

United States District Court,
N.D. Georgia, Rome Division.

MUZZY PRODUCTS, CORP,
Plaintiff.

v.

SULLIVAN INDUSTRIES, INC., Dennis E. Sullivan, Connie Sullivan, Keith M. Sullivan,
Defendants.

No. CIV.A.4:01-CV-143-HLM

March 12, 2002.

In a patent infringement case, defendants moved for summary judgment of non-infringement and for oral hearing, and plaintiff moved for summary judgment of infringement. The District Court, Harold L. Murphy, J., held that: (1) patent for arrowheads were not literally infringed, and (2) patent was not infringed under the doctrine of equivalents.

Motion for summary judgment of non-infringement granted and other motions denied.

4,558,868. Not Infringed.

David H. Cofrin, Lamar Archer & Cofrin, Atlanta, GA, John B. Lunseth, II, phv, Gerald E. Helget, phv, Michael M. Lafeber, phv, Briggs & Morgan, Minneapolis, MN, for Muzzy Products, Corp., plaintiff.

Larry A. Roberts, Michael Kenneth Dixon, Kilpatrick Stockton, Atlanta, GA, for Sullivan Industries, Inc., Dennis E. Sullivan, Connie Sullivan, Keith M. Sullivan, defendants.

ORDER

HAROLD L. MURPHY, District Judge.

This patent infringement case is before the Court on Defendants' Motion for Summary Judgment of Non-Infringement [11], Plaintiff's Motion for Summary Judgment of Infringement [25], and Defendants' Motion for Oral Hearing [24].

I. Background

A. The Parties

Plaintiff is a Georgia corporation with its principal place of business in Cartersville, Georgia. (Compl.para. 3.) Plaintiff markets and sells archery equipment and accessories, including bow strings, arrows, and arrowheads. (Pl.'s Resp. Defs.' Stmt. Material Facts para. 1, admitting Defs.' Stmt. Material Facts para. 1.) Defendants do not dispute, for purposes of Defendants' summary judgment motion, that Plaintiff owns United States Patent Number 4,558,868 (the " '868 Patent"), which was issued on December 17, 1985. (Compl. para. 3; Defs.' Stmt. Material Facts para. 1.)

Defendant Sullivan Industries, Inc. is a Georgia corporation that has its principal place of business in Lakemont, Georgia. (Decl. of Dennis Sullivan para. 1.) Defendant Sullivan Industries, Inc. manufactures, markets, and sells a type of arrowhead known as a broadhead. (Id. para. 1-2.) A broadhead is an arrowhead that has two or more blades and is typically used for bow hunting. (Id. para. 3.) The chief product of Defendant Sullivan Industries, Inc. is a broadhead sold under the name "InnerlocTM." (Id. para. 2.)

Defendant Dennis Sullivan is the president of Sullivan Industries. (Sullivan Decl. para. 2.) Defendant Connie Sullivan is the secretary of Defendant Sullivan Industries. (Answer para. 6.) Defendant Kevin Sullivan is an employee of Defendant Sullivan Industries. (Pl.'s Resp. Defs.' Stmt. Material Facts para. 1, admitting Defs.' Stmt. Material Facts para. 3.) Defendants Dennis and Connie Sullivan are the sole shareholders of Sullivan Industries. (Id.)

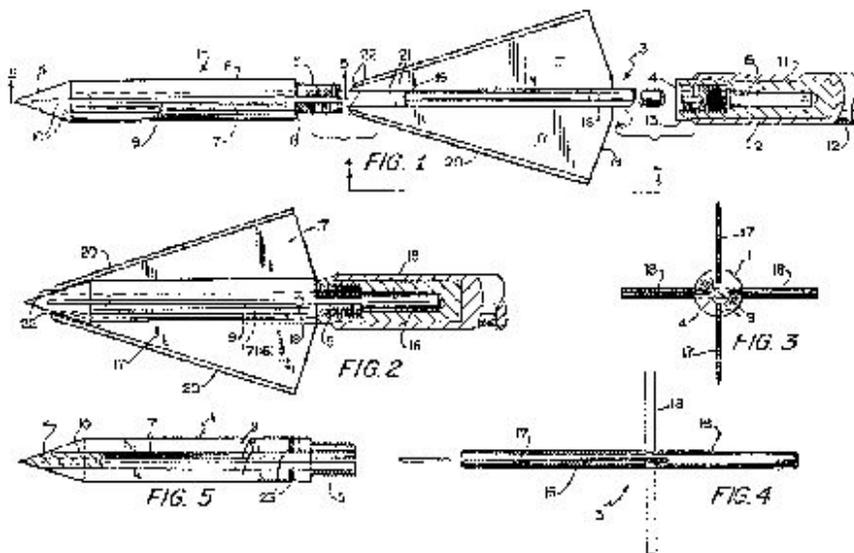
Plaintiff alleges that Defendants infringe, contributorily infringe, and induce infringement of the '868 patent by making, using, selling, and offering for sale broadhead arrowheads embodying the patented invention. (Com pl.para.para. 8-19.)

B. Undisputed Factual Background and Claims of the '868 Patent FN1

FN1. All facts related in this Part are gleaned from either the '868 patent or from Defendants' Statement of Material Facts for Which There is No Issue to be Tried. Plaintiff does not dispute any of the facts listed in Defendants' Statement of Material Facts for Which There is No Issue to be Tried, with the exception of Defendants' paragraph 6. (Pl's Resp. Defs.' Stmt. Material Facts para.para. 1-2.) See *infra* Part I.D. for discussion of paragraph 6.

The '868 patent, entitled "Arrowhead with Interchangeable Elements," relates generally to an arrowhead with replaceableblade assemblies, capable of conversion to any one of various types of broadheads disclosed. ('868 patent, col. 3, lines 13-16.) The '868 patent describes numerous embodiments of arrowheads. (*See generally* id., cols. 4-14 (describing seven embodiments).)

The embodiments described in the '868 patent share certain common features: (1) a "main body" (also called an "arrowhead body," a "central body," or a "body") having longitudinal slots; and (2) a "blade assembly," mounted to the body, comprised of two or more blades which are received within the slots in the body. ('868 patent, col. 14, claim 1.) In each embodiment, the blade assembly includes two or more blade elements which are either formed as a unitary structure, rigidly secured to a common connecting structure (known as a "mandrel"), or mutually engaged. (Pl.'s Resp. Defs.' Stmt. Material Facts para. 1, admitting Defs.' Stmt. Material Facts para. 5.) Figure 1 of the '868 patent, reproduced below, shows a main body 1 and a representative blade assembly 3, in which two blades 17 are rigidly joined to a common mandrel 16. ('868 patent, col. 4, lines 19-20, 57-58.)



All of the claims in the '868 patent require a blade assembly comprising at least two blades or at least two blade units. ('868 patent, col. 14, line 15, through col. 18, line 55.)

Plaintiff asserts that the InnerlocTM product infringes, both literally and under the doctrine of equivalents, claims 2, 4, 11, and 12 of the '868 patent. (Pl.'s Mem. Resp. Mot. Summ. J. s. II.) These claims provide as follows:

2. In an arrowhead, the combination of

an elongated main body adapted to be secured to the tip of an arrowshaft and having

a leading end, an intermediate portion and a trailing end,

an axial space which opens through one end of the body and extends for at least a substantial part of the length of the body,

a plurality of slots which extend both longitudinally and laterally relative to the main body, open longitudinally through said one end of the body and open both outwardly [through] the outer surface of the body and inwardly into the axial space, and

at least one internal stop surface which is spaced from said one end of the body toward the other end, faces toward said one end and is axially exposed toward said one end via said axial space and said slots;

a blade assembly comprising at least two blades and being constructed and arranged to be inserted into the main body via the open ends of the axial space and the slots until the blades are each accommodated by a different one of the slots and the assembly is engaged with said at least one stop surface; and

a closure member releasably secured to said one end of the main body to close the open ends of the slots and secure the blade assembly in a position in which the assembly is clamped axially against said at least one stop surface,

said blade assembly including an elongated mandrel which carries said blades;

said axial space comprising a bore dimensioned to accommodate said mandrel,

said bore having a blind end which constitutes said at least one stop surface;

said slots and said bore opening through the leading end of the main body.

4. The combination defined by claim 2, wherein the slots also have blind ends which constitute stop surfaces to be engaged by the blades.

11. In an arrowhead, the combination of an elongated main body adapted to be secured to the tip of a tubular arrow shaft, said tubular arrow shaft having a leading end portion,

said main body having a leading end, an intermediate portion and a trailing end,

an axial space which opens through said leading end of body and extends for at least a substantial part of the length of the body,

a plurality of slots which extend both longitudinally and laterally relative to the main body, open [longitudinally] through said leading end of the body and open both outwardly through the outer surface of the body and inwardly into the axial space,

the trailing end portion of said main body shaped and dimensioned so as to be insertable into said leading end portion of said tubular arrow shaft and secured thereto, and

at least one internal stop surface which is spaced from said leading end of the body toward the trailing end, faces toward said leading end and is axially exposed toward said one end via said axial space and said slots;

a blade assembly comprising at least two blades and being constructed and arranged to be inserted into the main body via the open ends of the axial space and the slots until the blades are each accommodated by a different one of the slots and the assembly is engaged with said at least one stop surface; and

a closure member releasably secured to said one end of the main body to close the open ends of the slots and secure the blade assembly in a position in which the assembly is clamped axially against said at least one stop surface.

12. In an arrowhead, the combination of an elongated main body adapted to be secured to the tip of a tubular arrow shaft and having

a leading end, an intermediate portion and a trailing end,

an axial space which opens through the leading end of the body and extends for at least a substantial part of the length of the body,

a plurality of slots which extend both longitudinally and laterally relative to the main body, open longitudinally through said leading end of the body, extend to a location near the trailing end of the main body and open both outwardly through the outer surface of the body and inwardly into the axial space,

said main body having a right circular cylindrical outer surface extending from the trailing end to a point near said leading end and being of such a diameter as to be slidably embraceable by the tip portion of said tubular arrow shaft, and

at least one internal stop surface which is spaced from said one end of the body toward the other end, faces

toward said one end and is axially exposed toward said one end via said axial space and said slots;

a blade assembly comprising at least two blades and being constructed and arranged to be inserted into the main body via the open ends of the axial space and the slots until the blades are each accommodated by a different one of the slots and the assembly is engaged with said at least one stop surface; and

a closure member comprising a point member releasably secured to said one end of the main body to close the open ends of the slots and secure the blade assembly in a position to which the assembly is clamped axially against said at least one stop surface.

U.S. Patent No. 4,558,868, cols. 14-18.

C. Undisputed Factual Background of the Accused Product FN2

FN2. All facts related in this Part are gleaned from Defendants' Statement of Material Facts for Which There is No Issue to be Tried. Plaintiff does not dispute any of the facts listed in Defendants' Statement of Material Facts for Which There is No Issue to be Tried, with the exception of Defendants' paragraph 6. (Pl.'s Resp. Defs.' Stmt. Material Facts para. 1-2.) See *infra* Part I.D. for discussion of paragraph 6.

The InnerlocTM broadhead is manufactured and sold by Defendant. (Defs.' Stmt. Material Facts para. 1; Sullivan Decl. para. 2.) Defendant offers the InnerlocTM in a variety of sizes and in blade configurations from two to five blade elements. (Defs.' Stmt. Material Facts para. 9; Sullivan Decl. para. 3.) All versions of the InnerlocTM broadheads consist of three components: (1) a body; (2) a plurality of independent blades; and (3) a tip structure. (Defs.' Stmt. Material Facts para. 9; Sullivan Decl. para. 3; *see also* Sullivan Decl. Ex. A, Fig. 1 (reproduced below).)

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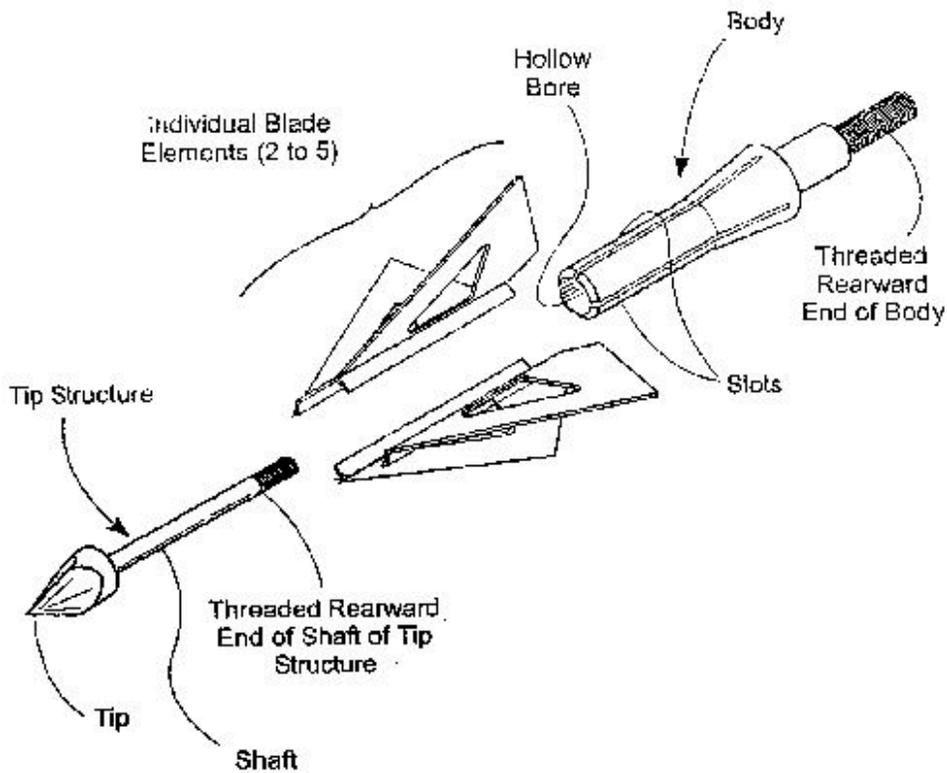


Figure 1

EXHIBIT A

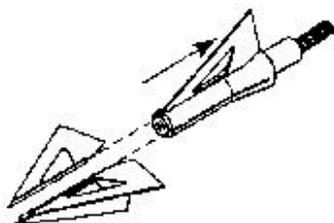
The forward end of the body contains a hollow bore that extends through a major portion of the body. (Defs.' Stmt. Material Facts para. 10; Sullivan Decl. para. 4.) The side walls of the body feature longitudinal slots that extend from the forward end of the body to a location forward of the rear end of the body. (Defs.' Stmt. Material Facts para. 10; Sullivan Decl. para. 4.) The longitudinal slots receive the individual blade elements. (Defs.' Stmt. Material Facts para. 10; Sullivan Decl. para. 4) The tip structure consists of a tip and a shaft with a threaded rearward end. (Defs.' Stmt. Material Facts para. 11; Sullivan Decl. para. 5.) The shaft of the tip structure fits into the forward end of the hollow bore contained in the body. (Defs.' Stmt. Material Facts para. 11; Sullivan Decl. para. 5.) The shaft of the tip structure screws into a threaded receptacle in the base of the bore. (Defs.' Stmt. Material Facts para. 11; Sullivan Decl. para. 5.)

To assemble the InnerlocTM broadhead, each blade is individually inserted, one at a time, into a separate slot in the body. (Defs.' Stmt. Material Facts para. 13; Sullivan Decl. para. 7; *see also* Sullivan Decl. Ex. C (reproduced below), Steps 1-4.) When all of blades have been positioned within the slots, the shaft of the tip structure is inserted into the bore of the body and the threaded rearward end of the tip structure is screwed

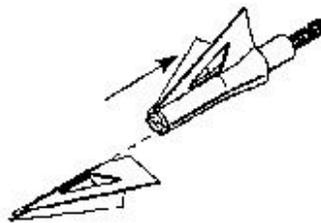
into the threaded receptacle in the base of the bore of the body. (Defs.' Stmt. Material Facts para. 13; Sullivan Decl. para. 7; *see also* Sullivan Decl. Ex. C (reproduced below), Step 5.)

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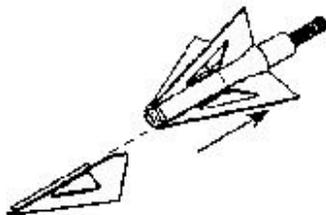
**Assembly of Sullivan Innerloc® Broadhead
(4-blade version)**



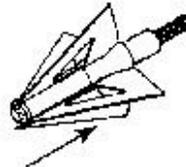
Step 1: First blade mounted to main body



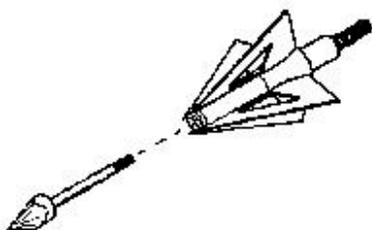
Step 2: Second blade mounted to main body



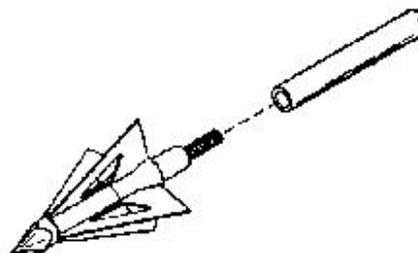
Step 3: Third blade mounted to main body



Step 4: Fourth blade mounted to main body



Step 5: Tip structure mounted to main body



Step 6: Assembled broadhead mounted to arrow shaft

EXHIBIT C

D. Disputed Facts Relating to Non-Infringement of the '868 Patent

Defendant asserts that the '868 patent "does not show any embodiments in which independent blade elements are individually mounted to the body." (Defs.' Stmt. Material Facts para. 5.) Plaintiff contends that Figures 23 and 24 in the '868 patent "reveal an embodiment wherein separate, unconnected, independent blades are capable of being individually mounted to the body." (Pl.'s Resp. Defs.' Stmt. Material Facts para. 2.)

II. Standard for Summary Judgment in Patent Cases

United States District Courts have jurisdiction over suits " 'arising under any Act of Congress relating to patents.' " *Helfgott & Karas, P.C. v. Dickenson*, 209 F.3d 1328, 1333 (Fed.Cir.2000) (quoting 28 U.S.C. s. 1338(a) (1994)). The Federal Circuit Court of Appeals enjoys exclusive appellate jurisdiction over appeals " 'based, in whole or in part, on section 1338 [of Title 28].' " *Id.* (quoting 28 U.S.C.A. s. 1295(a)(1)(1994)) (alteration in original).

[1] This lawsuit involves claims of patent infringement. Thus, this Motion for Summary Judgment for Non-Infringement is within the exclusive appellate jurisdiction of the Federal Circuit Court of Appeals, and the Court will follow the Federal Circuit's standards for summary judgment in patent cases.

[2] "Summary judgment is appropriate in a patent case, as in other cases, when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law." *Nike Inc. v. Wolverine World Wide, Inc.*, 43 F.3d 644, 646 (Fed.Cir.1994). In a motion for summary judgment of non-infringement, the Court "determines whether, after resolving reasonable factual inferences in favor of the patentee, ... no reasonable jury could find infringement." *Ishida Co., Ltd. v. Taylor*, 221 F.3d 1310, 1315 (Fed.Cir.2000). "This standard applies whether the court examines literal infringement or infringement under the 'doctrine of equivalents.' " *Kudlacek v. DBC, Inc.*, 115 F.Supp.2d 996, 1020 (N.D.Iowa 2000) (citing *CAE Screenplates, Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1312 (2000)).

III. Defendant's Motion for Summary Judgment of Non-Infringement

[3] " 'An infringement analysis entails two steps. The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing.' " *Karlin Technology, Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971 (Fed.Cir.1999) (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed.Cir.1995) (en banc), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996)). The Court addresses those steps in turn below.

A. Construction of Claims 2, 4, 11, and 12 of the '868 Patent

1. Rules of Construction

[4] [5] Claim construction is an issue of law for the Court to resolve. *CAE Screenplates*, 224 F.3d at 1316. "The process of construing a claim begins with the language of the claim itself." *Kudlacek*, 115 F.Supp.2d at 1021 (citing *CAE Screenplates*, 224 F.3d at 1316-17). "The claim language, of course, defines the bounds of claim scope." *York Prod., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572 (Fed.Cir.1996). "The central focus of the infringement inquiry remains on the claim language, as illuminated by the written description and the prosecution history." *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1355 (Fed.Cir.2000).

[6] [7] [8] The Court must consider the following intrinsic evidence of the record in construing the claims in Plaintiff's '868 patent: "the words of the claims themselves ... [and] the specification, to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning." *FN3 Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996). The Court also may consider a third source of intrinsic evidence, the prosecution history of the patent, if the claim and the specification are not dispositive.

Id. In most situations, analysis of these three sources of intrinsic evidence will suffice to resolve any ambiguity in a disputed claim term, and the Court may not rely on extrinsic evidence. *Id.* at 1583.

FN3. The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication. *Vitronics*, 90 F.3d at 1582 (citing *Markman*, 52 F.3d at 979).

[9] [10] As to the interpretation of specific terms used in the claims, "[w]ithout evidence in the patent specification of an express intent to impart a novel meaning to a claim term, the term takes on its ordinary meaning." *Optical Disc*, 208 F.3d at 1334. To determine the ordinary meaning of a word, the Court may rely on the dictionary definition of the term.FN4 *Id.* at 1335.

FN4. "Although technical treatises and dictionaries fall within the category of extrinsic evidence, as they do not form a part of an integrated patent document, they are worthy of special note. Judges are free to consult such resources at any time in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." *Vitronics*, 90 F.3d at 1584 n. 6.

2. Disputed Terms of Claims of Claims 2, 4, 11, and 12

The parties dispute three terms that each are present in claims 2, 4,FN5 11, and 12:(1) "blade assembly comprising at least two blades"; (2) "closure member releasably secured to said one end of the main body"; and (3) "a mandrel that carries said blades."

FN5. Although the terms are not literally present in claim 4, the terms are incorporated into claim 4 because claim 4 is a dependent claim referring to claim 2.

3. Meaning of the Disputed Terms of Claims of Claims 2, 4, 11, and 12

a. Meaning of "Blade Assembly Comprising at Least Two Blades"

[11] The Court has not found, nor have the parties referred the Court to, anything in the patent specification that conveys an "express intent to impart a novel meaning," *Optical Disc*, 208 F.3d at 1334, to the claim term "blade assembly." The term blade assembly therefore takes on its ordinary meaning. *Id.*

The dictionary defines "blade" as: "1. The flat cutting part of a sharpened weapon or tool." American Heritage(R) Dictionary of the English Language: Fourth Edition (2000). The dictionary defines "assembly" as: "4a. The putting together of manufactured parts to make a completed product, such as a machine or electronic circuit. 4b. A set of parts so assembled." *Id.*

The ordinary meaning of "blade assembly," therefore, is a set of parts, put together to make a completed product, in which said set of parts includes at least one part that is the flat cutting part of a sharpened weapon. Further, the ordinary meaning of "blade assembly comprising at least two blades" is: a set of parts, put together to make a completed product, in which said set of parts includes among its members either (1) at least two parts that each are the flat cutting part of a sharpened weapon; or (2) one part that has at least two flat cutting parts of a sharpened weapon.

b. Meaning of "Closure Member Releasably Secured to Said One End of the Main Body"

[12] The Court has not found, nor have the parties referred the Court to, anything in the patent specification that conveys an "express intent to impart a novel meaning," *Optical Disc*, 208 F.3d at 1334, to the claim

term "closure member releasably secured." The term "closure member releasably secured" therefore takes on its ordinary meaning. *Id.*

The dictionary defines "closure" as "2. Something that closes or shuts" and "close" as "4. Having little or no space between elements or parts; tight and compact ... 13. Fitting tightly." American Heritage(R) Dictionary. Therefore, the ordinary meaning of "closure member" is something whose purpose is to cause other parts either to fit tightly together, or to fit together such that the parts have little or no space between them.

"Secure" is defined as: "2. To make firm or tight; fasten." American Heritage(R) Dictionary. "Releasably" is the adverb form of "releasable," which the dictionary defines as: "2. Intended or configured to release." *Id.* The dictionary defines "release" as: "2. To free from something that binds, fastens, or holds back." *Id.* Thus, the ordinary meaning of "releasably secure" is something that is bound, fastened, or held back, but is configured such that it can be freed from being bound, fastened or held back.

Combining the ordinary meaning of "closure member" and "releasably secured" yields the following ordinary meaning for "closure member releasably secured": something whose purpose is to cause other parts either to fit tightly together, or to fit together such that the parts have little or no space between them; and whose configuration is such that the parts can be freed from being fit together.

c. Meaning of "A Mandrel That Carries Said Blades"

[13] The Court has not found, nor have the parties referred the Court to, anything in the patent specification that conveys an "express intent to impart a novel meaning," *Optical Disc*, 208 F.3d at 1334, to the claim term "a mandrel that carries said blades." The term "a mandrel that carries said blades" therefore takes on its ordinary meaning. *Id.*

The dictionary defines "mandrel" as "3. A shaft on which a working tool is mounted" and defines carry as "6. To hold or be capable of holding ... 7a. To support." American Heritage(R) Dictionary. Hence, the ordinary meaning of "a mandrel that carries said blades" is a shaft on which a blade is mounted, held, or supported.

B. Non-infringement of the '868 Patent

1. Literal Infringement of Claims 2, 4, 11, and 12

a. Literal Infringement Standard

[14] "Literal infringement of a claim exists when every limitation recited in the claim is found in the accused device, i.e., when the properly construed claim reads on the accused device exactly." *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 532 (Fed.Cir.1996). "Limitation," as used in the context of patent infringement, is synonymous with "element." *Black's Law Dictionary* 538 (7th ed.1999). Thus, literal infringement of the '868 patent exists when every element recited in claim 2, 4, 11, or 12 is found in the InnerlocTM broadhead.

b. Literal Infringement Analysis of "Blade Assembly Comprising at Least Two Blades"

[15] Claims 2, 4, 11, and 12 each contain the limitation: "a blade assembly comprising at least two blades and being constructed and arranged to be inserted into the main body." As explained in the preceding paragraph, for the InnerlocTM to literally infringe these claims, the InnerlocTM must have a blade assembly, as defined *supra* Part III.A.3.a., that has been constructed and arranged to be inserted into the

main body of the Innerloc™ broadhead.

The Court observes that during the process of assembling the Innerloc™ broadhead, no blade assembly is ever inserted into the main body of the Innerloc™ broadhead. Rather, individual blades are inserted, one at a time, FN6 into the main body of the Innerloc™ broadhead, and then the tip structure is inserted and fastened to the main body.

FN6. The Court conjectures that two or more blades could possibly be simultaneously inserted into the main body of the Innerloc™ broadhead. Two or more unconnected blades, however, are not a "blade assembly ... constructed and arranged to be inserted into the main body" as stated in Claims 2, 11, and 12. (*See* '868 patent, Claims 2, 11, 12.)

Plaintiff argues, however, that the Innerloc™ broadhead includes a blade assembly consisting of two or more manufactured blades which are put together to form a broadhead, and that no limitation is present in the claims which requires that the blade assembly be assembled prior to being connected to the main body. (Pl.'s Resp. Defs.' Mot. at 8.) Assuming, without deciding, that no such limitation exists, the Court still concludes that the Innerloc™ broadhead does not contain-as required by Claims 2, 4, 11, and 12-a "blade assembly ... constructed and arranged to be inserted into the main body."

The Innerloc™ broadhead does not have a blade assembly that is to be inserted *into* the main body. What is inserted into the main body are the blades and the tip structure. These parts, however, are not a "blade assembly," because they have not been "put together to make a completed product," as required by the construction given *supra* Part III.A.3.a.

The blades and tip structure, rather, become part of a blade assembly only when the individual blades are attached to the main body by the tip structure. The only assembly, therefore, that meets the definition of "blade assembly" in the Innerloc™ broadhead is the entire Innerloc™ broadhead itself, consisting of the tip structure, the blades, and the main body. Given this construction, the Innerloc™'s blade assembly is not a "blade assembly ... to be inserted into the main body." As a matter of logic, the main body cannot simultaneously be a part of the blade assembly and be the part into which the blade assembly is inserted.

The Court concludes, as a matter of law, that the Innerloc™ broadhead does not contain a "blade assembly comprising at least two blades and being constructed and arranged to be inserted into the main body." The Innerloc™ broadhead therefore does not contain every limitation of Claims 2, 4, 11, or 12 of the '868 patent. Because the Innerloc™ broadhead does not contain every limitation of any these claims, it does not literally infringe the '868 patent. Unless the Innerloc™ broadhead infringes the '868 patent under the doctrine of equivalents, see *infra* Part III.B.2., the Court's conclusion entitles Defendant to a summary judgment of non-infringement.

c. Literal Infringement Analysis of "Closure Member Releasably Secured to Said One End of the Main Body"

[16] Claims 2, 4, 11, and 12 each contain the limitation: "closure member releasably secured to said one end of the main body." As explained *supra* Part III.B.1.a. (first paragraph), for the Innerloc™ to literally infringe these claims, the Innerloc™ must have a closure member releasably secured, as defined *supra* Part III.A.3.b., to one end of the main body of the Innerloc™ broadhead.

The Court finds that the tip structure is a closure member releasably secured-via machined threads-to the main body of the Innerloc TM broadhead. The tip structure, however, is not releasably secured to "one end" of the main body; rather, the tip structure is releasably secured to a threaded hollow bore which is located in the intermediate section of the main body.

The Court concludes, as a matter of law, that the Innerloc TM broadhead does not contain a "closure member releasably secured to said one end of the main body." The Innerloc TM broadhead therefore does not contain every limitation of Claims 2, 4, 11, or 12 of the '868 patent. Because the Innerloc TM broadhead does not contain every limitation of any these claims, it does not literally infringe the '868 patent. Unless the Innerloc TM broadhead infringes the '868 patent under the doctrine of equivalents, see *infra* Part III.B.2., the Court's conclusion entitles Defendant to a summary judgment of non-infringement.

d. Literal Infringement Analysis of "A Mandrel That Carries Said Blades"

[17] Claims 2 and 4 each contain the limitation "a mandrel that carries such blades." As explained *supra* Part III.B.1.a. (first paragraph), for the Innerloc TM to literally infringe these claims, the Innerloc TM must have "a mandrel that carries said blades," as defined *supra* Part III.A.3.c.

The Court finds that the tip structure of the Innerloc TM is a shaft on which blades are supported. The tip structure holds the "legs" of the blades against the inner diameter of the main body. (*See* Sullivan Decl. Ex. B, Fig. 3, reproduced below.) The tip structure, therefore, falls within the ordinary meaning of the phrase "mandrel that carries such blades."

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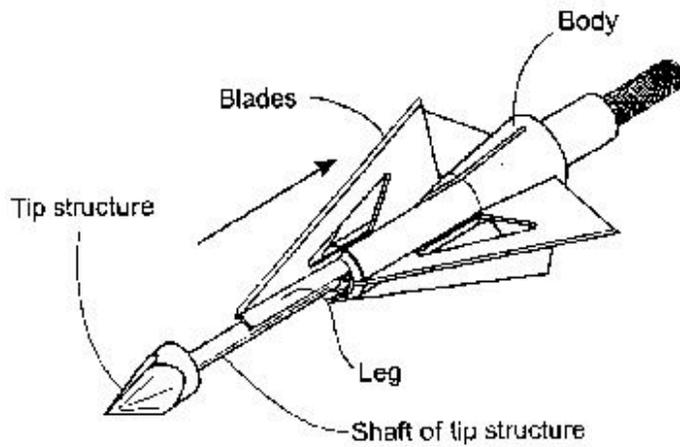


Figure 2

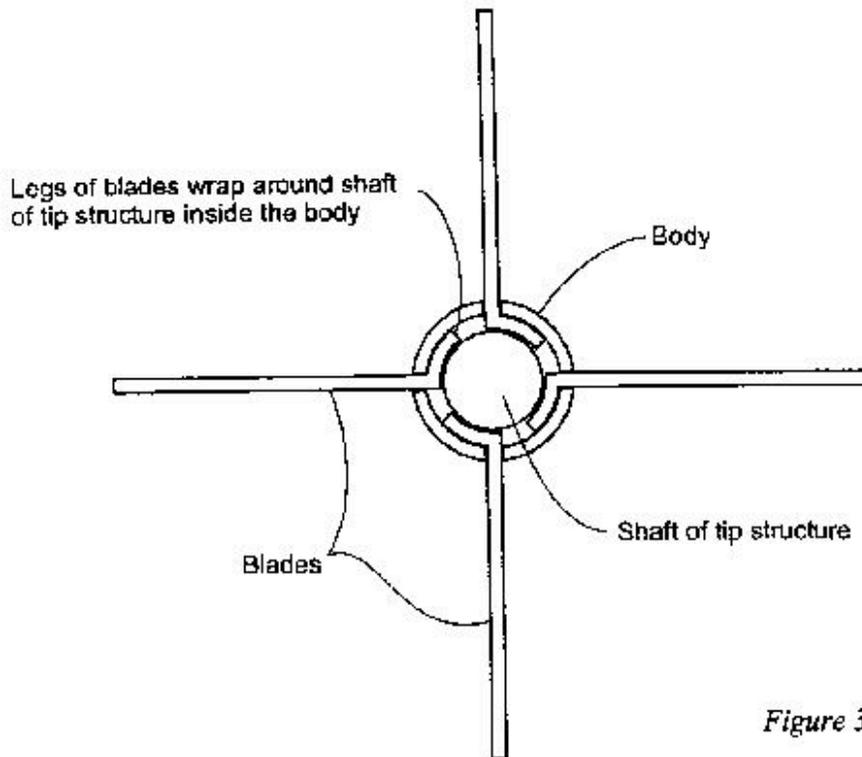


Figure 3

EXHIBIT B

Therefore, the Court concludes as a matter of law that the Innerloc™ broadhead does contain a "mandrel that carries such blades." Defendant is not entitled to a summary judgment of non-infringement based on this disputed term.

e. Literal Infringement Conclusion

[18] In sum, the Court concludes that the Innerloc™ broadhead does not contain every element recited in claims 2, 4, 11, or 12 of the '868 patent. In particular, the Court finds that the Innerloc™ broadhead

contains neither "a blade assembly comprising at least two blades and being constructed and arranged to be inserted into the main body," nor a "closure member releasably secured to said one end of the main body." FN7 The Court notes, however, that the non-existence of either the "blade assembly" element or the "closure member" element is sufficient to entitle Defendant to summary judgment of non-infringement, unless the Innerloc TM broadhead infringes the '868 patent under the doctrine of equivalents. The Court now turns to this doctrine.

FN7. As stated *supra* Part III.B.1.d, the Court finds the Innerloc TM broadhead does contain a "mandrel that carries said blades." In order to literally infringe the '868 patent, however, the Innerloc TM broadhead must contain *every* element recited in a claim of the '868 patent, not just *one* element recited in a claim of the '868 patent. *Cole v. Kimberly-Clark*, 102 F.3d at 532.

2. Infringement under the Doctrine of Equivalents

a. Doctrine of Equivalents Infringement Standard

[19] In *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 70 S.Ct. 854, 94 L.Ed. 1097 (1950), the United States Supreme Court "set out the modern contours of what is known in patent law as the 'doctrine of equivalents.'" *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997). "Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." (*Id.*) (citing *Graver Tank*, 339 U.S. at 609, 70 S.Ct. 854). "An accused device may infringe under the doctrine of equivalents only if it possesses all of the limitations of the relevant claim either literally or equivalently." *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1160 (Fed.Cir.1998) (citing *Warner-Jenkinson*, 520 U.S. at 40, 117 S.Ct. 1040). "Whether an element of the accused device is equivalent to a claim limitation depends on 'whether the substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element.'" *Id.* (quoting *Warner-Jenkinson*, 520 U.S. at 40, 117 S.Ct. 1040).

[20] The Supreme Court also has offered guidance on when the doctrine of equivalents may be decided as a matter of law: "Where the evidence is such that no reasonable jury could determine two elements to be equivalent, district courts are obliged to grant partial or complete summary judgment." *Warner-Jenkinson*, 520 U.S. at 39 n. 8, 117 S.Ct. 1040 "Thus, under the particular facts of a case, if ... a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court, as there would be no further *material* issue for the jury to resolve." *Id.* (emphasis in original).

b. Doctrine of Equivalents Infringement Analysis of the Blade Assembly Element of the '868 Patent

[21] The Court first considers the "function" prong of the *Warner-Jenkinson* "function, way, and result" test: FN8 whether some element of the Innerloc TM broadhead matches the function of the blade assembly element claimed in Plaintiff's '868 patent. Although the parties have not addressed the "function" issue, the Court has considered the language of the claims and specifications of the '868 patent and recites the following intrinsic evidence as indicative of the function of the blade assembly element: (1) "a blade assembly ... being constructed and arranged to be inserted into the arrowhead body," ('868 patent, claims 1-17); (2) "[i]n all embodiments, quick and easy loading of the selected blade assembly into the main body is made possible," ('868 patent, Detailed Description of the Patent, col. 13 lines 55-57); and (3) "[r]egardless of which blade assembly is used, the complete arrowhead will have the advantages of ... ease of assembly and of interchange of the blade assemblies." (*id.* at col. 14 lines 10-12).

FN8. The Supreme Court has noted that the function, way, and result test is suitable for analyzing

mechanical devices. Warner-Jenkinson, 520 U.S. at 39, 117 S.Ct. 1040.

The Court finds from this evidence that the following are functions of the blade assembly: to facilitate the ease with which blades are loaded into the main body, to facilitate the speed at which blades are loaded into the main body, and to facilitate interchangeability of blade types used in the main body. The Court has examined the blades of the Innerloc™ broadhead and concludes that, as a matter of law, because individual blades are loaded into the main body of the Innerloc™ broadhead, the blades do not achieve any of the functions of the blade assembly of the '868 patent.FN9

FN9. The Court examined the Innerloc™ broadhead both physically and pictorially. (Sullivan Decl. Ex. A-C (Drawings of the Innerloc™ broadhead).) The Court also examined the Muzzy Broadhead (manufactured under the '868 patent) both physically and pictorially. ('868 patent drawings.)

Loading multiple individual blades into the main body of the Innerloc™ broadhead is not as easy or quick as loading an assembled blade assembly into the main body of the '868 patent. Similarly, inserting multiple individual blades into the main body of the Innerloc™ broadhead makes changing blade types more cumbersome than loading a new blade assembly-constructed with the desired new blade type-into the main body of the '868 patent. Consequently, the Court finds that the Innerloc™ broadhead does not contain an element that serves the function of the blade assembly in the '868 patent.

Even though the blades of the Innerloc™ broadhead do not achieve the function of the blade assembly of the '868 patent, and thus the accused device does not infringe under the doctrine of equivalents, the Court next briefly considers the "way" and "result" prongs of the *Warner-Jenkinson* doctrine of equivalents test.

The "way" in which the '868 patent achieves the functions described above-ease and quickness of assembly and facility of blade type interchangeability-is through preassembly of the blades into a blade assembly. As discussed *supra* Part III.B.1.b., no blade assembly is ever formed during the assembly of the Innerloc™ broadhead. Rather, individual blades are inserted into the main body of the Innerloc™ broadhead. The Court therefore finds that the way the Innerloc™ broadhead achieves assembly of a broadhead and facility of interchange of blade types is different than the way the '868 patent achieves these functions.

The "result" obtained by the blade assembly of the '868 patent is an broadhead with the "advantages of ... ease of assembly and of interchange of the blade assemblies." ('868 patent at col. 14 lines 10-12.) The Court concludes that the Innerloc™ broadhead does not achieve this result.

c. Summary of Doctrine of Equivalents Infringement Analysis

For the reasons stated above, the Court finds that the evidence is such that no reasonable jury could find that the Innerloc™ broadhead contains an element that is the equivalent of the blade assembly element of the '868 patent. Stated differently, no reasonable jury could find that the Innerloc™ broadhead contains an element which serves the function of the blade assembly, in the way the blade assembly serves that function, and that the Innerloc™ broadhead contains an element that obtains the result of the blade assembly. Therefore, Defendant is entitled to a summary judgment of non-infringement under the doctrine of equivalents.

C. Summary of Non-infringement Analysis

The Court finds that, as a matter of law, the Defendants' Innerloc™ broadhead does not literally or equivalently infringe the Plaintiff's '868 patent. The Court therefore grants Defendants' Motion for Summary Judgment of Non-infringement.

IV. Plaintiff's Motion for Summary Judgment of Infringement

[22] "When both parties move for summary judgment, the court must evaluate each motion on its own merits, resolving all reasonable inferences against the party whose motion is under consideration." *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1338-39 (Fed.Cir.2001). In the instant case, however, the Court's evaluation of Plaintiff's Motion for Summary Judgment of Infringement would result in an analysis of literal and equivalent infringement that is identical to the Court's analysis set forth *supra* Part III.

Because the Court has concluded that, as a matter of law, Defendants' Innerloc™ broadhead does not infringe Plaintiff's '868 patent, Plaintiff's Motion for Summary Judgment of Infringement is Moot. *See DeMarini Sports, Inc. v. Worth, Inc.*, Civil Action No. 97-1693-KI, 1999 WL 571074 (D.Or. Aug.5, 1999), *aff'd*, 239 F.3d 1314, 1317 (Fed.Cir.2001). The Court therefore denies Plaintiff's Motion for Summary Judgment of Infringement as moot.

V. Defendants' Motion for Oral Hearing

[23] The Court denies as moot Defendants' Motion for Oral Hearing. The Court is able to evaluate the issues involved in this case without hearing oral argument from counsel. L.R. N.D. Ga. 7.1 E. (courts ordinarily decide motions without oral hearing).

VI. Conclusion

ACCORDINGLY, the Court **GRANTS** Defendants' Motion for Summary Judgment of Non-Infringement [11], **DENIES AS MOOT** Plaintiff's Motion for Summary Judgment of Infringement [25], and **DENIES AS MOOT** Defendants' Motion for Oral Hearing [24]. The Court **DISMISSES** Plaintiff's case against all Defendants, and directs the Clerk to close this case.

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