

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GLOBUS MEDICAL, INC.
Petitioner,

v.

SPINELOGIK, INC.,
Patent Owner

Case IPR2025-00226
Patent No. 8,460,385

PETITIONER'S REPLY

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EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 8,460,385 to Wensel (“the ’385 Patent”)
1002	Expert Declaration of Brad Culbert
1003	File History, U.S. Patent Application 12/705,972 (’385 Patent).
1004	U.S. Patent No. 7,942,903 (“Moskowitz”)
1005	U.S. Patent No. 4,790,303 (“Steffee”)
1006	U.S. Patent No. 8,075,593 to Hess (“Hess”)
1007	U.S. Patent Application Publication US 2006/0030851 (“Bray”)
1008	U.S. Patent Application Publication US 2005/0085913 (“Fraser”)
1009	Excerpts from Webster’s New World College Dictionary (4th Ed., 1999)
1010	Excerpts from The Oxford American Desk Dictionary (1998)
1011	Excerpts from The American Heritage Dictionary (2nd College Ed., 1982)
1012	Infringement Contentions Claim Chart of ’385 Patent
1013	YouTube Video File cited in Spinelogik’s Infringement Contents available at: https://www.globusmedical.com/products/hedron-ia/ downloaded from https://www.youtube.com/watch?v=mfkNhww75N0
1014	USPTO Discretionary Denial Guidance
1015	U.S. Patent No. 9,980,824
1016	Lumbar Interbody Fusion Techniques <i>Cages, Dowels, and Grafts</i> , ed. Haid, Jr. et al., Quality Medical Publishing, Inc., St. Louis, Missouri 2003.

Exhibit No.	Description
1017	Advances in Spinal Fusion – Molecular Science, Biomechanics, and Clinical Management, ed. Lewandrowski et al., Marcel Dekker, Inc., New York, New York 2004.
1018	U.S. Patent 8,100,955
1019	U.S. Patent No. 7,662,186
1020	U.S. Patent No. 7,041,135
1021	U.S. Patent Application Publication No. US 2009/0112261
1022	U.S. Patent No. 6,447,546
1023	U.S. Patent 8,172,854
1024	U.S. Patent 8,273,127
1025	Machinery Handbook, 28th Ed. (excerpts)
1026	A Method to Machine a Curved Tunnel with EDM, International Journal of Electrical Machining, No. 7, 2002, Goto et al.
1027	Curriculum Vitae of Brad Culbert
1028	Plaintiff’s Disclosure of Proposed Constructions, <i>Spinelogik Inc. v. Globus Medical, Inc.</i> , No. 2:23-cv-00529-JRG (E.D. Tex. Oct. 30, 2024)
1029	Defendant Globus Medical, Inc.’s Preliminary Claim Constructions, <i>Spinelogik Inc. v. Globus Medical, Inc.</i> , No. 2:23-cv-00529-JRG (E.D. Tex. Oct. 30, 2024)
1030	Spinelogik’s Opening Claim Construction Brief (Dkt. 50), <i>Spinelogik, Inc. v. Globus Medical, Inc.</i> , No. 2:23-CV-529-JRG-RSP (E.D. Tex. Jan. 8, 2025)
1031 - 1100	RESERVED
1101	Order Staying Case (Dkt. 53), <i>Spinelogik, Inc. v. Globus Medical, Inc.</i> , No. 2:23-CV-529-JRG-RSP (E.D. Tex. Jan. 24, 2025)
1102	Globus’ Motion to Transfer (Dkt. 18), <i>Spinelogik, Inc. v. Globus Medical, Inc.</i> , No. 2:23-CV-529-JRG-RSP (E.D. Tex. Apr. 2, 2024)
1103	Sanctions Order, <i>Symbology Innovations, LLC v. Valve Corp.</i> , No. 2:23-CV-00419-JRG (Dkt. 110), <i>Quantum Tech. Innovations, LLC v. Valve Corp.</i> , No. 2:23-CV-00425-JRG (Dkt. 75) (E.D. Tex. Jan. 31, 2025)
1104	PDF-Printout of “Team” Webpage, available at https://ghiplaw.com/team (last accessed May 2, 2025)

Exhibit No.	Description
1105	Sanctions Order (Dkt. 72), <i>Blue Spike, LLC v. Caterpillar, Inc.</i> , No. 6:16-CV-01361-RWS (E.D. Tex., May 10, 2017).
1106	Exceptional Case Order (Dkt. 94), <i>Decapolis Systems, LLC v. UT Southwestern Health Systems</i> , No. 2:22-cv-00159-JRG-RSP (E.D. Tex. Mar. 28, 2025)
1107	Stay Order (Dkt. 106), <i>Cellspin Soft, Inc. v. ByteDance Ltd.</i> , No. 2:23-CV-00496-JRG-RSP (E.D. Tex. Jan. 26, 2025)
1108	USPTO “Documents & Transaction History” for Application No. 12/705,972 (last accessed on May 27, 2025).
1109	Preliminary Infringement Contentions, <i>Spinelogik, Inc. v. Globus medical, Inc.</i> , No. 2:23-CV-529-JRG-RSP (E.D. Tex. Mar. 11, 2024)
1110	Preliminary Infringement Claim Chart Against Globus’s Independence MIS® Implant, <i>Spinelogik, Inc. v. Globus medical, Inc.</i> , No. 2:23-CV-529-JRG-RSP (E.D. Tex. Mar. 11, 2024)
1111	Preliminary Infringement Claim Chart Against Globus’s Coalition MIS®, <i>Spinelogik, Inc. v. Globus medical, Inc.</i> , No. 2:23-CV-529-JRG-RSP (E.D. Tex. Mar. 11, 2024)
1112	Preliminary Infringement Claim Chart Against Globus’s Corbel® Implant, <i>Spinelogik, Inc. v. Globus medical, Inc.</i> , No. 2:23-CV-529-JRG-RSP (E.D. Tex. Mar. 11, 2024)
1113	Preliminary Infringement Claim Chart Against Globus’s Hedron IA® Implant, <i>Spinelogik, Inc. v. Globus medical, Inc.</i> , No. 2:23-CV-529-JRG-RSP (E.D. Tex. Mar. 11, 2024)
1114	Stay Order (Dkt. 103), <i>Multimedia Techs. PTE. LTD. v. Vizio, Inc.</i> , No. 2:23-CV-00124-JRG-RSP (E.D. Tex. Aug. 22, 2024)
1115	Transfer Order (Dkt. 114), <i>Multimedia Techs. PTE. LTD. v. Vizio, Inc.</i> , No. 2:23-CV-00124-JRG-RSP (E.D. Tex. Jan. 22, 2025)
1116	Docket Sheet (as of April 30, 2025) in <i>Spinelogik, Inc. v. Globus Medical, Inc.</i> , No. 2:23-CV-529-JRG-RSP (E.D. Tex.)
1117	Order Denying Stay (Dkt. 73), <i>MyPort, Inc. v. Samsung Electronics Co., Ltd.</i> , No. 2:22-CV-00114 (E.D. Tex. June 13, 2023)

I. INTRODUCTION

Spinelogik's Response (Paper 13, "POR") primarily relies on importing unclaimed elements found in preferred embodiments and unchallenged dependent claims into the challenged claims, contrary to black-letter claim construction law. Spinelogik also attacks the asserted grounds by making unsupported factual assertions contrary to the record. For these and the other reasons stated herein, Spinelogik's arguments lack merit and fail to rebut the Petition's showing of unpatentability.

II. THE PARTIES AGREE ON THE CONSTRUCTION OF "CURVED" AND "CHANNEL"

Patent Owner ("Spinelogik") asserts plain and ordinary meaning for all terms, providing its understanding of that meaning for "channel" and "curved." POR, 9-12.

Spinelogik's understanding of "channel" is "a pathway ... through which an anchoring member traverses." POR, 9-10. This is substantively identical to Petitioner's construction ("a passage through which something moves or is conveyed"), specifically applied to an anchoring member. Paper 2 ("Petition"), 18. The parties thus agree with the Board's construction. Paper 9 ("DI"), 10.

The Board declined to adopt Petitioner's understanding of Spinelogik's applied construction of "curved," (DI, 11), which was based on Spinelogik's explicit accusation of products having channels that are "substantially linear" (Petition, 22-23). The Board found Petitioner's alternative construction, which requires a

“curved” channel to “follow a curved path (instead of the straight path identified in the accused products),” (Petition, 24), “to be consistent with the ’385 patent’s disclosures” (DI, 12). Now, for the first time, Spinelogik states that a POSA would understand “curved channel” to refer to “a channel following a curved trajectory, distinct from a straight one.” POR, 11-12. Excepting the inconsequential substitution of “trajectory” for “path,” there is no difference between this and Petitioner’s alternative. This is confirmed by Spinelogik’s repeated use of “path.” POR, 11 (“a non-linear, *curved path*”) (italics in original), 23 (“fundamental requirement that the channel itself follow a curved **path**”), 24.¹ The parties thus agree on the construction of “curved” channel. Because Grounds 2 and 3 establish that the challenged claims are unpatentable based on this construction, the Board should cancel all challenged claims. Petition, 24-25.

III. FUNDAMENTAL DEFECTS IN SPINELOGIK’S ARGUMENTS

Spinelogik relies on several repeated core arguments. These arguments are contrary to well-established case law or are otherwise fundamentally defective.

A. Spinelogik Repeatedly Violates Black-Letter Claim Construction Law to Import Preferred Embodiments into the Claims.

Spinelogik’s primary arguments throughout its Response are that the asserted

¹ Unless otherwise stated, all emphasis herein is added.

grounds fail to show unpatentability because they do not disclose or suggest various elements, primarily “the claimed fusion member” having curved channels “designed for guiding **flexible anchoring members**” which have “**specialized PMMA injection capability**.” POR, 16, 20; *see also id.*, 19 (criticizing the references as “critically lacking any system for polymer injection ... **as required by the ’385 Patent**”). Spinelogik thus asserts that the claims require the anchoring members be flexible and have PMMA (or other material) injection capability. POR, 31 (asserting the PMMA delivery structure is “essential to the claimed anchoring member design”), 43 (asserting as “[t]he essential requirement of the ’385 Patent” “that the channel constrain a non-linear path enabling the use of a flexible, push-in anchor with central lumen for PMMA injection”); 44 (“**absolute requirement**” that the anchoring member “be configured for PMMA injection (i.e., having a hollow channel and perforated tip)”; 64 (asserting “polymer delivery capability” as “**the essential structural requirement**”), 25-37 (relying on these elements in arguing against Ground 1 on motivation to combine and elements 1.1, 1.2, 1.3, 5.2, 7); *id.*, 40-53 (relying on these elements in arguing against Ground 2 on motivation to combine and claims 1.1, 1.2, 1.3, 7); *id.* at 55-71 (relying on these elements in arguing against Ground 3 on motivation to combine and claims 1.1, 1.2, 1.3, 7, 9). Spinelogik makes similar arguments regarding other unclaimed limitations which are specifically addressed with respect to the asserted grounds below. *See* Section

IV.

It is improper to limit the scope of the claims to particular preferred embodiments. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (*en banc*); *Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1347 (Fed. Cir. 1998). This is true even when there is only a single embodiment (which is not the case here). *Phillips*, 415 F.3d at 1323; *see also* Ex. 1030, 5 (Spinelogik acknowledging this rule in claim construction briefing in parallel litigation). None of the challenged claims recite limitations requiring flexibility or any structure for polymer injection, nor are these limitations within the plain meaning of “anchoring member” or any other limitation in the challenged claims.

Spinelogik admits that flexible anchors configured to deliver hardening materials such as PMMA are merely preferred embodiments. POR, 6 (“[T]he specification contemplates **various forms** for these anchoring members ... and notes they **may** possess features like ‘hollow channels and perforated tips in **some embodiments**’ to facilitate injection of [PMMA or other hardening material]”), 7 (“The specification explains that ‘the anchoring members comprise a flexible material’ **in some embodiments**”). This is correct. As the challenged claims do not include these limitations, it is improper to read them into the claims.

Further, the presence of a dependent claim that adds a particular limitation gives rise to the presumption that the limitation is not present in the independent

claim. *Phillips*, 415 F.3d at 1314-15; *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1376 (Fed. Cir. 2019). Here, unchallenged dependent claims recite these allegedly “critical” features. Claim 8 requires that the “first and second anchoring members be made of **a flexible material to allow [them] to bend** to traverse through the first and second channels.” Ex. 1001, 27:57-60. Claim 10 requires that each anchoring member “comprises a perforation for delivering a hardening material.” Ex. 1001, 28:10-13. These limitations are thus presumed not to be present in Claim 1. Spinelogik never attempts to rebut this presumption. The challenged claims encompass non-flexible anchoring members without perforations for delivering a hardening material (PMMA).

Nor does Spinelogik attempt to argue that the specification teaches that the invention as a whole must possess these features. It cannot, because the specification never describes the features of the “present invention” as a whole, which would be required for such a conclusion. *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007). Although Spinelogik argues that “the entire objective of the design of the ’385 Patent” requires enabling “PMMA augmentation through flexible needles,” this statement is completely unsupported by Spinelogik’s citations. POR, 26. None use “the present invention” or any similar language, and all **expressly** relate to particular embodiments. Ex. 1001, 3:35-47, 14:64-65 (noting that Fig. 14 is an alternative embodiment), 15:45-50 (discussing Fig. 14

embodiment); 21:55-65. At best, the specification teaches only that the objective of the described invention (versus specific embodiments) requires only a fusion member that affixes to the vertebral bodies, (Ex. 1001, Abstract), and attempts to meet the need for “an improved method to effect a more rapid, reliable fusion between unstable vertebral segments” (Ex. 1001, 2:10-13). The remainder of the specification describes particular embodiments. *See, e.g., id.*, 2:15-4:24 (“Summary of Invention” section, repeatedly describing only the features of “some embodiments”). Indeed, the specification expressly states that anchoring members “may be flexible in some embodiments, while being rigid in other embodiments” (Ex. 1001, 23:7-8), and describes “EMBODIMENTS THAT DO NOT USE POLYMER MATERIALS,” specifically, “anchoring members [that] may be without a central lumen or perforations” (*id.*, 26:32-49).

Spinelogik’s arguments cross the border into the frivolous. They cannot defeat the Petition’s showing of unpatentability, because the challenged claims do not require these elements.

B. The Asserted Grounds are Not Based on Hindsight but Rely on Analogous Art Supported by Rigorous Application of the Motivation to Combine Requirement.

Spinelogik repeatedly argues that the asserted grounds rely on combinations based on impermissible hindsight reasoning. *See, e.g.*, POR, 4, 20, 25, 57-58, 62. Hindsight is usually addressed in the context of objective indicia of non-

obviousness, such as commercial success. *See, e.g., Polaris Indus. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1071-72 (Fed. Cir. 2018) (explaining that objective indicia are an important guard against hindsight reasoning). Spinelogik does not address any objective indicia.

Hindsight bias is also prevented by the requirement that the asserted prior art be analogous to the claimed invention. *Corephotonics, Ltd. v. Apple Inc.*, 84 F.4th 990, 1003-04 (Fed. Cir. 2023); *see also LG Elecs., Inc. v. Conversant Wireless Licensing S.A.R.L.*, 759 F. App'x 917, 925 (Fed. Cir. 2019) (finding that “[t]he fact that the references are directed to the same field of art helps to support the Board’s finding that a person of ordinary skill in the art would be motivated to combine their teachings”). Spinelogik asserts non-analogousness in several arguments. *See* POR, 4 (asserting a combination of “disparate systems”), 40-41 (arguing that Hess is non-analogous because it discloses an interspinous device), 56-57, 62. But the Petition showed that each reference is analogous to the claimed invention.

Moskowitz (Grounds 1 and 3) is both from the same field of endeavor as the challenged patent (“surgical procedures for spinal fusion and stabilization”) and is reasonably pertinent to the problem facing the inventor (improving the reliability of fusion “between unstable vertebral segments”); indeed, Moskowitz—like the claimed invention—is an intervertebral fusion device. *Compare* Ex. 1001, 1:29-30, 2:10-13 *with* Ex. 1004, 1:20-27; Petition, 25.

While Hess is primarily directed to interspinous interventions (as acknowledged in the Petition), Petitioner provided evidence that a POSA considered it to be suitable and desirable for use as an intervertebral implant with minimal modifications. Petition, 61-62 (citing Ex. 1002 ¶ 122). Spinelogik’s attorney argument does not rebut this evidence. POR, 15-16, 40-41. Spinelogik fails to address the Petition’s showing that a POSA would have considered Hess to be reasonably pertinent to improving intervertebral fusion, and is thus analogous. Petition, 62-64 (citing Ex. 1002 ¶¶ 122-125).

Steffee is from the same field of endeavor, and a POSA would have understood Steffee to explicitly disclose its use in in spinal fusion procedures. Petition, 84-85 (citing Ex. 1002 ¶ 163). Steffee is also reasonably pertinent to the problem disclosed in the ’385 Patent, because Steffee’s use of curved anchors to prevent migration applies to the problem of failed spinal fusion. *Id.*, 85-88 (citing Ex. 1002 ¶¶ 164-166, 168).

Spinelogik also argues that Steffee is not analogous to **Moskowitz** because the two use different “fixation technolog[ies]” (barbed fasteners vs. threaded screws). POR, 55-56. But the test for analogous art compares the reference to the challenged patent, not other prior art. *Sanofi-Aventis Deutschland GmbH v. Mylan Pharms. Inc.*, 66 F.4th 1373, 1377-78 (Fed. Cir. 2023). Thus, Spinelogik fails to rebut the Petition’s showing that Steffee is analogous prior art. Petition, 84-88.

Finally, hindsight is negated by ensuring there is an appropriate motivation to combine, which is the “best defense” against hindsight analysis. *In re Gartside*, 203 F.3d 1305, 1319 (Fed. Cir. 2000). Although not required, this is especially true when the express teachings of the proposed combination suggest a motivation to combine. *Schwendimann v. Neenah, Inc.*, 82 F.4th 1371, 1381 (Fed. Cir. 2023). Petitioner’s motivations to modify or combine are expressly suggested in the asserted references. Petitioner’s evidence in support is not based on *ex post* reasoning but on the suggestions in the asserted references and how they would have been understood by a POSA at the time of the claimed invention. Ex. 1002 ¶ 48.

Spinelogik first argues that the proposed modifications to Hess (Ground 2) are hindsight driven because they minimize “the structural differences and conflicting functional objectives inherent” in such modifications. POR, 41. Spinelogik’s attack centers on the proposed modification of changing Hess’s “bullet” shape to a “box cage” which “ignores the specialized mechanical function of the internal components.” *Id.* Spinelogik ignores Hess’s express teaching that its shape could be easily modified to match the profile of adjacent bone when deployed. Petition, 65 (citing Ex. 1006, 7:7-13, Ex. 1002 ¶ 126). This negates Spinelogik’s charge of hindsight. Spinelogik’s unexplained, conclusory argument that “converting Hess for intervertebral fusion would require eliminating its core dynamic stabilization functionality,” (POR, 42), cannot rebut Petitioner’s evidence that the proposed

modifications could be made without undermining Hess's structural stability. Petition, 65-66 (citing Ex. 1002 ¶¶ 126, 128).

For Ground 3, Spinelogik argues hindsight because the combination entails redesigning "Moskowitz's straight guides from supporting rigid, twisting elements to supporting flexible, impacted elements capable of navigating a complex curvilinear trajectory." POR, 57-58. This attack (in addition to importing flexible and impact-driven anchor limitations) fails to address the proposed combination and instead attacks the reference individually. *See* Sections III.A., III.C. Further, ample motivation is expressed in Steffee's teaching that curved anchors were superior to straight anchors (such as Moskowitz's screws) because they minimized the forces acting on the anchor which caused straight anchors to lose effectiveness. Petition, 87 (citing Ex. 1005, 1:29-36), 88-89 (citing Ex. 1002 ¶ 169). These same forces act on anchors used with and without implants. Petition, 87-89; Ex. 1002 ¶¶ 168-169. Thus, the Petition's analysis and evidence established a motivation to use Steffee's curved anchors in Moskowitz's implant to prevent implant migration, a well-known problem that affected surgical fusion success (which Spinelogik acknowledges). Petition, 88-89; Ex. 1002 ¶ 169; POR, 24, 56.

There is no hindsight bias in any asserted ground. Each is grounded in analogous art from the same field of endeavor and/or reasonably pertinent to the problem to be solved. The asserted grounds rely on motivations to modify or

combine contained in the references themselves. Finally, Spinelogik's hindsight arguments are pure attorney argument unsupported by any evidence, and therefore cannot rebut the analysis and evidence provided in the Petition. *See* Section III.C.

C. Spinelogik Attacks the References Individually Instead of the Proposed Combinations.

Spinelogik asserts that “[n]one of the intervertebral implant or fasteners systems disclosed in the asserted ... references teach or suggest the core inventive concepts.” POR, 18-20. For Ground 3, Spinelogik further argues that Moskowitz and Steffee disclose distinct fixation mechanisms and driving methods (*id.*, 56-57, 68, 70-71) and premises its arguments on Moskowitz's channels being “inherently straight” (*id.*, 61). It also asserts that in Steffee, the combination fails because the fasteners do not traverse “curved paths to achieve precise exit locations.” *Id.*, 67. These arguments all attack the references individually. But obviousness “cannot be overcome by attacking references individually” when unpatentability “is based upon the teachings of a combination of references.” *Bradium Techs. LLC v. Iancu*, 923 F.3d 1032, 1050 (Fed. Cir. 2019) (internal quotation marks and citation omitted). The proper test is “what the combined teachings of the references would have suggested to those having ordinary skill in the art.” *In re Mouttet*, 686 F.3d 1322, 1333 (Fed. Cir. 2012). Thus, Spinelogik's reliance on differences between the individual references and the claimed invention(s) cannot overcome the Petitions' analysis and evidence for the modifications and combinations of the asserted

grounds.

Spinelogik's single, conclusory assertion that the references "teach away" from the claimed invention (POR, 4) lacks merit. References do not teach away, even when expressing a preferred alternative to the claimed invention, when they do not criticize, discredit, or otherwise discourage investigation into the claimed invention. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009). They do not do so here.

D. Spinelogik Provides No Evidence to Support its Arguments or Factual Assertions.

Spinelogik repeatedly makes factual assertions about the understanding of a POSA, how the references function, and that the asserted grounds require wholesale redesign. *See, e.g.*, POR, 23 (asserting that Moskowitz does not disclose an internal seat and that "multiple alternative configurations could achieve screw fixation without a seat"), 25 (asserting that modifying Moskowitz necessitated "wholesale, non-obvious redesign"), 25-26 (asserting that a POSA had no motivation or reasonable expectation of success in modifying Moskowitz and that modification "undermines the core functionality"), 26, 31 (asserting that Moskowitz's expandable design "inherently creates looseness between screws and the box" and that "[i]f the screws rigidly coupled the box to the vertebrae ... box expansion would be impossible or would cause screw loosening or bone damage"), 41 (asserting that Hess addresses "fundamentally different biomechanical loading conditions" and that

modifying Hess would involve a “wholesale internal redesign”), 47 (asserting that Hess’s curved locking wings cannot traverse through curved channels), 56-57 (asserting that Moskowitz-Steffee entails wholesale redesign and that Steffee’s impact insertion undermines Moskowitz’s guiding system), 60 (asserting wholesale redesign and alleged “critical technical barriers” precluding combination), 62 (asserting that creating “semi-circular channel paths” in Moskowitz requires wholesale redesign and “compromises the structural integrity required for the sliding base expansion mechanism”), 65-66 (asserting without explanation that curved channels “would fundamentally alter Moskowitz’s geometry” and that the modifications “necessarily change the spatial relationships between channels”). These unsupported assertions are mere attorney argument, and cannot rebut the unchallenged testimonial evidence provided in the declaration of Mr. Culbert (Ex. 1002), whom Spinelogik failed to even cross-examine. In addition, as discussed with regards to the specific grounds below, they also contradict the disclosures in the asserted references themselves. These, and the other unsupported arguments and factual assertions in Spinelogik’s Response, should be disregarded because they lack any evidentiary weight whatsoever. *See, e.g., Wasica Fin. GmbH v. Cont’l Auto. Sys.*, 853 F.3d 1272, 1284-85 (Fed. Cir. 2017) (“We thus think it was reasonable for the Board to accept Wasica’s expert testimony over Schrader’s bare attorney argument.”) (citing *Gemtron Corp. v. Saint-Gobain Corp.*, 572 F.3d 1371, 1380

(Fed. Cir. 2009) (“unsworn attorney argument . . . is not evidence and cannot rebut [the record evidence]”); *see also Enzo Biochem, Inc. v. Gen-Probe, Inc.*, 424 F.3d 1276, 1284 (Fed. Cir. 2005) (“Attorney argument is no substitute for evidence.”).

IV. SPINELOGIK’S OTHER GROUND-SPECIFIC ARGUMENTS FAIL TO REBUT THE ANALYSIS AND EVIDENCE IN THE PETITION.

A. Ground 1 – Moskowitz and the General Knowledge of a POSA

Spinelogik’s arguments with regard to Moskowitz primarily rely on its argument that Moskowitz does not include “curved channels” as properly construed. *See, e.g.*, POR, 23, 28-29, 32-36. Ground 1 used Spinelogik’s applied claim construction, (Petition, 24), which Spinelogik has now disavowed. However, because Moskowitz is a primary reference for Ground 3, Petitioner addresses Spinelogik’s relevant Ground 1 arguments with Ground 3 below.

B. Ground 2 – Hess and the General Knowledge of a POSA

Spinelogik’s attorney argument that Hess requires “wholesale internal redesign” (POR, 41-42) is unsupported and contradicted by the evidence. Petition, 65-66; Ex. 1002 ¶¶ 126, 128. Hess itself suggests modifying its shape and a POSA would have recognized that its interspinous implant could easily be modified for use as an intervertebral implant. Petition, 66; Ex. 1002 ¶ 128.

The modified device possesses all elements of the challenged claims. Petition, 61-84. Spinelogik nevertheless argues that Hess’s alleged functional differences fail

to disclose the “inventive utility” of the claimed invention with respect to curved channels and anchors, which Spinelogik asserts to include “guiding an anchoring member that must **‘bend to traverse through the [curved] channel’** ... enabling the use of a flexible ... anchor.” POR, 42-43 (citing Ex. 1001, 16:63-65), 43-45. But the cited portion of the ’385 Patent does not state any such requirement. Ex. 1001, 16:63-65. This language is found only in Claim 8 and is not required by the challenged claims. *See* Section III.A. The same is true for the alleged requirement of an anchor with a central lumen for PMMA injection. *Id.* These unclaimed features cannot overcome the Petition’s showing of unpatentability.

Claim 1

Spinelogik’s argument that Hess’s guide tracks are not curved channels because they are not designed for flexible, hollow anchors, (POR, 45-48), is addressed above. *See also* Section III.A. Any “functional dissimilar[ity]” aside (POR, 47-48), the guide tracks are curved channels under the parties’ agreed construction. Petition, 67-69.

Spinelogik similarly distinguishes Hess’s wings from the claimed anchors based on the particular mechanism of anchor insertion/fixation and deployment. POR, 48-49. Claim 1 is not limited to such specific mechanisms, but requires only insertion through the channel and vertebral member. Hess’s locking wings satisfy this limitation (Petition, 69-71) and Spinelogik’s unexplained “structural

incompatibility,” (POR, 49), does not change this.

Despite its arguments that Hess’s planes “fail to disclose the [necessary] technical significance” and serve “a different technical purpose,” (POR, 49, 50), Spinelogik **admits** that Hess’s channels comprise parallel cross-sectional planes (POR, 49), as shown in the Petition. Petition, 71-74.

Claims 2-3

Spinelogik acknowledges that the surfaces mapped in the Petition (Petition, 74-75) satisfy the limitations of Claims 2 and 3 but argues that this geometry is merely “incidental” and is not “an intended design constraint.” POR, 50-51. Yet the limitations are present. Spinelogik’s related assertion that Hess’s teaching that its shell is designed to match the profile of adjacent bone “has no relevance to intervertebral fusion member surface geometry,” (*id.*, 52), is unsupported attorney argument. Hess itself explains that its external surface could be modified to match the profile of adjacent bone (Ex. 1006, 7:7-13), and the Petition explained that such modification was desirable to enable the implant to serve as a stable platform during fusion. Petition, 65; Ex. 1002 ¶ 126. The Petition’s analysis and evidence are un rebutted. None of Spinelogik’s arguments show that these limitations are not present.

Claim 7

Spinelogik argues that the claimed driving member must “apply axial impact

or pushing force” and must itself comprise a central lumen for PMMA injection, and further requires “specialized coupling ... and pivoting mechanisms.” POR, 52-53. These are not claim limitations nor are they within the plain meaning of “driving member.” The specification describes these features as only included in “some” or “alternative” embodiments. *See, e.g.*, Ex. 1001, 3:35-45, 14:7-49; 14:64-15:42; 16:66-17:10; 18:56-60, 21:28-31, 24:41-52. It is improper to import them into the claim absent express definition or lexicography. *Hill-Rom Servs. v. Stryker Corp.*, 755 F.3d 1367, 1372-73 (Fed. Cir. 2014); *see also Phillips*, 415 F.3d at 1323; *see* Section III.A. Spinelogik thus fails to show that the limitations of Claim 7 are not present in Ground 2.

Claim 9

Spinelogik does not even argue that these limitations are not present but distinguishes Ground 2 based on the “functional context” of the ’385 Patent. POR, 54. But Claim 9 describes a specific structure; it does not matter if Hess’s mechanism “bears no relation to the flange-and-cavity retention system” described in **some embodiments** of the ’385 Patent. POR, 54-55; Ex. 1001, 16:26-39 (referencing the “flanged bases” 1645-1650 of anchoring members 1410-1420), 14:7-31 (stating that 1410-1420 are only one embodiment). The claim does not require a “dedicated flanged base,” but an opening with a recess and an anchor with a base that fits therein, which are present in Ground 2. Petition, 80-84.

C. Ground 3 – Moskowitz-Steffee

Spinelogik argues, in conclusory fashion, that a POSA would simply not have chosen to use Steffee’s impact-driven curved anchors with Moskowitz, because Moskowitz’s threaded screws and Steffee’s barbed fasteners are “non-analogous” and “antithetical” fixation and insertion mechanisms. POR, 56-57. Spinelogik provides no evidence for its unexplained argument that using Steffee’s fasteners “undermines” Moskowitz’s guiding system in the combination, (*id.*, 57), which cannot rebut the evidence to the contrary. Petition, 90-91.

Spinelogik’s arguments against motivation to combine and reasonable expectation of success focus on the combination’s “absence of the specialized PMMA delivery system” using hollow, flexible anchors. POR, 59. These are not limitations of the challenged claims. Section III.A.

Spinelogik also argues that Moskowitz already addresses migration, implying this defeats any motivation to combine. POR, 59. The cited portions of Moskowitz (Ex. 1004, 2:36-39, 7:49-62) do not discuss implant migration, and stand for the unsurprising proposition that Moskowitz’s device enables successful fusion. Nor is there any need for a reference to hold itself out as flawed for a POSA to have a motivation to improve it. *Janssen Pharms., Inc. v. Teva Pharms. USA, Inc.*, 97 F.4th 915, 929-30 (Fed. Cir. 2024) (explaining that there is no such requirement and that motivation “may be found in many different places and forms” and “need not be

expressly stated in the references at all, let alone originate from the reference to be modified.”) (internal citations omitted). The Petition explains, with supporting evidence, that the motivation derived first from the need to minimize implant migration. Petition, 88-89 (also explaining as an additional motivation the need to more securely engage the implant with vertebrae due to Moskowitz’s use of threaded screws). Spinelogik acknowledges this motivation but does not rebut this analysis or evidence, offering only a conclusory criticism that it is “superficial.” POR, 56.

Spinelogik also argues that using Steffee’s fasteners “defeats Moskowitz’s fundamental adjustability feature provided by its expandable design.” POR, 59; *see also id.*, 27-28, 31. In addition to providing no evidence to support this assertion, Spinelogik contradicts Moskowitz. Moskowitz’s expandable design provides the ability to expand its implant to match the necessary intervertebral space, with expansion before anchor insertion. Ex. 1004, 7:41-48, 10:57-64. Thus, any inability to reposition Steffee’s anchors (itself an unsupported factual assertion) cannot affect Moskowitz’s expandable design, as height adjustment occurs prior to and independent of anchor insertion.

Claim 1

Spinelogik admits that “[t]he combination produces a channel capable of passing a curved, non-threaded component,” but distinguishes the prior art by asserting that it “lacks the capacity or functional need” to guide a flexible anchor for

“deep tissue targeting and PMMA delivery” and inserted by being pushed. POR, 63, 64, 30. Spinelogik further admits that the combination discloses “parallel channel orientations” but argues that this “parallelism” results from “incidental geometry” instead of from “managing the ... paths of flexible anchoring members.” POR, 64-65. These distinctions are irrelevant. The claimed limitations are admittedly present, and the absence of unclaimed elements does not change this. Section III.A.

A POSA was motivated to use curved fasteners as taught by Steffee to minimize the forces that acted on Moskowitz’s straight anchors and tended to cause implant migration. Petition, 88-89; Ex. 1002 ¶ 169. Spinelogik fails to address this argument, other than conclusory assertions of hindsight. While Spinelogik attacks Steffee individually because its fasteners were used for securing bone graft without an implant, Spinelogik does not support its assertion that the “bone graft resorption forces” and the need to “minimize moment arm effects” are a “technical problem wholly unrelated” to securing intervertebral fusion devices. POR, 62. On the contrary, the Petition explained—with supporting testimony as to a POSA’s understanding—that Steffee’s teaching regarding the forces tending to cause fastener movement for bone graft was equally applicable to the forces acting on fasteners used to secure implants. Petition, 88-89; Ex. 1002 ¶ 169. Spinelogik also contradicts Moskowitz, which explains that its implant is used with the same bone graft material, and thus subject to the same forces discussed in Steffee. Ex. 1004,

3:42-45.

Spinelogik likewise provides no evidence that “wholesale redesign” would be necessary or that the asserted combination would compromise the structural integrity of Moskowitz’s implant related to its expansion mechanism. POR, 62-63, 65. As discussed, this analysis is simply incorrect. *See* Section IV.C. above. The only evidence is that a POSA had a reasonable expectation of success in including curved channels to complement Steffee’s anchors, because such modifications required only well-known techniques to include curved channels similar to those already used in the field. Petition, 90-91; Ex. 1002 ¶ 173.

Nor does Spinelogik provide any evidence to support its assertions that any structural modifications would alter the device geometry or require changing the “spatial relationships between channels” or orientation of the parallel planes disclosed in Moskowitz. POR, 65. The Petition explained that a POSA would have maintained the same cross-sectional planes in the combination, as in both Moskowitz and Steffee. Petition, 47-48, 93-94; Ex. 1002 ¶ 179.

Spinelogik asserts that Moskowitz does not disclose an internal seat, but ignores the Petition’s explanation of the location and presence of such a seat. POR, 23, 29-30; Petition, 34-35; Ex. 1002 ¶¶ 76-77. Other than a citation to Moskowitz, Spinelogik provides no evidence to support its assertions that Moskowitz’s screws “function by threading into bone, not by mechanical retention via a seat” and

“multiple alternative configurations could achieve screw fixation without a seat.” POR, 23, 30. The cited portion of Moskowitz does not even suggest Spinelogik’s conclusions. Ex. 1004, 7:49-52 (stating only that the transvertebral screws traverse Moskowitz’s screw box). Merely because anchors insert through the implant and into bone does not mean that they are not also retained in the implant by a seat. The Petition showed that a POSA would have understood such a seat to be present based on Moskowitz’s depiction of its screw heads and their bearing surfaces engaging with either threading that served as a seat or a separate seat. Petition, 34-37, 92-93; Ex. 1002 ¶¶ 76-80, 178. This showing is unrebutted.

Spinelogik argues in conclusory fashion that Petitioner failed to show motivation, analogous art, and reasonable expectation of success for the conclusion that such a seat was also obvious in view of the general knowledge of a POSA. POR, 23, 39. But the Petition explained that prior art intervertebral fusion implants used such seats, which was simply a well-known design for screws and other fasteners. Petition, 37-39. The Petition expressly set forth a motivation to use such a design and a reasonable expectation of success. Petition, 37-41; Ex. 1002 ¶¶ 80-87. Spinelogik simply ignores this. The Petition also explained that in Moskowitz-Steffee, a POSA would have maintained this same functionality to enable the bearing surface of Steffee’s fasteners to securely engage with the implant via a seat to securely affix the implant to the vertebrae. Petition, 92-93; Ex. 1002 ¶ 178.

Finally, Spinelogik provides no evidence to rebut the showing of parallel cross-sectional planes (which Spinelogik admits are present) but relies on a different “underlying technical problem.” POR, 31-32; *see also id.*, 64-65. Whether intended to solve the same problem or not, the Petition showed that the claim limitation is present in Ground 3. Petition, 93-94.

All elements of Claim 1 are present in the asserted combination, and Spinelogik’s unsupported attorney arguments do not show otherwise. Petition, 91-94.

Claims 2-4

Spinelogik repeats its conclusory assertion that creating curved channels in Moskowitz would alter Moskowitz’s geometry, without support (POR, 65-66), and ignores Petitioner’s evidence that a POSA would have maintained the same parallel channels based on the teaching of both Moskowitz and Steffee. Petition, 93-94; Ex. 1002 ¶ 179. The only proposed modification to the channel geometries is adding internal curvature, and there is no reason—certainly, no reason explained by Spinelogik—why merely changing internal curvature would somehow displace the terminal points of Moskowitz’s channels on the fusion member’s surfaces (and thus their plane orientation). Petition, 94; Ex. 1002 ¶¶ 180-182.

Spinelogik attacks Moskowitz as not providing an express disclosure that the channel planes are parallel to any implant surface. POR, 32. This is false, as is readily

apparent from Moskowitz's figures and as explained by Mr. Culbert's unrebutted expert testimony. Ex. 1002 ¶¶ 98-102, 180-182.

Spinelogik also alleges inconsistency and contradiction between Petitioner's analyses for claims 2, 3, and 4. POR, 33-35. There is no inconsistency. The claims do not require the channels' planes to be non-parallel to **all** fusion member faces. While the **specification** uses such language to describe channel embodiments 4610 and 4620, this language is missing from the claims. *See* Petition, 46-47, 49. Thus, the channel planes are indeed simultaneously parallel and perpendicular to different fusion member surfaces. Petition, 48-52.

Claim 5

Spinelogik attacks Steffee individually because its fasteners do not traverse curved paths in an implant. POR, 67. This fails to address the proposed combination where Steffee's fasteners are used in Moskowitz's modified channels. Petition, 95; Ex. 1002 ¶ 183.

Claim 7

Spinelogik does not argue that the combination does not possess the limitations of Claim 7, but that it "fails to teach the critical functional capacity" of the invention, referencing an unclaimed central lumen for PMMA injection in the driving member. POR, 67-69, 37-38. Spinelogik ignores the Petition's showing that the modified driver would use axial "pushing or impacting force" (POR, 68) for

Steffee's non-threaded anchors. Petition, 95-96; Ex. 1002 ¶¶ 184-185. Spinelogik also strangely asserts that there is no decoupling mechanism, while admitting that Steffee's driving tool remains coupled "only during insertion." POR, 69. First, Claim 7 does not require a "decoupling mechanism" but only that the driving member be configured to decouple from the anchor. Second, a POSA understood that decoupling would necessarily occur in Moskowitz, Steffee, and the asserted combination. Petition, 57-58, 96; Ex. 1002 ¶¶ 112, 185. Nor does the claim require the driving member pivot (POR, 27, 38), a limitation found in unchallenged claim 13 but not present in the challenged claims. Ex. 1001, 28:52-58; *see* Section III.A. Finally, no claim requires pushing/impacting force, another attempt to import a limitation that ignores the specification's discussion of different embodiments. Ex. 1001, 24:41-52.

Claim 9

Spinelogik asserts that the "specialized recesses of increased diameter" and anti-rotation features of some embodiments are not present in the asserted combination. POR, 69-70, 38-39. But the claim requires only an opening with a recess, not these unclaimed features. Petition, 58; Ex. 1002 ¶ 114. There is no need for the combination to create a "highly specialized locking architecture" for anchoring a "PMMA-delivered system" because those are not claim limitations. POR, 71. The Petition showed that the actual claim limitations were present.

Petition, 58-61, 92-93, 96; Ex. 1002 ¶¶ 115, 178, 186.

V. Conclusion

Spinelogik's arguments and factual assertions are conclusory and unsupported, and distinguish the asserted grounds by importing limitations not present in the challenged claims. For the reasons stated in the Petition and herein, the challenged claims should be cancelled.

Dated: February 3, 2026

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

Pursuant to 37 C.F.R. § 42.24 *et seq.*, the undersigned certifies that this document complies with the type-volume limitations. This document, excluding those portions identified under § 42.24 (a)(1) contains 5,577 words as calculated by the word processing program used in creating it.

/James H. Hall/
James H. Hall

CERTIFICATE OF SERVICE

I hereby certify that on this 3rd day of February 2026, a copy of this Reply and Exhibit 1030 was served via email to Patent Owner's counsel of record at the email addresses identified in Patent Owner's Mandatory Notices (Paper 4):

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