

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

**BOYDSTUN EQUIPMENT
MANUFACTURING, LLC**, an Oregon
limited liability company

Plaintiff,

v.

Cottrell, Inc., a Georgia corporation,

Defendant.

Case No. 3:16-cv-790-SI

**OPINION AND ORDER ON
CLAIM CONSTRUCTION**

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Michael H. Simon, District Judge.

In this action brought by Plaintiff Boydston Equipment Manufacturing, LLC (“Boydston”) against Defendant Cottrell, Inc. (“Cottrell”), Boydston seeks a declaratory judgment of non-infringement of U.S. Patent No. 7,585,140 (“the ’140 patent”), among other

things. The parties disagree over the construction of two terms. On October 6, 2017, the Court held a claim construction hearing. Based on the parties' submissions and the arguments of counsel, the Court construes the two disputed terms as set forth below.

STANDARDS

Patent infringement analysis involves two steps. First, the court construes the asserted patent claims. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). Second, the factfinder determines whether the accused product or method infringes the asserted claim as construed. *Id.* The first step, claim construction, is a matter of law. See *Markman*, 517 U.S. at 372; *Vitrionics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). "It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Patent claims must precisely define the relevant invention and thereby put both the public and competitors on notice of the claimed invention. See *Phillips*, 415 F.3d at 1312.

"[T]he words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips*, 415 F.3d at 1312 (quoting *Vitrionics*, 90 F.3d at 1582). There are two exceptions to this general rule: (1) "when a patentee sets out a definition and acts as his own lexicographer;" or (2) "when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012); see also *Hormone Research Found., Inc. v. Genentech, Inc.*, 904 F.2d 1558, 1563 (Fed. Cir. 1990) ("It is a well-established axiom in patent law that a patentee is free to be his or her own lexicographer and thus may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings." (citation omitted)).

The ordinary and customary meaning “is the meaning that the term would have to a person of ordinary skill in the art in question at the time” of the effective filing date of the patent application. Phillips, 415 F.3d at 1313. This is because “inventors are typically persons skilled in the field of the invention,” and “patents are addressed to and intended to be read by others of skill in the pertinent art.” Id. “[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent,” id., which includes the “written description and the prosecution history,” *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005).

There are some cases in which “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction . . . involves little more than the application of the widely accepted meaning of commonly understood words.” Phillips, 415 F.3d at 1314. “A determination that a claim term ‘needs no construction’ or has [its] ‘plain and ordinary meaning’” may be sufficient when, for example, a term has only “one ‘ordinary’ meaning or when reliance on a term’s ‘ordinary’ meaning . . . resolve[s] the parties’ dispute.” *O2 Micro Intern. Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008).

In other cases, determining a claim’s ordinary and customary meaning requires further examination. This may be because the meaning is not “immediately apparent,” terms “have a particular meaning in a field of art,” or the patentee has used a term “idiosyncratically.” Phillips, 415 F.3d at 1314. In those cases, a court construing the claim will consider “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.” Id. (quoting *Innova*, 381 F.3d at 1116). Such “sources include ‘the words of the claims themselves, the remainder of the specification, the prosecution history,

and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” Id. (quoting *Innova*, 381 F.3d at 1116).

The language of “the claims themselves provide substantial guidance as to the meaning of particular claim terms.” Id. Additionally, “[t]he context in which a claim term is used in the asserted claim can be highly instructive.” Id. “Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.” Id. For example, “[b]ecause claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims.” Id. Courts should also interpret claim terms in a manner that does not render subsequent claim terms superfluous. See *Stubmo v. Eastman Outdoors, Inc.*, 508 F.3d 1358, 1362 (Fed. Cir. 2007) (noting that the court has “denounced” claim construction that renders phrases “superfluous”); *Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”).

In addition to the claims themselves, courts must consider the specification in construing claim terms, as the terms “are part of ‘a fully integrated written instrument.’” *Phillips*, 415 F.3d at 1315 (quoting *Markman*, 52 F.3d at 978). As the Federal Circuit has stated: “the specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” Id. (quoting *Vitrionics*, 90 F.3d at 1582). A patent’s “specification may reveal a special definition given to a claim term . . . that differs from the meaning it would otherwise possess,” and such definition would govern. Id. at 1316. Similarly, a specification may “reveal an intentional disclaimer, or disavowal, of claim scope”—and again, “the inventor’s intention, as expressed in the specification, is regarded as dispositive.”

Id. Importantly, though, limitations from the specification should not be imported into the claims and claims should not necessarily be confined to the “very specific embodiments of the invention” in the specification. Id. at 1323; see also *Douglas Dynamics, LLC v. Buyers Prod. Co.*, 717 F.3d 1336, 1342 (Fed. Cir. 2013) (“While claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims.”); *Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009) (“The patentee is entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims.”). Ultimately, a court must “read the specification in light of its purposes in order to determine ‘whether the patentee is setting out specific examples of the invention to accomplish those goals, or whether the patentee instead intends for the claims and the embodiments in the specification to be strictly coextensive.’” *Decisioning.com, Inc. v. Federated Dept. Stores, Inc.*, 527 F.3d 1300, 1308 (Fed. Cir. 2008) (quoting *Phillips*, 415 F.3d at 1323).

In addition to the text of the claims and specification, courts “should also consider the patent’s prosecution history, if it is in evidence.” *Phillips*, 415 F.3d at 1317 (quoting *Markman*, 52 F.3d at 980); see also *Graham v. John Deere Co.*, 383 U.S. 1, 33 (1966) (“[A]n invention is construed not only in light of the claims, but also with reference to the file wrapper or prosecution history in the Patent Office.”). The prosecution history of a patent “contains the complete record of all the proceedings . . . , including any express representations made by the applicant regarding the scope of the claims.” *Vitronics*, 90 F.3d at 1582. The prosecution history may “inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d

1282, 1289 (Fed. Cir. 2009) (quoting Phillips, 415 F.3d at 1317). For example, a patentee may make “a clear and unmistakable disavowal of scope during prosecution,” such as “by clearly characterizing the invention in a way to try to overcome rejections based on prior art.” *Comput. Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1374 (Fed. Cir. 2008) (quotation marks omitted). The Federal Circuit, however, also has cautioned that “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification.” Phillips, 415 F.3d at 1317. Where there is ambiguity in the prosecution history, it should not limit the claim terms. See *Inverness Med. Switzerland GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1382 (Fed. Cir. 2002) (“It is inappropriate to limit a broad definition of a claim term based on prosecution history that is itself ambiguous.”). Ultimately, the prosecution history “is less useful for claim construction purposes” than the language of the claims and specification. Phillips, 415 F.3d at 1317.

Courts may also consider extrinsic evidence in construing a claim, although such evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Id.* (quoting *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)). Extrinsic evidence “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Id.* (quoting *Markman*, 52 F.3d at 980). Specifically, dictionaries—and particularly technical dictionaries—may aid in a court’s claim construction. See *id.* at 1318. Expert testimony may also be useful to a court to the extent that it “provide[s] background on the technology at issue, [explains] how an invention works, [ensures] that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or [establishes] that a

particular term in the patent or the prior art has a particular meaning in the pertinent field.” Id. Expert testimony, however, consisting of “conclusory, unsupported assertions . . . as to the definition of a claim term are not useful to a court.” Id. Further, expert testimony “that is clearly at odds with the claim construction mandated by the . . . written record of the patent” should be discounted. Id. (quoting *Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998)).

BACKGROUND

Both Plaintiff and Defendant are in the business of manufacturing and selling commercial car haulers. Their products are well known to drivers and passengers alike: commercial car haulers, of which there are about fifteen thousand in the United States, are used to transport up to ten vehicles, stacked on top of one another, all over the country. Passing drivers may wonder just how all of those cars remain in place; the answer, in part, is the subject of this litigation.

The process of manufacturing a commercial car hauler involves many specialized components that are built into a truck chassis (i.e., a frame) and trailer and are part of the commercial car hauler design itself. Some of these specialized components involve patented features. Two integral components, which are relevant to this case, are a tie-down system for fastening cars and a ratcheting winch for the tie-down system.

Older tie-down systems—i.e., those built before or without the mechanisms at issue in this case—also require operators to secure the vehicles being transported to the hauler doing the transporting using tie-down straps tightened with ratcheting winches. These ratchets consist of a gear with teeth that engage a pawl, allowing the gear to rotate in one direction only. Welded to the gear is a ratchet head with a series of cross-holes, and the gear and head together are attached to a shaft. Operators, when loading cars, insert a bar into the head and gear through the cross-holes, using the shaft to wind a strap and secure the vehicle. With this type of mechanism, the

ratchet head can only be turned in one direction. An operator may have to remove the bar, reinsert it in a cross-hold, and repeat the turning process—possibly several times—in order to completely secure a vehicle.

On March 27, 2008, Cottrell sought to patent a ratcheting winch through an expedited review process with the U.S. Patent and Trademark Office (“PTO”).¹ The PTO issued U.S. Patent No. 7,585,140 (“’140 patent” or “ratcheting winch patent”) on September 8, 2009. The ratchet that is the subject of Cottrell’s ’140 patent speeds up the tie-down process by allowing operators to completely tighten the straps by inserting the tie down bar only once. It accomplishes this by allowing the ratchet head to move in two directions, rather than one. In this model, the ratchet head and ratchet gear move independently of one another. Between the ratchet head and ratchet gear are “drive bodies,” which are spring-loaded pins. The drive bodies are inserted into depressions in the head and corresponding ramped pockets in the gear. The pockets have a ramp on one side and a “wall” on the other. When the ratchet head is rotated in one direction, the spring-loaded drive bodies engage, move along the ramps, and are stopped by the walls in the pockets of the gear; this in turn causes the gear to rotate. When turned the other way, the head rotates independently of the gear.

In February 2016, Boydston introduced a Rapid Ratchet™ winch, which similarly helps drivers to more quickly and easily tie vehicles down by allowing them to tighten straps around wheels without having to remove and replace the bar into the ratchet head with each quarter-turn. On March 31, 2016, Cottrell sent Boydston a demand letter, asserting that Boydston’s Rapid Ratchet™ winch infringed Cottrell’s ’140 patent. On February 21, 2017, Boydston filed a petition for Inter Partes Review (“IPR”) with the Patent Trial and Appeal Board (“PTAB”).

¹ Under an expedited review, patent applicants have higher duties of disclosure, and must perform a pre-examination search, disclosing the search logic to the PTO.

Boydstun asserted in that petition that all claims in Cottrell's '140 patent are obvious on two grounds: over Ruan (a prior art patent) in view of Cottrell's own prior patent, U.S. Patent No. 5,314,275 ("275 patent"); and over Boice (a prior art patent) in view of Ruan. On August 30, 2017, the PTAB granted the petition and instituted an IPR proceeding, after finding a reasonable likelihood that Boydstun would prevail in its claims.²

CLAIM CONSTRUCTION

The parties dispute the meaning of two terms in the '140 patent: "mechanical contact" and "coupled." The relevant claims are as follows, with the disputed terms bolded:

1. A ratcheting tie down system for a vehicle transporter having one or more vehicle platforms, the system comprising: a ratchet assembly affixed to an end of a tie down shaft having a longitudinal axis, the tie down shaft being affixed to one of the one or more vehicle platforms; a pawl mechanism **coupled** to the ratchet assembly, wherein the ratchet assembly comprises: a ratchet gear having engagement teeth **coupled** to the pawl mechanism; a ratchet head **coupled** to the ratchet gear, wherein an inner face of the ratchet gear is positioned in opposition to and in **mechanical contact** with an inner face of the ratchet head, and wherein the ratchet gear, the ratchet head and the shaft are configured to rotate as a single integral unit when rotated in a forward direction about the longitudinal axis, and the ratchet head is configured to rotate with respect to the ratchet gear and the shaft when the ratchet head is rotated in reverse direction about the longitudinal axis.

...

7. The system as claimed in claim 5 wherein the drive bodies are configured to position in the lower-most portion and be in **mechanical contact** with the wall in response to a forward rotation of the ratchet head, the ratchet gear and the tie-down shaft.

Essentially, the dispute between the parties comes down to the following question: whether the '140 patent only covers a design in which the ratchet head and ratchet gear are directly in

² Neither party objects to the Court taking judicial notice of the PTAB decision for purposes of this claim construction.

contact, or whether the patent extends to designs in which the ratchet head and ratchet gear are indirectly connected.³ A related question is whether the spring-loaded drive bodies are part of the ratchet head or a separate piece that connects the ratchet head to the ratchet gear.

A. First Disputed Term: “Mechanical Contact”

Boydston’s Proposed Construction	Cottrell’s Proposed Construction
“pressing against”	“direct or indirect physical contact”

Boydston argues that “mechanical contact” means “pressing against.” With respect to the ’140 patent, Boydston’s position is that the spring-loaded drive bodies form a part of the ratchet head, extending from the inner face of the head. The ratchet head, of which the drive bodies are a part, according to Boydston, directly presses against the ratchet gear. Boydston argues that, because the patent described the ratchet head and ratchet gear as being in mechanical contact, the patentee must have conceived of the drive body pins as being a part of the ratchet head. This conclusion, however, impliedly relies upon Boydston’s understanding of “mechanical contact” simply to mean directly pressing against.

Cottrell, on the other hand, argues that “mechanical contact” covers either direct or indirect physical contact. As Cottrell explains, the ratchet head and the ratchet gear are in indirect mechanical contact by way of the drive bodies, which are separate components. When the ratchet head is rotated forward, the drive bodies press against ramped pockets in the ratchet gear, causing it to rotate. Thus, Cottrell argues, the contact between the head and gear is indirect,

³ Boydston suggests that the parties’ dispute is not over whether the inner faces of the ratchet gear and ratchet head are directly or indirectly interlocked. Rather, Boydston characterizes the dispute as being “over the meaning of the phrase in mechanical contact with in light of the specification.” Although this latter characterization is also correct, the dispute over the meaning of “mechanical contact” involves a disagreement over whether that contact is direct or indirect.

and “mechanical contact” describes this indirect form of contact. Cottrell also suggests that “mechanical contact” could mean an operational connection in which, when one piece moves, it causes another to move in turn.

1. The Words of the Claim

The term “mechanical contact” is used twice in the ’140 patent claims—in Claim 1 and Claim 7. Claim 1 describes “a ratchet head coupled to the ratchet gear . . . wherein an inner face of the ratchet gear is positioned in opposition to and in mechanical contact with an inner face of the ratchet head . . .” ECF 77-1 at 15. Claim 7 describes “drive bodies [that] are configured to position in the lower-most portion and be in mechanical contact with the wall in response to a forward rotation of the ratchet head, the ratchet gear and the tie-down shaft.” Id.

Boydston argues that Claim 1 and Claim 2, read together, indicate that the drive bodies are a part of the ratchet head. Claim 1, in relevant part, explains that “an inner face of the ratchet gear is positioned in opposition to and in mechanical contact with an inner face of the ratchet head.” Id. Claim 2 reads: “The system as claimed in claim 1 further comprising drive bodies disposed in depressions positioned on the inner face of the ratchet head.” Id. Boydston argues that Claim 2 “describes the structure showing how these inner faces are in mechanical contact.” ECF 73 at 13 (emphasis omitted). Therefore, Boydston argues, the ratchet head, conceived of as including the drive bodies, is in direct contact with the ratchet gear.

Boydston emphasizes the fact that the word “face” does not necessarily indicate a flat plane. Boydston compares the “face” of the ratchet head with drive bodies to the “face” of a building with recessed surfaces and protruding objects, and to the “face” of the moon. Boydston argues that the word “face,” in these contexts, does not necessarily indicate a flat, planar surface. The Court does not disagree, in theory. Boydston’s argument, however, ultimately is unconvincing.

Boydston's theory is belied by the text of the claim itself. Claim 2 describes the drive bodies as being "disposed in depressions" on the inner face of the ratchet head. ECF 77-1 at 15. The plain and ordinary way to interpret this is that the drive bodies are a separate component, not a part of the face, and are placed—or "disposed"—into the depressions on the face. Similarly, Claim 7 speaks of drive bodies that are independently configured into position. Claim 7 uses the term "mechanical contact" to describe the relationship between the drive bodies and the wall of the ramped pockets in the ratchet gear, which occurs "in response to a forward motion." *Id.* This suggests, as Cottrell argues, that "mechanical contact" refers to either direct or indirect contact. In Claim 7, the "mechanical contact" between the drive bodies and the ratchet gear is direct.

2. Specification

This understanding is confirmed by the specification and figures. Figures 8A-8D in the '140 patent, which purport to depict the ratchet head, do not depict the drive bodies. ECF 77-1 at 11-12. Figure 4, which Boydston argues constituted the only embodiment of how the parts of the ratcheting winch fit together, depicts the drive bodies as separate components. ECF 77-1 at 5. The implication is that the drive bodies are not a part of the ratchet head, but rather their own independent components.

In describing the ratchet head, the specification indicates that it can "include a series of depressions positioned along an inner face of the ratchet head." ECF 77-1 at 14. Later, the specification states that "the ratchet head includes the cross-holes, the depressions, the inner face, and the mating pair."⁴ *Id.* at 15. The depressions, unlike the drive bodies, are expressly

⁴ Both the ratchet gear and ratchet head can include a "mating pair," which may be "male" or "female." ECF 77-1 at 14. The specification explains that "[t]he ratchet gear and the ratchet head can mate via the first and second mating pairs," going on to explain that "[t]he ratchet gear and the ratchet head are affixed to one another via a retaining pin." *Id.* The mating pairs between the gear and head "form an outer groove, into which a seal can be installed to limit intrusion of water and contaminates." *Id.*

delineated as being a part of the ratchet head.⁵ The specification continues, explaining that “[i]n exemplary embodiments, the series of depressions are cylindrical holes into which resilient bodies (e.g., compression springs) are positioned. . . . In exemplary embodiments, drive bodies (e.g., cylindrical drive pins) are further positioned in the series of depressions, generally adjacent or on top of the resilient bodies.” ECF 77-1 at 14. This explanation—which separates those things that are “included” in the ratchet head (such as depressions) and those that may be “positioned” into parts of the head (the drive bodies)—supports the conclusion that the drive bodies are separate components.

The specification consistently refers to the drive bodies as independent components. As the specification explains, after “the ratchet gear and the ratchet head are assembled, the series of drive bodies are constrained and spring-loaded via the resilient bodies.” *Id.* The “lengths of the . . . drive bodies can vary in order to vary the compression of the drive bodies within the depressions and the ramped pockets.” *Id.* As the specification further explains, “the motion of the drive bodies is limited to an inward and outward motion into and out of the depressions.” *Id.*

The specification uses the term “in mechanical contact with” only once. It states: “Rotation of the ratchet gear and the ratchet head in the opposite direction forces the spring-loaded drive bodies into the lower-most portion and against and in mechanical contact with the wall of the ramped pockets, resulting in a lock up condition between the ratchet gear and the ratchet head.” *Id.* As with the text in Claim 7, this supports Cottrell’s suggestion that “in mechanical contact” can mean direct contact as well as indirect contact. In this case, it is the

⁵ Similarly, the specification explains that “the ratchet gear includes the ramped pockets, each having the ramp surface, the upper-most portion, the lower-most portion, and the wall. The ratchet gear further includes, the engagement teeth, the inner face and the mating pair.” ECF 77-1 at 15.

spring-loaded drive bodies that end up in direct “mechanical contact” with the wall of the ramped pockets.⁶

Boydston’s proposed construction—that “mechanical contact” means “pressing against”—is unavailing for an additional reason: the specification notes that a seal may be installed between the ratchet head and ratchet gear to limit the entry of water and other contaminants. As Cottrell points out, in that case, the head and gear would not be “pressing against” one another—at least not directly. Thus, a construction of “mechanical contact” to mean “pressing against” would exclude this disclosed embodiment; it is, therefore, disfavored. See *Accent Packaging, Inc. v. Leggett & Platt, Inc.*, 707 F.3d 1318, 1326 (Fed. Cir. 2013) (“[A] claim interpretation that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.”) (quoting *On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH*, 386 F.3d 1133, 1138 (Fed. Cir. 2004)).

Boydston also argues that Cottrell’s interpretation is essentially without limit—and that everything, in essence, could be characterized as “in mechanical contact” under Cottrell’s proposed interpretation. For example, Boydston remarks that a car’s tire is indirectly connected to its steering wheel. The Court notes, first, that this has a limit—no one suggests that a car is connected to the ground, which is connected to the rest of the planet. Boydston, however, is correct that there must be some limiting principle to the meaning of “mechanical contact.” Therefore, Cottrell’s proposed construction—“direct or indirect physical contact”—is also not entirely convincing.

⁶ Cottrell argues that Boydston’s construction, if adopted, would “eliminate every embodiment the patent teaches, which all have drive bodies providing the claimed mechanical contact.” This is not entirely true because Boydston also argues that the drive bodies are a part of the ratchet face, which would mean that the face, so construed, could be “pressing against” the ratchet gear. As discussed, however, the text of the Claims themselves belie this interpretation.

3. Patent Prosecution History

In addition to the text of a patent's claims and specifications, courts may consider a patent's prosecution history for further evidence of what both the PTO and the patentee intended to include in a patent's scope. See Phillips, 415 F.3d at 1317. Boydstun argues that the prosecution history of Cottrell's '140 patent indicates a disavowal of scope that precludes Cottrell from now arguing its proposed interpretation of "mechanical contact."

During prosecution of the '140 patent, Cottrell distinguished its invention from U.S. Patent No. 2006/0013667 ("Ruan" or "Ruan prior art"). Ruan is a patent for a "rapid rotating device for ratchet belt shaft." The Ruan patent, like the '140 patent and the Rapid Ratchet™ winch, offers a speedier tie-down process than the older method. The Ruan patent consists of "a fixed base and a rotating body. The fixed base is attached firmly to the belt shaft, and the rotating device is fit circumferentially around the fixed base on one side." In Ruan, the ratchet gear and the ratchet head are positioned on opposite sides of the tie-down shaft.

In distinguishing its invention from Ruan, Cottrell stated: "Ruan does not teach . . . a ratchet assembly . . . wherein an inner face of the ratchet gear is positioned in opposition to and in mechanical contact with an inner face of the ratchet head." ECF 74-3 at 5. Cottrell further stated that Ruan does not teach "the ratchet gear and the ratchet head remaining in mechanical contact during both the forward direction and reverse direction." *Id.* Finally, Cottrell argued that Ruan does "not teach that any of the ratchet wheels and rotating body are in mechanical contact as an assembly as in Applicant's claimed invention. Ruan only shows the rotating body 2 in mechanical contact with the fixed base 1." *Id.*

Boydstun argues that the only difference between the Ruan prior art and Cottrell's '140 patent is that in Ruan the ratchet gear and ratchet head are on opposite ends of the tie-down shaft. Under Cottrell's proposed construction of "in mechanical contact with," Boydstun argues, the

Ruan prior art would describe a ratchet gear in mechanical contact with a ratchet head because the two are connected—indirectly—by way of the tie-down shaft. Cottrell agrees that, under its proposed construction of “mechanical contact,” Ruan would describe a ratchet gear and ratchet head that are in mechanical contact. But Cottrell distinguishes Ruan by the text of Claim 1(a) in the ’140 patent describing: “ratchet assembly affixed to an end of a tie down shaft having a longitudinal axis, the tie down shaft being affixed to one of the one or more vehicle platforms.” As Cottrell explained, Ruan did not teach “an assembly,” and did not teach that the ratchet gear and ratchet head are affixed to “an end” of the shaft—rather, they are affixed to opposite ends.

Boydston characterizes the distinction Cottrell makes between Ruan and the ’140 patent during the ’140 prosecution as a disavowal of scope. The Federal Circuit has summarized when this doctrine applies:

Disavowal requires that “the specification or prosecution history make clear that the invention does not include a particular feature,” or is clearly limited to a particular form of the invention. For example, we have held that disclaimer applies when the patentee makes statements such as “the present invention requires . . .” or “the present invention is . . .” or “all embodiments of the present invention are” We have also found disclaimer when the specification indicated that for “successful manufacture” a particular step was “required.” We found disclaimer when the specification indicated that the invention operated by “pushing (as opposed to pulling) forces,” and then characterized the “pushing forces” as “an important feature of the present invention.” We found disclaimer when the patent repeatedly disparaged an embodiment as “antiquated,” having “inherent inadequacies,” and then detailed the “deficiencies that make it difficult” to use. Likewise, we found disclaimer limiting a claim element to a feature of the preferred embodiment when the specification described that feature as a “very important feature . . . in an aspect of the present invention” and disparaged alternatives to that feature.

Hill-Rom Servs., Inc. v. Stryker Corp., 755 F.3d 1367, 1372 (Fed. Cir. 2014) (quotation marks, citations and corrections omitted). Boydston, however, identifies no such disclaimer made by

Cottrell. “There are no words of manifest exclusion or restriction.” *Id.* Disavowals must be unambiguous to limit the scope of a claim. See *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003) (“We have . . . declined to apply the doctrine of prosecution disclaimer where the alleged disavowal of claim scope is ambiguous.”). Boydston does not identify anything in the prosecution history that unambiguously disavows any particular element or design. Although there is no clear disavowal, the prosecution history informs the Court’s claim construction analysis.

4. Extrinsic Evidence

George Clark (“Clark”), Boydston’s expert, opines that “[a] person of ordinary skill in the art would understand that [the] mechanical contact [at issue] is made by the drive bodies pressing against the wall of the ramped pockets.” ECF 56 at 7 ¶22. The Court agrees. Clark further opines that “a person of ordinary skill in the art would understand that the spring-loaded drive bodies are part of the ratchet head.” *Id.* The Court disagrees and notes that Clark does not provide any specific explanation for this latter proposition.⁷ Neville Hogan (“Hogan”), Cottrell’s expert, states that “the term ‘mechanical contact’ is not commonly used.” ECF 72 at 13 ¶39. He explains, however, that the word “mechanical” is “generally understood as relating to physical force, which ‘contact’ can be either direct or indirect through an intermediary.” *Id.* In addition, the AMERICAN HERITAGE COLLEGE DICTIONARY defines “mechanical,” in relevant part, as: “1. Of or relating to machines or tools. 2. Operated or produced by a mechanism or

⁷ See Phillips, 415 F.3d at 1318 (explaining that expert testimony consisting of “conclusory, unsupported assertions . . . as to the definition of a claim term are not useful to a court”).

machine. . . . 5. Relating to, produced by, or dominated by physical forces. . . .” ECF 58-4 at 6 (AMERICAN HERITAGE COLLEGE DICTIONARY 842 (3d ed. 2000)).⁸

5. Claim Construction for “Mechanical Contact”

Based on the foregoing analysis, the Court construes “mechanical contact” to mean “direct or indirect contact through a mechanical operation.”

B. Second Disputed Term: “Coupled”

Boydstun’s Proposed Construction	Cottrell’s Proposed Construction
“a ratchet head coupled to the ratchet gear” means “a ratchet head affixed to the ratchet gear”	“directly or indirectly connected”

Boydstun asks the Court to construe the entire phrase “a ratchet head coupled to the ratchet gear.” Boydstun argues that “coupled” is used in two different ways in the ’140 patent, and with two different meanings. Boydstun asks the Court to construe “coupled” in the context of an entire phrase in order to resolve the ambiguity or confusion caused by the use of “coupled” to mean two different things. Boydstun argues that, in this context, the phrase means “a ratchet head affixed to the ratchet gear.” Cottrell asks the Court to construe only the term “coupled.” Cottrell argues that “coupled” has a plain meaning, and that its plain meaning is just as Cottrell argues—“directly or indirectly connected.” Cottrell argues that the ratchet head and ratchet gear are coupled indirectly via a retaining pin or other device. Also at oral argument Cottrell suggested that simply giving “coupled” its plain and ordinary meaning may not resolve the ambiguity or disagreement between the parties, citing *O2 Micro Intern. Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008).

⁸ WEBSTER’S II offers a similar definition. ECF 58-5 at 6 (WEBSTER’S II NEW COLLEGE DICTIONARY 695 (3d ed. 2005)).

The Court finds that “coupled” should be given its plain and ordinary meaning. “Coupled” is a term that is so readily understandable that it need not be subject to further construction. See *Lisle Corp. v. A.J. Mfg. Co.*, 398 F.3d 1306, 1313-14 (Fed. Cir. 2005) (declining to limit the scope of a disputed term to a figure depicted within a patent and giving the disputed term its “common-sense meaning”); *W.E. Hall Co., Inc. v. Atlanta Corrugating, LLC*, 370 F.3d 1343, 1350 (Fed. Cir. 2004) (holding that “[s]ingle piece’ is sufficiently clear to make even resort to the dictionary unnecessary”).

Boydston further argues that the two uses of “coupled” in the ’140 patent create confusion, because the specification indicates that “coupled” in fact means something different each time it is used. The Court disagrees. “Coupled” is first used to describe the relationship between the pawl mechanism and the ratchet assembly. The pawl mechanism and ratchet assembly, Boydston observes, are not “affixed” to one another; the pawl mechanism essentially rests on the ratchet assembly, free to move when the assembly turns. “Coupled” is next used in the disputed phrase—“a ratchet head coupled to the ratchet gear.” Here, Boydston argues that “coupled” means affixed because the specification, when describing how the head and gear are linked together, explains that the two are “affixed to one another via a retaining pin or other similar device.” As Boydston explains, the pawl and ratchet assembly are not affixed; therefore, Boydston argues, “coupled” must mean two different things. The Court disagrees that these two uses of “coupled” creates an intractable ambiguity that needs to be resolved by the Court.

The specification describes a ratchet head and ratchet gear that are “coupled” because they are affixed via some other device. They are not affixed directly to one another, but are each affixed by a retaining pin that links them together. This understanding does not contradict the use of “coupled” to describe the link between the pawl mechanism and ratchet assembly. Thus, there

is little risk of confusion or ambiguity in the meaning of the term “coupled” as it is used in the ’140 patent claims.

Further, construing “coupled” to mean “affixed,” as Boydstun asks the Court to do with respect to the second use of “coupled,” would be contrary to the well-understood canon of construction advising that different words should be given different meanings. Both Claim 1 and the specification use the terms “affixed,” “fixed,” and “coupled.” See, e.g., *SimpleAir, Inc. v. Sony Ericsson Mobile Commc’ns AB*, 820 F.3d 419, 431 (Fed. Cir. 2016) (concluding that “data channel” must mean something different from “data feed” because each was used in different parts of a patent); *Chicago Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC*, 677 F.3d 1361, 1369 (Fed. Cir. 2012) (“The general presumption that different terms have different meanings remains.”); *Bd. Of Regents of the Univ. of Tex. Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008) (“Different claim terms are presumed to have different meanings”) (citation omitted). The implication is that, had the patentee intended “coupled” in one phrase to mean “affixed,” the patentee would have used the term “affixed.” Additionally, to a lay reader, “affixed” suggests something more than “coupled.” “Coupled” implies nothing more than two things being linked together in some way.⁹ On the other hand, “affixed” implies a more direct attachment.¹⁰

⁹ The AMERICAN HERITAGE COLLEGE DICTIONARY defines a “couple” as “a link.” It defines “coupled” and “coupling” as “1. To link together; connect.” ECF 58-4 at 5 (AMERICAN HERITAGE COLLEGE DICTIONARY 318 (3d ed. 2000)). WEBSTER’S II is in accord. ECF 58-5 at 5 (WEBSTER’S II NEW COLLEGE DICTIONARY 265 (3d ed. 2005)). The MCGRAW-HILL DICTIONARY OF ENGINEERING defines “couple” as “[t]o connect with a coupling, such as two belts or two pipes.” ECF 58-6 at 3 (MCGRAW-HILL DICTIONARY OF ENGINEERING 132 (2d ed. 2003)). The DICTIONARY OF AUTOMOTIVE ENGINEERING defines “coupling” as “(1) Device for connecting together mechanical components, such as rotating shafts.” ECF 58-7 at 3 (DICTIONARY OF AUTOMOTIVE ENGINEERING 52 (2d ed. 1995)).

¹⁰ The AMERICAN HERITAGE COLLEGE DICTIONARY defines “affix” as “[t]o secure to something; attach.” As an example, it gives “affix a label to a package.” ECF 58-4 at 4

Boydston also argues that Cottrell is foreclosed from offering its proposed construction based on the prosecution history of the '140 patent. When arguing for patentability of its application over Ruan, Cottrell stated that “Ruan does not teach that the ratchet head is coupled to the ratchet gear.” In Ruan, the ratchet head and ratchet gear are positioned on opposite sides of the tie-down shaft. For the same reasons as already discussed, this does not meet the high bar required to establish a disavowal of scope. In summary, the Court concludes that “coupled” should be given its plain and ordinary meaning.

CONCLUSION

The Court construes the disputed terms as follows: (1) “in mechanical contact with” means “direct or indirect contact through a mechanical operation”; and (2) “coupled” is given its normal and ordinary meaning.

IT IS SO ORDERED.

DATED this 18th day of October, 2017.

/s/ Michael H. Simon
Michael H. Simon
United States District Judge

(AMERICAN HERITAGE COLLEGE DICTIONARY 318 (3d ed. 2000). WEBSTER’S II similarly defines the verb “affix” as “to attach,” giving “affix a heel to a shoe” as an example.” ECF 58-5 at 4 (WEBSTER’S II NEW COLLEGE DICTIONARY 20 (3d ed. 2005)).