IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

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| DR. MARK A. BARRY ,<br><br>Plaintiff,<br><br>v.<br><br>STRYKER CORPORATION, ET AL.,<br><br>Defendants. | Civil Action No. 20-1787-RGA |

MEMORANDUM OPINION

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February 3, 2023

**ANDREWS, U.S. DISTRICT JUDGE:**

Before me is the issue of claim construction of multiple terms in U.S. Patent No. 7,670,358 ("the '358 patent"), U.S. Patent No. 8,361,121 ("the '121 patent"), U.S. Patent No. 9,339,301 ("the '301 patent"), U.S. Patent No. 9,668,787 ("the '787 patent"), and U.S. Patent No. 9,668,788 ("the '788 patent") ("the Asserted Patents"). The parties submitted a Joint Claim Construction Brief (D.I. 135) and Appendix (D.I. 137),[1] and I heard oral argument on December 15, 2022 (D.I. 145).

## I. BACKGROUND

On December 30, 2020, Plaintiff Dr. Mark Barry filed his Complaint alleging infringement of the Asserted Patents against Defendant Stryker Corporation ("Stryker"). (D.I. 1).[2] On June 2, 2021, Plaintiff filed his Complaint alleging infringement of the Asserted Patents against Defendants SeaSpine Holdings Corp., SeaSpine Orthopedics Corp., and SeaSpine Inc. ("SeaSpine"). (C.A. No. 21-806, D.I. 1). On March 21, 2022, I consolidated the two actions. (D.I. 43).

The Asserted Patents belong to the same patent family. All Asserted Patents share a common specification, with the exception of the '358 patent, the oldest of the patents, which is missing a figure and related paragraphs. The Asserted Patents are directed to methods and systems used in spinal surgeries to manage and correct spinal deformities. ('358 patent, 1:18–20).

## II. LEGAL STANDARD

"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) (en banc) (internal quotation marks omitted). "'[T]here is no magic formula or

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[1] The parties also submitted a deposition transcript and exhibits before the Markman hearing. (D.I. 169-1).

[2] Unless otherwise specified, the docket referred to is C.A. 20-1787.

catechism for conducting claim construction.' Instead, the court is free to attach the appropriate weight to appropriate sources 'in light of the statutes and policies that inform patent law.'" *SoftView LLC v. Apple Inc.*, 2013 WL 4758195, at *1 (D. Del. Sept. 4, 2013) (quoting *Phillips*, 415 F.3d at 1324) (alteration in original). When construing patent claims, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977–80 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). Of these sources, "the 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." *Phillips*, 415 F.3d at 1315 (internal quotation marks omitted).

"[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 (citations and internal quotation marks omitted). "[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent." *Id.* at 1321 (internal quotation marks omitted). "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314.

When a court relies solely upon the intrinsic evidence—the patent claims, the specification, and the prosecution history—the court's construction is a determination of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 331 (2015). The court may also make factual findings based upon consideration of extrinsic evidence, which "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned

treatises." *Phillips*, 415 F.3d at 1317–19 (internal quotation marks omitted). Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

## III. PATENTS AT ISSUE

The '358 patent has a priority date of December 30, 2004. The '121 Patent is a continuation-in-part of the '358 Patent and a continuation of U.S. Patent No. 7,776,072, which has a priority date of August 1, 2005. The rest of the asserted patents are continuations of the '121 patent and continuations-in-part of the '358 Patent. Plaintiff is asserting 14 claims against the Defendants: claims 4 and 5 of the '358 patent, claims 2 and 3 of the '121 patent, claims 1, 2 and 4 of the '301 patent, claims 2, 3, and 6 of the '787 patent, and claims 1, 2, and 6 of the '788 patent (the "Asserted Claims"). (D.I. 175 at 6-7). The following claims are representative and most relevant for purposes of claim construction:

### Claim 1 of the '358 Patent

**1.** A method for aligning vertebrae in the ***amelioration of aberrant spinal column deviation conditions*** comprising the steps of:

selecting a first set of pedicle screws, said pedicle screws each having a threaded shank segment and a head segment;

selecting a first ***pedicle screw cluster derotation tool***, said first ***pedicle screw cluster derotation tool*** having a first ***handle means*** and a first group of ***pedicle screw engagement members*** which are mechanically ***linked*** with said first ***handles means***, each ***pedicle screw engagement member*** being configure for and engaging with, and transmitting manipulative forces applied to said first ***handle means*** to said head segment of each pedicle screw of said first set of pedicle screws,

implanting a each (sic) pedicle screw in a pedicle region of each of a ***first group of multiple vertebrae*** of a spinal column which exhibits an aberrant spinal column deviation condition;

engaging each ***pedicle screw engagement member*** respectively with said head segment of each pedicle screw of said first set of pedicle screws; and

applying manipulative force to said first ***handle means*** in a manner for simultaneously engaging said first group of ***pedicle screw engagement members*** and first set of pedicle screws and thereby in a single motion simultaneously rotating said vertebrae of said

first group of multiple vertebrae in which said pedicle screws are implanted to achieve an ***amelioration of an aberrant spinal column deviation condition;***

selecting a first length of a spinal rod member, wherein one or more of said pedicle screws of said first set of pedicle screws each includes:

a spinal rod conduit formed substantially transverse of the length of said pedicle screw and sized and shaped for receiving passage of said spinal rod member therethrough; and

spinal rod engagement means for securing said pedicle screw and said spinal rod member, when extending through said spinal rod conduit, in a substantially fixed relative position and orientation;

extending said first length of said spinal rod member through said spinal rod conduits of one or more said pedicle screws of said first set of pedicle screws; and

after applying said manipulative force to said first ***handle means***, actuating said spinal rod engagement means to secure said vertebrae in their respective and relative positions and orientations as achieved through application of said manipulative force thereto.

('358 patent, col. 6:8-56 (disputed terms italicized and bolded)).

**Claim 2 of the '121 patent**

**2.** A system for aligning vertebrae in the ***amelioration of aberrant spinal column deviation conditions*** comprising:

a first set of pedicle screws, each pedicle screw having a threaded shank segment and a head segment; and

a first ***pedicle screw cluster derotation tool***, said first ***pedicle screw cluster derotation tool*** having a first ***handle means*** for facilitating simultaneous application of manipulative forces to said first set of pedicle screws and a first group of three or more ***pedicle screw engagement members*** which are mechanically ***linked*** with said first ***handle means***, said first ***handle means*** having a ***handle linked*** to each ***pedicle screw engagement member*** of the first group of three or more ***pedicle screw engagement members*** and a ***linking member*** to join together the ***handles linked*** to the ***pedicle screw engagement members***, wherein the ***handle means*** is configured to move simultaneously each ***pedicle screw engagement member***, wherein each ***pedicle screw engagement member*** is configured to engage respectively with said head segment of each pedicle screw of said first set of pedicle screws; and wherein each ***pedicle screw engagement member*** is configured to transmit manipulative forces applied to said first ***handle means*** to said head segment of each pedicle screw of said first set of pedicle screws;

a second set of pedicle screws, each pedicle screw having a threaded shank segment and a head segment;

a second ***pedicle screw cluster derotation tool***, said second ***pedicle screw cluster derotation tool*** having a second ***handle means*** for facilitating simultaneous application of manipulative forces to said second set of pedicle screws and a second group of three or more ***pedicle screw engagement members*** which are mechanically ***linked*** with said second ***handle means***, said second ***handle means*** having a ***handle linked*** to each ***pedicle screw engagement member*** of the second group of three or more ***pedicle screw engagement members*** and a ***linking member*** to join together the ***handles linked*** to the ***pedicle screw***

***engagement members***, wherein the ***handle means*** is configured to move simultaneously each ***pedicle screw engagement member***, wherein each ***pedicle screw engagement member*** is configured to engage respectively with said head segment of each pedicle screw of said second set of pedicle screws; and wherein each ***pedicle screw engagement member*** is configured to transmit manipulative forces applied to said second ***handle means*** to said head segment of each pedicle screw of said second set of pedicle screws;

a ***cross-linking member*** that ***links*** the first ***handle means*** to the second ***handle means***.

('121 patent at 7:57-8:45 (disputed terms italicized and bolded)).

**Claims 1 and 2 of the '301 patent**

**1.** A system for aligning human vertebrae comprising:

a first set of at least three pedicle screws, each pedicle screw having a threaded shank and a head, said first group of pedicle screws adapted to be implanted in a first group of at least three vertebrae;

a first ***pedicle screw cluster derotation tool*** adapted to facilitate simultaneous application of rotative force in a single motion to said first group of at least three vertebrae, said first ***pedicle screw cluster derotation tool*** having a first set of at least three ***pedicle screw engagement members*** configured to engage the heads of the corresponding first set of at least three pedicle screws, said first set of ***pedicle screw engagement members*** being interconnected by a first ***linking member*** such that application of rotative force in the single motion to said pedicle screw engagement member simultaneously moves all of the interconnected ***pedicle screw engagement members***;

a second set of at least three pedicle screws, each pedicle screw of said second set of pedicle screws having a threaded shank and a head, said second set of pedicle screws adapted to be implanted in said first group of at least three vertebrae;

a second ***pedicle screw cluster derotation tool*** adapted to facilitate simultaneous application of rotative force in a single motion to said second group of at least three vertebrae, said second ***pedicle screw cluster derotation tool*** having a second set of at least three ***pedicle screw engagement members*** configured to engage the heads of the corresponding second set of at least three pedicle screws, said second set of ***pedicle screw engagement members*** being interconnected by a second ***linking member*** such that application of rotative force in the single motion to one or more of the pedicle screw engagement members of said first or second set of ***pedicle screw engagement member*** simultaneously moves all of the interconnected ***pedicle screw engagement members*** of said first and second set of ***pedicle screw engagement members***; and

a ***cross-linking member*** interconnecting said first set of ***pedicle screw engagement members*** and said second set of ***pedicle screw engagement members***;

wherein each ***pedicle screw engagement member*** of said first and second set of ***pedicle screw engagement members*** is configured to transmit the rotative force to said head of said pedicle screw to which said respective ***pedicle screw engagement member*** is engaged so as to be adapted to simultaneously rotate the vertebrae of the first group of at least three vertebrae.

**2.** The system of claim 1, further comprising a ***handle member*** configured to be coupled to one or more of said ***pedicle screw engagement members***, said ***handle member*** in cooperation with said first ***linking member*** facilitating the simultaneous application of the rotative force to each pedicle screw of said first set of at least three pedicle screws.

('301 patent at 6:31-7:19 (disputed terms italicized and bolded)).

## IV. CONSTRUCTION OF AGREED-UPON TERMS

I adopt the following agreed-upon constructions:

| **Claim Term** | **Claims**[3] | **Construction** |
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| "mechanically linked" / "which are mechanically linked with" | Claims 1 and 2 of the '358 Patent; Claim 2 of the '121 Patent. | "joined by a physical connection that allows force to be transmitted or transferred from one object to another" |
| "spinal rod engagement means" / "spinal rod engagement member" / "spinal rod engagement mechanisms" | Claims 1 and 3 of the '358 Patent; Claims 1 and 3 of the '121 Patent; Claim 4 of the '301 Patent; Claim 6 of the '787 Patent; Claim 4 of the '788 Patent. | Means-plus-function under 35 U.S.C. § 112, ¶6<br><br>Function:<br><br>to secure the pedicle screw and spinal rod in a substantially fixed position and orientation:<br><br>Structure:<br><br>1) A two-piece nut and screw, as described in the '358 Patent, 4:59-65; '121 Patent, 5:1-7, and Figure 4 of both patents; and<br><br>2) A locking nut, as described in U.S. Patent No. 6,743,231 at 7:56-60 and Figure 11;<br><br>3) A rotatable locking element embedded within a spinal rod conduit, as described in U.S. Patent No. 6,827,719 at 8:28-35 and Figures 7-8; |

[3] The parties did not identify which claims contained which terms. These are the claims I identified to contain the terms. If there are any claims at issue that I failed to identify, these agreed upon constructions are to apply to those claims.

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| | | 4) A rotatable bridge structure that can fasten to the inner walls of the spinal rod conduit, as described in U.S. Patent No. 6,652,256 at 2:66-3:11, and Figures 1-2; and<br><br>5) Equivalents thereof. |
| "wherein the spinal rod is precontured" | Claim 4 of the '121 Patent; Claim 5 of the '301 Patent. | "the spinal rod is bent to the approximate desired curvature of the spine before being extended through the spinal rod conduits" |
| "craniocaudal" | Claim 1, 3, and 6 of the '787 Patent; | "the long axis of the body (i.e. from head to toe)" |
| "transverse" | Claim 1 and of the '358 Patent; Claim 3 of the '121 Patent; Claim 4 of the '301 Patent; Claim 1 and 6 of the '787 Patent; Claims 1 and 6 of the '788 Patent. | "across the long axis of the body" |

## V. CONSTRUCTION OF DISPUTED TERMS

### 1. "(First/Second) Pedicle Screw Cluster Derotation Tool" (claims 1 and 2 of the '358 Patent; claim 2 of '121 Patent; claim 1 of the '301 Patent)

a. *Plaintiff's proposed construction*: "A tool for engaging a plurality of pedicle screws implanted in a plurality of vertebrae of a spinal column; such tools do not need to be attached on only one side of the spine."

b. *Defendants' proposed construction*: "A tool for engaging a plurality of pedicle screws implanted in multiple vertebrae along one side of the spinal column."

c. *Court's construction*: "A tool for engaging a plurality of pedicle screws implanted in a plurality of vertebrae of a spinal column; such tools do not need to be attached on only one side of the spine."

"The parties agree that a pedicle screw cluster derotation tool engages 'a plurality of pedicle screws implanted in a plurality of vertebrae.'" (D.I. 135 at 9). The only dispute with respect to this term is whether the tool is limited to one side of the spine. (*Id.* at 8-9).

Plaintiff argues "there is neither clear disavowal nor lexicography limiting a tool to only one side of the spine." (*Id.* at 9). To support this argument, Plaintiff cites to portions of the '358 Patent specification which uses non-limiting language such as lines 5:36 ("present method usually involves"), 5:47 ("The preferred mode of the present method"), 5:65-67 ("Although the invention has been described with reference to specific embodiments, this description is not meant to be construed in a limited sense."). Plaintiff also notes that the District Courts of the Eastern District of Texas and the Eastern District of Pennsylvania previously construed this term not to be limited to one side. (D.I. 135 at 9).

Defendants counter that neither clear disavowal nor lexicography are necessary to limit the scope of the "pedicle screw cluster derotation tool." (*Id.* at 9). Defendants argue that "pedicle screw cluster derotation tool" is a coined term that has no plain or ordinary meaning. (*Id.* at 15). Defendants contend that as a coined term, "pedicle screw cluster derotation tool" "cannot be construed broader than the disclosure in the specification." (*Id.*). Defendants argue that the only disclosure of a "pedicle screw cluster derotation tool" in the patent specification is Figure 1, which only shows a tool being applied to one side of the spine.

Both parties agree that "pedicle screw cluster derotation tool" is a "coined term" with no plain and ordinary meaning to a person of ordinary skill in the art (POSA). (D.I. 135 at 9; Markman Hearing Tr. 42:5-14). Therefore, it "cannot be construed broader than the disclosure in the specification." *Indacon, Inc. v. Facebook, Inc.*, 824 F.3d 1352, 1357 (Fed. Cir. 2016). The question left to address "is whether the intrinsic evidence provides objective boundaries to the scope of the term." *Iridescent Networks, Inc. v. AT&T Mobility, LLC*, 933 F.3d 1345, 1353 (Fed. Cir. 2019).[4]

[4] The other district courts that construed this term did not address this argument.

I find the intrinsic evidence does not limit the scope of "pedicle screw cluster derotation tool" to only one side of the spine. Neither party cites to evidence in the prosecution history that would limit the scope of the term. Even if Defendants are correct that Figure 1 and the accompanying lines from the '358 patent specification ('358 Patent, col. 4:66-5:5) only show "a pedicle screw cluster derotation tool" being applied on one side of the spine, that is not the only reference to "pedicle screw cluster derotation tool" in the patent. For example, the summary of the invention section describes the tool as "in the presently preferred embodiment include shafts, extending from a common handle or linked handle array, which are oriented and configured to extend to and engage the heads of a number of implanted pedicle screws which will have been implanted in adjacent vertebrae . . . ." ('358 Patent, col. 3:47-53). Additionally, the specification further explains, "However configured, the object and design of pedicle screw cluster derotation tool 30 is to facilitate simultaneous application of manipulative forces to multiple pedicle screws 10 which are implanted in a like number of vertebra (a 'cluster')." (*Id.*, col. 5:25-29). These parts of the specification make no reference to only using the tool on one side of the spine, and instead contemplate a broader scope. Therefore, the patent specification does not recite using the "pedicle screw cluster derotation tool" on only one side of the spine as an objective boundary.

It is these specification references that distinguish this case from others where a specification was read to limit the scope of a coined term. In cases where a specification limited the scope of a coined term, the specification consistently and repeatedly described the limitation when discussing the coined term. *See, e.g.*, *Indacon,* 824 F.3d at 1357 (construing the link claim terms as "*allowing each instance* of a defined term to be identified and displayed as a link" because it was repeatedly demonstrated in the specification); *CoolTVNetwork.com, Inc. v. Blackboard Inc.*, 2020 WL 6536960, at *9 (D. Del. Nov. 6, 2020) (finding the term "shop mode" required allowing

a user to add items to a shopping cart because "when the specification mentions 'shop mode,' it always does so with reference to the ability to add an item to the user's shopping cart").

I construe "pedicle screw cluster derotation tool" not to be limited to one side of the spine because the specification does not provide that as an objective boundary. Therefore, I adopt Plaintiff's construction of "pedicle screw cluster derotation tool."

**2. "Handle" (claim 2 of the '121 Patent; claim 6 of the '788 Patent)[5]**

a. *Plaintiff's proposed construction*: "A part that is designed especially to be grasped by the hand."

b. *Defendants proposed construction*: "A part that is designed especially to be grasped by the hand (and not merely any part that *may* be grasped by the hand)"

c. *Court's construction*: "Single part that is designed especially to be grasped by the hand."

Both parties agree that a "handle" is at least a part that is designed especially to be grasped by the hand. (D.I. 135 at 17, 23). The dispute with respect to this term is whether the additional parenthetical specifying "and not merely any part that *may* be grasped by the hand" is necessary.

Plaintiff argues that the addition of the parenthetical is improper as it imposes a "negative limitation" on the term that is not supported by the intrinsic evidence. (D.I. 135 at 21). Plaintiff contends that there is no clear disavowal or disclaimer to warrant the addition of the parenthetical.

Defendants argue the clarifying parenthetical is necessary because Plaintiff argued during the '358 Patent IPR proceeding that "handle means" does not include "a part . . . that may be grasped by the hand." (D.I. 135 at 28 (citing D.I. 137, Ex. 21 at 24)). Defendants also cite to arguments raised by Plaintiff during an IPR proceeding that distinguish prior art posts from "handle means" because the posts were not "designed to be grasped by the hand." (D.I. 135 at 29

[5] The parties briefed "handle," "handle means," and "handle member," together. For clarity, I discuss them individually.

(citing D.I. 137 at Ex. 31, 46-47)). Defendants clarify their argument that the proposed "parenthetical is not narrowing, nor is it a negative limitation. It merely clarifies what a 'part especially designed to be grasped by the hand' requires, and it seeks to prevent Plaintiff from deviating from his construction and the clear intrinsic record on the handle terms . . . ." (D.I. 135 at 44-45).

I agree with Plaintiff that "handle" should be construed as "a part that is designed especially to be grasped by the hand" and that the additional parenthetical is not necessary. Defendants concede that the parenthetical does not change the scope of Plaintiff's proposed construction. (D.I. 135 at 31, 44-45). Both parties agree the definition of "especially" is "for a particular purpose." (D.I. 135 at 23, 31 (citing D.I. 137, Ex. 10, Ex. 11)). I agree. Defendants' proposed parenthetical appears to foreshadow a factual dispute about whether specific structures qualify as "handles." There is no claim construction dispute here, because the proposed parenthetical does not affect the scope of the term "handle." There is no reason to include it.

I add the clarification that a "handle" is a "single part" rather than just "a part" so that "handle" is construed to refer to one part. Generally, the use of "a" or "an" is construed to mean one or more. *See KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000). I think this clarification is necessary to limit the scope of "handle" to an individual part, rather than an array of handles. *See infra* Section V.3. My construction is also consistent with the patent specification, which describes a "handle" as just a part of one pedicle screw wrench. (*See, e.g.*, '121 Patent, col. 5:14).

For the reasons discussed, I construe "handle" to mean "a single part that is designed especially to be grasped by the hand."

**3. "Handle Means" (claims 1 and 2 of the '358 Patent; claim 2 of the '121 Patent)**

a. *Plaintiff's proposed construction:* "A part that is designed especially to be grasped by the hand."

b. *Defendant Stryker's proposed construction*: "A part that is designed especially to be grasped by the hand (and not merely any part that *may* be grasped by the hand)."

c. *Defendant SeaSpine's proposed construction*: "An array of linked handles along one side of the spine, each handle designed especially to be grasped by the hand (and not merely any part that may be grasped by the hand)." Or in the alternative: means-plus-function.

d. *Court's construction*: "A part that is designed especially to be grasped by the hand."

The parties propose three different constructions for the term "handle means." Defendant "Stryker's position is that 'handle means' . . . should have the same construction as 'handle.'" (D.I. 135 at 23). Because I have already rejected Defendants' argument for how to construe "handle," and Stryker does not raise specific arguments that only apply to "handle means" and not "handle," I will not address its proposed construction any further. That leaves the dispute between Plaintiff and SeaSpine.

Plaintiff argues the term should have the same construction as the term "handle." (D.I. 135 at 16). Plaintiff argues that limiting the definition of "handle means" to the linked handle array would improperly limit the term to the preferred embodiment disclosed in Figure 1. (D.I. 135 at 18). Plaintiff cites to the patent specification, which states "the presently preferred embodiment includes shafts, extending from a common handle or linked handle array." (D.I. 135 at 18-19 (citing '358 Patent, col. 3:47-50)). Plaintiff argues that "handle means" is described as "part of the 'pedicle screw cluster derotation tool,' the structure to which forces are applied so that they are 'transferred and dispersed.'" (D.I. 135 at 18). Plaintiff contends that these parts of the specification demonstrate that "handle means" is broader than the "linked handle array" embodiment.

Plaintiff further argues that "handle means" should have the same construction as "handle" (i.e., a part designed especially to be grasped by the hand). Plaintiff maintains that providing the same construction for "handle" and "handle means" is proper due to the surrounding context of the claim language. Plaintiff contends that "handle means" "are what the surgeon grasps and are part of linking the levers for *en bloc* derotation: 'having first handle means and a first group of pedicle screw engagement members which are mechanically linked with said first handle means.'" (D.I. 135 at 32-33 (citing '358 Patent, col. 6:14-17)). Therefore, Plaintiff essentially argues that any limitation beyond "a part designed especially to be grasped by the hand" is already present elsewhere in the claim.

Plaintiff argues that §112, ¶ 6 does not apply to "handle means" because the claims and specification recite sufficient structure. (D.I. 135 at 20, 36-37). Plaintiff contends that the claim language recites that "handle means" "are structures that link 'engagement members' and to which derotational force is applied." (D.I. 135 at 20). Plaintiff cites to its expert witness' statement for support that "a [POSA] would understand the 'handle' terms are structures." (D.I. 135 at 20 (citing D.I. 137 Ex. 13, ¶¶ 29-21)).

Plaintiff also argues that "handle means" is not written in a means-plus-function format because no function is ascribed to the term. Plaintiff also cites to the fact that Claim 2 of the '121 discloses that "'handle means' is a structure made up of 'a handle linked to each pedicle screw engagement member . . . and a linking member to join together the handles linked to the pedicle screw engagement members.'" (D.I. 135 at 36 (citing '121 Patent, col. 8:7-12)). Plaintiff contends that the reference to "handles" and "linking members" are sufficient structural components to prevent the application of §112, ¶ 6. (D.I. 135 at 37).

SeaSpine argues that "handle" and "handle means" should be distinct because to give both terms "the same meaning would render the recited 'handle' term superfluous." (D.I. 135 at 24). SeaSpine contends that "handle means" must include something additional to a "part designed especially to be grasped by the hand" when read in the context of the claims and specification.

SeaSpine further argues that "handle means" should be limited to the "linked handle array" structure disclosed in the patent specification ('358 Patent, col. 4:49-6:5; '121 Patent, col. 4:57-6:23), and not include the "common handle structure." (D.I. 135 at 25).[6] SeaSpine argues that a POSA would not read the "common handle structure" to correspond to "handle means" because the "common handle structure" "replace[s]" the linked handle arrays and wrench cross-linking members. (*Id.* at 25 (citing '358 Patent, col. 5:21-28; '121 Patent, col. 5:19-25)). Because the claims of the '121 Patent require linking two handle means with a cross-linking member, SeaSpine contends that the "common handle structure" is not covered by the claims.

In the alternative, SeaSpine argues that "handle means" is subject to §112, ¶ 6. SeaSpine argues that the term is written in a means-plus-function format, and the claims do not recite sufficient structure for performing that function. SeaSpine contends that the '121 Patent claim language describes the function of "facilitating simultaneous application of manipulative forces to [1] a set of pedicle screws and [2] three or more pedicle screw engagement members mechanically linked with the handle means." (D.I. 135 at 26 (citing '121 Patent, cls. 1-2)). If §112, ¶ 6 applies, SeaSpine argues that the only disclosed structure in the specification is the linked handle array described in Figure 1.

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[6] Defendants refer to what I am calling the "common handle structure" as the "common" or "single handle member" structure. (*See, e.g.*, D.I. 135 at 24). The term "handle member," however, is a disputed term. To avoid confusion, I refer to that structure as the "common handle structure."

There is a presumption that §112, ¶ 6 applies because the term uses the word "means." *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). "[T]he presumption that §112, ¶ 6 applies is overcome if the claim itself recites sufficient structure or material for performing the claimed function." *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1318 (Fed. Cir. 1999). Plaintiff has overcome that presumption as the claims in both patents recite sufficient structure.

Claim 1 of the '121 Patent, for example, provides sufficient structure to take this term outside of the realm of §112, ¶ 6. Claim 1 requires a "first handle means having a handle linked to each pedicle screw engagement member of the first group of three or more pedicle screw engagement members and a linking member to join together the handles linked to the pedicle screw engagement members, said first handle means moving each pedicle screw engagement member simultaneously." (*See also* '121 Patent, cl. 2 (similar language)). Thus, "handle means" is described with sufficient structure as the body of the claim describes what structural elements comprise a "handle means."

Defendants do not argue that "handle means" should have a different meaning in the '358 Patent than it does in the '121 Patent. I find that § 112, ¶ 6 does not apply to the '358 Patent. First, the claims are not written in typical means-plus-function format. Claim 1 of the '358 Patent recites,

> said first pedicle screw cluster derotation tool having first handle means and a first group of pedicle screw engagement members which are mechanically linked with said first handle means, each pedicle screw engagement member being configured for engaging with, and transmitting manipulative forces applied to said first handle means to said head segment of each pedicle screw of said first set of pedicle screws, . . .
>
> applying manipulative force to said first handle means in a manner for simultaneously engaging said first group of pedicle screw engagement members and first set of pedicle screws . . . .

('358 Patent, col. 6:14-21; 6:29-33). "Handle means" here is not described in functional terms, but instead as a structure. Second, I find that "handle" is used to designate a class of structures that a POSA would recognize. For example, the parties were able to agree that "handle" refers to a single part that has been "designed especially to be grasped by the hand." *See supra* Section V.2.

I also agree with Plaintiff that "handle means" should not be limited to the "array of linked handles" described in the patent specification.[7] A POSA would not understand the '121 Patent specification to limit "handle means" only to the "linked handle array." The '121 Patent recites,

> This tool, in the presently preferred embodiment includes shafts, extending from a common handle or linked handle array . . . . The engagement between the pedicle screw cluster derotation tool and the individual pedicle screws is such that, as manipulative forces are applied to the handle means of [the] pedicle screw cluster derotation tool, forces are transferred and dispersed simultaneously among the engaged vertebrae.

('121 Patent, col. 3:54-56; *see also* '358 Patent, col. 3:54-59). This part of the specification indicates that "handle means" is a general term that is not limited to the "linked handle array" embodiment. The specification shows that "handle means" should be given a broad construction.

I do not agree with SeaSpine that applying the same construction to "handle means" as "handle" would make "handle" "superfluous" in the '121 Patent (D.I. 135 at 24).[8] First, I have construed "handle" to mean a "single" part and "handle means" to mean "a part," which includes one or more "handles." Thus, I do not give the terms identical constructions.

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[7] I have already rejected the other aspects of SeaSpine's proposed construction that require a "pedicle screw cluster derotation tool" to be limited to one side of the spine and the addition of the unnecessary parenthetical.

[8] The term "handle" does not appear separately from "handle means" in the '358 Patent. Therefore, the "superfluous" argument would not apply in the '358 Patent.

Second, the surrounding claim language makes it clear that a "handle means" is comprised of a handle linked to each pedicle screw engagement member and a linking member. ('121 Patent, cl. 1). The relevant part of the claim is:

> said first handle means having a handle linked to each pedicle screw engagement member of the first group of three or more pedicle screw engagement members and a linking member to join together the handles linked to the pedicle screw engagement members, said first handle means moving each pedicle screw engagement member simultaneously;

('121 Patent, col. 6:40-46). Inserting Plaintiff's proposed construction for "handle means" with my construction of "handle" would have the relevant part of the claim read:

> said first *part that is designed especially to be grasped by the hand* having a single part that is designed especially to be grasped by the hand linked to each pedicle screw engagement member of the first group of three or more pedicle screw engagement members and a linking member to join together the single parts designed especially to be grasped by the hand linked to the pedicle screw engagement members, said first *part that is designed especially to be grasped by the hand* moving each pedicle screw engagement member simultaneously;

('121 Patent, col. 6:40-46) ("handle means" replaced with italicized text and "handle" replaced with underlined text). Using similar constructions for "handle means" and "handle" does not render "handle" superfluous. The surrounding claim language, instead, provides the structural components for "handle means" (e.g., the combination of a handle and a linking member).

I adopt Plaintiff's construction.

**4. "Handle Member" (claim 2 of the '301 patent)**

a. *Plaintiff's proposed construction:* "A part that is designed especially to be grasped by the hand."

b. *Defendant Stryker's proposed construction*: "A part that is designed especially to be grasped by the hand (and not merely any part that *may* be grasped by the hand)"

c. *Defendant SeaSpine's proposed construction*: "Having a single common handle part designed especially to be grasped by the hand (and not merely any part that *may* be grasped by the hand)."

d. *Court's construction*: "Having a single common handle part designed especially to be grasped by the hand."

As with "handle means," each party proposes a different construction for the term "handle member." Plaintiff argues the term should have the same construction as the term "handle." (D.I. 135 at 16). Defendant "Stryker's position is that 'handle member' . . . should have the same construction as 'handle.'" (D.I. 135 at 23). Because I have already rejected Defendant Stryker's argument for how to construe "handle," and Defendant Stryker does not raise specific arguments that only apply to "handle member" and not "handle," I will not address its proposed construction any further. Defendant SeaSpine argues that "handle member" should have a construction that is distinct from "handle" and "handle means."

Plaintiff argues that "handle member," like "handle means," should be given the construction of "a part designed especially to be grasped by the hand." (D.I. 135 at 16). Plaintiff contends that "handle member" should not be read to be limited to the specific embodiment described in the specification. (*Id.* at 18; *see* '301 Patent, col. 5:25-31). Plaintiff argues that the specification does not limit "handle member" to the "common handle structure" because the specification describes "'each pedicle screw cluster derotation tool 30 is configured from a grouping of pedicle screw wrenches 32,' and '[e]ach pedicle screw wrench 32 includes a handle 34.'" (D.I. 135 at 19 (citing '358 Patent, col. 5:1-3, 12)).

Plaintiff also argues that the doctrine of claim differentiation does not support reading "handle means" and "handle member" to refer to different embodiments, but rather that the two terms are used to refer to the full scope of the invention. (D.I. 135 at 33). Plaintiff argues that in

the context of the specification "it is clear that 'handle means' and 'handle member' ***each*** refer to at least the two embodiments described." (*Id.* at 35).

Defendant argues that the only mention of a "handle member" in the '301 Patent specification is as a replacement for the "linked handle array." (D.I. 135 at 27). Defendants contend that the claims where "handle member" is used are only limited to the single handle variation and not the linked handle array variation. (D.I. 135 at 43).

I do not agree with Plaintiff that "[w]hen the claims are read in the context of the specification, it is clear that 'handle means' and 'handle member' ***each*** refer to at least the two embodiments described." I agree with Defendants that "handle member" only refers to the "common handle structure" described in the specification. (*See* '301 Patent, col. 5:25-31). Unlike "handle means," which I construe to have a broad construction because "handle means" is described more generally (*see* '301 Patent, col. 3:61-66), "handle member" only appears once in the specification. There, the patent specification recites, "the multiple wrenches 32, linked by wrench cross linking members 40, depicted in Fig. 1 may be replaced by a single handle member from which extend the functional equivalent of the multiple shafts 36 and shaft distal ends 38 . . . ." ('301 Patent, col. 5:26-29).

Furthermore, Plaintiff acknowledges that the surrounding claim language supports reading "handle member" as referring to the single handle embodiment. As Plaintiff states in the Joint Claim Construction brief, albeit in its discussion of the term "linking member,"

> Claim 2 of the '301 Patent adds a limitation focusing on one of those embodiments: "a handle member configured to be coupled to one or more of said pedicle screw engagement members, said handle member in cooperation with said first linking member . . . ." The language of the claims makes clear that while Claim 1 is broader in its scope, Claim 2 introduces the additional limitation of a single handle member attached to the construct—the embodiment of a single handle from which extend the functional equivalent of the multiple shafts.

(D.I. 135 at 77 (quoting '301 Patent, col. 5:24-40)). Plaintiff argues that the surrounding claim language demonstrates that "handle member" should be construed to be the same as "handle" and "handle means" because "handle member" is used consistently with the way the other terms are used in their respective claims. (D.I. 135 at 35). Claim 2 of the '301 Patent, however, does not use the words "single"[9] or "functional equivalent of multiple shafts." Therefore, Plaintiff's own argument demonstrates that a POSA would read "handle member" to refer to the "single handle member" (or common handle) structure disclosed in the specification, and not include other embodiments.

The Eastern District of Pennsylvania reached a different construction for this claim. (D.I. 137, Ex. 3 at 14 (construing this term to have the same meaning as "handle" and "handle means")). I have considered this decision, but I am not persuaded by its conclusion. I think that court's reasoning supports adopting my construction.

The court's opinion states, "Defendants' proposed constructions seek to narrow impermissibly the term 'handle member' beyond what is contemplated by the claim language. As the specification describes the 'handle member' as having multiple shafts extending from it, there is no reason to include that language within the definition of handle member itself." (D.I. 137, Ex. 3 at 14). The EDPA court agreed that the specification describes "handle member" to refer only to the common handle embodiment described in the specification.

While I agree with the EDPA court that the specification describes "handle member" as referring to the common handle structure as described in lines 5:26-30 of the '301 Patent, I disagree

[9] Claim 8 of the '787 Patent – which is not an asserted claim – does use the language "single handle member" instead of "a handle member." ('787 Patent, col. 10:4-7). I, however, do not read this as undercutting my construction of "handle member" or to require "handle member" without the term "single" to be something broader. This appears to be another way to refer to the "common handle structure."

that "there is no reason to include that language within the definition of the handle member itself." (D.I. 137, Ex. 3 at 14). As *Phillips* counsels, "the 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. *Phillips v. AWH Corp.*, 415 F.2d 1303, 1315 (Fed. Cir. 2005). Therefore, it is because the specification describes "handle member" that the language from the specification should be included in the definition of the disputed term. While I must not import limitations from the specification into the claims, as Plaintiff notes, the claim language is consistent with this limitation as well.

Therefore, I find that "handle member" should be limited to the common handle embodiment. I adopt Defendant SeaSpine's proposed construction.

**5. "Second Group of [Multiple] Vertebrae" (claims 2 and 3 of the '358 patent; claim 1 of the '121 patent; claim 6 of the '301 patent)**

a. *Plaintiff's proposed construction*: Plain and ordinary meaning.

b. *Defendants' proposed construction*: "a group of vertebrae different from the 'first group of vertebrae'"

c. *Court's construction*: Plain and ordinary meaning.

The parties disagree as to whether the "second group of multiple vertebrae" can be identical to the "first group of multiple vertebrae." (D.I. 135 45-46). The parties agree the two groups can at least have overlapping members. (*Id.* at 46, n.2).

Plaintiff argues that the plain and ordinary meaning is applicable and that the claims do not require the second group of vertebrae be different from the first group. Plaintiff contends that despite using the terms "first" and "second" to refer to the groups, the claims do not preclude these groups from being identical. Plaintiff also contends that configurations beyond what is disclosed

in Figure 1 are covered because the specification refers to Figure 1 as a "preferred embodiment" and "contemplates '[s]ignificant variations.'" (*Id.* at 49).

Defendants argue, "[N]othing in the claim language suggests that 'first' is identical with 'second.'" (*Id.* at 46). Defendants contend that the "plain meaning" of having a first group and second group is that they "do not refer to the identical group of vertebrae." (*Id.* at 46-47). Defendants further argue that the two groups cannot refer to identical group of vertebrae because dependent claim 2 of the '358 Patent includes steps of rotating and securing the second group of vertebrae, which would be "meaningless" if this group referred to the first group that was already rotated and secured under claim 1 of the '358 Patent. (*Id.* at 50).

Defendants also contend that by describing "the invention as applying force 'to all to-be-derotated vertebrae' with said force being 'dispersed throughout the affected spinal segments or regions,'" the groups must be different. If the groups were identical, Defendants argue that dispersing force to the "second group" via the second tool is nonsensical because force would have already been applied to the vertebrae as the "first group" via the first tool. Defendants also cite to *Sysmex Corp. v. Beckman Coulter, Inc.*, 2021 WL 1259710, at *10 (D. Del. Apr. 6, 2021), *report and recommendation adopted*, 2022 WL 1237787 (D. Del. Apr. 27, 2022), and *3M Innovation Props. Co. v. Avery Denison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003) for support that using language "first" and "second" to refer to different things is "customary." (D.I. 135 at 47).

I adopt Plaintiff's construction. First, there is nothing in the patent specification that requires the "first" and "second" groups of vertebrae to be different. While Figure 1 shows that the "first" and "second" groups are not identical, this is a preferred embodiment, which cannot be read to limit the scope of the claim terms. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en banc).

I also do not read the statement that Defendants cite to in the background of invention section to require "first" and "second" groups to be different. This section in its entirety reads,

> To achieve such an objective, force must be applied safely to all to-be-derotated vertebrae, and the forces necessary to reconfigure all, or at least a substantial portion of the spinal column must be dispersed throughout the affected spinal segments or regions. Nothing in the prior art satisfies these requirements, either individually or in combination.

('358 Patent, 2:67-3:5). I agree with Plaintiffs that this part of the specification describes "the general concept of applying forces safely 'to all to-be-derotated vertebrae,'" not a specific form of embodiment. (D.I. 135 at 49). As Plaintiff notes, having the two groups of vertebrae be identical does not prevent this objective from being achieved. (*Id.*).

I do not read Plaintiff's choice to use the terms "first" and "second" to compel an understanding that the groups must be different. Defendants' citation to case law undermines their argument. In each of those cases, the courts determined that "first" and "second" referred to different things because in those patents the language of the claims and specification ascribed different attributes to the two things at issue. *See 3M Innovation*, 350 F.3d at 1368 (finding the "first pattern" and "second pattern" were different as the preferred embodiment and claims gave them different functions); *Sysmex*, 2021 WL 1259710, at *10 (finding "a second test result screen" could not both show blood measuring mode like the "first test result screen" when dependent claims required the second screen to not be blood measuring mode and the specification "strongly suggested" the second screen was not blood measuring mode). In this case, the claim language does not require the first and second groups of vertebrae to be different or to serve different functions.

I adopt Plaintiff's construction.

**6. "Amelioration of Aberrant Spinal Column Deviation Conditions" (claims 1 and 2 of the '358 patent; claim 2 of the '121 patent)**

a. *Plaintiff's proposed construction*: Not limiting. Plain and ordinary meaning.

b. *Defendants' proposed construction*: "to move the spinal column in a corrected configuration"

c. *Court's construction*: Limiting when it appears in the body of the claim. Not limiting when it appears in the preamble. Plain and ordinary meaning.

There are two disputes with respect to this term. First, the parties dispute as to whether this term is limiting in the claim. Second, if it is limiting, the parties disagree over the meaning of the term.

Plaintiff contends that "amelioration" is just an intended purpose of the invention and is not limiting. Plaintiff argues that despite appearing in the body of the claim, the term is not limiting, but instead "merely contextual as the claims themselves detail the 'movement' required for 'amelioration.'" (D.I. 135 at 57). Plaintiff argues that Defendants' proposed construction recasts the intended purpose of the invention as "completing surgeries" by defining this term as moving the spine to a corrected configuration. (*Id.* at 58). Plaintiff cites to the Federal Circuit's prior consideration of "amelioration" to include "the long-term effects, efficacy, and safety of the procedure" for support. (*Id.* (citing *Barry v Medtronic*, 914 F.3d 1310, 1320-21 (Fed. Cir. 2019))). The construction may be significant to a later validity challenge. (D.I. 135 at 58).

Defendants argue that Plaintiff is using the "amelioration" language to read in a post-operation limitation into the claims for purposes of validity, but not for infringement. (D.I. 135 at 54). Defendants cite to the body of the claim which "requires an 'amelioration of an aberrant spinal column condition' before the engagement means can be actuated to secure the vertebrae in the corrected configuration achieved during the amelioration step" (*id.* at 55 (emphasis omitted)), to argue that this claim term acts as a limitation accomplished during the surgical procedure.

The Federal Circuit's prior ruling on this term only considered the term in the context of the claim preambles for the '358 Patent and the '121 Patent. *See Barry*, 914 F.3d at 1324 ("Even in this case, the claim language that Medtronic treats as identifying 'the intended purpose' is preamble language that, it is undisputed here, is not limiting, *i.e.*, it does not state a requirement that must be proved to establish infringement."). Therefore, whether the term as recited in the body of claims 1 and 2 of the '358 Patent is limiting is a matter not previously disputed by the litigants in the Federal Circuit and therefore not addressed by that court.

As an initial matter, I do not construe the term to be limiting when it is recited in the preambles of claims 1 and 2 of the '358 Patent and claim 2 of the '121 Patent. This is consistent with the Federal Circuit's ruling. *See Barry*, 914 F.3d at 1324. "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." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (citation and quotation marks omitted). "The preamble may be limiting to the extent it is necessary to provide antecedent basis for the body of the claim." *Cochlear Bone Anchored Solutions AB v. Oticon Medical AB*, 958 F.3d 1348, 1355 (Fed. Cir. 2020) (quoting *Symantec Corp. v. Computer Assoc. Int'l, Inc.*, 522 F.3d 1279, 1288 (Fed. Cir. 2008)). In addition, the preamble may be limiting when the preamble "is essential to understand limitations or terms in the claim body," recites "additional structure or steps underscored as important by the specification," or there was "clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art." *Catalina*, 289 F.3d at 808.

Claim 2 of the '121 Patent claims a system and the body of the claim provides a complete structure for that system. ('121 Patent, cl. 2). It is not proper to read the preamble as limiting here because it is merely reciting an intended purpose or benefit, not a structure or limitation.

I also do not construe the preambles of the claims 1 and 2 of the '358 Patent as limiting either. First, the preamble is not providing an antecedent basis for the term as the preamble recites "a method for aligning vertebrae in the amelioration of aberrant spinal column deviation conditions" ('358 Patent, col. 6:7-8), and the claim bodies recite "to achieve an amelioration of an aberrant spinal column deviation condition." ('358 Patent, col. 6:36-37, 7:14-15). The use of "an amelioration" rather than "the amelioration" in the body indicates the term in the body is not referring back to the term in the preamble. Second, the preamble is not providing an essential step because the body of the claims already recite steps where an amelioration is achieved. ('358 Patent, col. 6:36-37, 7:14-15). Furthermore, at the Markman Hearing counsel for Stryker clarified that its proposed construction applied to the term as it appeared in the body of the claim. (Markman Hearing Tr. 20:24-21:2 ("[T]he language . . . that we're construing is the body of Claim 1 of the '358 patent.").

I agree with Defendants that the term is limiting when it is recited in the body of the claim of the '358 Patent and that it is not merely contextual. Specifically, the body of claim 1 of the '358 Patent requires "applying manipulative force to said first handle means . . . and thereby in a single motion simultaneously rotating said vertebrae of said first group of multiple vertebrae in which said pedicle screws are implanted to achieve an amelioration of an aberrant spinal column deviation condition." In this context, "an amelioration of an aberrant spinal column deviation" is doing more than just serving as a reference point. I find Defendants' argument that movements of the spine into worse configurations would be covered by the claim if this term were not given patentable weight persuasive. (*See* Markman Hearing Tr. 28:19-29:4). Furthermore, claim 1 of the '358 Patent states that actuating the spinal rod engagement means to secure the vertebrae in place occurs "after applying said manipulative force to said first handle means." ('358 Patent, col. 6:52-

54). Thus, the amelioration is something that occurs during the surgery. I find this claim term is a limitation as recited in the body of the claim.

I construe this term, however, to have its plain and ordinary meaning. In its briefing, Plaintiff states that amelioration means to make something better or to improve. (D.I. 135 at 52-53). Defendants agree, stating that "the 'amelioration' phase refers to the surgeon 'using the invention' during a surgery to improve a spinal deformity. Once the surgeon is satisfied the desired amelioration is achieved, the vertebrae are secured in their corrected configuration 'as achieved' during surgery." (D.I. 135 at 54 (emphasis omitted)). As noted, I have construed the "amelioration" term to be limiting as it appears in the body of the claim, which would be a step conducted during surgery. As Defendants agree that "to improve a spinal deformity" is a permissible meaning of "to ameliorate" in the context of the claims, and that meaning is consistent with the plain and ordinary meaning advanced by Plaintiff, there is no actual dispute as to meaning.

Therefore, I construe "amelioration of aberrant spinal column deviation conditions" to be limiting when it appears in the body of claims 1 and 2 of the '358 Patent, and to have its plain and ordinary meaning. I construe "amelioration of aberrant spinal column deviation conditions" not to be limiting when it appears in the preamble of claims 1 and 2 of the '358 Patent and claim 2 of the '121 Patent.

**7. "Linking Member to Join Together the Handles Linked to the Pedicle Screw Engagement Members" (claim 2 of the '121 Patent)**

a. *Plaintiff's proposed construction*:[10] Not means-plus-function. The term should be given its plain and ordinary meaning.

If the Court construes the term as means-plus function:[11]

[10] (D.I. 135 at 61).

[11] (D.I. 135 at 69).

| Function | Corresponding Structure |
|---|---|
| "to link handle ends of pedicle screw engagement members" | "a structure capable of linking together multiple handle ends of engagement members (5:8-13), a structure capable of linking together the functional equivalent of multiple shafts (5:24-27), and equivalents thereof." |

b. *Defendants' proposed construction*: means-plus-function.

| Function | Corresponding Structure |
|---|---|
| "joining together the handles linked to the pedicle screw engagement members" | "pedicle screw wrench linking member 42, depicted in Figure 1 as a rod through the handles of the pedicle screw cluster derotation tool 30." |

c. *Court's construction*: means-plus-function.

| Function | Corresponding Structure |
|---|---|
| "joining together the handles linked to the pedicle screw engagement members" | "pedicle screw wrench linking member 42, as described in Figure 1, and lines 5:10-13, or single handle member as described in lines 5:24-27." |

The parties dispute whether "linking member" should be construed under 35 U.S.C. § 112, ¶ 6 as a means-plus-function limitation.

"Linking member" is presumptively not subject to construction under § 112, ¶ 6 because it does not recite the word "means." *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015). "When a claim term lacks the word 'means,' the presumption can be overcome and § 112, [¶] 6 will apply if the challenger demonstrates that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function.'" *Id.* at 1349 (quoting *Watts v. WL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)). "What is important is . . . that the term, as the name for structure, has a reasonably

well understood meaning in the art." *Greenberg v. Ethicon Endo–Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996).

Defendants argue that "linking member" is subject to § 112, ¶ 6 because, "while the 'linking member' term does not use the word 'means,' . . . the word 'member' is used as a generic placeholder term that operates as a substitute for the term means." (D.I. 135 at 63). Defendants contend that the claim language "only recite[s] a 'linking member' in terms of its function – 'joining the handles together' – without reciting a sufficiently definite structure for performing such function." (*Id.* at 54). Defendants also argue that "linking member" has no specific meaning to a POSA as a name for a sufficiently definite structure. (*Id.*).

Plaintiff counters that the claim limitations are "written in structural terms – 'handle means' is a part designed especially to be grasped by the hand that is created by joining 'engagement members' structures with 'linking members.'" (*Id.* at 67). Plaintiff cites to its expert's opinion for support that "[s]tructures to link together levers are readily envisioned from the language." (*Id.* (citing D.I. 137, Ex. 13, ¶¶ 32-37)). Plaintiff argues that the claim limitations disclose sufficient structure for "linking members" as they describe "what must be linked" – the handles or the handle ends of engagement members – and "what is required of the linking" – connecting the handles "so that force is distributed simultaneously." (*Id.* at 67-68). Plaintiff characterizes the term "linking member" as a device that takes its name from the function it performs, such as "filter," "brake," or "screwdriver." (Markman Tr. 99:2-7). Plaintiff notes that two district courts have construed "linking member" to have its plain and ordinary meaning. (*Id.* at 63; D.I. 137. Ex. 2 at 39-40; D.I. 137, Ex. 3 at 27-28).

I agree with Defendants that "linking member" is a means-plus-function limitation. Defendants have overcome the presumption that "linking member" is not subject to § 112, ¶ 6 by showing the claim fails to "recite sufficiently definite structure." *See Williamson*, 792 F.3d at 1349.

"One way to demonstrate that a claim limitation fails to recite sufficiently definite structure is to show that, although not employing the word 'means,' the claim limitation uses a similar nonce word that can operate as a substitute for 'means' in the context of § 112, ¶ 6." *MTD Products Inc. v. Iancu*, 933 F.3d 1336, 1341 (Fed. Cir. 2019) (citation omitted). "[A] critical question is whether 'the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure,' including either a particular structure or class of structures." *Id.*

I find that a POSA would not understand "linking member" to have a sufficiently definite meaning as the name for a structure or class of structures. "It is a non-structural generic placeholder (member) modified by functional language . . . ." *Kyocera Senco Indus. Tools Inc. v. Int'l Trade Commission*, 22 F.4th 1369, 1380 (Fed. Cir. 2022).

While Plaintiff argues that "linking member" is one of those devices that takes its name from the function it performs, I am not persuaded that "linking member" qualifies as such a device. "Linking member" is not like the other examples of devices named after the function they perform because there is no evidence to suggest that it has "a generally understood structural meaning in the art." *See Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1213-14 (Fed. Cir. 1998). For example, Plaintiff's expert, Dr. Yassir, states "a person [of] ordinary skill in the art would understand . . . [the term] and scope with reasonable certainty" (D.I. 137, Ex. 13 at ¶¶ 33), but he does not state or show that "linking member" is a term with a generally understood meaning in the art to refer to a structure or class of structures. *Cf. Greenberg*, 91 F.3d at 1584 (finding § 112, ¶ 6 did not apply to "detent mechanism" because dictionary definitions and expert testimony showed

"'detent' denotes a type of device with a generally understood meaning in the mechanical arts"). Therefore, I find the term "linking member" itself does not provide sufficiently definite meaning for structure.

The use of a nonce term followed by functional language, however, does not automatically mean § 112, ¶ 6 applies. "[O]ther language in the claim 'might inform the structural character of the limitation-in-question or otherwise impart structure' to the claim term." *MTD Products*, 933 F.3d at 1342 (quoting *Williamson*, 792 F.3d at 1351).

I find that the surrounding claim language fails to provide sufficiently definite structure to avoid § 112, ¶ 6. Claim 2 of the '121 Patent recites "a linking member to join together the handles linked to the pedicle screw engagement members." ('121 Patent, col. 8:10-12). The claim language just defines what the linking member does: link the handle ends of engagement members. Plaintiff's expert opines that the claim language "describes a structure that can link multiple handles – things designed especially to be grasped by the hand – together" and that a POSA "would read claim 2 of the '121 patent to know a structure that connects the engagement members and handles is what is claimed." (D.I. 135, Ex. 13 ¶¶ 35, 37). But Plaintiff's expert is essentially saying that any structure that can connect the handle parts of engagement members is a "linking member." This is not sufficient when the claim term is not well understood as a name for sufficiently definite structure. *Compare Nichia Corp. v. TCL Multimedia Tech. Holdings*, 2017 WL 5719267, at *8 (D. Del. Nov. 28, 2017) (applying § 112, ¶ 6 to the term "reflective member" where the expert opined that any structure that reflected light could be a "reflective member" without showing the term was understood as the name for sufficiently definite structure) *and Mas-Hamilton*, 156 F.3d at 1214 (applying § 112, ¶ 6 to "lever moving element" where the term lacked a generally understood structural meaning and not applying § 112, ¶ 6 would mean "'moving element' could be any device

that can cause a lever to move"), *with Greenberg*, 91 F.3d at 1583 (finding § 112, ¶ 6 did not apply to "detent mechanism" despite it "not call[ing] to mind a single well-defined structure" because dictionary definitions and expert testimony demonstrated it had a reasonably well understood meaning in the art as a name for structure).

Furthermore, Plaintiff's argument that § 112, ¶ 6 does not apply because the surrounding claim language discloses structural elements, "including what must be linked and what is required of the linking" (D.I. 135 at 67), misses the mark. "[T]he recitation of some structure in a means-plus-function element does not preclude the applicability of § 112[, ¶ 6]." *K2M, Inc. v. OrthoPediatrics Corp.*, 2018 WL 2426660, at *1, n.2 (D. Del. May 30, 2018) (quoting *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1536 (Fed. Cir. 1991)). Furthermore, even though the claim language discloses "what must be linked and what is required of linking" (D.I. 135 at 67), this language describes the function of the "linking members," not their structure. *See Al-Site Corp. v. VSI Intern., Inc.*, 174 F.3d 1308, 1318-19 (Fed. Cir. 1999) (holding § 112, ¶ 6 did not apply to "eyeglass hanger member" because the claim disclosed structural limitations such as "'made from a flat sheet material' with an 'opening means formed . . . below [its] upper edge'"); *K2M*, 2018 WL 2426660, at *1, n.2 ("Indeed, the claim language here neither provides a list of structure underlying the grasping means nor does it provide a detailed recitation of the structure for performing the function of grasping a bone anchor."); *cf. Laitram*, 939 F.2d at 1536 (finding the disclosure of structure in the claim language did not remove "means for joining" from § 112, ¶ 6 because the recited structure instructed what the "means-for-joining does, not what it *is* structurally").

My construction is different than the ones adopted by the District Courts of the Eastern District of Texas, *Barry v. Medtronics*, 2015 WL 13906208 (E.D. Tex. Dec. 22, 2015) (D.I. 137,

Ex. 2), and the Eastern District of Pennsylvania, *Barry v. Globus Med., Inc.* and *Barry v DePuy Synthes Prods., Inc.*, EDPA Case No. (Consolidated) 17-2998) (D.I. 137, Ex. 3), which did not construe this term as a means-plus-function limitation. The issue of whether § 112, ¶ 6 applied to "linking member" was not raised in *Medtronics.* (D.I. 137, Ex. 2 at 38-42). I disagree with the Eastern District of Pennsylvania's conclusion, for the reasons stated above.

Construing a means-plus-function claim term is a two-step process. *Williamson*, 792 F.3d at 1351. The first step is to identify the claimed function. "The identified function must be the function 'explicitly recited in the claim.'" *Nichia*, 2017 WL 5719267, at *8 (quoting *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999)). The second step is "to determine what structure, if any, disclosed in the specification corresponds to the claimed function." *Williamson*, 792 F.3d at 1351. "Structure disclosed in the specification qualifies as 'corresponding structure' if the intrinsic evidence clearly links or associates that structure to the function recited in the claim." *Id.* at 1352.

Despite the differences in language, the parties are in close agreement on the claimed function of "linking member." The two differences are that Plaintiff proposes the verb "link" where Defendants propose "join" and Plaintiff proposes that the "linking member" links the "handle ends of pedicle screw engagement members" where Defendants propose that what are joined are the "handles linked to the pedicle screw engagement members." (D.I. 135 at 61, 69). I do not read these slight differences to conflict with each other or alter the scope of what a "linking member" does. In addition, neither party identifies any issue with the proposed function identified by the other party. (D.I. 135 at 69-70). I choose to adopt Defendants' construction, as its language is what is explicitly recited in claim 2 of the '121 Patent. ('121 Patent, col. 8:10-12).

The parties agree in part on the structures disclosed in the specification that correspond to the claimed function. Both parties agree that a corresponding structure for "linking member" is the "pedicle screw wrench linking member 42" as described in Figure 1 and lines 5:10-13 of the '121 Patent.[12]

The parties disagree as to whether the corresponding structure for "linking member" should also include "a single handle member from which extend the functional equivalent of the multiple shafts 36 and shaft distal ends 38 for simultaneously engaging multiple pedicle screws 10." ('121 Patent, col. 5:25-27).

Defendants argue that this part of the specification is not a corresponding structure for two reasons. First, Defendants contend "the claims explicitly require linking together the handles of the handle means, not a significant variation's 'functional equivalent' as Plaintiff suggests." (D.I. 135 at 66) (emphasis omitted). I take this to mean that Defendants are arguing that a POSA would not recognize this part of the specification as a corresponding structure. *See, e.g.*, *B. Braun Med., Inc. v. Abbott Lab'ys*, 124 F.3d 1419, 1424 (Fed. Cir. 1997) ("We hold that . . . structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim."). Second, Defendants argue that this part of the specification fails to describe a corresponding structure because it "only makes a generic reference to an undisclosed functional equivalent of the derotation tool depicted in Figure 1." (D.I. 135 at 66).

[12] Defendants in their briefing cite to lines 5:1-4 of the '358 patent, which corresponds to the same text as lines 5:10-13 in the '121 Patent. Plaintiff's proposed structure also includes lines 5:8-9 in the '121 Patent, but these lines just refer to Figures 1-4 and 7, and the "pedicle screw cluster derotation tool 30" generally, and do not add anything with respect to the structure of a "linking member."

Plaintiff counters, "Defendants' proposed construction is improperly limited to a preferred embodiment, when the specification contemplates other structures." (D.I. 135 at 68). Plaintiff argues that there are disclosures of two structures in the specification, one at lines 5:8-20 of the '121 Patent, and another one following at lines 5:21-37, and that Defendants' construction improperly only includes the former.

I agree with Plaintiff that the embodiment, specifically as detailed in lines 5:24-27 of the '121 Patent, includes a corresponding structure to the term "linking member." As discussed in the context of the "handle means" term, a POSA would recognize lines 5:21-37 of the specification to illustrate an alternative embodiment of the pedicle screw cluster derotation tool and that the single handle member (or common handle structure) is an embodiment of "handle means." Because the claim language recites a "handle means" has a "linking member" (*see, e.g.*, '121 Patent, col. 8:7-10 ("handle means having . . . a linking member")), I find that a POSA would understand this part of the specification to correspond to the claim limitation for "linking member" as well.

I agree with Plaintiff that the '121 Patent also has adequate structure for the alternative embodiment of "linking member." The proper inquiry here is "whether one of skill in the art would understand the specification itself to disclose the structure, not simply whether that person would be capable of implementing that structure." *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1212 (Fed. Cir. 2003). "[T]he patentee need not disclose details of structures well known in the art, *see S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1371 (Fed. Cir. 2001), the specification must nonetheless disclose some structure," *Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1302 (Fed. Cir. 2005) (full citation added). Plaintiff has done that here with respect to "linking members." The patent's specification discloses structure for "linking member" as it describes using a "single handle member from which extend the

functional equivalents of the multiple shafts 36." ('121 Patent, col. 5:21-37). The single handle member, which as discussed includes the "linking member," is the structure joining the shafts.

Therefore, I construe the structure of "linking member" to be the pedicle screw wrench linking member 42, as described in Figure 1, and lines 5:10-13, or single handle member as described in lines 5:24-27.

**8. "Linking Member" (claim 1 of the '301 patent; claims 1 and 6 of the '788 patent)**

a. *Plaintiff's proposed construction*:[13] Not means-plus-function, not indefinite, and should be given its plain and ordinary meaning.

If the Court construes the term as means-plus function:[14]

| Term | Function | Corresponding Structure |
|---|---|---|
| "Linking Member" (of the '301 patent) | "to link pedicle screw engagement members" | "a structure capable of linking together multiple handle ends of engagement members ('301 patent at 5:11-16), a structure capable of linking together the functional equivalent of multiple shafts ('301 patent at 5:26-30), and equivalents thereof." |
| "Linking Member" (of the '788 patent) | "to link elongated levers" | "a structure capable of linking together multiple handle ends of elongated levers ('788 patent at 5:29-35), a structure capable of linking together the functional equivalent of multiple shafts ('788 patent at 5:45-48), and equivalents thereof." |

b. *Defendants' proposed construction*: means-plus-function.

[13] (D.I. 135 at 70).
[14] (D.I. 135 at 78).

| Term | Function | Corresponding Structure |
|---|---|---|
| "Linking Member" (of the '301 patent) | "interconnecting the [first/second] set of two or more pedicle screw engagement members such that the application of rotative force in the single motion to said pedicle screw engagement members simultaneously moves all of the interconnected pedicle screw engagement members" | Indefinite: no "linking member" is disclosed in the specification in the absence of a handle.<br><br>*Defendant Stryker's proposed alternative structure:* "a common handle or linked handle array from which the pedicle screw engagement members extend; handles 34 and pedicle screw wrench linking member 42 of a pedicle screw cluster derotation tool 30 as depicted in Fig. 1". |
| "Linking Member" (of the '788 patent) | "linking at least two of the elongated levers in a axial direction such that they move in unison" | Indefinite: no "linking member" is disclosed in the specification in the absence of a handle.<br><br>*Defendant Stryker's proposed alternative structure:* "a common handle or linked handle array from which the pedicle screw engagement members extend; handles 34 and pedicle screw wrench linking member 42 of a pedicle screw cluster derotation tool 30 as depicted in Fig. 1". |

*Defendant Stryker's proposed alternative construction:* If the Court construes the terms as not means-plus-function, in the alternative: "a member for interconnecting a set of two or more pedicle screw engagement members."

c. *Court's construction*: means-plus-function

| Term | Function | Corresponding Structure |
|---|---|---|
| "Linking Member" (of the '301 patent) | "to interconnect the [first/second] set of two or more pedicle screw engagement members such that the application of rotative force in the single motion to said pedicle screw engagement members simultaneously moves all of the interconnected pedicle screw engagement members" | "pedicle screw wrench linking member 42, as described in Figure 1, and lines 5:13-16, or single handle member as described in lines 5:25-31." |
| "Linking Member" (of the '788 patent) | "to link at least two of the elongated levers in a axial direction such that they move in unison" | "pedicle screw wrench linking member 42, as described in Figure 1, and lines 5:31-35, or single handle member as described in lines 5:46-50." |

The dispute over this term mirrors the dispute over "linking member" in the '121 Patent. (D.I. 135 at 71 ("Just as with the '121 Patent . . . ."), 72 ("Similar to 'linking member' recited in the '121 Patent . . . .").

Defendants argue that "linking member" is subject to § 112, ¶ 6 because a POSA "would not understand a 'linking member' as identifying any particular structure, and the claims of the '301 and '788 Patents only recite 'linking member' in terms of its function." (*Id.* at 72).

Plaintiff argues that a POSA "would understand 'linking member' here is structure permitting the creation of a 'handle means' by allowing the distribution of force to the linked pedicle screws and not limited to the example 'handle means' shown in Figure 1." (D.I. 135 at 72). Plaintiff also argues that means-plus-function does not apply because the claim language shows that "'linking member' is structure that interconnects the engagement members, which are other structures attached to different vertebrae, to rotate simultaneously the vertebrae." (*Id.* at 75). In the

alternative, Plaintiffs argue that if the claim is means-plus-function, then "'linking member' should be construed to have the same structure as in the '121 Patent for the same reasons." (*Id.* at 78).

I find that "linking member" is subject to § 112, ¶ 6 for the same reasons as "linking member" in the '121 Patent. The presumption that § 112, ¶ 6 does not apply because of the absence of the word "means" has been overcome because a POSA would not understand "linking member" to have a sufficiently definite meaning as the name for a structure or class of structures. *See supra* Section V.7; *Kyocera Senco Indus. Tools Inc. v. Int'l Trade Commission*, 22 F.4th 1369, 1380 (Fed. Cir. 2022). In addition, the surrounding claim language fails to provide sufficiently definite structure to avoid § 112, ¶ 6.

For example, claim 1 of the '301 Patent recites "said first set of pedicle screw engagement members being interconnected by a first linking member such that application of rotative force in the single motion to said pedicle screw engagement members simultaneously moves all of the interconnected pedicle screw engagement members." ('301 Patent, cl. 1). Just like in the '121 Patent, the claim language is describing what the "linking member" does (i.e., connecting pedicle screw engagement members in a way to permit simultaneous movement), not what it is structurally.[15] While Plaintiff's expert states means-plus function treatment is not required, he cites to the "same reasons" offered for "linking member" in the '121 Patent, which I found to be insufficient. (D.I. 137, Ex. 13, ¶¶ 39, 41).

I now turn to construing the means-plus-function claim term. Despite the differences in language, the parties are in close agreement on the claimed function of "linking member." I do not

[15] It is the same case for the '788 Patent. Claim 1 of the '788 merely describes "a linking member configured to link at least two of the elongated levers in a axial direction such that they move in unison." ('788 Patent, cl. 1). This claim language only describes what is being linked, which addresses the function rather than the structure of "linking member."

read these slight differences to conflict with each other or to alter the scope of what a "linking member" does, and neither party identifies any issue with the proposed function identified by the other party. (D.I. 135 at 78-79).[16] While Plaintiff's construction omits language regarding "simultaneous movement" or "moving in unison," Plaintiff does not dispute that is what "linking members" do. (D.I. 135 at 75 ("The claims show the 'linking member' is structure that interconnects the engagement members, which are other structures attached to different vertebrae, to rotate simultaneously the vertebrae."). Because Defendants' construction comes directly from the language within the body of the claims, I adopt Defendants' construction.

The parties dispute what the corresponding structure is for this means-plus-function claim term. Plaintiff argues that these "linking member" terms should have the same structure as applied to the "linking member" term in the '121 Patent because the specification discloses two embodiments of a structure that links together elongated levers or pedicle screw engagement members. (D.I. 135 at 78).

Defendants argue that term is indefinite because the specification fails to disclose any structure that interconnects pedicle screw engagement members and elongated levers. Defendants argue that the closest structure to a "linking member" is the single rod joining handles and cross-linking members in Figure 1. (*Id.* at 74). Defendants argue this cannot be a "linking member" because the rod is only joining "handles" not "pedicle screw engagement members" (*Id.*). Defendants contend that the only other linking structure disclosed is the cross-linking member in Figure 1, which connects rods 42 across the spine. In the alternative, Defendant Stryker argues "that structure must (at least) be limited to a common handle or linked handle array" because these

[16] I construe "linked" to mean "connected." *See infra* Section V.11. Therefore, I see no difference between using "to link" and "to interconnect" as the verb choice.

are the only structures in the specification "that even arguably interconnect[] multiple pedicle screw engagement members." (D.I. 135 at 75).

As an initial matter, I do not find the term to be indefinite based on the argument that the specification does not disclose a structure. The '301 Patent recites, "As depicted in FIG. 1, each pedicle screw cluster derotation tool 30 is configured from a grouping of pedicle screw wrenches 32, by a pedicle screw wrench linking member 42 joined together to act in unison during use." ('301 Patent, col. 5:12-16).[17] It is true that Figure 1 depicts the linking member acting on the handles, but the patent specification does clarify that "pedicle screw wrench 32 includes a handle 34." ('301 Patent, col. 5:16). Given that the specification explicitly states that the "wrench linking member 42" joins the group of pedicle screw wrenches and Figure 1 is not contrary to that idea, a POSA would recognize this structure as corresponding to "linking member."

Similarly, a POSA would also recognize the disclosure of using a "single handle member from which extend the functional equivalent of multiple shafts 36 and shaft distal ends 38 for simultaneously engaging multiple pedicle screws 10" as a replacement for the multiple wrenches as another possible structure. ('301 Patent, col. 28-30).

Because these are the only two structures or embodiments disclosed in the patent specification, the structure of the "linking member" is limited to these terms. Therefore, I agree with Defendant Stryker's alternative construction.[18]

**9. "Cross-Linking Member/Cross-Linking Member that Links the First Handle Means to the Second Handle Means" (claim 2 of the '121 patent; claim 1 of the '301 patent; claims 1 and 6 of the '788 patent)**

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[17] The '788 Patent has identical language. (*See* '788 Patent, col. 5:31-35).

[18] While this construction differs from Plaintiff's alternative proposed construction, it is consistent with Plaintiff's overall argument that "linking member" as used in these patents should have the same structure as those used in the '121 Patent.

a. *Plaintiff's proposed construction*:[19] Not means-plus-function, not indefinite, and should be given their plain and ordinary meaning.

If the Court construes the term as means-plus-function:[20]

| Term | Function | Corresponding Structure |
|---|---|---|
| "Cross-Linking Member" (of the '301 patent) | "to link the first and second set of pedicle screw engagement members" | "a structure capable of linking together multiple handle ends of engagement members (5:11-16), a structure capable of linking together the functional equivalent of multiple shafts (5:26-30), and equivalents thereof." |
| "Cross-linking Member" (of the '788 patent) | "to link at least two elongated levers in a transverse" | "a structure capable of linking together multiple handle ends of elongated levers (5:29-35), a structure capable of linking together the functional equivalent of multiple shafts (5:45-48), and equivalents thereof." |

b. *Defendants' proposed construction*:[21] means-plus-function.

| Term | Function | Corresponding Structure |
|---|---|---|
| "Cross-Linking Member" (of the '121 patent) | "linking the first handle means to the second handle means" | "wrench cross-linking member 40, depicted in Figure 1 between the linked handles of the pedicle screw cluster derotation tool 30"<br><br>Otherwise indefinite since there is no "cross-linking |

[19] (D.I. 135 at 70).

[20] (D.I. 135 at 78). Plaintiff does not propose a means-plus-function construction for the term when it appears in claim 2 of the '121 Patent.

[21] (D.I. 135 at 79).

| | | |
|---|---|---|
| | | member" disclosed in the specification in the absence of a handle. |
| "Cross-Linking Member" (of the '301 patent) | "interconnecting the first set of pedicle screw engagement members and the second set of pedicle screw engagement members" | "wrench cross-linking member 40, depicted in Figure 1 between the linked handles of the pedicle screw cluster derotation tool 30"<br><br>Otherwise indefinite since there is no "cross-linking member" disclosed in the specification in the absence of a handle |
| "Cross-Linking Member" (of the '788 patent) | "linking at least two of the elongated levers in a transverse direction such that they move in unison" | "wrench cross-linking member 40, depicted in Figure 1 between the linked handles of the pedicle screw cluster derotation tool 30"<br><br>Otherwise indefinite since there is no "cross-linking member" disclosed in the specification in the absence of a handle. |

If the Court construes the terms as not means-plus-function, in the alternative: "a member that links across the spine."

c. *Court's construction*: means-plus-function.

| Term | Function | Corresponding Structure |
|---|---|---|
| "Cross-Linking Member" (of the '121 patent) | "linking the first handle means to the second handle means" | "wrench cross-linking member 40, depicted in Figure 1 and lines 5:22-24, or a single handle member as described in lines 5:24-28" |
| "Cross-Linking Member" (of the '301 patent) | "interconnecting the first set of pedicle screw engagement members and the second set of | "wrench cross-linking member 40, depicted in Figure 1 and lines 5:25-27, or a single handle |

| | | |
|---|---|---|
| | pedicle screw engagement members" | member as described in lines 5:27-31" |
| "Cross-Linking Member" (of the '788 patent) | "linking at least two of the elongated levers in a transverse direction such that they move in unison" | "wrench cross-linking member 40, depicted in Figure 1 and lines 5:44-46, or a single handle member as described in lines 5:46-50." |

Similar to the disputes regarding "linking member," the parties disagree as to whether "cross-linking member" is subject to § 112, ¶ 6.

Defendants argues that § 112, ¶ 6 applies because "cross-linking member" is a "generic term" and the claim language lacks definite structure. Defendants argue (as they did with "linking member") that the claims just describe the "cross-linking member" in terms of its function: for linking or interconnecting. Defendants argue that there is not sufficient structure disclosed as the patents "provide no support for the indeterminate structures possible, and a [POSA] has no guidance on what the cross-linking member is or is not, other than that it is used generically to link." (*Id.* at 82).

Plaintiff argues that a POSA "would understand from the claims, as informed by the specification, the terms refer to structures connecting tools across the spine." (D.I. 135 at 80). For example, Plaintiff argues that the '121 Patent "expressly refers to structures linking tools across the spine, reciting the 'cross-linking member [] links the first handle means to the second handle means." *Id.* Plaintiff refers to similar language in the claims of the '301 and '788 Patent claims. Plaintiff relies on their expert's statement that the patents disclose sufficient structure. (*Id.*).

I agree with Defendants that "cross-linking member" is subject to § 112, ¶ 6. There is a presumption that § 112, ¶ 6 does not apply to "cross-linking member" because it does not use the

term "means," *Williamson*, 792 F.3d at 1349, but that presumption has been rebutted. I find that a POSA would not understand "cross-linking member" to have a sufficiently definite meaning as the name for a structure or class of structures.

First, just as with "linking member," there is nothing in the record to indicate that a "cross-linking member" is a term that is used in common parlance or has a well understood meaning in the art.

Second, I do not find that the surrounding claim language provides sufficient structure to take "cross-linking member" out of § 112, ¶ 6. Claim 2 of the '121 Patent just states "a cross-linking member that links the first handle means to the second handle means." That language merely states what the cross-linking member does (i.e., connect handle means), not what it is or what structure it has.[22] As discussed in the context of "linking member," this is not sufficient structure to prevent § 112, ¶ 6 from applying.

Third, I am not persuaded by Plaintiff's expert that the claims describe sufficient structure. Plaintiff's expert states that a POSA "would understand cross-linking member to be a structure" and that the claims describe "sufficient structure." (D.I. 137, Ex. 13, ¶¶ 42-49). Plaintiff's expert further states a POSA would not understand this term to be limited to what is shown in Figure 1 of the patents. (*Id.*). Plaintiff's expert, however, does not describe how or what a POSA would understand this term to refer to. If "cross-linking member" referred to a broad class of structures, Plaintiff's expert has not stated what the class would be. Plaintiff's expert, instead, indicates that

[22] This is the same case for the '301 Patent and '788 Patent. (*See* '301 Patent, cl. 1 ("a cross-linking member interconnecting first set of pedicle screw engagement members and said second set of pedicle screw engagement members"); '788 Patent, cl. 1 ("a cross-linking member configured to link at least two of the elongated levers in a transverse direction such that they move in unison"); '788 Patent, cl. 6 ("a cross-linking member configured to link at least two of the elongated levers in a transverse direction such that they move in unison")).

structures that can link the two things described in the claim language are suitable. (*Id.*, ¶ 44 ("[T]he [POSA] would understand that the handle means of the two pedicle screw cluster derotation tools are assembled and then linked one to another across the spine. The phrase at issue is entirely clear on this point, and a [POSA] would understand cross-linking member to be a structure."), ¶ 47 ("Again, this term gives a structure for linking or connecting pedicle screw engagement members to each other."), ¶ 49 ("Again, this term gives a structure for linking or connecting elongated levers, . . . , to each other."). This is just a description of what the cross-linking member does, not what it is. Therefore, I find that § 112, ¶ 6 applies.

The parties are close to agreeing on the function of "cross-linking member." For the '301 Patent, the parties' proposed functions are similar. The only difference is that Plaintiff uses "link" where Defendants use "interconnect." I do not read these terms to be different or to lead to different scopes of the claim term. I will adopt Defendants' construction as their language comes directly from the body of the claim.

For the '788 Patent, the parties' proposed functions are again similar. The only difference is that Defendants add the limitation of "such that they move in unison." Plaintiff's proposed construction does not have such a limitation. I agree with Defendants that this limitation should be included. Plaintiff acknowledges that the claim language "makes clear a cross-linking member 'link[s] at least two of the elongated levers in a transverse direction such that they move in unison.'" (D.I. 135 at 80 (citing '788 Patent, col. 7:29-30)). Therefore, Plaintiff does not appear to dispute that providing a connection such that the levers move in unison is part of the "cross-linking member's" function. (D.I. 135 at 83 ("[T]hese claims expressly refer to the structure of the cross-linking member, . . . and the end-function of the resulting structure.")). Therefore, I will adopt Defendants' construction.

The parties disagree on the disclosed structure in the specification for "cross-linking member." Plaintiff argues that the disclosed structure is the same as it is for "linking members."[23] Defendants argue that the only disclosed structure in the patent specification is the "wrench cross linking member 40" of Figure 1.

The language of the claims makes clear that a "cross-linking member" is connecting pedicle screw engagement members, elongated levers, or handle means that are transverse from each other. There are only two references in the specification to structures that link things across the spine. The first is the wrench cross-linking member 40. (*See, e.g.*, '121 Patent, col. 5:22-24; '301 Patent, col. 5:25-27; '788 Patent, col. 5:44-47). The second is the description of the "single handle member" (or what I have earlier called the "common handle structure"), which is described as a replacement for the wrench cross-linking member. *See, e.g.*, '121 Patent, col. 5:24-28; '301 Patent, col. 5:27-31; '788 Patent, col. 5:47-50.

I do not agree with Plaintiff that a POSA would recognize all the structures corresponding to "linking members" as structures that also correspond to "cross-linking members." I think a POSA would only identify the disclosed structures that connect things across the spine as corresponding to "cross-linking members." *See B. Braun Med., Inc. v. Abbott Lab'ys*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). Plaintiff's expert opines that a POSA "would know of ways to link across the spine, including for example structures similar to those used to link along the same side of the spine, addressed above as the 'linking member.'" (D.I. 137, Ex. 13, ¶ 45). Plaintiff's expert's opinion in this matter, however, was predicated on there being sufficient structure to not have § 112, ¶ 6 apply. (*Id.*). Furthermore, Plaintiff's expert merely states that a POSA would "know of

[23] Plaintiffs did not brief this point. It was raised at the Markman hearing. (*See* D.I. 135 at 79 (plain and ordinary meaning proposed); Markman Hearing Tr. 108:18-109:109:22 (passing slides to the court with means plus function constructions for '301 Patent and '788 Patent)).

ways to link across the spine," not that the patent specification discloses that the "linking member" structures are used to link across the spine. (*Id.*). Therefore, I do not find that the patent specification discloses that the structures for "linking members" are also the structures for "cross-linking members."

I construe the corresponding structure for this term to include the wrench cross-linking member 40, depicted in Figure 1 or a single handle member.

**10. "Pedicle Screw Engagement Member(s)" (claims 1-2 of the '358 Patent; claims 1-2 of the '121 patent; claim 1-2, 6 of the '301 Patent)**

a. *Plaintiff's proposed construction:* "The shaft and the shaft distal end that engages the pedicle screw."

b. *Defendants' proposed construction*: "a shaft with a distal end that engages the head segment of a pedicle screw"

c. *Court's construction*: "a shaft with a distal end that engages a pedicle screw"

The parties agree that "pedicle screw engagement member(s)" refers to a shaft structure. (D.I. 135 at 85). The parties dispute whether a "pedicle screw engagement member" must engage with the head segment of a pedicle screw. (*Id.* 84-85).

Plaintiff argues that importing the limitation of engaging a head segment is improper and unnecessary because the claim language states that "each pedicle screw engagement member being configured for engaging with, . . . said head segment of each pedicle screw." (*Id.* at 85).

Defendant counters that "pedicle screw engagement member" is a "coined term that cannot be construed more broadly than how the term is used in the specification." (*Id.*). Defendant argues the specification "teach[es] that the 'pedicle screw engagement member' is a shaft with a distal end that engages with the head segment of a pedicle screw." (*Id.*).

I agree with Plaintiff that it is unnecessary to import the limitation that a "pedicle screw engagement member" engages with the head segment of a pedicle screw. The surrounding claim

language explicitly states that "pedicle screw engagement members" are configured for engaging with the head segments of pedicle screws. (*See* '358 patent, col. 6:17-21). Having the pedicle screw engagement member engaging with the head segment of a pedicle screw already exists as a limitation in claim 1. Therefore, there is no need to add this as a limitation. *See Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998) ("If we need not rely on a limitation to interpret what the patentee meant by a particular term or phrase in a claim, that limitation is "extraneous" and cannot constrain the claim.").

Thus, for the reasons discussed above, I adopt Plaintiff's construction.

**11. "Linked" (claims 1-2 of the '358 patent; claim 2 of the '121 patent; claim 1 of the '787 patent; claim 6 of the '788 patent)**

a. *Plaintiff's proposed construction:* "Connected; objects do not need to be separate and can be part of an integrated structure."

b. *Defendants' proposed construction*: "connected between one element and another"

c. *Court's construction*: "Connected."

Prior to the Markman hearing, I proposed to construe "linked" to mean "connected." (D.I. 166). The parties do not dispute that "connected" is appropriate, but dispute as to what things can be "connected." After the Markman Hearing, I asked parties to submit a joint letter to provide additional information about the usage of "linked" in the claims. (D.I. 175). There appears to be no instance in the Asserted Claims where "linked" is used and at least two things are not being connected. (*Id.* at 4-5).

Plaintiff argues for the additional clarification that objects that are "linked" can be part of the same integrated structure. Plaintiff cites as an example the description of the pedicle screw cluster derotation tool including the "functional equivalent of the multiple shafts 36 and shaft distal ends 38." ('358 Patent, col. 5:19-29). Plaintiff says this is an example of "linked" components

being part of the same structure. (D.I. 175 at 3-4). Plaintiff also cites to Defendant Stryker's counsel's statement during the Markman hearing that linked objects can be part of an integrated structure. (D.I. 175 at 5 (citing Markman Tr. 149:12-20)).

Defendants argue that Plaintiff is seeking to add the clarifying language to read out elements of the Asserted Claims. For example, Defendants contend that Plaintiff will attempt to argue that one single structure will satisfy both the handle terms and the pedicle screw engagement members terms. (D.I. 175 at 5).

I construe "linked" to mean "connected." Both parties agree that "linked" as used in the claims connects at least two things. (D.I. 175 at 3-5). Therefore, I do not read Defendants' proposed construction as adding anything necessary as the claim language consistently describes two things as being "linked." Plaintiff's construction injects ambiguity by stating objects need not be separate. Both parties agree that things that are "linked" can be parts of an integrated structure. (D.I. 175 at 4-5). The claim language, however, clarifies that things that are "linked" together must be distinct parts. Thus, Plaintiff's language is unnecessary.

Therefore, I construe "linked" to mean "connected."

The parties are directed to submit a jointly-agreed order implementing the constructions set forth in this opinion.