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Datasheet for the decision of 16 December 2009

Case Number: T 0154/08 - 3.2.02

Application Number: 97945515.1

Publication Number: 1011441

IPC: A61B 5/103

Language of the proceedings: EN

Title of invention:
System for confocal imaging within dermal tissue

Applicant:
LUCID, INC.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 52(1), 54, 56

Relevant legal provisions (EPC 1973):
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Keyword:
"Novelty (yes)"
"Inventive (yes), after amendment"

Decisions cited:
-

Catchword:
-

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Case Number: T 0154/08 - 3.2.02

D E C I S I O N
of the Technical Board of Appeal 3.2.02
of 16 December 2009

Appellant: LUCID, INC.
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Representative: Wagner, Karl H.
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 11 July 2007 refusing European application No. 97945515.1 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: M. Noël
Members: S. Chowdhury
A. Pignatelli

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division dated 11 July 2007 to refuse European patent application No. 97 945 515.1.

The application was refused on the grounds that the main request was not admissible under Rule 86(3) EPC and the subject-matter of the claims of the auxiliary request did not meet the requirements of Article 52(1) EPC having regard to:

D1: US-A-5 146 923
D4: WO 96/21938 A
D6: FR 2 682 490 A1 and
D7: CH 669 325 A5.

Moreover, claims 1 and 21 did not comply with the requirement of Article 84 EPC together with Rule 29(2) EPC.

II. On 21 September 2007 the appellant lodged an appeal against the decision and paid the prescribed fee on the same day. On 21 November 2007 a statement of grounds of appeal was filed.

The appellant requests that the decision be set aside and a patent be granted on the basis of the claims 1 to 4 filed on 6 July 2009.

III. Independent claim 1 reads as follows:

"A system for dermatological examination of the skin tissue of a patient comprising: means for maintaining

an area of the skin tissue under stress by an attachment (69) having a central circular window plate (72), a deformable diaphragm (70) and a semi-rigid ring (74), wherein said diaphragm (70) radially extends outward from said window plate to said semi-rigid ring: said diaphragm (70) having an annular protruding section (75) which defines inner and outer cavities (76, 78) when said attachment is adjacent to the surface of said tissue (84); and means (80) for selectively creating suction in said inner and outer cavities (76, 78), when said attachment is adjacent to said the surface of said tissue (75) to pull said tissue into said cavities (76, 78), thereby stabilizing said tissue (75) adjacent to said window plate (72) for imaging by said imaging head (82); an imaging head coupled to said means, for imaging said stressed skin; and wherein said imaging head is a confocal imaging head having confocal imaging optics for providing confocal images of horizonal, vertical and angular sections through different planes of said tissue".

Claims 2 to 4 are dependent claims.

Reasons for the Decision

1. The appeal is admissible.

2. Amendments

Claim 1 is based on claim 25 as originally filed, but relates to a system for dermatological examination of the skin tissue of a patient rather than to apparatus for stabilizing the tissue of a patient (as in original

claim 25). The new claim includes features of an imaging head, accordingly, and is properly supported by the application as originally filed, particularly by page 10, lines 11 to 21 of WO 98/17166.

3. Article 84 EPC and Rule 29(2) EPC

There is now a single independent claim so that this objection has been met.

4. Novelty

Claim 1 defines a circular structure having a diaphragm with an annular protrusion for placement on the skin, the protrusion defining, together with the skin on which it is placed, cavities to which suction is applied for applying stress to the skin. The only prior art documents which rely on suction are D1 and D4. D1 relates to a nevoscope for examining skin lesions, in which suction is used to suck in a portion of tissue for transillumination. There is no diaphragm with a protrusion. In D4 suction is briefly mentioned as a means of attachment and skin stabilisation but no constructional details are given (D4, page 18, lines 22 to 27).

For these reasons the claimed system is novel.

5. Inventive step

5.1 The closest prior art document is D6 which, like the present application describes a confocal imaging system for imaging sections of tissue while contacting an area of tissue under stress. D1 is not related prior art

because it relates to a different type of apparatus, namely one for examining skin lesions by transillumination of a portion of tissue.

5.2 The purpose of placing the skin under stress is to prevent its movement during imaging (see the application, page 1, line 27 to page 2, line 2 and page 2, lines 8 to 11). Document D6 does not disclose means for maintaining an area of the skin tissue under stress, it merely mentions that an endpiece bears against the skin (page 6, lines 4 to 7).

5.3 The system of D6 does not comprise a diaphragm having an annular protruding section which defines inner and outer cavities when the attachment is adjacent to the surface of said tissue. The purpose of such a diaphragm is that upon application of suction to the cavities the semi-rigid ring and the window are pulled downward onto the skin and the tissue beneath the window is placed under stress, and at the same time the attachment adheres to the tissue by suction (WO 98/17166 page 10, lines 3 to 10).

D7 relates to apparatus for determining an antisolar protection index and is not relevant to the present invention.

5.4 Therefore, the objective technical problem may be defined as follows: to provide a mechanism for maintaining an area of skin tissue under stress by application of force on the tissue so that an imaging head may image the stressed tissue, while ensuring minimum distortion of the tissue.

5.5 Neither the problem nor its solution are known from the prior art documents mentioned in point I above. None of the documents discusses a diaphragm having an annular protruding section as part of an attachment for stressing skin tissue and coupling to an imaging head. In D1 the tissue is pulled upwards into a cavity by suction (see Figure 3 of D1) and the dermal layers are bent. In contrast, the window plate of the system of present claim 1 flattens the skin beneath it so that the dermal layers may be imaged without distortion thereof.

5.6 Therefore, the subject-matter of claim 1 involves an inventive step.

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 the first instance with the order to grant a patent on the basis of the following application documents:

   Claims 1 to 4 filed on 6 July 2009

   Description pages 1a and 9 filed on 6 July 2009.

   Description pages 1, 2 to 4, 7, 10 and 11 filed with the grounds of appeal dated 21 November 2007.

   Description pages 5, 6 and 8 as published.

   Figures 1 to 11 as published.

The Registrar The Chairman

D. Sauter M. Noël