

United States District Court,  
N.D. California.

**SHARPER IMAGE CORPORATION, a Delaware corporation, and Zenion Industries, Inc., a California corporation,**  
Plaintiffs.

v.

**HONEYWELL INTERNATIONAL, INC., a Delaware corporation, and Kaz, Inc., a New York corporation,**  
Defendants.

No. C 02-4860 CW

**March 17, 2004.**

E. Robert Wallach, Law Offices of E. Robert Bob Wallach, Jeffrey William Shopoff, Shopoff & Cavallo LLP, San Francisco, CA, Noelle J. Day, Alan L. Barry, Amy Gast O'Toole, Heather A. Boice, Bell, Boyd & Lloyd LLC, Chicago, IL, for Plaintiffs.

Munir R. Meghjee, Stacie Oberts, William H. Manning, Cole M. Fauver, Robins, Kaplan, Miller & Ciresi LLP, Minneapolis, MN, John P. Bovich, Jonah Dylan Mitchell, Reed Smith LLP, San Francisco, CA, Evan Michael Bundis, Pierre R. Yanney, Richard Jay Katz, Robert S. Weisbein, Darby & Darby, New York, NY, for Defendants.

## **REVISED CLAIM CONSTRUCTION ORDER**

**CLAUDIA WILKEN, District Judge.**

Plaintiffs Sharper Image Corporation and Zenion Industries, Inc. and Defendants Honeywell International, Inc. and Kaz, Inc. dispute the meaning of several terms and phrases used in U.S. Patent No. 4,789,801 ('801 patent), U.S. Patent No. 6,176,977 ('977 patent), and U.S. Patent No. 6,350,417 ('417 patent). The parties ask the Court to adopt their proposed construction of the disputed terms and phrases. The matter was heard on January 13, 2004. Having considered the parties' papers, the evidence cited therein and oral argument, the Court construes the disputed terms and phrases as set forth herein.

## **BACKGROUND**

Plaintiff Zenion Industries is the assignee of the '801 patent; Plaintiff Sharper Image is the assignee of the '977 and '417 patents. The patents-in-suit each claim electrokinetic devices, or devices that, "when immersed in ionizable dielectric fluid media, e .g., air, convert electrical energy directly into fluid flow, i.e., flow of the ionizable dielectric fluid media, without the aid of moving parts." '801 patent, col. 1 ln. 34-38. The patents-in-suit create this electrokinetic flow of air by using a high voltage generator to positively charge one array of electrodes and negatively charge another array of electrodes. Air molecules become

positively charged by interacting with the positively charged array of electrodes and then are attracted to the negatively charged array of electrodes, creating an electrokinetic flow of air. The '801 patent discloses improvements in such electrokinetic devices "whereby the undesired production of ozone is decreased and efficiency is increased." '801 Patent, col. 1. ln. 16-20. The '977 patent discloses improvements to electrokinetic devices used to electrostatically clean air, i.e. to clean air by causing particulate matter in the air to become positively charged and then electrostatically attracted to the negatively charged array of electrodes. *See* '977 patent, Background of Invention. The '417 patent discloses an improvement to such devices relating to "cleaning the wire or wire-like electrodes present in such devices." '417 patent, col. 1 ln. 13-17. Plaintiffs have filed suit against Defendants, alleging that Defendants' products infringe claim 24 of the '801 patent, independent claim 1 and dependent claims 4, 9, and 11 of the '977 patent, and claim 16 of the '417 patent. Now before the Court are the parties' respective positions on claim construction.

## LEGAL STANDARD

The interpretation of patent claims is a question of law to be decided by the Court. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 371-73 (1996). In construing a claim, the Court must look first to the specific words of the claim. *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996). "[T]he claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim." *Renishaw PLC v. Marposs ocieta per Azioni*, 158 F.3d 1243, 1248 (Fed.Cir.1998).

Words in the claim are generally given their ordinary meaning. *Id.*; *see also* *Texas Digital Sys. Inc. v. Telegenix Inc.*, 308 F.3d 1193, 1202 (Fed.Cir.2002) ("The terms used in the claims bear a 'heavy presumption' that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art."). "The ordinary meaning of a claim term may be determined by reviewing a variety of sources, including the claims themselves, other intrinsic evidence including the written description and the prosecution history, and dictionaries and treatises." *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed.Cir.2002) (internal citations omitted).

While words in the claim are generally given their ordinary meaning, the specification or prosecution history may indicate otherwise. *Vitronics Corp.*, 90 F.3d at 1582. "[A] patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition is clearly stated in the patent specification or file history." *Id.*

However, claims are not limited to the preferred embodiment described in the specification. *See* *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1121 (Fed.Cir.1985) ( *en banc*, plurality opinion).

## DISCUSSION

### I. Electrokinetic

The parties dispute whether the term "electrokinetic," as used in the preambles of all disputed claims of the patents-in-suit, should be construed and, if so, the appropriate construction of this term. Plaintiffs argue that the bodies of the claims of the patents-in-suit define complete inventions, and thus that the preambles are nothing more than overarching statements of purpose that need not be construed. *See* *Schumer v. Lab. Computer Sys., Inc.*, 308 F.3d 1034, 1310 (Fed.Cir.2002) ("If the body of a claim sets out the complete invention, and the preamble is not necessary to give life, meaning and vitality to the claims, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a

claim limitation.") (internal quotation marks omitted). Defendants, however, argue that the patent specifications and prosecution history demonstrate that the term "electrokinetic" is an important limitation on the claimed invention and therefore must be construed. *See Catalina Mktg. Int'l v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed.Cir.2002). (holding that the preamble may operate as a claim limitation if it "recit[es] additional structure or steps underscored as important by the specification" or if it was relied upon "during prosecution to distinguish the claimed invention from the prior art"). To resolve this question, the Court must review "the entirety of the patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim." *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed.Cir.1989).

The specification of the '801 patent, in a section addressing the field of the invention, states that the "present invention relates to electrokinetic transducing methods and apparatus." '801 patent, col. 1 ln. 16-17. The patent specification then proceeds to define "electrokinetic transducers" as devices that, "when immersed in ionizable dielectric fluid media, e.g., air, convert electrical energy directly into fluid flow, i.e., flow of the ionizable dielectric fluid media, without the aid of moving parts." '801 patent, col. 1 ln. 34-38. The patent specification recites that the purpose of the present invention is "provide improved electrokinetic transducers." '801 patent, col. 1 ln. 65-66. The patent specification distinguishes the present invention from conventional electrostatic precipitators that include rotary fans. '801 patent, col. 2 ln. 23-28 ("It is an additional object of the invention to provide electrokinetic apparatus which emit substantial airflows while at the same time serving as electrostatic precipitators, and thus are much more efficient and quieter than conventional electrostatic precipitators which comprise rotary electric fans."). Further, during a reexamination proceeding, the inventors explicitly distinguished the present invention from the prior art on the basis that the present invention moves air without mechanical means such as a fan. June 26, 2002 Response to Office Action in Reexamination Procedure for '801 patent at 5 ("Unlike the claims of the '801 patent, *Fuchs* does not disclose a device for moving air within a room without mechanical means, such as a fan."); *id.* at 7 ("A further object of the invention disclosed in the '801 patent includes producing efficient and quiet air flows ... without the use of an electric fan. Conversely, ... *Fuchs* requires a fan to move air. Thus, because *Fuchs* lacks any disclosure for moving air without mechanical means, *Fuchs* is not an enabling reference.") (internal citation omitted).

The specifications of the '977 and '417 patents, in sections addressing the field of the invention, similarly state that the present inventions relate to the electrokinetic flow of air. '977 patent, col. 1 ln. 5-9 ("This invention relates to electro-kinetic conversion of electrical energy into fluid flow of an ionizable dielectric medium, and more specifically to methods and devices for electro-kinetically producing a flow of air from which particulate matter has been substantially removed."); '417 patent, col. 1 ln. 13-17 ("This invention relates generally to devices that produce ozone and electrokinetic flow of air from which particulate matter has been substantially removed, and more particularly to cleaning the wire or wire-like electrodes present in such devices."). The specifications then proceed to define "electro-kinetic techniques" as techniques "by which electrical power is directly converted into a flow of air without mechanically moving parts." '977 patent, col. 1 ln. 33-36; '417 patent, col. 1 ln. 40-43. The specifications explicitly distinguish the present invention from prior art devices that use moving parts to create air flow. '977 patent, col. 2 ln. 39-40 ("The present invention provides an electro-kinetic system for transporting and conditioning air without moving parts."); '977 patent, col. 6 ln. 64-66 ("The air flow is indeed electro-kinetically produced, in that there are no intentionally moving parts within the present invention."); '417 patent, col. 9 ln. 4-6 ("The air flow is indeed electrokinetically produced, in that there are no intentionally moving parts.").

These passages from the specifications and the prosecution histories of the patents-in-suit demonstrate that

the term "electrokinetic" must be construed in order to "give life, meaning and vitality to the claims." *Schumer*, 308 F.3d at 1310. The specifications make clear that the inventors were working on improvements to electrokinetic devices, or devices that cause the flow of air through electrical, rather than mechanical, means. *See Gen. Elec. Co. v. Nintendo Co., Ltd.*, 179 F.3d 1350, 1361-62 (Fed.Cir.1999) ("Here, the '125 specification makes clear that the inventors were working on the particular problem of displaying binary data on a raster scan display device and not general improvements to all display systems."); *Corning Glass Works*, 868 F.2d at 1257 (applying the same principle). The specifications emphasize the advantages that such electrokinetic devices have over devices that create airflow through mechanical means. *See Innovad Inc. v. Microsoft Corp.*, 260 F.3d 1326, 1331-32 (Fed.Cir.2001) (specification recited invention's advantages over prior art by stating that it had no keypad). The specifications and prosecution histories clearly distinguish the inventions claimed by the patents-in-suit from prior art devices that move air through mechanical means. *See Catalina*, 289 F.3d at 808 ("[C]lear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates the use of the preamble to define, in part, the claimed invention."). For these reasons, the Court concludes that it must construe the term "electrokinetic" as used in the preambles of the patents-in-suit in order to give life, meaning, and vitality to the claims.

Considering the same evidence from the specifications and prosecution history of the patents-in-suit, the Court construes the term "electrokinetic," as used in the phrase "a diode-type electrokinetic transducer" in the '801 patent and the phrase "an electro-kinetic air transporter-condition" in the '977 and '417 patents, to mean "using electrical forces, without any mechanically moving components, to create an airflow through the device." FN1

FN1. The Court notes that this construction does not address the infringement question of whether a device which moves air mechanically as well as electrokinetically can infringe the patents-in-suit.

## **II. Second Array of Surfaces and Second Array of Electrodes**

The parties dispute the meaning of the phrase "a second array of ion receiving surfaces" as used in claim 24 of the '801 patent, the phrase "a second electrode array that includes at least first and second electrically-conductive hollow electrodes" as used in claims 1, 4, 9, and 11 of the '977 patent, and the phrase "a second electrode array ... including at least two electrodes" as used in claim 16 of the '417 patent. Plaintiffs contend that each of these phrases should be construed to mean "an arrangement of surfaces for collecting ions and airborne particles." Defendants contend that each of these phrases should be construed to mean "a collection of multiple, individually separate electrodes, i.e. conducting objects with no variation in voltage around their surfaces." By proposing to construe these phrases identically, Plaintiffs in effect attempt to substitute the term "surfaces" used in the '801 patent for the term "electrodes" used in the '977 and '417 patents, while Defendants in effect attempt to substitute the term "electrodes" used in the '977 and '417 patents for the term "surfaces" used in the '801 patent. Neither party has provided sufficient justification for this substitution.FN2 Therefore, the Court shall construe each of these phrases according to the meaning of the term actually used in the phrase at issue. The Court construes the phrase "a second array of ion receiving surfaces" as used in claim 24 of the '801 patent to mean "an arrangement of surfaces for collecting ions and airborne particles." The Court construes the phrase "a second electrode array," as used in the phrase "a second electrode array that includes at least first and second electrically-conductive hollow electrodes" in claims 1, 4, 9, and 11 of the '977 patent and the phrase "a second electrode array ... including at least two electrodes" in claim 16 of the '417 patent, to mean "a collection of multiple, individually separate

electrodes." However, the Court declines to adopt the remainder of Defendants' proposed construction, defining "electrodes" as "conducting objects with no variation in voltage around their surfaces," because Defendants have not offered adequate support for this proposed construction. The Court believes that the patents-in-suit use the term "electrode" in its ordinary meaning.

FN2. To justify their substitution of the term "surfaces" for the term "electrodes" in their proposed construction of this limitation of the '977 and '417 patents, Plaintiffs point to claim 12 of the '977 patent, which they claim demonstrates that an electrode array can be a single electrode. While Plaintiffs are correct that claim 12 demonstrates that the second electrode array can consist of a single electrode, this possibility is simply irrelevant to the proper construction of the claims at issue, all of which require that the second electrode array consist of at least two electrodes.

To justify their substitution of the term "electrodes" for the term "surfaces" in their proposed construction of this limitation of the '801 patent, Defendants point to additional elements of claim 24 of the '801 patent that recite that "the cross sections of the ion receiving surfaces of the second array are larger in area than the cross sections of the ion emitting surfaces of the first array," "the distance between any two adjacent ion emitting surfaces in the first array being substantially equal to the distance between any two adjacent ion receiving surfaces in said second array," and "any ion emitting surface in the first array is substantially equidistant from the closest two ion receiving surfaces in the second array." Defendants assert that these additional limitations demonstrate that the "surfaces" recited in claim 24 of the '801 patent must be electrodes, because "surfaces" cannot have cross sections or be equidistant from other surfaces. However, the Court does not believe that a "surface," as that term is ordinarily used, cannot have a cross section or be equidistant from another surface. Therefore, these limitations do not support Defendants' proposed construction.

### **III. Directly Confronting**

The parties dispute the meaning of the term "directly confronting" as used in the phrase "the ion emitting and ion receiving surfaces of the respective first and second arrays directly confronting each other across a space containing ambient air" in claim 24 of the '801 patent. Plaintiffs propose to construe this term to mean "facing each other." In support of this proposed construction, Plaintiffs point to the ordinary meaning of the term "directly confronting," as well as the reexamination prosecution history, in which the patent examiner's statement of reasons for patentability recites that the "synonymous recitations 'directly confront' or 'directly face' mean that no elements intervene or come between the electrode arrays, that the electrode arrays are face to face with each other." October 9, 2002 Examiner's Amendment in Reexamination Procedure for '801 Patent at 7. Defendants propose to construe this phrase to mean "positioned across a continuous space, such that air flows electrokinetically across this space and through the device." In support of this proposed construction, Defendants point to the patentee's response to an office action in the reexamination procedure, in which the patentee distinguished the '801 patent from the prior art by stating:

[I]n the '801 patent, the relationship of the maxisectional electrodes to the first array of electrodes as claimed provides the electric field necessary to generate air flow through the device.... Conversely, *Fuchs* does not teach the necessity of a specific orientation or relationship with a corresponding electrode in order to generate a desired electric field.

June 26, 2002 Response to Office Action in Reexamination Procedure for '801 patent at 9. While the Court agrees with Defendants that this passage from the prosecution history, as well as the specification and prosecution history as a whole, indicates that the claimed invention is a device that moves air

electrokinetically, the Court sees no basis for reading this limitation into the term "directly confronting." Instead, the Court construes the term "directly confronting" to mean "facing each other," as Plaintiffs propose and as is supported by the plain meaning of the term and the patent examiner's stated understanding.

#### **IV. Past**

The parties dispute the meaning of the term "past" as used in the phrase "air ions flow from the first array past the second array" in claim 24 of the '801 patent. Plaintiffs propose to construe this phrase to mean "air ions flow in a direction from the array of ion emitting surfaces and to the surfaces of the ion and airborne particle collecting surfaces." Thus, Plaintiffs propose to substitute the term "to" for the term "past." Defendants object to this substitution, asserting that the term "past" is not equivalent to the term "to," particularly as the term "past" is used in the context of the '801 patent. Defendants therefore propose to construe this term to require that the air ions flow "past" the second array, or "to the other side" of the second array. The Court agrees with Defendants that the term "to" is not synonymous with the term "past." Plaintiffs have offered no justification for substituting the term "to" for the term "past." Therefore, the Court construes the term "past" to mean "to the other side" of the second array, as Defendants propose.

#### **V. Voltage Pulse Generator ... for Generating a Signal**

The parties dispute the meaning of the phrase "voltage pulse generator ... for generating a signal" as used in claim 24 of the '801 patent. Plaintiffs propose to construe this phrase to mean "a generator that produces an electrical signal of voltage pulses." Plaintiffs assert that this proposed construction is consistent with the unambiguous ordinary meaning of the claim language.

Defendants object to Plaintiffs' proposed construction as unduly broad. Defendants argue that this element should be construed as a means-plus-function element that must be limited pursuant to 35 U.S.C. s. 112(6) FN3 to the corresponding structures in the specification for performing the function of generating a signal having voltage pulses of a single polarity, the generator biasing the signal so that the absolute value of the voltage of said signal stays above a predetermined minimum value. *See* '801 patent, claim 19. Defendants do not assert that the language of claim 24 supports their proposed construction. *See* *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed.Cir.2001) ( "[T]he failure to use the word 'means' in a claim element create[s] a rebuttable presumption that 35 U.S.C. s. 112, paragraph 6 [does] not apply."). Instead, Defendants assert that the disputed language of claim 24, which was added during the reexamination proceedings, must be construed consistently with the corresponding means-plus-function element of claim 19. Defendants argue that such a construction is appropriate because a canon of claim construction directs courts to interpret claims, if possible, to preserve their validity, *e.g.*, *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1384 (Fed.Cir.2001); claim 24 would be invalid if its scope were greater than the scope of claim 19, *see* 35 U.S.C. s. 305 ("No proposed amendment or new claim enlarging the scope of a claim of the patent will be permitted in a reexamination proceeding.").

FN3. 35 U.S.C. s. 112(6) allows patentees to express their claims in functional, rather than structural, language. If a patentee expresses its claim in means-plus-function language, the Court construes the claim by first identifying the function explicitly recited in the claim and then consulting the specification to determine the structures that correspond to this function.

The Court rejects Defendants' argument as inconsistent with the applicable Federal Circuit precedent. In

Quantum Corp. v. Rodime, PLC, 65 F.3d 1577, 1584 (Fed.Cir.1995), the Federal Circuit rejected the patent holder's argument that courts should restrict the scope of claim language added during reexamination proceedings to the scope of the original claim terms if necessary to preserve the validity of the new claims. The court reasoned, "Although we construe claims, if possible, so as to sustain their validity, it is well settled that no matter how great the temptations of fairness or policy making, courts do not redraft claims." *Id.* (internal citations omitted). Thus, this Court must construe the phrase "voltage pulse generator ... for generating a signal" as used in claim 24 on its own terms, rather than construing this phrase in order to limit the scope of the claim to that allowable. The Court therefore construes the phrase "voltage pulse generator ... for generating a signal" as used in claim 24 of the '801 patent to mean "a generator that produces an electrical signal of voltage pulses." FN4

FN4. "Whether claims have been enlarged is a matter of claim construction." Quantum Corp., 65 F.3d at 1580. However, the parties have not fully briefed this issue. Therefore, the Court declines at this time to address whether claim 24 has been impermissibly enlarged by including "within its scope any subject matter that would not have infringed the original patent." *Id.* Instead, the Court will address this issue in the context of resolving a motion for summary judgment on the basis of invalidity, if such a motion is made.

## **VI. Downstream Direction**

The parties dispute the meaning of the term "downstream direction" as used in the phrase "said ion generator outputs an electrostatic flow in a downstream direction toward said second electrode array" in claims 1, 4, 9, and 11 of the '977 patent. Plaintiffs propose to construe this phrase to mean "flow in a direction toward the ion and airborne particle collecting surfaces." Defendants propose to construe this phrase to mean "flow in a single direction, substantially perpendicular to and past the second array." In support of this proposed construction, Defendants point to the March 21, 2000 Second Supplemental Information Disclosure Statement, in which the applicant used the term "downstream" in distinguishing the present invention from the prior art. However, in that discussion, the applicant was addressing a different, unasserted embodiment of the present invention. The discussion of the pattern of air flow in that embodiment is not relevant to the pattern of air flow at issue in this claim, and thus does not support Defendants' proposed construction. For the same reason that the Court refused to substitute the term "to" for the term "past" in claim 24 of the '801 patent, the Court now refuses to substitute the term "past" for the term "toward" here, as Defendants request. Instead, the Court shall construe the term "downstream direction" as used in the phrase "said ion generator outputs an electrostatic flow in a downstream direction toward said second electrode array" to mean "flow in a generally single direction toward the ion and airborne particle collecting surfaces."

## **VII. Radius**

The parties dispute the meaning of the term "radius" as used in the phrase "a ratio of effective radius of an electrode in said second electrode array to effective radius of said rod-shaped electrode exceeds about 15:1" in claim 4 of the '977 patent. Plaintiffs propose to construe this phrase to mean that "the radius of the nearest ion collecting surface is at least 15 times greater than the radius of the ion emitting surface." Defendants propose to construe this phrase to mean that "all the electrodes in the electrode assembly have a circular shape with a measurable radius and where the measurable radius of the electrode in the second array is at least 15 times larger than the measurable radius of the electrically-conductive part of the electrodes in the first array." The Court agrees with Plaintiffs that this limitation does not require that the electrodes be circular, because any arc has a radius and because the specification discloses embodiments

that are not circular. *See* '977 patent, fig. 4B & 4D. However, for the reasons discussed in section II., *supra*, the Court agrees with Defendants that this limitation addresses the properties of electrodes, not surfaces. Further, the Court agrees with Defendants that the surface of the electrode must be curved in order for a radius to be determined. Therefore, the Court construes this phrase to mean that "the radius of the curved surface of the nearest ion collecting electrode is at least 15 times greater than the radius of the curved surface of the ion emitting electrode." FN5

FN5. At hearing, both Plaintiffs and Defendants stated that they had no objection to this construction.

### **VIII. Sheet of Metal**

The parties dispute the meaning of the term "sheet of metal" as used in claim 11 of the '977 patent. Plaintiffs propose to construe the term to mean "a metal substrate." Defendants propose to construe the term to mean "a flat metal product that is rolled (not extruded, cast or molded)." In support of their proposed construction, Defendants point to the background of the invention section of the patent specification, in which the patentee identifies as an advantage of the present invention that it does not require "expensive production techniques," such as "mold-casting or an extrusion process," to "fabricate the electrodes." '977 patent, col. 2 ln. 5-8, 27-30. However, nothing in the cited passages limits the scope of the invention to particular manufacturing techniques; the cited passages merely indicate that it is an advantage of the present invention that the electrodes can be manufactured inexpensively. Therefore, the Court declines to construe the term "sheet of metal" to be limited to metal substrates produced through specific manufacturing processes. However, the Court does agree with Defendants that Plaintiffs' proposed construction, "a metal substrate," inappropriately fails to incorporate the requirement that the metal be in the form of a sheet. Therefore, the Court construes the term "sheet of metal" to mean "a metal substrate in sheet form."

### **IX. Bead Shaped Member Defining a Through Opening**

The parties dispute the meaning of the phrase "bead-shaped member defining a through opening" as used in claim 16 of the '417 patent. Plaintiffs propose to construe this phrase to mean "at least one structure that is pierced for stringing or threading, having an opening that extends through the bead shaped member." Defendants propose to construe this phrase to mean "a small, often round piece of material, such as glass, plastic, or wood, that is pierced for stringing or threading." Despite the similarities between these proposed constructions, the parties dispute two aspects of the appropriate construction of this phrase: whether the "bead-shaped member" is required to have a particular shape and whether the "through opening" must completely surround the wire-shaped electrode.

Plaintiffs argue that a "bead-shaped member" can have any shape, as long as it is a structure that is pierced for stringing or threading. Defendants argue that a "bead-shaped member" must be generally round. In support of their proposed construction, Defendants point to the ordinary meaning of the term "bead-shaped member," as determined by dictionary definitions of the word "bead ." Defendants also point to the preferred embodiments referenced in the patent, which, while not all spherical, are all generally rounded, *see* '417 patent, fig. 7A-7E; '417 patent, col. 15 ln. 41 (cylindrical bead); '417 patent, col. 16 ln. 25 (bellshaped bead). Finally, Defendants point to the distinction drawn in the patent between embodiments incorporating a "bead-shaped member," *see* '417 patent, claim 16, and embodiments incorporating a "strip of flexible electrically insulating material," *see* '417 patent, claim 2; *see also* '417 patent, claims 3, 4, 8, 12, and 13. The Court agrees with Defendants that this evidence demonstrates that the term "bead-shaped member" is not simply any "structure" as Plaintiffs propose, and that the patentee intended to draw a distinction between a



bead-shaped structures and flat structures. Therefore, the Court construes the term "bead-shaped member" to require a "bead-shaped structure, i.e. a small, often round piece of material that is pierced for stringing and threading."

Plaintiffs argue that the phrase "defining a through opening" requires only that the bead-shaped member have "an opening that extends through the bead-shaped member." Defendants argue that the phrase requires that the bead-shaped member have an opening that completely surrounds the wire-shaped electrode. The Court agrees with Defendants, because Defendants' proposed limitation is supported by the specification and claims of the '417 patent. The specification of the '417 patent explicitly states that "one or more bead-like members *surrounds* each wire, the wire electrode passing through a channel in the bead." '417 patent, col. 4 ln. 58-60 (emphasis added). Similarly, the specification recites that "the beads slide the length of wire they *surround*." '417 patent, col. 4 ln. 62 (emphasis added). The patent also distinguishes a "bead-shaped member" that "surrounds" a wire electrode from a "strip of flexibly electrically insulating material ... having a second end that defines a slit" such that "said wire-shaped electrode fits frictionally within said slit." '417 patent, col. 16 ln. 52-57. These statements in the specification and the claims demonstrate that the phrase "defining a through opening" is limited to openings that surround the wire electrode. Therefore, the Court construes the phrase "defining a through opening" to mean "containing an opening capable of completely surrounding a wire-shaped electrode."

For these reasons, the Court construes the phrase "bead-shaped member defining a through opening" as a "bead-shaped structure, i.e. a small, often round piece of material that is pierced for stringing and threading, containing an opening capable of completely surrounding a wire-shaped electrode."

## CONCLUSION

The Court construes the disputed terms and phrases as stated.

IT IS SO ORDERED.

N.D.Cal.,2004.

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