





**STARK, U.S. District Judge:**

Plaintiff Regalo International, LLC (“Regalo”) filed suit against Defendant Munchkin, Inc. (“Munchkin”) in November 2015, alleging infringement of U.S. Patent Nos. 8,555,436 (the “463 patent”), 7,137,158 (the “158 patent”), and 7,178,184 (the “184 patent”). The patents are directed to bed rail systems that can be used to prevent a child from falling out of bed. Presently before the Court is the construction of disputed terms of the patents’ claims.

The parties submitted claim construction briefs (D.I. 57, 58, 60, 61) and the Court held a claim construction hearing on October 7, 2016 (*see* D.I. 84 (“Tr.”)).

## **I. LEGAL STANDARDS**

The ultimate question of the proper construction of a patent is a question of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837 (2015) (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388-91 (1996)). “It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (internal quotation marks omitted). “[T]here is no magic formula or catechism for conducting claim construction.” *Id.* at 1324. Instead, the court is free to attach the appropriate weight to appropriate sources “in light of the statutes and policies that inform patent law.” *Id.*

“[T]he words of a claim are generally given their ordinary and customary meaning . . . [which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1312-13 (internal citations and quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Id.* at 1321

(internal quotation marks omitted). The patent specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

While “the claims themselves provide substantial guidance as to the meaning of particular claim terms,” the context of the surrounding words of the claim also must be considered.

*Phillips*, 415 F.3d at 1314. Furthermore, “[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . [b]ecause claim terms are normally used consistently throughout the patent . . . .” *Id.* (internal citation omitted).

It is likewise true that “[d]ifferences among claims can also be a useful guide . . . . For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Id.* at 1314-15 (internal citation omitted). This “presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim.” *SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003).

It is also possible that “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. It bears emphasis that “[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.” *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358

F.3d 898, 906 (Fed. Cir. 2004)) (internal quotation marks omitted).

In addition to the specification, a court “should also consider the patent’s prosecution history, if it is in evidence.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996). The prosecution history, which is “intrinsic evidence,” “consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

In some cases, “the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva*, 135 S. Ct. at 841. Extrinsic evidence “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the meaning of a term to those of skill in the relevant art because such dictionaries “endeavor to collect the accepted meanings of terms used in various fields of science and technology.” *Phillips*, 415 F.3d at 1318. In addition, expert testimony can be useful “to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.” *Id.* Nonetheless, courts must not lose sight of the fact that “expert reports and

testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence.” *Id.* Overall, while extrinsic evidence “may be useful” to the court, it is “less reliable” than intrinsic evidence, and its consideration “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

Finally, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osram GmbH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (quoting *Modine Mfg. Co. v. U.S. Int’l Trade Comm’n*, 75 F.3d 1545, 1550 (Fed. Cir. 1996)).

## II. CONSTRUCTION OF DISPUTED TERMS

### A. “vertical support members”<sup>1</sup>

<b>Regalo</b>
weight bearing parts that are positioned in a generally upright orientation in an operating configuration
<b>Munchkin</b>
support members that extend at a right angle to the horizontal plane

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<sup>1</sup>This term appears in claim 15 of the ’436 patent.

**Court**

weight bearing parts that are positioned in a generally upright orientation in an operating configuration

The parties agree that the vertical support members are upright when the bed rails are in an operating configuration. They disagree about whether the vertical support members must be *perfectly* vertical.

Munchkin contends that, because the patentee did not qualify the term “vertical” in any way, the Court should construe the term to require that the support members be perfectly vertical – that is, at a right angle to the horizontal plane. Regalo argues that the patent allows for some wiggle room, noting that the description of a preferred embodiment describes the vertical support members as “at generally a right angle, or slightly less than a right angle, relative to the guard rail frame” (which is positioned horizontally). *See* ’436 pat. col. 7:24-26. Similarly, when explaining how to position the guardrail in the “locked and upright position,” the specification explains that the rail is swung “upwardly to be relatively vertical or swung slightly through the vertical,” and then “locked in the upright and operating position.” *See id.* at 9:32-46. In Regalo’s view, this description suggests that the patentee used the term “vertical” in a loose sense, meaning “generally upright,” rather than in a strict sense, requiring a 90-degree angle to the horizontal plane.

Munchkin argues that this portion of the specification supports the opposite conclusion. Muchkin notes that the patent uses the terms “relatively vertical” or “slightly through the vertical,” to describe the possible states of the support members just before they are locked into position, and uses the term “upright” to describe their position after being locked into position. Muchkin urges the Court to give meaning to that difference by finding that the support members

are adjusted from being near-vertical before being locked into position to perfectly vertical afterward. (D.I. 58 at 6-7)

The Court is not persuaded that the patentee intended to distinguish between “upright” and “relatively vertical”/“slightly through the vertical.” As Regalo notes, the patent does not suggest a reason that the process of locking the bed rail would require the further adjustment from “relatively vertical” to “vertical.” (D.I. 61 at 3) The Court understands that “relatively vertical” and “slightly through the vertical” refer to two acceptable, final, operating positions for the claimed bedrails, and thus finds that “upright” refers to a range of positions including “relatively vertical” and “slightly through the vertical” as well as the perfectly vertical position.

**B. “engaged to,” “engaging between,” “engaging,” “engage”<sup>2</sup>**

<b>Regalo</b> to come together
<b>Munchkin</b> directly attached or secured to, and not merely touching
<b>Court</b> to attach or secure

The parties agree that the term “engage” denotes attaching or securing two things to each other. They disagree about whether the term requires *direct* attachment (excluding attachment by some third mechanism) that is achieved by something more than *merely touching*.

The patents use the term “engage” to describe a wide variety of physical relationships. As is undisputed, some of these relationships constitute “direct attachments” that amount to more than “merely touching.” *See, e.g.*, ’158 pat. col. 17:64-18:2 and Fig. 10 (describing method of

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<sup>2</sup>This term appears in claims 9, 17, and 22 of the ’184 patent and claims 4-6, 8, 9, and 18 of the ’158 patent.

attaching perforated shaft to rod having spring-loaded peg protruding radially from its axis by sliding shaft over rod while rod's spring is compressed until rod is aligned with perforation of shaft, allowing spring to decompress and causing peg to extend through perforation so that rod and shaft are locked together). However, the patents also use the term "engage" to describe attaching two objects to each other via a third component. *See, e.g.*, '436 pat. col 6:50-52 and Fig. 9A. Further, the patents use the term "engage" to describe a relationship in which one object grips another such that they are effectively secured to each other. *See, e.g.*, '184 col. 1:42-46 and Fig. 7C (describing bed rail "hug[ging]" a bed). Thus, while the Court agrees that the term "engage" refers to the act of "attaching or securing," the Court is not persuaded that "engaging" requires *direct* attachment or securing that is *more than merely touching*.<sup>3</sup>

**C. "rail portion"<sup>4</sup>**

<p><b>Regalo</b> a portion of the bed rail that extends upwardly from the leg portion when in an operating configuration</p>
<p><b>Munchkin</b> a portion of the bed rail that extends upwardly from the leg portion when in an operating condition, including any connection or connecting mechanism to the leg portion<sup>5</sup></p>
<p><b>Court</b> a portion of the bed rail that extends upwardly from the leg portion when in an operating configuration</p>

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<sup>3</sup>This interpretation of the patents does not contradict the reexamination history of the '158 and '184 patent (*see* D.I. 58 at 7-10 (recounting patent examiner's finding that "engag[ing]" requires "attachment" and patentee's representations that two items that are "engaged" with each other are "connect[ed]")).

<sup>4</sup>This term appears in claims 9, 17, and 22 of the '184 patent and claims 4-6, 8, 9, and 18 of the '158 patent.

<sup>5</sup>Munchkin amended its proposed construction in its response brief. (*See, e.g.*, Tr. at 54)



The parties disagree about whether the “rail portion” of the claimed bed rail includes only that portion of the bed rail that extends upward from the leg portion beyond the sleeping surface, such that it can prevent a child from rolling out of bed when the bed rail is in its operating configuration. Regalo argues that this construction is consistent with the description of “rail portion” outlined in the specifications of the disputed patents. *See* ’158 pat. col. 1:28-33; ’184 pat. col. 1:38-40.

Munchkin does not disagree that this term includes the structure Regalo cites. But Munchkin contends that because “engagement” requires “direct attachment,” and the “rail portion” is “engaged to” the leg portion of the bed rail, it follows that the proper construction of “rail portion” must include “any connection or connecting mechanism to the leg portion.” However, as discussed above, the Court disagrees with Munchkin’s view that the term “engage” requires direct attachment. Therefore, the Court will adopt Regalo’s proposed construction.

**D. “wherein the rail portion and the leg portion can be relatively swingable to each other and away from each other”<sup>6</sup>**

<p><b>Regalo</b> the rail portion and the leg portion can pivot or swing toward and away from each other</p>
<p><b>Munchkin</b> a hinge mechanism or joint is located at the end of the rail portion such that the entire frame pivots with respect to the leg portion</p>
<p><b>Court</b> the rail portion and the leg portion can pivot or swing toward and away from each other</p>

The parties agree that this term requires the rail and leg portions of the claimed bed rails to pivot or “swing” relative to one another. They disagree about whether this claim requires the

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<sup>6</sup>This term appears in claims 17 and 22 of the ’184 patent.

presence of a “hinge mechanism or joint” to facilitate that pivoting.

Munchkin argues that the term “relatively swingable” invokes 35 U.S.C. § 112 ¶ 6. Because the claim term does not use the word “means,” Munchkin must overcome a rebuttable presumption that 35 U.S.C. 112 ¶ 6 does *not* apply. *See Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000). To overcome that presumption, Munchkin must prove by a preponderance of the evidence that the claim does not recite sufficiently definite structure for performing the claimed function. *See Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1372 (Fed. Cir. 2003).

“[A] proper determination of whether the claim limitations should be construed as means-plus-function limitations requires an understanding of one of ordinary skill in the art.” *Id.* at 1374. Specifically, a Court must consider whether the recited claim language would invoke in the mind of such a person a specific structure or class of structures. *See Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 790 F.3d 1329, 1338 (Fed. Cir. 2015); *see also Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) (considering whether claim term had “well understood structural meaning”).

Munchkin has not explained why a person of ordinary skill in the art at the time of the invention would not know what specific class of structures could be used to attain the “relatively swingable” character of the recited bed rails and legs. For this reason, Munchkin has not met its burden of proving that 35 U.S.C. 112 ¶ 6 applies, and the Court will not construe this claim to require a hinge or a joint like those disclosed in the specification.

**E. “wherein the rail portion and the leg portion can be relatively drawn to each other and away from each other”<sup>7</sup>**

<b>Regalo</b> the rail portion and the leg portion can pivot or swing toward and away from each other
<b>Munchkin</b> a hinge mechanism or joint is located at an end of the rail portion such that the entire frame pivots with respect to the leg portion
<b>Court</b> the rail portion and the leg portion can pivot or swing toward and away from each other

The parties agree that this claim term should have the same construction as “wherein the rail portion and the leg portion can be relatively swingable to each other and away from each other.” (D.I. 57 at 13; D.I. 58 at 14) Accordingly, the Court has adopted that construction.

**F. “tubular portion”<sup>8</sup>**

<b>Regalo</b> a portion shaped like a tube or a sleeve
<b>Munchkin</b> a tube formed by a sheet folded over and secured to itself, having an opening located only along a lengthwise axis
<b>Court</b> a portion shaped like a tube or a sleeve

The parties agree that the term “tubular portion” refers to a structure shaped like a tube, but disagree about whether that tubular shape must be formed by a “sheet folded over and secured to itself.” The claims and specification refer to the term “tubular portion” several times. One preferred embodiment describes folding a sheet of fabric over itself and securing the fabric

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<sup>7</sup>This term appears in claims 4-6, 8, 9, and 18 of the ’158 patent.

<sup>8</sup>This term appears in claims 17 and 22 of the ’184 patent.

to itself with stitches, so as to form a “tubular portion” of the sheet. *See* ’184 pat. col. 12:32-35.

However, other preferred embodiments refer to “tubular” components, such as the “rigid portions or tubular portions of the legs” of the bed rail, that are not made from a sheet folded over itself.

*Id.* at 5:61-62.

Munchkin explains (for the first time in its responsive brief) that it seeks to limit the term “tubular portion” only in the context of claim terms directed to a “sheet section having a tubular portion.” (D.I. 60 at 9-10) However, to limit the term “tubular portion” in one context but not in other contexts would be unnecessarily confusing to the fact-finder. Further, even in the context of the sheeting limitations, it would be the term “sheet section,” not “tubular portion,” that might impose the requirement that the tube or sleeve be formed from a “sheet folded over and secured to itself.” The parties did not present this term to the Court for construction.

**G. “sleeve”<sup>9</sup>**

<b>Regalo</b> a portion shaped like a tube or sleeve for receiving tubes from the rail portion or frame
<b>Munchkin</b> a tube formed by a sheet folded over and secured to itself, having an opening located only along a lengthwise axis
<b>Court</b> a portion shaped like a tube or sleeve for receiving tubes from the rail portion or frame

The parties agree that the “sleeves” of the claims are made of sheeting, and that the sleeves are designed to receive tubes from the rail portion or frame. They disagree, however, about whether the specification requires that the claimed sleeves be “formed by a sheet folded over and secured to itself” and whether they have openings “located only along a lengthwise

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<sup>9</sup>This term appears in claim 18 of the ’158 patent.

axis.” Although the specification includes examples of preferred embodiments in which sheeting is folded over and secured to itself to form a sleeve, *see, e.g.*, ’158 pat. col. 12:59-61, nothing in the claims requires that the tubular portion be formed this way (as opposed to, for example, by attaching two sheets to each other along parallel lengths). Nor is there a basis in the specification (i.e., lexicography or disavowal) for importing this limitation into the claims. Similarly, nothing in the specification or claims requires the sheet to have an opening along only the lengthwise axis.

**H. “sheeting”<sup>10</sup>**

<b>Regalo</b> material for covering at least part of the rail portion
<b>Munchkin</b> material for covering at least part of the rail portion frame, but does not include mesh
<b>Court</b> material for covering at least part of the rail portion

The parties disagree about whether the term “sheeting” includes within its scope only the material that covers the rail portion of the bed frame (i.e., the sleeves that cover the rails) or whether it can also include mesh extending between the sleeves. *See, e.g.*, ’158 pat. Fig. 9. The Court finds that sheeting can include such a mesh; in fact, the specification discloses a preferred embodiment in which the sheeting “includes a resilient mesh . . . engaged to inner portions of the sleeves.” ’158 pat. col. 18:54-59. Nothing in the disputed claims suggests that this preferred embodiment is excluded from their scope.

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<sup>10</sup>This term appears in claims 4, 5, 8, 9, and 18 of the ’158 patent.

I. “predefined acute angle”<sup>11</sup>

<b>Regalo</b> a predetermined angle less than ninety degrees
<b>Munchkin</b> a single predetermined angle less than ninety degrees
<b>Court</b> a predetermined angle less than ninety degrees

The disputed claim term appears in the context of limitations that require a bed rail to be capable of locking its rail portion into a position that forms a predefined acute angle with its leg portion. The parties disagree about whether the term “predefined acute *angle*” requires that the bed rail be capable of locking the rail portion at *one and only one* predetermined angle, or whether the claims include within their scope bed rails that can be locked at two or more predetermined angles.

The disputed limitations appear in the context of “comprising” claims. ’158 pat. col. 22:29-32. As a general rule, in open-ended claims containing the transitional phrase “comprising,” an indefinite article “a” or “an” carries the meaning “one or more.” *See Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342 (Fed. Cir. 2008). The Federal Circuit has described the exceptions to this rule as “extremely limited;” a patentee must “evinced[] a clear intent to limit ‘a’ or ‘an’ to ‘one.’” *Id.* Munchkin has not cited intrinsic evidence that meets this high burden.

Munchkin argues that, although the term “comprising” may create a presumption that a list of claim elements is non-exclusive, it does not render open-ended every word or phrase of a

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<sup>11</sup>This term appears in claim 4-6, 8, and 9 of the ’158 patent.

claim limitation. (D.I. 58 at 18-19 (*citing CANVS Corp v. U.S.*, 126 Fed. Cl. 106, 109 (Fed. Cl. 2016))<sup>12</sup> Here, however, the pre-defined acute angle at which the bed rail may be locked is not merely a description of the element recited in the claim; it is essential to the claim limitation.

Claim 4, for example, recites:

The bed rail according to claim 1, wherein the rail portion can be locked at a fabricated predefined acute angle relative to the leg portion to minimize any gap between the rail portion and the first side of the bed.

'158 pat. col. 22:29-32. Because claim 1 separately claims a “rail portion,” claim 4 introduces only a limitation directed to “lock[ing] at a predefined acute angle.” The limitation specifies locking at a “predefined acute angle” because such an angle is necessary to achieve the limitation’s stated goal of “minimiz[ing] any gap between the rail portion and the first side of the bed.” See '158 pat. col. 8:20-41 (explaining that “[t]he provision of an acute angle between the rail portion . . . and the leg portion . . . works to close off any gap . . . and sets the rail portion . . . as close to the sleeping surface . . . as possible”); *id.* Fig. 8. As the patent explains, a range of acute angles could be acceptable to achieve this goal. Nothing in the patent suggests a reason why the patentee would limit the claims to embodiments that allow locking at just one predefined acute angle.

Since Munchkin has failed to rebut the presumption that the requirement of locking at “a”

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<sup>12</sup>*CANVS* is inapposite. In *CANVS*, the Court construed a “comprising” term containing a limitation directed to “an optical input structured to define a line of sight” as allowing for more than one optical input, with each optical input having a single line of sight. *Id.* at 116. But there the parties *agreed* that each optical input had a single line of sight. *Id.* The only dispute was whether the patentee specified “an optical input having [a single] line of sight” in order to indicate that the claims should cover embodiments of the invention having only one optical input. *Id.*

predefined acute angle is non-limiting, the Court adopts Regalo's proposed construction.

### **III. CONCLUSION**

The Court will construe the disputed claim terms as described above. An appropriate Order follows.