UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF CALIFORNIA

AUBIN INDUSTRIES, INC.,

Plaintiff,

v.

CASTER CONCEPTS, INC.,

Defendant.

CASTER CONCEPTS, INC.,

Counterclaimant,

v.

AUBIN INDUSTRIES, INC.,

Counter-Defendant.

No. 2:14-cv-02082-MCE-CKD

MEMORANDUM AND ORDER

Through the present action, filed on September 8, 2014, Plaintiff Aubin Industries, Inc. ("Aubin") seeks injunctive relief and damages from Defendant Caster Concepts Inc. ("Caster") for alleged patent infringement. Aubin pleads causes of action for patent infringement, unfair competition, and intentional and negligent interference with prospective economic relationships. On October 30, 2014, Caster filed an answer to Aubin's complaint that included counterclaims for invalidity and non-infringement of Aubin's patent. On March 22, 2016, after being provided a claims construction tutorial

as to the patent at issue, the Court held a so-called Markman hearing regarding the construction of certain disputed claims in the patent. Having considered the argument of counsel and the papers and declarations submitted, the Court construes the disputed claims below.

BACKGROUND

On April 19, 2005, Aubin had United States Patent No. 6,880,203 ("The '203 Patent") issued on a wheel assembly for use in industrial settings.[1] Aubin's patent design involved independently rotating disks in the wheel assembly that help to move heavy equipment more effectively. Aubin used the '203 Patent to market and sell its popular "Swivel-EAZ®" line of wheel assemblies. Pl.'s Compl., ¶¶ 14-16.

According to Aubin's Complaint, Caster has directly infringed on its '203 Patent by "making, using, selling, and/or offering for sale ergonomic wheel assemblies with multiple independently rotatable disks," including its "Twergo" branded line of wheel assemblies. Id. at ¶ 19. Aubin alleges both direct infringement as well as contributory infringement stemming from Caster's alleged import of components especially adapted for use in its wheel assemblies. Id. at ¶¶ 26-27, 29.

The '203 Patent has two independent claims. The claim language employed in Independent Claim 1 is as follows:

> 1. A split tread wheel assembly, including:
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> [1a] a pair of tread assemblies disposed in **closely spaced,** axially aligned **relationship**, and **means for supporting said pair of tread assemblies on a common structural element in independently rotatable fashion**;
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> [1b] each of said tread assemblies including a central aperture, and a pair of sealed ball bearing assemblies, each secured within said central aperture of one of said tread assemblies;

[1] A copy of the '203 patent is attached to Aubin's Complaint as Ex. A.

> [1c] further including **a generally cylindrical spacer having a pair of annular lands at opposed ends thereof**, **each of said annular lands disposed to engage the inner race of one of said pair of bearing assemblies**.

The highlighted portion of Claim 1 above encompasses the terms for which Caster seeks construction.[2] For its part, Aubin asks the court only to construe the phrase "means for supporting said pair of tread (disk) assemblies on a common structural element in independently rotatable fashion."

In addition to construing Claim 1 as enumerated above, Caster also asks the Court for a construction as to a portion of Dependent Claim 5, as set out in bold below:

> The wheel assembly of claim 4, wherein said spacer comprises a tubular member having an axial opening there through, and further including a pair of **hub inserts adapted to be received within said axial opening of said spacer.**

Finally, Aubin requests construction as to the highlighted portions of Dependent Claim 12:

> 12. The wheel assembly of claim 11, further including t**hreaded means for applying axially compressive force to opposed ends of said axle to urge said pair of arms toward each other** and compressively impinge on said outer end surfaces of said hub inserts.

The Court will construe each of the requested terms in the analysis section of this Memorandum and Order below.

STANDARD

Claims construction, which construes the meaning of terms at issue in a patent, is a legal determination solely with the province of the court. Markman v. Westview Instruments, Inc., 517 U.S. 370, 372 (1996); 02 Micro Int'l Ltd. v. Beyond Innovation

[2] The '203 Patent's second independent claim, Number 4, is essentially identical except that it refers to "disk assemblies" instead of "tread assemblies." Neither party asks the Court to construe Independent Claim 4 any differently than Claim 1.

Tech. Co., 521 F.3d 1351, 1360 (Fed. Cir. 1998) ("The purpose of claim construction is to determine the meaning and scope of the patent claims asserted to be infringed.")

In interpreting patent terms, the court must analyze the intrinsic evidence of record, which consists of the claim language, the patent specification, and, if in evidence, the prosecution history. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed Cir. 1996). A court should first consider claim language, which should generally be given its "ordinary and customary meaning" unless clearly stated otherwise. Id. The "ordinary and customary" meaning of a claim term is "the meaning that the term would have to be a person of ordinary skill in the art in question at the time of the invention." Phillips v. AWH Corp., 415 F.3d 1303, 1313 (9th Cir. 2005).

After claim language, the court looks to the patent specification. Vitronics, 90 F.3d at 1582. The specification, which is the single best guide to the meaning of a disputed term, is highly relevant to the claims construction analysis and may well be dispositive. See Phillips, 415 F.3d at 1315. It is a fundamental rule that claims must be construed so as to be consistent with the specification. Id. at 1316. Courts therefore rely heavily on the written description of the claims in the specification for guidance when conducting claim construction. Id. at 1317. When reviewing the specification, however, courts must avoid reading limitations from the specification into the claim. Id. at 1323. To avoid importing limitations, the court must consider the purposes of a specification, which is to teach and enable those of skill in the art to make and use the invention and to provide the best way of doing so. Id.

In addition to the claims themselves and the specification, courts should also consider the patent's prosecution history, if that history is in evidence. Id. at 1317. The prosecution history consists of the record of the proceedings before the United States Patent and Trademark Office ("PTO") and includes the prior art cited during the examination of the patent. Id. The prosecution history, which is part of the intrinsic evidence, provides evidence of how the PTO and the inventor understood the patent. Id. The prosecution history limits the interpretation of claims terms so as to exclude any

interpretation that was disclaimed during prosecution. See Southwall Technologies, Inc. v. Cardinal IG Co., 54 F.3d 1570. 1576 (Fed. Cir. 1995).

Although the intrinsic evidence is the most important for claims construction, the court may also rely on extrinsic evidence if necessary. Extrinsic evidence "consists of all evidence external to the patent prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." Phillips, 415 F.3d at 1317. Extrinsic evidence, while useful, is generally less significant than the intrinsic record and should be evaluated in light of available intrinsic evidence. Id. at 1319.

"Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the eventers actually invented and intended to envelop with the claim. Renishaw PLC v. Marpass Societa per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998) (citing Markman, 517 U.S. at 389). "The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." Id. Therefore, "[a] claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent." Id.

ANALYSIS

The chart below summarizes the Court's construction of the claims terms at issue, and is followed by the Court's supporting analysis as to each term:

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Disputed Claim Term	Construction
"a generally cylindrical spacer having a pair of annular lands at opposed ends thereof"	"a generally cylindrical spacer having two outer diameter surfaces separated by a raised area and located at regions adjacent to the spacer's sidewalls"
"said annular lands disposed to engage the inner race of said pair of bearing assemblies"	"the annular lands of the spacer positioned so the inner races of the pair of ball bearing assemblies sit on top of them"
"means for supporting said pair of [tread/disk] assemblies on a common structural element in independently rotatable fashion"	**Means:** spacer (22) as disclosed in Figure 5 of the '203 patent specification **Function:** supporting said pair of tread (disk) assemblies on a common structural element in independently rotatable fashion (undisputed)
"closely spaced . . . relationship"	Indefinite
"hub inserts adapted to be received with said axial opening of said spacer"	"hub inserts dimensioned to pair with the inner diameter of the axial opening of said spacer"
"threaded means for applying axially compressive force to opposed ends of said axle to urge said pair of arms toward each other"	**Means:** axle (36) and nut (39) as disclosed in Figure 5 of the '203 patent specification **Function:** "to apply axially compressive force at opposed ends of said axle to urge said pair of arms toward each other" (undisputed)

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A. "a generally cylindrical spacer having a pair of annular lands at opposed ends thereof"

Caster asserts that this clause is far and away the most significant issue for the court to construe. According to Caster, the concept of placing two wheels in a single caster dates back more than a hundred years to a patent issued in 1915. See Excerpt from '203 Patent prosecution history, Ex. 2 to Decl. of Dr. Paul Wright. Caster goes on to allege that the '203 patent was not the first split-tread wheel, design, either, pointing to a patent issued in 1951 that described a single wheel assembly with two independently rotating disk or tread assemblies. Wright Decl., Ex. 4. Given that prior art, according to Caster, the patent examiner authorized the '203 Patent only after Aubin amended its patent request to include a specification that the patent includes "a generally cylindrical spacer having a pair of annular lands at opposed ends thereof," along with the additional proviso as discussed below that "each of said annular lands [be] disposed to engage the inner race of one of said pair of bearing assemblies." Id. at Ex. 2. Caster maintains that it is Aubin's spacer, with its annular lands, that separates the '203 Patent not only from the prior art but also from Caster's own patented caster design. The '203 spacer has two outer diameter surfaces separated by a raised area. Caster argues those outer diameter surfaces, upon which rest the ball bearings and wheel assembly rests, are the "annular lands" referred to in the '203 Patent. Caster further asserts that its own design is different because it uses a plain ring-shaped spacer without any edge discontinuity, along with hat-shaped hub inserts that also are fundamentally different from those inserts identified in the '203 Patent.

The heart of the construction dispute faced by the Court is in defining the term "annular lands." The '203 Patent does not just require a spacer, but one with "a pair of annular lands." Caster argues that the annular lands are the surfaces shown in the '203 Patent, and cannot include surfaces never identified in the patent that conflict with the patent specification.

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As a preliminary matter, it appears that annular surfaces are surfaces that go around the object. By referring to an "outer diameter surface" or an "inner diameter surface", the '203 patent uses the term annular consistently, and claims must be read in light of the patent's specification, which "is the single best guide to the meaning of a disputed term." Phillips, 415 F.3d at 1315. All annular surfaces referenced in the '203 Patent are horizontal to the upright structure, and as such are all diameter surfaces as opposed to vertical sidewalls.

In addition to the way the term "annular surfaces" is used in the '203 patent specification itself, Caster also proffers as further support for its position of the Declaration of Professor Paul Wright, a mechanical engineering professor at the University of California, Berkeley and a member of the National Academy of Engineering. Dr. Wright opines that in the context of mechanical engineering, cylindrical objects like those at issue here commonly refer to "annular surfaces" as "curved inner or outer diameter surfaces, as opposed to the object's sidewalls. Wright Decl., ¶ 21.

Having defined the term "annular surfaces" we must next proceed to the meaning of "annular lands." Given its particular usage in mechanical engineering, Dr. Wright states that "annular lands" is a term of art. Expert testimony is appropriate to "establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." Phillips, 415 F.3d at 1318. Expert testimony is also appropriate to ensure that the court understands how a claim term would be understood by one skilled in the art. AIA Engineering Ltd. v. Magotteaux Int'l S/A, 657 F.3d 1264, 1273 (Fed. Cir. 2011).

As a term of art in mechanical engineering, Dr. Wright describes annular lands as referring to "particular surfaces on certain annular, or ring shaped, objects that have more than one outer diameter surface." Wright Decl., ¶ 11. According to Dr. Wright, an object, like Caster's spacer, that is simply a ring shaped-object "does not have annular lands." Instead, "annular lands are created when there is a discontinuity in the outer diameter surface of a ring-shaped object. The discontinuity can be a raised or lowered

surface." Wright Decl., ¶ 11. To have annular lands, an object needs a step or ridge on the diameter surface. Annular lands as identified in Figure 5 of the '203 patent are the distinct outer diameter surfaces where a discontinuity is present. A plain ring-shaped spacer is perfectly smooth and lacks the distinct outer diameter surfaces that result when such a discontinuity exists. Absent that stepped surface, a plain spacer lacks annular lands. See Wright Decl., par 11. The Court finds Dr. Wright's reasoning persuasive. The term "having a pair of annular lands," then, as used in the '203 Patent, means "having two outer diameter surfaces separated by a raised area."

This interpretation is consistent both with Figure 5 of the '203 Patent and photos of the patented spacer. The only surfaces identified in the patent as annular lands are identified in Figure 5 as annular lands 23, and those surfaces are described in the '203 patent as "spaced apart annular lands 23 at opposed ends of the spacer." '203 patent, col. 3:42-44. The reference to "opposed ends" means the annular lands go to the edge of the spacer and do not encompass the spacer's sidewalls. While Plaintiff argues that "at opposed ends" means the sidewalls, that construction would be inconsistent with the preferred embodiment as depicted in Figure 5 of the patent and would consequently violate claim construction law. See On-Line Techs., Inc. v. Bodeseewerk Perkin-Elmer GmbH, 386 F.3d 1133, 1138 (Fed. Cir. 2004). The '203 Patent does not use term "annular" to refer to the sidewalls of ring-shaped objects. Instead, as noted by Dr. Wright, it uses the term to identify the rounded inner or outer diameter surfaces of ring-shaped objects. See Wright Decl. ¶ 22, and its supporting references to the '203 patent at 1) 2:11 (referring to the "annular (limited) bearing surfaces of the wheel on the axle", which is the inner diameter surface of the wheel, not its sidewalls); at 2) 2:37-42 (referring to the central annular surfaces 21 of hub inserts, which are outer diameter surfaces of the inserts on which the spacer sits); and at 3) 3:35 (referring to "annular recess 17", which is the inner diameter of the wheel disk that receives the ball bearing assemblies). Each reference identifies the inner or outer diameter of a ring-shaped object, not to its sidewalls. Consequently, as Dr. Wright notes, "one of ordinary skill in

the art would understand the claim term 'a generally cylindrical spacer having a pair of annular lands at opposed ends thereof' as used in the '203 Patent to mean a generally cylindrical spacer having two outer diameter surfaces separated by a raised area and located at regions adjacent to the spacer's sidewalls." Wright Decl., ¶ 11. The Court agrees with Dr. Wright's analysis of the term "annular lands" in the context of the '203 Patent.

Dr. Wright also points out that other patents have used the phrase "annular lands" in a manner consistent with his proposed construction and the terms of the '203 patent itself. A 1987 patent issued to Matson (U.S. Patent No. 4,785,926), for example, uses the term "annular land" to refer to an outer diameter surfaces when, like here, there are different outer diameter surfaces on a ring-shaped object, with an outer diameter surface holding the inner race of a ball bearing assembly. See id. at ¶ 19, Ex. 6. Another patent, issued to Pfister in 1991 (U.S. Patent No. 5,086,751), uses the term "annular lands" to refer to outer diameter surfaces of ring-shaped objects with differing outer diameter surfaces. Id. at ¶ 18, Ex. 7. In the Court's view, these comparisons add further credence to Dr. Wright's interpretation of "annular lands" as adopted herein.

Aubin, on the other hand, simply urges the Court to rely on purportedly "plain meaning" of the term, arguing that there is "nothing technical about the phrase." According to Aubin, the term "annular" simply means a circular surface and "lands" means "to come to rest in a particular place". To support its assertion that "land" should be afforded its everyday meaning, Aubin cites both the Merriam-Webster dictionary definition of "land" as well as Philip Aubin's own deposition testimony[3] that if "you jump off a chair you land on the floor, and if "you land a plane, you land it on a run way." Aubin Dep., Ex C to the Singer Decl., 209:21-210:2. The Court does not find this reasoning persuasive, and does not believe that a lay definition is proper in the face of

[3] Phillip Aubin, the listed inventor of the '203 patent, is Aubin's President. A machinist by trade, Aubin has no engineering degree and has taken no engineering courses. Aubin Dep., Ex. 2 to the Harkins Decl., 45:20-46:19.

Dr. Wright's assertion that "annular lands" is a term of art, not a lay term.[4] Significantly, lay dictionary definitions for technical terms cannot be used to contradict expert testimony on technical terms. See Vanderlande Indus. Nederland BV v. I.T.C., 366 F.3d 1311, 1321 (Fed. Cir. 2004).

Based on all the foregoing, then, the Court construes the claim term "a generally cylindrical spacer having a pair of annular lands at opposed ends thereof" as meaning "a generally cylindrical spacer having two outer diameter surfaces separated by a raised area and located at regions adjacent to the spacer's sidewalls."

B. "said annular lands disposed to engage the inner race of said pair of bearing assemblies"

This is an additional patent specification describing the '203 spacer. Aubin argues that it should simply be given its plain meaning. Caster, on the other hand, alleges that because a jury may have difficulty with what it means for the annular lands to engage the ball bearings, the term should be interpreted to make it clear it means that the inner race of the ball bearings sits on top (and not next to) the lands. Therefore, the construction advocated by Caster is "the annular lands of the spacer positioned so the inner races of the pair of ball bearing assemblies sit on top of them." According to Caster, this helps the jury, is consistent with the '203 Patent and comports with industry usage. The Court agrees.

A ball bearing assembly is typically a ring-shaped object that has an inner race (the inner circular portion), an outer race (the outer circular portion) and a ball race in between. Wright Decl, ¶ 26 The purpose of a ball bearing assembly is to allow an object on the outside of the assembly to rotate independently of the object on the inside of the assembly, or vice versa. Id. As Dr. Wright explains, to one of ordinary skill in the art, engaging the inner race of a ball bearing assembly typically refers to putting the inner facing side of the inner race onto a shaft or similar object, akin to the process of

[4] It should also be noted that, according to Dr. Wright, the concept of "lands" in mechanical engineering is taught in textbooks such as Shigley & Miscke's Mechanical Engineering Design, 5th ed. (McGraw Hill, 1989), another factor militating against a simple lay definition of the term. Wright Decl, ¶ 18.

putting a ring on to a finger. Wright Decl., ¶ 27. More specifically for purposes of the present case, one engages the inner race of a ball bearing assembly by putting it on a cylindrical object, here the outer facing diameter of the spacer. Id. at ¶ 29. Dr. Wright goes on to point out that this interpretation is consistent with the phrase's usage in the '203 patent, where the inner races are engaged by annular lands on the spacer such that the annular lands sit under the inner races of the ball bearings. See, e.g., '203 patent, Fig. 5. Consequently, by putting the inner race on a spacer, the outer race can spin without causing the inner race to also spin. In that way, placing the inner race on top of the spacer's annular lands engages them. Wright Decl., ¶ 27. Significantly, the '203 patent agent does not refer to engaging an inner race from the side or sidewalls. To the contrary, the '203 patent makes it clear that the ball bearing is already engaged on top of the annular lands of the spacer before the hub inserts are added.

Aside from simply arguing that the phrase should be accorded its plain meaning, Aubin has cited no evidence to contradict Caster's proffered construction, which the Court finds persuasive. The term "said annular lands disposed to engage the inner race of said pair of bearing assemblies" is therefore construed to mean "the annular lands of the spacer positioned so the inner races of the pair of ball bearing assemblies sit on top of them."

C. "means for supporting said pair of [tread/disk] assemblies on a common structural element in independently rotatable fashion"

The parties agree that this term utilizes so called "means-plus function" language that, in turn, invokes special rules in claims construction. In analyzing such language, the Court must first identify the pertinent "means" and more precisely what structure the patent clearly links to a given function.

Caster argues that the proposed means under this analysis is the spacer itself, whereas Aubin contends that the means is the entire hub assembly, comprised not just of the spacer but the spacer together with the two hub inserts assembled together, along with all equivalent structures. The second, "function" portion of the analysis is

undisputed inasmuch as both parties agree that the requisite function consists of supporting the tread (disk) assemblies on a common structural element in independently rotatable fashion. The crux of the dispute, then, is that Caster claims that spacer itself performs the function whereas, according to Aubin, the function requires hub inserts and not just the spacer.

The law requires a "clear link" between the structure disclosed in the patent and the function stated in the claim. B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997). Structures not clearly linked to the function are excluded. See, e.g., Omega Eng'g, Inc. v. Raytek, Corp., 334 F.3d 1314, 1332 (Fed. Cir. 2003). Here, according to the '203 Patent, the function of supporting the tread assemblies in an independently rotatable fashion is performed by spacer with its annular land. As the patent states:

> A cylindrical spacer **22** extends about the surfaces **21** of both hub inserts **19**, and includes spaced apart annular lands at opposed ends of the spacer to support and retain the inner races of the ball bearing assemblies **18**. Thus the wheel disks **13** are both supported by the same spacer component, yet are independently rotatable.

'203 patent, col. 3:41-46.[5]

Consequently, whether the hub inserts help the wheels to operate is irrelevant. That is not a condition of the claim, which requires a common structural element to support the wheel assemblies in independently rotatable fashion. The '203 Patent makes clear that this is accomplished by the spacer itself, with its annular lands. Only the spacer is required to actually support the tread/disk assemblies. Moreover, the patent makes it clear that the wheel disks are assembled to the spacer **before** the hub inserts are added.[6] At most, the hub inserts, like any such insert, simply keep the ball bearings in place on their respective lands and prevent those bearings from sliding

[5] The numbers inserted into the quotation refer to the components depicted in Figure 5 of the patent specification.

[6] See '203 Patent, col. 4:38-45

sideways away from the spacer. They do not support the bearings themselves, only the annular lands do.

The wheel disks are both supported by the same spacer component, yet are independently rotatable. There is no need to add any other structures to the means; the spacer alone performs the function. Wright Decl., ¶ 37. Again, that conclusion is consistent with the patent language itself:

> A cylindrical spacer extends about the central annular surfaces and supports the inner races of the bearing assemblies so that the two treads turn independently about the common spacer on their respective bearing assemblies. Thus, the independently rotating treads are supported on the same structural element . . .

'203 Patent, col. 2:38-45.

The above-quoted language links support to a "singular" spacer rather than the "plural" central annular surfaces. Additionally, the spacer is the one structural element that is common to both tread assemblies since it holds both of them. Aubin's proposal to include the spacer assembled with the two hub inserts as the requisite support invokes not one structural element, but an assembly of three elements, one spacer and two hub inserts. One of skill in the art would know that a reference to a structural element refers to one element, not three. Wright Decl., ¶ 34.

The doctrine of claim differentiation further supports Caster's argument that the spacer is the only common element. Under that doctrine, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." Phillips, 415 F.3d at 1315.[7] The two independent claims asserted in the '203 Patent (Claims 1 and 4) do not require hub inserts at all; in fact, the term hub insert does not appear until Dependent Claim 5. The only difference between Claim 4 and Claim 5 is that Claim 5 adds hub inserts to go into

[7] While Plaintiff argues that claim differentiation does not apply to means-plus-function claims like this one, they cite no supporting authority. Caster, on the other hand, identifies case law finding the doctrine is indeed applicable in this instance. Wenger Mfg., Inc. v. Coating Mach Sys., Inc., 239 F.3d 1225, 1233 (Fed Cir. 2001); Univ. of Pittsburgh of Commonwealth Sys. of Higher Educ. v. Varian Med. Sys., Inc., 561 Fed. App'x 934, 942 (Fed, Cir. 2014) (rejecting argument that claim differentiation does not apply to means-plus-function claims).

a hole in the spacer. If Claim 4 required the hub inserts, Claim 5 would be meaningless. To read a claim term from a dependent claim (Claim 5) into an independent claim (Claim 4) "renders the term redundant and offends principles of claim differentiation." Trebro Mfg., Inc. v. Firefly Equip., LLC, 748 F.3d 1159, 1167 (Fed. Cir. 2014). Independent Claims 1 and 4 require the "means for supporting" but do not require hub inserts.

Consequently, while the function portion of this claim language is undisputed as "supporting said paid of tread (disk) assemblies on a common structural element in independently rotatable fashion", the means for that function is construed by the Court as the spacer identified as item 22 on Fig. 5 to the '203 patent.

D. "closely spaced. . . relationship"

Caster argues that this phrase, as used in the '203 patent, is indefinite. Patent claims must provide "reasonable certainty" as to their scope, and are invalid if they fail to do so. Nautilus v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2129 (2014). "The scope of claim language cannot depend solely on the unrestrained, subjective opinion of a particular individual." Datamize LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1350 (Fed. Cir. 2005).

Here we have not just a "spaced relationship" but also a "closely spaced relationship." That raises the question of just how close the relationship needs to be to fall within the term's purview. As Dr. Wright noted, a "spaced relationship" is susceptible to definition since for purposes of the present matter it would be a relationship in which there is some space between the assemblies; they do not touch. But, as Wright goes on to observe, once the term "closely" is inserted the relationship becomes impossible to adequately define. Wright Decl., ¶ 41. According to Dr. Wright, "[o]ne of ordinary skill in the art would not be able to define 'closely spaced relationship' to give the scope of the claims meaning, because the phrase is too vague to know whether or not wheels are in such a relationship." Id. The Court believes Dr. Wright is correct.

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Similarly uncertain terms have been found to be indefinite. See Interval Licensing LLC v. AOL, Inc., 766 F.3d 1364, 1371 (Fed. Cir. 2014) ("unobtrusive manner"); Innovative Display Techs. LLC v. Acer Inc., 2014 WL 4230037 at ** 25-26 (E.D. Tex. Aug. 26, 2014 ("quite small"). Consequently, the Court concludes that the term "closely spaced relationship" is invalid as indefinite.

E. "adapted to be received with said axial opening of said spacer"

This language is not used in Independent Claims 1 and 4 of the '203 Patent., which do not require a hub insert that fits into the axial opening of the spacer. It is nonetheless used within Dependent Claim 5 (as well as in subsequent Claims 6-15) as a limiting term in describing hub inserts by requiring that such hub inserts be "adapted to be received within said axial opening of said spacer." While Aubin again maintains that the term should simply be afforded its plain meaning, Caster contends that construction on the Court's part is necessary. For purposes of making the language more understandable to a jury, the Court agrees that construction would be helpful.

According to Caster, one of ordinary skill in the art would understand this term of the '203 patent to mean "dimensioned to pair with the inner diameter of the axial opening of said spacer." Wright Decl., ¶¶ 45-47. Significantly, as Caster notes, this construction is consistent with the '203 Patent, which notes that the "cylindrical spacer extends about the surfaces of both hub inserts" ('203 Patent, col. 3:41-42), with the hub inserts then "pressed into the central opening of the spacer." Id. at 4:40-41. That configuration can result only when the dimensions are "paired" so as to fit together. Moreover, the term "adapted to" means modified to a particular purpose. Caster's proffered construction more precisely shows that the hub insert must be modified so that the bore of the spacer fits properly around it. In order to do this, the inserts must be dimensioned (by machining or otherwise) to fit precisely to the axial opening (central hole) of the spacer. Consequently, Caster's proposed construction will be adopted.

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F. "threaded means for applying axially compressive force to opposed ends of said axle to urge said pair of arms toward each other"

According to Aubin, this term is a means-plus function claim limitation, which requires both a stated function and a corresponding structure from the patent specification for proper construction. Aubin asserts that the function is clear from the claim language and does not need construction: "to apply axially compressive force to oppose ends of said axle to urge pair of arms toward each other". With respect to the "means" portion of the mean-plus-function analysis, however, Aubin urges the Court to unequivocally identify the axle (36) and nut (39) depicted in Figure 5 of the '203 Patent specification as the structure corresponding to the stated function.

Caster has not offered any differing interpretation, and the Court's review of the specification indicates that Aubin's position is the correct one. Figure 5 makes it clear that once the wheel assembly is secured and the axle is in place, the nut is tightened on the axle by screwing it into the threaded section of the axle. '203 Patent, col. 3:57-60. Consequently, the Court finds that the means for applying axial compression is indeed use of the axle and nut.

CONCLUSION

For all the foregoing reasons, the Court construes the disputed claim terms as set forth above.

IT IS SO ORDERED.

Dated: September 26, 2017

MORRISON C. ENGLAND, JR
UNITED STATES DISTRICT JUDGE