

**UNITED STATES DISTRICT COURT  
DISTRICT OF MINNESOTA**

Icon Health & Fitness, Inc.,  
a Delaware corporation,

Plaintiff,

v.

**MEMORANDUM  
OPINION AND ORDER**

Civil No. 09-319 ADM/SER

Octane Fitness, LLC,  
a Minnesota limited liability company; and  
Nellie's Exercise Equipment, Inc.,  
a California corporation,

Defendants.

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C.J. Veverka, Esq., David R. Wright, Esq., H. Craig Hall, Jr., Esq., Larry R. Laycock, Esq., and Mark W. Ford, Esq., Workman Nydegger, Salt Lake City, UT; and Jeanette M. Bazis, Esq., and Lawrence M. Shapiro, Esq., Greene Espel, P.L.L.P., Minneapolis, MN, on behalf of Plaintiff.

Matthew L. Cutler, Esq., Rudolph A. Telscher, Jr., Esq., Harness, Dickey & Pierce, P.L.C., St. Louis, MO; and Michael A. Lindsay, Esq., Dorsey & Whitney, L.L.P., Minneapolis, MN, on behalf of Defendant Octane Fitness, LLC.

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**I. INTRODUCTION**

On March 29, 2011, a hearing was held before the undersigned United States District Judge in this patent infringement action by Plaintiff Icon Health & Fitness, Inc. ("Icon") against Defendant Octane Fitness, LLC ("Octane"). Icon alleges that Octane infringed claims 1-5, 7, and 9-11 of U.S. Patent No. 6,019,710 (the "710 patent"). Octane denies the infringement allegations and moves for summary judgment of non-infringement. Octane also moves to strike portions of Icon's expert report. For the following reasons, the motion to strike is denied and the motion for summary judgment of non-infringement is granted.

## II. BACKGROUND<sup>1</sup>

The '710 patent, entitled "Exercising Device with Elliptical Movement," covers an elliptical exercise machine designed to take up less floor space than prior art models and to allow for adjustable stride length.

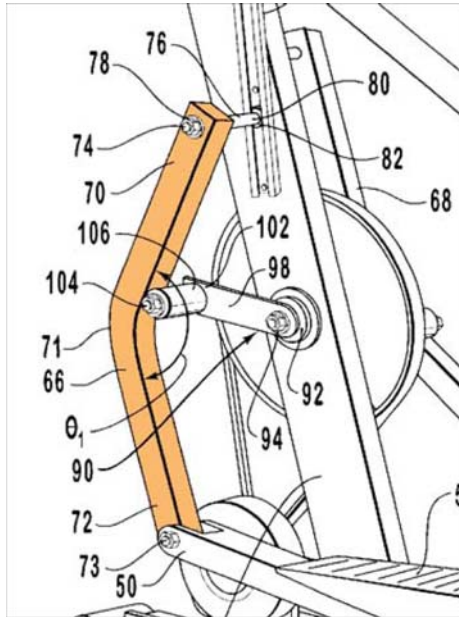
The elliptical machine described in the '710 patent includes a frame with a base configured to rest on a ground surface and a support stand arising from the base. A hand rail extends from the top of the support stand to each side of the base, and a display board is mounted on top of the hand rail above the support stand. The machine also includes two foot rails, spaced apart, that are each connected to the support stand by a stroke rail and a rotatable crank arm.

During operation, an exerciser places one foot on each foot rail and moves his or her feet back and forth so that the front end of each foot rail moves in a substantially elliptical path. When the exerciser's feet move in an elliptical pattern, it simulates a running motion.

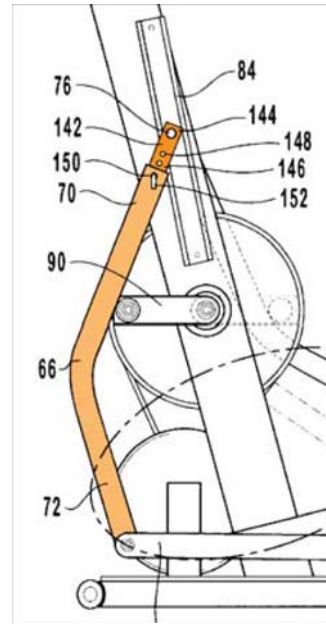
To enable their elliptical machine to occupy a smaller space, the inventors placed the foot rail linking mechanism in front of the device rather than in the back of the device. This linking mechanism, sometimes called a "linkage system," connects the foot rails to the frame so as to allow for elliptical motion. A stroke rail (see highlighted portion of Figures 1 and 2, below) is attached to the forward end of a foot rail and connected to the frame via (1) a pin mounted within a C-shaped channel (the "C-channel") (see Figure 2, no. 84) on the support stand; and (2) a collar (see Figure 1, no. 106) encircling a pin (id., no. 104) projecting from a rotatable crank arm (id., no. 98), connected to an axle (id., no. 92) extending through the support stand.

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<sup>1</sup> A description of the invention is set forth more fully in the Court's Order of December 22, 2010 [Docket No. 144]. The '710 patent is attached as Exhibit 1 to the Declaration of Matthew L. Cutler [Docket No. 158].



**Figure 1**



**Figure 2**

The patent describes two types of stroke rails. The first type, depicted in Figure 1, is a unitary stroke rail that does not vary in length. The second type of stroke rail can increase or decrease in length via manual adjustment (Figure 2) or motorized adjustment (not pictured).

At issue in this litigation are patent claims 1-5, 7, and 9-11, all directed to the elliptical machine's linkage system. Those claims were construed in this Court's Order of December 22, 2010 [Docket No. 144] ("Claim Construction Order").

### **III. DISCUSSION**

#### **A. The Law of Patent Infringement**

The determination of infringement is a two-step process. First, the claims are construed; second, the construed claims are compared to the allegedly infringing product. See IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1429 (Fed. Cir. 2000). The first step, a question

of law, id., has already been performed. The second step, infringement, is a question of fact; however, where no reasonable jury could find infringement, summary judgment is appropriate.

Id.

“To establish infringement, every limitation set forth in a patent claim must be found in an accused product or process exactly or by a substantial equivalent.” Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1535 (Fed. Cir. 1991). Where the claim limitations appear exactly, the accused product literally infringes. Where features substantially equivalent to the claim limitations appear in the accused product, the accused product infringes under the doctrine of equivalents. Icon claims both types of infringement apply here.

### **1. Literal infringement**

Literal infringement requires that every limitation set forth in a patent claim be found in the accused device. Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 980 (Fed. Cir. 1999). If any limitation is missing, there is no literal infringement. Id.

When a claim is presented in means-plus-function form, as several of the ‘710 patent claims are, the analysis is slightly different. A means-plus-function claim “recite[s] a specified function to be performed rather than the structure, material or acts for performing that function.” IMS Tech., 206 F.3d at 1429-30. “Such limitations are construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” Id., citing 35 U.S.C. § 112, ¶ 6 (internal quotation omitted).

For a means-plus-function claim, the analysis for literal infringement “requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification.” Odetics, Inc. v.

Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999). This is a narrower version of what is often referred to as the “tripartite test,” or the “function, way, or result” test, developed in the context of the doctrine of equivalents. See id. In the context of a means-plus-function claim, the word “equivalent” indicates the relevant structure must perform the identical function in substantially the same way to achieve substantially the same result. Id.

To determine if there has been literal infringement of a means-plus-function claim, the Court first considers whether the identical function is performed. IMS Tech., 206 F.3d at 1430. If so, the Court determines “whether the accused device uses the same structure, materials or acts found in the specification, or their equivalents.” Id. The Court must analyze the differences between the structure claimed in the patent, and the proposed equivalent. See Odetics, 185 F.3d at 1268. “[T]he claim limitation is the overall structure corresponding to the claimed function.” Id. As “structures with different numbers of parts may still be equivalent under § 112, ¶ 6[.]” id., it is neither necessary nor appropriate to deconstruct the corresponding structure into its component parts, and look for an exact match.

Decisions of the Federal Circuit establish when structures are, and are not, substantially equivalent. For example, a patent on a circular saw for concrete claimed the function of “supporting the surface of the concrete” while it was being sawed. Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1306 (Fed. Cir. 1998). The court found the patent claimed a “hard and predominantly flat” structure called a “skid plate” that skidded across the concrete surface, while the accused structure was a “soft, compressible, and round” set of rubber wheels that rolled over the surface. Id. at 1309. Because one skidded and the other rolled, and because the two structures supported the concrete surface in substantially different ways, they were not equivalent. Id.

By contrast, equivalence was found in Odetics, a case dealing with automated videocassette library storage devices. There, the claimed function was to rotate a bin when force was applied. Odetics, 185 F.3d at 1264. The corresponding structure was a gear with teeth; the accused structure was a set of pins protruding from the bottom of the bin. Id. at 1265, 1269-70. In both instances, force applied to the structure caused the bin to rotate; as a result, the structures were equivalent, which supported a finding of literal infringement. Id. at 1270.

When considering equivalence, the context of the invention controls, because “two structures that are equivalent in one environment may not be equivalent in another” – for example, “if performing functions other than the claimed function.” IMS Tech., 206 F.3d at 1436. Thus the context of the claimed invention informs the analysis of how substantial the differences are. Where “the disclosed physical structure is of little or no importance to the claimed invention, there may be a broader range of equivalent structures than if the physical characteristics of the structure are critical in performing the claimed function in the context of the claimed invention.” Id. So, for example, where a patent for controlling a machine tool claimed an “interface means” for transferring and recording data onto “an external medium,” but did not specify a format or mechanism for recording or retrieving data, a reasonable factfinder might find the differences between a cassette tape and a floppy disk to be insubstantial. Id. at 1430, 1437. “That two structures may perform unrelated– and, more to the point, unclaimed– functions differently or not at all is simply not pertinent to the measure of § 112 ¶ 6 equivalents.” Odetics, 185 F.3d at 1271.

Another test for equivalence is the “known interchangeability” test. The known interchangeability test “looks to the knowledge of a skilled artisan to see whether that artisan would contemplate the interchange as a design choice.” Interactive Pictures Corp. v. Infinite

Pictures, Inc., 274 F.3d 1371, 1383 (Fed. Cir. 2001). Expert testimony that alternatives are known to be interchangeable may support a finding of equivalence. Id. at 1382; see also Caterpillar, Inc. v. Deere & Co., 224 F.3d 1374, 1380 (Fed. Cir. 2000) (question of fact on equivalence where evidence showed accused mechanism “was a known alternative” structure that “had, in fact, been substituted” by patentee for the structure disclosed in the patent); IMS Tech., 206 F.3d at 1437 (same, where evidence showed floppy disk drive and tape cassette were known to be equivalent for data transferring and recording functions); Al-Site Corp. v. VSI Intern., Inc., 174 F.3d 1308, 1316 (Fed. Cir. 1999) (same, where expert testified that glue and rivet were interchangeable structures when used to close a loop on an eyeglass display).

## **2. Doctrine of Equivalents Infringement**

Even without literal infringement, it is possible for a device to infringe if the accused device includes the substantial equivalent of every claim limitation. See Sage Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1423 (Fed. Cir. 1997). The key question is whether the differences are “insubstantial.” Id. “The doctrine of equivalents prevents an accused infringer from avoiding infringement by changing only minor or insubstantial details of a claimed invention while retaining their essential functionality.” Id. at 1424. As the Federal Circuit has observed,

The doctrine of equivalents is necessary because one cannot predict the future. Due to technological advances, a variant of an invention may be developed after the patent is granted, and that variant may constitute so insubstantial a change from what is claimed in the patent that it should be held to be an infringement. Such a variant, based on after-developed technology, could not have been disclosed in the patent.

Chiuminatta, 145 F.3d at 1310.

The equivalence analysis largely mirrors the analysis for literal infringement of a means-plus-function claim. The test for equivalent structure is the same: whether the structure performs

a function in the same way with the same result. See id. at 1311 (holding lack of equivalent structure under § 112, ¶ 6 mandates same finding under doctrine of equivalents). But where the means-plus-function analysis requires identical functions, the doctrine of equivalents requires only that the functions be substantially similar. Interactive Pictures, 274 F.3d at 1382. The known interchangeability test also applies in the context of the doctrine of equivalents. See id.; see also Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 36 (1997).

What constitutes substantially equivalent function again is illustrated by reviewing the opinions of the Federal Circuit. In a case involving digital image processors, a jury considered whether an image processing system infringed a claimed “image transform processor means.” Interactive Pictures, 274 F.3d at 1382. The two image processing systems transformed different types of digital input signals into the same type of image. As the Federal Circuit observed, “A difference of inputs to a signal processing element resulting in the same output necessarily implies a difference in function performed by the element.” Id. However, the jury concluded that the difference in function was insubstantial, and the Federal Circuit found no basis to reverse that finding as a matter of law. Id.

In another case, the court considered an electronic circuit switch designed to allow a television to receive signals from both a VCR and a television antenna. The patent claimed a “means . . . for establishing a second signal path [from the TV to the antenna] . . . said second signal path being disrupted” when the VCR was turned on. Gen. Elec. Co. v. Nintendo Co., 179 F.3d 1350, 1354 (Fed. Cir. 1999). The accused switch contained transistors which established “an alternative path of lower resistance allowing the antenna signal to flow to ground rather than to the television,” effectively bypassing, but not disrupting, the signal path to the television. Id. at 1355. The functions were not identical, and, because one altered the signal path while the



other did not, they also were not equivalent. Id. at 1356. See also Kahn v. Gen. Motors Corp., 135 F.3d 1472, 1478 (Fed. Cir. 1998) (in AM stereo receivers, function of reducing distortion in first input signal is not substantially equivalent to function of removing second input signal).

The application of the doctrine of equivalents is not without legal limitations, which raise questions of law for the court. See Warner-Jenkinson, 520 U.S. at 39 n.8. One arises when the patentee argues for an equivalent which, if accepted, would vitiate an element of the original claim. Known as the “all elements rule,” the “all limitations rule,” or the “doctrine of vitiation,” the doctrine holds that “each element contained in a patent claim is deemed material to defining the scope of the patented invention,” and that the doctrine of equivalents “is not allowed such broad play as to effectively eliminate [an] element in its entirety.” DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 469 F.3d 1005, 1016-17 (Fed. Cir. 2006) (citing Warner-Jenkinson, 520 U.S. at 29-30). So, even if two functions or structures may in fact be equivalent, they cannot be found equivalent as a matter of law if doing so would effectively read a claim limitation out of a claim or render it meaningless. Tronzo v. Biomet, Inc., 156 F.3d 1154, 1160 (Fed. Cir. 1998). Thus where a patentee proposes a theory of equivalence which “effectively eliminate[s] a limitation in its entirety,” such a theory is legally insufficient to prove infringement as a matter of law. DePuy Spine, 460 F.3d at 1017.

For example, where a patent for an artificial hip socket specifically claimed a particular conical shape, and differentiated other shapes in the prior art as inferior, the patentee could not later claim infringement on the theory that other shapes were equivalent - even when that theory was supported by expert testimony. Tronzo, 156 F.3d at 1159-60. In another case involving folding bus seats, an accused seat that was “rotatably mounted” to its base was not equivalent to a patented seat that was “slidably mounted” to its base. Freedman Seating Co. v. Am. Seating

Co., 420 F.3d 1350, 1361 (Fed. Cir. 2005). Because sliding is “not a subtle difference in degree, but rather . . . a difference in kind” from rotation, no reasonable jury could find the two equivalent without vitiating the “slidably mounted” limitation. See id. at 1362 (internal quotation omitted). Similarly, no reasonable jury could find a rod extending horizontally to be equivalent to a rod extending “vertically up”; doing so would read the limitation “vertically up” out of the patent. See Nautilus Group, Inc. v. Icon Health & Fitness, Inc., Civ. No. C02-2420RSM, 2005 WL 1902498, \*6 (W.D. Wash. May 25, 2005) (unpublished), aff’d without opinion, 191 F. Appx. 960 (Fed. Cir. Aug. 17, 2006). If a factfinder must ignore a claim limitation to find equivalence, then as a matter of law, the differences are not insubstantial.

The reach of the doctrine of equivalents is also limited by the prior art. See Interactive Pictures, 274 F.3d at 1380. Just as a patentee cannot assert equivalents that would read a limitation out of the patent, a patentee also cannot assert equivalents that would encompass, or “ensnare,” the prior art. See Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 567 F.3d 1314, 1322 (Fed. Cir. 2009) (holding “ensnarement” defense to infringement is a question of law). This is because “a patentee should not be able to obtain, under the doctrine of equivalents, coverage which he could not lawfully have obtained from the PTO by literal claims.” Wilson Sporting Goods Co. v. David Geoffrey & Assocs., 904 F.2d 677, 684 (Fed. Cir. 1990), overruled in part on other grounds by Cardinal Chem. Co. v. Morton Intern., Inc., 508 U.S. 83, 92 n.12 (1993). In a crowded field of prior art, the scope of equivalents may be limited. See Abbott Labs. v. Dey, L.P., 287 F.3d 1097, 1105 (Fed. Cir. 2002). “[W]hen a device that incorporates the purported equivalent is in fact the subject of a separate patent, a finding of equivalency, while perhaps not necessarily legally foreclosed, is at least considerably more difficult to make out.” Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 493 F.3d 1368, 1379-80 (Fed.

Cir. 2007). The accused infringer bears the burden of identifying prior art which would be encompassed by the asserted range of equivalents, at which point the patentee must show that its proposed equivalent does not encompass the prior art. Streamfeeder, LLC v. Sure-Feed Sys., Inc., 175 F.3d 974, 983 (Fed. Cir. 1999). The patentee must propose “a hypothetical claim that is sufficiently broad in scope to *literally* encompass the accused product or process.” Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co., 204 F.3d 1360, 1364 (Fed. Cir. 2000).

If that [hypothetical] claim would have been allowed by the PTO over the prior art, then the prior art does not bar the application of the doctrine of equivalents. Conversely, if that claim would not have been allowed, the prior art bars application of the doctrine and infringement by equivalence may not be found.

Id. at 1364-65 (internal citations omitted).

With these principles in mind, the Court turns to the motion to strike and the infringement analysis.

## **B. Motion to Strike Expert Testimony**

Octane moves to strike the portions of the opinion of Icon’s expert, Dr. Jahan Rasty, that pertain to infringement by equivalents. For the following reasons, the motion is denied.

Federal Rule of Evidence 702 provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data; (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702. To be admissible, therefore, proposed expert testimony based on scientific, technical or other specialized knowledge must meet three prerequisites: it must be relevant, reliable, and offered by a qualified witness. See Lauzon v. Senco Prods., Inc., 270 F.3d 681, 686 (8th Cir. 2001).

Dr. Rasty has a doctoral degree in mechanical engineering and a master's degree in business administration. He has been a tenured professor of mechanical engineering for over 22 years, currently heads a university research laboratory, and has published numerous peer-reviewed studies based on the results of his research. Rasty Decl. [Docket No. 173] Ex. 1 (“Rasty Expert Report”) at 2; see also Hall Decl. [Docket No. 170] Ex. A. Octane argues that Dr. Rasty's lack of experience designing and manufacturing elliptical machines makes him “unable to competently testify” as to whether Octane's machines have structures equivalent to those disclosed in the '710 patent. Octane Daubert Mem. [Docket No. 152] at 6. However, an expert may be qualified based on “knowledge, skill, experience, training, or education.” Fed. R. Evid. 702. There is no dispute Dr. Rasty has all of these credentials in areas related to mechanical engineering. “Gaps in an expert witness's qualifications or knowledge generally go to the weight of the witness's testimony, not its admissibility.” Robinson v. GEICO Gen. Ins. Co., 447 F.3d 1096, 1100 (8th Cir. 2006). There is no basis to exclude Dr. Rasty's testimony on the grounds that he is not qualified.

The next question is whether Dr. Rasty's testimony is relevant. Relevance means simply that the testimony will “assist the jury in determining *any* fact at issue in the case.” Smith v. Ford Motor Co., 215 F.3d 713, 721 (7th Cir. 2000). Octane contests portions of Dr. Rasty's opinion directed to equivalent structure. In the context of proving equivalence, the Federal Circuit has held that an expert must provide “particularized testimony” on a “limitation-by-limitation basis” as to “the insubstantiality of the differences” in function, way, and result. Texas Instruments Inc. v. Cypress Semiconductor Corp., 90 F.3d 1558, 1567 (Fed. Cir. 1996). Generalized or conclusory testimony will not suffice. Id.

Equivalence is a question of fact at issue in the case, and accordingly Dr. Rasty's testimony may be relevant if it is sufficiently particularized. Octane argues it is not. However, Dr. Rasty's report analyzes each of the disputed claims on a limitation-by-limitation basis, addressing the differences in function, way and result, as well as the alternative test of known interchangeability. See, e.g., Rasty Expert Report at 8 (addressing claim 1(e)). The report reflects Dr. Rasty was aware of the applicable legal tests and employed the proper claim constructions (with the exception of "linear reciprocating displacement," which will be excluded as discussed below). Id. at 4. The Court finds no basis to exclude Dr. Rasty's equivalence testimony on the grounds of relevance.

The final inquiry is whether Dr. Rasty's testimony is reliable. To be admissible, Dr. Rasty's testimony must be "based upon sufficient facts or data" and "the product of reliable principles and methods," which have been applied "reliably" to the facts of the case. See Fed. R. Evid. 702. When considering reliability, the focus is on "principles and methodology, not on the conclusions that they generate." Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 595 (1993). "The soundness of the factual underpinnings of the expert's analysis and the correctness of the expert's conclusions based on that analysis are factual matters to be determined by the trier of fact, or, where appropriate, on summary judgment." Smith, 215 F.3d at 718.

Trial courts have discretion not only to determine whether an expert's testimony is reliable, but also "in deciding *how* to test an expert's reliability." Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152 (1999). Toward that end, the Supreme Court has proposed four non-exclusive factors that may be considered, including (1) whether the expert's method can be, or has been, tested; (2) whether the method has been subjected to peer review and publication;

(3) the method's known or potential rate of error; and (4) whether the method is generally accepted. See Lauzon, 270 F.3d at 686-87, citing Daubert, 509 U.S. at 593-94.

Here, Octane does not challenge Dr. Rasty's testimony on any of these grounds. Rather, it argues that Dr. Rasty neglected to give sufficient weight to what it considers to be "the important factors to consider in designing a marketable elliptical exercise machine," including "manufacturability, cost, smoothness, noise, and size of the machine." Octane Daubert Mem. at 6. Octane asked Dr. Rasty whether he had considered the "advantages" of Octane's design in these areas. Cutler Summary Judgment Decl. [Docket No. 158] Ex. 16 ("Rasty Dep.") at 137. Dr. Rasty replied that he "didn't really see differences that were worth mentioning." Id. at 138.

Octane also observes that Dr. Rasty's opinions contradict those of an Icon fact witness, William Dalebout, who testified about design and manufacturing issues with the invention described in the '710 patent. Octane Daubert Mem. at 7; Cutler Daubert Decl. [Docket No. 153] Ex. 5 at 36-37. Discrepancies in witnesses' testimony, however, would go to credibility, not admissibility. See Lauzon, 270 F.3d at 695 n.9.

Octane has not shown that Dr. Rasty's testimony falls "outside the range where experts might reasonably differ, and where the jury must decide among the conflicting views of different experts." Kumho Tire, 526 U.S. at 153. To the extent Dr. Rasty's testimony may include inaccuracies, discrepancies or conclusions lacking support, these would be proper subjects for cross-examination. See Daubert, 509 U.S. at 596. Accordingly, Octane's motion to strike the portions of Dr. Rasty's testimony on equivalence is denied.

### C. Motion for Summary Judgment of Non-infringement

Federal Rule of Civil Procedure 56(a) provides that summary judgment shall issue “if the movant shows that there is no genuine dispute as to any material fact and that the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a); see also Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 587 (1986) (citing Fed. R. Civ. P. 56(c));<sup>2</sup> Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 252 (1986)(same); Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986)(same). On a motion for summary judgment, the Court views the evidence in the light most favorable to the nonmoving party and draws all justifiable inferences in its favor. Ludwig v. Anderson, 54 F.3d 465, 470 (8th Cir. 1995). The nonmoving party may not “rest on mere allegations or denials, but must demonstrate on the record the existence of specific facts which create a genuine issue for trial.” Krenik v. County of Le Sueur, 47 F.3d 953, 957 (8th Cir. 1995) (internal quotation omitted).

Icon argues the linkage system in Octane’s Q45 and Q47 machines infringes claims 1-5, 7, and 9-11 of the ‘710 patent. Of these, the only independent claim is Claim 1. If Octane can show Claim 1 is not infringed, then none of the claims which depend on Claim 1 are infringed. See Streamfeeder, 175 F.3d at 984. Accordingly, both sides focus their attention on three disputed elements of Claim 1: 1(c), 1(d) and 1(e). Because the analysis of claim 1(d) is dispositive, it will be addressed first.

#### 1. Claim 1(d)

The patent claims a **“means for connecting each stroke rail to the frame such that linear reciprocating displacement of the first end of each stroke rail results in displacement**

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<sup>2</sup> Federal Rule of Civil Procedure 56 was amended effective December 1, 2010; the summary judgment standard was previously located in Rule 56(c).

**of the second end of each stroke rail in a substantially elliptical path.”** ‘710 patent, claim 1(d).<sup>3</sup> The function is “connecting each stroke rail to the frame such that linear reciprocating displacement of the first end of each stroke rail results in displacement of the second end of each stroke rail in a substantially elliptical path.” The Court declined to construe the terms of this claim, including “linear reciprocating displacement,” and so those words take their “ordinary and customary meaning as understood by a person of ordinary skill in the art at the time of the invention.” Wavetronix v. EIS Elec. Integrated Sys., 573 F.3d 1343, 1355 (Fed. Cir. 2009).

Icon proposed a construction of “linear reciprocating displacement” which did not require “movement along a linear path.” This construction was rejected. Claim Construction Order at 8. Nonetheless, Icon argues that the first end of the stroke rail undergoes linear reciprocating displacement, relying on a portion of Dr. Rasty’s report which uses the rejected construction. See Icon Mem. Opp. S.J. [Docket No. 171] at 21, citing Rasty Expert Report at 7. Because it is based on an erroneous claim construction, Dr. Rasty’s opinion on this point is not admissible. See Texas Instruments, 90 F.3d at 1565 (expert testimony based on incorrect claim construction cannot support finding of infringement under proper construction). His opinion therefore cannot create a question of fact on whether the first end of the proposed stroke rail in Octane’s machines undergoes linear reciprocating displacement.

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<sup>3</sup> The Court declined to construe the function associated with claim 1(d), but described it as “to connect the stroke rail to the frame in such a way as to cause the first end of the stroke rail to undergo linear reciprocating displacement (which then causes the second end of the stroke rail to move in an elliptical path).” Claim Construction Order at 10. Icon treats this description as a construction, and urges the Court to modify it so that there is no need for the connecting means to “cause” one end of the stroke rail to undergo linear reciprocating displacement. Icon Mem. Opp. S.J. [Docket No. 171] at 20. The description is not a construction. Because the words in this claim take their ordinary meaning, construction is not necessary.



Given the exclusion of Dr. Rasty's opinion on this point, there is no evidence that any part of Octane's machines undergoes linear reciprocating displacement. Indeed, when considering the issue using the proper construction, Dr. Rasty acknowledges that "the first end of the stroke rails . . . reciprocate along a slightly arcuate path rather than along a straight path." Rasty Expert Report at 12. Without linear reciprocating displacement, there can be no literal infringement under § 112, ¶ 6, because the functions are not identical. The difference between movement in a straight line and movement in an arc is a "difference in kind," not merely a "difference in degree." See Freedman Seating, 420 F.3d at 1360. Icon's linkage system translates linear reciprocating displacement into elliptical motion. Octane's linkage system translates arcuate displacement into elliptical motion. Two different inputs yield the same output, which strongly suggests that a different function is being performed. Compare Interactive Pictures, 274 F.3d at 1382. On these facts, no reasonable jury could find the functions to be identical. There is no literal infringement of claim 1(d).

The Court next considers whether the functions are substantially equivalent so as to allow infringement under the doctrine of equivalents. Dr. Rasty suggests that in this context, movement in a slight arc is equivalent to movement in a straight line, because "substituting straight-path reciprocation with reciprocation along a slight arc has no meaningful effect on the elliptical path traveled by the second end of the stroke rail. . . . Both provide lateral constraint of the motion of the first end of the stroke rail and convert circular motion derived from the axle to elliptical motion at the second end." Rasty Expert Report at 12.

The Court does not agree. To find the functions equivalent, it is necessary to read the word "linear" out of claim 1(d), a result prohibited by the doctrine of vitiation. Had Icon sought

to claim different types of reciprocating displacement, it might simply have omitted the word “linear”; it chose not to do so, and is bound by that choice.

In addition, the requirement of linear reciprocating displacement is critical to the context of this invention. The prior art field is crowded. See ‘710 patent at 1 (listing 27 prior art references). In a Notice of Allowability, the U.S. Patent and Trademark Office specifically identified linear reciprocating displacement as a reason why the ‘710 patent was allowable over the prior art. See Cutler S.J. Decl. [Docket No. 158] Ex. 13. Dr. Rasty has also acknowledged that linear reciprocating displacement is one reason why the linkage system disclosed in the ‘710 patent was patentable over the prior art. Rasty Dep. at 139.

Movement in an arc is not a recent development in mechanics; indeed, Octane has identified a patent prior to the ‘710 patent which discloses an elliptical linkage system that translates arcuate motion into elliptical motion. See U.S. Patent No. 5,707,321, Cutler S.J. Decl. [Docket No. 158] Ex. 18 (the “‘321 patent”). This is not a case in which the doctrine of equivalents is necessary to protect a patentee from infringement via a technology unknown at the time of the patent application. For all these reasons, Icon may not rely on the doctrine of equivalents to prove that, for purposes of an elliptical linkage system, movement in an arc is substantially equivalent to movement in a straight line.

Because the functions are neither identical nor substantially similar, claim 1(d) is not infringed as a matter of law. The Court will nevertheless proceed to consider whether Octane’s machines have equivalent structure.

In a means-plus-function claim, the “corresponding structure must include all structure that actually performs the recited function.” Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc., 296 F.3d 1106, 1119 (Fed. Cir. 2002). The claim construction order identifies this structure as

(1) an axle mounted to both the frame and a pair of crank arms; (2) a pin projecting from each crank arm; (3) a collar encircling each pin that is attached to a stroke rail; (4) the C-channel and corresponding flared-head pin; and (5) spot welds, nuts and washers used to attach these structures together. Claim Construction Order at 11-14.

Dr. Rasty acknowledges that Octane's machines do not have identical structure, yet suggests they are equivalent because they restrain unwanted lateral movement in substantially the same way (through the use of rigid metal structures) with substantially the same result (elliptical movement at the second end of the stroke rail). Rasty Expert Report at 13. Focusing specifically on the "way" element, Dr. Rasty proposes that the C-channel and flared-head pin structure of claim 1(d) is equivalent to a part of Octane's machines called a rocker link or stability link, because "trapping a moving object in a track and tethering a moving object to a ridged pivoting are known to be interchangeable ways to limit the object from moving in an undesirable direction while, at the same time, allowing movement of the object in a desired direction." Id. at 13-14.

The Court finds the structures are not equivalent as a matter of law. A structure which may be equivalent in one context may not be equivalent in another, see IMS Tech., 206 F.3d at 1436, and the structure's performance of unclaimed functions is not pertinent to the analysis. See Odetics, 185 F.3d at 1271. While the C-channel and the rocker link may be equivalent for the function of restraining unwanted lateral movement, this is not the function claimed in the patent. Instead, the claimed function is connecting the stroke rail to the frame so that linear reciprocating displacement of the first end of the stroke rail results in elliptical motion at the second end.

In this context, the structures do not perform the function in the same way. By sliding back and forth within the C-channel, the flared-head pin allows the first end of the stroke rail to undergo linear reciprocating displacement which is converted to elliptical motion at the second end. Because the C-channel and flared-head pin are critical to the function of allowing the first end of the stroke rail to undergo linear reciprocating displacement, the range of equivalents is correspondingly narrow. As already noted, no part of Octane's machines undergoes linear reciprocating displacement. Instead, the rocker link allows the actuator casting to pivot in an arc. No reasonable jury could find the structures equivalent as a matter of law.

Claim 1(d) of the patent is not infringed as a matter of law. For this reason, Octane is entitled to summary judgment of non-infringement. However, the Court will proceed to consider the remaining disputed claim elements.

## **2. Claim 1(c)**

Claim 1(c) identifies **“a pair of stroke rails each having a first end and an opposing second end, the second end of each stroke rail being hingedly attached to the first end of a corresponding foot rail.”** '710 patent, claim 1(c). The term “stroke rail” is not defined in the patent, and has no meaning for a person of ordinary skill in the art. The Court has construed it to mean “a linear or curved rail, which may be made to vary in length, extending from a foot rail to a frame on an elliptical machine.” Claim Construction Order at 8.

The parties dispute whether Octane’s machines have a “stroke rail.”<sup>4</sup> Octane argues that “no part of Octane’s linkage extends from a foot rail to the frame.” Octane Mem. S.J. [Docket No. 157] at 22. Icon responds that two parts of Octane’s linkage system, the actuator casting and the intergrated screw motor, are a “stroke rail” which “extends from a foot rail to a frame” via the rocker link. Icon Mem. Opp. S.J. [Docket No. 171] at 11-12. Octane replies that the rocker link is “part of Octane’s multi-part linkage system; it is not a connecting part” and ought not to count as part of a stroke rail. Octane S.J. Reply [Docket No. 183] at 4.

A stroke rail may not consist of an unlimited number of parts; a proposed construction to that effect was specifically rejected as impermissibly broadening the scope of the patent. Claim Construction Order at 8. Yet a stroke rail “may be made to vary in length,” which contemplates a multi-part structure. A reasonable jury could find that additional elements used to vary the length of a stroke rail are part of the stroke rail. However, other intervening parts unrelated to varying the length of the stroke rail cannot reasonably be considered part of the stroke rail.

So viewed, the elements which Icon characterizes as a stroke rail cannot literally infringe claim 1(c). Even if Octane’s actuator casting and integrated screw motor could together be considered a “linear or curved rail,” and even if that rail “may be made to vary in length,” no reasonable jury could find the stroke rail “extends from a foot rail to a frame” because of the intervening rocker link. If the rocker link varied the length of the stroke rail, arguably it might

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<sup>4</sup> Icon argues Octane conceded its Q47 linkage had a stroke rail. Icon Mem. Opp. at 6. Octane’s initial claim construction chart, dated August 26, 2009, states that as to claim 1(c), “Octane admits that the Q47 Machine contains this element.” Veverka Decl. [Docket No. 172], Ex. 1 at 2. On June 1, 2010, Octane filed a supplemental claim construction chart providing as to claim 1(c), “Octane’s Q47 Machine does not contain this element.” *Id.*, Ex. 2 at 2. Octane offers no explanation for the discrepancy. Because since June 2010 Octane appears to have consistently argued the absence of a stroke rail, and because Icon did not argue the alleged concession at claim construction, the Court finds that the concession was withdrawn by Octane well before this motion was filed.

be considered part of the stroke rail; but it does not. It is a separate, independently moving, intervening element of the linkage system interposed between the frame and the proposed stroke rail, and its presence prevents the stroke rail from extending to the frame. Accordingly no reasonable jury could find literal infringement of claim 1(c).

The next question is whether claim 1(c) is infringed under the doctrine of equivalents. Octane argues the “basic structure” of its linkage system was disclosed in the ‘321 patent, and as prior art lies beyond the reach of the doctrine of equivalents as a matter of law. Octane Mem. S.J. at 27-31; see ‘321 patent. Octane has the burden of proffering evidence of prior art that is encompassed by Icon’s proposed range of equivalents. See Streamfeeder, 173 F.3d at 983. Octane has met its burden.

Icon, however, has failed to propose a hypothetical claim that encompasses Octane’s machines. As the patentee with the ultimate burden to show infringement by equivalents, it is Icon’s burden to propose a hypothetical claim for analysis in response to Octane’s motion for summary judgment of non-infringement. See id. at 982; see also Ultra-Tex Surfaces, 204 F.3d at 1364. Instead, Icon argues the ‘321 patent fails to read on the ‘710 patent, and specifically is missing the equivalent of claim 1(e). Icon Mem. Opp. S.J. at 27-28. This analysis establishes that the ‘321 patent does not anticipate the literal ‘710 patent claims – a point not in dispute. Icon’s analysis does not address whether the ‘321 patent anticipates Icon’s proposed *equivalent* to those claims.

There is no literal infringement as to claim 1(c). Because Icon has not proposed a hypothetical claim to support its argument that its proposed range of equivalents is not ensnared by the ‘321 patent, the Court finds claim 1(c) is not infringed under the doctrine of equivalents.

### 3. Claim 1(e)

The Court has previously held that the function set forth in claim 1(e), “**selectively varying the size of the substantially elliptical path that the second end of each stroke rail travels,**” needs no construction. Claim Construction Order at 14. For the motorized embodiment, which is the only one arguably infringed, the corresponding structure is “[a]n electric motor driving a gear that engages teeth on an elongated engagement bar to move an adjustment arm. The electric motor is mounted to the stroke rail by a bracket, and the adjustment arm is connected to the elongated engagement bar by a rod.” Claim Construction Order at 17-18.

For purposes of this Motion Octane does not dispute the functions are identical: Octane’s machines are able to selectively vary the substantially elliptical path traveled by the second end of the proposed stroke rail. However, Octane argues its machines have no structure equivalent to the adjustment arm and connecting rod outlined in claim 1(e). Octane notes the “tube-within-a-tube” structure contemplated by the ‘710 patent presents many disadvantages as compared to Octane’s integrated screw mechanism. Octane Mem. S.J. at 15.

Dr. Rasty proposes that the electric motor and integrated screw used in Octane’s machines vary the elliptical path in substantially the same way to achieve substantially the same result. Specifically, “[b]oth mechanisms transform the rotary motion of an electric motor to transverse motion. The gear of the rack and pinion traverses the teeth of the associated bar in a very similar way that the nut of a power screw traverses the threads of the associated screw.” Rasty Expert Report at 14. According to Dr. Rasty, both mechanisms “increase/decrease the effective distance between two pivot points which in turn varies the size of the substantially

elliptical path.” Id. Furthermore, “[i]n mechanics, power screws and rack and pinion devices are known to be interchangeable systems in many applications.” Id.

To defeat the argument on equivalence, Octane responds with functions not claimed in the patent – for example, creating a smaller operating envelope at the front of the machine, as well as reducing manufacturing and mechanical challenges associated with the structure in the patent. Octane highlights the differences between the ‘710 design and its machines in performing these functions. See Octane Mem. S.J. at 35-37.

As already noted, what is equivalent in one context may not be equivalent in another, and differences in performing unclaimed functions are not relevant to an equivalence analysis. Claim 1(e) is drawn more broadly than claim 1(d), and does not by its terms require a tube-within-a-tube structure. Neither does it appear that the physical characteristics of this structure are critical to the claimed function of selectively varying the elliptical path. There is no evidence that the PTO considered the tube-within-a-tube structure to be a reason to allow the ‘710 patent over the prior art. Dr. Rasty has testified that a rack-and-pinion structure is mechanically equivalent to a motorized screw for the purposes of selectively varying the elliptical path. Octane’s expert, Steven Lenz, does not appear to dispute the point, testifying instead that a motorized screw is superior technology which has largely replaced rack-and-pinion structure on modern exercise machines. Veverka Decl. [Docket No. 172] Ex. 7 at 22-27; Ex. 8 at 153-56.

There is an issue of fact as to whether Octane’s integrated screw motor is equivalent to the structures corresponding to claim 1(e). However, because claim 1(d) is not infringed as a matter of law, Octane is entitled to summary judgment of non-infringement.



## V. CONCLUSION

Based upon the foregoing, and all of the files, records and proceedings herein, **IT IS HEREBY ORDERED** that Octane's motion to strike portions of Dr. Rasty's expert report [Docket No. 150] be **DENIED**, and Octane's motion for summary judgment of non-infringement [Docket No. 155] be **GRANTED**.

LET JUDGMENT BE ENTERED ACCORDINGLY.

BY THE COURT:

s/Ann D. Montgomery  
ANN D. MONTGOMERY  
U.S. DISTRICT JUDGE

Dated: June 17, 2011.