

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
Chief Judge Philip A. Brimmer

Civil Action No. 18-cv-00691-PAB-STV

WRIGHT MEDICAL TECHNOLOGY, INC.,

Plaintiff,

v.

PARAGON 28, INC.,

Defendant.

ORDER

This matter is before the Court on the parties' Joint Motion for Determination [Docket No. 148], wherein the parties ask the Court to construe certain disputed terms in nine patents.¹ On April 26, 2019, the Court held a claim construction hearing pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996). Docket No. 149.

I. BACKGROUND

On March 23, 2018, plaintiff Wright Medical Technology, Inc. filed this lawsuit against defendant Paragon 28, Inc. alleging patent infringement. Docket No 1. Plaintiff

¹ The patents at issue are U.S. Patent Nos. 7,771,457 (issued Aug. 10, 2010) ("the '457 Patent"); 8,100,954 (issued Jan. 24, 2012) ("the '954 Patent"); 8,118,846 (issued Feb. 21, 2012) ("the '846 Patent"); 8,118,848 (issued Feb. 21, 2012) ("the '848 Patent"); 9,144,443 (issued Sept. 29, 2015) ("the '443 patent"); 9,259,251 (issued Feb. 16, 2016) ("the '251 Patent"); 9,259,252 (issued Feb. 16, 2016) ("the '252 Patent"); 9,259,253 (issued Feb. 16, 2016) ("the '253 Patent"); and 9,545,278 (issued Jan. 17, 2017) ("the '278 Patent") (collectively, the "patents"). Docket No. 89 at 6-7 ¶¶ 20-29.

filed its Third Amended Complaint [Docket No. 89] on September 28, 2018, claiming that defendant has infringed upon ten of its patents, nine of which are at issue in this claim construction matter.² Docket No. 89 at 5-6, ¶ 17; Docket No. 134 at 4.

Each patent at issue relates to orthopedic plates used in bone fracture repair or reconstruction. Docket No. 89 at 8, ¶ 30; '457 Patent, col. 1, ll. 62-67; col. 2, ll. 1-2. These devices are designed for use in repairing smaller bones, such as the clavicle, elbow, and knee and can bend laterally to wrap or spiral around a bone. *Id.*, col. 2, ll. 25-28, 33-36. An example of an orthopedic plate is shown in Figure 1 of the '954 Patent:

² The parties did not identify any claim terms that require construction in the '710 Patent, which relates to a surgical instrument. Docket No. 134 at 3 n.1.

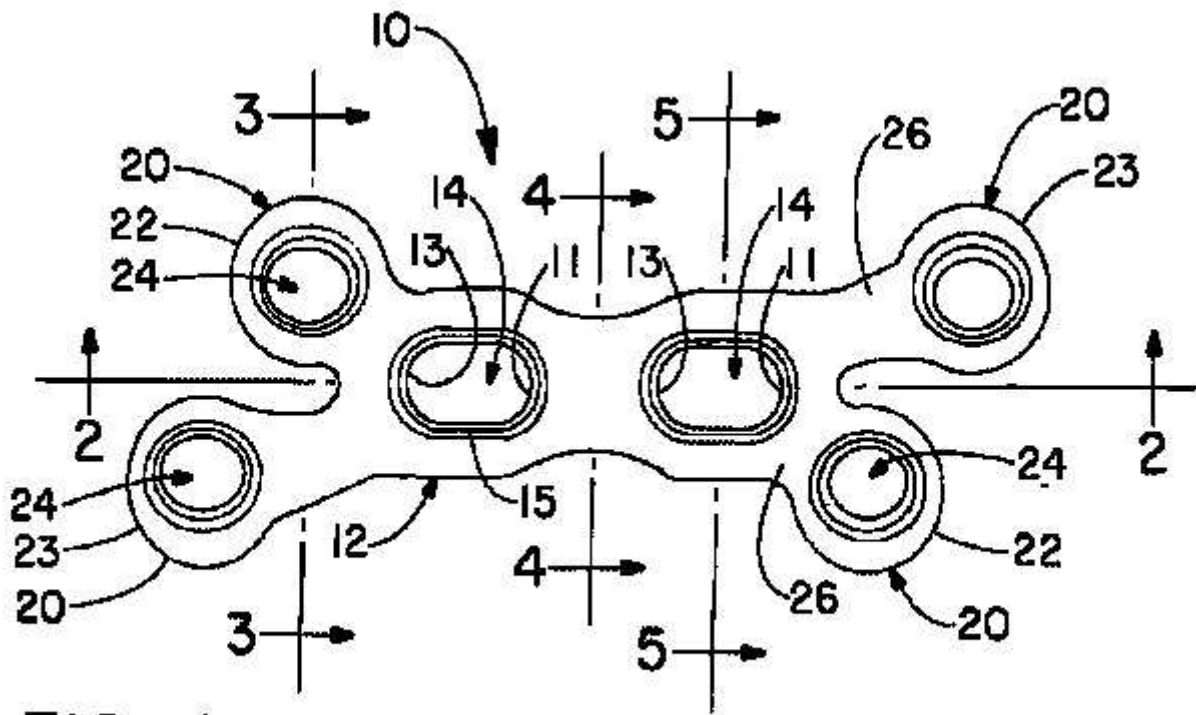


FIG. - I

The preferred embodiment of this plate includes a trunk portion (12) with two or more screw holes or slots (14) along the trunk's longitudinal axis. '457 Patent, col. 5, ll. 6-11. The area linking the screw holes to the trunk portion has a narrowed waist area (26) that may bend relative to the trunk's longitudinal axis. *Id.*, ll. 34-36. The plate has at least one but preferably two sets of arms (20) and each arm includes a screw hole (24). *Id.*, 43-44; 51-52. In each set of arms, the arms will be different lengths and will diverge from the trunk at different angles, *id.*, 44-46; 54-58, so that when the arms are wrapped around and secured to a bone, the screw used to secure one arm will not impinge the screw securing the other. *Id.* at col. 6, ll. 41-46.

The '457 and '954 Patents have the same specification, as do the '251, '252, '253, '278, '443, and '846 Patents. Docket No. 134 at 4. The '848 Patent has its own specification. *Id.* These specifications are substantially similar.³

The parties ask the Court to construe ten different claim terms found in over 100 claims across the nine patents. The Court must construe these claim terms consistently across each patent and each claim. See *Boss Indus., Inc. v. Yamaha Motor Corp., U.S.A., Inc.*, 333 F. App'x 531, 536-37 (Fed. Cir. 2009) (unpublished) (finding that the district court did not err in construing a term consistently for multiple patents where the patents' specifications were "nearly identical" and where the patents "share[d] many common terms with [their] sister patents").

Due to the large number of claims containing the disputed claim terms, the Court will not set out each use of each term. However, Claim 1 of the '457 Patent, which contains all of the disputed claim terms, is instructive as to the context in which each claim term is used. Claim 1 describes:

1. A surgical plate system capable of being used to stabilize a small bone fracture comprising

a **Y-shaped** plate that has an inferior surface and which has a concentric superior surface forming a portion of a cylinder, the plate **consisting of** a trunk and a pair of a first arm and a second arm,

the **trunk** having a linear medial longitudinal axis along the superior surface extending between a first and a second **end**, and

³ Because the specifications are substantially similar, they will be referred to in the singular unless otherwise noted. References to identical language from the common specifications will be cited to the '457 and '251 specifications unless otherwise noted.

the inferior surface of the plate defining a curve transverse to the medial axis,

the first **arm** and the second arm extending from the first end of the trunk, the inferior surface of the first arm and of the second arm following the same curve as the inferior surface of the trunk,

the first arm having an **ear** with at least one screw hole defining a first **screw axis** perpendicular to a tangent to the top surface of the first ear, the first ear being attached to the trunk by a **linking section** having a **waist**, a first angle and a first length being defined by a line from the center of the first arm screw hole to **the intersection of the medial longitudinal axis** of the trunk, and,

the second arm having a second ear with at least one second screw hole defining a second screw axis perpendicular to a tangent to the top surface of the second ear, the second ear being attached to the trunk by a linking section having a waist, a second angle and a second length being defined by a line from the center of the second arm screw hole to the intersection of the medial longitudinal axis of the trunk, and

the first angle and the first length being different from the second angle and the second length whereby the first screw axis and the second screw axis converge toward the inferior side of the plate but do not intersect.

'457 Patent, Claim 1, col. 8, ll. 23-57 (emphasis added).

II. LEGAL STANDARDS FOR PATENT CLAIM CONSTRUCTION

Claim construction is a question of law for the court, *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 325 (2015), guided by Federal Circuit precedent. See *SunTiger, Inc. v. Scientific Research Funding Group*, 189 F.3d 1327, 1333 (Fed. Cir. 1999). The Federal Circuit has made clear that “there is no magic formula or catechism for conducting claim construction.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1324 (Fed. Cir. 2005) (en banc). Nevertheless, there are several key sources and doctrines that

should be consulted and applied, but “[t]he sequence of steps used by the judge in consulting various sources is not important; what matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law.” *Id.*

The starting point is the “bedrock principle” that “the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The words of the claims “are generally given their ordinary and customary meaning,” *id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)), 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,” *id.* at 1313; see *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (“Generally speaking, [courts] indulge a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning.”). In those instances when the claim language “involves little more than the application of the widely accepted meaning of commonly understood words,” construction is relatively straightforward and “the ordinary meaning . . . may be readily apparent even to lay judges.” *Phillips*, 415 F.3d at 1314. When the claim terms have a particular meaning in the field, however, courts “look [] to ‘those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.’” *Id.* (quoting *Innova*, 381 F.3d at 1116). “These sources include the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant

scientific principles, the meaning of technical terms, and the state of the art.” *Innova*, 381 F.3d at 1116.

The context in which a term is used, both in the asserted claim as well as in other claims of the patent, can be valuable and instructive. *Phillips*, 415 F.3d at 1314. In addition, the patent specification – the text and figures of the patent that precede the claims – “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.” *Id.* at 1315 (quoting *Vitronics*, 90 F.3d at 1582). With that said, “the claim requirement presupposes that a patent applicant defines his invention in the claims, not in the specification.” *Johnson & Johnston Associates Inc. v. R.E. Service Co., Inc.*, 285 F.3d 1046, 1052 (Fed. Cir. 2002); see *PSC Computer Products, Inc. v. Foxconn Int’l, Inc.*, 355 F.3d 1353, 1359 (Fed. Cir. 2004) (“[T]he claims of a patent limit the invention, and specifications cannot be utilized to expand the patent monopoly”) (quoting *United States v. Adams*, 383 U.S. 39, 48-49 (1966)).

If necessary, courts may also consider the patent’s prosecution history – the official record of the patent application and subsequent process before the U.S. Patent and Trademark Office, which “provides evidence of how the PTO and the inventor understood the patent.” *Phillips*, 415 F.3d at 1317. Nevertheless, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, . . . it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* And, although courts may consult extrinsic evidence such as “expert and inventor testimony, dictionaries, and learned treatises,” such

evidence is “less significant than the intrinsic record,” i.e., the specification and prosecution history, and courts must be wary not to use extrinsic evidence to override the meaning of the claim terms demonstrated by the intrinsic evidence. *Id.* at 1317-19 (quoting *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)). That is, “extrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1319.

In short, a court must construe the claim terms as they would be viewed by “the ordinary artisan after reading the entire patent.” *Id.* at 1321. This is important in order to respect the public notice function of patents:

The patent system is based on the proposition that claims cover only the invented subject matter. As the Supreme Court has stated, “[i]t seems to us that nothing can be more just and fair, both to the patentee and the public, than that the former should understand, and correctly describe, just what he has invented, and for what he claims a patent.”

Id. at 1321 (quoting *Merrill v. Yeomans*, 94 U.S. 568, 573-74 (1876)).⁴

⁴ Patent claims are to be construed through the eyes of a person of ordinary skill in the art (“POSITA”) at the time of the invention. Defendant’s expert asserts that a POSITA would have two to three years of experience either in the design of orthopedic plates or in the use of orthopedic plates in surgery. Docket No. 134-19 at 4, ¶ 13. Plaintiff’s expert contends that a POSITA would have either (1) a medical degree with training and clinical experience in orthopedic joint repair or (2) a post-graduate degree in engineering or material science and at least two years of experience working in the field of medical device design with a person who has a medical degree and who has experience in orthopedic joint repair. Docket No. 143-17 at 5-6, ¶ 21. Although the level of skill is important in some claim construction disputes, the Court finds that it does not impact the proper constructions of the terms at issue, many of which the parties agree have no commonly understood definition to a POSITA, and declines to make findings on the level of skill required from a POSITA.

III. ANALYSIS

A. Arm

The term “arm” appears in assorted claims in each of the nine patents at issue. Plaintiff argues that this term need not be construed. Docket No. 143 at 10. Defendant argues that this term should be construed as “a plate appendage configured to be bent without deforming any of its screw holes.” Docket No. 134 at 10. Defendant further argues that not construing this term would render this term indefinite, as “arm” has no definite meaning. *Id.* at 11. The parties’ experts do not dispute that “arm” does not have one well-defined and universal meaning to a POSITA. Docket No. 134-19 at 5, ¶ 16; Docket No. 143-17 at 6, ¶ 23. The Court agrees that the term requires construction.

The parties’ main dispute with respect to this term is whether an arm must be configured to bend without deforming its screw holes. Defendant argues that it must, as “[t]he specification uniformly states that the plate design ‘facilitates the desired bending while resisting deformation of the screw holes.’” Docket No. 134 at 12. But the specification portions defendant cites do not expressly state that arms are configured to bend without deforming their screw holes; rather, those portions reference the plate design generally. See ’457 Patent, col. 3, ll. 30-33 (“The radiused configuration of the plate . . . permit[s] bending without deforming the screw holes”). To the extent that the specification could be read to imply that an arm can be configured to bend without deforming its screw holes, this is insufficient to read this limitation from the specification into the claims. “[I]t is improper to read limitations from a preferred embodiment

described in the specification . . . into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 904 (Fed. Cir. 2004). There is no clear indication in the specification that the patentee intended to do so.⁵

Further, under the principles of claim differentiation, “limitations stated in dependent claims are not to be read into the independent claim from which they depend.” *Karlin Tech., Inc. v Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72 (Fed. Cir. 1999). Here, Claim 1 of the ’457 Patent describes a plate “consisting of a trunk and a pair of a first arm and a second arm,” with no mention of whether the arms can bend without deforming the screw holes. ’457 Patent, Claim 1, col. 8, ll. 28-29, 42, 48-49.

⁵ Moreover, when the ability to bend without deforming screw holes is included in a claim, this attribute is not assigned to an arm generally, but to a specific portion of an arm. See, e.g., ’457 Patent, Claim 4, col. 8, ll. 63-65 (“A surgical plate system as set forth in claim 1 wherein the waist of the linking section of the first arm and of the second arm is configured to bend relative to the trunk section.”); *id.* at Claim 11, col. 10, ll. 6-8 (“the linking section waist being configured to bend relative to the trunk section without deforming the through hole”). But certain claims also indicate that an arm is not required to have a linking section or a waist. See ’253 Patent, Claim 1, col. 11, ll. 47-49 (describing “an elongate central trunk portion having . . . at least one pair of divergent arms, each arm including a threaded screw hole” with no mention of a linking section or a waist); *id.* at Claim 7, col. 11., ll. 25-26 (“The orthopedic plate as set forth in claim 1, wherein each arm of the pair of divergent arms includes a waist”); *id.* at Claim 8, col. 11, ll. 27-29 (“The orthopedic plate set forth in claim 7, wherein . . . a first arm and a second arm each hav[e] a linking section. . . .”). “The inclusion of such a specific limitation” on a claim term in a dependent claim “makes it likely that the patentee did not contemplate that the [claim term] already contained that limitation.” *Phillips*, 415 F.3d at 1324. There is no indication in the patents that an arm that does not contain a waist or linking section would be configured to bend without deforming its screw holes. See *TurboCare Div. of Demag Delaval Turbomachinery Corp. v. General Elec. Co.*, 264 F.3d 1111, 1123 (Fed. Cir. 2001) (A limitation from a specific embodiment should not be read into a claim, “particularly . . . where another claim restricts the invention in the exactly the [same] manner.”).

But dependent Claim 4, which depends on Claim 1, describes “[a] surgical plate system as set forth in claim 1 wherein the waist of the linking section of the first arm and of the second arm is configured to bend relative to the trunk section in response to a force applied before or during surgery without deforming the screw hole.” ’457 Patent, Claim 4, col. 8, ll. 63-67. That some plate embodiments may have arms that are configured to bend without deformation of the screw holes does not require that each arm have this feature. Accordingly, the Court finds that the language “configured to be bent without deforming any of its screw holes” improperly imports a limitation into the construction of “arm.”

The Court finds that defendant has not provided any convincing evidence from the intrinsic record that the claim term “arm” requires a construction other than its plain and ordinary meaning. As set forth above, when claim language “involves little more than the application of the widely accepted meaning of commonly understood words,” construction is relatively straightforward. *Phillips*, 415 F.3d at 1314. “Generally speaking, [courts] indulge a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning.” *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). The Court is confident that a jury would be able to ascertain the meaning of “arm” as used throughout the patents by examining the claim language and the specification. *Phillips*, 415 F.3d at 1315 (the specification language “is always highly relevant to the claim construction analysis” and “the single best guide to the meaning of a disputed term.”); see, e.g., ’457 Patent, col. 5, ll. 43-46 (“The plate . . . also includes at least one set, and preferably two opposing sets of arms. . . . [T]hese

sets of arms can be viewed as a set of diagonally opposed short . . . and long arms.”); see also *id.* at col. 7, l. 9 (“the length of each of the arms will vary”); see also *id.* at Claim 1, col. 8, ll. 28-29 (“the plate consisting of a trunk and a pair of a first arm and a second arm”). Accordingly, the Court declines to construe this term and finds that it shall have its plain and ordinary meaning.

B. Link, linking section, linking portion

These related claim terms appear in assorted claims in the '251, '252, '253, '443, '457, '846, '848, and '954 Patents. The parties' experts agree that “linking section” and its other various forms do not have one well-defined and universal meaning to a POSITA. Docket No. 134-19 at 5, ¶ 16; Docket No. 143-17 at 6, ¶ 23.

Defendant argues that this term, in its various forms, should be construed to mean the “portion of the plate that links two distinct parts of the plate.” Docket No. 134 at 15. Plaintiff contends this term needs no construction. Docket No. 143 at 15. Specifically, plaintiff argues that a construction is unnecessary because “the claims themselves already identify the plate features that are connected by a link.” *Id.* See, e.g., '252 Patent, Claim 1, col. 11, ll. 54-55 (“the first ear being attached directly to the trunk by a linking section having a waist”); '253 Patent, Claim 8, col. 12, ll. 28-30 (“a first arm and a second arm each having a linking section joined to the central trunk portion”). In the alternative, plaintiff proposes that the terms should be construed to mean the “portion of the plate between two plate features.” *Id.*

The parties each challenge the other's construction for the very same reasons: uncertainty in the meaning of “plate features” and “distinct parts.” Docket No. 134 at

17; Docket No. 143 at 15. The Court believes that the proposed constructions create more confusion than clarity and finds that there is no indication in the intrinsic record that the patents use the terms “link,” “linking section,” or “linking portion” in a narrow or specialized manner such that these terms need construction. The plain and ordinary meaning already implies that a linking section “links,” or joins, two separate areas of the plate. Moreover, the Court agrees with plaintiff that the patents themselves adequately set out which portions of the plate are joined by a linking section, see, e.g., ’846 Patent, Claim 1, col. 11, l. 55 (“the arm being joined to the trunk portion by a link”); ’954 patent, Claim 1, col. 8, ll. 54-56 (“the second ear being attached to the trunk by a linking section having a waist”), and defendant appears to concede the same. See Docket No. 134 at 16 (“Regardless of which two plate portions were at issue, the patentee used the term to link two distinct parts of the plate.”). The parties’ proposed constructions do not provide any additional clarification as to the meaning of the section “linking portion” that is not already evident in the term’s customary and ordinary meaning and the contexts in which it is used, and the parties have not overcome the presumption that “a claim term carries its ordinary and customary meaning.” *CCS Fitness*, 288 F.3d at 1366. The Court will not construe the phrase “link,” “linking section,” or “linking portion” because the patent does not give a special meaning to the term that is different from its lay meaning and the jury can determine, as a factual matter, which portions of the plate constitute linking sections.

C. Waist, waist area, waist portion

These related claim terms appear in assorted claims in the '251, '252, '253, '443, '457, '846, and '954 Patents. Plaintiff contends that no construction is needed to understand the term “waist,” but, if a construction is necessary, it proposes construing “waist” as an “area of the plate that is configured to facilitate bending of the plate.” Docket No. 143 at 16. Defendant agrees that a waist can be configured to facilitate bending of the plate, but challenges plaintiff’s proposed construction as too broad, arguing that it will render any portion of a plate that can bend a “waist.” Docket No. 134 at 17-18. It proposes an alternative construction: a “portion of a linking section with a decreased width relative to the non-waist portion of the linking portion.” *Id.* at 17. The parties’ experts agree that there is no universal meaning of these terms to a POSITA. Docket No. 134-19 at 5, ¶ 16; Docket No. 143-17 at 6, ¶ 23.

The parties’ dispute over this term is two-fold. They disagree as to whether a waist must be narrowed relative to the plate’s adjacent portions and, further, whether a waist must be part of a linking section.

Plaintiff argues that a waist is not necessarily a narrowed portion of the plate. It contends that the only portions of the specification that describe a narrower waist refer to the waist area of a trunk, and that the “specification never describes the linking sections of the arms in that same manner.” Docket No. 143 at 18.

But the specification does refer to the linking sections in the arms as being narrowed: “The arms include a rounded portion 324, 324’ that defines a portion of a circle and has a linking area that has a smaller width than the diameter of the circle.”

'457 Patent, col. 10, ll. 9-11. And several claims, in addition to each specification, refer to a "waist-shaped" linking portion, indicating that a waist is not only a specific area of the plate, but also that a waist has a distinct shape. '457 Patent, col. 2, l. 62; '251 Patent, col.3, l. 57; '848 Patent, col. 2, ll. 43-44. See also *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) ("Even when guidance is not provided in explicit definitional format, the specification may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents.") (quotation omitted). Moreover, at the claim construction hearing, plaintiff stated that the narrowed area is precisely what helps facilitate bending in the waist, as the thinning of the plate prevents stress fractures from forming when it is bent. Thus, the Court finds that a waist is narrowed relative to the adjacent plate portions.

The parties also dispute whether a waist must be part of a linking section. The Court finds that a waist portion is part of a linking section. Plaintiff notes that some claims do not require a "waist" to be part of a linking section. See, e.g., '457 Patent, Claim 6, col. 9, ll. 3-5 ("the trunk has at least two through holes and a waist area between the through holes which encourages bending of the waist area."); '251 Patent Claim 16, col. 12 ll. 60-62 ("the trunk has at least two through holes and a trunk waist area between the through holes"). But the specification related to these claims define these exact areas as being part of a linking section. See '457 Patent, col. 2, ll. 61-63 ("The plate has a central trunk portion including one or more screw holes separated by a waist shaped linking portion along a longitudinal axis"); '251 Patent, col. 3, ll. 55-58

("All of the plates have an elongate central trunk portion including one or more screw holes which are optionally separated by a waist shaped linking portion along a longitudinal axis"). As stated above, the specification "is always highly relevant to the claim construction analysis" and is "the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315 (quoting *Vitronics*, 90 F.3d at 1582). And a POSITA "is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* at 1313. For these reasons, the Court construes "waist" as a "narrowed area of a linking portion that is configured to facilitate bending."

D. Ear

This claim term appears in assorted claims in the '251, '252, '457, '846, '848, and '954 Patents. The parties' experts agree that "ear" does not have one well-defined and universal meaning to a POSITA. Docket No. 134-19 at 5, ¶ 16; Docket No. 143-17 at 6, ¶ 23. Plaintiff argues this claim needs no construction. Docket No. 143 at 20. Defendant disagrees. Defendant argues this term should be construed to mean the "thick material surrounding a screw hole that is configured to resist deformation of the screw hole during bending." Docket No. 134 at 21.

The word "ear" does not appear in the specification for any of the nine patents, and no patent figure refers to a specific portion of the plate as the "ear." The term does appear in the claims, however, and it does so in consistent ways. First, an ear is always part of an arm. See '251 Patent, Claim 1, col. 11, l. 53 ("the first arm having a first arm linear medial axis and an ear"). Second, an ear is always attached to – and,

therefore, not a part of – a trunk. See '457 Patent, Claim 1, col. 8, ll. 41-42 (“the first ear being attached to the trunk by a linking section having a waist”). And finally, an ear always has at least one screw hole. See '848 Patent, Claim 1, col. 8, l. 8 (“the first arm having an ear with at least one screw hole”).

The specification provides additional insight into the proper construction of “ear.” The specification of the '846 Patent states that “[t]he arms include a rounded portion 324, 324' that defines a portion of a circle and has a linking area that has a smaller width than the diameter of the circle. Each rounded portion includes a screw hole 326, 326'.” '846 Patent, col. 10, ll. 3-6.

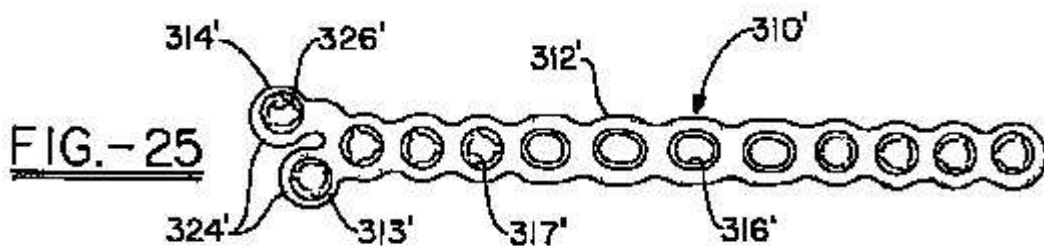


Fig. 25, '846 Patent. In the patent claims, the '846 Patent – one embodiment of which is demonstrated in Figure 25 – is described as “a pre-contoured Y-shaped plate, . . . the plate consisting of a trunk and a pair of a first arm and a second arm, . . . the first arm having an ear with at least one screw hole, . . . the first ear being attached to the trunk by a linking section having a waist, . . . the second arm having a second ear with at least one second screw hole, . . . the second ear being attached to the trunk by a linking section having a waist.” '846 Patent, Claim 7, col. 12, ll. 22-47.

The specification language describing feature 324 aligns with the language describing an “ear” in Claim 7 of the ’846 Patent. This indicates that the 324 feature is an “ear” and, therefore, provides guidance as to the parameters of “ear,” namely, that it is the rounded portion of the arm.

The portions of the specifications that defendant cites to in support of its construction of “ear” do not support its argument that an ear must be a thickened area surrounding a screw hole. The specification of the ’457 Patent refers to “the optional thickened annular area surrounding the screw holes which would act to shield these holes against deformation during bending,” ’457 Patent, col. 6, ll. 31-33, and “[t]he increased annular area around the through bores resists deformation when a bending device is used to apply force to the plate through the screw holes.” *Id.* at col. 5, ll. 40-42. According to defendant, these excerpts provide that an ear must be a thicker area surrounding the screw hole and must be configured to resist deformation during bending.

However, the “optional thickened annular area” and the “increased annular area” referenced by defendant refer not to an ear, but to the area surrounding the through hole or a screw hole in a trunk. See *id.* at col. 5, ll. 32-42 (describing the layout and thickness of the trunk); *id.* at col. 6, ll. 26-34 (referencing the thickened annular area in relation to the shape of the plate). Because, as set out above, an ear is always part of an arm and always separate from a trunk, this language does not refer to an ear and does not provide support to defendant’s position. Therefore, consistent with its usage,

the Court defines “ear” as “the rounded portion of the arm including at least one screw hole.”

E. Y-shaped plate

The claim term “y-shaped plate” appears in assorted claims in the ’251, ’252, ’253, ’457, ’846, ’848, and ’954 Patents. Plaintiff argues that no construction is needed but, alternatively, it argues that a Y-shaped plate is “a plate with features generally arranged in the shape of a Y.” Docket No. 143 at 22. Defendant contends that a Y-shaped plate is “a plate that is shaped such that the entire outline of the plate forms only the shape of the letter Y.” Docket No. 134 at 22.

Defendant argues that its construction is supported by the specification because “[t]he patents repeatedly distinguish ‘X-shaped plates’ from ‘Y-shaped plates’ based on the **outline** of the plate.” *Id.* at 23. But defendant sets forth no argument as to why “Y-shaped” needs a construction at all. In fact, defendant concedes that “the plain meaning of Y-shaped is just that: shaped like the letter Y.” *Id.* at 22. The parties do not demonstrate that there is a genuine, fundamental dispute over the scope of this claim term. *Compare O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008) (“A determination that a claim term ‘needs no construction’ or has the ‘plain and ordinary meaning’ may be inadequate when a term has more than one ‘ordinary’ meaning or when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.”). Because there is no indication within the patents that “Y-shaped” has any specialized meaning separate from its plain and ordinary meaning, and because there is no genuine dispute between the parties’ interpretations, the Court

finds that no construction of the term “Y-shaped plate” is necessary and that it should have its ordinary and customary meaning.

F. Trunk, trunk portion

This term appears in assorted claims in all nine patents. Defendant argues that this term should be construed as “the main body of the plate from which plate appendages extend.” Docket No. 134 at 26. Plaintiff argues that no construction is necessary. Docket No. 143 at 24. If the term “trunk” does need to be construed, plaintiff argues that it should be construed as “a portion of the plate from which appendages extend.” *Id.* The parties’ experts agree that this term does not have an understood meaning to a POSITA. Docket No. 134-19 at 5, ¶ 16; Docket No. 143-17 at 6, ¶ 23.

The main dispute between the parties is whether a “trunk” must be defined as the main body of the plate. Defendant argues that it must, as the specifications describe the trunk as the “central” portion of the plate. See, e.g., ’457 Patent, col. 2, l. 57; ’251 Patent, col. 3, ll. 55-56. According to defendant, omitting this description from the construction would allow the trunk to “take various arbitrary shapes and end at arbitrary points.” Docket No. 134 at 26. Plaintiff contends that including such language in the construction is unnecessary because the claim language already sufficiently defines a trunk’s parameters. Docket No. 143 at 24.

The Court finds the inclusion of the “main body” description unnecessary and capable of inviting confusion into the claims. For example, in Figure 14 of the ’954

patent, it is unclear whether the trunk in a plate of this size could constitute its “main body,” where the arms arguably make up the majority of the plate:

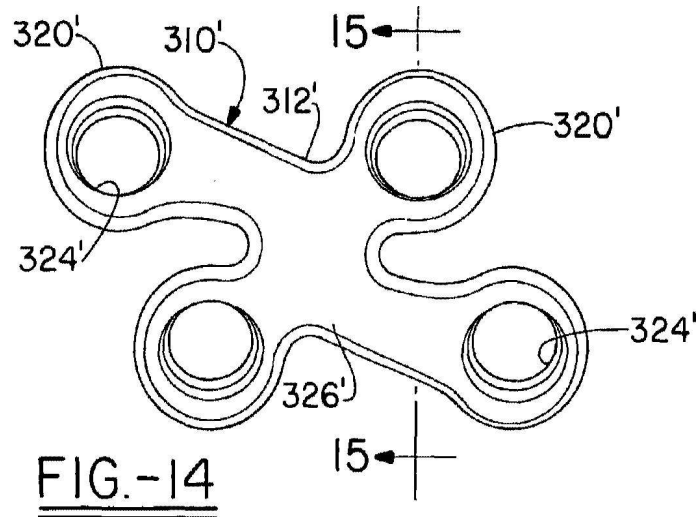


Fig. 14, '954 Patent; *id.* at col. 8, ll. 1-4 (Figure 14 “illustrate[s] an embodiment of the plate 310, 310' with a shorter trunk 312, 312' that serves principally to join the two ends bearing the arms 320, 320' and including a single narrowed waist area 326, 326'.”).

The specifications and claims make clear that the trunk portion of the plate is the portion from which arms extend. Although defendant argues that omitting a reference to the trunk being the central portion of the plate would lead to arbitrary conclusions about where a trunk begins and ends, the Court disagrees. A trunk has two ends, '251 Patent, Claim 1, col. 11, ll. 50-52 (describing a y-shaped plate with one set of arms and one trunk, “the trunk having a linear medial longitudinal axis along the superior surface extending between a first and a second end”), and when the end of a trunk has a set of arms, the trunk ends where the arms begin. See '457 Patent, Claim 1, col. 8, ll. 35-36

(“the first arm and the second arm extending from the first end of the trunk”). The Court finds that the parameters set out in the patents would prevent a jury from applying the term trunk in an arbitrary fashion.

Moreover, no patent at issue includes a plate with more than one trunk.⁶ For this reason, plaintiff’s proposal that a trunk is “a portion” of the plate is too broad. See *TiVo, Inc. v. EchoStar Comm. Corp.*, 516 F.3d 1290, 1303 (Fed. Cir. 2008) (“As a general rule, the words ‘a’ or ‘an’ in a patent claim carry the meaning of ‘one or more.’”).

Both parties also suggest that the trunk should be defined relative to plate “appendages.” But no claim uses the more general term “appendage” to describe the extensions off the trunk; instead, each claim, when referring to trunk extensions, specifically refers to “arms” extending from the trunk. The Court sees no reason to diverge from the claim language when referring to trunk extensions. Accordingly, the Court construes “trunk” as “the portion of the plate from which arms extend.”

G. End

This claim term, which has no ordinary meaning to a POSITA, see Docket No. 134-19 at 5, ¶ 16; Docket No. 143-17 at 6, ¶ 23, appears in assorted claims in all nine patents. Plaintiff argues the term “end” is not indefinite and needs no construction. Docket No. 143 at 26. Defendant argues that “end” means “the intersection of the edge of the plate and the longitudinal axis of the plate.” Docket No. 134 at 27.

⁶ See ’457 Patent, Claim 1, col. 8, l. 30; ’954 Patent, Claim 1, col. 8, l. 51; ’846 Patent, Claim 1, col. 11, l. 55; ’443 Patent, Claim 22, col. 12, ll. 65-66; ’278 Patent, Claim 1, col. 12, ll. 16-17; ’251 Patent, Claim 1, col. 11, l. 50; ’252 Patent, Claim 1, col. 11, l. 55; ’253 Patent, Claim 1, col. 11, l. 58; and ’848 Patent, Claim 1, col. 7, l. 41 (each referring to a plate’s singular trunk).

This term is used across the patents in various contexts. Most commonly, “end” is used to refer to the point at which a trunk stops and an arm begins. “[T]he first arm and the second arm extending from the first end of the trunk . . .” ’846 Patent, Claim 7, col. 12, ll. 32-33. The claims also routinely define a “longitudinal trunk axis extending between a first end and a second end.” ’278 Patent, Claim 1, col. 12, ll. 10-11. Moreover, “end” is also used to describe portions of the plate as a whole. “The central trunk includes . . . two locking screw holes 517 in the proximal end of the plate. The other end of the plate includes a pair of arms 530.” ’251 Patent, col. 11, ll. 27-31.

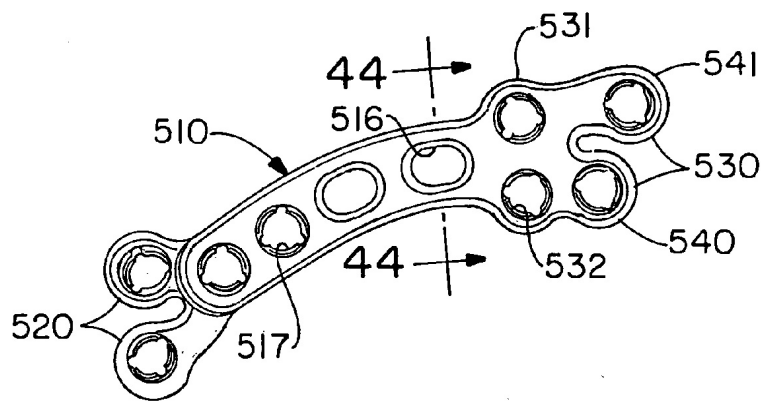


FIG. - 43

Fig. 43, ’251 Patent.

Defendant’s proposed construction is inconsistent with the specification language because the specification makes clear that an “end” of a plate can include more than just the plate’s edge. In addition to the configuration set out above, one plate configuration is described as a trunk including “four obround translation slots 316’ which are in the center between three locking screw holes 317’ at the end with the arm

320' and four locking screw holes 317' at the other end of the central trunk." '251 Patent, col. 10, ll. 31-34.

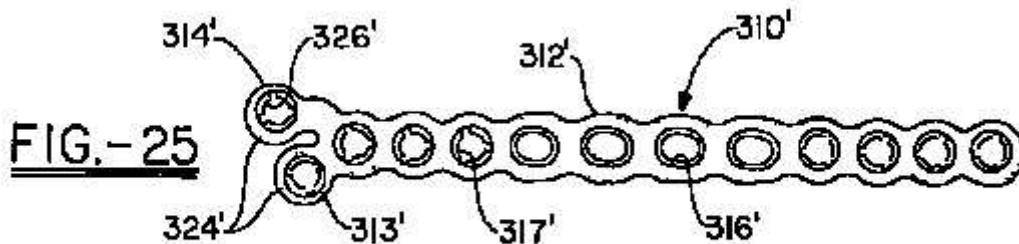


Fig. 25, '251 Patent. Across the patents, “end” refers to an area encompassing more than just the plate edge and more than just one point. Thus, the construction of “end” to include the edge of the plate contradicts the references to “end” that include portions extending further into the plate than the trunk’s edge. Defendant’s definition of “end” is too narrow and is not supported by the intrinsic record.

As demonstrated by these examples, when the term “end” is used across the patents, the claim or specification language and the context of the term’s usage make clear to which portion of the plate the term refers. *See, e.g., id.* As a result, the Court finds that construing the term “end” by limiting it to a certain portion of the plate necessarily risks creating inconsistencies between the chosen construction of the term and its various uses throughout the patents. Such a construction should be avoided. *See Aylus Networks, Inc. v. Apple, Inc.*, 2015 WL 355174, at *10 (N.D. Cal. Jan. 27, 2015) (rejecting construction that would create inconsistency between claims); *see also LTJ Enter., Inc. v. Custom Mktg. Co., LLC*, 2015 WL 3607746, at *3 (D. Minn. June 8, 2015) (“The definitions proposed by the parties must be rejected because they each

would create inconsistencies throughout the claims.”). Because the Court finds that the plain and ordinary meaning of the term “end” would permit a jury to ascertain to which portion of the plate “end” refers, the Court declines to construe this term.

H. Consists of, consisting of

This claim term appears in assorted claims in the '251, '252, '253, '457, '846, and '848 Patents. Plaintiff argues that no construction is needed. Docket No. 143 at 28-29. Alternatively, plaintiff argues that “a plate consisting of a trunk and a pair of a first arm and a second arm” means “a plate that has only a trunk and a pair of arms, and where the trunk and arms can include other features.” *Id.* In other words, plaintiff proposes a construction that, when a certain item is “consisting of” certain features, those features can themselves contain other features. Defendant argues the term should be construed to mean “includes the following and only the following.” Docket No. 134 at 29.

“‘[C]onsisting of’ is a term of art in patent law with a distinct and well-established meaning.” *Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350, 1358 (Fed. Cir. 2016). It is “a term of patent convention meaning that the claimed invention contains only what is expressly set forth in the claim.” *Nordian Corp. v. Stryker Corp.*, 363 F.3d 1321, 1331 (Fed. Cir. 2004). Use of this term “creates a very strong presumption that that claim element is ‘closed’ and therefore ‘exclude[s] any elements, steps, or ingredients not specified in the claim.’” *Multilayer Stretch Cling Film Holdings*, 831 F.3d at 1358 (quoting *AFG Indus., Inc. v. Cardinal IG Co., Inc.*, 239 F.3d

1239, 1245 (Fed. Cir. 2001)). To overcome this presumption, “the specification and prosecution history must unmistakably manifest an alternative meaning.” *Id.* at 1359.

Plaintiff argues that adopting the well-established meaning of “consisting of” “could lead the jury to believe that the claim scope would exclude plates having only a trunk and arms if the trunk and arms themselves include features unrecited in the independent claims, such as additional slots, screw holes, waists, or ears.” Docket No. 143 at 30. But the “closed” definition of “consisting of” works to exclude “elements, steps, or ingredients *not specified in the claim.*” *Multilayer Stretch Cling Film Holdings*, 831 F.3d at 1358 (emphasis added). Accordingly, there will be no exclusion of elements further defining an arm or a trunk that are explicitly set out in the claims – for example, “the first arm having an ear with at least one screw hole.” ’457 Patent, Claim 1, col. 8, l. 39. A POSITA would understand that construing “consisting of” to have its term of art meaning will not erase details explicitly set forth in the claim. Thus, plaintiff’s proposed construction is unwarranted, as there is no indication from the specification or prosecution history that “consisting of” should take on a meaning other than its commonly understood meaning. The Court construes “consisting of” consistent with its legal definition – “contain[ing] only what is expressly set forth in the claim.” *Norian Corp.*, 363 F.3d at 1331.

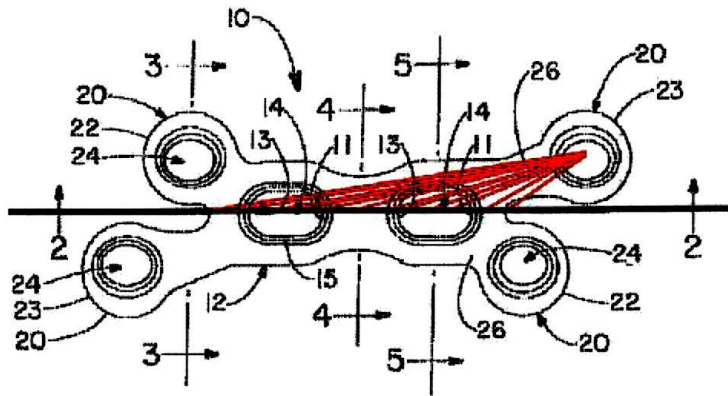
I. Intersection of [an axis]

This claim term appears in assorted claims in the ’251, ’252, ’253, ’457, ’846, ’848, and ’954 Patents and is used to describe the angles at which arms diverge from the plate: “a first angle being defined by an intersection of the medial longitudinal axis

of the trunk with the first arm linear medial axis,” ’251 Patent, Claim 1, col. 11, ll. 57-59; “a first angle and a first length being defined by a line from the center of the first arm screw hole to the intersection of the medial longitudinal axis of the trunk.” ’457 Patent, Claim 1, col. 8, ll. 41-44. Defendant argues that this term is indefinite because it is open to an infinite number of interpretations. Docket No. 134 at 31. Specifically, defendant contends that an infinite number of lines may be drawn between the center of an arm screw hole and the trunk’s medial longitudinal axis, such that it is unclear where the intersection in question would occur. *Id.* at 30. Plaintiff argues that this term is not indefinite because a POSITA “would understand that the ‘line’ that intersects with longitudinal trunk axis is a longitudinal arm axis that extends from . . . the center of the arm screw hole to the longitudinal trunk axis along each of the asymmetrical arms.” Docket No. 143 at 31.

A term is indefinite if it “fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). To prove that a term is indefinite, a party must “demonstrate by clear and convincing evidence that one of ordinary skill in the relevant art could not discern the boundaries of the claim based on the claim language, the specification, the prosecution history, and the knowledge in the relevant art.” *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 783 (Fed. Cir. 2010). The Court disagrees with defendant’s argument that this term is indefinite because a POSITA would, viewing the term the context of the patent specification and claim language, be able to ascertain the meaning and scope of the claim term.

A POSITA would understand that the reason why the patents refer to an intersection at the trunk's medial longitudinal axis is to ascertain the angle at which an arm extends from the trunk. See, e.g., '457 Patent, Claim 1, col. 8, ll. 42-45 ("a first angle . . . being defined from a line from the center of the first arm screw hole to the intersection of the medial longitudinal axis of the trunk"). The purpose of ascertaining this angle is to ensure that, when a plate is wrapped around and screwed into a bone, the screws used to attach the plate to the bone will not impinge one another. See '251 Patent at col. 4, ll. 33-36 ("While the screws are at convergent angles, the screws typically do not in fact impinge on each other, or conflict in their placement *since each of the arms of the plate in a pair form a different angle to the central trunk.*") (emphasis added). Thus, the angle at which an arm extends from the trunk is not arbitrary or open to infinite measurements, but rather is an integral aspect of the plate's design. A POSITA would read the patents accordingly and recognize that the only way to measure the angle at which an arm extends from the trunk is to measure the angle created by the intersection of the trunk's medial longitudinal axis with the arm's medial longitudinal axis. An angle measured from any other line – for example, any of the lines drawn onto Figure 1 of the '954 patent by defendant:



see Docket No. 134 at 32 – would not provide a practical measurement of the angle at which the arm diverges from the trunk – information which is important to the invention.

This is confirmed by Figure 1 of the '457 Patent. Using a line drawn down the longitudinal medial axis of each arm, this figure depicts the measurement of the angles, labeled here as angle α and angle β , at which the arms on this plate embodiment diverge from the plate's trunk:

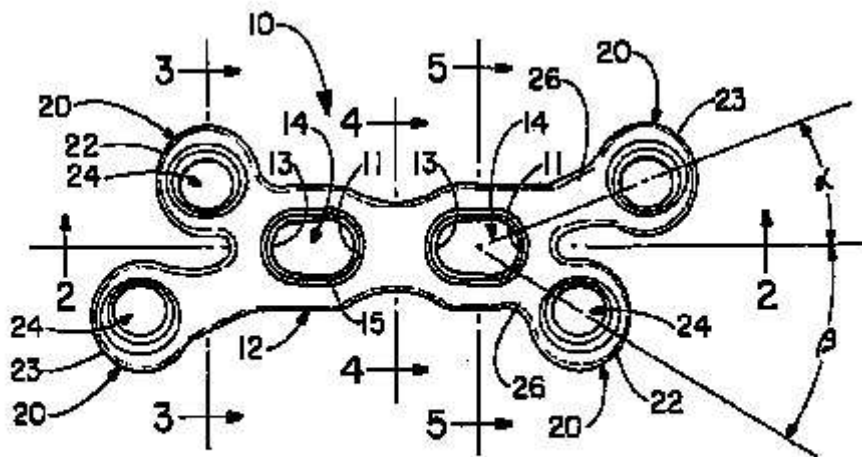


FIG.-1

Fig. 1, '457 Patent. While Figure 1 of the '457 Patent is the only figure that contains these annotations, the different specifications consistently refer to angles α and β in Figure 1 in discussing the angles created by an arm and a trunk. See, e.g., '848 Patent, col. 4-5, ll. 67-3 (“each set of arms includes one arm that defines a smaller angle of divergence α from the longitudinal axis of the trunk portion than the angle of divergence of the other arm β ”); '954 Patent, col. 5, ll. 62-25 (same); '251 Patent, col. 7, ll. 17-22 (“the first angle shown in FIG. 1 at α may be from about 5° to about 25° . . . while the second angle shown at β from about 10° to about 35° ”). This demonstrates that, consistent across all patents, an arm angle is measured at the intersection of the trunk and arm medial axes. See *E.I. du Pont De Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060, 1069 (Fed. Cir. 2019) (treating specification of sister patent, issued from continuation-in-part of common parent application, as intrinsic evidence in construing claims).

Although “limitations from the specification may not be read into the claims,” *Bell At'l Network Serv., Inc. v. Covad Commc'ns Grp., Inc.*, 262 F.3d 1258, 1270 (Fed. Cir. 2001), the Federal Circuit has stressed the importance of reading the claims in view of the specification, noting that “[o]ne purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000). In determining whether language found in the specification applies to the claims, the Federal Circuit “looks to whether the specification refers to a limitation only as part of less than all possible embodiments or whether the specification read as a whole suggests that the very character of the

invention requires the limitation be a part of every embodiment.” *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003). “[W]here the specification makes clear at various points that the claimed invention is narrower than the claim language might imply, it is entirely permissible and proper to limit the claims.” *Id.*; see also *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1329 (Fed. Cir. 2009) (“[W]hen the preferred embodiment is described in the specification as the invention itself, the claims are not necessarily entitled to a scope broader than that embodiment.”). Here, because the specifications exclusively calculate the angle at which a plate’s arms extend from the plate’s trunk by measuring the intersection of the trunk and arm medial axes, the Court finds that “the very character of the invention” indicates that this measurement technique is a limitation of the invention and not just one of its embodiments.

Having found that Court a person of ordinary skill in the art would understand that the angle-creating intersection at issue here is the intersection between the arm’s longitudinal medial axis and the trunk’s longitudinal medial axis, the Court construes “intersection of [an axis]” as “the intersection of the longitudinal medial trunk axis and the longitudinal medial arm axis.”

J. Screw axis, screw hole axis

This claim term appears in assorted claims in all nine patents. “The first arm having a first arm linear medial axis and an ear with at least one screw hole defining a first screw axis.” ’251 Patent, Claim 1, col. 11, ll. 53-55. Plaintiff again contends that no construction is needed. Docket No. 143 at 34. In the alternative, plaintiff proposes

that the term should be construed as an “axis that extends longitudinally through the center of a bore through the plate.” *Id.* Defendant argues that, without construction, or with plaintiff’s construction, “screw hole axis” is an indefinite term because there are an infinite number of axes that can be drawn through a screw hole. Docket No. 134 at 34. It seeks to define a screw hole axis as the “line through the center of a screw hole that is perpendicular to the top surface of the plate surrounding the screw hole.” *Id.* The parties do not appear to disagree as to the parameters that define a screw hole axis; rather, their disagreement revolves around the amount of detail required in the term construction.

Much of defendant’s proposed construction is superfluous given the specification language. As defendant concedes, “[t]he specifications of the asserted patents uniformly describe the screw hole axis as ‘perpendicular to a tangent to the top surface’” of the screw hole. *Id.* at 35; see ’457 Patent, col. 8, ll. 39-41 (“the first arm having an ear with at least one screw hole defining a first screw axis perpendicular to a tangent to the top surface of the first ear”); ’848 Patent, col. 2, ll. 57-60; ’457 Patent, col. 5, ll. 32-34 (“The through holes 14 in the trunk portion 12 have a longitudinal axis that is perpendicular to a plane tangent to the top radius of the plate.”). The Court will not add redundancy into the construction of “screw axis” or “screw hole axis” where it is already clear that the screw axis is perpendicular to a tangent to the top surface of the screw hole.

Moreover, the claims indicate, and the parties agree, that a screw hole axis is central in relation to the screw hole: “each arm including an arm screw hole which

defines a central screw hole axis.” ’278 Patent, Claim 5, col. 11, ll. 47-48; ’443 Patent, Claim 6, col. 12, ll. 5-7 (“The orthopedic plate system as set forth in claim 1, wherein the central screw hole axis of each arm converges toward the central screw hole axis of the other arm”). For this reason, the Court disagrees with defendant’s contention that there are an infinite number of axes that may be drawn through a screw hole to constitute a “screw hole axis.” The context in which the claim term is used indicates this is not so. See *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“[T]he context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms.”). If the screw axis is a line that is both perpendicular to a tangent to the top surface of the area surrounding the screw hole, and runs through the center of the screw hole, then each screw hole has only one possible screw axis.

Finally, each use of “screw axis” or a “screw hole axis” occurs in reference to a screw hole; no other plate “bores,” such as compression slots, have screw axes. Accordingly, the Court declines to adopt the portion of plaintiff’s proposed construction that defines a screw axis in relation to a “bore” in the plate. The Court construes “screw hole axis” to mean “the longitudinal axis through the center of a screw hole.”

IV. CONCLUSION

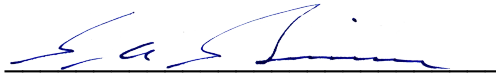
Accordingly, it is

ORDERED that the parties’ Joint Motion for Determination [Docket No. 148] is **GRANTED**. It is further

ORDERED that the disputed claim terms will be construed as indicated above.

DATED September 30, 2020.

BY THE COURT:

A handwritten signature in blue ink, appearing to read "Philip A. Brimmer", is written over a horizontal line.

PHILIP A. BRIMMER
Chief United States District Judge