

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CONFLUENT SURGICAL, INC.,)
INTEGRA LIFESCIENCES)
CORPORATION AND INTEGRA)
LIFESCIENCES SALES LLC,)
)
Plaintiffs,)
)
v.)
)
HYPERBRANCH MEDICAL)
TECHNOLOGY, INC.,)
)
Defendant.)

Civil Action No. 17-688-LPS-CJB

REPORT AND RECOMMENDATION

In this action filed by Plaintiff Confluent Surgical, Inc., Integra Lifesciences Corporation and Integra Lifesciences Sales LLC (“Plaintiffs”) against Defendant HyperBranch Medical Technology, Inc. (“Defendant” or “HyperBranch”), Plaintiffs allege infringement of United States Patent Nos. 9,517,478 (the “478 patent”), 8,210,453 (the “453 patent”), 8,876,021 (the “021 patent”), 8,033,483 (the “483 patent”), 8,616,468 (the “468 patent”), 9,101,946 (the “946 patent”), and 9,700,290 (the “290 patent”) (collectively, “the asserted patents” or “the patents-in-suit”).¹ Presently before the Court is the matter of claim construction. The Court recommends that the District Court adopt the constructions as set forth below.

I. BACKGROUND AND STANDARD OF REVIEW

The Court hereby incorporates by reference the summary of the background of this

¹ The asserted patents make up two patent families. (See D.I. 98 at 4 n.2; Plaintiffs’ Markman Presentation, Slide 2) The ‘483 patent and the ‘021 patent share a common specification and are referred to as “Family 1.” (D.I. 98 at 4 n.2) The remaining five patents (the ‘453, ‘468, ‘946, ‘478 and ‘290 patents) share a different common specification and will be referred to as “Family 2.” (*Id.*)

matter set out in its March 7, 2019 Report and Recommendation (“March 7 R&R”). (D.I. 177 at 1-2) It additionally incorporates by reference the legal principles regarding claim construction set out in the March 7 R&R. (*Id.* at 2-4) Because HyperBranch contends that certain of the disputed claim terms addressed herein are indefinite, (*see, e.g.*, D.I. 79 at 18-19), the Court further includes below the applicable standard for definiteness.

The primary purpose of the definiteness requirement is to ensure that patent claims are written in such a way that they give notice to the public of what is claimed, thus enabling interested members of the public (e.g., competitors of the patent owner) to determine whether they infringe. *All Dental Prodx, LLC v. Advantage Dental Prods., Inc.*, 309 F.3d 774, 779-80 (Fed. Cir. 2002). Put another way, “[a] patent holder should know what he owns, and the public should know what he does not.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002). Even so, the Supreme Court of the United States has recognized that “absolute precision is unattainable” and not required. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014).

“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Id.* at 901. Definiteness is to be evaluated from the perspective of a person of ordinary skill in the art (“POSA”) at the time the patent was filed. *Id.* at 908.

Like claim construction, definiteness is a question of law for the court. *H-W Tech., L.C. v. Overstock.com, Inc.*, 758 F.3d 1329, 1332 (Fed. Cir. 2014); *Pi-Net Int’l Inc. v. JPMorgan Chase & Co.*, 42 F. Supp. 3d 579, 586 (D. Del. 2014). The United States Court of Appeals for the Federal Circuit has stated that “[a]ny fact critical to a holding on indefiniteness . . . must be

proven by the challenger by clear and convincing evidence.” *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003); *see also Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008).²

II. DISCUSSION

The parties had disputes regarding 15 terms or sets of terms (hereafter, “terms”). The Court has addressed seven of these terms in previously-issued Report and Recommendations. (D.I. 177; D.I. 194; D.I. 216) The Court addresses three additional terms herein; the remaining terms will be addressed in a forthcoming Report and Recommendation.

A. “elongated” / “elongated shaft” / “elongated member” / “elongated portion” (the “elongated body limitations” or “elongated body terms”)

Five of the asserted patents (the '478, '946, '468, '453 and '483 patents) require that the claimed applicator include an “elongated” body, recited in the claims as an “elongated shaft,” “elongated member,” or “elongated portion.” (See D.I. 79 at 16) The use of the disputed terms in claim 19 of the '483 patent and claim 1 of the '453 patent is representative. (See, e.g., Plaintiffs’ Markman Presentation, Slides 37-38) Claim 19 of the '483 patent is reproduced below, with the disputed term highlighted:

19. A system for mixing at least a first component and a second component, the system comprising:

at least a first source of component and a second source of component;

² In *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898 (2014), the Supreme Court left open the question of whether factual findings subsidiary to the ultimate issue of definiteness should, in fact, trigger the application of a “clear-and-convincing-evidence standard[,]” noting that it would “leave th[is] question[] for another day.” 572 U.S. at 912 n.10. In the absence of Supreme Court precedent to the contrary, the Federal Circuit’s case law (utilizing the clear-and-convincing-evidence standard) controls. *See Cal. Inst. of Tech. v. Hughes Commc’ns Inc.*, 35 F. Supp. 3d 1176, 1182 n.4 (C.D. Cal. 2014).

a manifold configured for operable engagement with the at least first and second sources of component, the manifold including at least a first component channel and a second component channel therethrough;

an *elongated shaft* extending distally from the manifold, the *elongated shaft* including at least a first component lumen and a second component lumen extending the length thereof, the at least first and second component lumens in fluid communication with the at least first and second component channels;

a tip assembly defining a first chamber, an intermediate chamber and a final chamber, wherein the first chamber is configured to receive a distal end of the elongated shaft, the second chamber is configured to receive an insert, and the final chamber is configured to receive the at partially mixed at least first and second components prior to the mixture being ejected from an outlet defined in the distal end of the tip assembly; and,

an insert received in the second chamber, the insert including a substantially cylindrical member having a recess formed in a distal end thereof.

('483 patent, cols. 6:57-8:3 (emphasis added)) Claim 1 of the '453 patent is reproduced next, with the disputed term highlighted:

1. A spray assembly for dispensing a mixture, the assembly comprising:

a connector configured for operable engagement with a first and second source of component and a source of pressurized fluid;

a tip operably connected to the connector, the tip including an opening and defining a mixing chamber between the connector and the opening of the tip;

an *elongated member* extending between the connector and the tip, the *elongated member* including at least a first lumen configured for fluid communication with the first source of component, a second lumen configured for fluid communication with the second source of component, and a third lumen configured for fluid communication with the source of pressurized fluid; and

an insert member configured to be received in the mixing chamber, the insert member including at least one radially extending slot on a first end of the insert and at least a one radially extending slot on a second end of the insert, each of the radially extending slots being configured to mix the first and second source of components prior to the combination exiting the opening in the tip.

(453 patent; col. 6:28-49 (emphasis added))

The parties' competing proposed constructions for the elongated body limitations are set out in the chart below:

Term	Plaintiffs' Proposed Construction	Defendant's Proposed Construction
"elongated"	"extended"	"longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis"
"elongated shaft"	"structure containing lumens extending distally to the applicator tip"	"a long, narrow body that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis"
"elongated member"	"structure of the spray applicator extending between the connector and applicator tip"	"a part of an applicator that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis"
"elongated portion"	"structure of the spray applicator extending between the connector and the applicator tip"	This term is indefinite. If it is not indefinite, the term should be given the following construction: "a part of an applicator that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis"

(D.I. 79 at 16 (internal quotation marks omitted)) The parties' primary dispute with respect to the elongated body limitations is over the meaning of the word "elongated."³ Plaintiffs assert that "elongated" means "extended," and that the word is used in the elongated body terms as a descriptor to underscore that these structures are extending from one structural element to another (i.e., they have spatial orientation with other structural elements). (D.I. 81 at 13; Tr. at 102, 104) HyperBranch argues that: (1) "elongated" is generally used to compare one dimension to another and that (2) with respect to the elongated body phrases, the term is used to describe the structures that are longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis. (D.I. 79 at 17; Tr. at 137-38)

Below, the Court will first explain why Plaintiffs' proposals do not appropriately define the elongated body limitations. Then it will articulate why HyperBranch's proposed constructions are supported by the intrinsic and extrinsic record.

1. Plaintiffs' Proposed Constructions

Plaintiffs' proposed constructions are nullities which, if adopted, would improperly render the term "elongated" meaningless. Their proposals simply utilize language that is already clearly conveyed by other aspects of the claims.

As just one example, if the Court were to adopt Plaintiffs' proposed constructions for "elongated member[.]" the portion of the claim in which that term is found would read: "a[structure of the spray applicator extending between the connector and applicator tip] extending between the connector and the tip." Thus, as HyperBranch points out, when the "unnecessary

³ HyperBranch's position that the "elongated portion" term is indefinite will be discussed (and ultimately rejected) in more detail below in connection with the phrases directed to the relationship between the connector/manifold element and (elongated) body element.

and redundant description of how the elongated [member] is situated with respect to other elements is stripped from Plaintiffs' construction of the "elongated body terms, all that is left is "structure" or "structure of the spray applicator." (D.I. 98 at 11-12; *see also* D.I. 79 at 18) Such a descriptor gives no meaning to the term "elongated"—a term that the patentee chose to include in the claims. *See Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) ("A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so."); *see also Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1562 (Fed. Cir. 1991) ("All the limitations of a claim must be considered meaningful[.]"). Indeed, Plaintiffs' proposed constructions could encompass any "structure," including non-elongated structures such as a cube or a disk. (D.I. 79 at 18; D.I. 98 at 12)

During the *Markman* hearing, the Court questioned Plaintiffs about this problem, asking "[i]f elongated and extended mean the same thing, why wouldn't [claim 1 of the '453 patent] just say [for example] 'a member extending'?" (Tr. at 105) In response, Plaintiffs asserted that the patentee was just using "elongated" in the elongated body terms as a "name[.]" a "descriptor[.]" to "describe that this is a [member/shaft/body/portion] which is going to have a spatial relationship between [such a body and] what follows[.]" (*Id.* at 104-05; *see also id.* at 113 (Plaintiffs' counsel reasserting that "elongated is used as part of a name for the body, portion, whatever, it extends from the connector manifold to the tip"))

This explanation is not persuasive. This is apparent by looking, for example, to claim 7' of the '478 patent. That claim recites: "[t]he spray assembly of claim 6, further including a *connector extending proximally from and operably connected to the body.*" ('478 patent, col. 7:19-21 (emphasis added)) If the patentee chose to use "elongated" as a name for a structure that

extended to another portion of the spray applicator, why did he not do the same for the term “a connector extending proximally from and operably connected to the body” found in claim 7?

Indeed, Plaintiffs’ proposed construction for that “connector extending . . .” term further highlights how their constructions for the elongated body terms infuse no meaning into the modifier “elongated.” For the “connector extending . . .” term, Plaintiffs’ proposed construction is “structure of the applicator extending toward a source of component and joined with and capable of operating with the structure of the spray applicator defining a lumen[,]” (D.I. 81 at 17)—i.e., a construction that is “fundamentally the same as [Plaintiffs’] proposed constructions for other separate ‘elongated’ body phrases, despite the fact that the recited ‘body’ in claim 7 is not required to be elongated[,]” (D.I. 98 at 12).

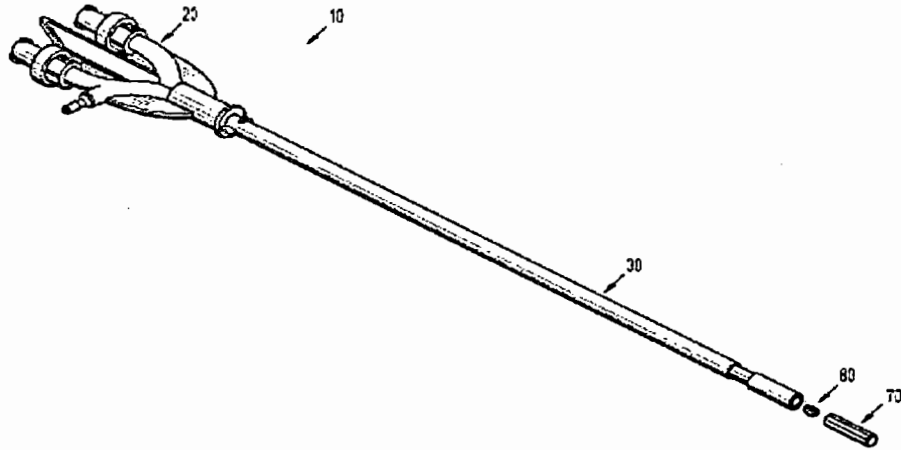
For these reasons, the Court rejects Plaintiffs’ proposed constructions for the terms at issue.

2. HyperBranch’s Proposed Constructions

HyperBranch’s proposed constructions, meanwhile, are in accordance with the intrinsic evidence and with the plain meaning of “elongated.”

As an initial matter, HyperBranch’s proposals give real meaning to “elongated.” Their constructions use this modifier to describe the components of the applicator that are “longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis.” And indeed, this meaning is supported by the intrinsic record—“the elongated body elements (element 30) disclosed in the patents clearly are longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis.” (D.I. 79 at 17 (citing '453 patent, cols. 2:62-3:4, FIGS. 1-4; '483 patent, cols. 2:66-3:7, FIGS. 1-3)) This is demonstrated by Figure 1 of the '453 patent below, wherein item 30 represents the “elongated body portion of [the] spray

assembly,” (‘453 patent, col. 3:31-32), and it is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis.



(‘453 patent, FIG. 1) Even Plaintiffs acknowledge that when the elongated body elements are depicted in the patents, they meet the definitions proposed by HyperBranch. (Tr. at 110-11)

However, Plaintiffs take issue with HyperBranch’s proposed constructions because “there’s no requirement that [in the patent that the elongated body element] be a specific length.” (Tr. at 111; *see also* D.I. 101 at 6 (“Where no length/width relationship is recited in the claims or required by the specification, it is error to read it into the claims.”); D.I. 81 at 11) Yet HyperBranch’s proposed constructions do not require the elongated body elements to have a *specific* length, and one of the plain and ordinary meanings of the term “elongated” is “having more length than width”—i.e., having a particular relationship between length and width dimensions. (D.I. 80 at ¶ 63 (citing *id.*, ex. 2 at 599) (internal quotation marks and brackets omitted)) Thus, this plain and ordinary meaning for the term is both consistent with the intrinsic record and one that gives meaning to the term “elongated” in the claim limitations. *See Clipco, Ltd. v. Ignite Design, LLC*, No. 04 C 5043, 2005 WL 6266235, at *5-6 (N.D. Ill. Feb. 23, 2005)

(rejecting the plaintiff's construction of "elongated arm" to mean "a projection" where the plaintiff relied on a dictionary to define "elongate" as "extended[,]") and instead construing the term to mean "'an attachment that is long in comparison to its width and that generally extends horizontally outward[,]'" as such a construction gave effect to the plain meaning of both words of the disputed term and was consistent with the intrinsic evidence); *see also Mich & Mich TGR, Inc. v. Brazabra, Corp.*, 128 F. Supp. 3d 621, 639 (E.D.N.Y. 2015) (construing "elongate main portion" or "elongated member" as, *inter alia*, "a main structure that is longer than it is wide"); *Sky Zone, LLC v. Raymond*, No. 3:11-cv-0141-LRH-WGC, 2014 WL 5063549, at *4-6 (D. Nev. Oct. 9, 2014) (construing "elongated" to mean "'long in relation to its width[,]'" which was the "ordinary and customary definition" of the term).⁴

With respect to the body-related terms in the elongated body limitations (i.e., "shaft," "member," and "portion"), the Court also agrees with HyperBranch that its proposed constructions "are consistent with the plain and ordinary meaning of these terms [and are]

⁴ While Plaintiffs cite to *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315 (Fed. Cir. 2013) in support of their argument that it would be error to construe "elongated" to require a specific relationship between length and width dimensions, (D.I. 101 at 6; Tr. at 113), the facts in that case are easily distinguishable. There, the district court had construed "ribbon" to mean "'a strip of film having a width of no more than one inch[,]'" and had relied in support on a prior art reference that disclosed "'ribbon-like strips'" of a specified width. *3M Innovative Props.*, 725 F.3d at 1333. The Federal Circuit rejected that construction as imposing an "artificial one-inch width requirement[,]," concluding that the term "ribbon" "has a customary meaning that is not subject to specific size requirements" and that the intrinsic record did not provide any information regarding the "parameters of the claimed ribbon." *Id.* at 1333-34. Here, in contrast, "elongated" has a customary meaning that implicates a length/width relationship.

Now, it is true that in the same dictionary that HyperBranch relies on in support of its proposed constructions, there is another definition for "elongated": "[m]ade longer; extended." (D.I. 80, ex. 2 at 599; *see also* D.I. 81 at 10 n.5; D.I. 83, ex. 3 at 2) But based on the intrinsic record, "elongated" is used in *these patents* to refer to an element of the applicator that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis.

supported by the intrinsic record[.]” (D.I. 79 at 16 n.7) It also agrees that these proposals “are more descriptive and helpful than” Plaintiffs’ proposed choice (which is to use the generic term “structure” to refer to each of these items). (*Id.*)⁵

Thus, for the reasons discussed above, the Court recommends that the elongated body limitations be construed as follows:

1. “elongated” shall be construed to mean “longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”

2. “elongated shaft” shall be construed to mean “a long, narrow body that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”

3. “elongated member” shall be construed to mean “a part of an applicator that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”

4. “elongated portion” shall be construed to mean “a part of an applicator that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”

B. Phrases Directed to the Relationship and Connection Between the Connector/Manifold Element and the (Elongated) Body Element (“elongated portion extending distally from the connector portion” / “an elongated member operably connected to and extending distally from the connector” / “an elongated shaft extending distally from the manifold” / “elongated member extending between the connector and the tip”)

⁵ In construing the claim term “inner shaft,” the Court recently agreed that HyperBranch’s proposed language for “shaft”—“a long, narrow body”—reflects the plain and ordinary meaning of the word and is supported by the intrinsic record. (D.I. 194 at 26-28)

These phrases, which recite how the elongated body element is positioned with respect to the connector/manifold element⁶ of the spray assembly, are found in certain asserted claims of the '478, '290, '946, '468 and '483 patents. The use of the term “elongated portion extending distally from the connector portion” in claim 1 of the '478 patent is representative, and that claim is reproduced below with the disputed term highlighted:

1. A spray assembly for dispensing a mixture, the spray assembly comprising:

a connector portion configured for operable engagement with a first source of component, a second source of component, and a source of pressurized air;

an elongated portion extending distally from the connector portion, the elongated portion including a first lumen configured for fluid communication with a first source of component, a second lumen configured for fluid communication with a second source of component, and a third lumen configured for fluid communication with a source of pressurized air;

a tip assembly operably connected to the elongated portion, the tip assembly defining an opening and a mixing chamber between a distal end of the elongated portion and the opening of the tip assembly, wherein each of the first lumen, the second lumen, and the third lumen are in fluid communication with the mixing chamber; and

an insert member received in the mixing chamber, a distal end of the insert member defining an annular recess and at least one radially extending slot, the annular recess and the at least one radially extending slot operating to mix first and second components prior to the combination exiting the opening in the tip assembly.

('478 patent, col. 6:32-56 (emphasis added))

⁶ “Connector” and “manifold” are used synonymously in the patents and by the parties. (See, e.g., Tr. at 125; Plaintiffs’ Markman Presentation, Slides 52, 58)

The parties' competing proposed constructions for these terms are set out in the chart

below:

Term	Plaintiffs' Proposed Construction	Defendant's Proposed Construction
"elongated portion extending distally from the connector portion"	"structure of the spray applicator extending from the connector in a direction away from the source of component"	<p>This term is indefinite. If it is not indefinite, the term should be given the following construction:</p> <p>"a part of an applicator distinct from the connector that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis and extends distally away from the connector along its longitudinal axis"</p>
"an elongated member operably connected to and extending distally from the connector"	"structure of the spray applicator extending between the connector and the applicator tip that extends from the connector in a direction away from the source of component and joined with and capable of operating with the connector"	<p>This term is indefinite. If it is not indefinite, the term should be given the following construction:</p> <p>"a part of an applicator distinct from the connector that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis and extends distally away from the connector along its longitudinal axis"</p>
"an elongated shaft extending distally from the manifold"	"structure containing lumens extending distally to the applicator tip from the manifold"	<p>This term is indefinite. If it is not indefinite, the term should be given the following construction:</p> <p>"a long, narrow body that is distinct from the manifold that is longer in the longitudinal dimension than</p>

		in the dimensions perpendicular to the longitudinal axis and extends distally away from the manifold along its longitudinal axis”
“elongated member extending between the connector and the tip”	“structure of the spray applicator between the connector and applicator tip”	This term is indefinite. If it is not indefinite, the term should be given the following construction: “a part of an applicator distinct from the connector and the tip that extends between the connector and the tip and is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”

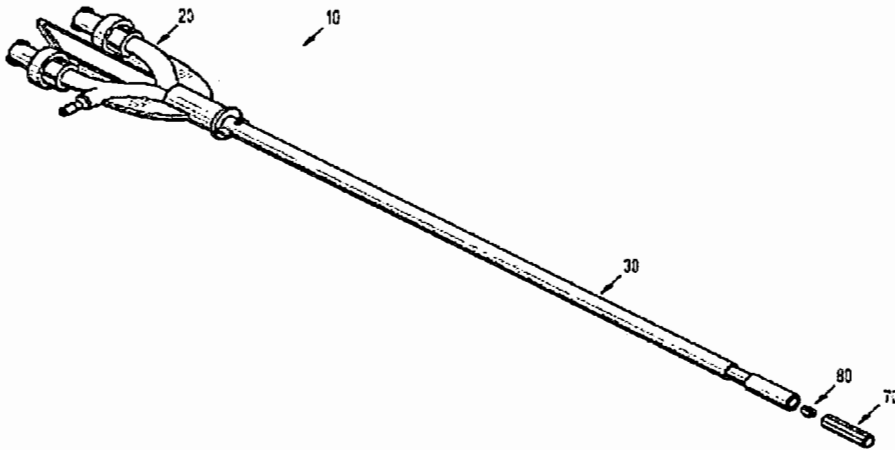
(D.I. 79, Appendix A (internal quotation marks omitted)) It is undisputed that each of these limitations require at least 2 elements: (1) a connector/manifold element; and (2) an elongated body element. (D.I. 101 at 7; Tr. at 125) The crux of the dispute (and the related question of definiteness) is whether these two elements may be formed from a single, unitary piece, (Plaintiffs’ position), or whether the two elements must begin as two separate parts and thus cannot be formed from “one thing” such as a single piece of plastic, (HyperBranch’s position). (See, e.g., Tr. at 136)

HyperBranch argues that when the elongated body elements and the connector/manifold elements recited in these terms are separate, distinct structures from each other (as proposed in HyperBranch’s constructions), these phrases are not indefinite. (D.I. 79 at 19; D.I. 98 at 12) In such circumstances, according to HyperBranch’s expert Paul Hattan, the POSA “would be able to identify a separate, distinguishable elongated body element and then determine (applying

HyperBranch's proposed construction of this term) whether or not this element was 'elongated.'" (D.I. 80 at ¶ 70) However, the patent teaches certain embodiments wherein the connector/manifold element and elongated body element are joined together, and it is these particular embodiments, according to HyperBranch, that create an indefiniteness issue.

Below, the Court will first further describe the assertedly problematic embodiments referenced by HyperBranch. Then it will summarize the parties' respective positions with respect to indefiniteness. Lastly, it will explain why HyperBranch has not met its burden here.

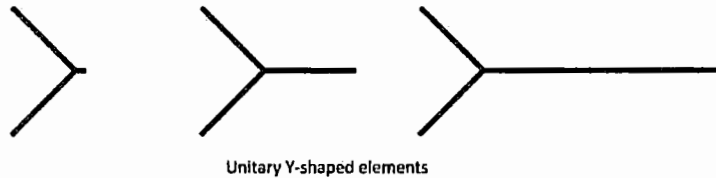
With regard to the embodiments that HyperBranch focuses on, the patents disclose that the connector/manifold element may be Y-shaped. This allows the sources of components (and a source of pressurized air when applicable) to be attached at the embodiments' proximal ends, and for an elongated body element to be joined to the connector/manifold element. (*See* D.I. 79 at 19 (citing '483 patent, col. 3:1-4, 8-10, 36-38, FIGS. 1-2; '453 patent, cols. 2:65-67, 3:5-8, 3:24-30, FIGS. 1, 3-4)) For example, in Figure 1 of the '453 patent, depicted below, item 20 represents the Y-shaped connector/manifold element and item 30 represents the elongated shaft (with item 80 representing an insert member and item 70 representing the applicator tip), ('453 patent, cols. 2:62-3:4):



('453 patent, FIG. 1) In describing these embodiments, the patents teach that the elongated body element can be joined to the connector/manifold element to form a single, unitary body. (See D.I. 80 at ¶ 69) For example, the Family 1 specification teaches that the elongated shaft may be “integrally formed at a distal end of manifold 20[.]” ('483 patent, col. 3:36-38) Likewise, the Family 2 specification teaches that in one embodiment, the collar of the Y-connector “is molded directly around the proximal end of elongated body portion 30” and in another embodiment, the elongated body portion “may be securely affixed to” the Y-connector “using adhesive, sonic welding or other suitable method.” ('453 patent, col. 3:49-56)

HyperBranch (and its expert, Mr. Hattan) asserts that these embodiments require a finding of indefiniteness for these claims for two reasons. First, HyperBranch contends that the POSA would not be able to determine whether such an applicator includes “both a connector and elongated body (in which case it would satisfy these claim limitations) or includes just a connector and fails to include an elongated body (in which case it would fall outside these claim limitations).” (D.I. 79 at 19-20; *see also* D.I. 98 at 12-13; Tr. at 126 (HyperBranch explaining that the question here is “[w]hen I have a Y-shaped body . . . when do I just have a connector and

when do I have a connector plus another [elongated body] element, which is what the claims require”); D.I. 80 at ¶ 71) For example, Mr. Hattan depicts the below unitary, Y-shaped elements in his declaration and asserts that “[t]here is no principled way to determine whether any of these [] unitary Y-shaped elements consist of (i) just a connector/manifold or (ii) a manifold/connector element and an (elongated) body element.”



(D.I. 80 at ¶ 71; *see also* D.I. 99 at ¶ 35) Second, HyperBranch argues that as to such structures, the POSA would not be able to determine whether the “body” is elongated (because the POSA could not know where the connector element ends and the elongated body element begins). (D.I. 79 at 20; D.I. 98 at 13; D.I. 80 at ¶ 72)

During the *Markman* hearing, HyperBranch’s counsel asserted that the indefiniteness problem really crystallizes when a potentially infringing applicator with a unitary Y-shaped connector is very short. In such a circumstance, HyperBranch argues that the POSA would not know whether such an element amounts to *just* a Y-shaped connector (such that it would not infringe the relevant claims), or includes a Y-shaped connector *and* an elongated body portion, as required by the claims. (Tr. at 133-34)

In light of its position, HyperBranch asserts that if these terms are not found to be indefinite, then the Court must “remove[]” the indefiniteness “from any adopted construction[.]” (D.I. 79 at 20) The Court would do so, according to HyperBranch, by adopting HyperBranch’s proposed constructions, which “supply an objective definition by requiring that” the claimed elongated body element “be structurally distinct from the claimed” connector/manifold element

to which it is joined. (*Id.* at 20-21) During the *Markman* hearing, HyperBranch further explained that while its proposed constructions would allow for two different parts to be affixed or welded together, the connector/manifold element and elongated body element must have been originally made from two different parts and, even after affixation, one must be able to “clearly identify that there are two parts [] that are separate. They weren’t made together and they weren’t made as one thing. They’re not a unitary body.” (Tr. at 136)

For their part, Plaintiffs respond by noting that the claims do not require particular, precise beginning or ending points for the connector/manifold element and the elongated body element. (D.I. 101 at 7) In their view, these elements can be “integrally formed[,]” for example, from one piece of plastic. (Tr. at 119) Plaintiffs assert that all that the claims require is that these two portions are found in a sprayer assembly—and that one can objectively determine whether “the sprayer assembly include[s] an elongated portion that extends distally from a connector portion[.]” (D.I. 101 at 7; *see also* Tr. at 119)

In support, Plaintiffs point to the patent specification, which, as discussed above, describes an embodiment wherein the “elongated shaft [] may be *integrally formed* at a distal end of [the] manifold[.]” (‘483 patent, col. 3:36-38 (emphasis added); *see* D.I. 81 at 17 n.10; D.I. 101 at 9; Tr. at 119, 139)⁷ Even in such a scenario, Plaintiffs argue, while perhaps a POSA⁸ may not

⁷ HyperBranch does not dispute that this embodiment describes a spray assembly with a connector/manifold element and elongated body element that are not distinct structures, but instead are formed from one “unitary Y-shaped body.” (Tr. at 126)

⁸ Both parties’ experts agree that the POSA in the art of the asserted patents would be:

[A] person with either: (1) a master’s degree in the field of mechanical engineering and/or a related field having at least one year of educational or work experience in the design and

be able to identify *precisely where* the connector/manifold element and elongated body portions each begin and end, the POSA *would* be able to identify “*if the two portions exist*” (which is all that is required by the claims) by simply looking at the device. (D.I. 101 at 8 (emphasis in original))

Plaintiffs’ position is supported by the declaration of their expert, Dr. Bruce Kent Gale. Dr. Gale opines that the claims need not require the connector/manifold element and elongated body element to be formed from two separate pieces in order for a POSA to understand the scope of the claims with reasonable certainty, because a POSA can determine if the two required elements are present in a spray assembly “by a simple visual inspection.” (D.I. 102 at ¶ 18) Dr. Gale provides an example to demonstrate this concept: one involving two shovels of the same shape and size. Both shovels have a blade and a handle extending from the blade, though one shovel has a wooden handle attached to a metal blade and the other shovel is formed from a single piece of plastic. (*Id.*) While the starting point and ending point for the handle and blade on the plastic shovel are not precisely defined, a visual inspection confirms that both shovels have both a handle and a blade. (*Id.*) During the *Markman* hearing, the Court pressed Plaintiffs’ counsel as to how Dr. Gale’s analogy would relate to embodiments of the present invention that include a Y-shaped unitary connector/manifold with a very short additional portion. The Court

development of liquid mixing and dispensing applicator systems; (2) a bachelor’s degree in the field of mechanical engineering and/or a related field and at least two years of work experience in the design and development of liquid mixing and dispensing applicator systems; or (3) any education and experience equivalent to (1) or (2).

(D.I. 80 at ¶ 20; *see also* D.I. 82 at ¶ 11)

asked how, in such a case, would the POSA be able to determine whether such a structure had both the connector/manifold element and an elongated portion or just the connector/manifold element? Plaintiffs asserted that this is “a question of fact to be examined [as part of the infringement analysis] based upon what a person of skill in the art recognizes”—can the POSA discern that there is both a connector and an elongated body element, or just a connector? (Tr. at 140-41)

Having considered all of the above, the Court is first persuaded that Plaintiffs’ proposed constructions (which do not require that the elongated portion/member/shaft be “distinct” from the connector/manifold) align with the intrinsic record much more closely than do HyperBranch’s proposed alternative constructions (which require this “distinct”-ness). After all, it is undisputed that the specification discloses an embodiment wherein the two relevant elements may be “integrally formed.”

Obviously, the more difficult issue relates to whether, with the terms being given those constructions, the relevant claims are indefinite. At this stage, however, the Court is not persuaded that HyperBranch has met its burden to show indefiniteness. After all, the patent specifications *do* provide examples of structures that embody the relevant claims. And the claims also *do* provide information regarding the required elements—i.e., that: (1) the connector portion must be configured for operable engagement with source of components (and, in some circumstances, a source of pressurized air); and (2) the elongated portion must extend distally from the connector portion, must include certain components (and, as discussed above in connection with the elongated body elements, must be longer in the longitudinal dimensions than

in the dimensions perpendicular to the longitudinal axis).⁹ Those requirements provide some standards or boundaries for a POSA to use as guideposts when assessing whether the claim limitations are met. Moreover, Dr. Gale has opined that the POSA, understanding what constitutes these two required elements, would be able to make this call. HyperBranch has not pointed the Court to any case law standing for the proposition that, in a case like this, the POSA must be able to identify precisely where such two recited components begin and end (rather than simply being able to identify that a given structure *has* the two recited components in the first place). In the Court’s view, HyperBranch has not demonstrated by clear and convincing evidence, at this stage of the case, that a POSA having experience with liquid mixing and dispensing applicator systems would not be able to discern with reasonable certainty whether a given system had both required elements or not.¹⁰ (Tr. at 138-39, 141); *cf. Exmark Mfg. Co. Inc. v. Briggs & Stratton Power Prods. Grp., LLC*, 879 F.3d 1332, 1346 (Fed. Cir. 2018) (“[A]

⁹ With respect to the modifier “elongated” in these terms, for the reasons discussed above, the Court finds that the language in HyperBranch’s proposed alternative constructions accurately capture the word’s meaning.

¹⁰ During the *Markman* hearing, HyperBranch’s counsel pointed to one of its own accused spray assembly devices which has a Y-connector. HyperBranch seemed to assert both that: (1) the device “ha[s] just a Y connector” and not an elongated body portion, and (2) the “patents provide no principled way to conclude whether such an applicator includes both a connector and an elongated body when it has this unitary Y-shaped body[.]” (Tr. at 130-33) However, the “difficulty or complexity of the infringement analysis does not necessarily speak to whether a claim is definite or not[.]” *Spanston, Inc. v. Int’l Trade Comm’n*, 629 F.3d 1331, 1346 (Fed. Cir. 2010), and “[t]he test for indefiniteness does not depend on a potential infringer’s ability to ascertain the nature of its own accused product to determine infringement, but instead on whether the claim delineates to a skilled artisan the bounds of the invention[.]” *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1340-41 (Fed. Cir. 2005). Moreover, it stands to reason that in an infringement analysis like this one, an expert might have more to go on than just simply observing the physical contours of the accused device; there might, for example, be other evidence (e.g., figures, design documents or other records that characterize the various aspects of the device) that could be useful in an analysis of whether the device has both a connector/manifold element and an elongated body element.

patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.”) (internal quotation marks and citations omitted); *Am. Med. Sys., Inc. v. Laser Peripherals, LLC*, 712 F. Supp. 2d 885, 900 (D. Minn. 2010) (“The asserted claims do not require the transmitting surface/particular area to have certain dimensions or a precise location, and definiteness does not require specification of the precise location or dimensions of a claim limitation if a person of ordinary skill in the art would understand the claim.”).

Accordingly, the Court recommends that the District Court adopt the following constructions for these limitations:

1. “elongated portion extending distally from the connector portion” shall be construed to mean “a part of an applicator that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis and extends distally away from the connector along its longitudinal axis”

2. “an elongated member operably connected to and extending distally from the connector” shall be construed to mean “a part of an applicator connected to a connector and that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis and extends distally away from the connector along its longitudinal axis”

3. “an elongated shaft extending distally from the manifold” shall be construed to mean “a long, narrow body that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis and extends distally away from the manifold along its longitudinal axis”

4. “elongated member extending between the connector and the tip” shall be construed to mean “a part of an applicator that extends between the connector and tip and is

longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”

C. “a connector extending proximally from and operably connected to the body”

This phrase is found in claim 7 of the '478 patent. Claim 7 recites:

7. The spray assembly of claim 6, further including *a connector extending proximally from and operably connected to the body.*

('478 patent, col. 7:19-21 (emphasis added))

The parties’ competing proposed constructions for these terms are set out in the chart below:

Term	Plaintiffs’ Proposed Construction	Defendant’s Proposed Construction
“a connector extending proximally from and operably connected to the body”	“structure of the applicator extending toward a source of component and joined with and capable of operating with the structure of the spray applicator defining a lumen”	This term is indefinite. If it is not indefinite, the term should be given the following construction: “a connector joined to the proximal end [of] a distinct body so the joined elements are capable of operation”

(D.I. 79, Appendix A) The parties’ disputes relating to this term are identical to the disputes they had with respect to the phrases directed to the relationship and connection between the connector/manifold element and the (elongated) body element (with the exception of the arguments directed to the “elongated” modifier, which is not present in claim 7 of the '478 patent). (See D.I. 79 at 18 n.9; D.I. 81 at 17) For the reasons discussed above with respect to those terms, the Court recommends that “a connector extending proximally from and operably connected to the body” be construed to mean “a connector joined to the proximal end of a body so the joined elements are capable of operation.”

III. CONCLUSION

For the foregoing reasons, the Court recommends that the District Court adopt the following constructions:

1. “elongated” should be construed to mean “longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”
2. “elongated shaft” should be construed to mean “a long, narrow body that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”
3. “elongated member” should be construed to mean “a part of an applicator that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”
4. “elongated portion” should be construed to mean “a part of an applicator that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”
5. “elongated portion extending distally from the connector portion” should be construed to mean “a part of an applicator that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis and extends distally away from the connector along its longitudinal axis”
6. “an elongated member operably connected to and extending distally from the connector” should be construed to mean “a part of an applicator connected to a connector and that is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis and extends distally away from the connector along its longitudinal axis”
7. “an elongated shaft extending distally from the manifold” should be construed to mean “a long, narrow body that is longer in the longitudinal dimension than in the dimensions

perpendicular to the longitudinal axis and extends distally away from the manifold along its longitudinal axis”

8. “elongated member extending between the connector and the tip” should be construed to mean “a part of an applicator that extends between the connector and tip and is longer in the longitudinal dimension than in the dimensions perpendicular to the longitudinal axis”

9. “a connector extending proximally from and operably connected to the body” should be construed to mean “a connector joined to the proximal end of a body so the joined elements are capable of operation”

This Report and Recommendation is filed pursuant to 28 U.S.C. § 636(b)(1)(B), Fed. R. Civ. P. 72(b)(1), and D. Del. LR 72.1. The parties may serve and file specific written objections within fourteen (14) days after being served with a copy of this Report and Recommendation. Fed. R. Civ. P. 72(b)(2). The failure of a party to object to legal conclusions may result in the loss of the right to de novo review in the district court. *See Henderson v. Carlson*, 812 F.2d 874, 878-79 (3d Cir. 1987); *Sincavage v. Barnhart*, 171 F. App’x 924, 925 n.1 (3d Cir. 2006).

The parties are directed to the Court’s Standing Order for Objections Filed Under Fed. R. Civ. P. 72, dated October 9, 2013, a copy of which is available on the District Court’s website, located at <http://www.ded.uscourts.gov>.

Dated: July 5, 2019



Christopher J. Burke
UNITED STATES MAGISTRATE JUDGE