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Datasheet for the decision of 18 September 2015

Case Number: T 1603/12 - 3.2.02

Application Number: 07115332.4

Publication Number: 1917987

IPC: A61M1/00

Language of the proceedings: EN

Title of invention:
Irrigation/aspiration system

Patent Proprietor:
Alcon, Inc.

Opponent:
Geuder AG

Headword:

Relevant legal provisions:
EPC Art. 56, 100(a)

Keyword:
Inventive step - (yes)

Decisions cited:

Catchword:

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Case Number: T 1603/12 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 18 September 2015

Appellant: (Opponent)	Geuder AG Hertzstrasse 4 69126 Heidelberg (DE)
Representative:	Patent- und Rechtsanwälte Ullrich & Naumann PartG mbB Schneidmuehlstrasse 21 69115 Heidelberg (DE)
Respondent: (Patent Proprietor)	Alcon, Inc. P.O. Box 62 Bösch 69 6331 Hünenberg (CH)
Representative:	Hanna, Peter William Derek Hanna Moore + Curley 13 Lower Lad Lane Dublin 2, D02 T668 (IE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 16 May 2012 rejecting the opposition filed against European patent No. 1917987 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman E. Dufrasne
Members: D. Ceccarelli
M. Stern

Summary of Facts and Submissions

I. The opponent has appealed the Opposition Division's decision, dispatched on 16 May 2012, to reject the opposition against European patent No. 1 917 987.

II. The patent was opposed on the ground of lack of inventive step.

III. In its decision, the Opposition Division considered in substance the following documents:

D3: US-A-2006/0135974;
D7: DE-B-102 33 053.

It held that D3 was the closest prior art and that a combination of it with the common general knowledge or the teaching of D7 did not render obvious the invention as claimed in claim 1.

IV. The notice of appeal was received on 13 July 2012. The appeal fee was paid on the same day. The statement setting out the grounds for appeal was received on 24 August 2012.

V. The respondent's reply to the statement of grounds was received on 12 December 2012.

VI. The Board summoned the parties to oral proceedings and set out its provisional opinion by a communication dated 17 June 2015.

VII. Oral proceedings took place on 18 September 2015.

VIII. The appellant requested that the decision under appeal be set aside and that the patent be revoked.

IX. The respondent requested that the appeal be dismissed.

X. Claim 1 of the patent as granted reads as follows:

"A surgical system, comprising:

(a) a surgical console (320);
(b) a handpiece (9);
(c) an irrigation line (322) and an aspiration line (324) connecting the handpiece to the console;

wherein the irrigation line (322) is adapted to exhibit a higher compliance or reduced stiffness relative to the aspiration line (324),
characterized in that,
the irrigation line (322) is formed from a material having a lower durometer than the material used to form the aspiration line (324)."

Claims 2 to 4 are dependent claims.

XI. The appellant's arguments are summarised as follows:

Both D3 and the description of the prior art in the patent, in particular figure 2 and paragraph [0020], could equally be considered as the closest prior art, since they both disclosed a surgical system with all the features of the preamble of claim 1.

It followed that the subject-matter of claim 1 differed from the closest prior art in that the irrigation line was formed from a material having a lower durometer than the material used to form the aspiration line.

Since the surgical system according to the closest prior art comprised an irrigation line exhibiting a higher compliance or reduced stiffness relative to the aspiration line, the problem of reducing sudden fluid flow surges as described in paragraphs [0008] to [0011] of the patent had already been solved. Hence, it could not constitute the objective technical problem to be considered in the problem-solution approach for assessing the inventive step of the claimed invention, which should be established over the closest prior art instead. Since the patent did not specifically mention any other problem, the objective technical problem simply related to an alternative design, as was also derivable from column 4, lines 2 to 6 of the patent.

The surgical system according to the closest prior art had the irrigation line and the aspiration line with different geometries. In particular, the irrigation line had a wall with a reduced thickness. Such a different geometry was disadvantageous for several reasons. For example, it required different couplings for connecting each line to the console. Moreover, the reduced wall thickness of the irrigation line meant that there was a risk that the line might break in the proximity of the coupling with the console, and that the line might collapse if not enough pressure was present within it. Also, the manipulation of a long line with a thin wall by an operator was extremely difficult. The fluid lines in the field of the invention were normally produced by an extrusion process. Because of their different geometry, the irrigation line and the aspiration line required different extrusion dies, which resulted in higher manufacturing costs.

The objective technical problem was therefore how to further develop the surgical system according to the closest prior art, such that it could be easily and cheaply manufactured.

As shown in various documents, it belonged to the common general knowledge that the stiffness of a body depended on two variables only: its material and its geometry. It was also known that the higher the hardness of a material, the higher its stiffness. Further, document D7 taught to provide a device for the irrigation of a body cavity with fluid lines of different stiffness or compliance, made from materials with different hardness (paragraph [0027]).

Since the objective technical problem derived from the different geometries of the irrigation and aspiration lines, the solution of providing different materials for the fluid lines as claimed in claim 1 was implied. That was self-evident and did not go beyond a normal technical development of the prior art. More particularly, turning to the common general knowledge, the skilled person would clearly foresee materials with different hardness for the irrigation and aspiration lines. Other possibilities would be more complicated.

XII. The respondent argued in essence that, starting from either D3 or the description of the prior art in the patent as the closest prior art, the invention would be arrived at only with ex post facto knowledge of it. The skilled person could provide different materials for the fluid lines of a surgical system according to the closest prior art, but was not motivated to do so by the prior art at hand. There were several other possible ways to affect the physical stiffness of a

tube which the skilled person could equally consider.

Reasons for the Decision

1. The appeal is admissible.

2. The invention

The invention relates to a surgical system comprising a handpiece with an irrigation line and an aspiration line.

Such a surgical system is typically used in the field of ophthalmic surgery, in particular to remove the diseased lens of an eye in case of a cataract.

To treat a cataract, which is a condition in which the lens of the eye becomes less transparent, thereby being less able to transmit light to the retina, resulting in deteriorated vision, the diseased lens has to be removed from the eye and replaced by an artificial intra ocular lens (IOL).

The invention can be employed in a typical treatment to achieve this, called phacoemulsification. Such a treatment involves the insertion of a vibrating tip of the handpiece into the diseased lens so that the lens is liquefied or emulsified by the vibration. The liquefied lens is then aspirated out of the eye through the aspiration line. The irrigation line is used to supply irrigation fluid to the eye, for aiding the aspiration of the lens and rinsing the surgical site.

The invention addresses a possible complication associated with phacoemulsification, namely the

anterior chamber collapse following an occlusion break. As explained in paragraph [0008] of the patent, during cataract surgery the aspiration line can become occluded if a piece of the lens material to be removed fully covers the aspiration port. During the occlusion vacuum can build up in the aspiration line, so that when the occlusion eventually breaks a sudden surge occurs in the eye. If the material and fluid removed under that condition cannot be replaced quickly enough by the fluid delivered by the irrigation line, the eye can soften and collapse.

In order to reduce surge after an occlusion break, the compliance of the irrigation line should be higher than that of the aspiration line. As a result, during an occlusion vacuum build-up in the aspiration line is reduced, and when the occlusion eventually breaks the irrigation line can temporarily provide a larger fluid flow, such that any vacuum build-up in the eye is more easily quenched (paragraphs [0008] and [0009]).

In particular, according to claim 1, for such purpose the aspiration line is formed of a material having a higher durometer than the material used to form the irrigation line.

3. *The closest prior art*

It is common ground that both D3 and the description of the prior art in the patent, in particular figure 2 and paragraph [0020], could equally be considered as the closest prior art. It is also undisputed that both pieces of prior art disclose a surgical system with all the features of the preamble of claim 1.

4. The differentiating feature

The parties also agree that the subject-matter of claim 1 differs from the closest prior art in that the irrigation line is formed from a material having a lower durometer than the material used to form the aspiration line.

5. The objective technical problem

As the appellant pointed out, it is the established case law of the boards of appeal that, in the analysis of inventive step according to the problem-solution approach, the objective technical problem solved in the light of the closest prior art has to be determined.

The Board agrees with the appellant that the problem of avoiding anterior chamber collapse following an occlusion break as described in paragraph [0008] of the patent cannot be regarded as the objective technical problem, since this problem is solved by the closest prior art too. For such a purpose, both D3 and the description of the prior art in the patent concern a surgical system with irrigation and aspiration lines having different compliance.

The objective technical problem has therefore to be established based on one or more technical effects derivable from the differentiating feature of the claimed subject-matter.

In the statement of grounds the appellant mentioned several disadvantages related to the irrigation line and the aspiration line of the closest prior art having different cross sections. Providing the irrigation line and the aspiration line of different materials as

claimed makes it possible to have two tubes of the same circular cross section instead. As a result, couplings for connecting the lines to the console and extrusion dies for the manufacturing process may be simpler.

These technical effects contribute to the solution of the problem as formulated by the appellant in the statement of grounds, i.e. to obtain a surgical system that could be easily and cheaply manufactured.

This problem, which is also derivable from the description of the patent (paragraph [0011] in particular), is regarded as the objective technical problem by the Board.

6. Conclusion

The appellant argued that the formulation of the objective technical problem implied its solution, since there were only two variables affecting the stiffness of a body, i.e. its material and its geometry.

Even accepting that it belonged to the general knowledge of the skilled person that the higher the durometer of a material, the higher its stiffness, the Board does not share this view.

Without previous knowledge of the invention, the skilled person, faced with the objective technical problem of obtaining a surgical system that could be easily and cheaply manufactured, could equally have considered acting on either or both of the two variables mentioned above. This alone opens up a series of different possible solutions. As the respondent pointed out in its reply to the statement of grounds, some possible ways of influencing the stiffness of the

fluid lines could have been the provision of cavities in the tube walls, the provision of longitudinal ribs inside or outside a tube, the provision of a sheath of a stiffer material and the provision of a spring or coil of metal surrounding a tube. Further solutions involving other elements of the fluid lines, in addition to the tubes, could be conceived too. The implementation of these solutions does not involve any technical difficulty which the skilled person could not readily overcome.

Therefore, in the absence of any specific hint, there would be no motivation for the skilled person to apply precisely the claimed solution to the closest prior art in view of the common general knowledge.

As regards document D7 mentioned by the appellant, the Board notes that it concerns a device for rinsing a body cavity. Although it is disclosed that such a device may comprise two tubes of materials having different hardness (paragraph [0027]), D7 is in no direct or indirect relation with a surgical system having a handpiece with an irrigation line and an aspiration line as claimed. A fortiori, D7 does not address the objective technical problem as defined above. Hence, it cannot provide any motivation to the skilled person to modify the device of the closest prior art such as to comprise the irrigation line and the aspiration line of different materials as claimed.

For these reasons it is concluded the subject-matter of claim 1 and its dependent claims 2 to 4 is inventive.

It follows that the ground for opposition of lack of inventive step under Article 100(a) EPC in conjunction with Articles 52(1) and 56 EPC does not prejudice the

maintenance of the European patent.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Hampe E. Dufrasne

Decision electronically authenticated