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**Datasheet for the decision
of 4 October 2021**

Case Number: T 0173/18 - 3.2.04

Application Number: 11719510.7

Publication Number: 2608705

IPC: A47J31/36, A47J31/40,
A47J31/44, A47J31/58

Language of the proceedings: EN

Title of invention:
CONTROLLED MOTORIZED BREWING UNIT

Patent Proprietor:
Société des Produits Nestlé S.A.

Opponents:
Hofmann, Stefan
UNILEVER PLC/ UNILEVER N.V.

Headword:

Relevant legal provisions:
EPC Art. 83, 54(2), 56, 111(1)
RPBA 2020 Art. 13(2)

Keyword:

Sufficiency of disclosure - (yes)

Novelty - after amendment

Inventive step - (yes)

Appeal decision - remittal to the department of first instance
(no)

Amendment after summons - cogent reasons (no)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 0173/18 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 4 October 2021

Appellant: Société des Produits Nestlé S.A.
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
20 November 2017 concerning maintenance of the
European Patent No. 2608705 in amended form.**

Composition of the Board:

Chairman A. de Vries
Members: G. Martin Gonzalez
 C. Heath

Summary of Facts and Submissions

- I. The appeals were filed by the appellant-proprietor, appellant-opponent 1 and appellant-opponent 2 against the interlocutory decision of the Opposition Division finding that, on the basis of the auxiliary request 3 before it, the patent in suit met the requirements of the EPC.
- II. The Opposition Division held that the subject-matter of this request was novel and involved an inventive step having regard inter-alia to the following evidence:
- O2D1 US 7,210,401 B1
O2D2 US 6,557,458 B1
- O1D7 WO 2008/105017 A1
- III. In preparation for oral proceedings the Board issued a communication, dated 27 March 2020, setting out its provisional opinion on the relevant issues.
- Oral proceedings before the Board were held by videoconference on 4 October 2021. As announced with letter of 24 August 2021, the duly summoned appellant-opponent 2 did not attend.
- IV. The appellant-proprietor requests that the decision under appeal be set aside and that the patent be maintained as granted (Main Request), or that the patent be upheld in accordance with Auxiliary Requests 1 - 7 filed or re-filed with letter dated 29 March 2018, whereby Auxiliary Request 3 corresponds to the version as upheld by the opposition division.

Both appellant-opponents request that the decision under appeal be set aside and the patent be revoked.

V. Claim 1 of the requests relevant for this appeal read as follows:

(a) Main request (as granted)

"A motorized beverage machine (1) having a brewing unit (2) that comprises a first assembly (13) and a second assembly (14) cooperating together, each assembly delimiting part of a brewing chamber (29) for containing an ingredient capsule (30), at least one of said assemblies being:

- movable away from the cooperating assembly into an open position within said machine for forming between said assemblies a passage (31) for inserting into and/or removing from the brewing unit said ingredient capsule; and
- movable to the cooperating assembly into a closed position for forming said brewing chamber,

such machine comprising activation means including:

- a motor (3) for driving said movable assembly between said open and closed positions;
- a transmission means (4) for transmitting a drive action from the motor to the movable assembly;
- water supply means (5) for supplying heated water to the brewing chamber; and
- control means (10) for controlling the drive action of the motor,

characterised in that the control means (10) comprise:

- means for measuring at least one electrical parameter representative of a consumption of power by the motor;
- means for comparing to a set reference (40,41) an evolution of said measured parameter as a function

of time during the transfer of the assembly from the open to the closed position; and
- means for providing to at least one of said activation means an input resulting from the comparison of the evolution of said measured parameter to the set reference."

(b) First auxiliary request

Claim 1 as in the main request with the following features added at the end of the claim:

"wherein a safety input is provided to the motor (3) when detecting a variation of the measured parameter relative to the set reference (40, 41) which is abnormal".

(c) Second auxiliary request

Claim 1 as in the first auxiliary request with the following features added to the claim (emphasis added by the Board to indicate added text):

"...means for providing to at least one of said activation means an input resulting from the comparison of the evolution of said measured parameter to the set reference,

wherein the control means (10) is configured to detect the abnormal variation in comparison to a referential curve (40, 41) representing the normal evolution of the electrical parameter as a function of time corresponding to:

- a mode in which the movable assembly (14) is moved into a closed position with an ingredient

capsule (30) inserted in the brewing chamber (2 9)
(hereinafter the "Capsule closure mode"); and/or
- a mode in which the movable assembly is moved
into a closed position with no capsule inserted in
the brewing chamber (hereinafter the "Empty closure
mode")

wherein a safety input is provided to the motor (3)
when detecting a variation of the measured parameter
relative to the set reference (40, 41) which is
abnormal".

VI. The appellant-proprietor argues as follows:

The invention is sufficiently disclosed. Claim 1 of the
main request, first and second auxiliary requests is
new over O2D1 and O2D2. The case should be remitted to
the Opposition Division for first instance
consideration of the inventive step of claim 1 of the
second auxiliary request. The new objections presented
by the appellant-opponent 1 based on O1D7 during the
oral proceedings are late filed and should not be
admitted. The subject-matter of claim 1 of the second
auxiliary request involves an inventive step in the
light of O2D1 and O2D2.

VII. The appellant-opponents argue as follows:

The invention as defined in granted claims 2, 14 and 16
is not sufficiently disclosed. Claim 1 of the main
request, of the first and the second auxiliary request
lacks novelty over O2D1 or O2D2. Claim 1 of auxiliary
request does not involve an inventive step in the light
of O2D1, O2D2, O1D7 and common general knowledge. The
inventive step arguments based on O1D7 put forward
during the oral proceedings are admissible.

Reasons for the Decision

1. The appeals are admissible.
2. Background

The invention is concerned with a beverage machine for the preparation of a beverage from an ingredient capsule. The machine has a motorized brewing unit and a control for closing the motorized brewing unit in a convenient and safe manner, see paragraph [0001] of the contested patent. To this end, the motorized beverage machine comprises means for measuring at least one electrical parameter representative of the motor power consumption during its operation, see paragraph [0017]. As stated in paragraph [0020] "by such measurement, the mechanical constraints exercised against the motor output can be determined. Such constraints may correspond to normal operation, e.g. opening or closing with or without a capsule ingredient, or to an abnormal operation, e.g. an interference with an obstacle preventing normal opening or closing, such as a human body part e.g. a finger, caught in between the assemblies or inhibiting reopening of the assemblies, e.g. jamming of the brewing unit". The machine may be configured to respond in appropriate manner, for instance by inverting or reducing motor action or stopping it altogether, see paragraphs [0022]-[0023].

3. Main request - Novelty
 - 3.1 The appellant-proprietor contests the Division's finding that claim 1 is not new over O2D2 and O2D1.

3.2 Two features are in dispute:

3.2.1 The required measurement of a parameter representative of the power consumption. In the Board's view this can be consumed motor current, as in the embodiment of the patent - see paragraph [0020] and figure 5 of the patent specification -, or the power consumption itself.

3.2.2 The second disputed feature requires *comparing an evolution of the parameter as a function of time to a set reference*.

In the Board's understanding this formulation does not imply that curves of values are being compared, as a *set reference* can mean nothing more than a single predetermined threshold value. In that case comparing an *evolution of a parameter as a function of time* can simply refer to comparing the value of the measured parameter as it evolves or varies with time with the threshold value. Evolution as a function of time in this context may also be interpreted as referring to a measure of the temporal change of the parameter in question. Any of these readings fit within the general teaching of patent. Thus, the feature is not limited to the curve showing the parameter's time dependence, nor does it therefore require monitoring of that time dependence, as argued by the appellant proprietor.

In the above understanding the derivative of a parameter with respect to time is a measurement of the evolution of said parameter as a function of time and would thus anticipate that claimed feature, as would an increase of the parameter.

3.3 Turning to the O2D1 disclosure, the electronic controls of the known machine sense an increase in power consumption of the stalled gear motor and shuts off the power, see column 6, lines 10-12, which implies a comparison of a time evolution of the power consumption to a set value, as claimed.

3.4 The machine of O2D2 measures "the intensity of the supply current" (representative of the power consumption) and compares its derivative with respect to time to a set threshold, see column 4, lines 32-34 and 43-45. Document O2D2 therefore also anticipates the disputed features.

3.5 Thus, the Board concludes that claim 1 lacks novelty over O2D1 and O2D2.

4. First auxiliary request - Novelty

4.1 Claim 1 further requires that a safety input is provided to the motor when detecting a variation of the measured parameter relative to the set reference which is abnormal.

4.2 The Board is of the opinion that although O2D1 and O2D2 only describe normal operation, both documents implicitly disclose the above features and so deprive claim 1 of novelty.

4.3 As regards the safety input feature, this feature is claimed as "a safety input... provided to the motor" (*emphasis added*). As such, it is a signal that a motor can receive and is able to process. In the Board's view, any control input to stop the motor in case of emergency can also be regarded as safety input and thus anticipates that feature. Indeed the patent

itself, see paragraph [0023], considers this option "The safety input may comprise inverting the motor action to move the movable assembly in open position or reducing or *stopping the drive action* of the motor" (emphasis added).

- 4.4 Turning to the prior art disclosures, it is not in dispute that O2D1 only describes normal operation of the machine. However this document implicitly discloses the above further features for the following reasons. The machine control is described as sensing an increase in power consumption of the stalled gear motor 66, which occurs when lower head 28 reaches the exact mating position. The electronic controls then shut off the power, see column 6, lines 4-12. Although not explicitly described, if an abnormal situation in the form of an obstacle or other interference were to occur, the motor would necessarily stall. This would naturally produce an increase in power, which is abnormal since it is not taking place at its normal position, i.e. lower head 28 is not yet at its mating position. The machine controls, since they are so designed, would sense this increase in power and would issue a motor stop instruction to the motor. Thus the known machine, though not explicitly described, also detects abnormal variations of power consumption and provides a safety input to the motor (shut off). It does not matter that the machine does not "know" that the power increase is caused by an abnormal event. What matters is that it in fact responds in the claimed manner to what is objectively an abnormal event in a manner that protects the machine from damage or the user from injury. Nor is there anything in the claim that suggests that the safety input must be different from input in normal operation. Therefore document O2D1

discloses a machine that also possesses the claimed limitations.

4.5 A similar conclusion is arrived at for O2D2. O2D2 describes measuring the intensity of the supply current to the motor 6 during the closing phase of the extraction chamber, see column 4, lines 32-36. It comprises detection means for a drop in the derivative relative to time of supply current. Upon sensing a current consumption derivative below a set threshold, the machine control stops the motor 6, see column 4, lines 43-45 and column 5, lines 4-7. This is described for sensing the optimum closed position, see column 5, lines 6-7. However, for the same reasons as explained above for O2D1, the machine necessarily also generates the input and stops the motor in the event of an obstacle. If an unexpected interference occurs, the control would detect a variation of the measured current consumption, also at an abnormal chamber closing position, since it measures and detects during the whole closing phase, and would then provide a safety input to the motor (i.e. stop the motor) upon such detection, as claimed.

4.6 The Board thus holds that that claim 1 of the first auxiliary request is not new over O2D1 and O2D2.

5. Second auxiliary request - Novelty

5.1 Claim 1 of the second auxiliary request is amended to add that
the control means (10) is configured to detect the abnormal variation in comparison to a referential curve (40, 41) representing the normal evolution of the electrical parameter as a function of time corresponding to:

- *a capsule closure mode and/or*
- *an empty closure mode.*

This claim therefore requires a time resolved reference curve for comparison with the evolution of the measured parameter as a function of time.

The added features read in context clarify what the set reference is, namely a referential curve of the normal time evolution, i.e. a succession of values of the parameter as it varies with time. It is thus against this time resolved, "signature" variation of values that the the evolution of the parameter as a function of time, i.e. as the measured parameter varies with time, is compared.

- 5.2 Contrary to the findings of the Opposition Division, neither O2D1 not O2D2 anticipate this feature, since they only describe a constant threshold or a constant set value, not a curve showing the evolution of the current or power as a function of time of a closing motor.
- 5.3 The appellant-opponent 1 argues that the threshold value of O2D2 anticipates the claimed referential curve. This value is the derivative of the current at the end of a normal closing operation, see O2D2 column 4, lines 43-45. As such it is the value of the inclination of the curve that represents the normal supply current as a function of time at that point. This inclination value, mathematically extrapolated over time, can be regarded as representative of an approximate linear evolution over time of the current parameter for the closing motor. This inclined straight line anticipates the referential curve of claim 1.

The Board is not convinced by this argument. Even if such an approximation is possible and might be seen as representing a normal supply current evolution of a movable assembly, this is simply not taught by O2D2. In O2D2 only a single constant value is recorded and it is this value against which measured increase in current is compared.

Moreover, the Board is not convinced that the extrapolated inclined straight line put forward by the appellant-opponent 1 indeed does represent a normal closing evolution of the current. While a first order (linear) approximation of the normal closing curve over time (for instance of curve 40 or 41 in figure 5 of the patent) is of course possible, there is nothing that indicates or suggests that the threshold value used in O2D2 for determining that the chamber has reached correct closed state matches or is related in any way to the slope (or inclination) of such an approximation.

5.4 The Board concludes that claim 1 of the second auxiliary request is new

6. Remittal - Admission of new case of appellant-opponent 1

6.1 The Board in its communication at section 9 "Remittal" stated its preliminary opinion:

"If auxiliary request 2 is found to be new, the appellant-opponent requests remittal for the issue of inventive step. The board however notes that there is no absolute right to have an issue decided at two instances, see Case Law of the Boards of Appeal, 9th edition, July 2019 (CLBA), V.A.7.2.1. In the present case, the issue of inventive step, although for other

request, and the relevant prior art have already been discussed in the impugned decision. Thus while there was no specific discussion of this issue for auxiliary request 2, this does not per se appear to justify remittal to the department of first instance. On the other hand, considerations of procedural economy speak against remittal. In view of the above the board would not be inclined to remit the case for the issue of inventive step of auxiliary request 2".

The parties during the oral proceedings refrained from further comment. Absent further submissions, the Board saw no reasons to deviate from its preliminary intention and decided not to remit the case in accordance with Article 111(1) EPC.

6.2 During the oral proceedings, the appellant-opponent 1 stated that it wished to argue an inventive step objection based on O1D7. This would not be a new or amended case, since they already raised the argument with letter of 20 August 2018, see section 3.

However, as indicated by the Board in its written opinion, section 3 merely cites several documents against inventive step of auxiliary request 2, without providing any substantive argument.

In particular, section 3 mentions a combination of O1D7 with common general knowledge or of O1D9 with O1D7 and refers to arguments made in the notice of opposition in relation to feature E2 of granted claim 1 based inter alia on O1D7. How arguments against the *granted* claim 1 might apply to features added to that claim is not immediately apparent to the Board, even when the relevant sections 4.1.4, 4.1.5 of the opposition notice are considered. This reference does therefore not

constitute a substantiation of a case against the added features based on O1D7. Any case now to be made based on O1D7 would thus be new and represents an amendment to the case of appellant opponent 1 in the sense of Article 13(2) RPBA 2020.

Such amendments shall, in principle, not be taken into account unless there are exceptional circumstances which have been justified with cogent reasons by the party concerned, see Article 13(2) RPBA 2020. That the document O1D7 might be highly relevant for the second auxiliary request, as argued by the appellant-opponent 1 is not an exceptional circumstance justifying amendment at this final stage. Indeed, the second auxiliary request 2 is part of the contested decision and has also been pursued by the appellant-proprietor from the outset of these appeal proceedings. All relevant objections for this request should have therefore been presented with the reply to the proprietor's appeal, especially those based on prima-facie highly relevant documents that were already then available to the appellant opponent 1. Otherwise, the appellant-opponent 1 has not identified any other special reason for the amendment of their case.

In the light of the above, the Board decided not to admit the new objections based on O1D7, Article 13(2) RPBA 2020.

7. Second auxiliary request - Inventive step
- 7.1 It is not in dispute that either O2D1 or O2D2 can be regarded as starting point for the assessment of inventive step.

7.2 It follows from the above novelty analysis that while O2D1 and O2D2 disclose a comparison of instantaneous values with a constant threshold or set value, neither document discloses using a referential curve that represents the normal evolution of the electrical parameter as a function of time when the chamber is closing with and/or without capsule. Since, in contrast, the set reference in the machine according to the claimed invention is a curve representing the normal evolution as a function of time, the machine control performs a time resolved comparison of the measured parameter. It seems to the Board that such a comparison against a "time signature" yields more accurate results than the use of a constant value or threshold as a reference. For instance, it is plausible that abnormal variations may be detected sooner than in the prior art while the use of a signature variation may also allow to identify the nature of an abnormal event. The chamber closing operation can thus be seen to be safer than if only a threshold value is used. The corresponding objective technical problem can thus be formulated as how to further improve safe operation, see patent paragraph [0010].

7.3 None of the cited prior art suggests or renders obvious using a curve representing the normal time evolution as reference to this end, nor does the Board consider this to be common general knowledge.

In this regard, O2D1 or O2D2 focus only on preventing excessive wear when the mechanism approaches its end position, with the threshold value chosen to allow the end position to be detected more accurately. The appellant-opponent 1 submits that the skilled person, drawing on their common general knowledge, would regard the use of some form of curve, for example a first

order linear approximation of normal operation, see above, as a function of time as an obvious alternative to the known constant value or threshold. However, the Board has no reason to believe that this would be part of their common general knowledge. As stated above, the main focus in O2D1 and O2D2 is on accurately determining when the mechanism is approaching its end position. There is no need to know what happens before that point. Consequently, the skilled person has no motivation to determine how power or current evolves or varies with time along the path of movement of the assembly - even in approximation - much less to use that as a reference.

7.4 The Board therefore concludes that the subject-matter of claim 1 of the second auxiliary request involves an inventive step.

8. Auxiliary Request 2 - Sufficiency of disclosure

8.1 The appellant-opponent 1 contests the positive findings of the Opposition Division regarding sufficiency of disclosure of granted claims 2, 14 and 16. In the auxiliary request 2 the feature of claim 2 has been incorporated into claim 1 while claims 14 and 16 have been renumbered as claims 12 and 14 but are otherwise unchanged. Thus, this contention applies also to the auxiliary request 2. However, the Board is not convinced by the appellant-opponent's arguments.

8.2 As regards granted claim 2, the skilled person readily understands the term "abnormal" variation in the context of the patent as a deviation of the measured parameter from its normal operation values, see paragraph [0020]. The specification provides a clear example of what this means: e.g. a variation of current

consumption exceeding 20% of normal current consumption over time (curves 40,41 of figure 5) would be abnormal, see paragraphs [0052]-[0056]. The Board has no doubt that the skilled person, an engineer involved in the design and development of beverage machines will from their understanding of the operation of the machine have no difficulty deciding what is an abnormal operation and how they might detect it, in particular which parameters would be indicative of an operation that is not as intended. The example illustrates the general approach rather clearly, namely comparing a measured development of current to a development representing normal operation. What counts as a (non acceptable) deviation of course depends on the particular circumstances and is a matter of considered choice, which is well within the skilled person's routine abilities.

The appellant-opponent 1 also submits that there are two different "normal" curves, see curves 40 and 41 of figure 5 of the patent: empty chamber closure mode (41) and inserted capsule closure mode (40). However, there would be no practical guidance in the patent as to how the machine should decide which of the two possible curves is the applicable reference value at a given moment. The Board is satisfied that the skilled person does not need express guidance as it readily occurs to them (as it does to the Board) how they can configure the machine to decide which norm is to be used, for instance by means of user input for either brewing (capsule closure) or for machine cleaning (empty closure), or by using a presence sensor or other known sensing solutions.

8.3 The Board also holds that the skilled person in the field of beverage making machines will be entirely familiar with capsules customarily used in the field, their properties and suitable mechanisms. With that knowledge they would thus be able to realize a machine of granted claim 14 adapted to a particular capsule having a motor current absorption curve with an inserted capsule as defined in granted claim 16.

8.4 The Board thus concludes that the invention is sufficiently disclosed, Article 83 EPC.

9. For the above reasons, the Board holds that the claims as amended according to auxiliary request 2 meet the requirements of the EPC. The board concludes that the patent as amended can be maintained pursuant to Article 101(3)(a) EPC, with a description to be adapted thereto.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to uphold the patent based on the following documents:
 - claims 1-20 of Auxiliary Request 2 re-filed with letter dated 29 March 2018, and
 - a description to be adapted thereto.

The Registrar:

The Chairman:



G. Magouliotis

A. de Vries

Decision electronically authenticated