

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

DEPUY SYNTHES PRODUCTS, LLC,	:	
	:	
Plaintiff,	:	
	:	
v.	:	C.A. No. 11-652-LPS
	:	
GLOBUS MEDICAL, INC.,	:	
	:	
Defendant.	:	

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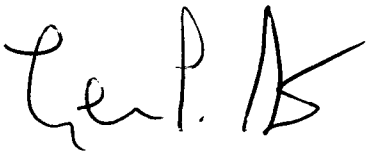
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MEMORANDUM OPINION

May 7, 2013
Wilmington, Delaware.



STARK, U.S. District Judge:

Presently before the Court is the issue of claim construction of various disputed terms found in U.S. Patent Nos. 7,846,207 (the “207 patent”), 7,862,616 (the “616 patent”), and 7,875,076 (the “076 patent”) (collectively, the “patents-in-suit”).¹

I. INTRODUCTION

Synthes USA, LLC, Synthes USA Products, LLC, and Synthes USA Sales, LLC (collectively, “Synthes” or “Plaintiffs”) filed this patent infringement action against Globus Medical, Inc. (“Globus” or “Defendant”) on July 22, 2011.² (D.I. 1) The patents-in-suit relate to medical devices called “intervertebral implants” and methods of implanting such devices between adjacent vertebrae in spinal fusion procedures. (See D.I. 1 at 2-4)

The parties completed claim construction briefing on June 8, 2012. (D.I. 39; D.I. 52; D.I. 53; D.I. 54; D.I. 55) The Court conducted a *Markman* hearing on July 9, 2012. (See D.I. 70 (hereinafter “Tr.”))

II. LEGAL STANDARDS

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (internal quotation marks omitted). Construing the claims of a patent presents a question of law. See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977-78 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370, 388-90 (1996). “[T]here is no magic formula or catechism for

¹The patents-in-suit are found at D.I. 55 Exs. A-C.

²DePuy Synthes Products, LLC was substituted as plaintiff for Synthes USA, LLC on February 15, 2013. (D.I. 157)

conducting claim construction.” *Phillips*, 415 F.3d at 1324. Instead, the court is free to attach the appropriate weight to appropriate sources “in light of the statutes and policies that inform patent law.” *Id.*

“[T]he words of a claim are generally given their ordinary and customary meaning . . . [which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1312-13 (internal citations and quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). The patent specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

While “the claims themselves provide substantial guidance as to the meaning of particular claim terms,” the context of the surrounding words of the claim also must be considered. *Phillips*, 415 F.3d at 1314. Furthermore, “[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . [b]ecause claim terms are normally used consistently throughout the patent” *Id.* (internal citation omitted).

“Differences among claims can also be a useful guide. . . . For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Id.* at 1314-15 (internal citation omitted). This “presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim.” *SunRace Roots Enter. Co., Ltd. v.*

SRAM Corp., 336 F.3d 1298, 1303 (Fed. Cir. 2003).

It is also possible that “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. It bears emphasis that “[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (internal quotation marks omitted), *aff’d*, 481 F.3d 1371 (Fed. Cir. 2007).

In addition to the specification, a court “should also consider the patent’s prosecution history, if it is in evidence.” *Markman*, 52 F.3d at 980. The prosecution history, which is “intrinsic evidence,” “consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

A court also may rely on “extrinsic evidence,” which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the meaning of a term to those of skill in the relevant art because such dictionaries “endeavor to collect the accepted meanings of terms used in various fields of science

and technology.” *Phillips*, 415 F.3d at 1318. Overall, while extrinsic evidence “may be useful” to the court, it is “less reliable” than intrinsic evidence, and its consideration “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1318-19.

In addition to these fundamental claim construction principles, a court should also interpret the language in a claim by applying the ordinary and accustomed meaning of the words in the claim. *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 759 (Fed. Cir. 1984). If the patent inventor clearly supplies a different meaning, however, then the claim should be interpreted according to the meaning supplied by the inventor. *Markman*, 52 F.3d at 980 (noting that patentee is free to be his own lexicographer, but emphasizing that any special definitions given to words must be clearly set forth in patent). If possible, claims should be construed to uphold validity. *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984).

Finally, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osram GmbH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007).

III. CONSTRUCTION OF DISPUTED TERMS³

A. “[front] plate / plate”⁴

1. Synthes’ Proposed Construction: “a structure with a planar dimension greater than its thickness that is in contact with the body and houses a plurality of boreholes.”⁵
2. Globus’ Proposed Construction: “flat and thin structure.”
3. Court’s Construction: “a structure with a planar dimension greater than its thickness.”

The Court’s construction is supported by the intrinsic and extrinsic evidence. The figures of the patents-in-suit depict plates that are not flat, but rather “relatively flat.” (*See, e.g.*, ’616 patent figs. 1, 6, 7) To the extent Globus’ position is that the term should be considered relatively flat and thin, the Court agrees with Synthes that the dispute between the parties is one of degree. (D.I. 52 at 13) The Court perceives no material distinction between comparing a plate’s dimensions in the manner proposed by Plaintiffs and the manner proposed by Defendant. Both sides agree the plate is not perfectly flat. (D.I. 52 at 15; Tr. at 9)

The parties alternately accuse one another of improperly broadening and narrowing the scope of the term to include things such as a passenger bus or a sheet of paper. (D.I. 52 at 10, 14)

³The Court will adopt the parties’ agreed upon construction of “teeth” as it appears in claims 1, 38, 42 of the ’207 patent, and claim 2 of the ’076 patent, as “protrusions provided on the top or bottom surfaces of the body.” (D.I. 52 at 6)

⁴Claims 1, 4, 6, 8-10, 12-13 of the ’616 patent; claims 1, 3-6, 8-11, 14-16 of the ’076 patent.

⁵Although Synthes proposes that “plate” and “front plate” do not require separate constructions, in its reply brief it contends that “front plate” and “securing plate” accord the same meaning to “plate,” which is “a structure with its planar dimension greater than its thickness.” (D.I. 52 at 13) This is the construction the Court has adopted.

The Court finds neither argument persuasive. *See Kyocera Wireless Corp. v. Int'l Trade Comm'n*, 545 F.3d 1340, 1347 (Fed. Cir. 2008) (declining to “interpret claim terms in a vacuum, devoid of the context of the claim as a whole”).

The Court’s construction is essentially the plain and ordinary meaning of the term in this field of art. *See, e.g.*, Biology Online Dictionary, <http://www.biology-online.org/dictionary/Plate> (Apr. 20, 2012) (defining “plate” as “[a] flat, or nearly flat, piece of metal, the thickness of which is small in comparison with the other dimensions”).

B. “front plate”⁶

1. Synthes’ Proposed Construction: “a structure with a planar dimension greater than its thickness that is in contact with the body and houses a plurality of boreholes.”
2. Globus’ Proposed Construction: No separate construction needed once “plate” is construed.

Alternatively, “flat and thin structure with a rear surface resting against the front surface of the body.”

3. Court’s Construction: No construction is necessary given that “plate” has been construed.

As the Court has construed “plate,” the only remaining dispute related to this term is whether the Court should include Synthes’ proposed limitations that the front plate be in contact with the body and have boreholes. The claim language does not support importing Synthes’ proposed limitations.

Claim 1 of the ’207 patent claims “a front plate mounted to the front surface . . . including a first borehole and a second borehole.” (’207 patent col. 6 ll. 39-42) As the surrounding claim

⁶Claims 1, 2, 4, 10-12, 16, 21, 37-43 of the ’207 patent.

language makes clear that the front plate is mounted, and thus necessarily makes contact with the body, and contains a plurality of boreholes, the Court sees no reason to import these same proposed limitations into the term “front plate” as Synthes proposes. *See Phillips*, 415 F.3d at 1314 (“To take a simple example, the claim in this case refers to ‘steel baffles,’ which strongly implies that the term ‘baffles’ does not inherently mean objects made of steel.”). (*See also* ’076 patent col. 4 ll. 64-col. 5 ll. 7 (claiming “a plate operatively coupled to the body . . . first and second boreholes passing through the plate”); ’616 patent col. 6 ll. 42-44 (claiming “plate contacting the front surface . . . the plate including a plurality of boreholes”)) Moreover, as Synthes acknowledged during the *Markman* hearing, “front is a term the jury would clearly understand.” (Tr. at 25)

C. “securing plate”⁷

1. Synthes’ Proposed Construction: “a structure with a planar dimension greater than its thickness that inhibits the fixation elements from falling out.”
2. Globus’ Proposed Construction: No separate construction needed once “plate” is construed.

Alternatively: “flat and thin structure with a rear surface resting against the front surface of the front plate that prevents the fixation elements from backing out of the boreholes.”

3. Court’s Construction: No construction is necessary given that “plate” has been construed.

The Court agrees with the parties that once the term “plate” is construed, there is no need to construe “securing plate.” (Tr. at 16, 81) (Synthes agreeing with this point)

⁷Claims 1-3, 23, 38, 40, 42 of the ’207 patent; claim 9 of the ’616 patent.

D. “upper surface [of the plate]”⁸

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “top surface of the front plate.”
2. Globus’ Proposed Construction: “uppermost boundary of the plate, including any tabs and extensions.”
3. Court’s Construction: “top surface of the front plate.”

The primary dispute between the parties is whether the top and bottom surfaces of the plate include tabs and extensions that extend from the plate in addition to the perimeter of the boreholes.

Globus relies on the prosecution history, specifically the applicants’ treatment of U.S. Patent No. 6,432,106 (the “Fraser patent”) (D.I. 53 Ex. P), to argue that Synthes disclaimed any claim scope of “top/bottom surfaces” of the plate that do not include extensions, tabs, or protrusions. (D.I. 52 at 23) The Court does not find a clear and unambiguous disclaimer in the prosecution history. During prosecution, the applicant explained that the tabs disclosed in the prior art were part of the height of the front plate because the front plate itself housed the boreholes. (See D.I. 53 Ex. K at 17) In contrast, tabs or extensions that do not house boreholes do not define the upper/lower surfaces of the plate. Rather, they are merely appendages and not part of the plate. As there was no clear and unambiguous disavowal, there is no basis to adopt Globus’ proposed construction.

⁸Claim 1 of the ’616 patent.

E. “lower surface [of the plate]”⁹

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “bottom surface of the front plate.”
2. Globus’ Proposed Construction: “bottommost boundary of the plate, including any tabs and extensions.”
3. Court’s Construction: “bottom surface of the front plate.”

Consistent with the related discussed in Section D, the Court will adopt Synthes’ alternate construction here as well.

F. “upper plane [of the body]”¹⁰

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “a plane defined from the front edge to the back edge of the top surface of the body.”
2. Globus’ Proposed Construction: “a flat plane defined by the frontmost edge and backmost edge of the top surface where the top surface abuts the upper vertebral body once inserted.”
3. Court’s Construction: “a plane defined from the front edge to the back edge of the top surface of the body.”

The Court’s construction is supported by the prosecution history. During prosecution, the patentee graphically depicted the upper and underside planes of a prior art reference. (*See* D.I. 53 Ex. G at 17-8; *id.* Ex. H at 10-11) Synthes’ construction is consistent with this depiction, as the upper and underside planes begin at the front edge of the body, and end at the back edge of the

⁹Claim 1 of the ’616 patent.

¹⁰Claims 1, 38, 42 of the ’207 patent; claim 1 of the ’076 patent.

body.

Globus fails to persuade the Court that its additional limitation, “where the top surface abuts the upper vertebral body once inserted,” is appropriate. Thus, the Court will decline to adopt Globus’ construction.

G. “underside plane [of the body]”¹¹ and “lower plane [of the body]”¹²

1. Synthes’ Proposed Construction: These terms can be understood in the context of these patents by their ordinary meaning, and do not require further construction. If the Court construes these terms, they should be construed as: “a plane defined from the front edge to the back edge of the bottom surface of the body.”
2. Globus’ Proposed Construction: “a flat plane defined by the frontmost edge and backmost edge of the bottom surface where the bottom surface abuts the lower vertebral body once inserted.”
3. Court’s Construction: “a plane defined from the front edge to the back edge of the bottom surface of the body.”

The parties’ dispute over this term is substantively identical to their dispute over the claim term addressed above at Section F. The Court’s resolution is the same as well.

H. “plate top surface located generally on the upper plane / plate top surface”¹³

1. Synthes’ Proposed Construction: “most or all of the front plate top surface is located approximately on the upper plane.”
2. Globus’ Proposed Construction: “uppermost boundary of the plate, including any tabs and extensions.”
3. Court’s Construction: No construction is necessary.

¹¹Claims 1, 38, 42 of the ’207 patent.

¹²Claim 1 of the ’076 patent.

¹³Claim 1 of the ’076 patent.

The primary dispute between the parties is whether this term includes tabs and extensions extending from the plate in addition to the perimeter of the boreholes. (D.I. 52 at 19) As discussed above, the Court is not persuaded that the inclusion of tabs and extensions is appropriate.

Synthes' construction simply rephrases the plain language of the claim. (D.I. 52 at 18 (citing *Anchord Wall Sys. v. Rockwood Retaining Walls Inc.*, 340 F.3d 1298, 1310-11 (Fed. Cir. 2003) (noting that "generally" is "commonly used in patent claims to avoid a strict numerical boundary to the specified parameter")))) The Court concludes that replacing "generally" with "most or all" or "approximately" is neither helpful nor necessary, and therefore declines to adopt Synthes' proposed construction. *See C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 863 (Fed. Cir. 2004).

I. "plate lower surface located generally on the lower plane / plate lower surface"¹⁴

1. Synthes' Proposed Construction: "most or all of the front plate bottom surface is located approximately on the lower plane."
2. Globus' Proposed Construction: "bottommost boundary of the plate, including any tabs and extensions."
3. Court's Construction: No construction is necessary.

This term presents the identical issues as the term immediately preceding it at Section H. For the same reasons, the Court has determined that no construction is necessary.

¹⁴Claim 1 of the '076 patent.

J. “borehole”¹⁵

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “fixation element receiving hole.”
2. Globus’ Proposed Construction: “drilled passageway for receiving a fixation element.”
3. Court’s Construction: Plain and ordinary meaning.

The parties agree that the hole receives a fixation element. Further, the parties appear to agree that “borehole” should be given its plain and ordinary meaning. (D.I. 52 at 43; Tr. at 100)

The dispute between the parties is whether the borehole must be created by “drilling.”

“Courts must generally take care to avoid reading process limitations into an apparatus claim because the process by which a product is made is irrelevant to the question of whether that product infringes a pure apparatus claim.” *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1344 (Fed. Cir. 2008) (internal citation omitted). Here, the intrinsic evidence does not require the Court to construe “borehole” to include the process limitation of “drilling.” Notably, neither the specification nor prosecution history mentions the process of creating a “borehole;” it follows, then, that there is no mention of creating a borehole by drilling. (D.I. 52 at 46) Thus, the Court will not read Globus’ process limitation into the claim.

¹⁵Claims 1, 16, 38, 42 of the ’207 patent; claims 1, 9, 13 of the ’616 patent; claim 1 of the ’076 patent.

K. “being anchorable within the first and second boreholes and the first and second partial boreholes”¹⁶

1. Synthes’ Proposed Construction: “capable of being constrained by the boreholes and partial boreholes.”
2. Globus’ Proposed Construction: “being rigidly connected to the internal walls of the first and second boreholes and first and second partial boreholes.”
3. Court’s Construction: “capable of being constrained by the boreholes and partial boreholes.”

The dispute between the parties is whether “anchorable within” includes non rigid and rigid connections or whether, instead, it is limited to a rigid connection. The specification makes clear that a “threaded, conical or expendable end” forms “rigid connection[s]” and a “smooth head” forms a non rigid connection. (*Id.* at col. 5 ll. 1-4) Thus, while a spiral or vaned blade is considered rigid, the expressly disclosed threadless or smooth fixation element would not be considered rigid.

The specification also discloses a preferred embodiment in which fixation elements are “preferably constructed as bone screws.” (*See id.* at col. 5 ll. 8-9) This preferred embodiment is “anchored in the boreholes in a rigid manner.” (*See id.* at ll. 14-15) The disputed term, however, is not limited to this preferred embodiment; nor is there a clear disclaimer of non rigid connections. *See, e.g., Medegen MMS, Inc. v. ICU Med., Inc.*, 317 F. App’x 982, 986 (Fed. Cir. Nov. 20, 2008) (holding that “plug” is not limited to “elastomeric” because there was no limiting claim language or disclaimer in specification, rather “elastomeric” appeared in preferred embodiment).

¹⁶Claims 1, 42 of the ’207 patent.

L. “first and second boreholes of the front plate diverge when viewed from the front surface / diverge”¹⁷

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “first and second boreholes of the front plate depart from a horizontal or vertical plane when viewed from the front surface of the front plate.”
2. Globus’ Proposed Construction: “depart from the vertical middle plane.”
3. Court’s Construction: “first and second boreholes of the front plate depart from a horizontal or vertical plane when viewed from the front surface of the front plate.”

The parties agree the term “diverge” means “depart from.” (Tr. at 103) Their dispute is whether the term is limited to departure only from the vertical middle plane or applies to departure from both the horizontal and vertical middle planes. The Court agrees with Synthes that the latter construction is correct.

Defendant’s contention that its construction is necessary to differentiate claims 1 and 16 is not persuasive. The doctrine of claim differentiation “is not a hard and fast rule of construction.” *Kraft Foods, Inc. v. Int’l Trading Co.*, 203 F.3d 1362, 1368 (Fed. Cir. 2000) (internal quotation marks omitted). Even if the Court were to apply the doctrine of claim differentiation, claims 1 and 16 are distinguishable without Globus’ additional limitation because claim 1 refers to the positioning of the *shafts*, whereas claim 16 refers to *boreholes*. (See ’207 patent col. 6 ll. 51-53 (“the first and second *shafts* being positioned substantially on an opposite side of the . . . planes”) (emphasis added); *id.* at col. 7 ll. 36-37 (“the first and second *boreholes* of the front plate diverge when viewed from the front surface”) (emphasis added))

¹⁷Claim 16 of the ’207 patent.

Defendant points to no other support for its narrowed construction. The Court's construction properly includes both horizontal and vertical departure, as depicted in the specification. (See '207 patent figs. 3, 4)

M. “captured between the front plate and the securing plate”¹⁸

1. Synthes' Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “captured partly or entirely within a space separating the front plate and the securing plate.”
2. Globus' Proposed Construction: “captured entirely within a space separating the front plate and the securing plate.”
3. Court's Construction: “captured partly or entirely within a space separating the front plate and the securing plate.”

While the parties agree that “between” means “within a space” or at least “a space separating two things,” they dispute how much within the space this term covers. Globus would limit the term to “entirely within a space” while Synthes would allow the term to encompass “partly or entirely within a space.” (D.I. 52 at 57-65)

Globus' construction would read out the embodiment depicted in Figure 7 of the '207 patent. Figure 7 shows fixation element heads “between” the front plate and securing plate. The fixation element heads are not depicted as *entirely* between the two plates, rather only partly between the plates.

The Court is also not persuaded that there was, in the prosecution of the '207 patent, a clear and unambiguous disclaimer of implants with fixation heads only partly within the planes of the body. At a minimum, there is some ambiguity in the figures of the Fraser patent, making it

¹⁸Claim 38 of the '207 patent.

unclear whether the fixation element heads are between the plates at all. (*Compare* Fraser patent fig. 3 *with* '207 patent fig. 8; *see also* Tr. at 80 (noting that if Fraser patent discloses flexible tabs, there is ambiguity over whether fixation elements are partly between planes))

N. “located between the plate and the securing plate”¹⁹

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “located partly or entirely within a space separating the front plate and the securing plate.”
2. Globus’ Proposed Construction: “located entirely within a space separating the plate and the securing plate.”
3. Court’s Construction: “located partly or entirely within a space separating the front plate and the securing plate.”

The parties’ dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section M. The Court’s resolution is the same as well.

¹⁹Claim 9 of the '616 patent.

O. “contained between the adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies”²⁰

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “contained partly or entirely within a space separating the adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies.”
2. Globus’ Proposed Construction: “contained entirely within a space separating the adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies.”
3. Court’s Construction: “contained partly or entirely within a space separating the adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies.”

The parties’ dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section M. The Court’s resolution is the same as well.

P. “positioned between the upper and lower planes”²¹

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “positioned partly or entirely within a space separating the upper and lower planes.”
2. Globus’ Proposed Construction: “positioned entirely within a space separating the upper and lower planes.”
3. Court’s Construction: “positioned partly or entirely within a space separating the upper and lower planes.”

The claim language supports Synthes’ construction. Claim 5 of the ’076 patent demonstrates that when this patentee intended for an element to be contained entirely between

²⁰Claim 1 of the ’616 patent.

²¹Claim 1 of the ’076 patent.

two other structures, the patentee expressly stated so. (See '076 patent col. 5 ll. 23-24 (“the plate is *entirely* contained between the endplates”) (emphasis added)) The Court agrees with Synthes that by refraining from using “entirely” as a qualifier in the disputed term, the language claims something broader than “entirely between.” (D.I. 52 at 59)

Q. “the first and second boreholes of the front plate and the first and second heads are covered at least partly by the securing plate / covered at least partly by the securing plate”²²

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “the securing plate partly or entirely covers the first and second boreholes of the front plate and the first and second heads of the fixation elements.”
2. Globus’ Proposed Construction: “at least partly underneath and concealed by the rear surface of the securing plate.”
3. Court’s Construction: “the securing plate partly or entirely covers the first and second boreholes of the front plate and the first and second heads of the fixation elements.”

The parties agree that this term requires partial to total coverage by the securing plate. (See D.I. 52 at 69) The only dispute is whether the Court should construe “cover” to mean “underneath and concealed,” as Globus proposes and Synthes opposes.

The Court is not persuaded by Globus. Globus relies primarily on Webster’s dictionary for its proposed construction of the “ordinary meaning” of “cover.” (D.I. 52 at 68) Even in this extrinsic evidence, however, Globus fails to identify support for including “underneath” in its construction. Moreover, as a general matter, extrinsic evidence is often unhelpful in interpreting claim language, particularly when divorced from the context of the intrinsic evidence. See

²²Claim 1, 42 of the '207 patent.

Phillips, 415 F.3d at 1318-19. Thus, the Court will decline to adopt Globus' construction.

R. “the securing plate at least partially covering each of the plurality of boreholes / the securing plate at least partially covering”²³

1. Synthes' Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “the securing plate partly or entirely covers each of the plurality of boreholes of the front plate.”
2. Globus' Proposed Construction: “the rear surface of the securing plate at least partly on top of and concealing.”
3. Court's Construction: “the securing plate partly or entirely covers each of the plurality of boreholes of the front plate.”

The parties' dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section Q. The Court's resolution is the same as well.

S. “the securing mechanism at least partially covering each of the plurality of boreholes / the securing mechanism at least partially covering”²⁴

1. Synthes' Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “the securing mechanism partly or entirely covers each of the plurality of boreholes of the front plate.”
2. Globus' Proposed Construction: “the rear surface of the securing mechanism at least partly on top of and concealing.”
3. Court's Construction: “the securing mechanism partly or entirely covers each of the plurality of boreholes of the front plate.”

The parties' dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section Q. The Court's resolution is the same as well.

²³Claim 9 of the '616 patent.

²⁴Claim 13 of the '616 patent.

T. “attaching a securing plate with a fastening agent over the first and second head portions of the first and second fixation elements”²⁵

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “a securing plate is attached to the front plate with a fastening agent so as to partly or entirely cover the first and second heads of the fixation elements.”
2. Globus’ Proposed Construction: “attaching a securing plate with a fastening agent entirely on top of the first and second head portions of the first and second fixation elements.”
3. Court’s Construction: “attaching a securing plate with a fastening agent entirely on top of the first and second head portions of the first and second fixation elements.”

Unlike the related claim terms in dispute discussed above (*see* Sections Q, R, S), which involve “cover” and “covering” and contain the modifier “at least partly/partially,” this claim term does not contain similar modifiers. A comparison of the ’207 and ’616 patents – which share the same inventors – makes clear the patentee understood how to distinguish between claiming partial coverage and total coverage. (*Compare* ’207 patent col. 9 ll. 6-8 (“attaching a securing plate with a fastening agent over the first and second head portions of the first and second fixation elements”) *with id.* at col. 6 ll. 55-58 (“a securing plate fastened . . . in such a manner that . . . the first and second heads are covered at least partly by the securing plate”)) Hence, the Court adopts Globus’ proposed construction.

²⁵Claim 38 of the ’207 patent.

U. “partial borehole in communication with the front surface and the upper side/underside of the body”²⁶

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “a partial borehole contacts the front surface of the body and the upper/lower surface of the body.”
2. Globus’ Proposed Construction: “a partial borehole extending through the front surface of the body and the upper/lower surface of the body.”
3. Court’s Construction: “a partial borehole contacts the front surface of the body and the upper/lower surface of the body.”

Figure 5 of the ’616 patent specification supports the Court’s construction. Figure 5 depicts a partial borehole in contact with the front surface and upper/lower surface of the body. By contrast, Globus’ construction suggests that the partial borehole must pass completely through the entire body of the implant. Such a construction is not supported by the patent.

V. “non-metallic material”²⁷

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “material not having metallic qualities.”
2. Globus’ Proposed Construction: “material with no metallic components.”
3. Court’s Construction: “material with no metallic components.”

The dispute between the parties is whether non-metallic material lacks metallic qualities or metallic components. Claim 1 of the ’616 patent claims a plate “made from a . . . metallic material” and a “body [] made from a . . . non-metallic material.” (See ’616 patent col. 6 ll. 65-

²⁶Claim 1 of the ’616 patent.

²⁷Claim 1 of the ’616 patent.

67) The claim language does not reference the properties of the materials, rather it states that the material itself is either metallic or non-metallic. Similarly, the specification does not describe or suggest what “qualities” are possessed by metals and non-metals. Synthes provides a general example in its brief that lead paint is non-metallic because it “does not behave like a metal.”

(D.I. 52 at 73) But the specification does not describe how a metal behaves (for example, how it conducts heat, electricity, etc.). Synthes’ construction is divorced from the meaning of the term as used in the intrinsic record, and the Court will decline to adopt it.

W. “the first height being substantially equal to the second height so that the three dimensional body and the plate are contained between the adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies / the first height being substantially equal to the second height”²⁸

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “the first and second heights are substantially equal to allow the body and the front plate to fit partly or entirely between adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies.”
2. Globus’ Proposed Construction: Indefinite.
3. Court’s Construction: “the first and second heights are substantially equal to allow the body and the front plate to fit partly or entirely between adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies.”

Globus argues that this term is indefinite under 35 U.S.C. § 112 and, therefore, incapable of being construed. Globus falls short of demonstrating by clear and convincing evidence that the claim term is insolubly ambiguous and incapable of construction. *See generally Halliburton Energy Servs. v. M-I LLC*, 514 F.3d 1244, 1249-50 (Fed. Cir. 2008) (describing indefiniteness as

²⁸Claim 1 of the ’616 patent.

“exacting standard,” which is satisfied when claim term is “completely dependent on a person’s subjective opinion”). To prove a claim to be indefinite, a party must show by clear and convincing evidence that a person of ordinary skill in the art, after reading the claims, specification, and prosecution history, would not be able to understand the bounds of the claim; the claim must be “insolubly ambiguous” after all reasonable attempts at construction. *See Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). A claim is not indefinite if it is amenable to construction, “even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree.” *Id.* “The standard of indefiniteness is somewhat high; a claim is not indefinite merely because its scope is not ascertainable from the face of the claims.” *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1342 (Fed. Cir. 2003).

While “[i]ndefiniteness is a matter of claim construction,” *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1319 (Fed. Cir. 2008), and presents a question of law, *see ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012), the Court declines to make a final determination as to indefiniteness in the context of this claim construction dispute. Here, as is typical for this stage of the proceedings, the standard of clear and convincing evidence of invalidity is not satisfied. *See, e.g., Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1366 (Fed. Cir. 2011).

The Court finds that it is able to construe the disputed term. Figure 4 of the ’616 patent depicts the fixation elements slightly above and below the upper and underside planes. Figure 4 is consistent with patentee’s Appeal Brief filed in the Board of Patent Appeals on April 15, 2010. (*See* D.I. 53 Ex. H at 12-15) In its Appeal Brief, the patentee distinguishes the present invention

from the Fraser patent based on the Fraser patent's depiction of fixation elements that are not positioned between the upper and underside planes of the body. (*Id.* at 12) Patentee argued, consistently with the patent figures and Synthes' construction, that the Fraser patent is distinguishable because the fixation elements in the asserted patents are positioned substantially between the upper and underside planes of the body. (*Id.* at 14-15)

The specification's description that the body of the implant is "preferably [] convex in shape" further supports the Court's construction. (*See* '616 patent col. 3 l. 26) The specification explains that the convex shape "allows for an improved fit with the . . . vertebral bodies." (*Id.* at ll. 28-29) This preferred embodiment involves first and second heights that are not equal but, instead, substantially equal to allow for the implant to fit between the vertebral bodies.

Synthes' proposed construction is supported, and the claim term is not insolubly ambiguous and not proven indefinite. Thus, the Court will adopt Synthes' construction.

X. "the second height being generally equal to the first height"²⁹

1. Synthes' Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: "the first and second heights are generally equal to allow the body and the front plate to fit partly or entirely between adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies."
2. Globus' Proposed Construction: Indefinite.
3. Court's Construction: "the first and second heights are generally equal to allow the body and the front plate to fit partly or entirely between adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies."

²⁹Claim 1 of the '076 patent.

The parties' dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section W. The Court's resolution is the same as well.

Y. “the first and second heads and the first and second boreholes and partial boreholes positioned substantially between the upper and underside planes / positioned substantially between the upper and underside planes”³⁰

1. Synthes' Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “the first and second heads and the first and second boreholes and partial boreholes are positioned substantially between the upper and underside planes to allow the body and the front plate to fit between adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies.”
2. Globus' Proposed Construction: Indefinite.
3. Court's Construction: “the first and second heads and the first and second boreholes and partial boreholes are positioned substantially between the upper and underside planes to allow the body and the front plate to fit between adjacent vertebral bodies when the implant is inserted between the adjacent vertebral bodies.”

The parties' dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section W. The Court's resolution is the same as well.

Z. “securing mechanism”³¹

1. Synthes' Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “a mechanical device that at least partially covers each of the plurality of boreholes in the front plate to inhibit the fixation elements from falling out.”

³⁰Claims 1, 38, 42 of the '207 patent.

³¹Claim 13 of the '616 patent.

2. Globus' Proposed Construction: Means-plus-function limitation; governed by 35 U.S.C. § 112, ¶ 6.
Function: to secure.
Structure: securing plate as disclosed in element 18 of Figures 1, 3, 6, 7 and at 4:4-18 and 6:13-23.
3. Court's Construction: Plain and ordinary meaning.

“[A] claim term that does not use ‘means’ will trigger the rebuttable presumption that § 112 ¶ 6 does not apply.” *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004). This is a strong presumption, not readily overcome. *See id.* Specifically, the presumption is overcome “if it is demonstrated that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Id.* (internal quotation marks omitted).

The strong presumption against this claim term being a means-plus-function term is not overcome here. “Securing mechanism” is generally understood by persons of skill in the art and is not used in “a purely functional manner designed to invoke section 112 ¶ 6, but as a description of structure.” *Id.* at 1361. (*See also* Tr. at 92) Moreover, the claim language identifies a structure for this term. Claim 13 of the '616 patent claims a securing mechanism that “operatively engage[s] the plate” and “partially cover[s] each of the plurality of boreholes formed in the plate to inhibit the bone fixation elements from falling out.” (*See* '616 patent col. 8 ll. 30-33) The Court agrees with Synthes that in the context of this patent, “securing mechanism” has its plain and ordinary meaning.

AA. “fastening agent”³²

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “a mechanical device that attaches the securing plate to the front plate.”
2. Globus’ Proposed Construction: Means-plus-function limitation; governed by 35 U.S.C. § 112, ¶ 6.
Function: to fasten.
Structure: screw, bayonet catch, click catch.
3. Court’s Construction: Plain and ordinary meaning.

The parties’ dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section Z. The Court’s resolution is the same as well.

BB. “upper surface”³³

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “top surface.”
2. Globus’ Proposed Construction: “top surface.”
3. Court’s Construction: “top surface.”

The Court adopts what the parties have essentially agreed is an appropriate construction of this claim term.

³²Claim 38 of the ’207 patent.

³³Claim 1 of the ’076 patent.

CC. “lower surface”³⁴

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “bottom surface.”
2. Globus’ Proposed Construction: “bottom surface.”
3. Court’s Construction: “bottom surface.”

The Court adopts what the parties have essentially agreed is an appropriate construction of this claim term.

DD. “upper side”³⁵

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “top side.”
2. Globus’ Proposed Construction: “top surface.”
3. Court’s Construction: “top surface.”

The parties are in agreement that the upper surface/upper side, lower surface/underside of the body should be construed such that all of the “upper” terms mean “top” and all of the “lower” terms mean “bottom.” (Tr. at 31 (“there is no dispute as to that”)) The dispute between the parties is whether “side” should be construed consistently with “surface.” The Court concludes that “side” and “surface” should be construed consistently.

By way of example, the ’076 patent specification describes a six-sided implant, including “a convex top side and convex underside, the two sides each being designed to rest against the

³⁴Claim 1 of the ’076 patent.

³⁵Claim 1, 38, 42 of the ’207 patent; claim 1 of the ’616 patent.

end plates of two adjacent vertebrae.” (’076 patent col. 4 ll. 11-13) This description refers to Figures 1 through 4, which depict the upper side/surface as the side/surface that is in contact with each vertebral body. The claim language describes the same side/surface as “an upper surface and a lower surface, the upper and lower surfaces . . . to contact the upper and lower endplates . . . of the upper and lower vertebrae.” (*Id.* at col. 4 ll. 58-62) Thus, within the ’076 patent, “side” and “surface” are used interchangeably. Similarly, claim 1 of the ’207 and ’616 patents claim a six-sided implant. (*See* ’207 patent col. 6 ll. 29-38; ’616 patent col. 6 ll. 31-33) The Court finds that replacing “side” with “surface” does not alter the meaning of the claims and, for the sake of consistency and simplifying issues for the jury, will construe “side” as “surface.”

EE. “underside”³⁶

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “bottom side.”
2. Globus’ Proposed Construction: “bottom surface.”
3. Court’s Construction: “bottom surface.”

The parties’ dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section DD. The Court’s resolution is the same as well.

³⁶Claims 1, 38, 42 of the ’207 patent; claim 1 of the ’616 patent.

FF. “upper vertebra”³⁷

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “vertebra above and most proximate to the implant.”
2. Globus’ Proposed Construction: “vertebra on the top side of the implant.”
3. Court’s Construction: “vertebra above and most proximate to the implant.”

Claim 1 of the ’076 patent claims “[a]n intervertebral implant for insertion between an upper vertebra having an upper endplate and a lower vertebra having a lower endplate.” (*See* ’076 patent col. 4 ll. 54-56) Hence, the plain language of the claim describes an upper vertebra having an upper endplate and a lower vertebra having a lower endplate. The claim continues and states that “the upper and lower surfaces . . . contact the upper and lower endplates, respectively, of the upper and lower vertebrae.” (*See id.* at ll. 59-62) Again, the plain language of the claim indicates that the upper vertebrae and upper endplate are in contact, and the lower vertebrae and lower endplate are in contact. The specification confirms that the “intervertebral implant” is meant to “rest against the end plates of two adjacent vertebrae.” (*See id.* at ll. 10-13) Hence, the claim language and the specification support Synthes’ proposed construction, which properly construes “upper vertebra” as “vertebra above and most proximate to the implant.”

Globus’ proposed construction, by contrast, would not allow for the upper vertebra and implant to be in contact. This is not supported by the patent. Nor does the prosecution history on which Globus relies, which consists primarily of a statement by the Examiner in connection with the Fraser patent, to the effect that “endplates can be interpreted as a superior endplate of

³⁷Claim 1 of the ’076 patent.

vertebral body 52 and inferior endplate of vertebral body 54,” (D.I. 39 Ex. H at 5), which does not constitute a clear and unambiguous disavowal of claim scope by the patentee.

GG. “lower vertebra”³⁸

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “vertebra below and most proximate to the implant.”
2. Globus’ Proposed Construction: “vertebra on the bottom side of the implant.”
3. Court’s Construction: “vertebra below and most proximate to the implant.”

The parties’ dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section FF. The Court’s resolution is the same as well.

HH. “upper endplate”³⁹

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “endplate on the bottom side of the vertebra above the implant.”
2. Globus’ Proposed Construction: “endplate on the top side of the vertebra.”
3. Court’s Construction: “endplate on the bottom side of the vertebra above the implant.”

The parties’ dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section FF. The Court’s resolution is the same as well.

³⁸Claim 1 of the ’076 patent.

³⁹Claim 1 of the ’076 patent.

II. “lower endplate”⁴⁰

1. Synthes’ Proposed Construction: This term can be understood in the context of these patents by its ordinary meaning, and does not require further construction. If the Court construes the term, it should be construed as: “endplate on the top side of the vertebra below the implant.”
2. Globus’ Proposed Construction: “endplate on the bottom side of the vertebra.”
3. Court’s Construction: “endplate on the top side of the vertebra below the implant.”

The parties’ dispute over this claim term is substantively identical to their dispute over the claim term addressed above at Section FF. The Court’s resolution is the same as well.

IV. CONCLUSION

For the reasons given above, the Court will construe the terms of the patents-in-suit consistent with this Memorandum Opinion. An appropriate Order follows.

⁴⁰Claim 1 of the ’076 patent.