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**Datasheet for the decision
of 13 April 2011**

Case Number: T 0747/10 - 3.4.01

Application Number: 07711264.7

Publication Number: 2004292

IPC: A61N 5/06, A61M 21/00

Language of the proceedings: EN

Title of invention:
A computer controlled light therapy apparatus

Applicant:
Andersen, Soren Ree

Headword:
-

Relevant legal provisions:
EPC Art. 123(2)

Relevant legal provisions (EPC 1973):
EPC Art. 54, 56

Keyword:
"Added subject-matter (yes - main request, second auxiliary request)"
"Novelty (yes - third auxiliary request)"
"Inventive step (yes, third auxiliary request)"

Decisions cited:
T 0331/87

Catchword:
-



Case Number: T 0747/10 - 3.4.01

D E C I S I O N
of the Technical Board of Appeal 3.4.01
of 13 April 2011

Appellant:

Andersen, Soren Ree
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Representative:

Jakobsen, Gert Hoey
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Decision under appeal:

Decision of the Examining Division of the
European Patent Office posted 11 November 2009
refusing European patent application
No. 07711264.7 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman: B. Schachenmann
Members: P. Fontenay
G. Assi

Summary of Facts and Submissions

- I. European patent application No. 07 711 264.7 was refused by a decision of the examining division dispatched on 11 November 2009. In their decision, the examining division held that claim 1 of a main request did not meet the requirements of Article 54 EPC 1973 as to novelty, that claim 1 of a first auxiliary request contained added subject-matter contrary to Article 123(2) EPC and that the subject-matter of claims 1 of second and third auxiliary requests did not involve an inventive step in the sense of Article 56 EPC 1973.

The examining division relied on document US-A-2004/0095746 (D1) to justify its novelty objection against claim 1 of the main request. This prior art was also considered to illustrate the closest prior art on which the inventive step objection against claims 1 of second and third auxiliary request was based.

- II. By letter dated 19 January 2010 the appellant (applicant) lodged an appeal against this decision and paid the prescribed appeal fee. The statement setting out the grounds of appeal was filed on 15 March 2010.

The appellant requested that the impugned decision be set aside and that the patent application be accepted for grant on the basis of various sets of claims according to a main request or a first or second auxiliary requests filed with the statement of grounds.

III. At the appellant's request, a summons to attend oral proceedings, scheduled to take place on 13 April 2011, was issued.

On 10 February 2011, in preparation of these proceedings, the Board issued a communication pursuant to Article 15(1) Rules of Procedure of the Boards of Appeal (RPBA), expressing its provisional opinion with regard to the requests then on file.

Considering that independent claim 1 of the main request defined new subject-matter over the teaching of document D1, the Board indicated that the debate to be held during the oral proceedings with regard to this request would focus on the inventive merits of the claimed invention. Concern was further expressed as to the existence of a valid basis in the original disclosure for the claims of the first and second auxiliary requests.

IV. On 14 March 2011, the appellant filed a new main request and three auxiliary requests, taking account of the Board's comments with regard to the issues of added subject-matter and inventive step. In the accompanying letter, the appellant provided arguments as to why, in his view, the analysis of document D1 relied upon by the Board in its previous communication was not correct. The appellant further indicated that his request for oral proceedings was withdrawn.

V. In a phone conversation on 28 March 2011, the appellant was informed that the Board intended to maintain the oral proceedings as initially scheduled. On behalf of the Board, the rapporteur reported about the

provisional position of the Board with regard to the requests filed on 14 March 2011. Particular concern was expressed as to the issues of inventive step under Article 56 EPC 1973 (main request) and added subject-matter (first auxiliary request). The Board was, however, inclined to consider that the claims of the second auxiliary request defined new and inventive subject-matter. In order to meet the requirements of clarity and support of the claims under Article 84 EPC 1973, possible amendments in the wording of the claims and in the description with regard to this second auxiliary request were discussed over the phone (cf. enclosure to the attendance note about a phone conversation dated 28 March 2011).

With letter dated 31 March 2011, the appellant filed amended documents according to a new main request and three auxiliary requests. Amended sets of claims and description pages were filed for the new main request and the first and second auxiliary requests. The appellant also indicated that the third auxiliary request corresponded to the previous second auxiliary request and included the amendments to the claims and description which had been discussed on the phone and enclosed to the attendance note of 28 March 2011. A corrected page of the claims according to the first auxiliary request was filed on 12 April 2011, one day before the oral proceedings.

VI. Oral proceedings were held on 13 April 2011 in the absence of the appellant.

VII. Claim 1 of the main request reads:

"1. A light therapy apparatus (10) comprising a light emitting assembly (12) holding a plurality of light emitting diodes (14) for emission of light and having a computer interface, and a computer (20) that is interconnected with the light emitting assembly (12) through the computer interface, and that is further adapted to control emitted light intensity to be appropriate for light therapy whereby the user may simultaneously perform computer work during treatment."

Claim 1 of the first auxiliary request differs from claim 1 of the main request in that the feature of the computer has been further specified. It reads (with emphasis on the differences added in bold type by the Board): "*a computer (20) that is interconnected with the light emitting assembly (12) through the computer interface **for power supply of the light emitting assembly (12)**, and that is further adapted to...*".

Claim 1 of the second auxiliary request differs from claim 1 of the main request in that the claimed apparatus further includes "*a presence detector (22) for detection of a person present in the field of emission of the light emitting assembly (12)*" and in that the computer is further adapted "*to record the time that a person receives light treatment as detected by the presence detector (22)*".

Claim 1 of the third auxiliary request incorporates the amendments made in claim 1 of the first and second auxiliary requests. It reads:

"1. A light therapy apparatus (10) comprising a light emitting assembly (12) holding a plurality of light emitting diodes (14) for emission of light and having a computer interface, a presence detector (22) for detection of a person present in the field of emission of the light emitting assembly (12), and a computer (20) that is interconnected with the light emitting assembly (12) through the computer interface for power supply of the light emitting assembly (12), and that is further adapted to control emitted light intensity to be appropriate for light therapy whereby the user may simultaneously perform computer work during treatment, and to record the time that a person receives light treatment as detected by the presence detector (22)".

Claims 2 to 11 of all the requests are dependent claims.

VIII. This decision is issued after the entry into force of the EPC 2000 on 13 December 2007. Reference is thus made to the relevant transitional provisions for the amended and new provisions of the EPC, from which it may be derived which Articles of the EPC 1973 are still applicable to the present application and which Articles of the EPC 2000 are to apply. When Articles or

Rules of the former version of the EPC are cited, their citations are followed by the indication "1973".

Reasons for the Decision

1. The appeal and the corresponding statement of grounds comply with the requirements of Articles 106 to 108 EPC and Rule 99 EPC. The appeal is, thus, admissible.
2. Main request - Second auxiliary request
 - 2.1 Claim 1 of the main request defines subject-matter extending beyond the content of the application as filed contrary to Article 123(2) EPC.

In the following, references to the original disclosure apply to the published PCT application WO-A-2007/104309.

- 2.1.1 Claim 1 of the main request differs from claim 1 as originally filed, *inter alia*, in that the feature according to which the computer interface permits to supply power to the light emitting assembly has been deleted. In the letter of 14 March 2011, the appellant submitted that the deletion of this feature fulfilled the three point test defined under section C-VI, 5.3.10 of the Guidelines for examination according to which the removal of a feature from a claim does not violate Art. 123(2) EPC if the skilled person would directly and unambiguously recognise that:

(i) the feature was not explained as essential in the disclosure;

(ii) the feature is not, as such, indispensable for the function of the invention in the light of the technical problem the invention serves to solve; and

(iii) the replacement or removal requires no real modification of other features to compensate for the change.

The appellant elaborated further on this issue in his letter of 31 March 2011, providing arguments why, in his view, each of the three criteria defined in this passage of the Guidelines was fulfilled.

2.1.2 It is acknowledged, as a preliminary remark, that the fact that the computer interface is consistently associated throughout the original disclosure to the function of supplying power to the light emitting assembly does not, as such, constitute an obstacle to its removal from the original claims. This view conforms to the approach developed in decision T 331/87, which constitutes the actual basis for the passage of the guidelines relied upon by the appellant. This passage in decision T 331/87 was indeed followed by the statement according to which "*The feature in question may be inessential even if it was incidentally but consistently presented in combination with other features of the inventions*" (cf. T 331/87, OJ 1991, 22, point 6).

The Board had thus to decide whether, under the present circumstances, the conditions set out in said passage

of the Guidelines and construed in the light of decision T 331/87, allowed the removal of the feature relating to the ability of the computer interface to supply power to the light emitting assembly.

- 2.1.3 A first step of the analysis to be carried out consists in identifying the subjective problem solved by the invention (cf. T 331/87, points 7.1 to 7.4), i.e. the problem defined by the applicant in the original description by reference to the prior art, as it was known to him at that time.

While the passage of the description on page 2, lines 25-27, defines it as an object of the invention to make it possible for a user to perform deskwork when being exposed to light therapy, thus addressing the problem associated with light sources harsh to the eyes (cf. page 2, lines 16, 17, 20-24), the passage on page 2, lines 17-20, suggests that another object of the invention is to solve the problem of limited portability encountered with prior art LED sources. This view is confirmed by the statement on page 2, lines 28, 29, introducing the definition of the invention, according to which "*the above-mentioned and other objects are fulfilled by provision of a light therapy apparatus*", wherein the following definition of the apparatus does incorporate *inter alia* the feature of the computer interface for power supply of the light emitting assembly, which addresses the problem of limited portability.

Moreover, although particular emphasis has been put in the course of the examination proceedings and the ensuing appeal proceedings on the aspect related to the

possibility for the user to perform deskwork during treatment, the Board observes that the original disclosure actually privileges the aspect of portability which appears to reflect the main concern of the appellant when filing the application. It is worth noting, in this respect, that original claim 1 reproduces the passage of the description on page 2, lines 29-35, but omits the indication concerning simultaneous deskwork. The passages on page 3, lines 1-7, confirm this view insofar as they underline the advantages conferred by the invention or some of its embodiments in terms of size and weight of the light emitting assembly.

Consequently, the main problem actually addressed by the invention as originally disclosed concerns the aspect of limited portability of conventional light therapy apparatuses.

- 2.1.4 The feature as to the ability of the computer interface to supply power permits the use of light emitting assemblies which do not, therefore, require additional large cumbersome batteries. The deleted feature is thus directly involved in the solution of the technical problem identified above. The present case differs, hence, from the case underlying decision T 331/87, in which the deleted feature only represented an advantageous embodiment of the invention, not contributing to the solution of the problem. For these reasons, the board then concluded in T 331/87 that the deleted feature defined an inessential feature of the invention which could be deleted without introducing new subject-matter in the application.

An *a contrario* interpretation of this principle would imply that a feature contributing to the solution of the problem defines an essential feature of the invention and could accordingly not be deleted. Such an interpretation must, however, be rejected, since it would conflict with the established practise at the EPO according to which a structural limitation in a claim may well be replaced by an equivalent, insofar as a support for the alternative configuration may indeed be derived from the application as filed. In the Board's judgement, the criterion of essentiality is therefore met, if the feature in question is not only involved in the claimed solution but defines the sole alternative actually derivable from the original application documents. In other terms, a feature is essential if the skilled person would not have considered any other configuration as the one actually disclosed in order to solve the problem underlying the invention.

Under the present circumstances, the description does not disclose any other substitute to the computer interface for supplying power to the light emitting assembly. The passage referred to by the appellant on page 2, lines 16-24, which evokes a built-in battery pack, refers to some drawbacks of the prior art. It does not constitute sufficient evidence that such battery packs have indeed been considered in the framework of the present invention. Moreover, battery packs would not provide full satisfaction in view of the subjective problem actually addressed by the invention since they would still contribute to the size and weight of the light assembly. The third paragraph on page 3 merely suggests that the computer interface may have taken the form of a USB interface, but does

not establish that the actual capacity of the computer interface to supply power, as such, can be optional. Similarly, the passage on page 5, lines 3-6, which describes a "preferred embodiment" of the invention, is not sufficient to establish that other means for supplying power were considered. The use of the term "preferred" seems to refer, in this context, to the use of two light emitting assemblies, and does not imply, contrary to the appellant's view, that the computer interface for power supply evoked in this paragraph is purely optional.

Consequently, since the deleted feature contributes to solve the subjective problem of limited portability associated to conventional light emitting diodes and since the skilled person would not be able to derive from the application as filed any other configuration as the one consistently disclosed throughout the description, the Board concludes that the feature of the computer interface being adapted to supply power constitutes an essential feature of the invention. Its deletion results in the skilled person being presented with information which is not directly and unambiguously derivable from that originally presented in the application contrary to the principle underlying Article 123(2) EPC.

- 2.2 The same analysis applies *mutatis mutandis* to the subject-matter of independent claim 1 according to the second auxiliary request.

3. *First auxiliary request*

3.1 *Novelty*

Document D1 discloses an illumination apparatus comprising a light emitting assembly holding a plurality of light emitting diodes (cf. D1, [0021]) for emission of light and having a computer interface (cf. D1, [0023]). The apparatus disclosed in D1 further comprises a computer (cf. D1, [0032]) that is interconnected with the light emitting assembly through the computer interface for power supply of the light emitting assembly (cf. D1, [0023], [0029]). Moreover, the illumination device disclosed therein may be "*configured to generate light, such as full-spectrum light, that is suitable for treating light deficiency disorders*" (cf. D1, [0006]) or "*configured to output light [...] with frequency components suitable for relieving light deficiency disorders such as seasonal affective disorders (SAD), depression, circadian rhythm disorders and/or the like*" (cf. D1, [0034]).

The illumination apparatus disclosed in D1 constitutes thus a therapy device in the sense of the present application. In this respect, the Board concurs with the view expressed by the examining division in their decision (cf. point 1.1 of the Reasons).

The examining division further held that the computer referred to in D1 is also implicitly adapted to perform other tasks, unrelated to light therapy, while simultaneously controlling light intensity for therapy purposes, so that a user may perform computer work (deskwork) during treatment. In the examining

division's view, a personal computer is indeed commonly adapted to perform deskwork while other tasks are running in the background.

The Board observes, however, that the question to be answered under the issue of novelty is actually not related to the general capabilities of personal computers but whether the personal computer referred to in D1 actually discloses, explicitly or implicitly, the claimed functionality. In fact, in the absence of detail as to the algorithm used in the system of D1, it cannot be established with certainty that the personal computer indeed allows simultaneous deskwork. The impossibility to carry out parallel deskwork could result, for example, from the deliberate will of the author of the algorithm to exclude any external stimuli in addition to the audio and/or visual stimulation already provided by the system or, on the contrary, to accompany stimulation by a selected sequence on the computer display. In any event, in applying the strict standards of "photographic novelty", the capability of the computer to allow deskwork during simultaneous treatment cannot be considered to result directly and unambiguously from the teaching of document D1.

For these reasons, the subject-matter of claim 1 of the first auxiliary request is new in view of document D1.

3.2 *Inventive step*

The subject-matter of claim 1 according to the first auxiliary request differs, therefore, from the light therapy apparatus disclosed in D1 in that the light

intensity is controlled so that the user may simultaneously perform computer work during treatment.

The claimed solution ensures that the user of the apparatus is not prevented from performing his normal desktop activities while undergoing light therapy.

It is worth stressing, in this respect, that document D1 explicitly discloses, in relation with Figure 6, mounting the illumination apparatus to a display device such as a computer monitor or television (cf. D1, [0028]), thus, indeed suggesting the use of the illumination device while allowing the user to carry out another task such as watching television. More generally, the skilled person would derive from this specific example that the various embodiments of the illumination device disclosed in D1 could be used by a user while carrying out other tasks. This would also apply, for example, to the illumination device when being used for therapy purposes (cf. D1, [0006] or [0034]). The tasks that a user could realise during treatment could relate to activities on a personal computer as hinted at in paragraph [0032].

It would therefore be straightforward for the skilled person facing the problem defined above to adapt the systems of D1 to allow desktop work. Starting from the embodiment disclosed in paragraph [0032] in D1, this would imply defining an algorithm allowing effective multitasking of the personal computer and selecting light intensities accordingly so that they do not generate any disturbance for the user when working on his computer.

For these reasons, the subject-matter of claim 1 of the first auxiliary request is obvious in the light of document D1 and does not involve an inventive step in the sense of Article 56 EPC 1973.

4. *Third auxiliary request*

4.1 *Added subject-matter*

Claim 1 of the third auxiliary request differs from original claim 1 in that the feature of the USB interface has been deleted and in that it includes the further limitations according to which:

- the computer is adapted to control emitted light intensity, whereby the user may simultaneously perform computer work during treatment;
- it includes a presence detector for detection of a person present in the field of emission of the light emitting assembly; and
- the computer is adapted to record the time that a person receives light treatment as detected by the presence detector.

It derives from the paragraph on page 3, lines 8-10, of the original description that the USB interface constitutes a mere example of a computer interface and that other options may accordingly be considered, thus providing a sufficient basis for its deletion in original claim 1.

The possibility for the user to perform deskwork during treatment with the light apparatus according to the invention is explicitly acknowledged on page 2, lines 26 and 34; page 4, lines 7-9, and page 7, lines 18-20, of the application as filed.

The passages on page 5, line 26 to page 6, line 2; page 7, lines 22-25, and page 8, lines 4-8, constitute a valid basis for the introduction of the features relating to the presence detector and the ability for the computer to control the time that a person receives light treatment.

Dependent claims 2 to 11 find their basis in corresponding original claims 2 to 11.

The subject-matter of claims 1 to 11 according to the third auxiliary request fulfils thus the requirements of Article 123(2) EPC as to added subject-matter.

4.2 *Novelty - Inventive step*

The light therapy apparatus defined in claim 1 according to the third auxiliary request differs from the apparatus disclosed in D1 in that:

(i) the light intensity is controlled so that the user may simultaneously perform computer work during treatment;

(ii) it includes a presence detector for detection of a person present in the field of emission of the light emitting assembly; and

(iii) the computer is adapted to record the time that a person receives light treatment as detected by the presence detector.

For the reasons set forth above in relation with the first auxiliary request, feature (i) as to the possibility to perform simultaneous computer work during treatment is not sufficient to justify the presence of an inventive step.

Features (ii) and (iii) cooperate in order to control and record the time of day and duration of each treatment or the duration of treatment as possibly accumulated in a day in accordance with timing parameters to be recorded (cf. original description, page 11, lines 13-15).

This added functionality appears to be particularly meaningful considering that the treatment with the claimed apparatus may have a long duration, e.g. several hours, as opposed with light therapy apparatuses of the prior art that emit light of a high intensity for a limited time period (cf. original description, page 4, lines 9-11). Hence, the claimed apparatus allows the user to monitor the elapsed time of treatment and the time remaining for the current light therapy treatment in a more effective way, despite multiple possible interruptions during a therapy session.

Even if document D1 may be considered to give an indication for providing therapy with reduced intensities (cf. discussion above in relation with the first auxiliary request), it does not contain any

further information as to the manner of optimising said treatment. None of the available prior art documents addresses the problems associated with long durations of treatment. There is, consequently, no incentive for the skilled person to adapt the system of D1 by incorporating a presence detector.

For these reasons, the subject-matter of claim 1 according to the third auxiliary request does not derive in a straightforward manner from the prior art and fulfils, thus, the requirements of the EPC as to the presence of an inventive step (Article 56 EPC 1973).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the examining division with the order to grant a patent with: Claims 1 to 11, description pages 1, 2, 2a, 3 to 12 and drawing sheets 1/6 to 6/6, all enclosed in the attendance note about the phone conversation of 28 March 2011 corresponding to the third auxiliary request according to the appellant's letter of 31 March 2011.

The Registrar:

The Chairman:

R. Schumacher

B. Schachenmann