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Datasheet for the decision of 15 March 2023

Case Number: T 0073/22 - 3.2.01

Application Number: 16709493.7

Publication Number: 3258812

IPC: A45D1/06, A45D1/28, A45D2/00

Language of the proceedings: EN

Title of invention:
HAIR STYLING APPLIANCE

Patent Proprietor:
Jemella Limited

Opponents:
Babyliss Faco SRL
Dyson Technology Limited

Headword:

Relevant legal provisions:
EPC Art. 100(b), 54, 56
RPBA 2020 Art. 13(2)

Keyword:

Grounds for opposition - insufficiency of disclosure (no)
Novelty - (yes)
Inventive step - (yes)
Amendment after summons - exceptional circumstances (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

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Case Number: T 0073/22 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 15 March 2023

Appellant: (Opponent 1)	Babyliss Faco SRL Avenue de l'Indépendance 25 4020 Wandre (BE)
Representative:	AWA Benelux Parc d'affaires Zénobe Gramme - Bât. K Square des Conduites d'Eau 1-2 4020 Liège (BE)
Appellant: (Opponent 2)	Dyson Technology Limited Intellectual Property Department Tetbury Hill Wiltshire SN16 0RP (GB)
Representative:	Fowler, Maria Jayne Dyson Technology Limited Intellectual Property Department Tetbury Hill Malmesbury, Wiltshire, SN16 0RP (GB)
Respondent: (Patent Proprietor)	Jemella Limited Bridgewater Place Water Lane Leeds Yorkshire LS11 5BZ (GB)
Representative:	MacDougall, Alan John Shaw Mathys & Squire The Shard 32 London Bridge Street London SE1 9SG (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on**

22 November 2021 concerning maintenance of the European Patent No. 3258812 in amended form.

Composition of the Board:

Chairman G. Pricolo

Members: S. Mangin

S. Fernández de Córdoba

Summary of Facts and Submissions

I. The appeals were filed by the appellants (opponents) against the interlocutory decision of the opposition division finding that, on the basis of the main request, the patent in suit (hereinafter "the patent") met the requirements of the EPC.

II. The opposition division held that:
- the invention was disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art,
- the subject-matter of claim 1 was novel over D13 (WO 2004/019726 A1), and
- the subject-matter of claim 1 involved an inventive step in view of :
  - D1 (WO2012028862) in combination with D5 (US 2010/0096923)
  - D9 (GB 2500733 A) in combination with D5
  - D02 (WO2012/140134), D03 (GB 2508590 A), D04(WO 2012/139958 A1) or D9 in combination with common general knowledge
  - D13 in combination with common general knowledge.

III. Oral proceedings were held by videoconference before the Board on 15 March 2023.

IV. The appellants (opponents 1 and 2) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeals be rejected (main request), alternatively that the patent be maintained on the basis of one of the following auxiliary requests:

new auxiliary requests AR 1 to AR 30 filed with the letter dated 15 February 2023 or
auxiliary requests AR 1 to AR 14 submitted with the reply to the statements of the grounds of appeal.

V. Independent claim 1 of the main request with the feature numbering used in the appealed decision reads as follows:

1.1 A hair styling apparatus comprising:
1.2 a plurality of heater electrodes which heat one or more hair styling heaters,
1.3 the plurality of heater electrodes comprising a first subset and a second subset;
1.4 a power source for powering the plurality of heater electrodes and
1.5 a controller (506) configured to control powering of the plurality of heater electrodes from the power source wherein,
1.6 in a first mode of operation, the controller is configured to control the power source so that the first and second subsets of the plurality of heater electrodes are not simultaneously powered and
1.7 the first and second subsets of the plurality of heater electrodes are powered in a time interleaved manner multiple times per second.

VI. Independent method claim 14 reads as follows:

A method of controlling a hair styling apparatus according to any preceding claim comprising a plurality of heater electrodes which heat one or more hair styling heaters, the plurality of heaters comprising a first subset and a second subset; the method comprising:

controlling powering of the heater electrodes so that the first and second subsets of the plurality of heaters are not simultaneously powered and are powered in a time interleaved manner multiple times per second.

VII. In the present decision, reference is made to the following additional documents:
D19: extract from the website "How Stuff Works" from 24 April 2013. The web page is entitled “Heating a Hair Dryer”.
D20: US 5243683

Reasons for the Decision

1. Main request - sufficiency of disclosure

The invention is described in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

1.1 Appellant 1 argued that the contested patent repeatedly indicated that the control unit could use multiple control algorithms without describing any (for example page 8, lines 28-30 of the application as originally filed). In particular, it was indicated that the power supply could use pulse width modulation (PWM) without indicating how this PWM could synchronize the pulses to obtain the claimed result.
Appellant 1 emphasised that unless the use of an interleaved PWM was obvious and formed part of the skilled person's general knowledge, the contested patent was insufficiently disclosed. They concluded that the contested invention was either insufficiently disclosed or did not involve an inventive step.

1.2 Appellant 2 submitted that features:
i - 1.2 "*a plurality of heater electrodes which heat one or more hair styling heaters", and*
ii - 1.3 *"the plurality of heater electrodes comprising a first subset and a second subset"*;
did not allow the person skilled in the art to carry out the invention.

i- The hair styling heater required a heater element 704 and a heater plate 702 (see paragraph [0062] of the patent). However, neither of these terms were mentioned in the claim. In addition, at paragraph [0063] and [0065] "styling surfaces on the heater plates" indicated that the heater plates comprised the styling function. However, these essential features of the invention were not included in claim 1.
Therefore, claim 1 did not clearly and sufficiently recite the essential elements that were necessary to enable the person skilled in the art to replicate the claimed appliance and specifically a "hair styling heater".

ii- The only disclosure of more than two heater electrodes populating the first and second subsets was in the form of (a) zones and (b) such zones being limited to a maximum current draw for each subset of electrodes. However, claim 1, and in particular features 1.3 to 1.6, did not mention either zones or a maximum current draw. Thus claim 1 did not clearly and sufficiently recite the essential elements that were necessary to enable the person skilled in the art to replicate the claimed appliance where there were more than two electrodes. Thus, the claim was not supported by the description. In addition, the skilled person was not able to put the invention into practice over the whole scope of the claim.

1.3 The Board does not agree with the appellants.

1.3.1 Configuring the controller to control the power source to power a first and second subsets of the plurality of heater electrodes not simultaneously and in a time interleaved manner multiple times per second (features 1.6 and 1.7) may be carried out by a person skilled in the art in view of the patent specification and their common general knowledge. Paragraphs [0051] and [0052] of the patent (page 14, line 28-page 15, line 5 of the application as filed) and figures 5, 6a and 6b give sufficient information for the invention to be implemented. In particular, the two switches 704 and 702 controlled by the microcontroller (see figure 5) will enable such an implementation. Furthermore PWMs are, per se, undisputedly well known to the person skilled in the art and the appellants did not specify why their implementation in such a control circuit would present any difficulties.

Features 1.2 and 1.3 can also be carried out by a person skilled in the art in view of the patent specification (figures 1, 3 and 7 and corresponding paragraphs in the description, in particular paragraphs [0036]-[0038]) and their common general knowledge. The objections made by appellant 2 are clarity objections, as essentially based on the argument that the claim lacks essential features, rather than objections of insufficiency of disclosure. Indeed for sufficiency of disclosure, it is the patent as a whole, including the description and the figures and not the claims only that must disclose any feature essential for carrying out the invention in sufficient detail to enable the skilled person to put the invention into practice.

2. Main request - Novelty over D13

The subject-matter of claim 1 is novel over D13 as it does not disclose feature 1.2.

The only disputed feature by the parties was feature 1.2.: *"a plurality of heater electrodes which heat one or more hair styling heaters".*

2.1 With their statement of grounds of appeal, appellant 2 submitted that claim 1 was not limited to contact with the hair as the term "hair styling heater" was not further defined in the claim. Therefore, any manner of heating the hair was included in claim 1. D13 disclosed a first heating element 20 and a second heating element 30 and the skilled person would understand that these two features formed a heater that could be used for hair styling. This was functionally the same as what was defined in feature 1.2 of claim 1.

2.2 With their letter dated 23 January 2023, filed after the communication of the Board pursuant to Article 15(1) RPBA 2020, appellant 2 submitted two new interpretations of feature 1.2 of claim 1:

i) Claim 1 did not require the hair styling heaters to be separate from the heater electrodes. In other words, the "hair styling heaters" consisted of "heater electrodes". There was no need for there to be another element that was different from the heater elements themselves. This interpretation was in line with paragraph [0017] of the patent and claim 17 as filed.

ii) Hair styling heaters were not part of the claimed hair styling apparatus. The wording of feature 1.2 encompassed hair styling apparatus where the hair

styling heater was for example a brush independent of the hair styling apparatus.

With either of the above two interpretations, D13 anticipated feature 1.2:

i) The heating elements 20, 30 were both "the plurality of heater electrodes" and the "hair styling heaters" of claim 1.

ii) The heating elements 20, 30 were "the plurality of the heater electrodes" that heat air, which in turn may be used to heat a "hair styling heater" not part of the "air styling apparatus", such as a rounded curling brush.

2.3 The Board judges that feature 1.2 is not disclosed in the hair dryer of D13. The 1st and 2nd heating elements 20 and 30, corresponding to the "heater electrodes" do not heat a hair styling heater, but heat the air. D13 does not therefore anticipate the subject-matter of claim 1. In their statement of grounds of appeal, appellant 2 held that the heater elements 20 and 30 were functionally the same as heater electrodes which heat one or more hair styling heaters. However the question for novelty is whether all the structural features of feature 1.2 are directly and unambiguously disclosed in the hair styling apparatus of claim 1, not whether the hair dryer of D13 discloses the same function.

2.4 In the Board's view, the interpretations of feature 1.2 of claim 1, proposed by appellant 2 in their letter of 23 January 2023, represent an amendment to their appeal case made after notification of a summons to oral proceedings. Contrary to the opinion expressed by

appellant 2 during the oral proceedings, the relevant submissions are not a mere refinement of their previous argumentation, and do not anyway merely constitute new arguments. Indeed the change of interpretation of feature 1.2 puts the novelty objection in view of D13 in a new light and amounts to a change of facts.

2.5 However, there is no need to decide whether the new claim interpretations should be taken into account (Article 13(2) RPBA 2020), because anyway the two new interpretations of feature 1.2 submitted by appellant 2 are incorrect.

Feature 1.2 clearly defines two distinct groups of components: a plurality of heater electrodes, on one hand, which heat one or more hair styling heaters, on the other hand. Feature 1.2 specifies that the heater electrodes heat the hair styling heaters, such that the heater electrodes have to be distinct components from the hair styling heaters.

Furthermore, a skilled person reading the claim with a mind willing to understand, and reading in particular features 1.1 and 1.2 in combination ("A hair styling apparatus comprising: a plurality of heater electrodes which heat one or more hair styling heaters"), would understand that the hair styling heaters must form part of the hair styling apparatus, as they provide the hair styling function for the claimed hair styling apparatus. This reading is moreover confirmed by the description and the figures. In particular, contrary to appellant 2's submissions, paragraph [0017] cannot be understood as implying the heater feature to be optional; rather paragraph [0017] describes a particular kid of hair styling apparatus falling within the wording of claim 1, having a first arm with a first contacting surface and a second arm with a second

contacting surface, in which there may be two electrodes only, e.g. one on each arm or a single heater with two electrodes.

It follows that the objections of lack of novelty over D13 based on these interpretations cannot convince.

3. Main request - Inventive step starting from D13

The subject-matter of claim 1 is not rendered obvious starting from D13.

3.1 With their statement of grounds of appeal, appellant 2 submitted that claim 1 was silent as to how the hair styling heater interacted with hair. Heater plates used to contact the hair were not present in claim 1. Thus, it was asserted that the technical feature was in fact that heat was used to style hair and this was disclosed in D13.

3.2 While the Board agrees that claim 1 is not limited to hair styling heaters that are brought in contact with the hair, and that both in claim 1 and D13, heat is used to style hair, D13 still does not disclose "one or more hair styling heaters".
The Board follows the opinion of the opposition division and the respondent that starting from D13 either alone or with common general knowledge, there is no incentive to consider the provision of heating elements heating one or more heat styling heaters. The Board notes that with their statement of grounds of appeal, appellant 2 has not indicated any type of hair styling heaters that could be included in the hair dryer of D13 and how they would be implemented in the hair dryer of D13. The statement that "heat is used to style hair" is not convincing for rendering the

subject-matter of claim 1 obvious starting from D13 either alone or in combination with common general knowledge.

3.3 Admissibility of the inventive step objections starting from D13 submitted with the appellant's 2 letter dated 23 January 2023 - Article 13(2) RPBA 2020

3.4 The Board does not take into account the new documents D19 and D20 and the inventive step objections starting from D13 in combination with these documents submitted by appellant 2 with their letter dated 23 January 2023.

3.5 With their letter filed after the summons to oral proceedings and the communication of the Board under Article 15(1) RPBA 2020 had been issued, appellant 2 filed two new documents D19 and D20 and submitted that the subject-matter of claim 1 lacked an inventive step over D13 in combination with common general knowledge and/or either of D19 or D20.

3.6 Appellant 2 argued that documents D19 and D20 were submitted directly in response to paragraph 3.1.4 of the Board's preliminary opinion stating that: *"Starting from D13, the skilled person would not add a hair styling heater to be heated by the heating elements 20 and 30 as it would increase the thermal loss without providing any additional benefit".*

D19 and D20 explained the additional benefits of more even, effective and safer heating that resulted from providing a separate hair styling heater in a hair dryer. D19 disclosed the use of a ceramic coating on a hair dryer electrode, the ceramic coating being a "hair styling heater", and D20 disclosed improved heating means for hair dryers comprising PTC semiconductor

heating elements comprising electrodes heating electrically insulating plates and a thermally conductive casing. These documents were not provided previously because this reasoning was not raised, by the Opposition Division or by the Proprietor, during the Opposition Proceedings. Thus, there existed exceptional circumstances within the meaning of Article 13(2) RPBA 2020, which meant these documents should be admitted at this stage of the proceedings.

The statement of grounds of appeal addressed the decision of the Opposition Division (page 14, point 5.4 of the appealed decision), which focused on the provision of heating plates contacting the hair, which was not a requirement of claim 1.
The issue, raised by the Board in their communication pursuant to Article 15(1) RPBA 2020, of a hair styling heater allegedly increasing thermal loss without providing any additional benefit, was not mentioned in the decision under appeal. Therefore, this was not addressed in the statement of grounds of appeal.

Documents D19 and D20 were short, simple documents that were submitted to address directly the reasoning now set out by the Board in the preliminary opinion, which was never raised during the opposition proceedings. The documents were submitted well ahead of the appeal oral proceedings.

Appellant 2 accepted that the preliminary opinion of the Board was based on the respondent's argument submitted in their reply to the statement of grounds of appeal on page 10, point 8.2. However they argued that there was little time between the reply of the respondent and the notification of the Board to make any submissions.

3.6.1 The new submissions constitute an amendment to appellant 2's appeal case made after the notification of a summons to oral proceedings. Pursuant to Article 13(2) RPBA 2020, such amendments are in principle not taken into account unless there are exceptional circumstances, which have been justified with cogent reasons.

The Board judges that D19 and D20 should have been filed at the latest with their statement of grounds of appeal. Indeed alternative heater elements such as PTC heaters comprising electrodes embedded in ceramic were the subject of discussion during the oral proceedings in opposition as can be deduced from points 8.3 and 9.9 of the minutes as well as point 4.2 of the appealed decision. However in their statement of grounds of appeal appellant 2 did not refer to any alternative heaters, but instead argued that:

"At point 5.4 of the interlocutory decision of the Opposition Division, it is recorded that D13 discloses a hairdryer comprising all the features of claim 1 except feature 1.2 namely "a plurality of heater electrodes which heat one or more hair styling heaters" and that the technical effect resulting from feature 1.2 is styling hair by contact of the hair with one or heaters. However, claim 1 is silent as so how the hair styling heater interacts with hair. As previously discussed, it seems that a heater plate is used to contact the hair however this feature is not present in claim 1. Thus, it is asserted that the technical feature is on fact that heat is used to style hair and this is disclosed in D13".

Appellant 2 made the point that claim 1 did not require that the hair styling heater had to contact the hair. However, they did not argue that the provision of hair styling heater was obvious for the skilled person, but

instead argued that the missing feature was disclosed in D13. Therefore submitting D19 and D20 and arguing that alternative heaters are known to the skilled person is not in the continuity of the objection made in the statement of grounds of appeal.

The Board notes that the length of the documents and their prima facie relevance is not the main criteria for admissibility at this late stage of the proceedings. Otherwise very pertinent documents could be submitted only at the end of proceedings, placing the respondent in a difficult situation as having to formulate new requests in response and possibly prolongating the proceedings unnecessarily. In any case, it is noted that it is doubtful whether a ceramic coating as in D19 or a casing of a PTC element as in D20 might qualify as a "hair styling heater" in the sense of claim 1, in particular having regard to the above-mentioned interpretation of feature 1.2.

To conclude, there are no exceptional circumstances for submitting D19 and D20 and the objections of lack of inventive step relying on these documents after the notification of a summons to oral proceedings.

4. Inventive step starting from D09 in combination with D05

4.1 The parties agreed that D09 did not disclose features:

- 1.6 "*in a first mode of operation, the controller is configured to control the power source so that the first and second subsets of the plurality of heater electrodes are not simultaneously powered*" and

- 1.7 *"the first and second subsets of the plurality of heater electrodes are powered in a time interleaved manner multiple times per second"*.

4.2 Appellant 1 considered that as D09 did not disclose the separate control of power supplies of the heating zones, the problem to be solved could be regarded as *"choosing an electrical power source optimising the consumption of the hair styling apparatus from D09 in order to extend the life of the battery, retaining optimum heating"*.

Appellant 1 argued that the consumer was looking for portable devices with a longer autonomy. Reduction of battery consumption was therefore omnipresent.

The person skilled in the art would therefore seek a solution in the technical field of power sources, in particular a modular DC-DC source with multiple and independent outputs as in D05.
Paragraph [0011] of D05 would encourage the person skilled in the art to combine D09 with D05 because it precisely addressed the technical problem solved by the opposing patent (paragraph [0011]: *"Disclosed herein are techniques and systems for DC-DC voltage conversion. Techniques in accordance with the present disclosure may advantageously improve operations of portable devices through reduced harmonic noise generation, as well as increased battery life-cycling"*). D05 was intended to improve the operation of portable devices requiring multiple independent power sources from a single DC source by providing extended battery life.

When combining D09 with D05, the skilled person would not add the filters present in D05. Indeed D09 mentions

the use of PWM without the use of filters. The skilled person was therefore well aware of the fact that filters were not mandatory. Furthermore, claim 4 of D05 disclosed non-filtered embodiments.

The device of D09, using the power supply of D05, would then have a power supply of the electrodes powered in sequence alternated in time and this, several times per second (§[0027]: *"in one implementation, each operating period P1-P4 is defined by six hundred twenty-five nanoseconds"*) in order to obtain the desired result, i.e. to save energy by reducing the current consumed by the source power supply.

The person skilled in the art, starting from D09, therefore had no particular reason to use the D05's filters. In any case, the filters had no impact on the problem solved by the patent. It was the current at the output of the source which was critical, and not the filtered character. In addition, avoiding the use of D05 filters responded precisely to the secondary technical problem of providing a simplified and less expensive hairdressing device.

4.3 The Board is of the opinion that the effect of the two differences is to reduce the current drawn from the source, while heating the electrodes adequately. The objective technical problem to be solved is to be regarded as to provide an efficient heating of the heaters (see paragraph [0008] of the patent, page 2, lines 20-26 of the application as filed).

However, regardless of the problem to be solved, starting from D09, it seems that the skilled person would not look into D05 as it does not deal with heating elements. D05 deals with other types of

portable electronic devices, such as mobile phones, personal digital assistants (PDAs) and Global Positioning System (GPS) receivers comprising an antenna to operate by way of wireless signals. These types of devices typically require one or more regulated voltages so as to operate properly. The combination of D09 and D05 is therefore based on an ex post facto analysis.

But even if the skilled person would combine D09 with D05, they would not arrive at the subject-matter of claim 1. The combination would result in the application of smoothed DC voltages to the heaters of D09. D05 does not disclose that the filters are optional as alleged by appellant 1. The filters are present and necessary for the DC-DC voltage conversion. While claim 4 defines the electronic circuit with a PWM, without defining filters, this does not make the filters optional in the embodiments described in D5.

4.4 Inventive step starting from D01 in combination with D05.

The subject-matter of claim 1 is not rendered obvious starting from D01 in combination with D05.

4.5 According to appellant 1, the differences between the subject-matter of claim 1 and D01 were the same as between the subject-matter of claim 1 and D09 and the associated effect and objective technical problem were identical.
Starting from D01, the person skilled in the art, being aware that it was possible to work without filters in this technical field (as taught in D09), would not have kept the filters. The absence of filters reduced the

complexity of the device and the associated costs, and D05 disclosed embodiments without filters.

4.6 The Board does not agree. For similar reasons as starting from D09, the skilled person would not consult D05 dealing with other types of wireless devices, such as mobile phones, personal digital assistants (PDAs) and Global Positioning System (GPS) receivers comprising an antenna to operate by way of wireless signals. The analysis of appellant 1 is based on an ex post facto analysis.
Furthermore neither D01 nor D05 disclose powering the loads in a time interleaved manner multiple times per second, such that the combination of D01 with D05 would not lead to the subject-matter of claim 1.
Finally using the system of DC-DC voltage conversion of D05 without the filters can only be based on hindsight.

5. Inventive step starting from D02, D03, D04 in combination with D05 to D08.

5.1 Appellant 1 further argued that as set in their notice of opposition, an identical inventive step argument could be based on documents D02, D03 and D04, which all disclosed hairdressing appliances comprising heating zones by independently controlled electrodes. Documents D06, D07 and D08 related to alternating power supplies of the PWM type. The subject-matter of claim 1 was therefore also not inventive in view of documents D02, D03, D04 combined with the general knowledge of a person skilled in the art demonstrated by documents D05 to D08.

5.2 The Boards notes that no argumentation was provided in the appeal based on the above documents but rather a general reference to the notice of opposition. Hence,

the objection cannot be considered sufficiently substantiated, and as a consequence, the opinion of the opposition division in this respect can only be confirmed as it is not apparent why it would be defective.

6. From the above it follows that none of the objections raised by the appellants are conclusive.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar: The Chairman:

A. Vottner G. Pricolo

Decision electronically authenticated