Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 30 July 2020

Case Number: T 1756/15 - 3.2.02

Application Number: 04758955.1

Publication Number: 1615574

IPC: A61B18/18, A61B18/22, A61F9/011, A61M25/01, A61B18/24

Language of the proceedings: EN

Title of invention:
DIRECTIONAL LASER PROBE

Patent Proprietor:
Synergetics, Inc.

Opponent:
D.O.R.C. International B.V.

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1756/15 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 30 July 2020

Appellant: (Patent Proprietor)	Synergetics, Inc. 3845 Corporate Centre Drive St. Charles, MO 63304 (US)
Representative:	Mewburn Ellis LLP Aurora Building Counterslip Bristol BS1 6BX (GB)
Respondent: (Opponent)	D.O.R.C. International B.V. Zuidland (NL)
Representative:	V.O. P.O. Box 87930 2508 DH Den Haag (NL)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 24 June 2015 revoking European patent No. 1615574 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	M. Alvazzi Delfrate
Members:	S. Böttcher
	Y. Podbielski

Summary of Facts and Submissions

I. The patent proprietor filed an appeal against the decision of the opposition division to revoke the European patent No. 1 615 574.

II. Oral proceedings before the Board took place on 30 July 2020.

Although having been duly summoned by communication dated 3 April 2020, the appellant (patent proprietor) was not present as announced by letter dated 7 July 2020.

In accordance with Rule 115(2) EPC and Article 15(3) RPBA 2020 the proceedings were continued without this party.

III. The appellant had requested in writing that the decision under appeal be set aside and the patent be maintained as granted or, as an auxiliary measure, on the basis of one of auxiliary requests 1 or 2 filed with the statement setting out the grounds of appeal.

IV. The respondent (opponent) requested that the appeal be dismissed.

V. Claim 1 of the main request (patent as granted) reads as follows:

"An opthalmic surgical instrument for insertion into the eye comprising:

an instrument handle (10');
a rigid tubular sleeve (20') projecting from the handle

(10') to a distal end (22') of the sleeve, the sleeve distal end (22') being dimensioned for insertion of the sleeve distal end (22') into an interior of an eye, an optic fiber (60) extending through the handle (10') and the sleeve (20') to a distal end portion (66) of the fiber, wherein the distal end portion (66) of the optic fiber (60) is contained in a tubular tip (70) that has a pre-bent portion and is constructed of a shape memory material, the tubular tip (70) being secured stationary to the optic fiber (60); and characterised by, said rigid tubular sleeve being secured stationary to the handle, and
a mechanism (80) on the handle (10') and connected to the optic fiber (60) to selectively move the optic fiber (60) between a pushed forward position of the optic fiber (60) where the optic fiber (60) projects a first distance from the handle (10') such that the distal end portion (66) of the optic fiber (60) projects from the sleeve (20') to cause the optic fiber (60) to bend and a pulled back position of the optic fiber (60) where the optic fiber (60) projects a second distance from the handle (10') that is less than the first distance such that the distal end portion (66) of the optic fiber (60) is contained in the sleeve (20') to cause the optic fiber (60) to straighten."

VI. The first auxiliary request differs from the main request at dependent claim 11 only.

The second auxiliary request differs from the main request only in the deletion of dependent claim 11.

VII. The following document is cited in this decision:

D6: WO 00/61023

VIII. The arguments of the appellant brought forward in the written procedure, as far as relevant for the present decision, can be summarized as follows:

Claim 1 as granted - inventive step in view of D6

D6, which could be considered the closest prior art, disclosed in a "main embodiment" an ophthalmic surgical instrument having a mechanism on the handle connected to the sleeve to selectively move the sleeve (page 7, line 22, to page 13, line 2; Figures 3 and 4).

The alternative embodiments mentioned on page 13, lines 3 to 30, could not be regarded as modifications of this main embodiment. The alternate embodiments referred to in line 3 of page 13 were rather alternative embodiments of the invention as defined in claim 1 of D6. The use of the word "alternate" was conveying that either the features of the main embodiment were present, or the features of the alternative embodiment.

The fact that in the sentence on page 13, lines 8 to 12, the same reference numerals were used as in the main embodiment merely indicated that the three elements of the instrument (sleeve, handle and pre-bent tip) were common in both embodiments. Since the information conveyed by this sentence related to the interaction between these elements, the use of reference numerals was irrelevant to the question of whether this information was supplementary to, or an alternative of the main embodiment.

Hence, the context of D6 and the language used therein was such that the disclosure of the alternate embodiments on page 13, lines 3-30, was not related to the discussion of the main embodiment.

Furthermore, the main embodiment of D6 did not include the feature that the tubular tip was secured stationary to the optic fiber. The teaching that the optic fiber extended past the tubular tip by 0.25 mm (page 11, lines 10 to 12) could be implemented by simply manoeuvring the fiber through the tip. This did not require that the tubular tip was secured stationary to the optic fiber. An additional point was that the mention of a plug at page 14, lines 11 to 14, did not apply to the main embodiment but to a further, modified embodiment.

As to the mechanism on the handle, D6 referred to the provision of alternative actuation mechanisms, e.g. trigger or squeeze mechanisms (page 13, lines 17 to 22). The person skilled in the art would consider these variants over and above taking the step of modifying the mechanism of the main embodiment.

By moving the optic fiber instead of the sleeve to expose and retract the pre-bent tip, the device defined in claim 1 of the patent permitted more accurate and precise control after insertion into the eye and gave rise to the effect of reduced stress on the eye tissue. The objective technical problem was to be regarded as to reduce lateral stress especially after insertion into the eye.

Starting from the main embodiment of D6 the person skilled in the art would not be motivated to modify the the device of this embodiment to arrive at the claimed subject-matter, in particular since the claimed arrangement would require a significant redesign. For instance, the sleeve would have to be attached to the handle such that it would not obstruct the movement of

the finger pad to the forward position. The person skilled in the art would not consider making those non-trivial, serious modifications.

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

IX. The arguments of the respondent relevant for the present decision can be summarized as follows.

Claim 1 as granted - inventive step in view of D6

The embodiment disclosed on page 13, lines 8 to 12, of D6 contained all the features of the main request unless explicitly stated, i.e. that in the alternate embodiment the sleeve was stationary and the tip with the fiber was moveable relative to the handle. This interpretation was supported by the fact that the same reference signs were used, that the word "the" was used referring to the antecedent features of the main embodiment, and that the whole disclosure was referred to as a specific embodiment that was susceptible to modifications and variations (page 14, lines 15 to 18 of D6).

D6 disclosed on page 14, lines 6 to 14, that the tubular tip could be securely fixed to the optic fiber. This feature was also derivable from the observation on page 11, lines 10 to 12, describing that the tip and fiber had a fixed relative distance.

The objective technical problem was how to provide improved precision and control of the fiber bending operation.

Although D6 disclosed alternative actuation mechanisms

(page 13, lines 17 to 22) the person skilled in the art would consider applying the actuation mechanism of the main embodiment as D6 taught (page 12, lines 15 to 21) that such mechanism enabled slow movement and gradual adjustment of the bending tip.

The application of the actuation mechanism did not require a significant redesign but could be realized by a routine workshop modification.

Therefore, the subject-matter of claim 1 lacked an inventive step in view of the alternate embodiment disclosed on page 13, lines 8 to 12 of D6, combined with the teaching of the main embodiment disclosed in D6.

Reasons for the Decision

1. Subject-matter of the invention

The invention as defined in claim 1 of the patent relates to an ophthalmic surgical instrument for insertion into the eye, e.g. a microsurgical laser probe. As illustrated in Figures 8 and 9, the device comprises a handle 10' and a rigid tubular sleeve 20' which is secured stationary to the handle. The device further comprises an optic fiber 60 extending through the handle and the sleeve. The distal end portion 66 of

the fiber is contained in a tubular tip 70 that is secured stationary to the optic fiber. The tubular tip is made of a shape-memory material and has a pre-bent portion 76. A mechanism (finger pad 80) is provided on the handle and connected to the optic fiber (by means of a set screw). This mechanism serves to selectively move the optic fiber 60 between a pushed forward position of the optic fiber such that the distal end portion 66 of the optic fiber (together with the pre-bent portion 76 of the tubular tip 70) projects from the sleeve 20' (Figure 8) and a pulled back position of the optic fiber such that the optic fiber is contained in the sleeve to cause the pre-bent portion of the tip and the optic fiber to straighten (Figure 9).

By this mechanism the advantages of a straight laser probe can be combined with those of a curved laser probe (paragraphs [0003] and [0004] of the patent).

2. Main request - inventive step

2.1 Both parties agree that D6 can be regarded as the closest prior art for the subject-matter of claim 1.

D6 discloses in an embodiment referred to by the parties as "main embodiment", an ophthalmic surgical instrument comprising an instrument handle 10, a rigid tubular sleeve 20 projecting from the handle, an optic fiber 42 extending through the handle and the sleeve to a distal end portion of the fiber, wherein the distal end portion of the optic fiber is contained in a tubular tip 30 that is constructed of a shape memory material and has a pre-bent portion (page 7, line 22, to page 13, line 2; Figures 3 and 4).

In this embodiment, the tubular tip 30 with the optic

fiber 42 is secured stationary to the handle, while the sleeve 20 is secured to a mechanism on the handle (finger pad 26) to be movable from a pulled-back position wherein the optic fiber is exposed (Figure 3) to a pushed-forward position wherein the optic fiber is contained in the sleeve (Figure 4).

2.2 Hence, the subject-matter of claim 1 differs from the embodiment of Figures 3 and 4 of D6 ("main embodiment") i.a. in that the optic fiber and the tubular tip are movable relative to the handle while the sleeve is stationary.

2.3 Furthermore, in a passage of D6 relating to alternate embodiments of the invention (page 13, lines 3 to 30) it is mentioned that "the sleeve 20 could also be mounted stationary relative to the handle 10 and the pre-bent tip 30 containing the optic fiber could be made moveable relative to the sleeve and handle to adjust the bend in the tip" (page 13, lines 8 to 12).

The Board concurs with the Opposition Division that this statement refers to an alternative of the main embodiment, i.e. an embodiment having all the features of Figures 3 and 4 wherein only the elements concerning the mechanism to expose the optic fiber are reversed (point 1.1.3.1 of the decision).

In this regard, the Board does not share the appellant's view that the alternate embodiments mentioned on page 13, lines 3 to 30, had to be regarded as alternative embodiments of the invention as defined in claim 1 of D6. In the Board's view, the word "alternate" does not mean that all the features of the main embodiment have to be replaced.

Furthermore, the use of reference signs (which were not used in claim 1 of D6) suggests that the alternate embodiment of page 13, lines 8 to 12 is a variant of the main embodiment (in which reference signs were used). Hence, in addition to conveying the information that both embodiments include these three elements, the reference signs indicate that these three elements of the main embodiment are modified in the alternate embodiment, whereas the other elements are not changed.

The cited passage is therefore - in connection with the description of the main embodiment - a disclosure of an instrument wherein the sleeve is secured stationary to the handle while the optic fiber is moveable between a pushed-forward position where the optic fiber projects a first distance from the handle such that the distal end portion of the optic fiber projects from the sleeve to cause the fiber to bend and a pulled-back position such that the distal end portion of the fiber is contained in the sleeve and straightened.

2.4 The feature "the tubular tip being secured stationary to the optic fiber" of claim 1 is not disclosed explicitly in connection with the main embodiment of D6. However, the Board considers this feature to be implicitly disclosed. It is evident for the person skilled in the art that the optic fiber can be reliably used to perform the eye surgery only if the position of the fiber relative to the pre-bent tip is exactly defined. Such an exact position can only be achieved by ensuring that the optic fiber is secured stationary in the tubular tip, for instance by friction fit. In fact, this is embodied by the statement that the optic fiber extends past the tubular tip by 0.25 mm, i.e. a fixed distance. Also the mention of a plug to securely fix the optic fiber in the tubular tip (page 14, lines 11

to 14), albeit in connection with a further embodiment having a larger diameter sleeve, conveys the information that it is essential to secure the tip stationary to the optic fiber.

2.5 Moreover, D6 does not disclose explicitly that, in said alternate embodiment, the optic fiber projects a second distance from the handle when in the pulled-back position. D6 discloses that in the main embodiment the sleeve 20 projects a second distance from the handle when in the pulled-back position (Figure 3).

Although it would be technically possible to modify the mechanism of the main embodiment such that the optic fiber does not project from the handle in the pulled back position, this would be disadvantageous since the distance the optic fiber had to be moved to expose the pre-bent tip would be prolonged. The person skilled in the art would therefore have no reason to consider this possibility. The person skilled in the art would rather configure the mechanism such that the optic fiber was retracted only as far as necessary, namely, until the optic fiber is contained in the sleeve. Since claim 1 requires that the sleeve projects from the handle, the optic fiber also projects from the handle in this position.

Hence, the feature "the optic fiber projects a second distance from the handle" when in the pulled-back position is also implicitly disclosed in D6.

2.6 It cannot be derived from the above-mentioned passage (page 13, lines 8 to 12) that the instrument of the alternative embodiment includes a mechanism on the handle that is connected to the optic fiber to

selectively move the optic fiber.

2.7 Due to this distinguishing feature the surgeon is able to move the optic fiber slowly and to bend the tip gradually.

Starting from said alternate embodiment of D6 the objective technical problem can be regarded as to improve precision and control of the fiber bending operation.

In this regard, the Board cannot concur with the appellant that the objective technical problem is related to reduce stress after insertion into the eye. Actually, this problem is associated with the feature of rendering the sleeve stationary and the fiber moveable relative to the handle. However, this feature is already included in the alternate embodiment disclosed on page 13, lines 8 to 12. Hence, the objective technical problem as defined by the appellant does not relate to the distinguishing feature of providing a mechanism on the handle.

2.8 In an attempt to solve the objective technical problem the person skilled in the art would consider providing a mechanism on the handle such as the one disclosed in connection with the main embodiment, in particular since D6 teaches that such a mechanism enables slow movement and gradual adjustment of the bending tip (page 12, lines 15 to 21). Hence, although D6 mentions other actuation mechanisms, such as a trigger or squeeze mechanism (page 13, lines 17 to 22), the Board does not agree with the appellant's assertion that the person skilled in the art would favour these variants over the step of modifying the mechanism of the "main embodiment".

Contrary to the appellant, the Board does not see the need to significantly redesign the arrangement of the main embodiment of D6. The application of the mechanism of the main embodiment to the alternate embodiment of D6 can be realized by a routine workshop modification, e.g. by arranging the sleeve on the handle such that its proximal end is located distally of the slot 18. The optic fiber would then be exposed in the slot, allowing the finger pad to be secured to the optic fiber, either directly or via the tubular tip. This is considered as a straightforward modification of the mechanism of the main embodiment.

Hence, it would be obvious for the person skilled in the art to arrive at the subject-matter of claim 1.

It follows that the subject-matter of claim 1 of the main request does not involve an inventive step.

3. Auxiliary requests - inventive step

The above-mentioned finding also applies to the auxiliary requests since claim 1 of the auxiliary requests is identical to claim 1 of the main request. Thus, the subject-matter of claim 1 of the first and second auxiliary requests does not involve an inventive step either.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Hampe M. Alvazzi Delfrate

Decision electronically authenticated