United States District Court,
D. Massachusetts.

SUMMIT TECHNOLOGY, INC,
Plaintiff.
v.
NIDEK CO., LTD., Nidek, Inc., and Nidek Technologies, Inc,
Defendants.

Civil Action No. 98-12611-EFH

June 21, 2002.

Christopher Liro, Russell E. Levine, Kirkland & Ellis LLP, Chicago, IL, Wayne L. Stoner, William F. Lee, Sharon C. Simpson Jones, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, for Plaintiff.

Abraham J. Rosner, John F. Rabena, Neil B. Siegel, Paul J. Wilson, Robert M. Masters, Stanislav Torgovitsky, Sughrue, Mion, Zinn, Macpeak & Seas, PLLC, Washington, DC, David S. Godkin, Birnbaum & Godkin, LLP, Kristina E. Barclay, U.S. Attorney's Office, Boston, MA, for Defendants.

ORDER

EDWARD F. HARRINGTON**, District Judge.**

After considering the submissions of the parties and hearing oral argument on the matter, IT IS HEREBY ORDERED, ADJUDGED and DECREED that the court construes the disputed claim limitations of the patents-in-suit-as follows:

U.S. Patent No. 4.941.093:

1. Claim 1: "A laser system for eroding a surface ..."

Claim 1 is not limited to a non-scanning laser system for eroding a surface.

2. Claim 1: "laser means for generating pulses of laser light along a beam path ... such that the pulses can be absorbed at a surface...."

This language is construed pursuant to 35 U.S.C. s. 112 para. 6. The function of this limitation is to generate pulses of laser light which follow a beam path, such that pulses progress from the laser along a path to a surface where they are absorbed. The surface means the surface that is from time to time exposed to the pulses. The structure corresponding to the "laser means" to perform the function encompasses excimer lasers (including argon-fluoride excimer laser of 193 nm wavelength), HF lasers and pulses CO2 lasers, as identified in the patent specification.

3. Claim 1: "support means for aligning a surface relative to the laser means"

This limitation is subject to 35 U.S.C. s. 112 para. 6. The "function" of the limitation is supporting or aligning a surface so that it is aligned with pulses from the laser. The means described in the patent for performing this function include an operating table, headrest, microscope, and/or suction cup placed over the eye.

4. Claim 1. "beam dimension control means disposed along said laser beam path, including optical means for optically varying an area on the surface to which the pulses of laser energy are delivered while maintaining a substantially constant energy per unit area during each pulse"

This limitation is subject to 35 U.S.C. s. 112 para. 6. The function of this limitation is, using optical component(s) in the path of the laser beam, to vary an area on the surface to which the pulses from the laser are delivered but, at the same time, to have each pulse delivered to the surface have substantially the same energy per unit area. Pulses delivered to the surface have substantially the same energy per unit area if they each ablate approximately the same depth of material. There are a number of "beam dimension control" and "optical" means described in the patent which perform or assist in performing this function, including those structures shown in Figures 8-16 and 20 and described in accompanying text, and including a variable aperture iris diaphragm.

5. Claim 15: "a method of eroding a surface of an object ..."

Claim 15 is not limited to a non-scanning method of eroding a surface of an object.

6. Claim 15: "aligning a surface of an object with a laser source...."

This limitation means aligning a surface of an object with a laser source that is operable to deliver pulses of laser energy to the surface. The "surface of an object" means the surface which is from time to time exposed.

7. Claim 15: "pulsing the laser source along a path so that light therefrom falls on the surface of the object"

This limitation means that the laser is pulsed such that pulses from the laser follow a path to the surface of the object.

8. Claim 15: "controlling the light from the laser with a beam dimension control means disposed along said path so as to optically vary the area ... during the emission of a plurality of pulses ... while maintaining a substantially constant energy per unit area during each pulse, and thereby obtaining a desired erosion profile of the surface"

This limitation means that the light from the laser is controlled with a beam dimension control means in the path of the light. The light is controlled so as to optically vary the area hit by the light during a succession of pulses of the laser, which pulses have substantially the same energy per unit area, and thereby, obtaining a desired erosion profile of the surface. Pulses delivered to the surface have substantially constant energy per unit area if they ablate approximately the same depth of material. The structures identified in the patent that can perform the function of the "beam dimension control means" are the same as those identified in

connection with claim 1.

9. Claim 17: "selected overlapping regions of the surface:

This limitation means that areas of the surface exposed to the laser light during a succession of pulses are chosen so that they overlap with one another.

10. Claim 25: "A method of correcting ocular disorders by reprofiling a corneal surface of an eye ..."

Claim 25 is not limited to a non-scanning method of correcting ocular disorders by reprofiling a corneal surface of an eye.

11. Claim 25: "aligning a cornea of an eye with a laser"

This limitation means a cornea of an eye is aligned with a laser.

12. Claim 25: "pulsing the laser source so that light therefrom propagates along a path and falls intermittently on the surface of the cornea to induce photoablation of a thin surface layer of the cornea within an area of exposure during each pulse"

This limitation means that the laser is pulsed to produce light that follows a path and falls intermittently (as it is pulsed) on the exposed surface of cornea. This light causes ablation of a thin layer of the corneal surface that is exposed to the pulses.

13. Claim 25: "Controlling the light with a beam dimension control means disposed along said path from the laser to optically vary said area of exposure while maintaining a substantially constant energy per unit area during each pulse"

This limitation means that the light from the laser is controlled optically with a beam dimension control means to vary the area of exposure of the cornea to the light, while maintaining substantially the same energy per unit area for each pulse to which the cornea is exposed, meaning that each such pulse ablates approximately the same depth of material. The structures identified in the patent that can perform the function of the "beam dimension control means" are the same as those identified in connection with claim 1.

14. Claim 30: "controlling the light from the laser further comprises varying the area of exposure"

This limitation means the light from the laser is controlled to vary the area of exposure.

U.S. Patent No. 4,973,330*:*

15. Claim 21: "to optimize the curvature of the anterior surface of an area of the cornea of an eye"

This language in the preamble of the claim is a limitation of the claim. The "anterior surface of an area of the cornea of an eye" is the front surface of the cornea of an eye.

16. Claim 21: "means for selecting out of the light produced by said light source, a portion of light which is essentially unidirectional in nature, whereby a beam of light having an outer portion and a center is formed"

This limitation is subject to 35 U.S.C. s. 112 para. 6. "The "function" of this limitation is to select, out of the light produced by the light source (e.g., laser), a portion of light that is essentially unidirectional in nature. This is light which has the same amount (or less) of divergence or spread as that of the central portion of an excimer laser beam. Light that is not essentially unidirectional in nature is blocked. The "means" structure described in the patent specification for performing this function is a diaphragm with a hole or aperture in the middle.

17. Claim 21: "means for focusing said beam of light onto the anterior surface of a patient's cornea, whereby a light spot having an area a[sic] configuration is formed, the area of said light spot having a maximum area at least as large as the area of the cornea desired to be operated upon"

This limitation is subject to 35 U.S.C. s. 112 para. 6. The "function" of this limitation is to focus the beam to direct a spot of light onto the front surface of the cornea. The area of this spot is at least as large as the area of the cornea one wishes to operate upon. The "means" structure described in the patent specification for performing this function is a lens.

18. Claim 21: "means for changing the configuration of said light spot, whereby size or shape of said light spot may be varied or a portion of said light spot may be obscured such that, as a function of time, varying portions of the cornea surface may be made to receive varying amounts of total photoradiant energy, whereby a lenticular lamina of cornea material having a smooth anterior surface may be removed by ablation"

This limitation is subject to 35 U.S.C. s. 112 para. 6. The "function" of the limitation is to vary the size or shape of, or obscure a portion of, the light spot formed on the cornea. This is done in such a way that, over time, different areas of the cornea receive different amounts of ablating light energy. This results in the removal from the cornea of a lens shaped layer of corneal tissue having a smooth outer surface. The "means" structures shown in the patent specification for performing this function are several, depicted in Figures 3, 4, 7, 8, 9, 10, and 13 and described in accompanying text, and include a diaphragm with an aperture or hole in the middle.

19. Claim 27: "wherein said means for changing the configuration of said light spot is a second diaphragm having a central aperture:

This limitation means that the "means" specified in claim 21 for changing the configuration of the light spot has two diaphragms, one of which is a diaphragm having a central aperture. There is no corresponding embodiment in the '330 patent employing two diaphragms. This claim cannot be construed pursuant to 35 U.S.C. s. 112 para. 6.

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