

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

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NASSAU PRECISION CASTING CO., INC., :

Plaintiff, :

-against- :

ACUSHNET COMPANY, INC., COBRA :

GOLF COMPANY, and PUMA NORTH :

AMERICA, INC., :

Defendants. :

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DECISION AND ORDER
10-CV-4226 (WFK) (AKT)

WILLIAM F. KUNTZ, II, United States District Judge

Nassau Precision Casting Co., Inc. (“Plaintiff”) brings this action against Acushnet Company, Inc., Cobra Golf Company, and Puma North America, Inc. (“Defendants”) for patent infringement under the patent laws of the United States, 35 U.S.C. § 101 *et seq.* Defendants move for summary judgment pursuant to Federal Rule of Civil Procedure 56 on the bases of non-infringement and invalidity. For the reasons stated below, this Court grants Defendants’ motion for summary judgment.

BACKGROUND

I. Facts

A. The Patent-in-Suit

Plaintiff owns the rights protected by United States Patent No. 5,486,000, a utility patent. *See* Bresnick Decl., Ex. A (the “’000 Patent”). The ’000 Patent was issued on January 23, 1996 to Robert Chorne and was later assigned to Plaintiff. Pl.’s 56.1 St. at ¶ 63. Plaintiff alleges golf irons manufactured and offered for sale by Defendants since 2006 infringe the ’000 Patent.

Specifically, Plaintiff alleges the Cobra S9, Cobra S9 Second Generation, King Cobra UFi, and Cobra S2 clubs (the “Accused Clubs”), manufactured and sold by Defendants, infringe Claims 1 and 2 of the ’000 Patent. Compl. at ¶ 10; Pl.’s 56.1 St. at ¶ 64.

Claim 1 of the ’000 Patent recites:

In a golf iron club head of a type having a ball-striking body of weight-imparting construction material inclined at a selected angle for driving a struck golf ball a corresponding selected height during its trajectory, said body having spaced-apart top and bottom surfaces bounding a ball-striking surface therebetween, the method of improving weight distribution comprising removing construction materials from said top-surface, relocating said removed construction material from said top surface to clearance positions below said top surface located adjacent opposite ends of said bottom, [sic] surface whereby said removed construction material from a location not used during ball-striking service of said golf iron, is of no adverse consequence thereto and said removed construction material in said relocated positions contributes to increasing said height attained by a struck golf ball.

’000 Patent col. 4 l. 16–31.

Claim 2 of the ’000 Patent recites:

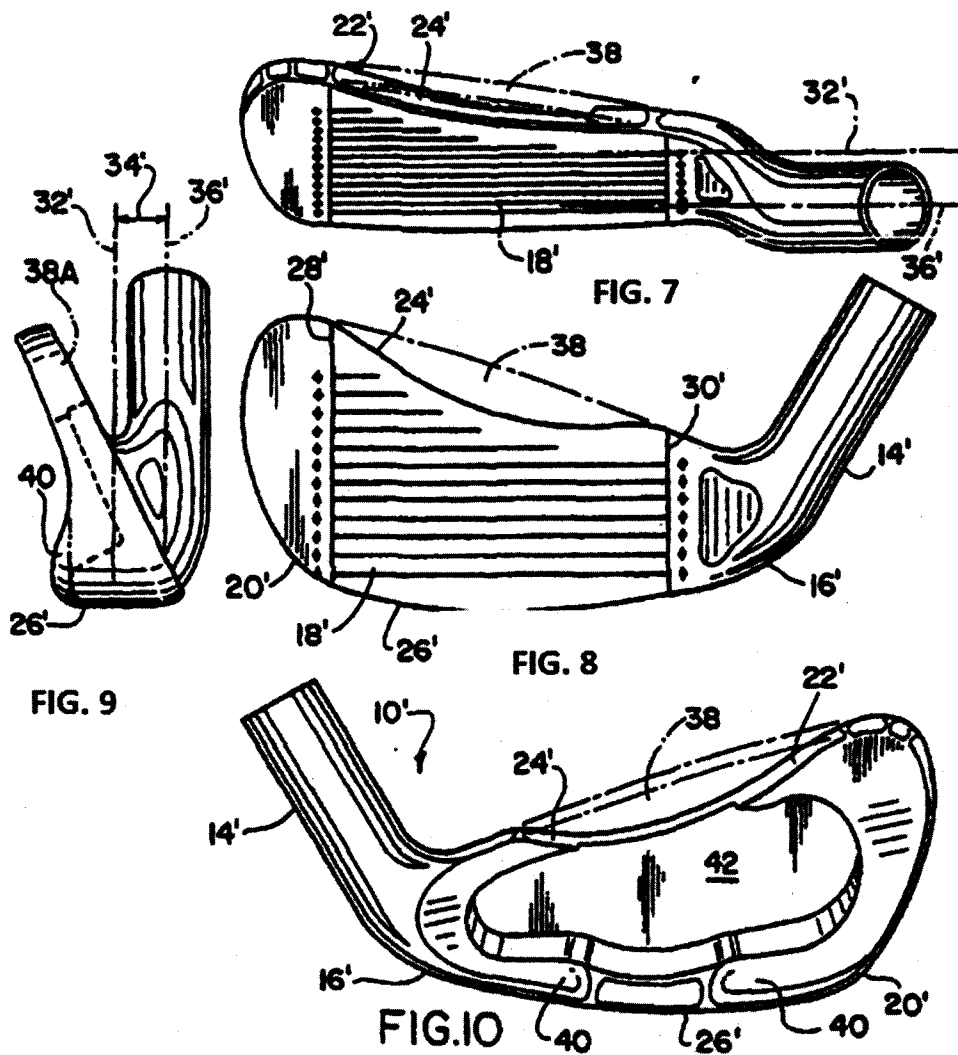
A method of improving the weight-distribution of a selected construction material constituting a golf iron club head with a ball-striking surface bounded in a vertical perspective by top and bottom surfaces and in a horizontal perspective by toe and heel portions said method comprising the steps of removing construction material from a central portion of said top surface, determining the weight of said removed construction material, and embodying as part of selected bottom areas of said toe and heel of said club head said removed construction material having said determined weight, whereby the weight is distributed to said selected bottom area without any increase in overall weight of the club head.

’000 Patent col. 4 l. 32–44.

The center of gravity (“CG”) has a specific meaning as understood in physics and is defined as the single point within any object that represents the intersection of all the balance points of the object. Pl.’s 56.1 St. at ¶ 4. Mr. Parente, one of Plaintiff’s liability experts, has testified that the CG of a club head can be lowered by redistributing material from the top of the club head to the bottom of the club head. Parente Dep. Tr. at 32:2–13, 33:3–34:4. By lowering

the CG of a golf club head, with all else being equal, a struck golf ball will fly higher. '000 Patent col. 4 l. 16–31 (relocated construction material “contributes to increasing said height attained by a struck golf ball”); Parente Dep. Tr. at 378:8–23. Claims 1 and 2 of the '000 Patent recite a method of improving weight distribution in a club head by removing construction material from the central portion of the top surface and relocating it to the bottom areas of the toe and heel of the club. Pl.’s 56.1 St. at ¶ 5.

Figures 8 and 10 of the '000 Patent below represent the front and the back, respectively, of a golf club head contemplated by the '000 Patent. These figures show the portion of the top surface of the club head from which construction material is removed, and the locations at adjacent ends of the lower heel (area 16) and toe (area 20) where construction material is relocated. According to the '000 Patent, construction material is to be removed from area 24 and relocated along the toe, central or heel portion (or some combination thereof) at areas 26 and 40. '000 Patent col. 3 l. 5–52. Parente testified that in removing material from the topline, resulting in a recess at area 38, the '000 Patent creates a concave area in the middle of the topline—a feature that was “totally new and unique” in the world of golf clubs at the time of filing the '000 Patent application. Parente Dep. Tr. at 171:21–172:11.



The specification¹ of the '000 Patent states, in relevant part:

Abstract

For weight distribution in a golf iron club head, the use of construction material from a location thereon never used in play, namely centrally along a top edge of the ball-striking face, advantageously relocated to the toe, sole, heel or combinations thereof, to contribute to sweet-spot enhancement

¹ A patent is made up of claims, a specification and drawings (or figures). "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention." 35 U.S.C. § 112.

Background of the Invention

All known prior art efforts at sweet spot-enhancement contemplate adding weight to the club head in clearance locations to the sweet spot, such as to the left and right thereof in the toe and heel respectively, with the expectation that this will contribute to optimum height in the trajectory and length and direction in the flight of the struck golf ball. While some ball-striking efficacy might result, it is believed that significantly all that occurs is that the overall weight of the club head is increased and the golfer is provided with a heavier club to use

Broadly, it is an object of the present invention to provide an improved weighted golf iron club overcoming the foregoing and other shortcomings of the prior art. More particularly, it is an object to achieve, using weight distribution, sweet spot-enhancement, i.e. significant improvement in the ball-striking efficacy of the club head, while maintaining the same overall weight of the club head and, even more important, without detracting from the club head configuration as it relates to its intended end use, namely hitting a golf ball.

Detailed Description of a Preferred Embodiment

[T]he removal of the metal construction material, or whatever construction material is being used such as metal per se, graphite or the like

Not only is the removed weight 38 better utilized at location 40 for the ball-striking function intended, but the removal from location 38A noted in FIG. 9 is from the worst location adversely bearing on the efficacy of the club head.

...

It should be understood that, while it is within the contemplation of the present invention to always remove the construction material preparatory to weight distribution from the top edge 24', [t]he selection for removal from the top edge 24' results from the recognition that, in the typical use of a golf club iron, the ball is never intentionally struck near or at the top of the club face 18', but always at the "sweet spot" or below, and thus removal of the top edge central portion incident to its relocation is totally consistent with the continued use of the golf club iron as intended. By way of further explanation, for example, if the removed club head portion is from the toe, this would certainly adversely affect the use of the golf club iron because a "toe" hit is part of the game, even though possibly never intended, because it can and does occur. In contrast, a "top edge" hit with an iron for all practical purposes, never occurs.

'000 Patent Abstract; col. 1 l. 41-63 ("Background of the Invention"); col. 3 l. 11-14, l. 26-29; col. 3 l. 44-col. 4 l. 6 ("Detailed Description of a Preferred Embodiment").

B. The State-of-the-Art at the Time the '000 Patent Was Filed

Defendants define a person of ordinary skill in the art (“POSITA”) relevant for the '000 Patent as someone who, at the time the application was filed, had three to five years of golf club iron design and manufacturing experience, with an understanding of mechanics and manufacturing processes, the fundamental principles of golf physics, and the range of golf club products available to customers. Defs.’ 56.1 St. at ¶ 13. Plaintiff presents a slightly different definition of a POSITA,² but admits Defendants’ definition is valid and concedes the validity and infringement analyses would be the same under either definition. Pl.’s Mem. at 5–6.

Both Parente and Peter Chorne, the named inventor of the '000 Patent, testified that POSITAs knew, long before the application of the '000 Patent was filed, the CG of a golf club head could be lowered, without increasing the weight of the club head, by redistributing material from the top to the bottom of the club head. Parente Dep. Tr. at 31:5–12, 32:2–13, 33:3–23; Chorne Dep. Tr. at 204:19–206:3, 214:13–215:7, 220:21–222:6. Similarly, both Parente and Chorne have stated that prior to the filing of the '000 Patent application, POSITAs knew that all else being equal, moving material lower in a club head inherently results in an increased trajectory of a struck golf ball. Parente Dep. Tr. at 34:24–35:19, 36:7–25, 37:15–24; Chorne Dep. Tr. at 202:4–203:6, 206:7–207:9, 215:8–25, 219:9–20.

C. The “Location Not Used During Ball-Striking Service” Limitation of Claim 1

Claim 1 of the '000 Patent requires the removal of construction material “from a location not used during ball-striking service of said golf iron.” '000 Patent col. 4 l. 26–28. In his expert

² Plaintiff’s expert Mr. Parente defines a POSITA as either a “person with a technical background and education, such as an undergraduate engineering degree, and experience in the golf industry designing golf clubs, preferably golf irons, for at least two years; non-degreed tool and die makers with 4–5 years minimum experience in making molds and masters and aiding in [computer-aided design]; a non-degreed person who works on prototypes in the areas of club fitting and assembly with [computer-aided design] experience; and a degreed or non-degreed person who has worked in a golf testing division for a golf manufacturing company with 4–5 years of experience.” Krumholz Decl., Ex. C (“Parente Expert Report”) at 9–10.

report, Parente states the Accused Clubs meet this limitation in Claim 1 because “[t]he center topline location of the club, from which . . . construction material is relocated . . . , is a part of the club head that is not normally used for striking a golf ball during play and is of no adverse consequence.” Krumholz Decl., Ex. C (“Parente Expert Report”) at 12–13.

However, although Parente states the center topline surface is not normally used for striking a golf ball, he admits it is not uncommon for “a golfer of some skill level to hit [a golf ball using] the top middle of a club face.” Parente Dep. Tr. at 267:15–19; *see also id.* at 267:6–12 (“**Q:** Golfers do, though, from time to time at least, hit a ball in the upper middle portion of a face . . . do they not? **A:** I would have to agree with you that golfers hit the ball in every location of the face.”).

D. The Accused Clubs

Peter Soracco, an inventor who assigned multiple patents incorporating his design ideas to Defendant Acushnet Company, Inc., developed the design of the Accused Clubs. Pl.’s 56.1 St. at ¶ 73. The patents underlying the Accused Clubs describe the claimed inventions using terminology similar to that used in the ’000 Patent. For instance, U.S. Patent No. 7,481,718 (the “’718 Patent”) describes a “recess” in the top portion of the club head that “removes material from the club head, allowing the opportunity to . . . lower the club head center of gravity.” ’718 Patent col. 2 l. 45–49. The ’718 Patent also allows for a lightweight polymer insert to be placed in the recess, which “allows the mass removed by the recess to be replaced in more desirous locations on the club head, such as in the perimeter and/or toward the sole.” *Id.* at col. 2 l. 54–59. Several other patents on which the Accused Clubs are based use similar language. *See* U.S. Patent No. 7,524,250 (the “’250 Patent”) col. 6 l. 51–64 (“Removing mass from the highest areas of a club head will have the greatest effect on lowering the center of gravity. Adding the mass

removed from the high areas to the bottom of the club head will further lower the center of gravity. . . . That weight is redistributed to the bottom portion of the club”); U.S. Patent No. 7,819,757 col. 2 l. 49–65 (“The present invention provides an improved golf club by removing [excess construction material] and redistributing it elsewhere”).

During the prosecution of the ’718 Patent, Defendants Acushnet Company, Inc. and Cobra Golf Company argued to the U.S. Patent Office that “[t]he purpose of the Applicant’s invention is to remove mass and weight from the top line of the golf club head. This inherently lowers the club head center of gravity, producing benefits as discussed in the written description. This also allows the club designer to add mass and weight to other, more beneficial areas of the club head without increasing the club head’s overall weight, producing benefits as also discussed in the written description.” Bresnick Decl., Ex. U (portions of ’718 Patent prosecution history).

Similar to the ’000 Patent, each of the Accused Clubs redistributes weight from a central portion of the top surface of the club head and relocates it low in the heel and toe of the bottom of the clubs. Pl.’s 56.1 St. at ¶ 70. Each of the Accused Clubs also maintains the same overall weight after removal of material from the top and relocation to the bottom. *Id.* at ¶ 71.

However, unlike the ’000 Patent, none of the Accused Clubs made, sold, or offered for sale by the Defendants has a concave topline. Pl.’s 56.1 St. at ¶ 21. Instead, each of the Accused Clubs incorporates a lightweight polymer insert along the top surface of the club head. *Id.* The polymer insert in each of the Accused Clubs replaces an equivalent volume of construction material, and the difference in weight between the polymer insert and the removed construction material is then redistributed to the bottom heel and toe of the golf club head. Parente Dep. Tr. at 279:6–13, 284:19–285:10. In addition, the S9 Second Generation club also removed some material from the “high toe,” replacing that material with a lightweight polymer. Parente Dep.

Tr. at 234:8–235:7. Similarly, the Cobra S2 club removed some material from the toe, replacing that material with stainless steel. Bresnick Decl., Ex. T (orthographic views of S9 Second Generation club).

II. The Parties' Arguments

Defendants argue the Accused Clubs do not infringe the '000 Patent because (1) the '000 Patent describes and claims a manufacturing process not used in making the Accused Clubs, (2) the Accused Clubs do not meet the “no adverse consequences” limitation of Claim 1, and (3) the Accused Clubs do not redistribute the determined weight of construction material removed from the center topline, as is required for infringement of Claim 2.

Alternatively, Defendants argue the '000 Patent is invalid. Defendants contend the '000 Patent was anticipated by prior art, namely the Hogan Magnum golf club and U.S. Patent No. 4,938,470 (“Antonious”). Defendants also argue the “no adverse consequence” limitation renders Claim 1 invalid as indefinite because that limitation does not provide an objective standard upon which a POSITA could understand the claim. Because the Court ultimately grants summary judgment to the Defendants on non-infringement grounds, the Court does not reach Defendants' anticipation or indefiniteness arguments.

Plaintiff opposes Defendants' motion for summary judgment. According to Plaintiff, the '000 Patent does not describe and claim a manufacturing process, but, rather, a method for improving weight distribution in a golf iron head. Plaintiff further argues Defendants fail to meet the strict requirements of an anticipation defense, as set forth by the Federal Circuit under 35 U.S.C. § 102, based on either the Hogan Magnum or the Antonious patent. Finally, Plaintiff contends the “no adverse consequences” limitation is not indefinite because the specification provides an objective definition of that limitation.

ANALYSIS

I. Summary Judgment Standard

A court “shall grant summary judgment if the movant shows that 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). “The role of the court is not to resolve disputed issues of fact but to assess whether there are any factual issues to be tried. In determining whether summary judgment is appropriate, this Court will construe the facts in the light most favorable to the non-moving party and must resolve all ambiguities and draw all reasonable inferences against the movant.” *Brod v. Omya, Inc.*, 653 F.3d 156, 164 (2d Cir. 2011) (internal citations and quotation marks omitted). No genuine issue of material fact exists “where the record taken as a whole could not lead a rational trier of fact to find for the non-moving party.” *Lovejoy-Wilson v. NOCO Motor Fuel, Inc.*, 263 F.3d 208, 212 (2d Cir. 2001) (citing *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986)).

If the moving party satisfies this burden, the non-moving party must “make a showing sufficient to establish the existence of [each] element to that party’s case . . . since a complete failure of proof concerning an essential element of the non-moving party’s case necessarily renders all other facts immaterial.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 322–23 (1986); *Chandok v. Klessig*, 632 F.3d 803, 812 (2d Cir. 2011) (“Where the undisputed facts reveal that there is an absence of sufficient proof as to one essential element of a claim, any factual disputes with respect to other elements become immaterial and cannot defeat a motion for summary judgment.”). Importantly, if the evidence produced by the non-moving party “is merely colorable, or is not significantly probative, summary judgment may be granted.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249–50 (1986) (internal citations omitted).

II. Non-Infringement

A. Applicable Law

Patent infringement analysis is a two-step process. First, this Court must construe the asserted claims of the patent as a matter of law. *Freedman Seating Co. v. American Seating Co.*, 420 F.3d 1350, 1356–57 (Fed. Cir. 2005) (citing *RF Del., Inc. v. Pac. Keystone Techs., Inc.*, 326 F.3d 1255, 1266 (Fed. Cir. 2003)). Second, the finder of fact “must determine whether the accused product or process contains each limitation of the properly construed claims, either literally or by a substantial equivalent.” *Id.* at 1357 (internal citation omitted). “[S]ummary judgment of non-infringement is proper only if no genuine issues of material fact remain.” *RF Del.*, 326 F.3d at 1266; *see also Bell Atl. Network Servs., Inc. v. Covad Comm. Grp., Inc.*, 262 F.3d 1258, 1266–67 (Fed. Cir. 2001).

“It is the claims that define the metes and bounds of the patentee’s invention.” *Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1347–48 (Fed. Cir. 2009) (citation omitted). “The claims, not specification embodiments, define the scope of patent protection. 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.” *Id.* at 1348 (citation omitted).

Nevertheless, despite the primacy of claim terms, the Federal Circuit has clearly stated that “the 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, including the specification.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). The claims do not stand alone, but are instead part of a “fully integrated written instrument.” *Id.* at 1315 (internal quotation marks omitted). Therefore, while a court construing a patent claim may not import a limitation from the specification, “the claims must be read in

view of the specification, of which they are a part.” *Id.* (internal quotation marks omitted). Indeed, “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. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Ultimately, construction of a disputed patent claim is a holistic process:

[T]he interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

Id. at 1316.

In construing the claim, it is well-settled law that the Court “should look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics*, 90 F.3d at 1582. “Extrinsic evidence, although not part of the intrinsic evidence, may be used to aid a court in construing claim terms as they would be understood in the relevant art, but may not be used to vary the meaning disclosed by the patent itself.” *Goldenberg v. Cytogen, Inc.*, 373 F.3d 1158, 1164 (Fed. Cir. 2004).

The words of the claim are generally given their ordinary and customary meaning, unless special usage is “clearly stated in the patent specification or file history.” *Vitronics*, 90 F.3d at 1582 (citing *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1578 (Fed. Cir. 1996)). “The ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313. A person of ordinary skill in the art in question “is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and

usage in the field. The inventor's words that are used to describe the invention—the inventor's lexicography—must be understood and interpreted by the court as they would be understood and interpreted by a person in that field of technology.” *Multiform Dessicants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998).

After the court has construed the relevant patent claims, “a plaintiff must prove the presence of each and every claim element or its equivalent in the accused method or device” to prove infringement. *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1378 (Fed. Cir. 2011). The plaintiff bears the burden of proving infringement by a preponderance of the evidence. *See Kahn v. General Motors Corp.*, 135 F.3d 1472, 1476 (Fed. Cir. 1998). “To prove literal infringement, the patentee must show that the accused device [or method] contains every limitation in the asserted claims. If even one limitation is missing or not met as claimed, there is no literal infringement.” *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998) (internal citations omitted).

B. Claims 1 and 2 of the '000 Patent Describe a Design Process, Not a Manufacturing Process

At the outset, the Court rejects Defendants' argument that Claims 1 and 2 in the '000 Patent describe a manufacturing process. Defendants insist that a “plain reading” of Claims 1 and 2 “unequivocally establishes that the claims disclose a method for manufacturing a club head.” Defs.' Mem. at 10. In particular, Defendants argue that when Claims 1 and 2 refer to “removing” and “relocating” construction material to other areas of the golf club head, the claims plainly describe physical processes. *Id.*

Defendants also point to statements made by Parente, as well as language in the '000 Patent specification and prosecution history, in support of their argument. For instance, according to Parente, “construction material” as used in the '000 Patent “refers to the metal of

the golf club or the material of the golf club. And if you're talking about the removal of construction material, you're talking about the removal of metal at some point in the manufacturing process." Parente Dep. Tr. at 247:21–248:3. Similarly, the specification describes "the removal of the metal construction material, or whatever construction material is being used such as metal per se, graphite or the like." '000 Patent, col. 3 l. 11–14. Likewise, in remarks accompanying an amendment to the '000 Patent dated September 26, 1994, Chorne characterized his invention to the U.S. Patent Office as follows: "[t]he present invention is for a golf iron club head in which a determined amount of head material is removed from the top edge of the head, and redistributed at a location which does not interfere with ball-striking operation of the club." Krumholz Decl., Ex. F at 3.

Finally, Defendants argue that Plaintiff's proposed construction of Claims 1 and 2 is based on an improper conflation of the terms "construction material" and "weight." Defs.' Mem. at 13. According to Defendants, Plaintiff attempts to escape the plain meaning of Claims 1 and 2—that is, a manufacturing process involving the physical removal of steel or other construction material—by equating "construction material" with "weight," such that Claims 1 and 2 call for the removal of "weight" from a design and not removal of "construction material" from a physical golf club head. *Id.* Defendants insist "construction material" and "weight" do not mean the same thing; otherwise, "determining the weight of said removed construction material" in Claim 2 would be tantamount to saying "determining the weight of said weight" or "determining the construction material of said construction material." *Id.* at 13–14. Such a construction, Defendants argue, would also violate the rule of claim construction that "different claim terms are presumed to have different meanings." *Id.* at 14 (citing *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1382 (Fed. Cir. 2008)). It follows from this, Defendants assert, that

Claims 1 and 2 must necessarily refer to the literal removal and relocation of steel or other physical matter. *Id.*

In sum, Defendants assert that because “removing” and “relocating” construction material are physical processes, the ’000 Patent discloses a manufacturing process for producing golf club heads. Accordingly, because Plaintiff “offers no evidence that the [A]ccused [C]lubs were manufactured using the claimed method,” Defendants argue, summary judgment is appropriate on Defendants’ defense of non-infringement. Defs.’ Mem. at 12.

However, Defendants’ proposed construction of Claims 1 and 2 does not account for the contextualized meaning of words such as “remove,” “relocate,” “construction material,” and “weight distribution” as used in the ’000 Patent or as a POSITA in the field of golf club head design would understand those terms. First and foremost, Claims 1 and 2 explicitly claim “method[s] of *improving . . . weight distribution*,” not methods of physically manufacturing golf club heads. ’000 Patent, col. 4 l. 21–22, 33 (emphasis added). The specification uses similar language and consistently states the invention claimed in the ’000 Patent is a method for improving weight distribution, not a method for physically manufacturing golf club heads. *See, e.g.*, ’000 Patent Abstract (“For weight distribution in a golf iron club head, the use of construction material from a location thereon never used in play.”); *id.* at col. 1 l. 57–63 (“[I]t is an object to achieve, using weight distribution, sweet spot-enhancement.”).

Indeed, as described in the specification, the ’000 Patent differs from prior art due to the unique method of achieving improved weight distribution: while “[a]ll known prior art efforts at [lowering the CG] contemplate adding weight to the [bottom of the] club head,” resulting in a heavier club, the ’000 Patent avoids this problem by redistributing weight from the top to the bottom, maintaining the same overall weight. ’000 Patent, col. 1 l. 41–63. Thus, the novelty of

the '000 Patent lies not in an inventive method of physically manufacturing a golf club head, but in the design steps taken to achieve a golf club head with a lowered CG.

None of the language used in the '000 Patent relates to the physical processes actually employed in the manufacture of golf club heads. For instance, Peter J. Piotrowski, Defendants' liability expert, described the process of manufacturing a golf club head using terms and phrases such as "machine a master," "pour[] epoxy around [the] shrink master and it form[s] a mold for the wax," "inject it with wax," "feed the molten material into the golf club," and "dip it into a succession of . . . ceramic slurries that will harden to form a shell on the outside of the wax." Piotrowski Dep. Tr. at 170:8–16, 171:14–21, 172:13–15, 176:23–25, 177:10–16. The '000 Patent does not mention any such manufacturing processes. Consequently, the Court is unconvinced by Defendants' argument that Claims 1 and 2 of the '000 Patent describe a method of manufacturing golf club heads.

Instead, the Court construes Claims 1 and 2 as describing steps taken in designing a golf club head with the physical characteristics described in the '000 Patent. In other words, Claims 1 and 2 encompass a design process, not a manufacturing process; construction material is "removed" from the top central portion of a club head design and "relocated" to the lower heel and toe of the head such that the ultimate design reflects a club head with a lower CG. Hence, words such as "remove" and "relocate" are not to be interpreted literally to direct a machinist to remove steel from the top of the club head and then weld that steel to the bottom. Rather, the Court reads those words as convenient, though imprecise, descriptors of design principles commonly employed by golf club design engineers. More specifically, POSITAs in the field of club design would understand "remove" and "relocate" as referring to shifting construction material in a golf club head design in order to achieve a desired weight distribution.

Extrinsic evidence further supports the conclusion that the ordinary and customary meaning of words such as “remove” and “relocate” is the shifting or redistributing of construction material in a golf club head design. In his expert report, Parente describes terms such as “moved,” “relocated,” “redistributed,” and “replaced” as follows:

Those terms are used in the industry and are understood to mean that the design of the club head takes into account the weight that would be present at a particular part of the iron can be replaced with a lighter weight material and the weight thus saved could be moved elsewhere in the club head, accounting for the target or specified weight for that particular club head. No golf club manufacturer would first cast a club head entirely of steel and then remove a portion of it to be replaced with a lightweight polymer material. This would not be cost effective. Instead, club heads such as those accused of infringement herein, are cast and would be designed to provide for the installation of materials such as the lighter polymer topline.

Parente Expert Report at 19. Parente’s explanation comports with common sense. “Moving” and “relocating” are natural terms to use when discussing the distribution of mass in the design of a physical object.³ The fact that terms such as “move” and “relocate” may also describe physical processes does not detract from the conclusion that, as they are used in the ’000 Patent, and as a POSITA would understand them, those terms refer to a design method, not a manufacturing process.

Language used by Defendants in the patents underlying the Accused Clubs provides further evidence that the ordinary and customary meaning of words such as “remove” and “relocate” is the shifting or redistributing of mass or weight in a golf club head design. For example, the ’718 Patent describes a “recess” in the top portion of the club head that “*removes material* from the club head, allowing the opportunity to . . . lower the club head center of

³ Put simply, Defendants’ construction of Claims 1 and 2 is based on the wrong frame of reference. “Remove” and “relocate” refer to physical processes only if one assumes the ’000 Patent addresses an already-cast golf club head that is later altered via the method described in Claims 1 and 2. However, the Court reads the ’000 Patent as addressing changes made to a pre-existing golf club head design—*i.e.*, the steps described by Claims 1 and 2 alter the overall design, resulting in the design of a club head with a lower CG.

gravity.” ’718 Patent col. 2 l. 45–49 (emphasis added). Another of Defendants’ patents, the ’250 Patent, describes its subject matter as follows:

Removing mass from the highest areas of a club head will have the greatest effect on lowering the center of gravity. Adding the mass *removed* from the high areas to the bottom of the club head will further lower the center of gravity. . . . By *removing* the top line portion of the face from the casting and *replacing* it with a lightweight viscoelastic piece, anywhere from 20-50 grams are *removed* from the top of the head That *weight is redistributed* to the bottom portion of the club, lowering the center of gravity even further versus that same club head constructed entirely of a metallic material, such as steel.

’250 Patent col. 6 l. 51–64 (emphasis added). And during the prosecution of the ’718 Patent, Defendants Acushnet Company, Inc. and Cobra Golf Company stated that “[t]he purpose of the Applicant’s invention is to *remove* mass and weight from the top line of the golf club head. This inherently lowers the club head center of gravity, producing benefits as discussed in the written description. This also allows the club designer to *add* mass and weight to other, more beneficial areas of the club head without increasing the club head’s overall weight, producing benefits as also discussed in the written description.” Bresnick Decl., Ex. U (portions of ’718 Patent prosecution history) at 55, 84, 98 (emphasis added).

Defendants’ terminology also undermines their argument that the distinct definitions of “construction material” and “weight” imply Claims 1 and 2 describe a manufacturing process. In the ’250 Patent, Defendants first describe “[r]emoving *mass* from the highest areas of a club head,” but then say “[t]hat *weight* is redistributed to the bottom portion.” ’250 Patent col. 6 l. 51–64 (emphasis added). Similarly, during the prosecution of the ’718 Patent, Defendants said the purpose of the invention was “to remove *mass and weight* from the top line of the golf club head,” which “allows the *club designer* to add *mass and weight* to other, more beneficial areas of the club head.” Bresnick Decl., Ex. U at 55, 84, 98. According to Defendants’ own argument,

the language used in these two patents is illogical, simultaneously describing both a manufacturing process and a design method.

The Court rejects Defendants' cramped reading of "construction material" and "weight." It is true that "[i]n the absence of any evidence to the contrary, we must presume that the use of . . . different terms in the claims connotes different meanings." *CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000). Nonetheless, as described *supra*, the Court concludes there is substantial evidence that "construction material" and "weight," as used in the '000 Patent, mean the same thing. As noted above, the terms are used interchangeably in both the '000 Patent and Defendants' own patents. Therefore, there is little difference between a claim calling for the removal and relocation of construction material or mass from the top of a club head and a claim calling for the removal and relocation of weight from the top of a club head in the context of the '000 Patent.

In the end, the usage of terms such as "remove," "replace," and "redistribute" in Defendants' own patents weighs heavily against Defendants' argument that those same or similar terms, as used in the '000 Patent, refer to a manufacturing process. Defendants' patents clearly use those terms to describe the design principles underlying the physical characteristics of the inventions claimed in the patents. Defendants cannot use those terms to describe design principles in their own patents, while claiming those terms mean something entirely different in the '000 Patent. Moreover, in the context of the entire patent, the terms used in Claims 1 and 2 are more sensibly read to describe a design process, not a manufacturing process. As the Federal Circuit has stated, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Phillips*, 415 F.3d at 1316. Consequently, the Court concludes that the ordinary meaning of

terms in Claims 1 and 2 such as “remove,” “relocate,” and “construction material” is the shifting or redistributing of mass or weight in a golf club head design in order to achieve an optimal weight distribution.

C. The Design Elements of Claims 1 and 2

“To prove infringement, a plaintiff must prove the presence of each and every claim element or its equivalent in the accused method or device.” *Star Scientific, Inc.*, 655 F.3d at 1378. The plaintiff bears the burden of proving infringement by a preponderance of the evidence. *See Kahn*, 135 F.3d at 1476. “If even one limitation is missing or not met as claimed, there is no literal infringement.” *Mas-Hamilton Group*, 156 F.3d at 1211. Therefore, to prove infringement as to either Claim 1 or Claim 2, Plaintiff must show that the Accused Clubs reflect every single limitation contained in those respective claims.

Claim 1 of the '000 Patent, which recites a design method of improving weight distribution in a golf club head, comprises four limitations:

- Removing construction material from the top surface of a golf club head, from a location not used during ball-striking service of the golf club head;
- Relocating that removed construction material to clearance positions below the top surface at adjacent opposite ends of the bottom surface;
- Lack of any “adverse consequence” due to such removal and relocation; and
- The removal and relocation contribute to increasing the height attained by a golf ball struck by the club head.

See '000 Patent col. 4 l. 16–32. Claim 2 varies from Claim 1 primarily in that it requires: (1) the overall weight of the club head must remain constant; (2) construction material must be removed from the “central portion” of the top surface, but there is no “not used during ball-striking service” restriction; (3) the relocated construction material must be of a “determined weight”

equal to the weight of the removed material; and (4) there is no “adverse consequence” limitation. Otherwise, Claims 1 and 2 are essentially the same. *See id.* at col. 4 l. 33–44.

D. The Accused Clubs Do Not Infringe Claim 1 Because They Do Not Practice the “Location Not Used During Ball-Striking Service” Limitation

The Court finds the Accused Clubs do not infringe Claim 1 of the ’000 Patent. Claim 1 requires removal and relocation of construction material “whereby said removed construction material from a location not used during ball-striking service of said golf iron, is of no adverse consequence thereto and said removed construction material in said relocated positions contributes to increasing said height attained by a struck golf ball.” ’000 Patent col. 4 l. 26–31. Claim 1 does not specifically define “location not used during ball-striking service.” As explained below, the Court concludes this phrase refers to any area of the club head face because any area of the club head face may be used to strike a golf ball. Consequently, Claim 1 prohibits removal of construction material from the club head face, and because the Accused Clubs remove material from the center middle part of the club face, they do not infringe Claim 1.

Language in the specification addresses the areas from which to remove construction material in terms of where a golf ball is normally or typically—as opposed to actually—struck. For example, the specification instructs that removal of material from the top edge “results from the recognition that, in the *typical* use of a golf club iron, the ball is never *intentionally* struck near or at the top of the club face.” *Id.* at col. 3 l. 52–54 (emphasis added). The specification also declares that a “top edge” hit with an iron “for all practical purposes, never occurs.” *Id.* at col. 4 l. 5–6. Similarly, in his expert report, Parente states the center topline location of the club “is a part of the club head that is not normally used for striking a golf ball during play.” Parente Expert Report at 12–13. Based on this evidence, it is clear that the center topline is an area of the golf club head not typically used to strike a golf ball.

However, that the center topline is not normally used to strike a golf ball does not mean it is “a location not used during ball-striking service” within the meaning of Claim 1. Although center topline hits may be very rare and never intentional, the top edge is nevertheless an area sometimes used during ball-striking service, a fact conceded by Parente. *See* Parente Dep. Tr. at 267:6–12 (“**Q:** Golfers do, though, from time to time at least, hit a ball in the upper middle portion of a face . . . do they not? **A:** I would have to agree with you that golfers hit the ball in every location of the face.”). Parente admits even experienced golfers sometimes hit a golf ball using “the top middle of a club face.” *Id.* at 267:15–24.

In light of this fact, the Court does not read “a location not used during ball-striking service” to include the center topline of the golf club face. Consistent with Parente’s admissions, “a location not used during ball-striking service” cannot include any portion of the club head face. Instead, because every location of the club face is sometimes used to strike a golf ball, “a location not used during ball-striking service” necessarily refers to some location of the club head other than the face, such as the rear area. *See e.g., id.* at col. 3 l. 30–35 (noting the common practice of removing construction material from the back of the golf club head). Had Claim 1 recited removal of material from a location not “normally” or “typically” used to strike a golf ball, the Court might have concluded the claim permits the removal of material from the center topline. But, as drafted, Claim 1 does not permit removal of material from that location.

In arriving at this construction of Claim 1, the Court emphasizes that “[t]he claims, not specification embodiments, define the scope of patent protection. 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.” *Kara Tech.*, 582 F.3d at 1348. The phrase “a location not used during ball-striking service,” used in Claim 1, is broad and encompasses any

location on the golf club head that is *actually* used to strike a golf ball. The use of words such as “typically” or “normally” logically narrows the meaning of the phrase “not used during ball-striking service.” However, those words are not found in Claim 1 and therefore do not limit its terms. The phrase therefore carries the broader meaning of a location that golfers do not *actually* use to strike a golf ball.

Moreover, the presence of words such as “typically” or “normally” in a detailed embodiment “is not enough . . . to limit the patentee’s clear, broader claims.” *Id.* at 1347. In this case, “the patentee did not act as his own lexicographer or disavow claim scope”—*i.e.*, depart from the clear meaning of claim terms through special definitions found in the specification. *Id.* “To act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term’ other than its plain and ordinary meaning. It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must ‘clearly express an intent’ to redefine the term.” *Thorner v. Sony Computer Entertainment Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Here, the ’000 Patent does not clearly indicate that “a location not used during ball-striking service” bears the narrower definition of a location not typically or normally used during ball-striking service.

In fact, to the contrary, the ’000 Patent specification expressly disavows any possible narrowing of the claim terms due to the specification: “it is to be understood that [the disclosed golf club head and method are] merely illustrative of the presently preferred embodiment of the invention, and that no limitations are intended to the detail of construction or design herein shown other than as defined in the appended claims.” ’000 Patent col. 4 l. 10–14. In sum, because the specification does not expressly limit the broad terms of Claim 1, the Court construes the phrase “a location not used during ball-striking service” as contemplating any

location on the club head face, the entirety of which Parente has recognized golfers sometimes use to strike a golf ball.

The design method practiced in the Accused Clubs removes construction material from the center topline, an area that is sometimes, even if unintentionally, used to strike a golf ball. Therefore, the Accused Clubs do not practice the limitation that construction material be removed “from a location not used during ball-striking service of the golf club head.” Accordingly, the Court concludes the Accused Clubs do not infringe Claim 1 of the ’000 Patent.

E. The Accused Clubs Do Not Infringe Claim 2 Because They Do Not Practice the “Determined Weight” Limitation

The Court also finds the Accused Clubs do not infringe upon Claim 2 of the ’000 Patent. Claim 2 requires “removing construction material from a central portion of [the] top surface, determining the weight of said removed construction material,” and “embodying as part of [the bottom of the club] said removed construction material having said determined weight.” ’000 Patent col. 4 l. 37–42. The redistribution of material is made “without any increase in the overall weight of the club head.” *Id.* at col. 4 l. 43–44. These limitations require that during the design process, *all* of the construction material or weight removed from the top of the club be embodied in the selected bottom areas, with no additional weight added elsewhere on the club head. Parente agrees that the “determined weight” limitation in Claim 2 does not permit any of the removed mass or weight to remain at the top. Parente Dep. Tr. at 282:5–11 (“Q: So what Claim 2 requires is the weight that is removed from the . . . top surface, needs in toto to be allocated to the bottom areas of the said toe and heel of the club, correct? A: Yes.”).

However, the record shows and Plaintiff admits that each of the Accused Clubs incorporates a lightweight polymer insert along the top surface of the club head. Pl.’s 56.1 St. at ¶ 21. The polymer insert in each of the Accused Clubs replaces an equivalent volume of

construction material, and the difference in weight between the insert and the removed construction material is then redistributed to the bottom areas of the golf club head. Parente Dep. Tr. at 279:6–13, 284:19–285:10. The “determined weight” means the weight of all of the construction material removed from the top of the club head design, yet some of that weight remains in the design of the club head topline in the form of a polymer insert. Because the design method of the Accused Clubs indisputably does not involve relocating all of the determined weight from the top to the bottom of the club, Plaintiff cannot show the Accused Clubs infringe Claim 2 of the ’000 Patent.

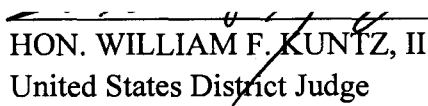
III. Conclusion

For the foregoing reasons, the Court grants summary judgment in favor of Defendants. Accordingly, all infringement claims by Plaintiff against Defendants as to the design methods described in Claims 1 and 2 of the ’000 Patent are dismissed with prejudice. The Clerk of Court is directed to enter judgment for Defendants that the Accused Clubs do not infringe the ’000 Patent, and to close the case.

SO ORDERED

Dated: Brooklyn, New York
April 17, 2013

s/WFK


HON. WILLIAM F. KUNTZ, II
United States District Judge