United States District Court,
N.D. California, San Jose Division.

BOSTON SCIENTIFIC CORP., et al,
Plaintiffs.
v.
CORDIS CORP,
Defendant.

No. C 02-01474 JW

Jan. 18, 2008.

Allison H. Stiles, Michael G. Strapp, Amanda Marie Kessel, Christopher T. Holding, J. Anthony Downs, Paul F. Ware, Jr., Roland Schwillinski, Sean Paul Cronin, Goodwin Procter LLP, Boston, MA, Michael Francis Kelleher, Julie Lynn Fieber, Folger Levin & Kahn LLP, Patrick Shaun Thompson, Goodwin Procter LLP, San Francisco, CA, for Plaintiffs.

David T. Pritikin, Hugh A. Abrams, Lisa Anne Schneider, Marc A. Cavan, Tara C. Norgard, Stephanie Pauline Koh, Sidley Austin LLP, Chicago, IL, Edward V. Anderson, Georgia Kloostra Van Zanten, Teague I. Donahey, Matthew Thomas Powers, Susan E. Bower, Tracy Jean Phillips, Sidley Austin Brown & Wood LLP, San Francisco, CA, for Defendants.

FIFTH CLAIM CONSTRUCTION ORDER; FN1

FN1. With this Order, the Court adopts a convention it has been using in its other cases with respect to claim construction orders; namely, to give each order a numerical title based on its order of construction. This is the Fifth Claim Construction Order the Court has issued in this case since 2003.

ORDER GRANTING IN PART AND DENYING IN PART CROSS-MOTIONS FOR SUMMARY JUDGMENT ON INFRINGEMENT / NON-INFRINGEMENT RE: DEFENDANT'S TRUFILL DETACHABLE COIL SYSTEM AS TO CLAIMS OF THE '385 AND '498 PATENTS

JAMES WARE**, District Judge.**

I. INTRODUCTION

Boston Scientific Corporation and Target Therapeutics, Inc. ("Target") (collectively, "Plaintiffs") filed this action against Cordis Corporation ("Defendant") alleging infringement of a number of patents relating to methods and devices for treating vascular medical problems. Presently before the Court are the parties' cross-motions for summary judgment as to whether Defendant's TRUFILL Detachable Coil System ("DCS") infringes Claims of the '385 and '498 Patents.

The Court has conducted several hearings on these and other motions whereby the parties have been permitted to supplement their original papers. Based on the papers submitted to date and the arguments of counsel at the hearing, the Court issues its Fifth Claim Construction Order and GRANTS in part and DENIES in part Cross-Motions for Summary Judgment.

II. BACKGROUND

On March 26, 2002, Plaintiffs filed a Complaint alleging that Defendant infringes U.S. Patents Nos. 5,895,385 ("the '385 Patent"), 6,010,498 ("the '498 Patent"), and 6,238,415 ("the '415 Patent"). At issue with respect to the present motions is whether Defendant's DCS infringes claims of the '385 and '498 Patents.

A. *The Patented Technology*

The Court provides a brief summary of the relevant technology as disclosed with respect to the '385 and '498 Patents. FN2 The prior art taught an extra-vascular approach for surgically occluding, and therefore treating, brain aneurysms. The approach had many risks because it is highly invasive and required general anesthesia. The prior art also taught an endo-vascular approach in which the aneurysm was entered through the use of a catheter. Under this approach, a balloon attached to the end of the catheter was introduced into the aneurysm, inflated, and detached, leaving it to occlude the aneurysm while preserving the parent artery. However, the balloon approach carried a risk that the aneurysm might rupture due to over-distension of the aneurysm.

FN2. A complete background of the technology is contained in the Court's October 8, 2003 Claim Construction Order. (hereafter, "CC Order," Docket Item No. 177.)

The '385 and '498 Patents describe medical devices and methods directed to an endo-vascular approach for, *inter alia,* forming an occlusion inside an aneurysm, which avoids the risks involved with using other methods. These patents summarize the invention as follows:

An artery, vein, aneurysm, vascular malformation or arterial fistula is occluded through endovascular occlusion by the endovascular insertion of a platinum wire and/or tip into the vascular cavity. The vascular cavity is packed with the tip to obstruct blood flow or access of blood in the cavity such that the blood clots in the cavity and an occlusion is formed. The tip may be elongate and flexible so that it packs the cavity by being folded upon itself a multiple number of times, or may pack the cavity by virtue of a filamentary or fuzzy structure of the tip. The tip is then separated from the wire mechanically or by electrolytic separation of the tip from the wire. The wire and the microcatheter are thereafter removed leaving the tip embedded in the thrombus formed within the vascular cavity. Movement of wire in the microcatheter is more easily tracked by providing a radioopaque proximal marker on the microcatheter and a corresponding indicator marker on the wire. Electrothrombosis is facilitated by placing the ground electrode on the distal end of the microcatheter and flowing current between the microcatheter electrode and the tip.

('385 Patent, Abstract; '498 Patent, Abstract.)

B. *Prior Claim Construction and Motions*

In its October 7, 2003 Order, the Court construed claim terms of the '385 and '498 Patents. In that Order, the Court found that "all methods of detachment (mechanical or electrolytic) claimed in these patents are

limited to a 'forceless letting go.' " (Id. at 6.) Specifically, the Court construed "detachable" to mean "attached but capable of being detached or disconnected without any axial force and without significant radial force" and "detaching" to mean "disconnecting without any axial force and without any significant radial force." (Id. at 15.)

On March 15, 2004, both parties filed cross-motions for summary judgment as to whether Cordis' DCS infringes Claims 7, 8, 10, 13, 15, 16, 17, 19, 22, 32, 35, and 38 of the '385 Patent and Claims 1, 3, 7, 9, and 10 of the '498 Patent. (Docket Item Nos. 316, 326 .) Plaintiffs' motion for summary judgment also contained an invitation for the Court to reconsider its earlier ruling of the meaning of detachment within the context of the two patents. Plaintiffs formalized this request in a Motion for Reconsideration dated May 17, 2004. (Docket Item No. 492.)

In its July 26, 2004 Order, the Court granted Plaintiffs' Motion for Reconsideration because it found that detachment did not require a "forceless letting go." (*See* Docket Item No. 592.) Accordingly, the Court re-construed "detachable" to mean "attached but capable of being detached or disconnected" and "detaching" to mean "disconnecting." (*Id*. at 12.) Since the Court's claim construction changed, the Court permitted the parties to file supplemental briefs with respect to their cross-motions for summary judgment, which allowed them to address issues left unresolved by the Court's prior orders. FN3

FN3. (Plaintiffs' Supplemental Brief in Further Support of Motion for Summary Judgment of Infringement, hereafter, "Plaintiffs' SB," Docket Item No. 639; Defendant's Supplemental Brief in Support of its Motion for Summary Judgment, hereafter, "Defendant's SB," Docket Item No. 642.)

C. *The Allegedly Infringing Technology*

The accused Cordis DCS has a coil that is attached to a "delivery tube" via a "gripper." (Declaration of Amanda M. Kessel in Support of Plaintiffs' Motion for Summary Judgment of Infringement, hereafter, "Kessel Decl.," Ex. 4 at CNV 0034441, Docket Item No. 307.) Like embodiments of the invention disclosed in the '385 and '498 Patents, the DCS coil is made of platinum, and it detaches to form an occlusion in a vascular cavity. (*See id*. at CNV 0034445.)

The accused Cordis DCS delivery tube is a hollow tube that is filled with fluid before being inserted into the body. (Declaration of Donald K. Jones in Support of Defendant's Motion for Summary Judgment of Noninfringement para.para. 4-5, hereafter, "Jones Decl.," Docket Item No. 310.) The method of detachment is accomplished by hydraulically expanding the gripper, which builds pressure within the delivery tube and reduces the friction holding the coil in place. (Kessel Decl., Ex. 5 at CNV 0034464, Ex. 6 at CNV 00344628; Jones Decl. para. 5.)

Presently before the Court are the parties' cross-motions for summary judgment as to whether Cordis' DCS infringes Claims 7, 8, 10, 13, 15, 16, 17, 19, 22, 32, 35, and 38 of the '385 Patent and Claims 1, 3, 7, 9, and 10 of the '498 Patent.

III. STANDARDS

A. *Standards and Procedures for Claims Construction*

1. General Principles of Claim Construction

Claim construction is a matter of law, to be decided exclusively by the Court. Markman v. Westview Instruments, Inc., 517 U.S. 370, 387, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). When the meaning of a term used in a claim is in dispute, the Court invites the parties to submit their respective proposed definitions and a brief, outlining the basis for their proposals. In addition, the Court conducts a hearing to allow oral argument of the respective proposed definitions. After the hearing, the Court takes the matter under submission, and issues an Order construing the meaning of the term. The Court's construction becomes the legally operative meaning of the term that governs further proceedings in the case. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). The Court recognizes that claim construction is a fluid process, wherein the Court may consider a number of extrinsic sources of evidence so long as they do not contradict the intrinsic evidence. However, the Court acknowledges that greater weight should always be given to the intrinsic evidence. Phillips v. AWH Corp., 415 F.3d 1303, 1324 (Fed.Cir.2005).

2. Construction from the View Point of an Ordinarily Skilled Artisan

A patent's claims define the scope of the patent: the invention that the patentee may exclude others from practicing. *Id*. at 1312. The Court generally gives the patent's claims their ordinary and customary meaning. In construing the ordinary and customary meaning of a patent claim, the Court does so from the viewpoint of a person of ordinary skill in the art at the time of the invention, which is considered to be the effective filing date of the patent application. Thus, the Court seeks to construe the patent claim in accordance with what a person of ordinary skill in the art would have understood the claim to have meant at the time the patent application was filed. This inquiry forms an objective baseline from which the Court begins its claim construction. *Id*.

The Court proceeds from that baseline under the premise that a person of ordinary skill in the art would interpret claim language not only in the context of the particular claim in which the language appears, but also in the context of the entire patent specification, of which it is a part. *Id*. at 1313. Additionally, the Court considers that a person of ordinary skill in the art would consult the rest of the intrinsic record, including any surrounding claims, the drawings, and the prosecution history-if it is in evidence. *Id.;* Teleflex, Inc. v. Fisosa N. Am. Corp., 299 F.3d 1313, 1324 (Fed.Cir.2002). In reading the intrinsic evidence, a person of ordinary skill in the art would give consideration to whether the disputed term is a term commonly used in lay language, a technical term, or a term defined by the patentee.

3. Commonly Used Terms

In some cases, disputed claim language involves a commonly understood term that is readily apparent to the Court. In such a case, the Court considers that a person of ordinary skill in the art would give to it its widely accepted meaning, unless a specialized definition is stated in the patent specification or was stated by the patentee during prosecution of the patent. In articulating the widely accepted meaning of such a term, the Court may consult a general purpose dictionary. Phillips, 415 F.3d at 1314.

4. Technical Terms

If a disputed term is a technical term in the field of the invention, the Court considers that one of skill in the art would give the term its ordinary and customary meaning in that technical field, unless a specialized definition is stated in the specification or during prosecution of the patent. In arriving at this definition, the

Court may consult a technical art-specific dictionary or invite the parties to present testimony from experts in the field on the ordinary and customary definition of the technical term at the time of the invention. *Id*.

5. Defined Terms

The Court acknowledges that a patentee is free to act as his or her own lexicographer. Acting as such, the patentee may use a term differently than a person of ordinary skill in the art would understand it, without the benefit of the patentee's definition. Vitronics Corp., 90 F.3d at 1582. Thus, the Court examines the claims and the intrinsic evidence to determine if the patentee used a term with a specialized meaning.

The Court regards a specialized definition of a term stated in the specification as highly persuasive of the meaning of the term as it is used in a claim. Phillips, 415 F.3d at 1316-17. However, the definition must be stated in a clear words, which make it apparent to the Court that the term has been defined. *See id.;* Vitronics Corp., 90 F.3d at 1582. If the definition is not clearly stated or cannot be reasonably inferred, the Court may decline to construe the term pending further proceedings. Statements made by the patentee in the prosecution of the patent application as to the scope of the invention may be considered when deciding the meaning of the claims. Microsoft Corp. v. Multi-Tech Systems, Inc., 357 F.3d 1340, 1349 (2004). Accordingly, the Court may also examine the prosecution history of the patent when considering whether to construe the claim term as having a specialized definition.

In construing claims, it is for the Court to determine the terms that require construction and those that do not. *See* U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed.Cir.1997). Moreover, the Court is not required to adopt a construction of a term, even if the parties have stipulated to it. Pfizer, Inc. v. Teva Pharmaceuticals, USA, Inc., 429 F.3d 1364, 1376 (Fed.Cir.2005). Instead, the Court may arrive at its own constructions of claim terms, which may differ from the constructions proposed by the parties.

B. *Summary Judgment*

The standard for summary judgment does not change in a patent case. Conroy v. Reebok Int'l, Ltd., 14 F.3d 1570, 1575 (Fed.Cir.1994). Summary judgment is proper "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed.R.Civ.P. 56(c). The purpose of summary judgment "is to isolate and dispose of factually unsupported claims or defenses." Celotex v. Catrett, 477 U.S. 317, 323-24, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). The moving party "always bears the initial responsibility of informing the district court of the basis for its motion, and identifying the evidence which it believes demonstrates the absence of a genuine issue of material fact." Id. at 323. The non-moving party must then identify specific facts "that might affect the outcome of the suit under the governing law," thus establishing that there is a genuine issue for trial. Fed.R.Civ.P. 56(e).

When evaluating a motion for summary judgment, the court views the evidence through the prism of the evidentiary standard of proof that would pertain at trial. Anderson v. Liberty Lobby Inc., 477 U.S. 242, 255, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). The court draws all reasonable inferences in favor of the non-moving party, including questions of credibility and of the weight that particular evidence is accorded. *See, e.g.,* Masson v. New Yorker Magazine, Inc., 501 U.S. 496, 520, 111 S.Ct. 2419, 115 L.Ed.2d 447 (1992). The court determines whether the non-moving party's "specific facts," coupled with disputed background or contextual facts, are such that a reasonable jury might return a verdict for the non-moving party. *T.W. Elec. Serv.,* 809 F.2d at 631. In such a case, summary judgment is inappropriate. Anderson, 477 U .S. at 248.

However, where a rational trier of fact could not find for the non-moving party based on the record as a whole, there is no "genuine issue for trial." Matsushita Elec. Indus. Co. v. Zenith Radio, 475 U.S. 574, 587, 106 S.Ct. 1348, 89 L.Ed.2d 538 (1986).

C. *Infringement*

"A determination of infringement requires a two-step analysis." *Terlep v. Brinkmann Corp.,* 419 F.3d 1379, 1381 (Fed.Cir.2005). First, the claim must be construed; second, the claim must be compared to the "accused device or process." *Id.* (citing Carroll Touch, Inc. v. Electro Mech. Sys., Inc., 15 F.3d 1573, 1576 (Fed.Cir.1993)). While claim construction is an issue of law, infringement is a question of fact. *Id.* (citing Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-71 (Fed.Cir.1995)). Due to the factual nature of the infringement inquiry, a court must take great care in determining whether a patent is infringed by way of summary judgment. SRI Int'l v. Matsushita Elec. Corp., 775 F.2d 1107 (Fed.Cir.1985). However, summary judgment on the issue is appropriate when the comparison of the properly construed claim with an uncontested description of the accused device reflects an absence of a genuine issue of material fact. Chemical Eng'g Corp. v. Essef Indus., Inc., 795 F.2d 1565 (Fed.Cir.1986).

The moving party bears the burden of proving infringement or non-infringement by a preponderance of the evidence. Mannesmann Demag Corp. v. Engineered Metal Products, Inc., 793 F.2d 1279, 1282 (Fed.Cir.1986). To establish infringement, every limitation in a claim as construed by the court must be infringed. Carroll Touch, 15 F.3d at 1576. Even if an accused device does not literally infringe a claim limitation, it may nonetheless be found to infringe under the doctrine of equivalents. Warner-Jenkinson Co. v. Hilton Davis Chemical Co., 520 U.S. 17, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997).

IV. DISCUSSION

With respect to the parties' cross-motions for summary judgment, Plaintiffs contend that on the basis of undisputed evidence, the Defendant's accused DCS device, literally infringes Claims 7, 8, 10, 13, 15, 16, 17, 19, 22, 32, 35, and 38 of the '385 Patent and Claims 1, 3, 7, 9, and 10 of the '498 Patent, or that it infringes those Claims under the doctrine of equivalents. Defendant contends that on the basis of undisputed evidence, the Plaintiffs cannot carry their burden to prove that the accused DCS device infringes the asserted patent Claims literally or under the doctrine of equivalents for two principal reasons: First, Defendant contends that Plaintiffs cannot prove that the accused DCS device, literally or equivalently, infringes the "wire" limitation, which is contained in each of the asserted Claims. Second, Defendant contends that in addition to no proof of infringement of the "wire" limitation, Plaintiffs cannot prove that the DCS device infringes the "no preferred geometric form" limitation of Claims 15 and 38 of the '385 Patent. The Court begins with an examination of Claim 7 of the '385 Patent.

A. *Claim 7 of the* '385 Patent

1. Construction of the Word "wire"

As a preliminary matter, the Court finds that further construction of the term "wire" is required.

Claim 7 provides: FN4

FN4. Unless otherwise indicated, all bold typeface is added by the Court for emphasis.

An apparatus for use in occluding a body cavity comprising:
a **wire;** and

a detachable elongate distal tip coupled to said wire, said elongate distal tip being a relaxed coil capable of being multiply folded upon itself.

The Court's last consideration of the meaning of the word "wire" in this case was in the October 7, 2003 Order. In that Order, the Court construed the word "wire" as it is used in Claims 7, 8, 10, 15, 32, 35, and 38 of the '385 Patent and Claims 1, 3, 7, 9, and 10 of the '498 Patent to mean, a "thin, flexible, continuous length of metal, usually of circular cross section." (CC Order at 9.) Subsequent to the October 7, 2003 Order, the Court has considered the construction of "wire" and other words and phrases in the Guglielmi family of patents in a case entitled: *Regents v. Micro Therapeutics, Inc.,* No. C-03-05669. Plaintiffs in this case were Third-Party Defendants in the *Regents* case.

In the August 24, 2005 Order in the *Regents* case, the Court stated:

The parties have agreed that the terms "guidewire" and "wire" should be construed synonymously for purposes of claim construction. This Court construes the term "wire" to mean "a thin, flexible, continuous length of metal, usually of circular cross-section that collectively includes both guidewires and tips and simply wires without distinct tip structures."

* * *

Further, both parties agree that the definition of "wire" should include "a thin, flexible, continuous length of metal, usually of circular cross-section." This additional language is consistent with the term's use in the specifications, the claims and the prosecution histories of the patents-in-suit. Therefore, this Court adds the parties' agreed-upon language to the explicit definition set forth in the specification.FN5

FN5. (*See* Docket Item No. 270.)

Subsequently, in the March 2, 2007 Order of the same case, the Court determined that with respect to a particular Claim, a further definition of "guidewire" was required:

The Court construes "guidewire" as it is used in Claim 1 of the '136 Patent to mean: Part of an apparatus of the invention which is a thin, flexible, continuous length of metal, of circular cross-section which has a detachable tip.FN6

FN6. (*See* Docket Item No. 482.)

The specifications used by the Court as a basis for its construction in the *Regents* case describe a "wire" in materially the same way as the specifications of the '385 and '498 Patents involved in this case. Of primary importance to its construction is the following statement in each of the specifications:

The term "wire" should be understood to collectively include both guidewires and tips and simply wires

without distinct tip structures.

(*See e.g.,* '578 Patent, Col. 4:8-10; '385 Patent, Col. 4:5-12; '498 Patent, Col. 4:16-21)

In both the Court's 2003 construction in this case and its 2005 construction in the *Regents* case, the Court construed "wire" as a "length of metal." These definitions recognize that the ordinary and customary meaning attributed to "wire" is that it is a strand of metal. *See* WEBSTER'S NEW TWENTIETH CENTURY DICTIONARY, 2098 (2d ed.1983). Nothing in the specification, including the claims, indicates explicitly or implicitly, that the inventors intended to impart a novel meaning to the composition of "wire."

Accordingly, the Court adopts substantially the same definition of wire as was used in the *Regents* case. As used in Claims 7, 8, 10, 13, 15, 16, 17, 19, 22, 32, 35, and 38 of the '385 Patent and Claims 1, 3, 7, 9, and 10 of the '498 Patent, the term **"wire"** means: **a thin, flexible, continuous length of metal, usually of circular cross-section that collectively includes both a wire which has a detachable tip and simply a wire without distinct detachable tip structure. The language of each claim enumerated must be examined to determine if the wire which is claimed includes or does not include a detachable tip structure. Unless otherwise ordered, the words "wire" and "guidewire" are synonymous, in the enumerated Claims.**

2. Infringement Analysis

The Court proceeds to examine whether Defendant's DCS infringes the "wire" limitation of Claim 7 FN7 of the ' 385 Patent.FN8 Applying the above construction to Claim 7, it is clear from the language of the Claim that the inventors used the word "wire" to mean: a thin, flexible, continuous length of metal, usually of circular cross-section **without** a distinct detachable tip structure.FN9

FN7. With respect to the "distal tip" limitation of Claim 7, Defendant does not dispute that the accused DCS device infringes that limitation.

FN8. The Court defers consideration of whether the "wire" limitation of the other asserted Claims is infringed

FN9. The inclusion of a detachable tip in the definition of "wire" in the first paragraph of Claim 7 would render redundant the "detachable elongate distal tip" limitation contained in paragraph 2.

a. Literal Infringement of "wire" Limitation

A finding of literal infringement requires that the asserted claims, as properly construed, cover or read on the accused device. Morton Int'l Inc. v. Cardinal Chem. Co., 5 F.3d 1464, 1468 (Fed.Cir.1993). A claim reads on an accused device only if the device embodies every limitation of the claim. Carroll Touch, Inc. v. Electro Mechanical Sys., Inc., 15 F.3d 1573 (Fed.Cir.1993). For literal infringement, each limitation must read on an element of the accused device exactly; any deviation will preclude a finding of literal infringement. Lantech, Inc. v. Keip Mach. Co., 32 F.3d 542, 547 (Fed.Cir.1994).

In its October 8, 2003 Order, the Court found a lack of support in the specification for Plaintiffs' argument

that the term "wire" should be defined to include a hollow object. (CC Order at 9.) Therefore, the Court did not adopt a definition of "wire" that would describe a "wire" as "sometimes being hollow" in its construction. (*Id*.) The accused Cordis DCS contains a "hollow delivery tube" that functions as a guidewire.FN10 (Jones Decl. para.para. 4, 22.) Since the accused DCS delivery tube is hollow, the "wire" limitation does not read on the delivery tube exactly and without deviation.

FN10. The '385 and '498 Patents both note in their specifications that "[t]he term 'wire' should be understood to collectively include both guidewires and tips and simply wires without distinct tip structures." (*See, e.g.,* '385 Patent, Col. 4:5-12.)

Accordingly, the Court finds that Defendant's DCS does not literally infringe the "wire" limitation of Claim 7 of the '385 Patent.

b. Infringement of "wire" Limitation Under Doctrine of Equivalents

The doctrine of equivalents prevents "fraud on the patent," which is when an accused infringer appropriates the benefit of the invention by making insubstantial changes that avoid the literal scope of the claims. EMI Group North America, Inc. v. Intel Corp., 157 F.3d 887, 896 (Fed.Cir.1998.) The doctrine recognizes the constraints of patent claims by allowing a patentee to find infringement against such a substantially equivalent invention. *Id*.

In this case, there are three issues raised by doctrine of equivalents analysis: (a) whether the DCS delivery tube is substantially equivalent to a "wire," (b) whether DCS delivery tube may still infringe under the doctrine of equivalents even if it performs an additional function, and (b) whether a finding of equivalence would vitiate the meaning of "wire" in light of the Court's construction of the claim term.

i. substantial equivalence

Defendant contends that its delivery tube does not infringe the "wire" limitation under the doctrine of equivalents because it is not substantially equivalent to a "wire." (Defendant's SB at 4.)

For an element of an accused device to be substantially equivalent to a claim limitation, it must not substantially change the way in which the function of the claimed invention is performed. Wolverine World Wide, Inc. v. Nike, Inc., 38 F.3d 1192, 1196 (1994). A patentee may prove substantial equivalence by showing that an element of the accused device "performs substantially the same function in substantially the same way to obtain the same result" as the claim limitation. *Id.;* Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 608, 70 S.Ct. 854, 94 L.Ed. 1097 (1950). This test, called the function-way-result test, forms the baseline for analysis of equivalence because "if two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form or shape." *Id*.

The primary **function** of the "wire" limitation of Claim 7 of the '385 Patent is to act as a "pusher," of the distal tip, which is coupled to it. The **way** it performs that function is through its flexibility and trackability when used in the vascular system of the body. The **result** is delivery and accurate placement of the attached tip at or in the intended site in the body.

The function of the "wire" is confirmed by the specification, which states that the wire is for "disposing the

[distal portion] into the vascular cavity." ('385 Patent, Col. 4:47-52.) Plaintiffs' expert also notes in his declaration that the "wire" functions as a pusher because it is "a structure used to push an implant through a catheter and position it at [the] desired occlusion site." (Declaration of Dr. Charles Strother in Support of Plaintiffs' Motion for Reconsideration para. 16, hereafter, "Strother Decl.," Docket Item No. 319.)

Defendant does not dispute that one of the primary functions of the accused DCS device is to act as a "pusher." Rather, Defendant represented to the Food and Drug Administration ("FDA") that the DCS delivery tube has the "combined functionality of a guidewire and a mini infusion microcatheter" and that its "pushability and trackability" are comparable to that of a guidewire. FN11 (Kessel Decl., Ex. 6 at CNV 0034626; Jones Decl., Ex. 4 at CNV 0034442.) Further, in a statement to the FDA regarding the "delivery system" of the DCS, Defendant notes that the delivery tube is designed to function in the same way as a wire.FN12 Thus, the DCS performs its function as a pusher by mimicking the flexibility and trackability of a "wire" and the intended result is identical to that of the patented invention, delivery and accurate positioning of a distal tip to which it is coupled.

FN11. The specifications of the '385 Patent specifically notes "[t]he term 'wire' should be understood to collectively include ... guidewires." ('385 Patent, Col. 4:5-12.)

FN12. Defendant stated that the DCS device "was designed to mimic the coil pushing performance of Target's GDC delivery wire" (Kessel Decl., Ex. 5 at CNV 0034462) and that "[b]oth DCS and GDC utilize a stiff proximal section for excellent pushability and kink resistence," and "a flexible distal section for excellent trackability in tortuous anotomy." Id. Although infringement may not be based on a product-to-product comparison, reliance on Defendant's statement about the functionality of its device as a "wire" is proper.

ii. additional functionality

Defendant contends that its delivery tube does not infringe the "wire" limitation under the doctrine of equivalents because an additional essential function of the "wire" is to "transmit force or energy" to the implant. (Defendant's SB at 2; Supplemental Declaration of John M. Collins in Support of Defendant Cordis' Motion for Summary Judgment of Noninfringement para. 12-14, Docket Item No. 643.) Defendant contends that the DCS delivery tube performs this function in a substantially different way from a "wire." (Defendant's SB at 6.)

First, Claim 7 does not disclose a function of the "wire" with respect to detachment. Although that function might be relevant to other patent claims, at most, the "transmission of force or energy" is an additional function performed by the DCS device. "Infringement under the doctrine [of equivalents] does not vanish merely because the accused device performs functions in addition to those performed by the claimed device." Miles Laboratories, Inc. v. Shandon Inc., 997 F.2d 870, 877 (Fed.Cir.1993). If a defendant has appropriated the material features of the patent, infringement will be found even when those features have been supplemented and modified so as to constitute an improvement. *See* Atlas Powder Co. v. E.I. du Pont De Nemours & Co., 750 F.2d 1569, 1579 (Fed.Cir.1984); Ryco, Inc. v. Ag-Bag Corp., 857 F.2d 1418, 1427 (Fed.Cir.1988).

Second, to the extent the specification discloses a function of the "wire" with respect to detachment, there is

no support in the specification for Defendant's description of that function, i.e., "transmission of force or energy." Claim 7 does contain a limitation that the "distal tip" must be "detachable." Even if a requirement that a tip be detachable is inherent, the Claim does not limit "detachable" in any way which would require the wire to function to "transmit force or energy." Nor is there any disclosure in the specification of a requirement that the "wire" transmit force or energy. FN13 Thus, the Court need not analyze whether the DCS functions in the same way as a "wire" to transmit force or energy.

FN13. Only one embodiment of the invention is accomplished by the wire transmitting force or energy: the embodiment employing an electrolytic detachment mechanism. The '385 and '498 Patents also disclose mechanical detachment.

If the Court were to regard a **function** of the "wire" limitation in Claim 7 as facilitating detachment, the **way** it must be regarded as doing so is by "mechanical or electrical detachment." FN14 The **result** is to accurately place the implant in the body cavity. Defendant's delivery tube performs substantially the **same function,** by similarly facilitating detachment. It accomplishes detachment substantially the **same way** because it uses mechanical detachment. Mechanical force is applied by expanding the gripper, which builds pressure within the delivery tube and reduces the friction holding the coil in place. (Kessel Decl., Ex. 5 at CNV 0034464, Ex. 6 at CNV 00344628; Jones Decl. para. 5.) While the DCS creates this force hydraulically using fluid inside its delivery tube, the combination of more than one element or step to perform a single function does not avoid infringement under the doctrine of equivalents. The accused DCS device achieves the **same result** as the "wire," namely detachment of the implant. The DCS's hydraulic mechanism of detachment may constitute an improvement on Claim 7 of the ' 385 Patent; however, the improvement does not dispel infringement under the doctrine of equivalents.

FN14. A requirement of "mechanical" detachment means that force or energy is involved. However, there is no disclosure that mechanical force or energy must be transmitted by the "wire."

Accordingly, the Court finds that Defendant's contention regarding additional functionality does not overcome the substantial equivalency of the DCS delivery tube and the "wire" limitation of Claim 7 of the '385 Patent.

iii. vitiation of a claim limitation

Defendant contends that a finding that its hollow delivery tube device infringes the "wire" limitation of Claim 7 is impermissible because non-hollowness is an express structural limitation of a "wire." (Defendant's SB at 8.)

The doctrine of equivalents may not be used to vitiate an express structural claim limitation. Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573, 1582 (Fed.Cir.1996). In this case, the Court was asked previously to consider whether the inventors used "wire" in a manner which included "hollow" objects. In its October 8, 2003 Order, the Court found a lack of support in the specification that the inventor used the term "wire" to include a hollow object. (CC Order at 9.) However, in its claim construction, the Court did not state a determination that by "wire" the inventors meant a "solid" or "non-hollow" strand of metal. Under the doctrine prohibiting claim vitiation, the Court must find that the doctrine of equivalents is being used to ignore a feature missing from the accused product which the claim, when properly interpreted,

expressly requires to be present as an essential feature of the patented device. Thus, for the doctrine of claim vitiation to preclude use of the doctrine of equivalents to cover Defendant's hollow delivery tube, the Court must construe the claim to require, as an express limitation, a solid or non-hollow "wire." One of ordinary skill in the art must also have understood that a solid or non-hollow "wire" would have been necessary for the invention to achieve its essential function or to avoid the prior art. Therefore, the Court's previous finding of lack of support for the inventors' use of "wire" to mean a non-hollow object is not a finding that a non-hollow structure is essential to perform the function of "wire" of the invention.

Defendant relies on *Hoganas AB v. Dresser Industries, Inc.* for the proposition that a court may infer a claim limitation from the specification and then find that the limitation would be vitiated by improper reliance on the doctrine of equivalents. 9 F.3d 948 (Fed.Cir.1993). In *Hoganas,* the Federal Circuit construed "straw-shaped" as a necessarily being a "hollow" shape. Id. at 951. The Federal Circuit found this interpretation was consistent with the specification because it would, for example, permit the escape of steam, a feature that was relevant to the invention in *Hoganas. Id.* The Federal Circuit then affirmed a finding of non-infringement under the doctrine equivalents. *Id.* at 955. It did so, in part, because "[a] conclusion that a solid fiber is equivalent to a hollow 'straw-shaped' element would eviscerate the plain meaning of that phrase." *Id.* However, the Federal Circuit also made findings that prosecution history estoppel applied, and that the accused device did not function in the same way as the "straw-shaped" limitation.

This case is distinguishable from *Hoganas.* First, there is no issue of prosecution history estoppel. Second, the Court finds that the DCS delivery tube functions in a substantially similar way to a "wire." Finally, the specifications and the claims of the '385 and '498 Patents make no mention of a requirement for a solid or non-hollow "wire."

In sum, the Court finds that the DCS delivery tube: (1) performs substantially the same function as a "wire" because it allows delivery and accurate positioning of a distal portion at a desired location within the body; (2) performs that function in substantially the same way as a "wire" because it mimics the "pushability" and "trackability" of a guidewire or delivery wire; and (3) accomplishes the same result as a "wire" because it allows for placement of the distal portion so as to form an occlusion in a body cavity. (Strother Decl. para. 12.)

Accordingly, Plaintiffs are entitled to partial summary judgment that the accused DCS device infringes Claim 7 of the '385 Patent under the doctrine of equivalents.

B. *Claim 15 of the* '385 Patent

Claim 15 states:

In an apparatus having **a wire for forming an occlusion** in a body cavity having a fluid flowing therein, the improvement comprising:

a deformable object temporally coupled to said wire for disposition into said cavity having no preferred geometric form when disposed into said cavity, said deformable object substantially impeding movement of said fluid in said cavity to thereby form said occlusion, whereby said cavity is occluded by said object.

Claim 15 is written in a "Jepson" format. A Jepson format is one in which the preamble describes prior art and then claims an "improvement" over the prior art. Dow Chemical Co. v. Sumitomo Chemical Co., 257

F.3d 1364, 1368 (Fed.Cir.2001). When a Jepson format is used, the preamble is a limitation because it defines, in part, structural limitations of the claimed invention. *See* Epcon Gas Sys., Inc. v. Bauer Compressors, Inc., 279 F.3d 1022, 1029 (Fed.Cir.2002).

The preamble to Jepson-type Claim 15 recites a "wire" as a structural limitation and recites a functional limitation of the "wire," i.e., "for forming an occlusion." Thus, the construction of the word "wire" as used in Claim 15 must include a capability of the "wire" itself to "form" an occlusion. The Court's construction of the word "wire" allows the "wire" to perform this function if the Court applies the construction which includes the tip. However, the body of the claim introduces an ambiguity. The Claim recites "a deformable object temporally coupled to said wire for disposition into said cavity." The structure that meets this limitation is also the distal tip. Thus, Claim 15 is arguably ambiguous in that it discloses coupling a tip (deformable object) to a wire which already has a tip. The Court defers further consideration of Claim 15, pending any further proceedings that the parties may wish to initiate with respect to the arguable ambiguity.

C. *Claim 38 of the* '385 Patent

1. Construction of Claim 38

The motions with respect to Claim 38 of the '385 Patent require construction of the phrases: "a deformable object;" "having no preferred geometric form when disposed into said cavity;" and "capable of being multiply folded upon itself."

Claim 38 of the '385 Patent provides:

In a method for forming an occlusion in a body cavity having a fluid flowing therein by disposing a wire at least adjacent to said body cavity, the improvement comprising:

disposing **a deformable object** into said cavity having **no preferred geometric form** when disposed into said cavity, said deformable object **capable of being multiply folded upon itself,** said deformable object substantially impeding movement of said fluid in said cavity to thereby form said occlusion, whereby said cavity is occluded by said object.

All of the highlighted phrases are limitations on the "object" which must be used to practice the claimed method. Two of these phrases has been previously construed by the Court.

a. "a deformable object"

In its October 7, 2003 Order, the Court construed the word deformable as follows:

The Court construes "deformable object" to mean "an object that can assume a different shape or form." This is the plain and ordinary meaning of the disputed terms.

(CC Order at 19.) In the written description, the inventors discuss the phrase "a deformable object" in the context of a description of an embodiment and depict in Figure 1 of the drawings a "coil" which is "easily deformed:"

Although prebiased to form a cylindrical or conical envelope, secondary coil 28 is extremely soft and its overall shape is **easily deformed.** When inserted within the microcatheter (not shown), secondary coil 28 is

easily straightened to lie axially within the microcatheter. Once disposed out of the tip of the microcatheter, secondary coil 28 **forms the shape shown in FIG. 1 and may similarly be loosely deformed** to the interior shape of the aneurysm.

('385 Patent, Col. 7:54-61.)

Upon reconsideration, the Court finds nothing in the specification, including the claims, which indicates explicitly or implicitly that the inventors intended to impart a novel meaning to "deformable." The record contains no evidence that "deformable" has a peculiar meaning in the field of art encompassed by the '385 Patent. The Court concludes that the meaning which would have been attributed to this word by those of ordinary skill in the relevant art at the time of invention is its ordinary and customary meaning.

The ordinary and customary meaning attributed to "deformable" is capable of being changed in shape as by pressure or stress. *See* WEBSTER'S NEW TWENTIETH CENTURY DICTIONARY, 477 (2d ed.1983). In its previous construction, the Court included the ability to changed in "form." The Court withdraws that word from its construction and now adopts a construction of **"a deformable object"** as: **a flexible object, which is capable of assuming a different shape.**

b. "having no preferred geometric form when disposed into said cavity"

The phrase "having no preferred geometric form when disposed into said cavity" has not been previously construed by the Court. There are several aspects of the phrase which require consideration.

First, the plain and ordinary meaning of the word "geometric" is to have a regular form according to the rules or principles of geometry. *See* WEBSTER'S NEW TWENTIETH CENTURY DICTIONARY, 765 (2d ed.1983). Nothing in the specification indicates that the inventors intended any specialized meaning of "geometric." Therefore, the Court uses the ordinary and customary meaning in its construction of the subject phrase. Second, with respect to the phrase "no preferred geometric form," it is clear that the inventors intended to impose a negative limitation, i.e., that a feature (a preferred geometric form when disposed into said cavity) *not* be present in the "object."

The word "preferred" is a commonly used word, with a variety of meanings depending upon the context in which it is used, among which are: to set above something else in one's liking, opinion, etc.; to hold in greater esteem; to incline toward. *See* WEBSTER'S NEW TWENTIETH CENTURY DICTIONARY, 1419 (2d ed.1983). Closely analogous words are: predilection, inclination, predispostion, and bias. Further, a "preference" connotes someone making a choice of one thing over another. The issue becomes whether, in the method disclosed in Claim '385, the phrase "no preferred" refers to the lack of preferences of the practitioner of the method, or whether the phrase refers to a characteristic of the "object" being used to perform the method.

The Court questions the permissibility of a claim limitation that relies on the subjective preference of a person who is performing a method. However, assuming for sake of analysis that it is permissible to disclose as a claim limitation that a device *not have* a user's preferred "geometric form when disposed," the patent documents must clearly indicate from among which group of alternative forms the absence must be judged, otherwise the claim is arguably indefinite. The specification does not teach what preferred geometric form a practitioner might *not* prefer when the implant is disposed in a cavity. Therefore, the Court declines to adopt a practitioner-based definition of "no preferred geometric form when disposed" because it would make the

claim ambiguous and therefore arguably indefinite.

In addition, the phrase "preferred geometric form" or its opposite could be used to describe an innate characteristic of an object. In this context, "preferred geometric form when disposed" would be a description of an object having and exhibiting a predetermined or an innate physical shape when deployed. The shape would be "preferred" in the sense that the object would have been fabricated in a fashion to exhibit a particular geometric shape and the object retains and exhibits that shape after it has been deployed unless force is applied to deform the object from its "preferred" geometric shape. Depending on the amount of force applied, even while the device is being subjected to force, it may retain its preferred geometric form and may "attempt" to assume its pre-deformed shape.FN15 In the same context, an object having "no preferred geometric form when disposed" would be one which exhibited no innate physical shape when deployed. The Court examines the specification of the ' 385 Patent for any discussion of "no preferred geometric form when disposed in [a] cavity" and the function of that limitation.

FN15. For example, one commonly understood device which has a preferred geometric form is a spring. A spring is commonly understood to be a device such as a length of metal that returns to its original form after being forced out of shape. *See* WEBSTER'S NEW TWENTIETH CENTURY DICTIONARY, 1760 (2d ed.1983). Thus, a spring-loaded hinge contains a circular coil of wire which may be in a relaxed state while the door is closed. When the door is pushed opened, the geometric form permits the spring to absorb the force and store energy by tightening its coils. When the door-opening force is released, the geometric coil structure of the spring causes it to return to its original state, closing the door in the process

The hypothetical spring device highlights the importance of defining the function which the device performs or *must not perform* when construing the limitation "no preferred geometric form when disposed in [a] cavity."
In the specification, the inventors do not use the phrase "no preferred geometric form when disposed in [a] cavity." However, there is discussion of the function of the deformability and conformability of occlusive coils. In their description of prior art, the inventors criticize balloon embolization because the method requires the cavity to conform to the shape of the balloon. The inventors' state that an **ideal device** is one which adapted itself to the irregular shape of the cavity:

Furthermore, **an ideal embolizing agent should adapt itself to the irregular shape of the internal walls of the** aneurysm**.** On the contrary, in a balloon embolization the aneurysmal wall must conform to the shape of the balloon. This may not lead to a satisfactory result and further increases the risk of rupture.

('385 Patent, Col. 2:5-10.) Thus, one of skill in the art would have understood that one of the reasons the inventors would include a limitation of "no preferred geometric form when disposed" would be to have an occlusive implant which adapts itself to the irregular shape of the internal walls of the body cavity as opposed to one which applies force to the internal walls of the cavity and reshapes the cavity to a preferred geometric shape of the implant.

The inventors did not use the phrase "geometric form" in the specification to describe an embodiment of an occlusive object. However, as noted above, the inventors do discuss an occlusive coil which is prebiased to form "a cylindrical or conical envelop," but when deployed deforms to the interior shape of the aneurysm:

Although **prebiased to form a cylindrical or conical envelope,** secondary coil 28 is extremely soft and its overall shape is easily deformed. When inserted within the microcatheter (not shown), secondary coil 28 is

easily straightened to lie axially within the microcatheter. Once disposed out of the tip of the microcatheter, secondary coil 28 forms the shape shown in FIG. 1 and may similarly **be loosely deformed to the interior shape of the** aneurysm**.**

('385 Patent, Col. 7:54-61.) One of skill in the art would have understood that the inventors are describing a coil embodiment of an occlusive implant which, before deployment, might exhibit a pre-biased geometric form, namely a cylindrical or conical envelop. However, the coil embodiment would easily straighten when inserted into and while being moved through a microcatheter. As the coil is disposed out of the tip of the microcatheter, initially it would assume its pre-biased cylindrical or conical shape. However, similarly to the way it would straighten to conform itself to the shape of the microcatheter, as it encounters the walls of the aneurysm, the coil embodiment would loosely deform itself from its pre-biased geometric envelop to instead assume a shape based on the interior walls of the aneurysm.

In every apparatus claim of the '385 Patent which describes an occlusive tip and in every method claim in which a tip was used, the inventors state that the tip is "relaxed," with "no memory of a predisposed shape" other than a "simple helical" (conical) shape.FN16 Thus, one of skill in the art would have understood that the inventors used the phrase "no preferred geometric form" to mean that when the "object" (tip) is deployed into the body cavity it assumes a shape based on the shape of the cavity and its deployed shape is not a geometric pattern which has been deliberately manufactured into it.

FN16. *See e.g.,* Claim 1: "... wherein said separable distal tip section has **no memory of its predisposed shape other than at most a relaxed simple helical shape ...;"**

Claim 14: "said elongate tip portion being **a relaxed coil** having **no substantial memory of its predisposed shape other than at most a relaxed simple helical shape ...;"**

Claim 24: "a detachable elongate distal tip portion coupled to and extending from said wire for a predetermined lineal extent, said detachable elongate distal tip portion being adapted to being packed into said body cavity to form said occlusion in said body cavity, said elongate distal tip portion including a first flexible, **shapeless segment having substantially no memory of its predisposition shape other than at most a relaxed, simple helical shape** for disposition into said cavity and a second segment for coupling said first segment to said wire, said second segment being adapted to be electrolyzed upon application of current ..."

Claim 24: "A **method for forming an occlusion** within a body cavity having fluid disposed therein comprising the steps of ... disposing a relaxed wire into said body cavity, said relaxed wire having **no substantial memory of its predisposed shape other than at most a relaxed, simple helical shape ..."** Therefore, the Court construes the term **"a deformable object ... having no preferred geometric form when disposed into said cavity"** to mean: **a flexible object, which is capable of deforming itself, and which does not exhibit a predetermined regular shape when placed into the cavity.**

c. "capable of being multiply folded upon itself"

In its August 21, 2006 Order, the Court construed the subject phrase as follows:

The Court construes (i) "capable of being multiply folded upon itself" to mean "capable of being folded upon itself more than one time."

The Court maintains that construction in this case.

2. Infringement Analysis

Having now construed Claim 38, the Court proceeds to consider the proffered evidence with respect to infringement of Claim 38 by the accused DCS coil.

Defendant presents declaration testimony of Donald Jones, a principle engineer employed by Defendant. Jones testified that the DCS coil is "prebiased" to take a "preferred geometric form" when it is deployed in a body cavity. (Declaration of Donald K. Jones in Support of Defendant's Supplemental Brief para. 4, Docket Item No. 644.) However, the declaration also states that at times, "the DCS coils may not be able to assume completely their prebiased shape or form." (Id.) This ambiguity is further obscured by Defendant's "Product Information Portfolio," which notes that its coils "thanks to their softness and shape offer an excellent conformability to the aneurysm shape." (*See* Declaration of Roland H. Schwillinski in Support of Plaintiffs' Reply in Further Support of Its Motion for Summary Judgment, Ex. 1 at CNV 0050874, Docket Item No. 393.)

Plaintiffs contend that Jones' declaration testimony is also contradicted by his own admission when he was deposed as the Defendant's Rule 30(b)(6) witness. (Plaintiffs' Further Reply Brief in Support of Motion for Summary Judgment at 7, Docket Item No. 654.) While Mr. Jones stated that "the coils themselves take a random path" to give a three dimensional shape, he also noted that the coil "is shaped in a fashion that gives it a predetermined shape." (Kessel Decl., Ex. 11 at 145.) Thus, it remains unclear whether the DCS coil has a preferred geometric form when disposed inside a body cavity.

Accordingly, the Court finds that, without more, there is a triable issue of fact as to whether the DCS coil infringes the "no preferred geometric form" limitation of Claim 38 of the '385 Patent. Since the Court has construed Claim 38 in this Order, this construction was not considered by the parties' experts. The parties are invited, if they wish, to renew their motions with respect to Claim 38 with supplemental declarations from their respective experts.

V. CONCLUSION

The Court DENIES Defendant's Motion for Summary Judgment.

The Court GRANTS Plaintiffs' Motion for Summary Judgment that Defendant infringes Claim 7 of the '385 Patent under the doctrine of equivalents.

Pending further proceedings based upon this Order, the Court DENIES, without prejudice to being renewed Plaintiffs' Motion for Summary Judgment that Defendant infringes Claims 15, 16, 17, 19, 22, and 38 of the '385 Patent.

The Court DEFERS ruling at this time on Motions addressed to Claims 8, 10, 13, 32, and 35 of the '385 Patent and Claims 1, 3, 7, 9, and 10 of the '498 Patent. The Court invites the parties to make a separate motion addressed to these Claims in light of this Order.

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