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D E C I S I O N
of 12 December 1995

Case Number: T 0619/94 - 3.2.2

Application Number: 88119718.0

Publication Number: 0318042

IPC: A61B 17/32

Language of the proceedings: EN

Title of invention:

Adjustable apparatus for removing surface portions of human tissue.

Patentee:

Molinari, Lorenzo and Ginebri, Otello

Opponent OII:

SIMOS S.r.l.

Headword:

-

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step - (yes)"

Decisions cited:

-

Catchword:

The criteria used to assess the existence of an inventive step in the medical field are no different from those applicable elsewhere. However, facts and conditions prevailing in the medical field have to be taken into account adequately (cf. point 4.5).



Case Number: T 0619/94 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 12 December 1995

Appellant: Molinari, Lorenzo
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Respondent: SIMOS S.r.l.
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Representative: -

Decision under appeal: Decision of the Opposition Division of the
European Patent Office dated 3 June 1994 revoking
European patent No. 0 318 042 pursuant to
Article 102(1) EPC.

Composition of the Board:

Chairman: H. Seidenschwarz
Members: P. Dropmann
J.-C. De Preter

Summary of Facts and Submissions

I. A Notice of Appeal was filed against the decision of the Opposition Division revoking European patent No. 0 318 042 on the ground that the subject-matter of the amended independent Claims 1 and 10 annexed to the decision lacked an inventive step having regard to document IT-A-1 184 922 (A1).

II. The Appellant (Proprietor of the patent) requested that the decision under appeal be set aside and, as a main request, that the patent be maintained on the basis of Claims 1 and 9 filed as Annex I together with the Statement of Grounds dated 30 September 1994.

The amendments of the dependent claims and the description mentioned in points 6.1 and 6.3 of the Statement of Grounds were not enclosed in this statement.

The Appellant further submitted an auxiliary request.

III. There is no request or submission on the part of the Respondent (Opponent OII "Simon S.r.l.").

Opponent OI "L.I.C.A. di Rosso & C. S.n.c." having withdrawn the opposition is not a party to the appeal proceedings.

IV. Independent Claims 1 and 9, which are identical to Claims 1 and 10 annexed to the decision under appeal, read as follows:

"1. A hand tool for removing surface portions of human tissue by superficial abrasion caused by a stream of a mixture of air with at least one granular abrasive

substance striking on the surface of the tissue to be removed, the said tool comprising an elongated manipulative body (20) housing a supply tube (25, 33) for the said mixture and a collection tube (26) for the purpose of sucking-in both the said mixture and the removed portions of the said tissue, and an operating head (21) secured to the said manipulative body (20) at the distal end thereof and housing the terminal portions (33) of the said tubes (25, 33; 26), the said head (21) being provided with a throughhole (22) internally communicating with the free ends of said terminal portions (33) so that, by keeping in contact the said throughhole (22) with the said surface, the said mixture is caused to strike the said surface,

characterized by the fact

that the said body (20) has an essentially cylindrical shape and houses the remaining portions (25, 26) of said tubes;

that the said head is formed of a bell-shaped element (21) having a longitudinal axis and closing the said body (20);

that the said throughhole (22) is provided in a wall portion (23) of the said element (21), which is inclined and offset with respect to the said axis; and

that the said throughhole (22) is aligned with the terminal portion (33) of the said supply tube (25, 33).

9. Apparatus for removing surface portions of human tissue by superficial abrasion caused by a stream of a mixture of air with at least one granular abrasive substance striking on the surface of the tissue to be removed, comprising a hand tool (5) to be applied to the

said surface, first supply means (2) for supplying the said air under pressure, second supply means (3) for supplying the said abrasive substance, suction means (4), the duct means (10, 10') for conveying the stream of the said mixture from the said supply means (2, 3) through the said tool (5) to the said suction means (4), the said tool comprising a manipulative body (20) housing a supply tube (25, 33) for conveying the said mixture and a collection tube (26) for the purpose of sucking-in both the said mixture and the removed portions of the said tissue, and an operating head (21) secured to the said manipulative body (20) at the distal end thereof and housing the terminal portions (33) of the said tubes (25, 33; 26), the said head (21) being provided with a throughhole (22) internally communicating with the free ends of said terminal portions (33) so that, by keeping in contact the said throughhole (22) with the said surface, the said mixture is caused to strike the said surface,

characterized by the fact

that the free ends of the other portions of the said tubes (25, 33; 26) are connected to the said duct means (10, 10');

that the said body (20) has an essentially cylindrical shape and houses the remaining portions (25, 26) of said tubes;

that the said head is formed of a bell-shaped element (21) having a longitudinal axis and closing the said body (20);

that the said throughhole (22) is provided in a wall portion (23) of the said element (21), which is inclined and offset with respect to the said axis; and

that the said throughhole (22) is aligned with the terminal portion (33) of the said supply tube (25, 33)."

- V. The Appellant essentially argued that the Opposition Division's arguments on the inventive step were based on wrong approaches, resulting from an ex post facto analysis. The greater efficiency of the stream traversing the hole in the claimed hand tool derived from the new concept of deeper tissue removal, thus making possible to carry out a lot of additional treatments, and overcoming a prejudice against the risks of using such deeper removal, thus involving a new problem. A skilled person would not necessarily consider sandblasting as used elsewhere, when looking for an improvement of a hand tool according to document A1.

Reasons for the Decision

1. The appeal is admissible.
2. The Board accepts the findings of the Opposition Division that the independent claims are admissible with respect to Article 123(2) and (3) EPC.
3. The Board furthermore concurs with the conclusion of the Opposition Division that the claimed subject-matter is novel over document A1 and over the other documents US-A-4 560 373 (A2), US-A-4 488 330 (A3) and US-A-1 752 664 (A4) mentioned during the proceedings. Indeed, none of the documents teaches a hand tool or an apparatus having all the features specified in Claim 1 or Claim 9, respectively.

4. However, the Board does not share the view of the Opposition Division that the subject-matter of the independent claims does not involve an inventive step.

4.1 Document A1 represents the closest state of the art. It discloses a hand tool and an apparatus for removing surface portions of human tissue by superficial abrasion caused by a stream of a mixture of air with a granular abrasive substance striking the surface of the tissue to be removed. This tool and apparatus comprise all the features specified in the pre-characterising portion of Claim 1 or Claim 9, respectively.

Due to the fact that the stream of the mixture of air with granular abrasive substance is parallel to the zone of the human tissue to be treated (cf. page 8, lines 19 to 22 of the translation of document A1 into English filed by Opponent II), the prior art tool and apparatus are suitable only for making micro-abrasions, as for example for the removal of stretch marks (cf. Claim 1, page 2, last paragraph and page 3, lines 1 to 6). However, often abrasions of different extent and depth of portions of the human skin have to be effected (cf. column 2, lines 7 to 23 of the patent specification and page 1, lines 11 to 16 of the application as originally filed).

4.2 Thus, the technical problem underlying the present invention is to render the known hand tool and apparatus more effective in the sense of enabling deeper abrasions of portions of the human skin to be made.

The problem is solved by the characterising features of Claims 1 and 9, respectively.

4.3 The question to be answered is whether, having regard to the state of the art, the above solution is obvious to a

person skilled in the art. In the following, the final two groups of the characterising features of Claims 1 and 9, i.e. those features concerning the position of the "throughhole", will be considered.

- 4.4 As already pointed out under Section 4.1 above, the structure of the tool and apparatus known from document A1 is such that the flow of the mixture of air and granular abrasive substance is parallel to the zone of the human tissue to be treated, the plane of the throughhole (38) being parallel to the lamellar flow of the mixture in the duct (22) downstream from the flow conveyor (35) (see also page 6, line 16 to page 7, line 1 and Figure 2). Thus, the abrasive particles strike the surface portions of the tissue to be removed in a direction that is almost parallel or tangential to said surface portions.

In contrast to this, the position of the throughhole in the claimed tool and apparatus is such that the mixture of air and abrasive substance strikes the surface portions of the tissue in a direction which is not parallel to the surface portions but rather has a component perpendicular thereto, i.e. the mixture strikes the surface at a predetermined angle.

The Board takes the view that this change of the direction of the abrasive particles relative to the surface portions to be treated is not obvious to a person skilled in the art. Indeed, the skilled person would consider that such a change of direction may involve the risk that the abrasive particles, due to the consistency or texture of the tissue, would penetrate deeply into the tissue instead of merely effecting abrasions of the human skin, thus adversely affecting the reconstruction of the cutaneous tissue.

The Opposition Division argued that a skilled person would easily recognise that, if more particles should impinge on the tissue to be removed, the hole (38) had to be arranged in such a way that the stream of particles could easily leave the hole. This would, in the Opposition Division's view, restore the conditions of the well-known sandblasting technique, wherein the abrasive particles were blown directly onto the material which was to be removed, from which the teaching of document A1 represented a deviation. Having regard to Figure 2 of document A1 the skilled person would thus obviously position the hole (38) in the distal end of portion (13) in round wall (17) so that the flow of abrasive particles could directly exit through the hole (38).

This argument, however, leaves out of consideration that the consistency of the human tissue to be removed by abrasion is different from that of material which is normally removed by sandblasting. The strength of such material prevents penetration of the abrasive particles into the material, whereas such penetration is to be feared when blowing abrasive particles onto the tissue in a direct manner. Hence, the situation of abrasion of human tissue differs from that of sandblasting other materials. Features that are known or obvious in the field of sandblasting cannot automatically be transferred to the medical field without considering the particular situation in this field.

- 4.5 The Board thinks it important to establish that the above considerations do not mean that the criteria used to assess the existence of an inventive step in the medical field are different from those applicable in other fields. They are the same. However, facts and conditions prevailing in the medical field have to be taken into account adequately.

4.6 As indicated in paragraph 4.4 above, the characterising features of Claims 1 and 9 concerning the position of the throughhole are not obvious to a skilled person in the light of the state of the art known from document A1.

Neither do the other documents A2, A3 and A4 mentioned during the proceedings suggest such a position of the throughhole in a tool for removing surface portions of human tissue by superficial abrasion by a stream of air mixed with abrasive particles.

Document A2, which relates to a surgical nozzle apparatus for forcibly injecting a single jet stream of fluid into living tissue to excise undesired tissue, does not mention the use of abrasive particles and is silent as to the nature and behaviour of such particles impinging on human tissue.

Document A3 discloses a rug and upholstery cleaning apparatus and document A4 reveals an apparatus for cleaning walls using a mixture of air and granulated cleaning material. These documents concern apparatuses in a technical area that is remote from the medical field of tissue abrasion and would, for the reasons given in point 4.4, not be considered by the skilled person faced with the problem underlying the contested patent.

4.7 The subject-matter of Claims 1 and 9 thus cannot be derived in an obvious manner from the state of the art mentioned in the proceedings and, therefore, involves an inventive step in accordance with Article 56 EPC.

5. Hence, the subject-matter of Claims 1 and 9 is patentable having regard to Articles 52(1), 54 and 56 EPC.

Order

For these reasons it is decided that:

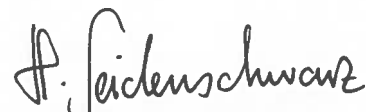
1. The decision under appeal is set aside.
2. - The case is remitted to the first instance with the order to maintain the patent with:
 - independent Claims 1 and 9 filed as Annex I with the letter of 30 September 1994,
 - dependent Claims 2 to 5, 7 to 9 and 11 to 14 of the patent specification but renumbered and amended as indicated in point 6.1 of said letter,
 - the description of the patent specification but amended as indicated in point 6.3 of said letter, and
 - the figures of the patent specification.

The Registrar:



S. Fabiani

The Chairman:



H. Seidenschwarz

