United States District Court,
M.D. Florida, Jacksonville Division.

PEDICRAFT, INC., a Florida corporation,
Plaintiff.
v.
STRYKER CORPORATION OF MICHIGAN, d/b/a Stryker Corporation, and d/b/a Stryker Medical, a Michigan corporation, and Stryker Sales Corporation, a Michigan corporation,
Defendants.

No. 3:02-cv-334-J-16HTS

May 5, 2003.

John B. MacDonald, Akerman Senterfitt, Jacksonville, FL, Joseph W. Bain, Akerman Senterfitt, West Palm Beach, FL, for Plaintiff.

Gregory J. Vogler, McAndrews, Held & Malloy, Ltd., Chicago, IL, Michael J. Dewberry, Fowler, White, Boggs & Banker, PA, Jacksonville, FL, for Defendants.

ORDER

JOHN H. MOORE II**, District Judge.**

This cause comes before the Court on the parties' Joint Claim Construction Stipulation (Dkt.49), Plaintiff's Claim Construction Memorandum (Dkt.50), and Defendants' Claim Construction Memorandum (Dkt.52). Pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), the Court scheduled briefing by the parties on the claim construction issues in dispute and subsequently held an evidentiary hearing on January 23, 2003 to assist it in determining the proper construction of the disputed patent claims (Dkts.58, 59, 62, 63). The Plaintiff subsequently filed a Supplemental Claims Construction Memorandum with attached Proposed Findings of Fact and Conclusions of Law (Dkt.65), and the Defendants' filed a Response (Dkt.66) and Proposed Findings of Fact (Dkt.67). Lastly, the Plaintiff then filed a Reply Memorandum (Dkt.68).

Upon review of the briefs submitted by the parties, as well their oral arguments presented to the Court and testimony and exhibits submitted at the *Markman* hearing, FN1 the Court now construes the remaining disputed patent claims as set forth below.

FN1. Both sides entered exhibits into evidence during the *Markman* hearing, and such exhibits will be referred to in this Order as "Plaintiff's Exhibit" or "Defendants' Exhibit." The patent at issue will be cited as "'855 Patent," followed by column and line numbers where applicable. The parties' briefs and transcript volumes of the *Markman* hearing will be referred to by their respective docket numbers.

I. Background

Pedicraft, Inc. ("Pedicraft"), a Jacksonville, Florida company, specializes in the design, manufacture, and sale of specialized medical equipment, including pediatric furniture for hospital and home use. As part of

this endeavor, Pedicraft designed and manufactured a pediatric crib stretcher that is equipped with side rails that can be raised to various levels above the bed surface as well as lowered to or below the bed surface to provide complete and unimpeded access to the patient from all sides. Pedicraft's crib was subsequently patented under United States Patent No. 6,339,855 ("the '855 Patent") on January 22, 2002, and Pedicraft was assigned the patent rights in the crib from the inventors. The title of the '855 Patent is "Crib or Bed with Fully Accessible Patient Surface and Side Rail Positioning Mechanism Therefor." ' 855 Patent; Plaintiff's Exhibit 1. Pedicraft claims the patent is meant to protect two aspects of its useful and novel invention: unimpeded access to the patient and a "side rail positioning mechanism" used to raise and lower the crib's four side rails.

On April 5, 2002, Pedicraft filed a patent infringement Complaint (Dkt.1) against Stryker Corporation ("Stryker"), a Michigan company, alleging that its "Cub Crib" manufactured after issuance of the '855 Patent is infringing on Pedicraft's product. The Complaint alleges three counts for direct infringement, inducement to infringe the '855 Patent, and an exceptional case due to willful infringement. Pedicraft seeks compensatory damages exceeding $1 million as well as a permanent injunction to prevent the manufacture and sale of the "Cub Crib." Stryker filed an Answer and Counterclaim on May 29, 2002 (Dkt.7), denying infringement of the '855 Patent and seeking a declaratory judgment that the "Cub Crib" does not infringe Pedicraft's product and that the '855 Patent is invalid.

Stryker subsequently filed a Motion for Summary Judgment or, in the Alternative, for Invalidity of the '855 Patent and supporting Memorandum of Law (Dkts. 8 & 9), claiming that it is entitled to judgment as a matter of law because the "Cub Crib" does not infringe Pedicraft's product either literally or under the doctrine of equivalents, and in any event, the '855 Patent is invalid for failing to comply with the requirements of the Patent Act, 35 U.S.C. s.s. 102, 103 and 112. This Court subsequently scheduled briefing by the parties and held a hearing pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), on January 23 and 24, 2003 to construe the disputed claims in the '855 Patent prior to ruling on Stryker's Motion for Summary Judgment. The evidentiary hearing was held to assist the Court in properly construing the patent claim terms, and exhibits and expert testimony were provided by both parties. Prior to the hearing, the parties were required to submit a Joint Claim Construction Stipulation (Dkt.49) as well as memoranda presenting their positions on proper construction of the disputed claims (Dkts. 50 & 52). After the hearing, the Court required the parties to submit supplemental memoranda and proposed findings of fact and law (Dkts.65-68) summarizing their recommended construction of the remaining disputed claim terms in the '855 Patent.

According to the Joint Claim Construction Stipulation (Dkt.49), as well as the supplemental memoranda submitted by the parties, only a handful of elements in common to claims 1-7, 10-15 and 18-19 of the 29-claim '855 Patent remain in dispute. FN2 The Court determines that the following limitations contained in the claims of the ' 855 Patent remain in dispute:

FN2. The Court adopts the construction of the undisputed terms in claims 1, 3, 5, 10, 12, 14 and 15 as stipulated by the parties in their Joint Claim Construction Stipulation, which was further revised at the *Markman* hearing. *See* Dkt. 49, pp. 2-3; Pedicraft's Hearing Notebook, Tab "C"; Dkt. 62, pp. 6-14; *see also* Vivid Techs., Inc. v. American Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed.Cir.1999).

1. "Enclosing said bed surface" as contained in Claims 1 and 10.

2. "Side rail positioning mechanism," as contained in Claims 1, 10 and 18.

3. "Handle component" as contained in Claims 10 and 18.

4. "A vertical lock spindle rotatably attached to said respective one of said at least one side rail" as

contained in Claim 10.

5. "Plurality of lock pins spaced vertically thereon" as contained in Claims 10 and 18.

6. "Lock spindle being operable to rotate between a lock position and a release position" as contained in Claims 10 and 18.

7. "Locking component slidably receiving said vertical lock spindle" as contained in Claims 10 and 18.

8. "Handle component is operable to rotate said lock spindle" as contained in Claims 10 and 18. Although the Court will interpret the claim limitations as a whole and in light of the entire context of the patent, only those claims that are disputed by the parties need be explicitly construed. *See, e.g.,* Vivid Techs., Inc. v. American Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed.Cir.1999). The Court will therefore address and construe each of these disputed claim limitations in turn below, in keeping with the following standards for claim construction pursuant to *Markman*.

II. Standards of Claim Construction

Claim interpretation is essential in a patent infringement case because, as the Court explained in *Markman,* the public is entitled to clear and specific notice of what an inventor claims as his invention. Without such notice, no infringement can be found. *See* Markman, 517 U.S. at 390. In order to determine whether an accused device infringes a patent claim, the Court employs a two-step process. *See* Pitney Bowes, Inc. v. Hewlett Packard Co., 182 F.3d 1298, 1308-09 (Fed.Cir.1999). The first step toward determining infringement is claim construction, which involves ascertaining the scope and meaning of the claims at issue. *See* Kemco Sales, Inc. v. Control Papers Co., 208 F.3d 1352, 1359 (Fed.Cir.2000). Product infringement, a question of fact to be determined by the Court in a separate Order following claim construction, is the second step. *See* Kemco Sales, 208 F.3d at 1360. The Federal Circuit has instructed that claims are not to be construed in light of the accused product, but that claim construction occurs independently of any infringement analysis. *See, e.g.,* Union Oil Co. v. Atlantic Richfield Co., 208 F.3d 989, 995 (Fed.Cir.2000); Embrex, Inc. v. Service Eng'g Corp., 216 F.3d 1343, 1347 (Fed.Cir.2000). Accordingly, this Order will solely deal with claim construction, which is a question of law for the Court to determine. *See* Markman, 517 U.S. at 370; Pitney Bowes, 182 F.3d at 1304.

To construe the patent claims, the Court must first look to intrinsic evidence: the language in the claims themselves, the written description or specification, and the prosecution history. *See* Pitney Bowes, 182 F.3d at 1309; Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). Dictionaries, encyclopedias and treatises available at the time of the patent are also useful in claim interpretation. *See* Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1202-03 (Fed.Cir.2002); Interactive Gift Express, Inc. v. Compuserve, Inc., 256 F.3d 1323, 1331-32 (Fed.Cir.2001). The Federal Circuit has held that "[s]uch intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language." Vitronics Corp., 90 F.3d at 1582. In most cases, an examination of the intrinsic evidence alone will yield the correct construction of the disputed claim language. *See* id. at 1583. As the Court explained in *Vitronics,* the public record described the scope of the patented invention, and it consists of the claims, specification and file history. This is the record upon which the public is entitled to rely, such that "[a]llowing the public record to be altered or changed by extrinsic evidence introduced at trial, such as expert testimony, would make this right meaningless." *Id*. At 1583. The Court will therefore focus its examination on the intrinsic evidence in this case.

The Court in *Pitney Bowes* explained that the starting point within the Court's examination of the intrinsic evidence is always the language of the claims themselves. *See* Pitney Bowes, 182 F.3d at 1305; Vitronics Corp., 90 F.3d at 1582. Even so, while the Court is to rely primarily on the language of the claims, the written description, prosecution history and admissible extrinsic evidence can be used by the Court to

supply context in understanding the disputed claim language. *See* Overhead Door Corp. v. The Chamberlain Group, Inc., 194 F.3d 1261, 1272 (Fed.Cir.1999); Interactive Gift Express. Inc. v. CompuServe, Inc., 256 F.3d 1323, 1331 (Fed.Cir.2001). Moreover, claim terms are to receive their ordinary and customary meaning unless the patentee assigns a special meaning, and it is important to interpret words consistently within the same claims. *See* Vitronics, 90 F.3d at 1582; Pitney Bowes, 182 F.3d at 1310; Texas Digital, 308 F.3d at 1202.

Dictionary definitions can also provide objective evidence of a claim's "ordinary meaning." *See* Iverness Med. Switzerland GmbH v. Warner Lambert Co., 309 F.3d 1373, 1378 (Fed.Cir.2002). Courts must be mindful, however, not to restrict the meaning of claim terms in order to support a limitation that is not indicated or supported by the claim terms themselves. *See* Intervet Amer., Inc. v. Kee-Vet Labs., Inc., 887 F.2d 1050, 1053 (holding that "[n]o matter how great the temptations of policy making, courts do not rework claims. They only interpret them."); *see also* Pitney Bowes, 182 F.3d at 1312 (reasoning that "the purpose of the title [of a patent] is not to demarcate the precise boundaries of the claimed invention but rather to provide a useful reference tool for future classification purposes."). The Federal Circuit has dictated that intrinsic evidence must always be consulted to determine the meaning of a claim as used by the patentee, even if the claim has an apparent ordinary meaning. *See* Texas Digital, 308 F.3d at 1204.

It is also important to note that the definitions selected by a patentee, which are clearly, deliberately and precisely included within the specification, control over the ordinary or customary meaning of a term. *See* Renishaw PLC v. Marposs Societa' Per Axioni, 158 F.3d 1243, 1249 (Fed.Cir.1998). It is often stated that a patentee can "choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history." Vitronics Corp., 90 F.3d at 1582; Renishaw, 158 F.3d at 1249 ("The patentee's lexicography must, of course, appear 'with reasonable clarity, deliberateness, and precision' before it can affect the claim."). A court must therefore carefully review the specification to determine the meaning of claim terms, because the specification always serves as a "highly relevant" dictionary to assist the court in claim construction. *Id*. In fact, as the Court reasoned in *Vitronics,* "[u]sually [the specification] is dispositive; it is the single best guide to the meaning of a disputed term." *Id*. In short, the intrinsic evidence is used by the Court to define a claim term when no ordinary meaning gives a definite, readily understood scope to the term. *See* Telemac Cellular Corp. v. Topp Telecom, Inc., 247 F.3d 1316, 1326 (Fed.Cir.2001).

Nonetheless, a court must apply caution not to impose upon a claim limitations contained only in the specification. *See* SciMed Life Systems, Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1340 (Fed.Cir.2001) (describing the act of reading into the claims a limitation from the written description as "one of the cardinal sins of patent law"). Instead, the disputed claim limitations are defined in the context of the patent and the understanding of one skilled in the art. *See* Multiform Dessicants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477 (Fed.Cir.1998). The Federal Circuit has explained that "[w]here a specification does not *require* a limitation, that limitation should not be read from the specification into the claims." Intel Corp. v. U.S. Int'l Trade Comm'n, 946 F.2d 821, 836 (Fed.Cir.1991). A corollary to this well-settled rule is that a court should not restrict a claim to the preferred embodiment expressed in the patent, unless by its own language the claim so states. *See* Karlin Technology, Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 973 (Fed.Cir.1999).

Even so, a narrow disclosure by the patentee can limit the scope of the claim, as claims do not enlarge what is patented beyond what the inventor has described in the invention. *See* Netword, LLC v. Centraal Corp., 242 F.3d 1347, 1352 (Fed.Cir.2001); Gentry Gallery v. Berkline Corp., 134 F.3d 1473, 1479 (Fed.Cir.1998). As explained by the Federal Circuit in *Netword,* the specification describes the context from which the claims arose, and therefore "the claims are construed to state the legal scope of each patented invention, on examination of the language of the claims, the description in the specification, and the prosecution history." Netword, 242 F.3d at 1352 (citations omitted).

In other words, claims should not be interpreted in a vacuum, but "must be read in view of the specification, of which they are a part." *Markman,* 52 F.3d at 979-80; *see also* Renishaw, 158 F.3d at 1248-49; Apple Computer, Inc. v. Articulate Systems, Inc., 234 F.3d 14, 25 (Fed.Cir.2000) (reasoning that claims must be construed as a whole); Gen. Foods Corp. v. Studiengesellschaft Kohl mbH, 972 F.2d 1272, 1274 (Fed.Cir.1992). Indeed, the specification may make clear that the patentee has limited the scope of the claim to not include a particular feature. *See* SciMed Life Systems, 242 F.3d at 1341. This is because claims should not be construed to cover what has been expressly disclaimed by the patentee. *See id*. At 1341-42, *quoting* Cultor Corp. v. A.E. Staley Mfg. Co., 224 F.3d 1328, 1331 (Fed.Cir.2000). In short, the specification provides guidance as to the meaning of the claims, thereby influencing the manner in which the claims are to be construed. *See* SciMed Life Systems, 242 F.3d at 1344; Renishaw, 158 F.3d at 1248-49.

After analyzing the specification, the Court may also consider the prosecution history of the patent at issue in this case, including an examination of the cited prior art. *See* Vitronics Corp., 90 F.3d at 1582-83. As with the specification, however, the Court must not read limitations from the prosecution history into the claims, but should instead only look to the prosecution history to inform itself as to the proper meaning of the claim terms and specific disclaimers of the claims' scope. *See* Wenger Mfg., Inc. v. Coating Mach. Sys., Inc., 239 F.3d 1225, 1238 (Fed.Cir.2001). As the Federal Circuit has explained, "[t]he prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution." Southwall Techs, Inc. v. Cardinal Co., 54 F.3d 1570, 1576 (Fed.Cir.1995).

The Defendants point out that the Federal Circuit has also recently recognized the value of dictionaries, encyclopedias and treatises in determining the meaning of claim terms, because such sources are considered both reliable and objective in construing claim terms. The Court reasoned in *Texas Digital* that "[d]ictionaries, encyclopedias and treatises, publicly available at the time the patent is issued, are objective resources that serve as reliable sources of information on the established meanings that would have been attributed to the terms of the claims by those of skill in the art." Texas Digital, 308 F.3d at 1202-03. In effect, while not traditional forms of intrinsic evidence, sources such as dictionaries are "unbiased reflections of common understanding not influenced by expert testimony or events subsequent to the fixing of the intrinsic record by the grant of the patent, nor colored by the motives of the parties, and not inspired by litigation." *Id.; see also* Optical Disc Corp. v. Del Mar Avionics, 208 F.3d 1324, 1334-35 (Fed.Cir.2000).

A court may rely on extrinsic evidence only if the intrinsic evidence does not provide the answer as to the proper construction of the claim terms. *See* Pitney Bowes, 182 F.3d at 1308; Phillips Petroleum Co. v. Huntsman Polymers Corp., 157 F.3d 866, 870 (Fed.Cir.1998). The Court defined extrinsic evidence in *Vitronics* as "that evidence which is external to the patent and file history, such as expert testimony, inventor testimony, dictionaries, and technical treatises and articles." Vitronics Corp., 90 F.3d at 1584. While there is no prohibition from hearing evidence from experts, the Federal Circuit has warned courts not to rely on extrinsic evidence in claim construction to contradict the meaning of claims which are discernable from an examination of the claim language itself, the written description, and the prosecution history-i.e., the intrinsic evidence. *See* Pitney Bowes, 182 F.3d at 1308; Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1368-1369 (Fed.Cir.2003); Vitronics Corp. ., 90 F.3d at 1583.

In short, courts have emphasized that the *admissibility* of extrinsic evidence-here, the experts and textbook evidence presented by the parties at the *Markman* hearing-is a separate issue from the reliance on extrinsic evidence during claim construction. *See id*. at 1308, n. 2. In *Pitney Bowes,* for example, the Federal Circuit reasoned that it is appropriate for the court to consult trustworthy extrinsic evidence to "ensure that the claim construction it is tending to from the patent file is not inconsistent with clearly expressed, plainly apposite, and widely held understandings in the pertinent technical field." *Id*. At 1309. In other words, "consultation of extrinsic evidence is particularly appropriate to ensure that [the Court's] understanding of the technical aspects of the patents is not entirely at variance with the understanding of one skilled in the art." *Id.; see also* Altiris, Inc., 318 F.3d at 1368-69; Teleflex, Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325 (Fed.Cir.2002).

In its *Markman* briefs, the Plaintiff also points to the doctrine of claim differentiation as influencing this Court's construction of the disputed claims at issue. This doctrine embodies the idea that separate claims are meant to be different, and as such interpretations which tend to make one or more claims repetitive of other claims should be avoided. *See* Wenger Mfg., Inc., 239 F.3d at 1233; Karlin Technology, Inc., 177 F.3d at 971-72. The doctrine "normally means that limitations stated in dependent claims are not to be read into the independent claim from which they depend." Karlin Technology, Inc., 177 F.3d at 972. Moreover, the doctrine is a guide or presumption as opposed to a rigid rule, and applies only where there is a dispute over whether a claim limitation found in a dependent claim should be read into an independent claim, such that the limitation is the only meaningful difference between the two claims. *See* Wenger Mfg., Inc., 239 F.3d at 1231.

Lastly, with regard to the construction of the disputed claims in this case, the Defendants argue for the application of the "means-plus-function" analysis found in 35 U.S.C. s. 112, para. 6. Whether a claim limitation is in means-plus-function format is a matter of claims construction and, therefore, a question of law. *See id.;* Kemco Sales, Inc., 208 F.3d at 1360. The Court must first determine whether a means-plus-function limitation is at issue, and then if it is, the Court must determine what the claimed function is. *See* Wenger Mfg., Inc., 239 F.3d at 1231: Kemco Sales, Inc., 208 F.3d at 1360. Finally, the Court must look to the specification to determine the disclosed structure which corresponds to the "means" for performing the "function." *See* Kemco Sales, Inc., 208 F.3d at 1360; Wenger Mfg., Inc., 239 F.3d at 1231.

The Federal Circuit has held that the use of the term "means" in a claim limitation creates a presumption that s. 112, para. 6 has been invoked, but conversely, the absence of the term "means" creates a rebuttable presumption that the means-plus-function section has not been invoked. *See* Wenger Mfg., Inc., 239 F.3d at 1232; Kemco Sales, Inc., 208 F.3d at 1360. The Court reasoned that "[i]n deciding whether either presumption has been rebutted, the focus remains on whether the claim as properly construed recites sufficiently definite structure to avoid the ambit of s. 112, para. 6." Personalized Media Communcations, LLC v. Int'l Trade Comm'n, 161 F.3d 696, 704 (Fed.Cir.1998). The subsequent determination of the corresponding structure for the means-plus-function claim is also a matter of claim construction, and is therefore a question of law. *See* Overhead Door Corp., 194 F.3d at 1271.

Section 112, para. 6 does not provide that *every means which* performs the specified function is covered within the patent protection. *See* Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1536 (Fed.Cir.1991). Instead, Section 112, para. 6 mandates that the patentee must specify the corresponding structure in the patent specification, meaning that the section "rules out the possibility that any and every means which performs the function specified in the claim *literally* satisfies that limitation." *Id.; see also* Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1382 (Fed.Cir.1999); In re Donaldson Co., 16 F.3d 1189, 1193-95 (Fed.Cir.1994). When determining whether the specification adequately describes the corresponding structure pertaining to a mean-plus-function claim, the Court must review the specification from the viewpoint of one skilled in the art at the time the patent was filed, reading the specification as a whole to determine the structure capable of performing the claimed function. *See Budde,* 250 F.3d at 1376, 1379. This reading includes the summary, objects of the invention, and the preferred embodiment in a manner that renders the patent internally consistent, taking note of the caveat in Section 112, para. 6 that a court cannot import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function. *See id.* at 1379-80; Wenger Mfg., Inc., 239 F.3d at 1233.

The requirements of Section 112, para. 6 cannot be avoided simply by "the mere addition of a dependent claim that recites the corresponding structure disclosed in the specification." Wenger Mfg., Inc., 239 F.3d at 1234. Even so, this does not mean that the Court must interpret a means-plus-function claim without regard to other claims. *See id.* Instead, using the doctrine of claim differentiation, other claims may provide guidance and context for interpreting disputed claim language, particularly if the disputed means-plus-

function claim contains an additional function or functions. *See id*. Failure to disclose adequate corresponding structure in the specification for a means-plus-function claim, however, results in the claim being indefinite and thus invalid. *See Budde,* 250 F.3d at 1376. In the end, "[a] determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." Personalized Media Communications, LLC, 161 F.3d at 705; *see also Budde,* 250 F.3d at 1376; Atmel Corp., 198 F.3d at 1378-79 (explaining that "an analysis of indefiniteness under [35 U.S.C.] s. 112, para. 2 is inextricably intertwined with claim construction," particularly in the context of a determination of adequate disclosure of structure for a means-plus-function claim under s. 112, para. 6); *but see* Intervet America, Inc., 887 F.2d at 1053 (reasoning that "[a]mbiguity, undue breadth, vagueness, and triviality are matters which go to claim *validity* for failure to comply with 35 U.S.C. s. 112-para. 2, not to interpretation or construction.").

It is well-settled that because patent claims have a statutory presumption of validity when the patent issues, "overcoming the presumption of validity requires that any facts supporting a holding of invalidity be proved by clear and convincing evidence." *Budde,* 250 F.3d at 1376; *accord* Intel Corp., 946 F.2d at 829. Therefore, in order to challenge a means-plus-function limitation as lacking structural support, the Defendants must demonstrate by clear and convincing evidence that the specification lacks disclosure of a structure sufficient to be understood by one skilled in the art as being adequate to perform the function described in the patent. *See Budde,* 250 F.3d at 1376-77. The clear and convincing standard is not met where extensive inferences would have to be drawn from the evidence presented. See Intel Corp. ., 946 F.2d at 830.

Guided by the above principles, the Court will now construe the remaining patent claim limitations at issue in this case.

III. The Disputed Patent Claim Limitations

A. "Enclosing said bed surface"

Claims 1 and 10 of the '855 Patent claim an apparatus comprising a frame, bed surface, and "at least one side rail movably connected to said frame along said periphery of said bed surface for enclosing said bed surface." '855 Patent, Col. 7, Claim 1; Col. 8, Claim 10. The parties dispute the meaning of the claim term "enclosing said bed surface." Pedicraft argues that this term requires that the side rails "together extend completely around the periphery of the bed so as to leave no substantial gaps through which the patient can pass when all of the side rails are in the uppermost position." Dkt. 65, pg.4. Stryker, in contrast, claims this phrase should be interpreted to mean "surrounding the bed surface sufficiently to prevent the patient from falling off the bed surface," in accordance with Webster's Third International Dictionary, pg. 746 (1986). Dkt. 66, pg. 32.

According to Pedicraft, its expert, David Lance Lockwood, testified that one skilled in the art and design of hospital beds would understand the phrase "enclosing said bed surface," when involving movable side rails such as the present invention, to mean not only to prevent the patient from falling out of bed but also to avoid entrapment between the rails. Dkt. 62, pp. 22-24. Pedicraft further contends that this interpretation not only comports with the ordinary meaning of the phrase, but is in accordance with the intrinsic evidence as well. Pedicraft highlights the Detailed Description section of the '855 Patent and illustrated embodiment as showing a "continuous" single side rail, and it points out that in response to inquiries from the Patent Examiner, it distinguished prior art as not containing side rails that sufficiently "enclose" the bed surface. Dkt. 65, pp. 5-6. Such intrinsic and extrinsic evidence therefore purportedly demonstrates that one skilled in the art would understand "enclosing" to mean not only the prevention of falling out of bed, but also side rails that "extend completely around the periphery of the bed so as to leave no substantial gaps through which the patient can pass when all of the side rails are in the uppermost position." Id.

Stryker contends that its construction of "enclosing said bed surface," requiring only that the patient be

prevented from falling off the bed surface, comports with the ordinary dictionary meaning of "enclose" as "to close in" or "surround." Dkt. 66, pp. 32-33. Moreover, it claims that during the prosecution of the patent, Pedicraft actually distinguished prior art as not including side rails that sufficiently enclose the bed surface, thus "placing the patient at risk of falling off of the bed surface." Id. Stryker points out that Pedicraft's proposed construction of this phrase differs from Stryker's simply through its inclusion of the concept of preventing "entrapment" of the patient, yet nowhere in the patent itself or in the prosecution history is the concept of "entrapment" mentioned by the patentee. As such, Stryker argues that the public record conclusively supports its construction of the phrase "enclosing said bed surface," regardless of any extrinsic and unsupported testimony from the Plaintiff's expert, Mr. Lockwood.

The Court agrees that there is no intrinsic support for including the concept of "entrapment" of the patient in the ordinary meaning of the phrase "enclosing said bed surface." *See* Vitronics, 90 F.3d at 1585; Southwall, 54 F.3d at 1578. The Court will not rely on the extrinsic and strained testimony of Mr. Lockwood to contradict the ordinary definition of "enclosure," which only requires that the side rails "close in" or "surround" the entire peripheral bed surface. Accordingly, the Court finds that one of ordinary skill in the art of hospital bed designs and functions would understand the claim term "enclosing said bed surface" to mean that the side rails surround the surface sufficiently to prevent the patient from falling off the bed surface.

B. "Side Rail Positioning Mechanism"

The claim term "side rail positioning mechanism," as used in Claims 1, 10, and 18 of the '855 Patent, is the most hotly contested and heatedly debated issue by the parties, who argue for widely divergent interpretations of this claim limitation. The term "side rail positioning mechanism" is nowhere explicitly defined in the '855 Parent, but it is used throughout the patent as part of the primary independent claims. In Claim 1, a "side rail positioning mechanism" is claimed as part of the overall apparatus, "each of said at least one positioning mechanism being coupled to a respective one of said at least one side rail, each of said at least one positioning mechanism being operable to position said respective one of said at least one side rail in an uppermost position [above the bed surface] ... and in a lowermost position [substantially at or below the bed surface]." '855 Patent, Col. 7, Claim 1. In Claims 10 and 18, "side rail positioning mechanism" is given a more specific structure, to include: (a) a handle component mounted to at least one side rail; (b) "a vertical lock spindle rotatably attached to said respective one of said at least one side rail and having a plurality of lock pins spaced vertically thereon, said lock spindle being operable to rotate between a lock position and a release position;" and (C)) "a locking component slidably receiving said vertical lock spindle, said locking component being fixed to said frame." ' 855 Patent, Col. 9, Claim 10; Col. 10, Claim 18.

Pedicraft submits that the claim limitation "side rail positioning mechanism" does have an ordinary meaning to one skilled in the art of hospital beds and cribs, when read in the context of the claims in the '855 Patent. Pedicraft urges this Court to adopt an ordinary and known meaning of "side rail positioning mechanism" that "covers any number of constrained kinematic chains arranged to lock and unlock a side rail and various up and down positions with respect to the bed surface and the patient." Dkt. 65, pg. 6. It urges the Court to reject Stryker's proposed construction, which limits the term "side rail positioning mechanism" to the combination described in Claims 10 and 18 of the '855 Patent, namely a combination of a handle component mounted to a side rail, a vertical lock spindle rotatably attached to the side rail and having several vertically spaced lock pins along its length, and a locking component which slidably receives the vertical lock spindle. *See* id. Pedicraft claims that Stryker's proposed narrow claim construction does not comport with the ordinary meaning that should be given to the term "side rail positioning mechanism," as shown through both intrinsic and extrinsic evidence.

Pedicraft asserts that the meaning of "side rail positioning mechanism" to one of ordinary skill in the art is reflected in the testimony of Mr. Lockwood, who has education and experience in the design and development of hospital beds and equipment. *See* Dkt. 62, pp. 20-22. Mr. Lockwood testified that one

skilled in the art would understand the term based on the person's understanding of the word "mechanism," along with a working knowledge of the functioning and design of hospital beds and cribs. *See* id. at pp. 28-30. According to Pedicraft's interpretation of the term "side rail positioning mechanism" as reflected by Mr. Lockwood's testimony, an ordinarily skilled person would understand the term as signifying a "mechanical linkage that is arranged to provide controlled motion transfer." *See* id.; Dkt. 65, pp. 7-8. Admittedly, this construction of the term was discussed through a "highly technical" definition of "mechanism" as a "constrained kinematic chain." Dkt. 65, pp. 7-8. Such a "constrained kinematic chain" would purportedly be arranged on a crib so as to move the side rail to lock and unlock the rail in up and down positions, and Pedicraft contends that this structure and function is made clear through the language in Claim 1 of the '855 Patent. Dkt. 62, pp. 28-30.

As "corroboration" for this technical definition of "mechanism," Pedicraft points to Mr. Lockwood's discussion of a 1969 college mechanical engineering textbook, which allegedly indicates how the term is defined by mechanical engineers-and would continue to be defined to the present day. Dkt. 62, pp. 32-34. Furthermore, Pedicraft claims that Stryker's own expert who testified at the *Markman* hearing, Dr. Joseph F. Dyro, a biomedical engineer who specializes in clinical engineering, also corroborated this definition of "mechanism" as a "constrained kinematic chain." According to Pedicraft, Dr. Dyro formed his opinion on the construction of this term without any consultation with colleagues or literature in the art, and he subsequently conformed with Mr. Lockwood's understanding of the meaning of "side rail positioning mechanism" by concluding that it would be a mechanical structure for moving the side rails up and down. Dkt. 63, pp. 32-24. In short, "other than semantical differences in their expressions," Pedicraft argues that both Dr. Dyro and Mr. Lockwood have the same understanding of the proper construction of the term "side rail positioning mechanism" from the perspective of one skilled in the art. Dkt. 65, pp. 8-9.

Pedicraft also disputes Stryker's attempt to use a general dictionary definition to construe the term "side rail positioning mechanism" as "a piece of machinery: a structure of working parts functioning together to produce an effect," which Stryker then argues is vague and must be limited by using the specific disclosures throughout the '855 Patent. Dkt. 65, pp. 9-10. Pedicraft argues that general dictionary definitions cannot control over how a claim would be interpreted by one specifically skilled in the art of hospital beds and cribs, and as such the claim term must be viewed in the entire context of the patent and the "world of hospital beds and cribs." In this world, Pedicraft contends, skilled individuals would understand a "side rail positioning mechanism" to mean a "constrained kinematic chain" used to position the side rails between the uppermost and lowermost positions on the crib.

Although Stryker contends that 35 U.S.C. s. 112, para. 6 applies to the term "side rail positioning mechanism" because it is a "means-plus-function" claim, Pedicraft disputes this argument because the term "means" is nowhere used in the claim, and therefore Section 112, para. 6 is presumed not to apply to this case. Pedicraft asserts that Stryker has not overcome this presumption of inapplicability of the "means-plus-function" section because "side rail positioning mechanism" does invoke sufficient structure to one skilled in the art when viewed in context of the entire '855 Patent and one's knowledge of hospital beds and cribs. Dkt. 65, pp. 11-12. Allegedly, the term "mechanism" would be understood by those skilled in the art (as demonstrated by the experts during the *Markman* hearing), and as such one would understand the meaning behind a mechanical structure used to position the side rails of hospital beds or cribs. *Id*. Pedicraft points to Stryker's own expert as demonstrating that those skilled in the art of hospital bed design and structure understand "side rail positioning mechanism" to mean a constrained mechanical linkage used to raise and lower side rails, without the need for dictionaries, treatises or other resources. *Id*. at pp. 12-13.

Stryker has therefore purportedly failed to overcome the presumption against application of Section 112, para. 6. Instead, Pedicraft contends that "side rail positioning mechanism," as used in Claim 1, states sufficient structural, operational and positional limitations to describe the "metes and bounds" of the claim limitation and thus take it out of the ambit of the "means-plus-function" section. It argues extensively that the disputed claim limitation "inherently has structure in the form of a mechanical linkage for motion

transfer ... a side rail lock ... coupled to the side rail ... operable to position the side rail between an uppermost position and a lowermost position." *Id*. at 13. In short, in view of the "inherent structure" contained in the term "side rail positioning mechanism," Pedicraft urges the Court not to analyze the term in light of Section 112, para. 6. Instead, the claim limitation should be interpreted in light of the meaning accorded to it by those of ordinary skill in the art (including both experts presented at the *Markman* hearing)-i.e., "a constrained kinematic chain, or in other words, a mechanical linkage coupled to the side rail and arranged to provide a controlled or predictable movement up and down of the side rail." *Id*. at 14.

Lastly, Pedicraft argues against the construction of "side rail positioning mechanism" as limited to the terms of the '855 Patent specifications, or in other words, the specific limitations evidenced in Claims 10 and 18. None of the descriptions in the patent claims that specify the purported limitations of a "side rail positioning mechanism" are presented in a "definition format" that would be readily understood by one skilled in the art, and according to Pedicraft, "[m]ost of the references to side rail positioning mechanism and the specific embodiment disclosing the specification are made in the context of the detail description section and with reference to the specific embodiment in the figures ." Dkt. 65, pg. 15. As such, these descriptions and the single embodiment should not be read as limitations to the term "side rail positioning mechanism," as one skilled in the art would not perceive such limitations upon interpreting the term in Claim 1 of the '855 Patent.

Stryker vehemently disputes what it considers Pedicraft's "strained" interpretation of the term "side rail positioning mechanism." Instead, Stryker contends that the claim limitation should be interpreted to include the combination of "(1) a handle mounted to a side rail, (2) a vertical lock spindle which is rotatably attached to the same side rail and has several lock pins spaced vertically along its length, and (3) a specially designed locking component for receiving the lock spindle." Dkt. 66, pg. 7. According to Stryker, this interpretation of "side rail positioning mechanism" is supported by the '855 Patent's abstract, summary of the invention, and detailed description of the invention (shown in Figure 3). Id. at pp. 7-8. In other words, the term "side rail positioning mechanism" is defined in accordance with Stryker's construction consistently throughout the '855 Patent.

In fact, Stryker argues that its interpretation of "side rail positioning mechanism" is not simply the *preferred* embodiment expressed in the patent, it is the *only* embodiment described in the '855 Patent. Moreover, the patent repeatedly refers to the positioning mechanism "of the present invention," including in the written description or summary of the invention where the mechanism to position the side rails is described as comprised of a handle, vertical lock spindle, and a locking component. '855 Patent, Col. 2, lines 50-65. Accordingly, because the phrase "of the present invention" is affirmatively used and followed by a description of "side rail positioning mechanism" that is consistently in concert with Stryker's specific construction, Stryker urges the Court to define the claim term using the three consistently required elements. Stryker highlights the testimony of Dr. Dyro at the *Markman* hearing, during which the expert testified that use of the phrase "present invention" in the '855 Patent is a signal regarding the meaning of the unfamiliar terminology "side rail positioning mechanism." Dkt. 63, pp. 23-24. In addition, it is evident that Pedicraft considered the "side rail positioning mechanism" to be an essential part of the invention, including the claim term in the title of the '855 Patent.

Stryker also urges this Court to carefully consider the specification of the invention in this case, as it is important to look to the specification as either an express definition of a claim or a definition by implication. Furthermore, other intrinsic evidence is allegedly consistent with Stryker's construction, including the prosecution history of the patent, wherein the Patent Office only allowed the '855 Patent to issue based on the specific attributes of the "side rail positioning mechanism." Dkt. 66, pp. 11-12. In fact, nowhere in the prosecution history did Pedicraft object to the Patent Officer's issuance of the patent with the claim "side rail positioning mechanism" including the required components named in the specification.

Contrary to Pedicraft's analysis, Stryker also asserts that 35 U.S.C. s. 112, para. 6 is applicable to the claim

term "side rail positioning mechanism." In effect, it argues that "side rail positioning mechanism" recites a means for performing a specified function, without reciting specific structure, material or acts in the limitation. The Court must therefore look to the specification and its equivalent of the '855 Patent (i.e., the "side rail positioning mechanism" as specifically defined by Stryker and Claims 10 and 18 of the patent) for the proper construction of this "means-plus-function" element. Although the claim element "side rail positioning mechanism" does not specifically include the "means" phrasing that would presumptively trigger Section 112, para. 6, Stryker points out that the claim language nonetheless fails to provide sufficient structure to remove the limitation from the "means-plus-function" analysis. This analysis, Stryker contends, is supported by Dr. Dyro, who testified that the term "side rail positioning mechanism" in Claim 1 of the '855 Patent is specifically described in terms of a function for positioning the side rail, without any described structure to perform the function. Dkt. 66, pp. 16-17. Dr. Dyro further testified that the term "mechanism" itself does not help in construing the claim limitation, as "mechanism" does not connote some identifiable structure. Id. In short, Stryker argues that the claim element "positioning mechanism being operable to position the side rail" in fact should be construed as if it were worded "means for positioning the side rail." Dkt. 66. Pg. 17.

Under Section 112, para. 6, Stryker asserts that the '855 Patent describes the claimed function of a "side rail positioning mechanism" as positioning the side rails between an uppermost and lowermost position, but the claim itself (i.e., Claim 1) does not disclose sufficient structure to correspond with this function. Accordingly, the *only* structure disclosed in the patent for accomplishing the function of positioning side rails include the combination of (1) a handle component mounted to a side rail; (2) a rotatable lock spindle with several vertically spaced lock pins operable to rotate between lock and release positions; and (3) a locking component attached to the frame of the bed which slidably receives the lock spindle. *See* '855 Patent, Abstract; Col. 2, Summary of the Invention; Detailed Description of the Invention, Col. 5, lines 20-40; Figures 3, 7 and 8; Claim 10, Col. 9; Claim 18, Col. 10. All of the claims in the patent-including Claim 1-therefore recite a "side rail positioning mechanism" that includes this combination of elements, as reflected in the patent's abstract, specification, figures, and later, Claims 10 and 18. As such, since nothing within the intrinsic evidence *ever* reflects a more expansive definition of "side rail positioning mechanism" that would not be limited to these required elements, Stryker argues that the Court should construe this claim as limited to the only disclosed structure in the ' 855 Patent. It claims this is required because Pedicraft cannot broaden Claim 1 by differentiating the patent's other claims, given the fact that functional language is used and the patent's specifications consistently describe a "side rail positioning mechanism" through the use of its required elements.

Stryker also points to the evidence presented at the *Markman* hearing as reflecting the clear fact that prior to the issuance of the '855 Patent, the term "side rail positioning mechanism" had no clear meaning to a person of ordinary skill in the art of hospital bed and crib design and manufacture. Instead, it is the patent itself which defines the claim term, solely by reference to the specific limitations described above. Stryker highlights Mr. Lockwood's testimony as reflecting his understanding that a "side rail positioning mechanism" as used in the '855 Patent would be understood to include a handle component, a vertical lock spindle, and a locking component. Dkt. 62, pp. 93-95. Additionally, there is no dictionary or treatise which includes a specific definition of "side rail positioning mechanism," nor is there any evidence that the phrase was ever used prior to its use by Pedicraft's counsel during patent prosecution. Dkt. 66, pg. 22. Both experts at the *Markman* hearing apparently agreed that prior to the '855 Patent, the term "side rail positioning mechanism" had never been used in any patent or publication. *See* Dkt. 62, pp. 99-100; Dkt. 63, pp. 16-17.

Stryker's own expert, Dr. Dyro, testified that the word "mechanism" does not connote a specific structure, but instead brings to mind an understanding of some "assemblage of parts that, when working together, perform some function." Dkt. 63, pg. 17. He also testified that he has never seen the definition of "mechanism" as a "constrained kinematic chain" in any document, textbook or dictionary, prior to hearing this definition presented by Pedicraft. Id. at 17-19. Moreover, although pieces of prior art presented during the '855 Patent prosecution do contain potential "mechanisms" for moving bed railings, Dr. Dyro did not

acknowledge that the prior art at any time expressly used the term "side rail positioning mechanism." Id. at 17, 40-41, 49-52. Dr. Dyro therefore testified that one must look to the disclosures of the '855 Patent itself to determine the meaning of this newly-used claim term.

Lastly, Stryker urges this Court to adopt its construction of "side rail positioning mechanism," as reflected in the '855 Patent itself and in the intrinsic evidence, over the strained and contradictory construction presented by Pedicraft and its expert, Mr. Lockwood. This testimony, along with a 1969 college textbook, cannot be used to contradict the meaning of the previously undefined term that is reflected in the language of the patent, its prosecution history, and in the testimony of the experts. *See* Dkt. 66, pp. 26-27. Such documents and prosecution history purportedly establish the meaning of this vague term without the need for reference to extrinsic evidence, such that one skilled in the art would understand a "side rail positioning mechanism" as requiring the three components highlighted above in the context of the '855 Patent.. Stryker claims any evidence to the contrary is entitled to little or no weight by this Court, such that the intrinsic evidence provides the required public notice of what is included within the claims of the '855 Patent.

The Court agrees that Pedicraft's attempts to define "side rail positioning mechanism" through the use of strained and convoluted phrases such as a "constrained kinematic chain" do not properly give clear notice to the public as to what would be covered under the terms of the '855 Patent. Instead, the description of "side rail positioning mechanism" to include (1) a handle component mounted to a side rail; (2) a rotatable lock spindle with several vertically spaced lock pins operable to rotate between lock and release positions; and (3) a locking component attached to the frame of the bed which slidably receives the lock spindle, is the *only* embodiment that is reflected throughout the '855 Patent, its prosecution history, and any additional intrinsic evidence. *See* '855 Patent, Abstract; Col. 2, Summary of the Invention; Detailed Description of the Invention, Col. 5, lines 20-40; Figures 3, 7 and 8; Claim 10, Col. 9; Claim 18, Col. 10. This claim term was previously undefined, and even when looking at the extrinsic evidence, it becomes clear that both experts believe the term would be understood by one of ordinary skill in the art of crib design and manufacture as it is reflected throughout the ' 855 Patent. The Court therefore believes Stryker's construction of the claim term "side rail positioning mechanism" is the correct one.

Additionally, the '855 Patent consistently defines the "positioning mechanism" *of the present invention* as including a handle, vertical lock spindle, and locking component. The Court agrees that the use of the phrase "of the present invention" is particularly indicative of the appropriate construction, because that language indicates the limitations of the structure Pedicraft intended to patent. *See, e.g.,* SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1343 (Fed.Cir.2001) (discussing use of phrase "present invention" to describe a particular structure); Bell Atlantic Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1277 (Fed.Cir.2001) (same). Stryker's expert affirmed this legal proposition by stating that "of the present invention" would be taken as a signal as to the meaning of the heretofore undefined term "side rail positioning mechanism." Dkt. 63, pg. 23 ("[W]hen a specification refers to the term 'the present invention,' it's talking about the present invention and not some possible embodiment or some possible configuration. It is, this is the invention."). Moreover, Pedicraft indicates in the title of the '855 Patent that the "side rail positioning mechanism" effectively is a vital component of the invention, if not the heart of the invention itself. Therefore, it is proper to refer to the specification and descriptions of this feature, consistent throughout the '855 Patent, as the implied definition of the term "side rail positioning mechanism." *See* Vitronics, 90 F.3d at 1582; Bell Atlantic, 262 F.3d at 1268; SciMed, 242 F.3d at 1344.

The Court also finds that the prosecution history, a recognized piece of the puzzle in construing a disputed claim term, supports the interpretation of "side rail positioning mechanism" put forth by Stryker. *See* Zenith Labs., Inc. v. Bristol-Myers Squibb Co., 19 F.3d 1418, 1425 (Fed.Cir.1994). In the Notice of Allowance, Stryker correctly points out that the Patent Examiner described the features of the positioning mechanism to be patented, which included a rotatable lock spindle and a locking component to slidably receive the lock spindle. Notice of Allowance, June 25, 2001, pg. 2. It is also noteworthy that there are no notes or commentary from Pedicraft in the prosecution history clarifying the scope of its invention, providing further

intrinsic support for Stryker's proffered construction. *See, e.g.,* Southwall Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1578 (Fed.Cir.1995) (holding that patentee cannot later contradict an indisputable public record regarding the allowance of the patent claims).

The claim term "side rail positioning mechanism" should also be construed with reference to the patent specification because it is a "means-plus-function" element as defined under 35 U.S.C. s. 112, para. 6. While it is true that this element does not include the requisite "means for" language that would result in the presumptive application of Section 112, para. 6, the fact remains that "side rail positioning mechanism" connotes a *function*-i.e., positioning side rails of the crib-without connoting sufficient structure for performing that function. As such, Stryker has overcome the presumption that Section 112, para. 6 does not apply to this term such that it must be construed with reference to the specification in the '855 Patent. *See* Mas-Hamilton Group v. LaGard, Inc., 156 F.3d 1206, 1213 (Fed.Cir.1998); Watts v. XL Systems, Inc., 232 F.3d 877, 880-81 (Fed.Cir.2000) (discussing application of Section 112, para. 6 when the claim term, a name for a structure, does not connote a reasonably well-understood meaning to one skilled in the art).

As discussed above, both Dr. Dyro and Mr. Lockwood appeared to agree at the *Markman* hearing that the term "side rail positioning mechanism" did not have a reasonably well-understood meaning prior to the issuance of the '855 Patent. Moreover, the word "mechanism" itself is vague and could connote a wide variety of structures, all to be used to perform some specified function-here, positioning the side rails of the crib. *See, e.g.,* Rodime PLC v. Seagate Tech., Inc., 174 F.3d 1294, 1303-04 (Fed.Cir.1999); Dkt. 63, pg. 17. The Court does not find Pedicraft's proffered "constrained kinematic chain" definition the least bit helpful in defining this vague term by narrowing its structure to a concrete "mechanism." Rather, to allow Pedicraft to widen the scope of its claim terms through such broad and ambiguous definitions would defeat the purpose of giving the public adequate notice of the limitations of the patented invention. *See* Markman, 517 U.S. at 390; Vitronics, 90 F.3d at 1583; Mas-Hamilton, 156 F.3d at 1214 (stating that claims cannot be construed too broadly to cover every conceivable structure that would serve as a means for performing a certain function). Because the term "mechanism" as used in the claim limitation "side rail positioning mechanism" does not connote a sufficiently known structure for performing the function, the Court finds that Section 112, para. 6 is applicable, and as such the claim term should be defined through referral to the specification and description of the invention in the ' 855 Patent. *See also* Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed.Cir.1996): Mas-Hamilton, 156 F.3d at 1213-15 (discussing application of Section 112, para. 6 to claim term even without traditional "means for" language); Raytheon Co. v. Roper Corp., 724 F.2d 951, 957 (Fed.Cir.1983). FN3

FN3. The Court agrees with Stryker that the Federal Circuit opinion in CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359 (Fed.Cir.2002), is inapposite to this case. In *CCS Fitness,* the traditional "means for" language was not used, and therefore it was presumed that Section 112, para. 6 did not apply. However, unlike this case, the Defendant in *CCS Fitness* did not present sufficient evidence to overcome the presumption, and in any event, the claims in the CCS Fitness patent provided sufficient structural description to take the disputed term outside of the requirements of Section 112, para. 6. *See id.* at 1364, 1369. Here, the Court finds that "side rail positioning mechanism" is a functional term, and there is not sufficient structure disclosed in Claim 1 of the '855 Patent. Nor does the term "side rail positioning mechanism" possess an ordinary meaning to one skilled in the art. Thus, the "means-plus-function" requirements apply.

In applying Section 112, para. 6, it therefore becomes clear that Stryker's identified construction comports with the disclosures in the '855 Patent. Because Claim 1 itself does not disclose a specific structure, the specification provides the required construction of the disputed claim term "side rail positioning mechanism." *See* Kemco Sales, Inc. v. Control Papers Co., 208 F.3d 1352, 1361 (Fed.Cir.2000). Here, that means the *only* structure disclosed in the entire '855 Patent must be construed as the meaning of "side rail positioning mechanism": a device that includes a handle component mounted to a side rail, a rotatable lock

spindle with several vertically spaced lock pins operable to rotate between lock and release positions, and a locking component attached to the frame of the bed which slidably receives the lock spindle. Stryker's construction of this term is therefore the correct one under Section 112, para. 6.

Pedicraft also cannot invoke the doctrine of claim differentiation to separate the "side rail positioning mechanism" disclosed in Claims 10 and 18 from the undisclosed structure in Claim 1. It argues that by virtue of the detailed description of a "side rail positioning mechanism" in independent Claims 10 and 18, the term should have an excessively broad scope in Claim 1 because it is not defined specifically as in the independent claims. Stryker's assertion is correct, however, that the *only* description of "side rail positioning mechanism" throughout the '855 Patent claims and specification includes the three required components. As such, claim differentiation "cannot broaden claims beyond their correct scope, determined in light of the specification and the prosecution history and any relevant extrinsic evidence." Wang Labs., Inc. v. America Online, Inc., 197 F.3d 1377, 1384 (Fed.Cir.1999). Here, due to the functional language of Claim 1 and the only structural disclosure in the specification and remaining claims of the '855 Patent, the term "side rail positioning mechanism" should properly be construed as requiring a handle, vertical lock spindle, and locking component. *See also* Laitram, 939 F.2d at 1538.

Lastly, the Court agrees with Stryker's contention that the term "side rail positioning mechanism" does not have an ordinary meaning to one skilled in the art of hospital beds and cribs, considering the fact that the term was not coined until the '855 Patent. Accordingly, the Court must look first to the intrinsic evidence in this case (i.e., the patent itself and the prosecution history), and then, if needed, to the extrinsic evidence (i.e., the expert testimony and exhibits provided at the *Markman* hearing). In this case, as discussed above, the '855 Patent and prosecution history give clear indication that a "side rail positioning mechanism," in conjunction with Pedicraft's product, must embody a handle component, vertical lock spindle, and a locking component. This embodiment was further supported by Dr. Dyro and Mr. Lockwood, who acknowledged that under the '855 Patent, a "side rail positioning mechanism" would include the required three elements. Dkt. 62, pp. 93-95.

Pedicraft has presented no evidence to demonstrate to the Court that prior to the '855 Patent, "side rail positioning mechanism" had any recognized meaning to one skilled in the art. In fact, there is no evidence to show that the term has ever been used in a dictionary or treatise, nor has it previously been used in any of the patents disclosed as prior art during prosecution of the '855 Patent. *See, e.g.,* Texas Digital, 308 F.3d at 1202; Optical Disc Corp. v. Del Mar Avionics, 208 F.3d 1324, 1334-35 (Fed.Cir.2000); Dkt. 62, pg. 99. Pedicraft's own expert even acknowledged his unfamiliarity with the term prior to this litigation, and it is patently evident that the term had never been used prior to the prosecution of the '855 Patent. Dkt. 62, pp. 80-81, 110. Stryker's expert, Dr. Dyro, also testified that the term "mechanism" does not signal a clear structural meaning, and that he had never seen the term "side rail positioning mechanism" prior to review of the '855 Patent. Dkt. 63, pp. 17-18.

The Court must accordingly look to the intrinsic evidence in this case to determine the meaning of the heretofore unused term. As explained above, the intrinsic patent documents (including the specification and file history) signal a clear meaning of "side rail positioning mechanism" without the need for reference to Mr. Lockwood's strained and unsupported (save for a 1969 textbook) definition of "mechanism." *See* Vitronics, 90 F.3d at 1584-85; Southwall, 54 F.3d at 1578; Texas Digital, 308 F.3d at 1204: Middleton, Inc. v. Minnesota Mining and Mfg. Co., 311 F.3d 1384, 1387 (Fed.Cir.2002). The Court will therefore adopt Stryker's construction of the term based on the intrinsic documents that would give the public proper notice of what constitutes a "side rail positioning mechanism."

Accordingly, the Court construes the term "side rail positioning mechanism," as used in Claim 1 and throughout the '855 Patent, to include the combination of (1) a handle mounted to a side rail; (2) a vertical lock spindle which is rotatably attached to the same side rail and has several lock pins spaced vertically along its length; and (3) a specially designed locking component for receiving the lock spindle.

C. "Handle Component"

Pedicraft argues that the claim limitation "a handle component mounted to ... at least one side rail," as used in Claims 10 and 18, should be construed to mean "a portion of the side rail positioning mechanism to be actuated by hand." Dkt. 65, pp. 17-18. This construction, according to Pedicraft, is supported by Claim 10, which purportedly "recites that the handle component is provided to actuate other components of the side rail positioning mechanism." Id. at 18. Moreover, the specification, file history, detailed description and Figure 4 of the '855 Patent all allegedly support Pedicraft's position that the handle component is actually that portion of the side rail that is actuated by hand. Id. at 18.

Stryker, on the other hand, proposes a simple definition of "handle component" as merely a "grip." Pedicraft argues that this definition is too restrictive and would improperly limit the handle to a "stationary grip structure" without consideration for the claimed actuating role played by the handle component, which is both evidenced in Claim 10 as well as the patent specification and prosecution history. Pedicraft points out that Mr. Lockwood testified that a handle component, in the context of the '855 Patent, would be understood to provide for hand actuation as opposed to a stationary grip, and Dr. Dyro purportedly also stated that a stationary grip would not perform the claimed hand actuation. Dkt. 62, pp. 51-52; Dkt. 63, pp. 43-44. In essence, Pedicraft interprets the "grip" to be a "subcomponent of the overall handle component," or in other words, the "handle component" is actually an assemblage of parts used to actuate the side rail positioning mechanism between a lock and release position. Id.

Stryker, on the other hand, supports its "grip mounted to the side rail" construction of "handle component" by arguing that the specification of the ' 855 Patent actually refers to the handle component as a "handle grip." ' 855 Patent, Cols. 5-6. Additionally, Stryker claims Dr. Dyro did in fact refer to the handle component as a grip during his *Markman* testimony. Dkt. 63, pp. 40-41. It argues that Pedicraft's proffered "actuation" definition is vague and unclear, and in fact the actuation function appears separately in the '855 Patent after the term "handle component" is used. Stryker therefore urges the Court to adopt a clearer definition of "handle component" as simply a "grip."

The Court again agrees that Stryker's proposed construction comports with both logic and the '855 Patent itself. The patent refers to the "handle component" as comprising a "handle grip," and then only later explains that this component operates to "rotate the lock spindle from a lock position to a release position ." '855 Patent, Cols. 5-6; Claim 10, Col. 9; Dkt. 66, pg. 34. The handle component itself, however, is simply a handle grip used to rotate the spindle, as opposed to some vague assemblage of parts comprising some unstructured actuation function. Stryker's construction of "handle component" is therefore the most logical and will be adopted by this Court.

D. "A vertical lock spindle rotatably attached to said respective one of said at least one side rail"

The "vertical lock spindle" component, as used in Claims 10 and 18, is also the subject of widely disparate constructions by the parties. Pedicraft argues that the proper construction of this phrase is "the portion or sub assembly of a side rail positioning mechanism that is arranged vertically along the side rail between the handle component and the locking component and is connected to the side rail so that portions of the lock spindle rotate relative to the side rail to allow the locking and releasing of the side rail from the various up and down positions." Dkt. 65, pg. 19. In stark contrast, Stryker asserts that the proper construction is simply "a long, rotating, vertically-oriented rod which serves as an axis of rotation for the lock pins for locking the side rail." Dkt. 66, pp. 27-28.

Pedicraft's construction argument centers around its assertions that a "vertical lock spindle" can be an assembly of parts as opposed to a single item (i.e., a rod), and that "rotatably attached" is not necessarily limited to rotation around a vertical axis, but can include rotation around another axis. Dkt. 65, pg. 20.

According to Pedicraft, Claim 10 expressly presents the vertical lock spindle as "a subcomponent of a side rail positioning mechanism," which is recited as having a "plurality of lock pins." '855 Patent, Col. 9, Claim 10. It points to the testimony of Mr. Lockwood as establishing that one skilled in the art would understand this claim as including an assembly that includes a vertical lock spindle and lock pins. Dkt. 62, pp. 53-54. Additionally, it claims the Patent Examiner also characterized the vertical lock spindle within Claim 10 as an assembly of components. Dkt. 65, pp. 20-21.

Pedicraft's further point of contention is that the phrase "rotatably attached" does not necessarily require that the vertical lock spindle rotate about a vertical axis. It asserts that Claim 10 only recites that a vertical lock spindle is "rotatably attached," but does not specify the axis of rotation-only that the lock pins themselves are "spaced vertically." Id. at pp. 21-22. This lack of specification regarding the actual axis of rotation is purportedly reflected throughout the '855 Patent, and Pedicraft adds that the prosecution history of the patent also supports its contention that the term "vertical" only describes the direction of locking, as opposed to the axis of rotation. Mr. Lockwood also apparently supported this proposed interpretation, based on the patent specification and claims, that the scope of Claim 10 is not limited to a spindle assembly rotating about a vertical axis, but could include rotation about another axis as well. Dkt. 52, pp. 57-58.

Stryker essentially argues that Pedicraft's proffered construction of the "vertical lock spindle" claim is both bizarre and provides little in the way of informative structure. Instead, consistent with the ordinary meaning of the term "spindle" and the words of the patent itself, Stryker asserts that the Court should construe the "vertical lock spindle rotatably attached to said respective said one of said at least one side rail" claim to mean "a long, rotating, vertically-oriented rod that serves as an axis of rotation for the lock pins for locking the side rail." Dkt. 66, pp. 28-29. In support of this construction, Stryker points to the dictionary definition of "spindle" as a rod that serves as an axis for spinning, as well as the testimony of Dr. Dyro, who described the spindle element, from the perspective of one skilled in the art, as "a long rotatable rod." Dkt. 63, pg. 22; Texas Digital, 308 F.3d at 1203.

Once again, Stryker's proposed construction comports with both common usage and common sense. The Court agrees that Pedicraft's "multi-part assembly" construction does not provide sufficient structural guidance as to what would properly fall under the language of the claim, instead offering broad and vague functional language in an attempt to include any number of assemblies within its scope-particularly, Stryker's product. There is no evidence to suggest that a "spindle" can ever be defined as a multi-party assembly, and Pedicraft does not offer a sufficient explanation as what parts would be included in a multi-part "spindle." Instead, "spindle" is a term that is well-known to those skilled in mechanics, and it is clearly defined in any dictionary as a single rod. *See* Dkt. 66, pp. 29-30. In fact, even Mr. Lockwood described a "spindle" as a "shaft that rotates," indicating a single piece as opposed to some vague assemblage of parts. Dkt. 62, pp. 118-19. In the file history, the Patent Examiner also acknowledged as much by analyzing prior art as containing an assembly of parts, *one piece of which* was a spindle. Dkt. 66, pp. 30-31; Dkt. 62, pp. 122-23.

The Court also agrees with Stryker's contention that a "vertical lock spindle" anticipates rotation about a vertical longitudinal axis. The claim language in Claims 10 and 18 expressly contemplates a spindle that rotates vertically and has lock pins "spaced vertically thereon," thus clearly indicating that the spindle is oriented vertically and has a longitudinal axis that is necessarily vertical. There is no support for venturing outside the plan language of the ' 855 Patent claims, the ordinary meaning of these terms, as well as common sense. Accordingly, the Court adopts Stryker's construction that this "vertical lock spindle" element should consist of "a long, rotating, vertically-oriented rod that serves as an axis of rotation for the lock pins for locking the side rail."

E. "Plurality of lock pins spaced vertically thereon"

Pedicraft further argues that the language "plurality of lock pins spaced vertically thereon," as contained in

Claims 10 and 18 of the '855 Patent, is disputed as to whether the vertically spaced lock pins "permit the locking of the side rail in a vertical position or permit the locking of the spindle in position." Pedicraft argues for the former, stating that the "interaction of the lock pins with the locking component is for the express purpose of positioning the side rail at its two recited vertical positions, the uppermost and lowermost position." Dkt. 65, pp. 23-24. As such, the claim limitations in Claims 10 and 18 should be construed as more than one pin vertically spaced along the spindle for purposes of positioning the side rail in a vertical position.

Stryker again points to the '855 Patent's discussion of the purpose of the "plurality of lock pins" as locking the spindle itself into position so as to prevent the lock spindle from rotating unless the lock pin is raised out of the catch groove, thereby permitting the raising and lowering of the side rails. Dkt. 66, pp. 35-36; '855 Patent, Col. 7, lines 5-10. In short, the purpose of the lock pins is described as preventing the unintended movement of the spindle, resulting in unintended movement of the side rails. '855 Patent, Col. 7, lines 5-10. Claim 10 itself recites this function when it states "said lock spindle being operable to rotate between a lock position and release position." '855 Patent, Col. 9, Claim 10. Once again, Stryker's construction is logical in that it is the lock spindle that is being locked into position through the use of its plurality of lock pins. The Court therefore adopts Stryker's construction of this claim language.

F. "Lock spindle being operable to rotate between a lock position and a release position"

Pedicraft asserts that this claim language in Claims 10 and 18 should be construed to mean "in response to operation of the handle, portions of the lock spindle are rotated from a position that precludes unwanted side rail travel to a position that permits desired side rail travel." Dkt. 65, pg. 24. Once again, however, Stryker's construction is more specific as to the meaning of this language. Stryker argues that this language means that "the lock spindle turns about its longitudinal axis from a lock position whereby the lock pin is resting on a catch to a release position whereby the lock pin slides through a clearance groove without obstruction."

Pedicraft centers its argument around its broader construction of "vertical lock spindle" (i.e., as potentially an assembly) as well as its claim that the spindle does not necessarily have to rotate around a vertical axis. It contends that Claim 10 expressly provides for the rotation between lock and release positions using the locking pins, and it is the release that permits movement of the associated side rails between their uppermost and lowermost positions. Dkt. 65, pp. 24-25; '855 Patent, Col. 9., Claim 10. According to Pedicraft, Stryker's specific and limited construction is not contained in Claim 10, and as such there is no support in the '855 Patent itself for importing the "specific catch and clearance groove arrangement" proposed by Stryker. Dkt. 65, pg. 25. Instead, Claim 10 only requires that in response to the actuation of the handle component, the lock spindle rotates relative to the side rail such that it is either held in a vertical position or allowed to move. Id.

Stryker again disputes Pedicraft's broader and more vague construction and offers a more specific one it contends is supported by the specification and figures embodied in the '855 Patent. *See* '855 Patent, Col. 6. The Court agrees that there is no support for the contention that only "portions" of the lock spindle will rotate relative to the side rail, and as explained above, there is no evidence to suggest that a "spindle" could possibly be a multi-part assembly. Instead, the '855 Patent describes the *entire* vertical lock spindle as being rotatably attached, and the ordinary meaning of "spindle" in the context of the '855 Patent clearly suggests a longitudinal axis of rotation. The Court further agrees that Pedicraft's use of terms such as "unwanted" and "desired" side rail movement in its proposed construction does improperly introduce vagueness and confusion into the patent, particularly when the term "spindle" has an ordinary meaning and its vertical attachment, movement and rotation are made clear from the express language of the '855 Patent itself. *See, e.g.,* Wane Labs., 197 F.3d at 1384.

Stryker's construction that "the lock spindle turns about its longitudinal axis from a lock position whereby the lock pin is resting on a catch to a release position whereby the lock pin slides through a clearance

groove without obstruction" is once again based on common sense. The language "lock spindle being operable to rotate between a lock position and a release position" therefore simply means that it rotates about its axis in such a way that its lock pins are either resting on a catch to prevent movement of the side rails, or the pins are in a release position to allow clearance (and thus movement) of the side rails. Such construction comports with both logic and the specific language of the '855 Patent itself.

G. "Locking component slidably receiving said vertical lock spindle"

The parties also offer disparate definitions of the "locking component" element contained in Claims 10 and 18, with Pedicraft again offering breadth as opposed to Stryker's specificity. Pedicraft's definition would limit this claim to "a lock portion of the side rail positioning mechanism mounted to the frame through which the lock spindle slides as the side rail moves between the uppermost position or the lowermost position for precluding unwanted side rail travel and permitting desired side rail travel." Dkt. 65, pp. 26-27. Stryker, in contrast, asserts that this claim limitation should be defined as "a lock fixed to the frame and having a mounting arm and a pair of grooves which slidably receives the vertical lock spindle." Dkt. 66, pg. 38.

The parties do not dispute that Claim 10 requires that the vertical lock spindle is slidably received by the locking component, which is fixed to the frame. However, Pedicraft argues that the broader language of Claim 10 should control over later, more specific claims requiring that the lock be fixed to the frame and have a mounting arm or pair of grooves that slidably receive the vertical lock spindle. Dkt. 65, pp. 26-27. Instead, Pedicraft argues that the specification and specific embodiment do not provide a specific and limited structure for the "locking component," but instead there is "no definitional form ... and no statements ... that can be regarded as clear and ambiguous [sic] surrender of alternatives other than the specific embodiment." Id. Under its broader definition of "locking component," which it claims is supported by Mr. Lockwood' s testimony, such a component can include any number of "locking and latching systems known in the art for providing a locking point for a side rail." Id.; Dkt. 62, pg. 66 ("it's a pretty generic, general kind of concept, that can be configured in a number of ways ... I look at Stryker's construction and it's focused again on the particular embodiment that's described in the spec"). The "locking component" in Claims 10 and 18 is not limited to the specification or specific embodiment in the '855 Patent, nor is it limited to the "catch and pass through groove limitations" expressly contained in Claims 16 and 17. *See, e.g.,* '855 Patent, Col. 9, Claim 16 ("wherein said locking component includes a catch to allow upward vertical movement of one said of plurality of lock pins through said locking component while preventing downward vertical movement of said one of said plurality of lock pins through said locking component").

Stryker of course disputes Pedicraft's characterization of its attempts to define the "locking component" through a "catch and pass through" function. Instead, it argues that the '855 Patent specifically emphasizes the important safety features of the "locking component," defining the specially designed structure as including a pair of grooves and a mounting arm. '855 Patent, Cols. 2-3; 5-6. Figure 5 of the '855 Patent also displays the top view of the "locking component of the present invention," which includes a mounting arm and a pair of grooves. This important safety feature was further discussed by Dr. Dyro during his *Markman* testimony as including a mounting arm and a pair of grooves. Dkt. 63, pp. 23-24. In short, Pedicraft's own characterization of this safety feature as being important to the invention, and then describing it to include a mounting arm and grooves, gives the Court clear indication as to the proper construction of the "locking component" limitation. *See The* Toro Co. v. White Consolidated Industries, Inc., 199 F.3d 1295, 1301 (Fed.Cir.1999); Vitronics, 90 F.3d at 1582.

The Court again agrees with Stryker's construction. Pedicraft's broad construction again provides the Court with little structure of the "locking component," instead attempting to define it as part of the vague term "side rail positioning mechanism," discussed *supra,* and stating vaguely that it precludes "unwanted side rail travel [while] permitting desired side rail travel." Such concepts do not assist the Court in giving definite structure to the claim terms, especially when a "locking component" *of the present* invention is specifically

presented throughout the '855 Patent-i.e., in the description, specification, figures, and claims of the patent itself. Accordingly, Stryker's definition is supported by the intrinsic and extrinsic records, meaning that a "locking component" should be specifically construed to include a lock fixed to the frame, a mounting arm, and a pair of grooves which slidably receives the vertical lock spindle discussed above.

H. "Handle component is operable to rotate said lock spindle"

Lastly, this claim language, as contained in Claims 10 and 18, is again the subject of differing interpretations by the parties, with Pedicraft opting for a broader construction. According to Pedicraft, this limitation requires that "in response to operation of the handle, portions of the lock spindle are rotated from a position that precludes unwanted side rail travel to a position that permits desired side rail travel." Dkt. 65, pg. 27. Stryker, on the other hand, submits a simpler and more straightforward interpretation, asserting that this claim limitation means "upon turning the handle, the lock spindle rotates about its longitudinal axis from a lock position to a release position." Dkt. 66, pg. 40.

Pedicraft again bases its construction on its assertions that a vertical lock spindle can be a single unit or assembly of parts, and that its axis of rotation need not be vertical. Moreover, it argues that Claim 10 does not require that the handle itself rotate; only that it is operable to rotate the spindle from the lock position to the release position. Dkt. 65, pg. 28. Additionally, the language of Claim 10 simply states that the rotation of the spindle from the lock to the release position coincides with the release of the lock pins to permit the side rails to move from a secured position to another vertical position, and therefore Pedicraft argues against Stryker's "rotation about its longitudinal axis" limitation as being narrower than the claim language itself. Id.; '855 Patent, Col. 9.

Stryker again claims that its construction is consistent with the ordinary meaning of "spindle," discussed above, as well as the intrinsic evidence contained within the '855 Patent's specification, description of the invention, and figures, which all demonstrate that when the handle of the crib is pulled, it causes the lock spindle to rotate about its longitudinal axis from a lock to a release position. Dkt. 66, pg. 40; '855 Patent, Col. 6, Figure 4. The Court again rejects Pedicraft's interpretation of the term "spindle" as potentially being comprised of more than one component, and again finds that a "vertical lock spindle" necessarily rotates about a vertical axis. Additionally, Stryker is again correct that introduction of vague terms such as "unwanted side rail travel" and "desired side rail travel" do not properly assist the Court in construing the meaning of the claim language-nor would they be helpful as public disclosures of the invention. *See* Markman, 517 U.S. at 390. The Court therefore finds that the phrase "handle component is operable to rotate said lock spindle" necessarily means that when one turns the handle, the lock spindle "rotates about its longitudinal axis from a lock position to a release position."

Accordingly, upon due consideration of the foregoing, it is **ORDERED AND ADJUDGED** that the disputed claim construction issues regarding the Pedicraft ' 855 Patent are hereby resolved as set forth above.

In light of the Court's previous deferral of its ruling on the Defendants' Motion for Summary Judgment and supporting Memorandum of Law (Dkt.8, 9), the parties are hereby **ORDERED** to provide the Court with supplemental memoranda, not to exceed twenty (20) pages, addressing the legal issues set forth in the Defendants' Motion. The Defendants shall file their supplemental memorandum **no later than May 23, 2003,** and the Plaintiff shall file its supplemental response **no later than June 6, 2003.**

DONE AND ORDERED.

M.D.Fla.,2003.
Pedicraft, Inc. v. Stryker Corp. of Michigan

Produced by Sans Paper, LLC.