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**Datasheet for the decision
of 4 September 2019**

Case Number: T 1239/16 - 3.2.04

Application Number: 05709020.1

Publication Number: 1737332

IPC: A47L15/42, A47L15/46

Language of the proceedings: EN

Title of invention:

A DISHWASHER AND CONTROL METHOD THEREOF

Patent Proprietor:

Arçelik Anonim Sirketi

Opponents:

Electrolux Appliances Aktiebolag
Patentwerk B.V.

Headword:

Relevant legal provisions:

EPC Art. 123, 83, 84, 54, 56

Keyword:

Amendments - allowable (yes)

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

G 0003/14, G 0010/91

Catchword:



Beschwerdekammern

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Case Number: T 1239/16 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 4 September 2019

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Decision under appeal: **Interlocutory decision of the Opposition**
Division of the European Patent Office posted on
11 March 2016 concerning maintenance of the
European Patent No. 1737332 in amended form.

Composition of the Board:

Chairman W. Van der Eijk
Members: J. Wright
 C. Kujat

Summary of Facts and Submissions

- I. The appeal was filed by the appellant (opponent II) against the interlocutory decision of the opposition division finding that, on the basis of the auxiliary request 1 (present main request), the patent in suit ("the patent") met the requirements of the EPC
- II. Opposition was filed by two opponents. Both were based on Article 100(a) EPC (novelty and inventive step). The opposition division held that the patent as amended met all the requirements of the EPC. In particular the amendments to claim 1 did not add subject matter, claim 1 was clear and the invention according to claim 1 was sufficiently disclosed. Furthermore, the subject matter of this request was novel and involved an inventive step.
- III. Oral proceedings were held before the Board.
- IV. The appellant-opponent II requests that the decision under appeal be set aside and that the European patent No. 1737332 be revoked.

The respondent (patent proprietor) requests that the appeal be dismissed and the patent thus be maintained as upheld by the opposition division or, in the alternative, that the patent be maintained in amended form on the basis of one of auxiliary requests 1-3, filed with letter of 9 July 2019.

The opponent I, party to the proceedings as of right, has not stated any request.

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

"A dishwasher (1) comprising a wash tub (2) in which the dishes to be washed is placed, a sump (3) which is in the lower section of the wash tub (2), where the water present in the wash tub (2) is collected during washing operation, a circulation pump (4), driven by an electric motor with variable rpm, turning the water in the sump (3) back to the wash tub (2), a drain pump (5) which drains the water collected in the sump (3) at the end of the washing operation out of the dishwasher (1) and a filter (6) preventing the dirt from getting into the circulation during washing and thus decreasing the effectiveness of washing, characterized by a control card (7), tracing the change of the current (I) drawn by the circulation pump (4) from the network, determines the effects such as rotor blocking, pump felt sticking, filter (6) clogging and increase of the viscosity or the amount of foam in the washing water that influence the washing performance negatively, and wherein the control card (7) is adapted to distinguish said different effects depending on said change of the current (I) and, according to the determined effect, to provide the solution by changing the rpm and/or direction of rotation of the circulation pump (4)".

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

E1: EP0838192 A
D1: EP0618779 B1

VII. The appellant-opponent II argued that claim 1 of the main request (as maintained) added subject matter extending beyond the application as filed, was amended

to extend the protection conferred, lacked clarity, was not sufficiently disclosed, and that the subject matter of claim 1 was not new with respect to E1 and did not involve an inventive step, starting from E1 in combination with the skilled person's general knowledge.

The opponent I filed no written submissions but concurred with the view of the appellant-opponent II during the oral proceedings.

VIII. The respondent proprietor defended the decision's positive finding in all the above respects.

Reasons for the Decision

1. The appeal is admissible.
2. Background of the invention

The invention relates to a dishwasher (see published patent specification, paragraph [0001]). Such a dishwasher has a wash tub, a sump and an electrically driven circulation pump which returns water from the sump back to the wash tub (see published patent specification, paragraph [0010] and all versions of claim 1).

An object of the invention is to realise a dishwasher which identifies matters negatively affecting the washing performance using data of current drawn by the circulation pump. This data provides information on whether the pump has any operational problem. The identified problem is solved by changing the rpm and/or direction of rotation of the circulation pump (see

published patent specification, paragraphs [0005], [0022] and claim 1).

3. Added subject matter, Article 123(2) EPC
- 3.1 Present claim 1 is based on claim 1 as originally filed (which is as granted). During opposition proceedings the characterising portion was amended so that after the original wording "characterized by a control card (7), tracing the change of the current (I) drawn by the circulation pump (4) from the network, determines the effects such as [...] that influence the washing performance negatively," the following wording was introduced: "and wherein the control card (7) is adapted to distinguish said different effects depending on said change of the current (I) and, according to the determined effect, to provide the solution...."
- 3.2 In appeal, the appellant-opponent II and party as of right-opponent I challenged the opposition division's positive finding on Article 123(2) EPC (see impugned decision, reasons, point 12). They argued that there is no direct and unambiguous disclosure in the original application for the control card *distinguishing* different effects as is now claimed. The Board disagrees.
- 3.3 The Board first notes that the skilled person reads claim 1 as originally filed, just as they read any claim, giving the terms their usual meanings, with their mind willing to understand, in order to try to arrive at a technically sensible interpretation that takes into account the whole disclosure of the patent, see Case Law of the Boards of Appeal, 8th edition, 2016 (CLBA), II.A.6.1, and the decisions cited therein.

- 3.4 In the Board's view, contrary to how the appellant-opponent II has argued, the syntax of the first characterising feature "a control card, tracing..." leaves the skilled person in no doubt that the control card both traces current and determines effects. This is because the main clause of the feature starts by introducing the subject, namely a *control card*. Then comes a subordinate clause between commas: tracing the change of current.... This is followed by a continuation of the main clause: *determines the effects....*, whose verb *determines* can but agree with the subject (control card). Thus, the skilled person will understand that the control card both traces change of current and determines effects.
- 3.5 Therefore, original claim 1 defines a control card that [by] tracing current change determines effects. In the Board's view, the skilled person reads the word "determines" and its cognate determine (see Oxford English Dictionary online, definition 11) in the sense of "to ascertain definitely by observation, examination, calculation, etc. (a point previously unknown or uncertain); to fix as known". The description of the invention supports this interpretation. In particular paragraph [0005] explains an object of the invention to be to realise a dishwasher that "identifies matters affecting the washing performance negatively" and (see paragraph [0022]) current data provides the information as to whether the operation of the circulation pump has any problem and "the identified problem is [then] solved...".
- 3.6 The first feature of the characterising portion of original claim 1 (and present claim 1) thus defines that the control card traces change in current to

ascertain definitely [a plurality of] effects that negatively influence washing performance.

- 3.7 Moreover, in the Board's view, original claim 1 defines to determine effects in the plural. In this regard, the Board is not convinced that the feature can be interpreted to mean that a single effect is determined. Here effects (which is claimed) is not the same as an effect: the first is singular, the second plural.

By the same token, the Board does not interpret the feature concerned (...determines the effects) to define a dishwasher that is programmed to determine just one of a number of possible effects. Had this been intended, the claim would have been drafted to define a single effect not a plurality as is actually the case.

- 3.8 In the Board's view, determining (ascertaining definitely) effects necessarily involves distinguishing each and every effect from the other effects of the plurality. Therefore the control card implicitly distinguishes a plurality of effects.

- 3.9 Since there is not just one but a plurality of effects, they can but be different from each other, whether or not the second example effect mentioned in claim 1 (pump felt sticking) may, like the first example effect (rotor blocking), lead to the pump impeller no longer rotating (cf. application as published, paragraph [0002]).

- 3.10 Therefore, the Board is of the opinion that the characterising portion of claim 1 as originally filed implies that the control card is adapted to distinguish different effects depending on the change of the current. The Board has no reason to doubt that the

remainder of the feature added to claim 1 (and, according to the determined effect, to provide the solution....), which appears to merely reword the last feature of original claim 1, likewise has a basis in original claim 1.

3.11 Therefore, the Board concludes that present claim 1 does not add subject matter, extending beyond the application as filed.

4. Article 123(3) EPC

4.1 The appellant-opponent II argues that, according to present claim 1, the control card is only *adapted* to provide a solution (countering a negative effect), whereas in granted claim 1, the machine actively provided a solution to such problems, which is narrower. For example, the granted claim covered only a dishwasher actively providing the solution. Therefore, so the argument goes, the amendment extends the protection conferred by the claim. The Board takes a different view.

4.2 The Board acknowledges that granted claim 1 is not ideally formulated. Although it defines a dishwasher, some claim features are formulated as actions, which might appear more like method claim features.

4.3 However, in the Board's opinion, when the skilled person reads in granted claim 1 that the dishwasher is characterised by a control card tracing the change of the current....determines [negative] effects... and provides the solution, they would not understand the dishwasher to be defined as one permanently in the act of providing a solution to a negative effect, since they likewise understand that such negative effects

(see patent specification, paragraph [0002]) are not usual operation conditions but exceptional fault conditions. Thus, in the Board's view, it is implicit to the skilled person that the dishwasher defined in granted claim 1 is merely able to provide solutions to negative effects, in other words it is adapted to do so.

With this in mind, the Board sees no extension of protection inferred by claim 1 in its present version now literally stating that the control card is "adapted to... provide the solution" (to the negative effects).

Therefore, present claim 1 meets the requirements of Article 123(3) EPC.

5. Clarity

5.1 In accordance with G 3/14, in considering whether, for the purposes of Article 101(3) EPC, a patent as amended meets the requirements of the EPC, the claims of the patent may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that the amendment introduces non-compliance with Article 84 EPC (see reasons, point 85 and order).

5.2 In the present case, the Board considers that the amendment to claim 1 (the control card is adapted...), appears to be clearly worded as such. Nor has the contrary been argued.

5.3 However, the appellant-opponent II and opponent I have argued that the amendment is formulated as a result to be achieved, rendering the claim unclear. In particular, they argue that the feature added to claim

1 defines the control card to be able to distinguish any different effect that could influence washing performance negatively, without saying how. They contend that this renders the claim unclear.

As explained above (see section 3.10), the Board considers that the feature in question (distinguish different effects) is implied by the first characterising feature (control card...determines the effects), which was present in granted claim 1. Thus, in the Board's view, if the amended feature of claim 1 expresses an unclear result to be achieved, this lack of clarity would already have been present in granted claim 1.

In view of this, and in accordance with G3/14 as explained above, the Board does not have the power under Article 101(3) EPC to examine the alleged lack of clarity raised by the appellant-opponent II and opponent I.

The Board concludes that, to the extent that the Board has the power to examine clarity, claim 1 as amended is clear and so meets the requirements of Article 84 EPC.

6. Sufficiency of disclosure

6.1 The appellant-opponent II has argued that the patent as a whole does not teach how the control card can be adapted to *distinguish* different negative effects and is thus not sufficiently disclosed.

As already explained (see again point 3.10), the Board considers that it is implicit in *determining* these effects (a feature present in granted claim 1 but not challenged in opposition under Article 100(b) EPC),

that they are also distinguished one from another. Moreover, as has likewise already been explained, it is the control card that does this. Therefore, the appellant-opponent II's objection under Article 83 EPC boils down to the argument that the patent as granted was insufficiently disclosed.

6.2 Raising this objection for the first time in appeal amounts to a fresh ground for opposition (Article 100(b) with 83 EPC). According to G10/91 (see Headnote, point 3 and Reasons, point 18) such a fresh ground can only be introduced in appeal with the agreement of the patent proprietor. In the present case, no such agreement has been given, so the Board does not have the power to consider this issue.

6.3 Put differently, in so far as the skilled person is able to carry out the invention by tracing the change of current and determining negative effects (which the Board does not have the power to examine), the newly introduced feature of distinguishing these different effects and providing the solution according to the effect, can likewise be carried out by the skilled person. Therefore, the Board concludes that the subject matter as amended is sufficiently disclosed and so the claim meets the requirements of Article 83 EPC.

7. Main request, claim 1, novelty with respect to E1

7.1 E1 discloses a dishwasher (abstract).

Whether or not E1 discloses all the features of the preamble of claim 1 (in summary, a wash tub, sump drain pump, circulation pump driven by an electric motor with variable rpm and filter), the Board considers that the dishwasher of E1 (see column 2, lines 37 to 44 with

figure 2) implicitly has a control card, since it has a microprocessor 16. Furthermore, the control card is arranged to monitor, that is trace, the change of the current drawn by the circulation pump from the network (see column 2, lines 45 to 52).

In the Board's view, the control card also determines, and so distinguishes, different effects that influence washing performance negatively. In particular (see column 1, lines 36 to 41, column 3, lines 22 to 27 and column 3, lines 53 to last line), these effects are the blades of the pump impeller being stuck, preventing the (circulating pump) motor from starting and jamming of the pump impeller during a normal washing operation.

7.2 Contrary to the opinion of the respondent-proprietor, the Board sees these as two different effects. They are determined and thus distinguished by the control card by analysing two different phases of pump operation (start up and maintenance, see column 3, lines 10 to 15), therefore these are distinct effects. This is confirmed by the fact that the user is alerted to them by different visualisations (column 3, lines 53 to last line).

7.3 Furthermore, the washing machine of E1 attempts to resolve these effects by changing the rpm of the motor (see column 3, lines 34 to 39 with figure 2) or, according to a different embodiment (see column 3, lines 40 with figure 3), by changing the direction of rotation of the pump.

7.4 However, in the Board's view, E1 does not disclose that the control card is adapted to provide the solution according to the determined effect as claimed.

In E1 (column 3, lines 22 to 39), whether the blades of the pump impeller remain stuck at start-up (first effect) or whether they jam during a normal washing operation (second effect), the same pre-alarm routine for a given embodiment is activated "in anomaly conditions".

Therefore, E1's control card is not adapted to provide a solution (changing pump rotation rpm and or direction) *according to the determined effect*, as claim 1 requires. Therefore, for at least this reason, the Board concludes that the subject matter of claim 1 is new with respect to E1.

7.5 In reaching this conclusion, the consideration that, according to the invention, the response to different negative effects might be the same (cf. paragraphs [0012] and [0013] and claim 2, rotor blocked or rotation disturbed due to sticking elicit the same response) plays no role. This is because claim 1 defines that the control card chooses a suitable response (provide the solution in claim 1's words) according to the determined effect. Whether or not the solutions chosen in response to some different effects might be the same, does not change the fact that the control card is adapted to accord the solution to the effect. As already explained, the control card of E1 does not do so: faced with any anomaly condition, it attempts to solve it by entering the same pre-alarm phase (see column 3, lines 34 to 39 again).

7.6 Nor does the Board consider that E1 discloses a control card that accords different solutions to the different negative effects determined in that the washing machine has a pre-alarm and an alarm phase. It may be that some anomalous effects (a blocked rotor at start-up or

during operation) are solved in the pre-alarm phase, so normal operation is resumed, whereas other anomaly situations are not resolved, so a full alarm phase is entered and the washing machine shut down (cf. column 3, lines 49 to 51 - "all functions of the dish-washing machine are deactivated").

However, an anomalous effect that has not been resolved in the pre-alarm phase does not change to a different effect but is merely the same effect that remains unresolved after 60 seconds (cf. column 3, lines 34 to 39). Therefore, the full alarm phase is not accorded to a particular effect as claimed but merely the consequence of the pre-alarm phase not having resolved an anomalous effect.

Moreover, the full-alarm phase does not provide a solution to any effect. Only during the pre-alarm phase does the machine attempt to solve negative effects. If this fails, the full alarm phase is a shutting down of the machine, not a different attempt to solve the determined effect.

7.7 For all these reasons, the Board considers that E1 does not disclose the feature of a control card adapted to provide the solution according to the determined effect. Therefore E1 does not take away novelty of claim 1.

8. Main request, claim 1, inventive step starting from E1 with the skilled person's general knowledge

8.1 Following the discussion of novelty, the Board sees the subject matter of claim 1 to differ from E1 at least in that (in summary) the control card is adapted to

provide the solution according to the determined effect.

- 8.2 With respect to E1, where the dishwasher attempts to solve both negative effects (problems) with the same pre-alarm routine, the invention's differentiated negative effect (problem)- solution strategy results in improved circulation pump problem resolution (cf. published patent specification, paragraphs [0005] and [0022]). The associated objective technical problem can be formulated as how to further improve resolution of problems of a circulation pump of a washing machine as in E1.
- 8.3 The appellant-opponent II has argued that E1 discloses to the skilled person how to identify two anomaly situations by monitoring current and therefore the skilled person, wishing to improve resolution of pump problems would experiment and find further motor current conditions associated with further negative effects they know from their general knowledge (cf. D1, paragraph [0079]) and so arrive at the subject matter of claim 1. The Board disagrees.
- 8.4 It may be that the skilled person knows from their general knowledge of further different negative effects that could effect pump performance and so be identified by monitoring current.
- 8.5 However, the Board does not consider that it would be obvious for the skilled person to firstly modify E1 to determine new effects and secondly to further adapt the machine so that solutions were provided *in accordance* with those new effects.

This is because, although E1 (see column 1, lines 9 to 45) already recognises that different problems are encountered when trying to wash efficiently (lines 9 and 10), E1 focuses on safety by preventing the overheating of components caused by the pump motor jamming (lines 31 to 45).

- 8.6 In the light of this focus, the Board holds that it would not be obvious to adapt E1 as the appellant-opponent II and opponent I have suggested (to detect effects that negatively effect pump performance other than the motor jamming, such as foaming of the wash liquid), since doing so would not contribute to the safety of the machine when the motor jams. Rather, faced with the objective technical problem (improving resolution of pump problems), the skilled person might seek new ways of freeing a jammed pump, but not try, as a matter of obviousness, to investigate other anomalous operating states of the pump, let alone make the machine determine associated new effects.
- 8.7 The further adaptation of E1 which would be required to arrive at the subject matter of claim 1, namely providing solutions in accordance with these newly determined effects, appears likewise not to be obvious, given E1's teaching to always attempt the same solution (pre-alarm routine - cf. column 3, lines 34 to 39), when faced with anomalous conditions.
- 8.8 The Board concludes that the subject matter of claim 1 involves an inventive step starting from E1 in combination with the skilled person's general knowledge, as is said to be illustrated by D1.

9. In summary, the arguments submitted by the appellant-opponent II and opponent I have not convinced the Board that the impugned decision was wrong in finding claim 1 as maintained to not add subject matter extending beyond the application as filed, Article 123(2) EPC, to not be amended to extend the protection conferred, Article 123(3) EPC, to be clear, Article 84 EPC, to be sufficiently disclosed, Article 83 EPC and that the subject matter of claim 1 is new, Article 54 EPC and involves an inventive step, Article 56 EPC. Therefore, the appeal must be dismissed and there is no need for the Board to consider the respondent-proprietor's auxiliary requests.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



G. Magouliotis

W. Van der Eijk

Decision electronically authenticated