

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

KOLCRAFT ENTERPRISES, INC.,)	
)	
Plaintiff,)	No. 09 C 03339
)	
v.)	
)	Judge Edmond E. Chang
CHICCO USA, INC.,)	
)	
Defendant.)	

MEMORANDUM OPINION AND ORDER

This case involves a dispute over U.S. patent number 7,376,993 (the '993 patent), which claims a variety of methods and apparatuses related to infant play gyms.¹ (A play gym is a device composed of arches from which toys dangle.) The Court previously issued a claim construction opinion interpreting disputed terms in some of the method claims (Claims 28-30). R. 216, First Claim. Const. Op.² The parties now ask the Court to interpret one of the apparatus claims, Claim 20. This Opinion sets out the construction.

I. Background

The previous opinion explains this case's lengthy procedural history, and the overall invention at issue, so there is no need to recount those details again here. *See* First Claim Const. Op. at 2-9. The parties currently debate the construction of Claim 20 of the '993 patent. Claim 20 describes an apparatus including a floor mat

¹The Court has subject matter jurisdiction over this case under 28 U.S.C. §§ 1331 and 1338.

²Citations to the record are noted as "R." followed by the docket number and, where necessary, the page or paragraph number.

and a play gym, where the play gym can be connected to the floor mat, and the floor mat can be fastened to either a bassinet or a play yard.³ It is worth setting forth the full text of Claim 20:

An apparatus comprising:

a floor mat;

a play gym to suspend an object above the floor mat;

at least one connector to couple the play gym to the floor mat; and

at least one fastener to couple the floor mat to at least one of a play yard and a bassinet,

wherein the at least one connector comprises a plurality of connectors,

and the play gym comprises:

a hub; and

at least two legs, each of the legs having a first end coupled to the hub and a second end dimensioned to be removably coupled to a respective one of the connectors, wherein *the at least two legs are pivotably coupled to the hub,*

wherein *the connectors are pivotably coupled to the mat.*

Def. Br. at 3 (emphases added). The disputed terms are italicized.

II. Legal Standard

When construing patent claims, courts look first to intrinsic evidence, including the claims themselves, the specification, and the prosecution history.

Sunovion Pharms., Inc. v. Teva Pharms. USA, Inc., 731 F.3d 1271, 1276 (Fed. Cir.

³Claim 20 is the subject of a pending *inter partes* reexamination proceeding. In that proceeding, Claim 20 was deemed patentable, but the proceeding remains pending. R. 247, Def. Br. at 1 n.1.

2013) (citations omitted). The Court presumes “that claim terms take on their ordinary meaning unless the patentee demonstrated an intent to deviate from that meaning.” *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1370 (Fed. Cir. 2003) (quoting *Teleflex, Inc. v. Ficoso N. Am. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002)) (cleaned up).⁴ The ordinary meaning of a term is determined from the perspective of a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005). If the intrinsic evidence is not dispositive, then the Court may consider extrinsic evidence, such as dictionary definitions, expert testimony, and inventor testimony. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583-84 (Fed. Cir. 1996). Extrinsic evidence is considered less reliable than intrinsic evidence, and “may not be used to vary or contradict the claim language” and specification. *Id.*

III. Analysis

A. “At least one connector to couple the play gym to the floor mat”

Artsana⁵ argues that the phrase “at least one connector to couple the play gym to the floor mat” is in need of construction. It maintains that the word “connector” should be construed as a means-plus-function term under 35 U.S.C. § 112(f). Under Section 112(f), if a claim term is “expressed as a means for performing a specified function,” the claim must be construed to cover only the

⁴This opinion uses (cleaned up) to indicate that internal quotation marks, alterations, and citations have been omitted from quotations. *See, e.g., United States v. Reyes*, 866 F.3d 316, 321 (5th Cir. 2017).

⁵Chico USA, Inc., does business under the name Artsana, and is referred to as Artsana throughout the briefing. As with the prior opinion, the Court also will use that name.

structure, material, or acts described in the specification for performing the claimed function. 35 U.S.C. § 112(f); *see also Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015). If “the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure,” Section 112(f) does not apply. *Williamson*, 792 F.3d at 1349.

The term “connector” does not trigger a means-plus-function construction, because “connector” is clearly a term for structure, and would be understood as such by people of ordinary skill in the art. In fact, even a lay jury would understand “connector” to be a structural term, because “connector” is a common and easily understood noun. The ’993 patent’s specification confirms that “connector” is a word denoting structure. The specification frequently uses “connector” as a name for structure, and even provides several examples of connectors (fabric pockets, snaps, and rivets, among others). *See* ’993 Patent col. 5 ll. 7-12, 38-60; col. 1 ll. 53-56; col. 6 ll. 13-24. Artsana even seems to use “connector” as a structural term in its own patents. *See* Pl. Br. at 8-10. The use of the word “connector” in the specification and the Artsana patents confirms that the word “connector” is generally understood as having “sufficiently definite meaning as the name for structure.” *Williamson*, 792 F.3d at 1349.

Indeed, the Federal Circuit has already rejected the argument that the word “connector” does not disclose structure. *See Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1360 (Fed. Cir. 2004), *overruled on other grounds*, *Williamson*, 792 F.3d 1339. In *Lighting World*, the Federal Circuit noted that

dictionary definitions demonstrate that the word “connector” “has a reasonably well-understood meaning as a name for structure,” and so held that the term “connector assembly” did not trigger Section 112(f). It is true that *Lighting World* was decided before *Williamson v. Citrix Online* and so applied a “strong” presumption that a claim term lacking the word “means” is not subject to § 112(f). See *Lighting World*, 382 F.3d at 1358; *Williamson*, 792 F.3d at 1348-49. But even though the Federal Circuit has abandoned this “strong” presumption, *Lighting World*’s analysis of the term “connector” remains persuasive.⁶ The term “connector” plainly denotes structure, so the claim term “at least one connector to couple the play gym to the floor mat” does not trigger a means-plus-function construction.

B. “At least one fastener to couple the floor mat to at least one of a play yard and a bassinets”

Artsana’s next claim construction argument is very similar to its argument about the word “connector,” but this time Artsana asserts that the term “fastener” fails to disclose structure. This argument falls short for the same reasons as the argument about the term “connector.” “Fastener” is a commonly understood noun that refers to a category of structures used to fasten or attach things together. *Blackbird Tech LLC v. ELB Electronics*, 2016 WL 7451622, at *5 (D. Del. Dec. 28, 2016) (“Fasteners are a generally understood class of physical structures.”). Again,

⁶It is true that a term used in one patent does not necessarily have the same meaning as the same term in another patent (or, for § 112(f) purposes, the same sufficient reference to structure rather than means-for), so caution is warranted before simply relying on an opinion interpreting a different patent. But *Lighting World* translates well to this case by (a) making a generally applicable point that dictionary definitions of “connector” refer to structure; (b) looking to the specification’s use of the term as denoting structure, just like the ’993 patent does; and (c) pointing out that the opposing side’s patent also used the term to denote structure, which is true here too. 382 F.3d at 1360-61.

the specification gives examples of fasteners—Velcro strips and rivets—confirming that the claim term “fastener” is referring to this category of known structures. ’993 Patent col 3 ll. 43-46, col. 5 ll. 60-64. *See, e.g., Flo Healthcare Solutions, LLC v. Kappos*, 697 F.3d 1367, 1374-75 (Fed. Cir. 2012), *overruled on other grounds, Williamson*, 792 F.3d 1339 (finding that claim term “height adjustment mechanism” designates “a class of structures that are generally understood to persons of skill in the art”). The word “fastener” does not trigger Section 112(f), and does not require further construction. The term’s meaning is plain.

C. “The at least two legs are pivotably coupled to the hub”

Next up is the term “the at least two legs are pivotably coupled to the hub.” The interpretation of this term is mostly governed by the prior claim-construction opinion, which defined “pivoting the leg” as requiring the play gym leg to “rotate, turn, or move about a fixed point.” First Claim Const. Op. at 34. Claim 20 makes “pivot” into an adverb, but this change does not affect the claim construction. As for the word “coupled,” the parties agree that it means “linked, connected, or fastened.” *See* Def. Br. at 12-13, 21; Pl Br. at 14. Putting these elements together, “pivotably coupled” must mean linked, connected, or fastened such that the leg can rotate, turn, or move around a fixed point.

Artsana agrees with this definition of “pivotably coupled,” but tries to add the qualifier that a pivotable coupling does not include a coupling that is fixed and/or bendable. Def. Br. at 15-16. As far as “fixed” coupling is concerned, non-movable coupling is already excluded by the Court’s construction of “pivotably” as requiring

movement around a fixed point. But there is no basis in the patent to narrow the claim to exclude *bendable* coupling. Neither the specification nor the claim terms disclaim a pivotable coupling that is bendable. In support of its proposed construction, Artsana points to the Patent Trial and Appeal Board’s opinion in the *inter partes* proceeding on the ’993 patent. In that opinion, the PTAB distinguished prior art where the legs of the play gym were “fixedly connected to the hub,” but where the far ends of the legs were movable because the legs themselves were flexible. Def. Br. Exh. B at 18. It is not at all clear that this interpretation supports Artsana’s proposed claim construction, but even if it did, the Court’s claim interpretation would be no different. The PTAB’s decisions are not binding on this Court, and nothing in the patent disclaims a bendable coupling. What’s more, accepting Artsana’s proposed exclusion of a bendable pivot would arguably conflict with the Court’s own prior claim construction, which explained that a pivot would include “a hinge, joint (such as ball and socket), or other similar mechanism.” First Claim Const. Op. at 24-45. Hinges and ball-and-socket joints could both be considered bendable pivots. Artsana makes no convincing argument to support exclusion of pivotable couplings that are bendable, so the definition above stands.

D. “The connectors are pivotably coupled to the mat”

Artsana’s last argument is that Claim 20 is indefinite (or that it fails the written description requirement) because of ambiguity surrounding the term “the connectors.” A claim is indefinite, if, “read in light of the specification delineating the patent, and the prosecution history, [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.*, 134 S. Ct. 2120, 2124 (2014). Claim 20 requires “at least one connector” to couple the play gym to the floor mat. Claim 20 then specifies that this “at least one connector” must comprise a “plurality of connectors.” But the claim goes on to twice refer to “the connectors” without specifying whether “the connectors” refers to “the at least one connector” or, instead, the “plurality of connectors” that comprise the at least one connector (or both).⁷ Specifically, Claim 20 states that the play gym legs each must have “a second end dimensioned to be removably coupled to a *respective one of the connectors*,”⁸ and that “*the connectors* are pivotably coupled to the mat” (emphasis added). The question is, what does “the

⁷Kolcraft argues that the “plurality of connectors” limitation just means that there must be two connectors between the play gym and play mat, which is met by a play gym having two legs, with a connector at the end of each leg. Pl. Br. at 15. This interpretation is nonsensical. The phrase “at least one connector to couple the play gym to the floor mat” already includes a play gym connected to the floor mat by two connectors, one at the end of each leg, so Kolcraft’s proposed interpretation would render the phrase “plurality of connectors” extraneous. What’s more, Kolcraft’s interpretation ignores the language stating that the “at least one connector *comprises* a plurality of connectors.” It is difficult to see what that could mean other than that the at least one connector must itself be comprised of multiple connector parts.

In fact, that is the very interpretation that Kolcraft itself advocated in front of the PTO. In distinguishing a prior art reference by Graco, Kolcraft argued that “Graco ... has two connectors (i.e. at least one connector) at opposite ends of its play gym legs, but each such connector is a single connector. Thus, at least one connector of Graco does not comprise a plurality of connectors.” R. 219, Status Report Regarding Plaintiff’s Updated Infringement Contentions, Exh. A at 35. The Examiner apparently rejected that interpretation and held that the “plurality of connectors” limitation was met by the play gym having two legs with a connector at each end. R. 228, Def.’s Updated Noninfringement Contentions Exh. A at 37. But, for the reasons already discussed, the Examiner’s interpretation is not reasonable.

⁸Artsana also argues that the claim is indefinite because it would be impossible for “each of the [two] legs ... to be removably coupled” to a single connector. Def. Br. at 18. But this argument is clearly premised on a misreading of the claim, which only requires that each of the two legs be *dimensioned to be* coupled to a single connector, not that both legs be connected to a single connector at the same time.

connectors” refer to—“the at least one connector,” the “plurality of connectors,” or both?

If the phrase “the connectors” had to refer to *either* “the at least one [compound] connector” *or* the “plurality of connectors,” then there would be a serious ambiguity problem. It would be unclear whether the play gym’s legs must be dimensioned to be coupled to the “at least one connector,” or to only one of the plurality of connectors that comprise the compound connector. Similarly, it would be unclear whether each of the plurality of connectors has to be pivotably coupled to the mat, or whether coupling only one of the connectors in the compound connector would suffice. But a reasonable claim construction can resolve this ambiguity. As discussed earlier, Claim 20 introduces two different types of connectors: the “at least one connector” used to couple the play gym and floor mat, and the “plurality of connectors” that comprise the “at least one connector.” The claim goes on to use the generic term “connectors” twice. The reasonable construction here is that the term “connectors” is an umbrella term encompassing *both* of the two specific types of connectors introduced in Claim 20. The choice of the generic term “connectors” rather than the more specific terms “the at least one connector” or “a plurality of connectors” looks deliberate in context: other claims in the ’993 patent use the specific terms, suggesting Claim 20 would have used one of those terms if it had wanted to specify the type of connector. *See, e.g.*, ’993 Patent col. 8 ll. 53-54 (“An apparatus as defined in claim 1 wherein *the plurality of connectors* are coupled to

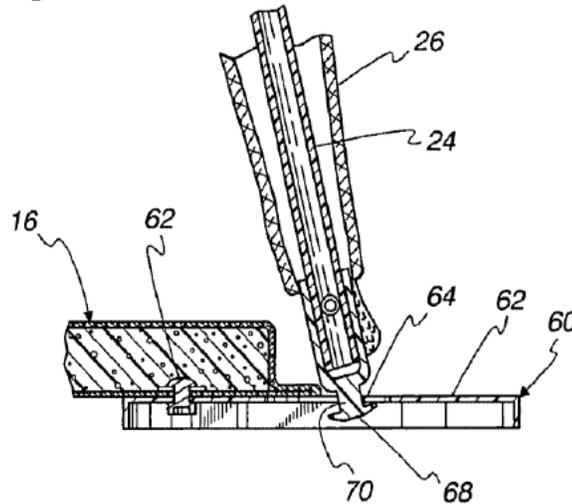
the mat...”); ’993 Patent col. 8 ll. 61-62 (“An apparatus as defined in claim 1 wherein *the at least one connector* is located within a perimeter of the mat...”).

In short, the best interpretation of the term “connectors” is that it is meant to encompass the category of connectors including both “the at least one connector” and the “plurality of connectors.” On this interpretation, Claim 20 is not indefinite. The claim says that “the connectors are pivotably coupled to the mat.” This means that *all* the connectors—the single compound connector and each of the plurality of connectors—must be pivotably coupled to the mat. Conversely, the play gym legs need only be dimensioned to be coupled to any *one* of these connectors.⁹

Artsana argues that, on this interpretation, the claim fails for lack of written description. A claim is invalid for lack of written description under 35 U.S.C. § 112(a) if the description does not “clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (cleaned up). Artsana asserts that the patent does not support a connector having multiple connector parts, each one pivotably coupled to the mat. Def. Br. 18-19. But that is not the case. Figure 5 of the ’993 patent shows a rivet (62) which couples a rotating plate (60) to the mat (16). Figure 5 is reproduced here:

⁹At this stage, the Court’s interpretation of the claim terms is limited by the evidence at hand. It may well be that after more expansive discovery, it will emerge that skilled artisans do not understand the term “the connectors” and find the claim ambiguous. This opinion does not prevent Artsana from re-raising the indefiniteness issue at some later stage of the case. For now, however, the claim does not appear to be indefinite.

Fig. 5



In Figure 5, both the rivet and the plate are pivotably coupled to the mat. *See also* '993 Patent col. 6 ll. 13-24. This is an example of an embodiment where all the connectors in the compound connector are pivotably coupled to the mat, which makes clear that the inventor “actually invented” the claimed subject matter. *Ariad*, 598 F.3d at 1351. Claim 20 does not fail for lack of written description, and it is not indefinite.

VI. Conclusion

The Court’s interpretation of the disputed terms of Claim 20 is summarized as follows:

Disputed Term	Construction
“At least one connector to couple the play gym to the floor mat”	No construction needed.
“At least one fastener to couple the floor mat to at least one of a play yard and a bassinet”	No construction needed.
“The at least two legs are pivotably	“Pivotably coupled” means linked,

coupled to the hub”	connected, or fastened such that the leg can rotate, turn, or move around a fixed point.
“The connectors are pivotably coupled to the mat”	<p>“Pivotably coupled” means linked, connected, or fastened such that the connector can rotate, turn, or move around a fixed point.</p> <p>“The connectors” is a generic term denoting <i>all</i> the connectors, including the “at least one connector” and each of the “plurality of connectors.”</p>

ENTERED:

s/Edmond E. Chang
 Honorable Edmond E. Chang
 United States District Judge

DATE: April 13, 2018