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Datasheet for the decision of 24 October 2022

Case Number: T 0180/21 - 3.2.04

Application Number: 08766817.4

Publication Number: 2299807

IPC: A01K41/02

Language of the proceedings: EN

Title of invention:
METHOD FOR THE TREATING OF PRODUCTS, SUCH AS EGGS TO BE HATCHED, WITH A CONDITIONED GAS STREAM, AND CLIMATE CHAMBER FOR CARRYING OUT THE METHOD

Applicant:
HatchTech Group B.V.

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

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Case Number: T 0180/21 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 24 October 2022

Appellant: (Applicant)	HatchTech Group B.V. Gildetrom 25 3905 TB Veenendaal (NL)
Representative:	Nederlandsch Octrooibureau P.O. Box 29720 2502 LS The Hague (NL)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 30 September 2020 refusing European patent application No. 08766817.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	J. Wright
Members:	S. Hillebrand
	K. Kerber-Zubrzycka

Summary of Facts and Submissions

I. The appeal was filed by the appellant (applicant) against the decision of the examining division to refuse the patent application in suit.

II. The examining division decided, by reference to its communication of 8 January 2020 amongst others, that the subject matter of the main request lacked inventive step.

III. The Board considered that the main request was allowable, therefore oral proceedings were not necessary and it decided the case in written proceedings.

IV. The appellant requests that the decision under appeal be set aside and that a patent be granted on the basis of the main request filed with entry into the regional phase on 16 December 2020 or, in the alternative, on the basis of auxiliary request 3, filed with the grounds of appeal, or one of auxiliary requests 1 and 2, filed with letter dated 30 September 2019.

V. The independent claims of the main request read as follows:

"1. Method for the treating of products, such as eggs (27) to be hatched, with a conditioned gas stream; the method being carried out in a climate chamber (1), and the climate chamber (1) comprising:

■ a substantially closed compartment (2) having two opposing lateral walls (12, 22) provided with one or more passages (44);
■ a substantially closed channel (3, 23) which extends around the outside of the compartment (2) and connects one of said lateral walls (12) to the other of said lateral walls (22) in order to form together with the compartment (2) a substantially closed circuit; the gas stream being circulated through the circuit;
characterized in that the direction in which the gas stream is circulated through the circuit is reversed repeatedly, in each case once a reversing time interval has elapsed".

"6. Climate chamber (1) for the treating of products, such as eggs (27) to be hatched, with a conditioned gas stream; the climate chamber (1) comprising:
■ a substantially closed compartment (2) having two opposing lateral walls (21, 22) provided with one or more passages (44);
■ a substantially closed channel (3, 23) which extends around the outside of the compartment (2) and connects one of said lateral walls (12) to the other of said lateral walls (22) in order to form together with the compartment (2) a substantially closed circuit;
■ a gas displacement device (15, 115, 215) received in the substantially closed channel (3, 23) for circulating the gas stream through the circuit;
characterized in that the gas displacement device (15, 80, 115, 215) is provided with a reversing system (17, 81, 117, 217) configured for reversing repeatedly, in each case once a reversing time interval has elapsed, the direction in which the gas stream is circulated through the circuit".

VI. In the present decision, reference is made to the following documents:

D1: GB 2 208 315 A
D2: US 4 957 066 A
D3: EP 1 104 987 A
D4: US 2 654 345 A

VII. The appellant-applicant's arguments can be summarised as follows:

D3 is the closest prior art. It discloses all features of claim 1 except the characterising feature (gas stream reversal). The effect of this feature leads to the objective technical problem of improving homogenous treatment of each individual product. D1 discloses neither a solution to this problem, nor the differing reversal of a gas stream feature. Therefore, the skilled person would not combine the teachings of D3 and D1 and even if they did, they would not arrive at the subject matter of claim 1. The same goes for independent claim 6.

Reasons for the Decision

1. The appeal is admissible.

2. Background

The application (see published application, WO2009/154439, page 1, lines 5 to 21) relates to a method and climate chamber for treating products, such as eggs to be hatched, with a conditioned gas stream. According to the application, it is important that the conditioned gas stream treats all products the same. To

this end (see the independent claims and page 1, lines 30 to 31) the climate chamber has a substantially closed compartment with two opposing lateral walls with one or more passages and forms part of a closed circuit for the conditioned gas. This means that the gas stream passes through the compartment predominantly in one direction, from one lateral wall to the opposing lateral wall. The applicant has found that albeit the products were treated uniformly relative to one another (see page 2, lines 1 to 22) in such a gas stream, individual products were, however, not treated uniformly on all sides - the temperature of the side facing into the wind (windward side) will differ from that in the wind shadow (lee side) and this may adversely affect an individual product.

The application sets out to solve this problem (see page 2, line 25 to page 3, line 3 and claims 1 and 6) by repeatedly reversing the direction in which the gas stream is circulated.

3. The examining division did not raise the issue of novelty against the main request. Nor does the Board consider any of the cited documents to take away novelty of the independent claims.

4. Main request, claim 1, inventive step

4.1 The examining division found the subject matter of the independent claims to lack inventive step starting from D3 in combination with D1. The reasons for the impugned decision are made by reference to three communications given the dates 18 December 2014, 8 March 2019 and 8 January 2020. The Board considers that the second of these should have referred to the annexe to the summons to oral proceedings dated 28 March 2019. The reasons

given in all three communications are much the same. In this decision reference will only be made to the last communication of 8 January 2020.

4.2 The Board agrees that D3 represents the closest prior art. It discloses a method of treating eggs in a substantially closed climate chamber compartment (see abstract and figure 2 reference 21). As explained on page 2, lines 4 to 15 with figure 2, the chamber has air permeable opposing lateral walls, so the walls have one or more passages. A channel, with its ventilation fan means 27, extends around the outside of the compartment so as to connect the lateral walls, thus forming a closed circuit with the climate chamber.

4.3 The Board agrees with the appellant-applicant and the examining division (see its communication of 8 January 2020, page 1, last three lines), that the subject matter of claim 1 differs from D3 in that the direction in which the conditioned gas stream circulates is reversed repeatedly, at the elapsing of a reversing interval. In D3, the ventilator fan 27 creates a gas flow in one direction only (see page 6, line 12 to page 7, line 2, and the arrows 30 to 34 in figure 2).

4.4 As already explained (cf. application page 2, lines 3 to 11 and page 2, line 26 to page 3, line 3), the effect of this difference is a more uniform temperature distribution on the surface of each individual product.

Therefore, the Board considers that the objective technical problem (cf. communication of 8 January 2020, page 2, first paragraph and application, page 2, last 3 lines) can be formulated as: how to improve the method

of D3 so that each individual product has a more uniform surface temperature.

4.5 The examining division found (communication of 8 January 2020 middle of page 2 and page 3) that D1, which also relates to treating eggs in a climate chamber with gas moved by a fan, disclosed a solution to the problem of lack of uniformity of ambient temperature in the chamber, namely the periodic reversal of the fan rotation direction. Therefore, the division reasoned, the skilled person would modify the method of D3 by reversing the fan direction and thus, it concluded, arrive at the last claim feature (reversal of gas stream direction), as a matter of obviousness. The Board disagrees with this conclusion.

4.6 The Board first notes that, as explained in D1, middle of page 7 to page 8, penultimate paragraph with figures 1 and 2, D1's underlying arrangement comprises two climate chambers 2 at either side of a gas conditioning chamber 7 with a centrifugal fan 11 that turns about a horizontal shaft 9. As best seen in figure 1, the fan 11 produces a gas-flow in the compartments that starts at the outer edges of the fan, then moves through the climate chambers in two (seen in cross section) *figure of 8* paths that meet where gas is sucked back into the fan at its central suction zone. As D1 explains (see page 3, first three full paragraphs and page 7, first full paragraph), with such an arrangement the temperature in the compartments 2 may not be uniform, mainly due to the rotation imparted to the gas flow by the centrifugal fan but also because the fan diffuses gas [from its circular periphery] into a rectangular space. D1 proposes various solutions to improve this including adding a helical fan to even out airspeed differences, water sprays and periodically reversing

the direction of rotation of the centrifugal fan (see abstract with figure 2). However, in all cases D1's underlying arrangement is unlike that of the present invention and D3 in that conditioned gas is not moved from one lateral wall of the chamber to an opposing lateral wall as part of a closed circuit. In the Board's view, because the gas flow profiles in the climate chambers of D3 and D1 are so different (D3's being approximately linear and D1's forming figures of 8), the skilled person would not think of combining the teachings of D3 and D1. Nor does D1 offer any solution to the objective technical problem (uniformity of surface temperature in the context of a gas stream between lateral walls). At most, D1 (see page 3, the three complete paragraphs) only offers a solution (reversing centrifugal fan direction) to a different problem: that of homogenising the environment throughout the treatment chamber to compensate air rotation caused by the centrifugal fan. Thus it is only concerned with treating all products equally and in a different gas-flow context.

Nor, in any case, does D1 disclose the characterising feature of claim 1. Whether D1's centrifugal fan turns in a clockwise or anticlockwise direction, it will still move conditioned gas outwards from its periphery, and draw it back into the centre of the fan. Thus, D1 does not teach to reverse the *direction* of a gas stream. At most, periodic reversal of D1's fan direction may periodically alter a rotational component of the gas stream without fundamentally changing its figure of 8 path through the climate chambers. For example, eggs half way up a chamber will always be subjected to a gas flow towards the centre of the fan. Therefore, even if the skilled person were to combine the teachings of D3 and D1 (the Board considers they

would not), they would not arrive at the method of claim 1, with its gas stream reversal step.

For all these reasons, the combination of D3 with D1 does not take away inventive step of claim 1.

5. By the same token, the Board holds that the combination of D3 with any of the remaining available prior art would not render the subject matter of claim 1 obvious to the skilled person.

5.1 Like D1, D2 discloses a climate chamber for hatching eggs with a conditioned gas stream (see abstract and figures 1 and 2). A centrifugal fan moves gas through the chamber in a *figure of 8* pattern when seen in cross section. Also like D1, D2 teaches to reverse the direction of the fan at intervals (see paragraph bridging columns 2 and 3) to compensate any local temperature differences, but not to solve a problem of improving uniformity of a product's surface temperature. Nor would reversing the fan direction change the fundamental path of the gas. As D2 emphasises (see column 2, lines 64 to 65) the centrifugal effect is largely independent of the fan's rotational direction. Therefore, D2 does not disclose the characterising step of reversing the direction of a gas stream through a climate chamber.

5.2 Likewise, D4 (see column 3, lines 55 to 62 with figure 4) discloses a climate chamber for hatching eggs through which a conditioned gas is moved by a centrifugal fan. D4 discloses to reverse the direction of the fan, namely when trays of eggs are rocked to point upwards or downwards (see column 5, lines 32 to 45 and column 6, lines 50 to 64 with figure 3). Whichever the direction of the fan's spin, the

conditioned gas always passes over the eggs from the outer walls of the chamber to the centre of the fan, thus fundamentally in only one direction. Therefore, as with D1 and D2, D4 does not disclose the idea of reversing the direction of a treatment gas stream through a climate chamber.

5.3 The Board concludes that the method of claim 1 involves an inventive step, Article 52(1) with Article 56 EPC.

5.4 The same conclusion applies to independent claim 6, which has features corresponding to those of claim 1 expressed in terms of a device.

6. No other objections to the claims were raised by the examining division, nor are any apparent to the Board.

6.1 In particular, the Board considers that the claims are clear, Article 84 EPC.

6.2 Moreover, the subject matter of the claims has a basis in the originally filed claims: Independent claims 1 and 6 correspond to claims 1 and 13 as originally filed. As to the dependent method claims, claim 2 corresponds to original claims 2, 3 and 4, claim 3 to original claim 5, claim 4 to original claims 6 to 9, and claim 5 to claims 10 to 12. Regarding the dependent device claims, claims 6 to 11 correspond to original claims 13 to 18 respectively. Claim 12 corresponds to original claims 19 and 20, claim 13 to original claims 21 and 22 and claims 14 and 15 to original claims 23 and 24 respectively. Therefore, the Board considers that the application meets the requirements of Article 123(2) EPC.

7. As to the description, the Board notes that amendments to the description, page 1 introduce references to D1 and D3 in accordance with the requirements of Rule 42(1)b) EPC. Pages 1 and 2 have also been modified to correctly refer to the independent claims, 1 and 6 in accordance with the requirements of Rule 42(1)c) EPC. Therefore the Board is also satisfied that the description has been correctly adapted to the main request.

8. The Board concludes that the appellant-applicant's main request is allowable.

Order

For these reasons it is decided that:

The decision under appeal is set aside and the case is remitted to the examining division with the order to grant a patent in the following version:

Description:
Pages 1 and 2 as filed with letter of 7 October 2022,
Pages 3 to 19 as published in the international application,

Claims:
1 to 15 of the main request as filed with entry into the regional phase on 16 December 2010,

Drawings:
Sheets 1/6 to 6/6 as published in the international application.

The Registrar: The Chairman:

G. Magouliotis J. Wright

Decision electronically authenticated