the rest of the patent. Where they discover ambiguities, with their mind willing to understand, they will attempt to find a technically meaningful interpretation for these terms, in first instance contextually from the the claim itself, and if this fails, from the entirety of the disclosure, that is remaining claims, description and figures.

In the present case, dependent claims 10 and 11 specify what preprocessed bread can be. Claim 10 has it being formed by pre-baked bread or baked-off bread, whereas according to claim 11 it is formed by dough, thus not (partly) baked bread. The skilled person recognises the words "formed by" in claims 10 and 11 as defining what constitutes the preprocessed bread of claim 1, rather than merely defining some intermediate product necessary to produce it. They would therefore dismiss the idea that in claim 1 all preprocessed bread has undergone some kind of baking process and that claim 11 merely defines the origin of all bread as dough. Rather, from claim 11, they interpret the term "preprocessed bread" in claim 1 broadly to include, inter alia, raw dough. By the same token they interpret "baking off" broadly to include fully baking dough.

Nor does the skilled person get a different story from the description. For example, paragraphs [0023] and [0029] teach that the invention is also applicable to bread to be fully baked, making use of dough.

Thus, the Board holds that the above terms in claim 1 are to be interpreted broadly such that "preprocessed bread" includes dough and "baking off" includes fully baking dough.

3.3 Following on from this, the Board considers D1 to be a good starting point for assessing inventive step, relating as it does to a method of baking bread from dough (see page 1, line 4 and claim 1).

D1 discloses a method of making fresh bread (claim 1). The method is carried out in an oven connected to a vacuum pump. The oven has sprinkler pipes connected to a supply of, inter alia, saturated steam, (page 1, lines 31 to 33,). Thus these can supply steam to the interior of the oven.

The method includes the steps of preparing preprocessed bread, namely dough (page 2, lines 5 to 7). After placing the dough in the oven, a vacuum is created (page 2, lines 11 to 15), during which time the bread rises. After this rising process, saturated steam may be supplied to the sprinklers (page 2, lines 25 to 27). In this case the steam will inevitably heat the bread. Thus D1 discloses the step of creating a vacuum in the interior of the oven prior to heating of the bread by using steam.

This saturated, that is dry, steam will also contribute to baking the risen dough. At first the vacuum is 9

inches Hg (page 2, lines 27 to 28). Thermodynamics dictates that, at this pressure, water boils at about 90°C. Thus the temperature of the saturated steam will be at least 90°C, far in excess of the 60°C at which bread starts to bake. Put differently the steam supplied to the interior of the oven will inevitably bake the risen dough, whether or not it mainly serves to harden the crust, which in any case the Board sees as part of the baking process. Accordingly, bearing in mind the claim term "baking off...preprocessed bread" includes fully baking dough, D1 discloses the third (baking off) claim step.

D1 however does not disclose how final cooling after baking proceeds. Thus the method of claim 1 differs from the disclosure of D1 only in that it includes, after the baking off step, a final step of cooling the bread in the oven by means of vacuum cooling.

3.4 It is not in dispute that the principle effect of this difference is to shorten cooling time, thus the overall processing time for preparing bread (specification, paragraph [0034], column 8, lines 14 to 19). Thus the associated problem can be formulated as how to modify the method of preparing bread known from D1 to reduce the preparation time.

3.5 The skilled person will be well aware of vacuum cooling bread by applying a vacuum to an oven after baking, and its advantageous effect of shortening cooling time, for example from document D6 (abstract, page 1, last paragraph, first three lines).

Tasked with the above objective problem, they will therefore apply a vacuum cooling step as known from D6 to the method disclosed in D1, using the available

vacuum pump, and so arrive at the subject matter of claim 1 as a matter of obviousness.

It may be that vacuum cooling following steam baking is even quicker than when it follows baking without steam, as the appellant-proprietor has argued. However, this increased effect is nothing more than an inevitable consequence of the obvious application of the vacuum cooling process of D6, with its well known effect of shortening cooling time.

3.6 Therefore the subject matter of claim 1 of the Main request and auxiliary requests I to IV lacks inventive step vis-à-vis D1 with D6, Article 56 EPC.

4. Admissibility of auxiliary requests V and VI

4.1 Auxiliary requests V and VI were filed at the oral proceedings before the Board. The requests thus amount to an amendment to the Appellant-proprietor's case in the sense of Article 13 of the Rules of Procedure of the Boards of Appeal (RPBA). Under paragraph (1) of that article the Board exercises discretion in admitting such amendments in view of, inter alia, complexity of the subject-matter, the state of the proceedings and the need for procedural economy. Furthermore, under Article 13(3) RPBA any amendments sought to be made after oral proceedings have been arranged shall not be admitted if they raise issues which the Board or the parties cannot reasonably be expected to deal with without an adjournment.

4.2 An approach frequently adopted by the Boards when exercising their discretion in admitting an amendment filed during oral proceedings can be summarised as follows:

Unless good reasons exist for filing the amendment so far into the proceedings - for example if it is occasioned by developments in the proceedings - it will be admitted only if it does not extend the scope or framework of discussion as determined by the decision under appeal and the statement of the grounds of appeal, and is moreover clearly allowable, see Case Law of the Boards of Appeal, 8th edition, 2016 (CLBA) IV.E. 4.2.6 b) and the case law cited therein. In accordance with established jurisprudence, amended claims are clearly allowable if the Board can quickly ascertain that they overcome all outstanding issues without raising new ones, see for example T 183/09, reasons 4.

4.3 The Board sees no good reason for filing these requests at the very last moment, namely during the oral proceedings. The appellant-opponent supplied no new arguments since replying on 8 January 2013 to the proprietor's appeal grounds. The Board's communication of 8 August 2016 merely summarised the issues raised by the parties, without introducing new substantive issues. The discussion in the oral proceedings focused on these issues, which could therefore not have come as a surprise to the respondent. Thus no recent developments in the proceedings might have justified filing new claims at the oral proceedings, nor has this been argued.

4.4 That said, the Board notes that the appellant-opponent took position on all granted method claims, that is all claims in the version of the patent as upheld, in their grounds of appeal (see page 17). Therefore the combination of claim 1 and one of these could be said to fall within the framework of discussion as



determined by the decision under appeal and the statement of the grounds of appeal.

4.5 Auxiliary request V, amended claim 1

Far from being a straightforward combination of two claims which have already been considered by the opponent, claim 1 combines granted claim 1 with granted claims 3, 6, 7 and 10. In the Board's opinion, consideration of inventive step of this feature combination raises new and complex inventive step issues for the first time during the oral proceedings. For example, whether the new combination represents a juxtaposition of particular features which might justify combinations of more than two documents, or whether certain features have a synergic effect. Following on from this, new questions arise as to which prior art documents would be most pertinent for features previously considered only combined with those of claim 1 but now presented in a more complex combination. Consequently, it would not be commensurate with a fair proceedings to expect the appellant-opponent, nor indeed the Board, to deal with these issues without adjournment of the proceedings, which would not be compatible with Article 13(3) RPBA. Accordingly, the Board decided not to admit auxiliary request IV into the proceedings pursuant to Articles 13(1) and 13(3) RPBA with Article 114 (2) EPC.

4.6 Auxiliary request VI, claim 1

Claim 1 is a straightforward combination of granted method claims 1 and 10, thus a combination on which the appellant-opponent has already taken position (see point 4.4 above). In this sense the Board holds that the amendment does not raise new issues, and it is

reasonable to expect the appellant-opponent to be able to deal with it without adjournment.

Furthermore, it is immediately apparent that the amendment to claim 1 limits the claim to a method of baking off preprocessed bread formed by pre-baked or baked-off bread, rather than fully baking dough.

As already explained, both D1 and D6 relate to baking off a preprocessed bread only in the broader sense of fully baking dough. Therefore, both documents disclose methods having a different underlying purpose to that of the invention as now claimed, so neither offers a promising starting point for arriving at the invention in an obvious manner. The Board was therefore quickly able to ascertain that the amendment addressed all lines of argument in both the impugned decision (see pages 18 to 20) and forwarded by the appellant-opponent in appeal (grounds of appeal, page 5, penultimate paragraph), namely inventive step of claim 1 starting from D1 or D6. Furthermore, the Board considered that the amendments did not raise new issues since the parties had already considered dependent claim 10 as granted. Therefore, applying the approach outlined above, the Board decided to admit the amendments based on auxiliary request VI, pursuant to Articles 13(1) and 13(3) RPBA with Article 114 (2) EPC.

5. Auxiliary request VI, inventive step, claim 1

- 5.1 In the Board's opinion, document D3 is a good starting point for assessing inventive step. It disclose a method of baking bread (see abstract and paragraph [0047]) starting with pre-baked bread, namely pre-baked rolls, (paragraph [0033]: "teilgebackene Brötchen").

Therefore D3 implicitly discloses the method step of preparing preprocessed, that is pre-baked, bread.

D3 also discloses creating a vacuum in the interior of the oven. This happens right at the start of the baking process (paragraphs [0010] and [0070]), "zu Beginn des Backvorgangs"). D3 likewise discloses supplying steam into the interior of the oven by means of steam-injection apparatus, or modules, ( paragraphs [0010] and [0065], "Beschwadungseinrichtung" or "Beschwadungsmodule" respectively). These modules (see paragraph [0065]) supply steam vapour during the baking process, ("Wasserdampf-Schwaden ...während des Backvorgangs") to moisten or dampen the bread ("Befeuchtung").

In the Board's understanding of the baking process, in particular the physiological process that takes place during baking under steam application, the steam provided by the steam-injection modules inevitably, that is directly and unambiguously, by moistening during baking contributes to baking the pre-baked bread in the oven, in other words baking it off. Indeed D3 states as much in paragraph [0010] when it states that the controlled moistening during baking improves the result of baking ("kontrollierten Befeuchtung ... was zu einer Verbesserung des Backergebnisses führt").

It is true that the D3 oven is an electrically heated fan oven ("Umluft") with fan 40 and heater coils 41 (see for example paragraph [0049] and figure 3). However, as already explained, claim 1 does not define that steam must be the only source of heat for baking (see above point 2.3). Since, furthermore, the steam is injected during the baking process and serves to moisten the bread (paragraph [0065] again), it can but

do so by condensing and releasing its latent heat of vaporisation into, and thereby heating, the pre-baked bread. Thus, far from dampening the bread as a water mist might at sub-baking temperatures, the steam released into the oven bakes the bread. D3 therefore directly and unambiguously discloses the step of baking off by heating the bread by means of supplying steam as claimed.

Given that, as explained above, the very first step of this baking process is to create a vacuum, D3 consequently discloses that this vacuum is created prior to heating the bread using steam.

Lastly, the method is performed in a shop, "in einem Ladengeschäft" (see paragraph [0016]), therefore the method is performed at a retail location.

5.2 Thus, the subject matter of claim 1 differs from D3 only in the final (vacuum cooling) step. Similar to the main request (see point 3.4), the problem associated with this difference can be formulated as: how to modify the method of preparing bread known from D3 to reduce the preparation time. Again D6 provides a solution, namely to vacuum cool the bread (abstract, page 1, last paragraph, first three lines).

Tasked with the above objective problem, the skilled person will, as a matter of obviousness, modify the method of D3 by making the available vacuum pump perform a vacuum cooling step, and therefore arrive at the subject matter of claim 1 without making an inventive step.

5.3 As has already been explained, vacuum cooling following baking in steam may make the vacuum cooling step

particularly effective, however this does not render the combination non-obvious. As explained above this increased effect is an inevitable bonus resulting from the obvious application of vacuum cooling as a routine measure known to skilled person to shorten cooling time

5.4 Therefore the subject matter of claim 1 lacks inventive step vis-à-vis D3 with D6.

6. In conclusion, the Board holds that the subject matter of claim 1 of the appellant's main request and auxiliary requests I to IV (claim 1 as granted) and of auxiliary request VI lacks an inventive step, Article 52(1) with 56 EPC. Since these are the only requests admitted, and all fail, the Board can but revoke the patent in accordance with Article 101(3)(b) EPC.

The question of sufficiency of disclosure of the invention (Article 100 (b) EPC) can therefore be left unanswered.

**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

A. de Vries

Decision electronically authenticated