

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

Sioux Steel Company,

Plaintiff,

v.

Prairie Land Mill Wright Services and
Duane Chaon,

Defendants.

Case No. 16-cv-2212

Judge Mary M. Rowland

MEMORANDUM OPINION AND ORDER

Plaintiff Sioux Steel Company developed a piece of farm equipment—a modular storage bin sweep that utilizes interconnected paddles to sweep and empty grain bins. Plaintiff alleges that Defendant Prairie Land Mill Wright Services and its owner, Defendant Duane Chaon, have infringed a patent it owns related to that piece of equipment. Defendants have denied infringement and asserted various affirmative defenses, including patent invalidity. Plaintiff moves now for partial summary judgment on its infringement claim and on Defendants' invalidity defense. [349]. For the reasons explained below, this Court grants in part and denies in part Plaintiff's motion.

I. Background

The following facts come from Plaintiff's statement of facts [351], Defendants' statement of additional facts [368]; and their respective responses [369]; [375].

A. The Patent

Defendant Prairie Land is an Illinois corporation, and Defendant Chaon is its president and owner. [351] ¶ 1.

The U.S. Patent & Trademark Office issued U.S. Patent No. 8,967,937 (the Patent), entitled “Modular Storage Bin Sweep System,” on March 3, 2015. *Id.* ¶ 3. Plaintiff owns all right, title, and interest in the Patent. *Id.* The Patent relates to a modular paddle sweep for sweeping particulate matter across the floor of a bin. *Id.* ¶ 4. The Patent contains twenty-eight total claims: one independent claim (Claim 1) and twenty-seven dependent claims. *Id.*

Plaintiff asserts that Prairie Land’s grain bin paddle sweep products, including the Single Arm, Twin Arm, Arm-And-A-Half, and Linear (collectively, the Accused Products), infringe its Patent because they include a “pivot unit,” “hinge section,” or “sweep sections pivotable with respect to one another.” *Id.* ¶ 5. Plaintiff alleges that the Accused Products literally infringe Claims 1, 3, 5, 6, 7, 12, 14, 15, 16, 19, 21, 23, and 24 of the Patent (the Asserted Claims). *Id.* ¶ 6. The Asserted Claims state as follows:

Claim 1: A modular storage bin sweep system utilizing paddles to sweep particulate matter across a floor surface of a bin, the system comprising:

a sweep assembly including at least two units connectable together in a substantially linear array along a longitudinal axis, each of the units having a unit longitudinal axis, the sweep assembly having an inboard end for locating toward a center of the bin and an outboard end for locating toward a peripheral area of the bin, each of the at least two units having a longitudinal axis, the sweep assembly comprising:

a plurality of interconnected paddles movable in a succession on a path along at least a portion of the sweep assembly between the inboard and outboard ends;

at least one of the at least two units comprising a power unit configured to move the succession of paddles along the path of the sweep assembly;

at least one of the at least two units comprising a drive unit configured to carry a portion of the succession of interconnected paddles and move the sweep assembly with respect to a surface of the bin below the sweep assembly, the drive unit being positioned toward the outboard end from the inboard end of the sweep assembly, the drive unit including a surface engaging portion configured to engage a surface below the sweep assembly and move the sweep assembly with respect to the surface, the surface engaging portion comprising at least one surface engaging wheel resting on the surface of the bin; and

at least one of the at least two units comprising a pivot unit configured to carry a portion of the succession of interconnected paddles, the pivot unit including a pair of connected sections with each section being connected to an adjacent said unit of the array, the pivot unit including a pivot structure positioned between and connecting the sections to permit pivoting of a first section with respect to a second section and thereby to permit a degree of pivotability of the unit longitudinal axes of the adjacent units with respect to each other in the array of units of the sweep assembly.

Claim 3: The system of claim 1 wherein the degree of pivotability of the units is in a substantially vertical plane about a substantially horizontal axis.

Claim 5: The system of claim 1 wherein a flexible cover extends between the connected sections.

Claim 6: The system of claim 1 wherein the pivot structure comprises one or more pivot arms extending from a first one of the connected sections to mount on pivot tabs extending from a second one of the connected sections, the pivot arms and pivot tabs being pivotally fastened together by pivot pins.

Claim 7: The system of claim 6 wherein the pivot pins extend along a substantially horizontal axis to permit pivoting about the horizontal axis but not about a vertical axis.

Claim 12: The system of claim 1 additionally comprising a traction enhancement structure mounted on the drive unit.

Claim 14: The system of claim 12 wherein the traction enhancement structure includes an elongated weight support and at least one weight configured to increase traction of the at least one surface engaging wheel of the drive unit on the surface below the sweep assembly.

Claim 15: The system of claim 14 wherein the weight support of the traction enhancement structure is configured to removably mount a plurality of weights on the drive unit to provide an adjustable degree of traction enhancement.

Claim 16: The system of claim 14 wherein the longitudinal axis of the sweep assembly is positioned on one lateral side of the at least one surface engaging wheel; and wherein the support of the traction enhancement structure extends from the drive unit in a direction lateral to the longitudinal axis of the sweep assembly and to an extent beyond the at least one surface engaging wheel to support the at least one weight at a location on an opposite lateral side of the at least one surface engaging wheel completely beyond the at least one surface engaging wheel.

Claim 19: The system of claim 14 wherein the weight support of the traction enhancement structure comprises a bar rigidly mounted on the drive unit such that the bar does not move with respect to the at least one surface engaging wheel of the drive unit.

Claim 21: The system of claim 1 additionally comprising a traction enhancement structure for selectively adjusting traction of the drive unit on the surface below the sweep assembly, the traction enhancement structure including: a weight support mounted on the drive unit and extending rearwardly of the drive unit to terminate rearwardly of the at least one wheel; and a weight removably mounted on the weight support.

Claim 23: The system of claim 21 wherein a slot is defined in the weight, a portion of the weight support being removably received in the slot when the weight is mounted on the weight support.

Claim 24: The system of claim 23 wherein the weight support forms a hook removably insertable into the slot in the weight.

Id. ¶ 7.

This Court has construed the following terms of the Patent as follows:

Claim Term	Construction
“pivot unit”	unit allowing for pivotability
“pivot structure”	structure containing a pin or shaft that allows for movement about such pin or shaft
“carry”	supporting the weight
“a surface engaging portion”	a portion of the drive unit configured to engage a surface
“motor portion”	a portion of the power unit, which includes at least a motor
“traction enhancement structure”	structure for increasing the traction or tractability of the drive unit
weight support” (claim 14)	an extended support for a weight

Id. ¶ 12.

B. Alleged Infringement

Plaintiff claims that Defendants have made, used, offered for sale, and sold the Accused Products since Plaintiff initiated this action, and that they have continued to do so while this lawsuit remains pending. *Id.* ¶ 15. According to Plaintiff, each model or variation of the Accused Products share similar features, including: (1) modules or units that are connected together in a linear array; (2) an endless loop or chain with a succession of paddles connected thereto that run through the linear array to sweep grain across the bin floor; (3) modules that include at least a power unit, a drive unit, a pivot unit, and other intermediate or linking units; (4) at least

one power unit that includes a motor that moves the chain, and thus, the succession of paddles to sweep the grain; (5) at least one drive unit that includes a tractor to move the sweep relative to the floor of the bin; (6) at least one drive unit that also includes a traction enhancement structure that extends behind the tractor's wheels and that can include removable weights to give the wheels more traction on the bin floor; and (7) at least one pivot unit that allows for flexibility in the vertical direction along the sweep's linear array or modules to accommodate unevenness in the bin floor and allow the paddles to follow the contour of the floor. *Id.* ¶ 16.

Defendants contend that the Accused Products do not infringe the Patent because they lack: (1) a pivot or drive unit “configured to” carry a portion of the succession of interconnected paddles; and (2) a “pivot structure.” *Id.* ¶ 20; [369] ¶ 32. Specifically, Defendants contend that, even though the pivot and drive units carry the paddles, they are not “configured to” support the weight of a portion of the paddles. [351] ¶ 51. Defendants also contend that that their Accused Products containing a “ball-and-socket” design lack the “pivot structure” recited in Claim 1. *Id.*

C. IPR

Prairie Land filed a petition for inter partes review (IPR) with the Patent Trial and Appeal Board (PTAB) on September 21, 2016. *Id.* ¶ 59. In its petition, Prairie Land presented the following grounds and combinations of prior art to the PTAB as rendering claims 1–28 of the Patent invalid as obvious under 35 U.S.C. § 103(a): (1) Claims 1–4 and 6–11 are obvious in view of *Dixon*, *Berreau*, and *Borowski*; (2) Claim 5 is obvious in view of *Dixon*, *Berreau*, *Borowski*, and *Vander Schaaf*; (3) Claims

12–28 are obvious in view of *Dixon, Berreau, Borowski, and Sudenga*; (4) Claims 1, 3, 4, and 6–11 are obvious in view of *Cantenot, Carrouget, Jackson ('094)*, and *Schiltz*; (5) Claim 2 is obvious in view of *Cantenot, Carrouget, Jackson, Schiltz, and Weikel ('647)*; (6) Claim 5 is obvious in view of *Cantenot, Carrouget, Jackson, Schiltz, and Klein*; (7) Claims 12–15 and 17–20 are obvious in view of *Cantenot, Carrouget, Jackson, Schiltz, and Wilham*; (8) Claims 16, 21, 22, and 6–28 are obvious in view of *Cantenot, Carrouget, Jackson, Schiltz, Wilham, and Weikel*; (9) Claim 23 is obvious in view of *Cantenot, Carrouget, Jackson, Schiltz, Wilham, Weikel, and Epp*; (10) Claims 24 and 25 are obvious in view of *Cantenot, Carrouget, Jackson, Schiltz, Wilham, Weikel, Epp, and Sudenga*; (11) Claims 1–4 and 6–11 are obvious in view of *Dixon, Jackson, and Schiltz*; (12) Claim 5 is obvious in view of *Dixon, Jackson, Schiltz, and Klein*; (13) Claims 12–28 are obvious in view of *Dixon, Jackson, Schiltz, and Sudenga*. *Id.* ¶ 60.

The PTAB instituted IPR only on three combinations of prior art: *Dixon, Berreau, and Borowski* (Claims 1–4, 6–11); *Dixon, Berreau, Borowski, and Vander Schaaf* (Claim 5); and *Dixon, Berreau, Borowski, and Sudenga* (Claims 12–28). *Id.* ¶ 61. For each of the remaining ten combinations, the PTAB declined to institute IPR, finding for each that Prairie Land had not demonstrated a reasonable likelihood of prevailing on its claims that these combinations rendered any claims of the Patent invalid as obvious. *Id.* The PTAB issued a final written decision on April 4, 2018, holding that Prairie Land “failed to prove by a preponderance of the evidence that

any claim (1–28) of the ‘937 Patent was invalid in view of the prior art of record in the IPR.” *Id.* ¶ 62.

Prairie Land filed a request for rehearing of the PTAB’s written decision on May 4, 2018. *Id.* ¶ 63. Prairie Land did not request rehearing on the PTAB’s decision not to institute IPR on the ten non-instituted grounds in Prairie Land’s petition. *Id.* The PTAB denied rehearing on January 14, 2019. *Id.*

Prairie Land subsequently filed its notice of appeal in the Federal Circuit on March 15, 2019; it filed its first brief on June 28, 2019 and its reply brief on February 25, 2020. *Id.* ¶ 64. Prairie Land did not assert before the Federal Circuit that the PTAB had erred by instituting IPR on only some, but not all, of the petitioned grounds. *Id.* The Federal Circuit affirmed the PTAB’s judgment on June 15, 2020. *Id.*

D. Bruce Meyer’s Expert Opinions

Defendants offer the expert report of Bruce Meyer, a purported expert in the field of agricultural equipment, in opposition to Plaintiff’s summary judgment motion. [371-2] ¶ 4. Meyer offers several opinions regarding both infringement and invalidity.

On infringement, Meyer opines that Defendants’ Accused Products do not infringe claim 1 of the ‘937 Patent, and that, because they do not infringe claim 1, they also do not infringe the remaining dependent claims. *Id.* ¶ 36. Meyer asserts that most of Prairie Land’s Accused Products lack the “pivot structure” referenced in claim 1 because the “pivot units” of most of those Accused Product use universal

joints—ball-and-socket pivots—rather than a pin or shaft about which the sections move relative to each other. *Id.* ¶ 47.

Meyer additionally opines that the Accused Products lack a “pivot unit” or “drive unit” “configured to carry a portion of the succession of interconnected paddles” because Defendant’s “pivot unit” and “drive unit” “are not designed to accomplish the objective of supporting the weight of the paddles, which simply travel through the pivot and drive units with their chain unsupported by a sprocket or the like.” *Id.* ¶¶ 38, 40.

In his expert report on invalidity, Meyer opines that the Patent’s claims all “are obvious.” [371-1] ¶ 46. Meyer reasons that several components of Plaintiff’s patent are “well known,” including conveyor sweeps, the advantages of sweeps formed of modular units and of placing pivots between sweep sections, and the bar-with-hanging-weight “traction enhancement structure.” *Id.* In his report, Meyer relies on thirty-five prior art references that Prairie Land did not raise as grounds for invalidity in its IPR petition: (1) *Kaeb*; (2) *South*; (3) *Hutchison* (‘903)); (4) *Clark*; (5) *Clewett*; (6) *Johnson*; (7) *Vinson*; (8) *Swanson*; (9) *Patz*; (10) *Silverthorn*; (11) *McCarthy*; (12) *Baker*; (13) *Fridgen*; (14) *Dickinson*; (15) *Greaves*; (16) *Behlen*; (17) *Ridlehuber*; (18) *Wood*; (19) *Machnee*; (20) *Gust*; (21) *Eskelinen*; (22) *Munger*; (23) *Pentith*; (24) *Pahl*; (25) *Swanstrom, Jr.*; (26) *Moser*; (27) *McDaniel*; (28) *Schlagel*; (29) *Stewart*; (30) *Hollander*; (31) *Hutchison* (‘968); (32) *Weikel* (‘590); (33) *Jackson* (‘075); (34) *Schulze*; and (35) *Mace*. [351] ¶ 70; [369] ¶ 70.

Although Prairie Land raised none of the above prior art references as grounds for invalidity in the IPR petition, it did cite some of them in its IPR petition; those include: *Kaeb*, *South*, *Hutchison '903*, *Clark*, *Johnson*, *Vinson*, *Swanson*, *Fridgen*, *Dickinson*, *Greaves*, *Behlen*, *Ridlehuber*, *Wood*, *Machnee*, *Gust*, *Eskelinen*, *Munger*, *Pentith*, *Stewart*, *Hollander*, *Hutchison '968*, *Weikel '590*, *Jackson '075*, and *Mace*. [351] ¶ 70; [369] ¶ 70. Additionally, all but four of the thirty-five aforementioned prior art references—*McCarthy*, *Swanstrom*, *McDaniel*, and *Schlagel*—“were known to Prairie Land at the time” it filed its IPR petition on September 21, 2016. [351] ¶ 71.

E. Plaintiff's Claims and Defendants' Affirmative Defenses

Plaintiff's (operative) first amended complaint alleges: federal patent infringement against Prairie Land (Count I) and Chaon (Count II); willful patent infringement by both Defendants (Count III); injunctive relief (Count IV); false advertising under the Lanham Act (Count V); trade libel (Count VI); violations of the Illinois Consumer Fraud and Deceptive Trade Practices Act (Count VII); and accounting (Count VIII). [165]. Since filing its first amended complaint, Plaintiff dismissed Counts V–VII, leaving only the patent and accounting claims and its request for injunctive relief. *See* [309]; [310].

Defendants assert several affirmative defenses, including patent invalidity pursuant to 5 U.S.C. §§ 102, 103, and 112. [172] ¶ 91. Defendants also assert a counterclaim against Plaintiff for declaratory judgment of invalidity and non-infringement. *Id.* ¶¶ 95–100.

F. Procedural History

Plaintiff initially filed suit in February 2016. [1]. In December 2016, the Court stayed the case pending the IPR proceedings. [83]. The Court lifted the stay upon conclusion of those proceedings in April 2018. [97].

Early in the case, Plaintiff moved for partial summary judgment on infringement and invalidity. In March 2019, the Court denied the motion as to infringement and granted the motion in part on the issue of invalidity. [134]. The Court ruled that Defendants cannot relitigate any ground for invalidity that was instituted in the IPR proceedings before the PTAB. *Id.* at 21.

The Court allowed Plaintiff to file its first amended complaint in October 2019. [164]; [165]. A few months later, in February 2020, the Court held a claim construction hearing, [181], and issued a claim construction opinion, [230]. With the benefit of the Court's claim construction opinion bearing on issues of infringement, as well as new case law from the Supreme Court and Federal Circuit pertinent to patent invalidity, Plaintiff has renewed its motion for partial summary judgment. [349].

II. Legal Standard

Summary judgment is proper where there is “no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). A genuine dispute as to any material fact exists if “the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). The party seeking summary judgment

has the burden of establishing that there is no genuine dispute as to any material fact. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986).

In determining whether a genuine issue of material fact exists, this Court must construe all facts and reasonable inferences in the light most favorable to the non-moving party. *Jones v. Mathews*, 2 F.4th 607, 612 (7th Cir. 2021). The non-moving party bears the burden of identifying the evidence creating an issue of fact. *Weaver v. Speedway, LLC*, 28 F.4th 816, 820 (7th Cir. 2022). To satisfy that burden, the non-moving party “must do more than simply show that there is some metaphysical doubt as to the material facts.” *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986). Thus, a mere “scintilla of evidence” supporting the non-movant’s position does not suffice; instead “there must be evidence on which the jury could reasonably find” for the non-moving party. *Anderson*, 477 U.S. at 252.

III. Analysis

Plaintiff has moved for summary judgment on the issues of infringement and invalidity. This Court will address each issue in order below.

A. Infringement

This Court first considers Plaintiff’s arguments on infringement. Patent infringement involves a two-step analysis: first, the Court determines the scope and meaning of the patent claims asserted; second, it compares the construed claims to the allegedly infringing device. *Sound View Innovations, LLC v. Hulu, LLC*, 33 F.4th 1326 (Fed. Cir. 2022) (citing *CommScope Techs. LLC v. Dali Wireless Inc.*, 10 F.4th

1289, 1295 (Fed. Cir. 2021)). Because this Court already construed the claims, it skips to step two of the analysis.

A device can infringe a patent either literally or under the doctrine of equivalents. *Pozen Inc. v. Par Pharm., Inc.*, 696 F.3d 1151, 1167 (Fed. Cir. 2012). Plaintiff asserts only literal infringement for purposes of its motion. [353] at 8. A device literally infringes “if every limitation recited in the claim appears in the accused product, i.e., the properly construed claim reads on the accused product exactly.” *Pressure Specialist, Inc. v. Next Gen Mfg. Inc.*, 469 F. Supp. 3d 863, 871 (N.D. Ill. 2020) (quoting *Jeneric/Pentron, Inc. v. Dillon Co., Inc.*, 205 F.3d 1377, 1382 (Fed. Cir. 2000)); see also *Akzo Nobel Coatings, Inc. v. Dow Chem. Co.*, 811 F.3d 1334, 1341 (Fed. Cir. 2016) (“Literal infringement exists when every limitation recited in the claim is found in the accused device.”). Infringement generally presents “a question of fact.” *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 849 (Fed. Cir. 2010), *aff’d*, 564 U.S. 91 (2011); see also *Medgraph, Inc. v. Medtronic, Inc.*, 843 F.3d 942, 949 (Fed. Cir. 2016).

For purposes of its partial summary judgment motion, Plaintiff argues that Defendants’ Accused Products meet two claim limitations in Claim 1: (1) the “pivot structure” limitation; and (2) the “configured to carry” limitation.

1. Pivot Structure

Claim 1 of the Patent includes a limitation that “the pivot unit including a *pivot structure* positioned between and connecting the sections to permit pivoting of a first section with respect to a second section and thereby to permit a degree of

pivotability of the unit longitudinal axes of the adjacent units with respect to each other in the array of units of the sweep assembly.” [351] ¶ 7 (emphasis added). The Court construed “pivot structure” to mean “structure containing a pin or shaft that allows for movement about such pin or shaft.” *Id.* ¶ 12.

Arguing that Defendants’ Accused Products contain this “pivot structure” limitation, Plaintiff offers the opinions of its expert, Jeffrey Decker, which state that Prairie Land’s pivot units all contain a pin or shaft allowing for movement about the pin or shaft, therefore meeting the “pivot structure” limitation of Claim 1. [353] at 10; *see* [354-1] ¶¶ 99–104. While this meets Plaintiff’s initial burden of proof, Defendants counter with expert testimony from Bruce Meyer. Meyer opines that the “pivot units” of most of the Accused Products use universal joints, rather than a pin or shaft about which the sections move relative to each other. [371-2] ¶ 47. Meyer elaborates that “there is no pin or shaft, and movement is around the ball,” and no ordinary artisan would regard Prairie Land’s universal joint to be a “pin” or a “shaft.” *Id.* These competing expert opinions create a triable issue as to whether the Accused Products contain the “pivot structure” embodied in Claim 1.

Plaintiff contends that, contrary to Meyer’s written opinion, Meyer testified to the existence of a shaft as a component of the “pivot structure.” [378] at 8; *see* [363] ¶ 55. Plaintiff mischaracterizes Meyer’s testimony. In fact, Meyer specifically denied that the pivot structure contains a “shaft,” testifying: “I would say that you have decided to call it a shaft, but I see it as a plain simple rod.” *See* [354-3] at 44. Thus, Meyer’s testimony is not inconsistent with his written opinions.

Plaintiff also argues that summary judgment is proper because Defendants' fact witnesses have admitted to the existence of a "shaft" within the "pivot structure." *See* [363] ¶ 55 (citing portions of the deposition transcripts for Defendants' fact witnesses—Chaon and Bill McKenna). True, Chaon and McKenna both testified to the existence of a "shaft." Chaon agreed with counsel's description of a "ball and shaft coming from [one] side that connects to the socket that's coming from the other side." [354-7] at 4. McKenna also testified about a "sphere" that "had an outside and inside," and a "shaft that we would weld to the center." [354-5] at 13. These pieces of testimony seemingly conflict with Meyer's testimony that no "shaft" exists—a point Plaintiff undoubtedly will raise at trial. Nonetheless, given Meyer's expert opinions, this Court cannot say that no genuine issue of material exists.

Moreover, even if it is true, as Chaon and McKenna have seemingly conceded, that a "shaft" exists in the "pivot structure" of the Accused Products, Plaintiff must also prove that the "pivot structure" "allows for movement about such pin or shaft" to be entitled to summary judgment on the "carry" limitation. [351] ¶ 12. The excerpted portions of Chaon's and McKenna's deposition transcripts do not reflect that they believe that movement is about the shaft, rather than about the ball. *See* [354-7] at 4; [354-5] at 13; [371-2] ¶ 47. This Court cannot find literal infringement of the "pivot structure" limitation on this record.

2. Carry Limitation

Claim 1 also contains the following limitations:

at least one of the at least two units comprising a drive unit configured to carry a portion of the succession of interconnected paddles and move

the sweep assembly with respect to a surface of the bin below the sweep assembly . . .

at least one of the at least two units comprising a pivot unit configured to carry a portion of the succession of interconnected paddles. . . .

[351] ¶ 7. Relying primarily on its expert, Jeffrey Decker, Plaintiff argues that, because it is undisputed that the Accused Products contain a return box that supports the weight of a portion of the succession of paddles, this Court can find as a matter of law that the Accused Products contain the claim limitations of drive and pivot units “configured to carry a portion of the succession of interconnected paddles.” [350] at 10. Meyer, however, again offers a countervailing opinion: the Accused Products’ “pivot unit” and “drive unit” are not designed to accomplish the objective of supporting the weight of the paddles, and thus, are not “configured to” carry the paddles. [371-2] ¶¶ 38, 40. This creates a genuine issue of material fact for trial.

Plaintiff contends that this Court should afford no weight to Meyer’s opinion because the Federal Circuit precedent holds that “configured to carry” does not require a particular intent or objective of an inventor, as Meyer’s opinion assumes. In Plaintiff’s view, “configured to carry” means simply that pivot and drive units are capable of supporting the weight of the paddles, not that they were specifically designed to accomplish that purpose. [350] at 12. Plaintiff relies on *Cochlear Bone Anchored Solutions AB v. Oticon Medical AB*, where the Federal Circuit remarked: “We have previously held that the claim term ‘adapted to’ generally means ‘made to,’ ‘designed to,’ or ‘configured to’ perform the stated function, and we have not introduced a subjective element into the construction of the phrase.” 958 F.3d 1348,

1356 (Fed. Cir. 2020). Plaintiff argues that, because it has equated the phrase “adapted to” to the phrase “configured to,” and has held that subjective intent should not be read into the phrase “adapted to,” the Federal Circuit would also hold that the phrase “configured to” contains no subjective element.

But other cases from the Federal Circuit confirm that the two phrases—“configured to” and “adapted to”—are not completely synonymous. Indeed, while the “phrase ‘adapted to’ generally means ‘made to,’ ‘designed to,’ or ‘configured to,’ . . . it can also be used more broadly to mean ‘capable of’ or ‘suitable for.’” *In re Man Mach. Interface Techs. LLC*, 822 F.3d 1282, 1286 (Fed. Cir. 2016) (quoting *In re Giannelli*, 739 F.3d 1375, 1379 (Fed. Cir. 2014)). When the phrase “adapted to” means “configured to” and not “capable of,” the phrase is “most naturally understood to mean . . . designed or configured to *accomplish the specified objective*, not simply that they can be made to serve that purpose.” *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1349 (Fed. Cir. 2012) (emphasis added). Thus, the phrases “adapted to” and “configured to” are not always synonymous; the Federal Circuit has emphasized that the latter phrase should be accorded a narrower interpretation that requires proof that something is made to accomplish a specific objective. *See Wapp Tech Ltd. P’ship v. Seattle Spinco, Inc.*, No. 4:18-CV-469, 2020 WL 1983087, at *20 (E.D. Tex. Apr. 27, 2020) (noting that the phrase “configured to” has a “narrower meaning than merely ‘capable of’ or ‘suitable for’ under Federal Circuit law). In this case, that means Plaintiff must prove that the drive and pivot units were made for the purpose of carrying the weight of interconnected paddles. *See, e.g., Rex Med., L.P.*

v. Intuitive Surgical, Inc., No. CV 19-005 (MN), 2020 WL 2128795, at *5 (D. Del. May 5, 2020) (“Configure, as defined by dictionaries, means set up for operation especially in a particular way.”); *Salazar v. HTC Corp.*, No. 216CV01096JRGRSP, 2018 WL 4242416, at *2 (E.D. Tex. May 1, 2018) (construing the term “configured to” to “require some particularized arrangement of the memory device for a specific purpose”).

Meyer’s opinion properly considers whether the Accused Products’ pivot and drive units were designed for the purpose of supporting the paddles’ weight. He opines that they were not designed for that purpose; instead, the paddles travel through the pivot and drive units with their chain unsupported by a sprocket or the like. [371-2] ¶¶ 38, 40. A rational jury could find, based on Meyer’s opinion, that the Accused Products do not meet the “configured to carry” limitation in Claim 1. *See Morningware, Inc. v. Hearthware Home Prod., Inc.*, 898 F. Supp. 2d 1018, 1033 (N.D. Ill. 2012) (noting that the parties’ competing evidence, accompanied by competing experts, presents a genuine issue of material fact on the issue of infringement).

Plaintiff also argues that the paddle-supporting chain located within the pivot and drive units of the Accused Products provides another independent basis for meeting the “carry” claim limitation. [350] at 13. Plaintiff contends that it is undisputed that the chain in those units carries—i.e., supports the weight of—the paddles, therefore meeting the claim limitations of a “drive unit” and “pivot unit” “configured to carry a portion of the succession of interconnected paddles.” *Id.* For their part, Defendants agree that a chain traveling through the pivot unit and drive

units of their Accused Products “is configured to carry” the paddles. *See* [363] ¶ 50; [367] at 12. Defendants nonetheless argue that the Accused Products do not meet the “carry” limitation because although the *chain* is configured to carry the paddles, the pivot and drive *units themselves* are “not so configured” to “carry” the paddles. [367] at 12. Essentially, the parties’ dispute boils down to whether the chain is, in Plaintiff’s view, a part of the pivot and drive units, or alternatively, is independent of those units, as Defendants maintain. This dispute is not capable of resolution on summary judgment; it presents a question of fact for the jury.

For these reasons, this Court denies Plaintiff’s motion for summary judgment to the extent based on non-infringement.

B. Invalidity

Plaintiff next moves for summary judgment on the issue of patent invalidity. Invalidity is an affirmative defense that can “preclude enforcement of a patent against otherwise infringing conduct.” *Commil USA, LLC v. Cisco Sys., Inc.*, 575 U.S. 632, 644 (2015) (quoting 6A Chisum on Patents § 19.01, p. 19–5 (2015)). A finding that a patent is invalid precludes liability. *Id.* Proving invalidity is difficult: A “patent is presumed valid, and overcoming that presumption at the district court requires clear and convincing evidence.” *Indivior Inc. v. Dr. Reddy’s Labs., S.A.*, 930 F.3d 1325, 1343 (Fed. Cir. 2019).

An accused infringer can prove invalidity in various ways. Relevant here, under 35 U.S.C. § 103, a claim is invalid as obvious “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole

would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” Obviousness “is a question of law . . . based upon underlying factual questions.” *Endo Pharms. Inc. v. Actavis LLC*, 922 F.3d 1365, 1372 (Fed. Cir. 2019) (quoting *Pozen Inc. v. Par Pharm., Inc.*, 696 F.3d 1151, 1160 (Fed. Cir. 2012)). A patent can also be invalid as anticipated by prior art, meaning that the “claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.” 35 U.S.C. § 102. A prior art reference “anticipates a patent’s claim when the four corners of the document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.” *Gao v. P’ships & Unincorporated Assocs. Identified on Schedule “A”*, No. 21-CV-4055, 2022 WL 1028926, at *4 (N.D. Ill. Apr. 4, 2022) (quoting *In re Hodges*, 882 F.3d 1107, 1111 (Fed. Cir. 2018)).

Plaintiff argues that summary judgment should enter on Defendants’ invalidity defense because: (1) statutory estoppel bars Defendants from pursuing their anticipation and obviousness arguments based on prior art that they raised or could have raised in their IPR petition; and (2) Defendants lack sufficient evidence that another piece of prior art that was not and could not have been raised in their IPR petition, the “POET sweep,” anticipated the Patent. As discussed below, this Court agrees.

1. Statutory Estoppel Under Section 315(e)(2)

Plaintiff argues that 35 U.S.C. 315(e)(2) estops Defendants from pursuing their invalidity defenses of anticipation and obviousness because those defenses rely, with one exception (the POET sweep, discussed in subsection 2 below), on prior art that Prairie Land already raised or reasonably could have raised during its inter partes review before the PTAB. [350] at 18.

“When IPR proceedings result in a final written decision, 35 U.S.C. § 315(e)(2) precludes petitioners from raising invalidity grounds in a civil action that they ‘raised or reasonably could have raised *during* that inter partes review.’” *Cal. Inst. of Tech. v. Broadcom Ltd.*, 25 F.4th 976, 989 (Fed. Cir. 2022) (quoting *Shaw Industries Group, Inc. v. Automated Creel Systems, Inc.*, 817 F.3d 1293, 1300 (Fed. Cir. 2016)). Estoppel applies “not just to claims and grounds asserted in the petition and instituted for consideration by the Board, but to all grounds not stated in the petition but which reasonably could have been asserted against the claims included in the petition.” *Id.* at 991. A petitioner may raise in an IPR “only [] a ground that could be raised under section 102 [anticipation] or 103 [obviousness] and only on the basis of prior art consisting of patents or printed publications.” 35 U.S.C. § 311(b).

Plaintiff argues that three categories of estoppel applies in this case: (1) the instituted grounds; (2) the non-instituted grounds; and (3) grounds not raised, but could reasonably have been raised in Prairie Land’s petition before the PTAB. [350] at 17. There is no genuine dispute that estoppel applies to the first category (the

instituted grounds), as it resulted in a written decision by the PTAB.¹ Thus, Defendants are estopped from asserting prior art references and combinations contained in the instituted grounds: *Dixon, Berreau, and Borwoski* (claims 1–4, 6–11); *Dixon, Berreau, Borowski, and Vander Schaaf* (claim 5); and *Dixon, Berreau, Borowski, and Sudenga* (claims 12–28). [351] ¶ 61; see *Medline Indus., Inc. v. C.R. Bard, Inc.*, No. 17 C 7216, 2020 WL 5512132, at *4 (N.D. Ill. Sept. 14, 2020) (observing that estoppel applies to a “specific piece of prior art or combination of prior art that a petitioner raised”).

The parties do, however, dispute whether Section 315(e)(2) bars Prairie Land from litigating the two other categories of potentially estopped grounds: the non-instituted grounds, and the grounds that it did not raise but reasonably could have raised.

Regarding the non-instituted grounds, prior to 2018, the PTAB “often instituted review on less than all the grounds raised in a petition, which left some grounds unadjudicated on the merits.” *Cal. Inst.*, 25 F.4th at 989. In its 2016 decision in *Shaw*, consistent with the PTAB’s practice of instituting review on some but not all grounds, the Federal Circuit ruled that estoppel did not apply to grounds on which the PTAB declined to institute review. 817 F.3d at 1300. In 2018, however, the Supreme Court held that the PTAB could not continue its practice of partial institution and instructed that the PTAB “*must* address every claim the petitioner has challenged.” *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1354 (2018). *SAS* effectively

¹ The Court already granted summary judgment to Defendants on the instituted grounds. [134] at 18–19. This decision stands.

“overruled the [PTAB]’s practice of partially instituting IPR proceedings”; after *SAS*, the PTAB “had only a binary choice to institute or not.” *Atlanta Gas Light Co. v. Bennett Regul. Guards, Inc.*, 33 F.4th 1348, 1353–54 (Fed. Cir. 2022). Thus, following *SAS*, the PTAB banned the practice of partial institution. See U.S. Patent & Trademark Office, *Guidance on the Impact of SAS on AIA Trial Proceedings* (Apr. 26, 2018), <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial> (stating that “the PTAB will institute on all challenges raised in the petition”).

Based on *SAS*, Plaintiff argues that Prairie Land should be estopped from litigating not only the three grounds that the PTAB instituted for review, but also the ten non-instituted grounds. Plaintiff reasons that, although *SAS* did not issue until after the PTAB made its final decision, it did issue during Prairie Land’s appeal to the Federal Circuit, and thus, Prairie Land should have sought remand at that time to the PTAB based on *SAS*. [378] at 14. Its failure to do so, Plaintiff argues, waived Defendants’ right to further pursue the non-instituted grounds in this forum. *Id.* This Court agrees.

To date, the Federal Circuit has not expressly decided how *SAS* affects the scope of preclusion in cases, like this one, in which the “Board declined to institute on all grounds and issued its final written decision pre-*SAS*.” *Cal. Inst.*, 25 F.4th at 991 n.5. The Federal Circuit *has*, however, found it “appropriate to remand to the PTAB to consider non-instituted claims as well as non-instituted grounds” for cases that were on appeal when the *SAS* decision came down. See *BioDelivery Scis. Int’l, Inc. v.*

Aquestive Therapeutics, Inc., 898 F.3d 1205, 1208 (Fed. Cir. 2018) (collecting cases). In a more recent case, the Federal Circuit found that estoppel applied against a party who could, but did not, seek an SAS remand directing the Board to address its non-instituted claims and grounds, explaining that its “choice to leave unremedied the Board’s mistake does not shield it from estoppel as to a claim it included in its IPR petition.” *Click-to-Call Techs. LP v. Ingenio, Inc.*, No. 2022-1016, --- F.4th ----, 2022 WL 3443656, at *5 (Fed. Cir. Aug. 17, 2022).² Thus, because this remand procedure is available to litigants, Section 315(e)(2) bars a party from relitigating any ground raised during IPR, “including grounds that the PTAB declined to include in the IPR proceeding and as to which [the party raising invalidity] did not seek a remand pursuant to SAS” when that party had the opportunity to do so. *Ironburg Inventions Ltd. v. Valve Corp.*, 418 F. Supp. 3d 622, 629 (W.D. Wash. 2019); *see also SiOnyx, LLC v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 601 (D. Mass. 2018); *f’real Foods, LLC v. Hamilton Beach Brands, Inc.*, No. CV 16-41-CFC, 2019 WL 1558486, at *2 (D. Del. Apr. 10, 2019).

Based on these authorities, this Court finds that Prairie Land “reasonably could have raised” non-instituted grounds before the PTAB after SAS. The PTAB issued its written decision on April 4, 2018, about three weeks before the Supreme Court issued SAS on April 24, 2018. 138 S. Ct. at 1348. Prairie Land filed a request for rehearing after SAS, on May 4, 2018, but did not also ask that the PTAB institute IPR on the ten non-instituted grounds in light of SAS. [351] ¶ 63. Prairie Land then

² This Court allowed the parties to file briefs on this new authority. *See* [391].

appealed to the Federal Circuit in March 2019; at no point during appellate review did Prairie Land assert that the PTAB had erred by instituting IPR on only some, but not all, grounds in the wake of *SAS*. *Id.* Because Prairie Land had the “opportunity to, but did not, seek a remand to the PTAB for it to further consider the non-instituted grounds at issue,” Section 315(e)(2) estops Prairie Land from asserting the non-instituted grounds. *Ironburg*, 418 F. Supp. 3d at 629; *see f’real Foods*, 2019 WL 1558486, at *2 (holding that, because *SAS* was issued during the defendant’s appeal before the Federal Circuit, the defendant’s failure to seek a remand estopped it from asserting a non-instituted ground at trial). This Court therefore grants summary judgment to Plaintiff on the non-instituted grounds. Statutory estoppel applies to each of the references upon which Prairie Land based its invalidity arguments in its IPR petition.

Plaintiff also seeks summary judgment on grounds that Prairie Land did not include, but reasonably could have raised, in its IPR petition. *Cal. Inst.*, 25 F.4th at 991. Courts interpret the phrase “reasonably could have raised” to mean any patent or printed publication a petitioner actually knew about or that a “skilled searcher conducting a diligent search reasonably could have been expected to discover.” *SiOnyx*, 330 F. Supp. 3d at 602 (quoting 157 Cong. Rec. S1375 (daily ed. Mar. 8, 2011) (statement of Sen. Kyl)); *see also Asetek Danmark A/S v. CoolIT Sys. Inc.*, No. 19-CV-00410-EMC, 2019 WL 7589209, at *10 (N.D. Cal. Dec. 30, 2019); *Ironburg*, 418 F. Supp. 3d at 631; *Clearlamp, LLC v. LKQ Corp.*, No. 12 C 2533, 2016 WL 4734389, at *8 (N.D. Ill. Mar. 18, 2016).

Plaintiff argues that thirty-five prior art references that Meyer relies on in his invalidity report but were not raised as grounds for invalidity in the IPR petition “were all known to Prairie Land at the time it filed its Petition.” [350] at 18. Defendants do not dispute that all but four of the thirty-five prior art references “were known to Prairie Land” at the time it filed its IPR petition in September 2016; in fact, Prairie Land even cited many of those prior art references in its petition. [351] ¶¶ 70–71. Thus, Plaintiff is estopped under Section 315(e)(2) from asserting that the Patent is invalid based on obviousness in light of the thirty-one prior references of which Prairie Land was aware at the time it filed its IPR petition. Those thirty-one prior references are: (1) *Kaeb*; (2) *South*; (3) *Hutchison* (‘903); (4) *Clark*; (5) *Clewett*; (6) *Johnson*; (7) *Vinson*; (8) *Swanson*; (9) *Patz*; (10) *Silverthorn*; (11) *Baker*; (12) *Fridgen*; (13) *Dickinson*; (14) *Greaves*; (15) *Behlen*; (16) *Ridlehuber*; (17) *Wood*; (18) *Machnee*; (19) *Gust*; (20) *Eskelinen*; (21) *Munger*; (22) *Pentith*; (24) *Pahl*; (23); (24) *Moser*; (25) *Stewart*; (26) *Hollander*; (27) *Hutchison* (‘968); (28) *Weikel* (‘590); (29) *Jackson* (‘075); (30) *Schulze*; and (31) *Mace*. [351] ¶ 70; [369] ¶ 70.

And although Defendants do not explicitly admit that the four other references were known to them at the time they filed their IPR petition, this Court concludes that estoppel also applies to those remaining references—*McCarthy*, *Swanstrom*, *McDaniel*, and *Schlagel*. Because these references were “found in a later prior art search, there is a reasonable inference that [they] could have been found earlier by a skilled searcher.” *GREE, Inc. v. Supercell Oy*, No. 219CV00071JRGRSP, 2020 WL 4999689, at *5 (E.D. Tex. July 9, 2020), *report and recommendation adopted*, No.

219CV00071JRGRSP, 2020 WL 4937111 (E.D. Tex. Aug. 24, 2020); *see also Wi-LAN Inc. v. LG Elecs., Inc.*, 421 F. Supp. 3d 911, 925 (S.D. Cal. 2019) (noting that the “fact that [the defendant] eventually found the three references at issue through a prior art search is compelling evidence itself that LG reasonably could have discovered these references through a diligent search”). Defendants do not offer any evidence that they could not have discovered these four references through a diligent search at the time of their IPR petition. Rather, Defendants apparently concede that although Meyer cites these references, Meyer does not also intend to rely on them to support Defendants’ invalidity arguments. *See* [369] ¶ 72 (conceding that Meyer’s report cites but does not “contain express references to “McCarthy,” “Swanstrom,” “McDaniel,” or “Schlagel”). Accordingly, estoppel applies to these four references as well.^{3 4}

2. POET Sweep

Plaintiff also seeks summary judgment on Defendants’ anticipation defense based on a sweep that Plaintiff purportedly sold to POET Biorefining. [350] at 20. In

³ Defendants argue that this Court should follow the “law of the case” because it previously held that they could seek review of any grounds raised in its IPR petition on which review was not instituted by the PTAB. [361] at 12; *see* [134] at 18. But in its prior opinion, this Court relied on *Shaw* for the proposition that Section 315(e) does not estop a petitioner from bringing arguments based on claims that the PTAB did not institute, [134] at 18, and the Federal Circuit only recently overruled *Shaw* in light of the Supreme Court’s *SAS* decision, *see Cal. Inst.*, 25 F.4th at 991 (ruling that “we take this opportunity to overrule *Shaw* and clarify that estoppel applies not just to claims and grounds asserted in the petition and instituted for consideration by the Board, but to all grounds not stated in the petition but which reasonably could have been asserted against the claims included in the petition”). Accordingly, the law of the case does not preclude this Court from revising that aspect of its prior opinion.

⁴ Estoppel applies against both Defendants, as Section 315(e)(2) applies to the petitioner itself, as well as “the real party in interest or privy of the petitioner,” 35 U.S.C. § 315(e). Defendant Prairie Land was the petitioner, and its president and owner, Duane Chaon, is unquestionably its privy.

Meyer's report, he opines that "[a]t least Claims 1, 3, 5–8, and 11 are anticipated by the sweep sold to POET Biorefining . . . as these claims define the POET sweep." [371-1] ¶ 61. Unlike the prior art references discussed above, it is undisputed that statutory estoppel does not apply to this sweep because the sweep is a product, and "a petitioner cannot use an IPR to challenge the validity of a patent claim under §§ 102 or 103 based on prior art products or systems." *Medline Indus.*, 2020 WL 5512132, at *3; *see also Zitovault, LLC v. Int'l Bus. Machines Corp.*, No. 3:16-CV-0962-M, 2018 WL 2971178, at *4 (N.D. Tex. Apr. 4, 2018) (noting that an IPR is limited to invalidity grounds "that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications") (quoting 35 U.S.C. § 311(b)).

Summary judgment is appropriate on Defendants' anticipation defense based on this POET sweep. Anticipation "requires that a single prior art reference disclose each and every limitation of the claimed invention, either expressly or inherently." *SRI Int'l, Inc. v. Cisco Sys., Inc.*, 930 F.3d 1295, 1306 (Fed. Cir. 2019). This inquiry requires "a comparison of the properly construed claim to the prior art," *Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1406 (Fed. Cir. 2004), accompanied by "testimony from one skilled in the art and [that] must identify each claim element, state the witnesses' interpretation of the claim element, and explain in detail how each claim element is disclosed in the prior art reference," *Schumer v. Lab'y Computer Sys., Inc.*, 308 F.3d 1304, 1315–16 (Fed. Cir. 2002).

Meyer’s expert opinions, taken in the light most favorable to Defendants, do not satisfy these requirements to prove anticipation. Meyer’s opinions on the POET sweep remains confined to a single paragraph that asserts, in conclusory fashion, that “[a]t least Claims 1, 3, 5–8, and 11 are anticipated by the sweep sold to POET Biorefining . . . as these claims define the POET sweep.” [371-1] ¶ 61. Meyer does not, as he must, explain in detail how each claim element is disclosed in the POET sweep. Such “[c]onclusory statements simply mentioning the alleged prior art patent, relying on the same prior art considered by the PTO, and alleging invalidity fail to raise a genuine issue of material fact.” *Creative Compounds, LLC v. Starmark Lab’ys*, 651 F.3d 1303, 1313 (Fed. Cir. 2011); *see, e.g., Vectura Ltd. v. GlaxoSmithKline LLC*, No. CV 16-638-RGA, 2019 WL 1244942, at *3 (D. Del. Mar. 18, 2019) (granting summary judgment on an anticipation defense where the defendant’s expert report “states that he believes [certain prior art] references anticipate all claims of the asserted patents,” but “provides no accompanying analysis to support his conclusion”); *Card-Monroe Corp. v. Tuftco Corp.*, 270 F. Supp. 3d 967, 998 (E.D. Tenn. 2017) (granting summary judgment on anticipation defense because the defendant “failed to provide testimony from one skilled in the art that identifies each claim element of the Severed Claims and explains how each element is contained in the operation of one needle bar of a graphics machine”).

Defendants argue in their brief that Plaintiff’s “shop drawing” for the sweep “shows all features of all of the asserted claims, including pivot units and traction enhancement weight kits.” [361] at 16–17. This argument falls well short of creating

a triable issue because it is too conclusory. It fails to “explain in detail how each claim element is disclosed in the prior art reference.” *Koito Mfg. Co. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1152 (Fed. Cir. 2004) (quoting *Schumer*, 308 F.3d at 1315–16). In any event, “arguments of counsel cannot take the place of evidence lacking in the record.” *Whitserve, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 23 (Fed. Cir. 2012) (quoting *Estee Lauder Inc. v. L’Oreal, S.A.*, 129 F.3d 588, 595 (Fed. Cir. 1997)).

In short, Defendants have failed to create a triable issue as to the POET sweep’s anticipation of the Patent. Accordingly, this Court grants Plaintiff’s summary judgment motion on this issue.

IV. Conclusion

For the reasons explained above, this Court grants in part and denies in part Plaintiff’s motion for partial summary judgment [349]. All pending dates and deadlines stand. In addition, counsel are to confer with their clients and with each other in good faith and file a joint status report by 9/26/22 as to whether a settlement conference would be productive in this matter prior to time-consuming trial preparation beginning.

E N T E R:

Dated: September 12, 2022



MARY M. ROWLAND
United States District Judge