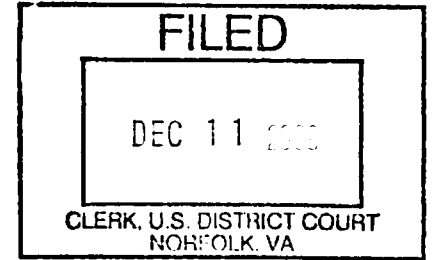


UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
Norfolk Division



AMERICAN PILEDIVING EQUIPMENT, INC.

Plaintiff,

v.

CIVIL ACTION NO. 2:08cv547

GEOQUIP, INC.,

Defendant.

MEMORANDUM OPINION

This case involves the alleged infringement of United States Patent No. 5,355,964 (" '964 Patent"). On October 7, 2009, plaintiff American Piledriving Equipment, Inc. ("APE") and defendant Geoquip, Inc. ("Geoquip") came before this court, pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), to argue their proposed constructions of the four claim terms and phrases currently in dispute: (1) "eccentric weight portion," (2) "integral," (3) "insert-receiving area," and (4) "connected to." After considering the parties' oral arguments, written materials, and the relevant legal authority, the court issues its claim construction ruling as detailed below.

I. BACKGROUND

Pile driving equipment is used to drive large piles into the earth to support buildings or other structures, whereas pile pulling equipment is used to remove those piles (collectively, "pile driving" equipment). The '964 Patent involves a vibratory pile driving device that functions by imparting large vibratory

forces to the pile, which allows for increased driving speed over the formerly-used hammer devices. The vibratory apparatus itself contains two eccentrically weighted counterweights, or gears that have an uneven weight distribution around their face, that rotate in opposite directions in a synchronized manner.¹ The opposite rotation cancels out the lateral forces that are created, while the uneven weight distribution generates substantial vertical force that can be transferred to the pile. Although this process generates significant driving forces, the rapid rotation of the counterweights also generates large stress loads and high temperatures within the apparatus.

The prior art includes a vibratory assembly in which a solid eccentric weight was bolted to a portion of a cylindrical gear. This design lacked durability, however, as the bolts had a tendency to break under the large stress loads generated by the rotation of the counterweights. To avoid the problem of breakage, another prior art device utilized cast, one-piece counterweights, but those one-piece counterweights lacked sufficient mass to drive piles efficiently. Thus, in order to increase the mass of cast counterweights, a third prior art device involved pouring molten lead into bores formed in the eccentric weight portions of those counterweights and allowing the lead to solidify. This design was

¹ In fact, the device could contain any even number of counterweights.

also unsuccessful in that one rotation of the counterweights moved the vibratory apparatus less than one inch vertically, while the design also suffered from uneven weight distribution within the counterweights.

The '964 Patent, which was issued to John White on October 18, 1994, covers a vibratory assembly used in pile driving equipment that includes a housing with at least one counterweight receiving area adapted to rotatably receive at least one counterweight. The metal counterweight has a cylindrical gear portion with an integral eccentric weight portion and at least one insert-receiving area. A solid insert made of a different metal from that of the counterweight fits within the insert-receiving area. The insert metal, which is tungsten in the preferred embodiment, has a specific gravity greater than that of the counterweight metal and a melting point greater than 328° Centigrade so that the metal will not liquify and shift during operation. At least one motor rapidly rotates the counterweight to generate substantial vibratory forces.

The '964 Patent recites twenty-seven claims, which describe the pile driving vibratory assembly itself, as well as a method for its construction. In particular, APE alleges that Geoquip has infringed, and continues to infringe, claims 1-3, 5-14, and 16-18 of the '964 Patent by using, offering to sell or rent, selling, and/or renting certain vibratory pile driving devices in the United

States. The parties now seek construction of the following disputed terms and phrases: (1) "eccentric weight portion," (2) "integral," (3) "insert-receiving area," and (4) "connected to."

II. DISCUSSION

A. Legal Standard

Claim construction is a matter of law to be decided by the court. Markman, 517 U.S. at 372. In performing this function, the court need only construe disputed terms and only to the extent necessary to resolve the controversy. See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999). Construction of the patent terms may resolve some or all of the issues of infringement. Id.

The process of claim construction begins with the words of the claims themselves. Old Town Canoe Co. v. Confluence Holdings Corp., 448 F.3d 1309, 1315 (Fed. Cir. 2006). Each disputed term is to be given its "ordinary and customary meaning," which is the meaning that the term would have to a person of ordinary skill in the art at the time of the invention. Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005). In some instances, a term's ordinary meaning may be readily apparent, in which case the court need only apply the widely accepted meaning of commonly understood words. Id. at 1314. When the term's meaning is not readily apparent, however, courts must consult "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/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed. Cir. 2004)). Those sources include intrinsic evidence, such as the claims, the specification, and the prosecution history, as well as extrinsic evidence, such as technical dictionaries, treatises, and expert testimony. Chamberlain Group, Inc. v. Lear Corp., 516 F.3d 1331, 1335 (Fed. Cir. 2008). As intrinsic evidence is considered to be more reliable than extrinsic evidence, the former should be the focus of the court's inquiry. Id.

In terms of intrinsic evidence, patent claims generally "'must be read in view of the specification, of which they are a part.'" Phillips, 415 F.3d at 1315 (quoting Markman, 52 F.3d at 979). 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 Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)). The specification may limit the scope of the invention through an intentional disclaimer or disavowal. Id. at 1316. Similarly, if the specification reveals a special definition for a term that differs from its ordinary meaning, the patentee's lexicography governs. Id. The redefinition of a claim term may be either explicit or implicit within the specification. Invitrogen Corp. v.

Biocrest Mfg., L.P., 327 F.3d 1364, 1367 (Fed. Cir. 2003) ("The applicant may also act as his own lexicographer and use the specification to implicitly or explicitly supply new meanings for terms."); Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc., 262 F.3d 1258, 1268 (Fed. Cir. 2001) ("[A] claim term may be clearly redefined without an explicit statement of redefinition."). Nevertheless, it is important that the court "avoid the danger of reading limitations from the specification into the claim," as "persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments." Phillips, 415 F.3d at 1323. A limitation is proper, however, when "the specification read as a whole suggests that the very character of the invention requires the limitation be a part of every embodiment." Alloc, Inc. v. Int'l Trade Com'n, 342 F.3d 1361, 1370 (Fed. Cir. 2003).

In addition to the claims and the specification, the court may also consider the prosecution history, which "consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent." Phillips, 415 F.3d at 1317. As in the specification, a patentee may limit the scope of claim terms by making a clear and unmistakable disavowal during prosecution, which prevents the patentee from recapturing through claim construction specific meanings disclaimed during prosecution. Computer Docking Station Corp. v. Dell, Inc.,

519 F.3d 1366, 1374 (Fed. Cir. 2008). Nevertheless, 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 and thus is less useful for claim construction purposes." Phillips, 415 F.3d at 1317.

As far as extrinsic evidence, the court is not "barred from considering any particular sources or required to analyze sources in any specific sequence, as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence." Id. at 1324. The district court, in its discretion, may admit extrinsic evidence to help educate itself about the field of the invention in order to determine how a person of ordinary skill in the art would understand the claim terms. Id. at 1319.

In the interest of uniformity, the Court of Appeals for the Federal Circuit has encouraged courts to consider the claim constructions of other jurisdictions involving the same patent terms. See, e.g., Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1329 (Fed. Cir. 2008). As APE has filed infringement actions in multiple jurisdictions across the country, at least three other district courts have construed the four terms and phrases of the '964 Patent at issue in this case. See Am. Piledriving Equip., Inc. v. Equip. Corp. of Am., No. 2:08cv895, 2009 WL 3401726 (W.D.

Pa. Oct. 20, 2009) (adopting Report and Recommendation); Am. Piledriving Equip., Inc. v. Hydraulic Power Sys., Inc., No. C08-537RSM, 2009 WL 3297311 (W.D. Wash. Oct. 14, 2009); Am. Piledriving Equip., Inc. v. Bay Mach. Corp., 632 F. Supp. 2d 956 (N.D. Cal. 2009). Stare decisis, however, does not literally apply. Visto Corp. v. Sprogit Techs., Inc., 445 F. Supp. 2d 1104, 1107-08 (N.D. Cal. 2006). Therefore, while this court has reviewed and considered the reasoning of these prior decisions, this court will perform an independent construction of the disputed terms and phrases.

B. Claim Construction

As noted above, the parties seek construction of four disputed terms and phrases: (1) "eccentric weight portion," (2) "integral," (3) "insert-receiving area," and (4) "connected to."² The court will address each disputed term or phrase in turn.

(1) Eccentric Weight Portion

The phrase "eccentric weight portion" is found in asserted claims 1, 3, 6, 11, and 16, as well as unasserted claims 19, 21, 26, and 27. APE seeks to define the phrase functionally, which

² Although the parties previously disputed the meaning of the phrase "cylindrical gear portion" in the case pending before the Northern District of California, the parties have agreed to the following construction: "The gear portion of the counterweight is a substantially cylindrical portion and has a rear face, a front face and a plurality of gear teeth around its perimeter." (Joint Mot. To Set Markman Hr'g Ex. 1, "Joint Disputed Claim Terms Chart.")

would allow for the eccentric weight portion to share common structure with the cylindrical gear portion, whereas Geoquip seeks to define the phrase structurally, which would require the eccentric weight portion to be physically distinct from the cylindrical gear portion. Specifically, APE proposes the following definition:

Eccentric weight portion - is that portion of the counterweight that creates the eccentric moment of the counterweight.

The portion is part of the whole counterweight, but need not be distinct from the cylindrical gear portion.

The eccentric weight portion has one or more areas for receiving an insert.

(Joint Disputed Claim Terms Chart.)

In contrast, Geoquip proposes the following definition:

Eccentric weight portion - The mass that extends forward from the front face of the bottom portion of the gear portion of the counterweight such that the counterweight has more weight at its bottom portion than its top portion.

Id.

The court begins its construction of "eccentric weight portion" by looking to the claims themselves. Claim 1, which is representative of the asserted claims, describes a "counterweight having a cylindrical gear portion and an eccentric weight portion integral with said cylindrical gear portion, said eccentric weight portion having at least one insert-receiving area formed therein."

'964 Patent, col. 9, ll. 39-43. Although "eccentric weight portion" is used in a consistent manner in the remaining claims, the claims do not define the phrase explicitly. Thus, the court turns to the specification for additional guidance.

The specification provides the following description:

As best seen in FIGS. 3A and 3B, the gear portion **41** of the counterweight **40** is substantially cylindrical and has a rear face **94**, a front face **96**, and a plurality of gear teeth **98** around its perimeter. The eccentric weight portion **43** of the counterweight **40**, which is formed integral with the gear portion **41**, extends forward from the front face **96** of the gear portion. The gear portion **41** has a weight distribution with less weight provided by a top portion **102** and more weight provided by a bottom portion **104** as a result of the eccentric weight portion **43** being connected thereto. In the preferred embodiment, the eccentric weight portion **43** has a substantially semi-cylindrical portion **100**, and the bottom portion **104** constitutes over one-half of the area of gear portion **41**. Accordingly, the counterweight **40** has a large mass of material integral to and projecting from the bottom portion **104** of the gear portion **41**, thereby forming a counterweight having a center of gravity located radially outward from the rotational axis of the gear portion.

Id. at col. 5, ll. 17-36 (emphasis added). In the portion of this passage that precedes the phrase "in the preferred embodiment," the patentee describes the eccentric weight portion structurally, as being that portion of the counterweight that extends forward from the front face of the gear portion. While the court does not presume that the phrase "in the preferred embodiment" automatically

transforms the preceding language in this paragraph into claim limitations, the court does assume that the phrase was inserted to distinguish in some manner the preceding description from the one that followed. Indeed, the repeated invocation of the preferred embodiment throughout the specification must serve some purpose, namely that of distinguishing more general descriptions of the invention from more specific descriptions of the preferred embodiment itself. See, e.g., id. at col. 3, ll. 61-62; col. 5, ll. 27-28, 51, 65; col. 7, ll. 35, 55; col 8, ll. 32-33.

APE, in response, argues that all discussions of the figures in the specification refer to the preferred embodiment alone, relying on a boilerplate disclaimer found in the '964 Patent. See id. at col. 3, ll. 9-12 ("The present invention will be more clearly understood from the following detailed description of the preferred embodiment taken in conjunction with the attached drawings."). Although the court declines to accept this boilerplate language as decisive, see, e.g., Les Traitments Des Eaux Poseidon, Inc. v. KWI, Inc., 135 F. Supp. 2d 126, 135 (D. Mass. 2001) (assigning "little weight" to boilerplate language in specification indicating general description of invention was "non-restrictive"), the court is also wary of improperly reading limitations from the specification into the claims. See Phillips, 415 F.3d at 1323. Thus, the court looks to the specification as a whole to determine whether a person of ordinary skill in the art

would conclude the eccentric weight portion to be structurally distinct from the cylindrical gear portion in every embodiment of the claimed invention. See Alloc, 342 F.3d at 1370.

In addition to the passage cited above, the court finds illustrative several other portions of the '964 Patent. First, the abstract of the invention indicates that the "counterweight has a cylindrical gear portion and an eccentric weight portion integrally formed therewith." '964 Patent, Abstract (emphasis added). The abstract does not say that the eccentric weight portion is integrally formed "therein" with respect to the cylindrical gear portion, but rather that it is integrally formed "therewith," which connotes a physical distinction between the two.³ This description belies APE's assertion that the "eccentric weight portion," being any portion of the cylindrical gear portion to create eccentric moment, may be wholly contained within the cylindrical gear portion. Instead, the description supports Geoquip's characterization of the "eccentric weight portion" as being physically distinct from the gear portion.

In addition, the specification gives no indication that the "eccentric weight portion" was intended to include, as APE suggests, that portion of the gear portion containing unbalanced

³ Within the specification itself, the patentee uses the word "thereto," which like "therewith" suggests physically distinct components. '964 Patent, col. 5., l. 27. By comparison, the eccentric weight portion has "dense, solid, metal inserts 45 mounted therein." Id. at col. 3, ll. 47-48 (emphasis added).

weight. When the specification refers to the apertures in the top portion of the gear portion that are designed to increase the eccentric weight found in the bottom portion of the gear portion, there is no mention of that offsetting weight being part of the "eccentric weight portion," as that phrase is used throughout the '964 Patent. See id. at col. 5, ll. 53-60. If the patentee intended the offsetting weight to be part of the "eccentric weight portion," a person of ordinary skill in the art might expect some indication to that effect.

Indeed, the specification's description of the balancing process further refutes APE's position that the "eccentric weight portion" is functionally defined:

Each counterweight 40 is balanced again on the balancing device to assure that the eccentric weight portion 43 hangs at its lowest point of a revolution when the counterweight is at the equilibrium position. If the eccentric weight portion 41 [sic] does not hang properly, metal may be removed from the eccentric weight portion to achieve a properly balanced counterweight.

Id. at col. 9, ll. 11-17.⁴ In order for the "eccentric weight portion" to be capable of hanging at "its lowest point," that phrase must be conceived of in a physical, structural manner,

⁴ This concept of the "eccentric weight portion" hanging at its lowest point is described earlier in the specification as well: "[T]he balancing shaft and counterweight are placed on a balancing rack that allows the counterweight to freely rotate until gravity pulls the eccentric weight portion 43 to the lowest point." '964 Patent, col. 8, ll. 26-30.

rather than in a functional one, as APE suggests. Thus, implicit within the specification is the understanding that the eccentric weight portion is defined structurally and is physically distinct from the cylindrical gear portion.

While the patentee could have defined "eccentric weight portion" in another manner if he had chosen to do so, the court finds that a person of ordinary skill in the art at the time of the invention would have understood the eccentric weight portion and the cylindrical gear portion to be physically distinct in every embodiment of the claimed invention. See Alloc, 342 F.3d at 1370. Nevertheless, although the court agrees with Geoquip that the eccentric weight portion extends outward from the cylindrical gear portion, the court does not agree that the eccentric weight portion must extend forward, as opposed to rearward.⁵ The court, therefore, construes the phrase "eccentric weight portion" to mean "that portion of the counterweight that extends either forward or rearward from the front or back face of the gear portion such that it shifts the center of gravity radially outward from the gear's rotational axis."

⁵ While the notion that the eccentric weight portion is physically distinct from the cylindrical gear portion is pervasive throughout the '964 Patent, the basis for limiting the eccentric weight portion to extending forward rather than rearward is limited to an isolated description in the specification. See '964 Patent, col. 5, ll. 20-23. As the court does not believe that extending forward rather than rearward is part of the "very character" of the claimed invention, the court refuses to limit the claims in that manner. See Alloc, 342 F.3d at 1370.

(2) Integral

The term "integral" appears in asserted claims 1, 6, and 11, as well as unasserted claims 19, 21, and 27. APE proposes the following construction:

Integral - means composed of portions, parts, or pieces that together constitute the whole.

The eccentric weight portion and the cylindrical gear portion act together to function as the counterweight.

(Joint Disputed Claim Terms Chart.) Geoquip proposes that "integral" means "formed or cast of one-piece." Id.

The court begins its analysis by looking to the claims themselves. Claim 1, which is representative of the asserted claims, describes a "counterweight having a cylindrical gear portion and an eccentric weight portion integral with said cylindrical gear portion." '964 Patent, col. 9, ll. 39-41. The term is used consistently throughout the claims, and there is no reason to believe that the term is used differently in one claim vis-a-vis another. See Innova, 381 F.3d at 1119 ("Unless otherwise compelled, when different claims of a patent use the same language, we give that language the same effect in each claim."). Thus, the court looks to the claims as a whole to determine the meaning of the term "integral."

The relationship between claims 16 and 19 provides strong evidence as to the meaning of "integral." Claim 16, which does not contain the term "integral," describes a counterweight having "an

eccentric weight portion connected to said cylindrical gear portion." '964 Patent, col. 11, ll. 13-14 (emphasis added). Claim 19, which is dependent on claim 16, describes: "The counterweight assembly of claim 16 wherein said eccentric weight portion is integral with said cylindrical gear portion, said first metal is cast steel, and said second metal is a [sic] tungsten." Id. at ll. 30-33 (emphasis added). Because dependent claim 19 uses the term "integral" rather than the phrase "connected to" to describe the relationship between the eccentric weight portion and the cylindrical gear portion, the term "integral" presumably limits claim 19 in a manner that claim 16 is not so limited. See Phillips, 415 F.3d at 1315 ("[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.").

Although the phrase "connected to" will be discussed further below, the court construes that phrase to mean "joined together, united or linked." Thus, claim 16 contemplates a two-piece counterweight in which the cylindrical gear portion and the eccentric weight portion are joined together. Under APE's proposed construction, the term "integral" in claim 19 would then limit the phrase "connected to" by requiring that the eccentric weight portion and the cylindrical gear portion function together to constitute the whole counterweight. The court fails to see,

however, how this definition of "integral" in any way meaningfully limits the definition of "connected to" as found in claim 16. Claim 16 describes the two portions of the counterweight as being joined together; presumably, the two portions also must function together or the invention would be ineffectual. Nevertheless, as the claims themselves do not define the term explicitly, the court turns to the prosecution history for further guidance.

During the 2006 reexamination of the '964 Patent, the examiner initially rejected claims 1-3, 5, 6, 8-14, and 16-19 on the grounds that the invention was unpatentable for obviousness in light of United States Patent No. 3,224,514 (the "Hornstein patent"). (Pl.'s Opening Claim Construction Br. Ex. L, "Office Action in Ex Parte Reexamination," at 2.)⁶ The Hornstein patent discloses a vibratory pile driver in which the counterweights contain a number of counterbalancing cylinders so that the counterweights themselves possess no eccentric weight absent the insertion of metal rods. (Pl.'s Opening Claim Construction Br. Ex. M, "Reply to Office Action in Reexamination," at 5.) In order to distinguish the Hornstein patent from the present invention, the patentee argued that Hornstein did not disclose an eccentric weight portion "integral" with the gear portion: "This requirement of the integral-i.e., one-piece-nature of the eccentric weight portion is

⁶ Pagination is that of the original document rather than of the exhibit.

unquestionably not disclosed by Hornstein. As explained above, Hornstein teaches a system in which weights may be added (or removed) in order to balance or unbalance the rotating rotor. . . . Hence Hornstein's eccentric is not integrally formed." Id. at 6 (emphasis added). Therefore, in order to distinguish prior art, the patentee argued that the term "integral," within the context of the '964 Patent, meant that the cylindrical gear portion and the eccentric weight portion were formed or cast of one piece. See id. The court finds this to be a clear and unmistakable disavowal by the patentee limiting the term "integral" to one-piece counterweights. See, e.g., Computer Docking, 519 F.3d at 1374 (noting a patentee may limit a claim term by clearly characterizing the invention in a certain way to overcome rejections based on prior art).⁷ Therefore, after taking into account both the language of the '964 Patent and its prosecution history, this court construes the term "integral" to mean "formed or cast of one piece," as Geoquip proposes.

(3) Insert-Receiving Area

The phrase "insert-receiving area" appears in asserted claims 1, 3, 6, 11, and 16, as well as unasserted claims 4, 15, 20, 21,

⁷ As the patentee never recanted in any way from the position that "integral" meant "formed or cast of one piece," the court finds the examiner's response to the patentee to be irrelevant. See, e.g., Springs Window Fashions LP v. Novo Indus., L.P., 323 F.3d 989, 995 (Fed. Cir. 2003) ("In any event, the examiner's remarks do not negate the effect of the applicant's disclaimer.").

22, 24, and 27.⁸ APE seeks to define the phrase as "a region of the eccentric weight portion that is capable of receiving an insert." (Joint Disputed Claim Terms Chart.) Geoquip seeks to define the phrase as "a bore extending into the eccentric weight portion and shaped to receive the solid insert." Id.⁹

In construing "insert-receiving area," the court looks first to the claims themselves. Claim 1, which is representative of the asserted claims, describes a "counterweight having a cylindrical gear portion and an eccentric weight portion integral with said cylindrical gear portion, said eccentric weight portion having at least one insert-receiving area formed therein." '964 Patent, col. 9, ll. 39-43. In other words, at the very least, the "insert-receiving area" is located, at least in part, within the "eccentric weight portion." Moreover, claim 3, which is dependent on claim 1, recites the "vibratory assembly of claim 1 wherein said at least one [sic] insert-receiving area is a bore in said eccentric weight portion and said solid insert member is a tungsten rod." Id. at ll. 56-59. Although the court believes the phrase "insert-

⁸ The phrase appears in claims 4 and 15 in its plural form.

⁹ The dispute over the meaning of "insert-receiving area," i.e., whether or not it may be wholly contained within the cylindrical gear portion, is closely tied to the construction of "eccentric weight portion," and whether that too may be so contained. This court has found that the "eccentric weight portion" must be physically distinct from the "cylindrical gear portion," see supra Part II.B.(3), and the court is mindful of that construction in its analysis of "insert-receiving area."

receiving area" to be used consistently in the remainder of the claims, the claims do not define the phrase explicitly. Thus, the court turns next to the specification.

The specification provides the following description:

The bottom portion 104 of the counterweight 40 is cast having insert receiving areas or bores 112 substantially parallel to the center bore 106 and extending fully through the gear portion 41 and fully through the eccentric weight portion 43. In the preferred embodiment, two insert receiving bores 112 are formed in the counterweight 40, although the number of bores can be varied.

Id. at col. 5, ll. 61-68. Although this passage describes the "insert-receiving area" as fully extending through both the gear portion and the eccentric weight portion, the court finds no other evidence within the specification to suggest that the insert-receiving area must extend completely through both portions. After considering the claims and specification as a whole, the court finds that the essential attributes of the "insert-receiving area" are, first, that it is shaped to receive an insert; second, that it is located, at least partially, within the eccentric weight portion; and third, that it may extend into the cylindrical gear portion, as is the case in the preferred embodiment. Neither party's proposed construction, however, succeeds in capturing these three attributes.¹⁰ As such, the court construes the phrase

¹⁰ As APE's proposed construction describes the "insert-receiving area" as "a region of the eccentric weight portion," APE's definition fails to indicate that the "insert-receiving area"

"insert-receiving area" to mean "a bore located, at least in part, within the eccentric weight portion that is shaped to hold securely a solid insert member."

(4) Connected To

The phrase "connected to" appears in asserted claims 1, 6, 11, and 16. The parties agree that the phrase generally means "joined together, united or linked" (Joint Disputed Claim Terms Chart), and the court finds this to be the ordinary meaning of the phrase. Geoquip, however, wishes the definition also to indicate that the phrase "specifically excludes bolting as the '964 patent teaches that prior art having bolted counterweights are not sufficiently durable and the '964 patent does not provide any other methods of 'connected to' other than casting from one-piece." Id. Thus, in order to resolve the dispute between the parties, the court must examine whether the patentee has made a clear and unmistakable disavowal of bolted counterweights. See Phillips, 415 F.3d at 1316.

The court begins its analysis by looking to the claims themselves. Claim 1 describes the counterweight and then indicates that there is "at least one driving means operatively connected to

may extend outside the eccentric weight portion. Nevertheless, Geoquip's proposed construction describes the "insert-receiving area" as "extending into the eccentric weight portion," which inaccurately suggests that the "insert-receiving area" is located within the cylindrical gear portion and extends into the eccentric weight portion, rather than the other way around. Thus, the court finds both parties' proposed constructions to be deficient.

said counterweight and adapted to rotate said counterweight about its rotational axis." '964 Patent, col. 9, ll. 51-53. Similarly, claims 6 and 11 describe a driving means as being "operatively connected to" the counterweight. Id. at col. 10, ll. 28-31, 64-66. Claim 16, however, uses the phrase "connected to" in a different manner, describing the counterweight as having "an eccentric weight portion connected to said cylindrical gear portion at a position radially outward of the axis of said cylindrical gear portion." Id. at col. 11, ll. 13-15. As opposed to the description in claim 19, in which the eccentric weight portion is integral with the cylindrical gear portion, claim 16 contemplates a two-piece counterweight in which the pieces are joined together in some manner. There is no mention in the claims, however, of excluding bolting as a means of connection. There is also no indication that the phrase "connected to" means something different in claim 16 than elsewhere in the '964 Patent. Because the claims do not define "connected to" explicitly, the court examines the specification for further guidance.

Geoquip argues that the patentee disclaimed bolting as a method of connecting the eccentric weight portion to the cylindrical gear portion, based upon the patentee's criticism of the prior art:

The prior art includes a vibratory assembly with counterweights having a solid eccentric weight bolted to a portion of a cylindrical gear. These bolted counterweights are not

sufficiently durable, because the bolts have a very undesirable tendency to break under the large stress loads generated during rotation [of the] counterweights.

Id. at col. 1, ll. 39-45. APE responds that this statement was not a disclaimer of bolting, but rather a general discussion of the problems in the prior art. Indeed, in the rest of the paragraph, the patentee goes on to discuss problems that arose from certain one-piece, cast counterweights as well. See id. at ll. 45-51 ("These solid, cast counterweights, however, do not have sufficient mass to generate large enough vibratory forces to efficiently drive or pull piles."). As the preferred embodiment of the '964 Patent takes the form of a one-piece, cast counterweight, id. at col. 5, ll. 51-53, that embodiment is obviously not being disavowed.

Thus, the court finds that the discussion of bolting in the prior art does not provide a clear disavowal of that means of connecting the eccentric weight portion to the cylindrical gear portion. See Ventana Med. Sys., Inc. v. Biogenex Labs., Inc., 473 F.3d 1173, 1180 (Fed. Cir. 2006) (finding no disavowal of certain dispensing methods when discussion of prior art included the dispensing method of the preferred embodiment in addition to the those methods allegedly disavowed). Because the court finds no reason to exclude bolting from the definition of "connected to," the court construes that phrase to mean simply "joined together, united or linked," as the parties agree, without the caveat suggested by Geoquip.

