UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WISCONSIN

ACANTHA LLC,

Plaintiff,

v. Case No. 15-C-1257

DEPUY ORTHOPAEDICS INC., et al.,

Defendants.

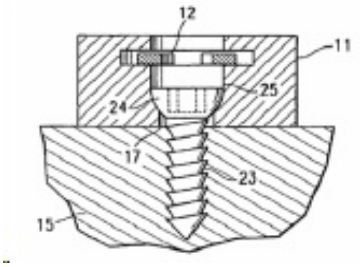
DECISION AND ORDER GRANTING DEFENDANTS' MOTIONS FOR PARTIAL SUMMARY JUDGMENT ON INFRINGEMENT

In this action for patent infringement, Plaintiff Acantha LLC accuses Defendants DePuy Synthes Sales, Inc., DePuy Synthes Products Inc., DePuy Synthes Inc., Johnson & Johnson Inc., Synthes Inc., Synthes USA LLC, DePuy Orthopaedics Inc., and DePuy Spine LLC of infringing its patent, U.S. Reissued Patent No. RE43,008 (the '008 Patent). Presently before the court is Defendants' motions for partial summary judgment of no direct infringement by the accused Vectra products and accused Zero-P VA product and for partial summary judgment of noninfringement by the accused Zero-P VA product. For the following reasons, Defendants' motions will be granted.

BACKGROUND

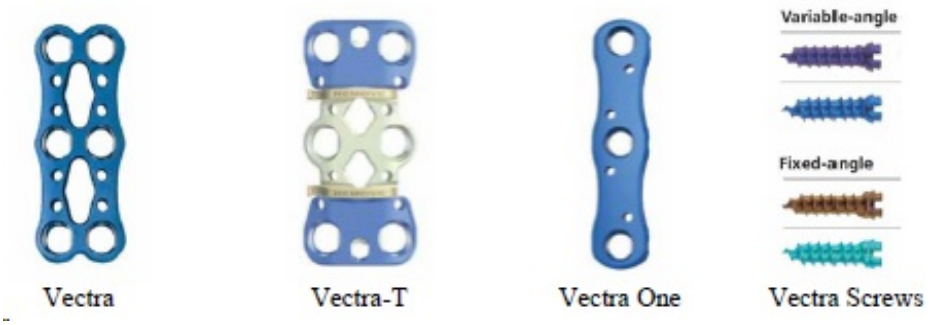
The '008 Patent, entitled "Orthopedic Implant Assembly," issued on December 6, 2011. The claimed invention generally relates to orthopedic implants used for joining bone segments, for instance, in the treatment of broken bones, spinal disorders, or the fusion of vertebrae following the removal of a spinal disk. Defs.' Proposed Findings of Fact No Direct Infringement (DPFOFNDI) ¶¶ 1–2, ECF No. 149. The asserted claims are directed to an orthopedic implant that includes a

stabilizing member (such as a bone plate) with at least one hole through the plate, a securing member (such as a bone screw), and a stopping member (such as a snap-ring or integral collar) that sits in a groove in the bore and prevents the screw from backing out of the assembly:

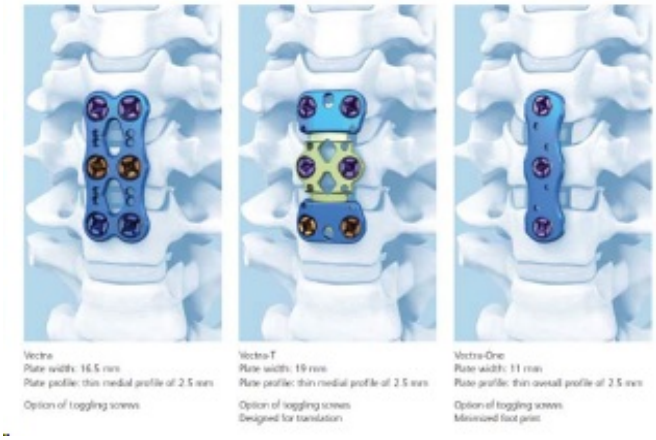


'008 Patent at 2, ECF No. 1-3. As the screw is inserted through the bore, the screw expands the snap-ring into the groove as the screw advances. Once the head of the screw passes through the snap-ring, the snap-ring elastically returns to its original shape. The snap-ring then prevents the screw from backing out of the assembly. DPFOFNDI ¶ 6. This orthopedic implant assembly can be durably attached to a patient's bone and prevents a screw from loosening or backing out of the bone.

Acantha asserts claims 3, 9, 21, 36, 37, 59, 63, 72, 79, and 85 of the '008 Patent and contends that the accused Vectra products infringe all of the asserted claims and that the accused Zero-P VA products infringe claims 21, 36, 37, 59, 63, 79, and 85 of the '008 Patent. *Id.* ¶¶ 7–8. The Vectra line consists of three different anterior cervical plating (ACP) products—Vectra, Vectra-T, and Vectra-One—that are distinguishable by their plates. Each product in the Vectra family contains an anterior cervical plate, which is to be used with various Vectra screws. The screws for the Vectra products are provided separately from the plates.

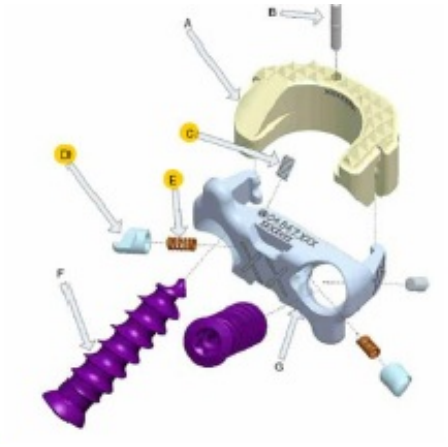


Defs.' Mem. in Support of Mot. for Partial Summ. J. of No Direct Infringement at 8, ECF No. 148. A surgeon attaches the plate and screw to the surface of a vertebrae of the cervical spine. DPFOFNDI ¶ 9. The Vectra designs cover two intervertebral disc spaces, as shown below.



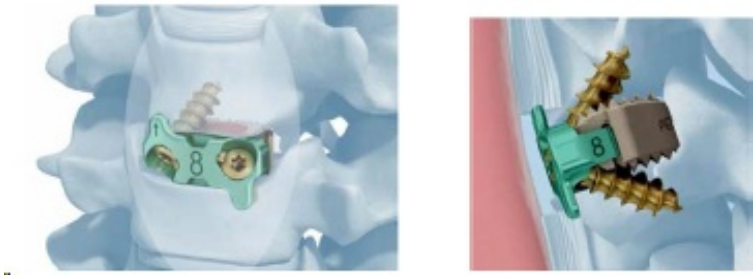
Defs.' Mem. in Support of Mot. for Partial Summ. J. of Noninfringement at 9, ECF No. 152.

The Zero-P VA is part of the Zero-P family of products. Unlike the Vectra products, the Zero-P VA is a standalone intervertebral product to be used in the anterior cervical spine, consisting of a spacer, a plate portion, and bone screws. The Zero-P VA includes a spring-loaded "snapper" mechanism designed to prevent screw back out. The snapper mechanism consists of a cylindrical catch (or pin), a spring, and a set screw.



Subcomponent	
A	Spacer
B	Radiopaque marker
C	Lock-screw (2)
D	Catch (2)
E	Spring (2)
F	Bone screw (2)
G	Interbody Plate

Id. at 12; Defs.' Proposed Findings of Fact Noninfringement (DPFOFN) ¶ 11, ECF No. 153. During implantation, rather than place the product on the surface of the anterior cervical spine, the surgeon inserts the spacer/plate portion of the Zero-P VA into an intervertebral disc space. The Zero-P VA's contralateral stops rest on the surface of the spine. *Id.* In the snapper mechanism's resting state, the spring applies a force on the catch, which positions a portion of the catch in the path of the bone screw. *Id.* ¶ 12. As the bone screw is inserted into the plate, the screw hits the catch and pushes it further into the plate portion, compressing the spring. *Id.* ¶ 14. After the screw passes the protruding portion of the catch, the spring pushes the catch outward into its original position. *Id.* ¶ 15. The catch prevents the screw from backing out of the bone. *Id.*



Defs.' Mem. in Support of Mot. for Partial Summ. J. of Noninfringement at 10, ECF No. 152.

Because both the Vectra and Zero-P VA products are compatible with various screw types, the stabilizing member and screws are separately packaged. Prior to surgery, a variety of plates and screws are removed from their packaging and placed on a tray for the surgeon to choose which product to use. DPFOFNDI ¶ 11. After the surgery, the hospital submits an invoice for the components that were actually used by the surgeon. *Id.*

LEGAL STANDARD

Summary judgment is appropriate when the moving party shows 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(a). All reasonable inferences are construed in favor of the nonmoving party. *Foley v. City of Lafayette*, 359 F.3d 925, 928 (7th Cir. 2004). The party opposing the motion for summary judgment must "submit evidentiary materials that set forth specific facts showing that there is a genuine issue for trial." *Siegel v. Shell Oil Co.*, 612 F.3d 932, 937 (7th Cir. 2010) (citations omitted). "The nonmoving party must do more than simply show that there is some metaphysical doubt as to the material facts." *Id.* Summary judgment is properly entered against a party "who fails to make a showing sufficient to establish the existence of an element essential to the party's case, and on which that party will bear the burden of proof at trial." *Parent v. Home Depot U.S.A., Inc.*, 694 F.3d 919, 922 (7th Cir. 2012) (internal quotations omitted).

ANALYSIS

I. No direct infringement by the accused Vectra and Zero-P VA products

Defendants argue the accused Vectra and Zero-P VA products do not directly infringe claims 3, 9, 59, 63, 72, 79, and 85, which are directed to an orthopedic implant "assembly." Defs.' Mem. in Support of Mot. for Partial Summ. J. of No Direct Infringement at 11, ECF No. 148. Direct

infringement occurs when the infringer "without authority makes, uses, offers to sell, or sells" a patented product or process within the United States. 35 U.S.C. § 271(a). "To prove direct infringement, the plaintiff must establish by a preponderance of the evidence that one or more claims of the patent read on the accused device literally or under the doctrine of equivalents." *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1310 (Fed. Cir. 2005). "Direct infringement of a method claim requires all steps of the claimed method to be performed by or attributable to a single entity." *LifeNet Health v. LifeCell Corp.*, 837 F.3d 1316, 1325 (Fed. Cir. 2016) (citing *BMC Res., Inc. v. Paymentech, LP*, 498 F.3d 1373, 1379–81 (Fed. Cir. 2007)). A third party's performance of method steps may be attributed to a single entity "(1) where that entity directs or controls others' performance, and (2) where the actors form a joint enterprise." *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015).

Defendants assert that the term "assembly," which appears in the preambles to the asserted claims, is a claim limitation and should be construed to mean "a set of parts that have been combined to form a completed structure." The accused Vectra and Zero-P VA products do not directly infringe any of the asserted claims, Defendants contend, because none of the defendants sell an "assembly" to its customers or attach an "assembly" to the bone of a patient. Acantha asserts "assembly" only appears in the preamble of the claims and is therefore not a claim limitation.

Although preamble language is often treated as nonlimiting, the Federal Circuit has recognized that it is not unusual for courts to "treat preamble language as limiting." *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006). "Whether to treat a preamble as a limitation is a determination 'resolved only on review of the entire[] . . . patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim." *Catalina Marketing*

Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Corning Glass Works v. Sumitomo Electric U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989)). "In general, a preamble limits the invention if it recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim." *Id.* "[W]hen the limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention." *Bicon*, 441 F.3d at 952.

Patents by their very nature are government-approved limited monopolies. But the extent of the right to exclude all others from using the invention "is limited by the definition of [the] invention, as its boundaries are marked by the specifications and claims of the patent." *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436, 456 (1940) (citing *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 510 (1917)); *see also United States v. Masonite Corp.*, 316 U.S. 265, 277 (1942) (Public policy "equally forbids the use of the patent to secure an exclusive right or limited monopoly not granted by the Patent Office." (quoting *Morton Salt Co. v. G. S. Suppiger Co.*, 314 U.S. 488 (1942))). Thus, "courts have no right to enlarge a patent beyond the scope of its claim as allowed by the Patent Office," *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. 274, 278 (1877), and cannot rewrite claims "to give the patentee something different than what [the patentee] has set forth." *Tex. Instruments, Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1171 (Fed. Cir. 1993); *see also Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1383 (Fed. Cir. 2008) ("Courts do not rewrite claims; instead, we give effect to the terms chosen by the patentee."). With these considerations in mind, the court will now turn to the '008 Patent.

In this case, the use of the term "assembly" in the '008 Patent is not merely limited to describing the purpose or intended use of the invention; it recites essential elements of the invention pertaining to its structure. By way of illustration, Claim 1 reads:

> An orthopedic implant assembly, comprising
>
> a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
>
> b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration; and
>
> c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element.

'008 Patent col. 7 ll. 61–67, col. 8 ll. 1–14. The preamble, not the claimed elements in the body of the claim, discloses the structure of the invention and gives "life, meaning, and vitality" to the claims. *Catalina*, 289 F.3d at 808. To make sense of the body of the claim, all three elements of the orthopedic implant assembly—the stabilizing element, the stopping member, and the securing element— must be assembled to meet the limitations of the claim. For instance, Claim 1 describes "the head [of a securing element that] is retained within the transverse passageway." '008 Patent col. 8 ll. 5–14. This limitation requires that the securing element be more than merely capable of being retained within the transverse passageway; it necessitates a securing element that *is* retained within the transverse passageway. This limitation is absent until the securing element is put in place and the device is assembled during surgery. In short, the term "assembly" is a claim limitation that requires the set of parts be combined to form a completed structure.

Defendants assert they do not directly infringe the '008 Patent because they do not perform all of the steps of the claim. *See Medgraph, Inc. v. Medtronic, Inc.*, 843 F.3d 942, 948 (Fed. Cir. 2016). That is, Defendants do not combine the stabilizing element, the securing element, and the stopping member to form the completed orthopedic implant assembly. The Federal Circuit's decision in *Cross Medical Products v. Medtronic Sofamor Danek*, 424 F.3d 1293 (Fed. Cir. 2005), is instructive on this point. *Cross Medical* involved an orthopedic surgical implant used to stabilize and align a patient's spine. *Id.* at 1297. The patent described a device comprising, in part, "an anchor seat means which has a lower bone interface operatively joined to said bone segment." *Id.* at 1299. This structural limitation, the Federal Circuit observed, rendered the apparatus complete only when the device came into contact with bone. It would be improper to construe "joined" more broadly to mean that the device was capable of operative joinder to the bone. *Id.* at 1306, 1310. The court found that the alleged infringing activity required the combined actions of the alleged infringer, who manufactured the accused products, and the surgeons, who implanted the device and connected it to the patient's bone. The court refused to attribute the surgeons' acts to the alleged infringer because the surgeons did not act as its agents during the surgery. *Id.* at 1311. Because the surgeons, and not the alleged infringer, performed the final step of the claim by connecting the device to the bone, the court concluded the alleged infringer did not "make" the claimed apparatus and therefore, did not directly infringe. *Id.*

Just as in *Cross Medical*, Acantha's claimed device is not complete until the three elements of the product—the stabilizing element, the stopping member, and the securing element—are assembled. The claim cannot be met until an independent third party, like a surgeon, assembles the accused product to create the completed structure. Because Defendants do not perform all of the

required acts necessary to constitute infringement, Acantha's direct infringement claim fails as a matter of law. In sum, Defendants do not directly infringe claims 3, 9, 59, 63, 72, 79, and 85 of the '008 Patent.

Next, Defendants assert that they do not directly infringe asserted claims 21, 36, and 37 because they do not position a stabilizing element against the surface of a patient's bone, as required by the '008 Patent. For instance, claim 21 requires:

> *A method of attaching an orthopedic implant assembly to a bone of a patient*, comprising
>
> a) *positioning a stabilizing element against a surface of the patient's bone*, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a biased stopping member within the bore and defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration;
>
> b) providing a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element;
>
> c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within the passageway defined by the biased stopping member and thereby displacing the biased stopping member to form the larger diameter configuration passageway defined thereby; and
>
> d) *attaching the stabilizing element to the bone* by advancing the head of the securing element posteriorly of the biased stopping member so that the passageway defined thereby returns to the smaller diameter configuration, to position the head within a posterior section of the transverse passageway between the biased stopping member and the second opening in the stabilizing element, and to *position the body of the securing element within the patient's bone*, so that the securing element is

> attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

'008 Patent col. 9 ll. 24–63 (emphasis added).

Acantha concedes Defendants do not directly infringe on these method claims with respect to the products sold by Defendants because those products are implanted by a surgeon. *See Cross Med.*, 424 F.3d at 1311 (holding that surgical implants that had to be "operatively joined" to a segment of bone could not be directly infringed by the manufacturer because it did "not itself make an apparatus" with the relevant portion already in contact with bone). Instead, Acantha asserts that Defendants directly infringe these claims when they test the accused products. Indeed, testing is a use of an invention that may infringe under § 287(a). *Waymark Corp. v. Porta Sys. Corp.*, 245 F.3d 1364, 1366 (Fed. Cir. 2001) (citing *Roche Prods. v. Bolar Pharm. Co.*, 733 F.2d 858, 863 (Fed. Cir. 1984)). Although Defendants test their products, this testing does not directly infringe the '008 Patent because Defendants do not perform all of the steps of the claimed method. Specifically, Defendants do not attach the implant to a *patient's* bone during testing and instead test their products on fake bone or a cadaver. Defs.' Reply Mem. in Support of Mot. for Partial Summ. J. of No Direct Infringement at 17, ECF No. 193. Acantha has not established that Defendants' internal testing meets the more general patient requirements stated in the '008 Patent. Therefore, the court grants summary judgment of no direct infringement of asserted claims 21, 36, and 37 of the '008 Patent. Even though Defendants are not liable for direct infringement of the asserted claims as a matter of law, it remains possible for them to be liable for indirect infringement.

II. Noninfringement by the Zero-P VA products

Defendants assert the Zero-P VA does not infringe the '008 Patent because the Patent does not contemplate an interbody device like the Zero-P VA. "A determination of patent infringement

consists of two steps: (1) the court must first interpret the claim, and (2) it must then compare the properly construed claims to the allegedly infringing device." *Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 905–06 (Fed. Cir. 2005). The accused device must infringe each limitation of the patented device. *Id.* at 906. To support a motion for summary judgment of noninfringement, the movant must show that "on the correct claim construction, no reasonable jury could have found infringement on the undisputed facts or when all reasonable factual inferences are drawn in favor of the patentee." *Network, LLC v. Centraal Corp.*, 242 F.3d 1347, 1353 (Fed. Cir. 2001). Defendants contend the accused Zero-P VA product does not infringe any of the asserted claims for two reasons. First, the accused Zero-P VA does not include a biased stopping member. Second, this product does not include an "anterior surface" or a "posterior surface." The court will address each challenge in turn.

Defendants argue that the Zero-P VA does not infringe any of the asserted claims because it does not include a biased stopping member. Each asserted claim requires a biased stopping member. Although claims 36 and 37 do not explicitly state that the stopping member is biased, Acantha does not dispute that the language of these claims require a biased stopping member. In fact, Acantha's expert, Dr. Barton Sachs, opined that, although claims 36 and 37 "do not use the words 'biased,' the stopping member in claim 36 is defined with descriptive language akin to a biased stopping member, and the descriptive language is fully supported by the written description of the patent." Expert Report of Dr. Barton L. Sachs at 58, ECF No. 159-10. Moreover, as Defendants point out, "[i]f the claims [36 and 37] were not limited as Acantha contends, they would be invalid pursuant to 35 U.S.C. § 112 for lacking written description." Defs.' Mem. in Support of Mot. for

Partial Summ. J. of Noninfringement at 14 n.4, ECF No. 152. Thus, the court will address whether the Zero-P VA contains a "biased stopping member" as required by the asserted claims.

In its decision and order on claim construction, the court construed "stopping member" to mean "[a] mechanical component that prevents the securing element from backing out of the stabilizing member" and "biased" to mean "[t]he tendency of a structure or component to return to a certain position or shape absent external force." ECF No. 64 at 7, 13. Defendants assert that the stopping member in the Zero-P VA is the cylindrical catch of the snapper mechanism. Even though the catch changes position as the screw passes through it, the catch moves back toward its original position only because the once retracted spring forces it back into place. Defendants therefore argue that the catch is not biased because it does not return to its original position "absent external force," or without the spring's force. Acantha first argues that the stopping member is the entire "snapper mechanism," including the cylindrical catch, spring, and set screw.

The specification in the '008 Patent reads that Figure 1 "illustrates one embodiment of the orthopedic implant assembly 10 of the invention, generally including a stabilizing element 11, with a biased stopping member 12 in a bore 13 therein, and a securing element 14, configured for securing a patient's bone 15." '008 Patent col. 4 ll. 16–20. It instructs that the biased stopping member "comprises an annular collar, although a variety of suitable members may be used, as for example, one or more contractible fingers biased to extend into the transverse passageway." *Id.* col. 4 ll. 21–24. In other words, the stopping member is not the entire blocking mechanism but rather the object that extends into the passageway and prevents the screw from backing out of the stabilizing member. This reading is further supported by Acantha's own expert, Dr. Sachs. Although Dr. Sachs noted at one point in his report that it did not matter how the phrase "stopping member" is defined,

ECF No. 159-11 at 42–43, he stated that the stopping member in the Zero-P VA is the finger that protrudes from the cylindrical catch. He observed:

> In the case of the "snapper" mechanism in the Zero-P VA product specifically, I understand that, because of the spring mechanism housed within the sidewall of the bore, the unseen or hidden portions of the snapper assembly have a larger diameter than the "finger" portion that actually protrudes out into the bore. Technically, when a screw passes beneath the finger and the blocking mechanism is engaged, the screw head may sit roughly parallel with, rather than below, a segment of the hidden portion of the assembly.
>
> [M]y opinion is that in the context of this claim limitation, the "stopping member" is properly viewed as the "finger" that actually protrudes into the bore and performs the back-out prevention function, and not the hidden parts of the assembly that do not actually contact the anterior portion of the screw upon backout.

Id. at 36.

Acantha asserts that Dr. Sachs only made this statement in terms of a certain claim limitation, specifically the language in the patent requiring that the head of the screw be retained between "the biased stopping member and the second opening of the stabilizing element." *See* '008 Patent col. 9 ll. 54–59. But the Federal Circuit recognizes the "presumption that the same terms appearing in different portions of the claims should be given the same meaning unless it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims." *PODS, Inc. v. Porta Stor, Inc.*, 484 F.3d 1359, 1366 (Fed. Cir. 2007) (quoting *Fin. Control Sys. Pty Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1318 (Fed. Cir. 2001)). Acantha has not made a clear showing or, for that matter, argued that the phrase "stopping member" was intended to have a different meaning depending upon the context in which it is used. The court concludes, as a matter of law, that the stopping member in the Zero-P VA product is the finger of the cylindrical catch, the component that prevents the screw from backing out of the stabilizing element.

Acantha also argues that, however it is defined, the stopping member is biased. But the catch is not biased because it does not "return to a certain position or shape absent external force." ECF No. 64 at 13. That is, the spring in the snapper mechanism is an external force that pushes the catch back to its original position, as this force is external to the stopping member. In short, the Zero-P VA product does not meet the "biased stopping member" limitation of the '008 Patent.

In addition, the Zero-P VA does not infringe the '008 Patent because it does not have anterior or posterior surfaces. The '008 Patent requires an orthopedic implant assembly that has a stabilizing element with anterior and posterior surfaces. By way of example, Claim 59 reads in pertinent part:

> An orthopedic attachment assembly, comprising:
>
> a) an elongated securing element having an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension;
>
> b) an attachment element which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, and a posterior bore portion, the posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing member with the posterior bore portion; and
>
> c) a biased stopping member which has a posterior stopping surface, a first configuration which extends within the bore that is elastically deformed to a second configuration as the enlarged portion of the securing member passes into the posterior bore portion, the biased stopping member returning to the first configuration upon passage of the enlarged integral portion into the posterior bore portion, the posterior surface of the biased stopping member configured to engage with the anterior surface of the enlarged integral portion of the securing member facilitating retention of the enlarged portion of the securing member within the posterior bore portion of the attachment member.

'008 Patent col. 14 ll. 53–67, col 15 ll. 1–13.

The court previously held that the anterior and posterior limitations carry their plain and ordinary meaning, noting that the specification unequivocally states that "[t]he term posterior should be understood to mean an inner portion of the assembly closer to the bone to which the assembly is attached, and the term anterior should be understood to mean an outer portion of the assembly farther away from the bone." ECF No. 64 at 5 (quoting '008 Patent col. 1 ll. 44–48). The court also clarified that "the patent's use of the terms 'anterior' and 'posterior' in this context is relative, not spatially specific." *Id.*

Unlike the traditional anterior cervical plating systems, which a surgeon attaches to the outer surface of the patient's cervical spine, the Zero-P VA is embedded within the intervertebral disc space, or the space between the bone. Defendants argue that because the Zero-P VA products are inserted between bone structures, rather than affixed to the surface of the bone, the surfaces of the Zero-P VA products that would be defined as anterior or posterior are either equidistant to the bone or the anterior surface is closer to the bone. Therefore, they maintain that the Zero-P VA does not infringe the '008 Patent. Acantha does not dispute that the "anterior surface" is the outer portion of the assembly farther away from the bone and the "posterior surface" is the portion of the assembly closer to the bone. DPFOFN ¶ 22.

To show that the anterior/posterior limitations in the '008 Patent are met, Acantha relies on certain statements from Dr. Sachs' report. In discussing the anterior and posterior limitations in relation to the Zero-P VA product, Dr. Sachs observed:

> Giving these terms their plain and ordinary meaning to a person of ordinary skill in the art, as required by the Court, it is my opinion that the Zero-P VA meets these limitations. The inventors of the '008 patent appear to have used the terms "anterior" and "posterior" merely as a shorthand way of identifying, in a consistent way, the front/back, leading/trailing, inward-/outward-facing surfaces of the claimed

> plate assembly. The shorthand they chose makes sense since the invention is useful in anterior cervical plating, making the terms anterior (front of the neck) and posterior (back of the neck) particularly apt. But a person of skill in the art in view of the specification would understand those terms to refer generally to the relative trailing/leading directions vis-a-vis screw and plate insertion.
>
> Although the plate portion of the Zero-P VA product is eventually placed partially within the intervertebral space, it plainly has a posterior (or bottom/leading) surface attached to the spacer, which is further interior of the bone, and an anterior (or top/trailing) surface that faces the surgeon and sits outward of the bone, even when the implant is fully inserted. Likewise, the bores in the Zero-P VA have obvious anterior and posterior bore portions, representing, as a relative matter, the outer/top portion closer to the surgeon and the more interior/bottom portion that projects towards the bone. Because the terms just describe relative position, there is no requirement in the claims that anterior and posterior refer to the exact same precise plane every time they are used. . . . In the Zero-P VA, as in the Vectra, the screws penetrate the outer portion of the plate and extend through an opening in a further interior portion of the plate, towards the bone and the back of the neck, thus meeting these limitations.

ECF No. 159-11 at 41. In short, Acantha maintains that anterior and posterior merely identify the "front/back, leading/trailing, inward-/outward-facing surfaces of the claimed plate assembly." *Id.* It contends that the anterior/posterior limitations simply provide, from the surgeon's perspective, an indication as to which surface is which, and "when a surgeon first orients the plate and approaches the spine for implantation, there can be no doubt which side is further away from the bone (the trailing side facing the surgeon) and which is closer to the bone (the leading side facing the spine)." ECF No. 180 at 19.

Yet, Acantha's new construction of "anterior surface" and "posterior surface" has no support in the claim language or the specification. To be sure, the specification states that the "term posterior should be understood to mean an inner portion of the assembly closer to the bone to which the assembly is attached, and the term anterior should be understood to mean an outer portion of the assembly farther away from the bone." '008 Patent col. 1 ll. 44–48. Dr. Sachs' explanation of the

anterior and posterior limitations effectively reads "closer to/farther from the bone" out of the plain and ordinary meaning of these phrases. Under the plain meaning of "anterior/posterior surface," the Zero-P VA products do not infringe because the anterior surface of the product is at least equidistant, if not closer to the bone, than its posterior surface. The operation of the Zero-P VA is significantly different than what is envisioned by the '008 Patent. For these reasons, the court grants Defendants' motion for summary judgment of non-infringement.

CONCLUSION

For the foregoing reasons, Defendants' motion for partial summary judgment of no direct infringement and motion for partial summary judgment of noninfringement by the accuse Zero-P VA products (ECF Nos. 147, 151) are **GRANTED**. Acantha's motion to file a sur-reply (ECF No. 201) is **GRANTED**.

SO ORDERED this 25th day of April, 2018.

s/ William C. Griesbach
William C. Griesbach, Chief Judge
United States District Court