

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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LIFE SPINE, INC.,  
Petitioner,

v.

GLOBUS MEDICAL, INC.,  
Patent Owner.

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IPR2022-01601  
Patent 10,925,752 B2

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Before KRISTIL R. SAWERT, CYNTHIA M. HARDMAN, and  
MICHAEL A. VALEK, *Administrative Patent Judges*.

SAWERT, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review

*35 U.S.C. § 314*

Granting Petitioner's Motion to File Under Seal

*37 C.F.R. §§ 42.14, 42.54*

## I. INTRODUCTION

Petitioner Life Spine, Inc. requests *inter partes* review of claims 1–8, 10–18, and 20 of U.S. Patent No. 10,925,752 B2 (“the ’752 patent,” Ex. 1001). Paper 2 (“Pet.”). Patent Owner Globus Medical, Inc. filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply and Patent Owner filed a Preliminary Sur-reply. Paper 9 (“Prelim. Reply”); Paper 10 (“Prelim. Sur-reply”).<sup>1</sup>

We have authority under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” After considering the Petition, Preliminary Response, Preliminary Reply, Preliminary Sur-reply, and associated evidence, we deny the Petition and do not institute an *inter partes* review.

### A. *Real Parties in Interest*

Petitioner and Patent Owner each identify themselves as the real party in interest. Pet. 1; Paper 6 (Patent Owner’s Mandatory Notices), 1.

### B. *Related Matters*

The parties identify *Globus Medical, Inc. v. Life Spine, Inc.*, 1:21-cv-01445 (D. Del.), as involving the ’752 patent. Pet. 1; Paper 7, 1. Patent

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<sup>1</sup> The Board observes that both parties delete spacing between words, in an apparent effort to circumvent our word count limits. For example, Petitioner uses “EX1001,” while Patent Owner uses “Ex-1001.” *See, e.g.*, Pet. 1; Prelim. Resp. 26. The parties are cautioned that continuing this practice may lead to a party’s brief not being considered. *See Consolidated Office Trial Practice Guide* (Nov. 2019), at 40, *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Owner identifies a number of patent applications related to the '752 patent, i.e., 17/817,209, 17/157,099, 17/065,970, 17/177,671, and 16/597,211. Pet. 1–2; Paper 7, 1. Petitioner identifies IPR2022-01434 and IPR2022-01435 as related *inter partes* review proceedings. Pet. 1.

*C. The '752 patent (Ex. 1001)*

The '752 patent, titled “Expandable Fusion Device and Method of Installation Thereof,” relates to an expandable device for insertion between adjacent vertebrae to facilitate fusion and a method for promoting intervertebral fusion using the expandable device. Ex. 1001, code (54), 1:18–22. According to the Specification, a need exists for a fusion device that is “capable of being installed inside an intervertebral disc space at a minimum to no distraction height and . . . can maintain a normal distance between adjacent vertebral bodies when implanted.” *Id.* at 1:56–60. The '752 patent purports to meet this need with a fusion device including first and second endplates and a central ramp capable of moving in a first direction to push the endplates outwardly into an unexpanded configuration. *Id.* at 2:1–5. The fusion device can be placed into a disc space via an endoscopic tube and then expanded into an expanded configuration. *Id.* at 2:5–8.

The Specification describes exemplary expandable fusion devices for installing in an intervertebral disc space to facilitate intervertebral fusion. *Id.* at 1:64–2:1. One exemplary device is depicted in Figure 50, reproduced below.

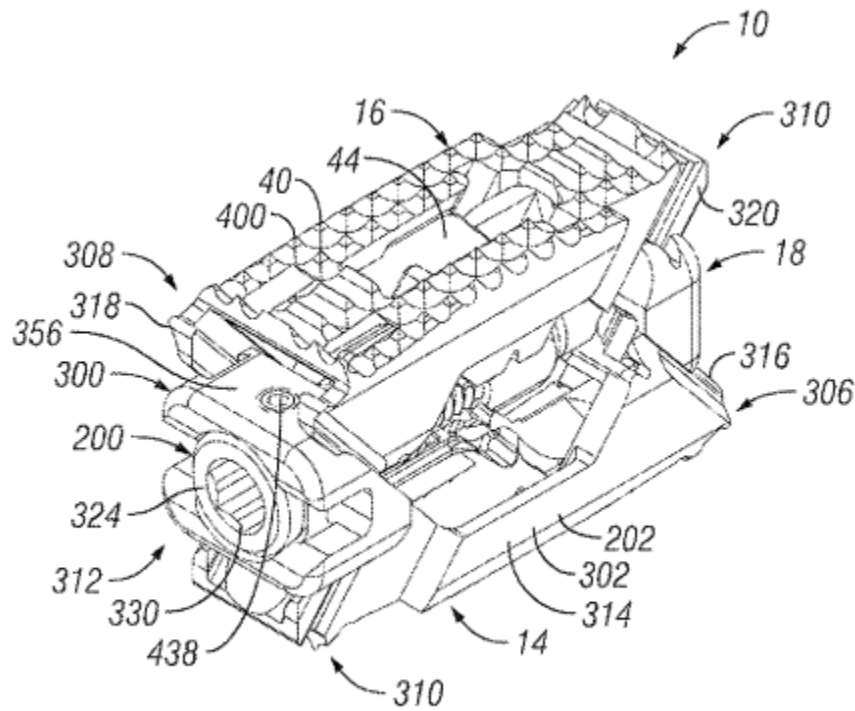


FIG. 50

Figure 50 of the '752 patent, reproduced above, is a perspective view of expandable fusion device 10 in an expanded position. *Id.* at 4:46–49, 16:66–67. Expandable fusion device 10 includes first endplate 14, second endplate 16, central ramp 18, actuator assembly 200, and driving ramp 300. *Id.* at 16:67–17:3. Actuator assembly 200 functions to pull central ramp 18 and driving ramp 300 together, which forces apart endplates 14 and 16. *Id.* at 17:3–7.

Figure 52 of the '752 patent is reproduced below.

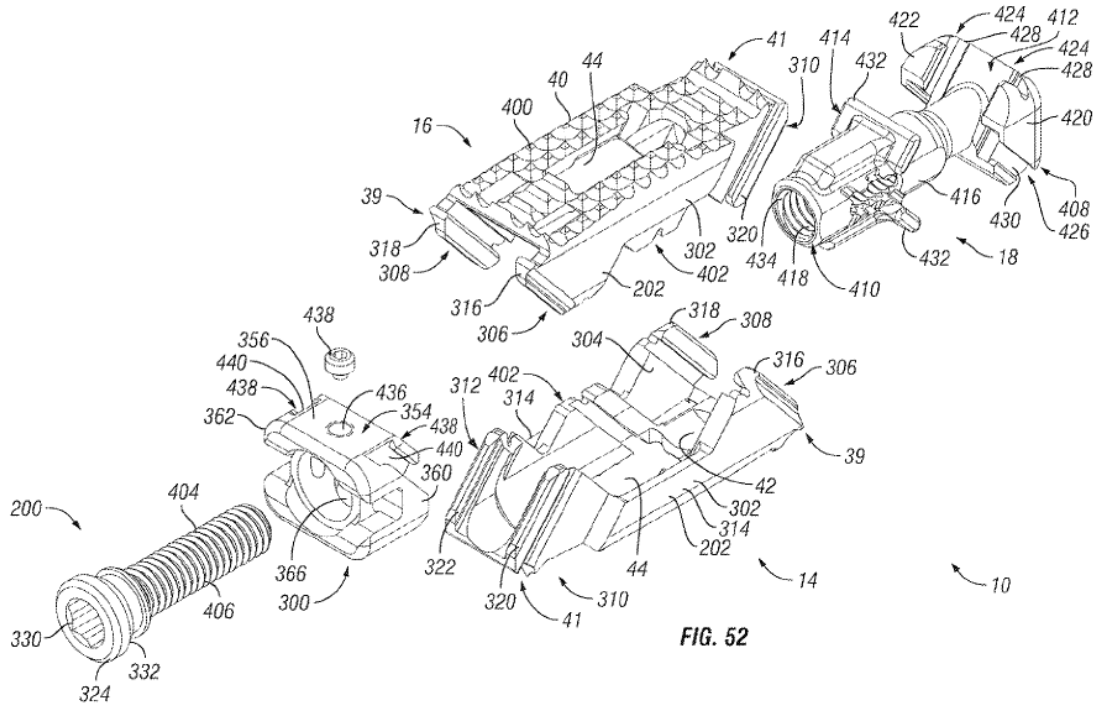


FIG. 52

Figure 52, reproduced above, is an exploded view of expandable fusion device 10. *Id.* at 4:53–55. Central ramp 18, which has first end 408 and second end 410, includes first expansion portion 412, second expansion portion 414, rod-receiving extension 416, and longitudinally-extending through bore 418. *Id.* at 18:51–56. Rod-receiving extension 416 is threaded to receive threading of extension 404 of actuator assembly 200. *Id.* at 19:30–33. Driving ramp 300 includes bore 366 sized to receive extension 404. *Id.* at 19:40–42. Actuator assembly 200 includes head portion 324 with rim 332, which engages contact surface 368 of driving ramp 300. *Id.* at 19:46–49.

In operation, expandable fusion device 10 is seated into an intervertebral disc space. *Id.* at 20:23–25. An instrument is used to engage head portion 324 of actuator assembly 200. *Id.* at 20:26–27. Rotating actuator assembly 200 in a first direction pulls central ramp 18 linearly

towards driving ramp 300 and pushes driving ramp 300 linearly towards central ramp 18. *Id.* at 20:27–33. Ramped portions of central ramp 18 and driving ramp 300 push against corresponding ramped portions of endplates 14 and 16, which forces the endplates outward into an expanded position. *Id.* at 20:37–39, 58–64.

*D. Challenged Claims*

Petitioner challenges claims 1–8, 10–18, and 20 of the '752 patent. Claims 1 and 11 are independent. Claim 1, reproduced below with bracketed and bolded lettering added,<sup>2</sup> is illustrative:

1. **[a]** An expandable fusion device comprising:
  - [b]** a first endplate and a second endplate,
  - [c]** a central ramp, a driving ramp, and an actuator positioned between the first and second endplates, **[d]** the central ramp non-rotationally coupled to the first and second endplates, and including a threaded bore, a first expansion portion, and a second expansion portion longitudinally spaced from the first expansion portion, **[e]** the driving ramp including a through bore and a third expansion portion, **[f]** the actuator including a head portion and a threaded extension that extends from the head portion, **[g]** the extension of the actuator non-threadingly extending through the through bore of the driving ramp and threadingly extending into the threaded bore of the central ramp,
  - [h]** wherein the actuator is rotationally coupled to the driving ramp **[i]** and when the actuator is rotated relative to the central ramp, the central ramp and the driving ramp move towards one another, thereby causing the first and second endplates to move apart.

Ex. 1001, 21:48–67.

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<sup>2</sup> For ease of reference, we use the same bracketed lettering Petitioner uses in the Petition. *See, e.g.*, Pet. 8–26.

Challenged independent claim 11 is similar to claim 1, but recites some additional features, including that the first and second expansion portions have “at least one ramped surface” and the through bore is “unthreaded.” *Compare id.* at 21:50–62 (claim 1), *with id.* at 22:33–45 (claim 11). Challenged claims 2–8 and 10 depend directly or indirectly from independent claim 1 and recite additional features, including with respect to the first and second expansion portions (claims 2 and 3, respectively), the central ramp (claim 4), the driving ramp (claim 5), the actuator (claims 6 and 7), and the endplates (claims 8 and 10). *Id.* at 22:1–24, 27–29. Similarly, challenged claims 12–18 and 20 depend directly or indirectly from independent claim 11 and recite additional features, including with respect to the first and second expansion portions (claims 12 and 13, respectively), the central ramp (claim 14), the driving ramp (claim 15), the actuator (claims 16 and 17), and the endplates (claims 18 and 20). *Id.* at 22:51–67; 23:1–10, 13–15.

*E. Evidence*

Petitioner submits evidence including:

<b>Evidence</b>	<b>Exhibit No.</b>
Declaration of Troy D. Drewry	1002
KR 20-0290058 (September 26, 2002) (“Chung”) <sup>3</sup>	1005
Olmos et al., U.S. Patent Publication 2008/0140207 A1 (published June 12, 2008) (“Olmos”)	1006

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<sup>3</sup> Exhibit 1005 includes a certified English translation on pages 1–12 and the original Korean document on pages 13–22. When citing Chung herein, we refer to the page numbers indicated by the six-digit page numbering scheme applied at the bottom center of the exhibit. For convenience we drop the lead-in zeros.

*F. Asserted Grounds of Unpatentability*

Petitioner asserts that claims 1–8, 10–18, and 20 are unpatentable on the following grounds:

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §<sup>4</sup></b>	<b>Reference(s)/Basis</b>
1–8, 10–18, 20	102(b)	Chung
1–5, 8, 10–15, 18, 20	102(b)	Olmos
1–8, 10–18, 20	103(a)	Olmos, Chung

Pet. 3. Patent Owner disputes Petitioner’s asserted grounds of unpatentability. *See generally* Prelim. Resp. Patent Owner supports its contentions with the Declaration of Brad Culbert (Ex. 2001), among other evidence.

II. ANALYSIS

*A. Discretionary Denial Under § 325(d)*

The parties dispute whether the Board should discretionarily deny the Petition under 35 U.S.C. § 325(d). Prelim. Resp. 7–26; Pet. 106–109; Prelim. Reply 4–6; Prelim. Sur-reply 5–6. Because we deny institution on the merits, we do not reach the discretionary issues raised by the parties.

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<sup>4</sup> The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended several provisions of 35 U.S.C., including §§ 102 and 103. The ’752 patent claims priority to an application filed before the effective date of the applicable AIA amendments. Ex. 1001, code (63); *see also* Pet. 4. Thus, we refer to the pre-AIA versions of 35 U.S.C. §§ 102 and 103. Our Decision would be the same were we to apply the AIA version of the statutes.



*B. Principles of Law*

In an *inter partes* review, “the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). Petitioner ultimately bears the burden of persuasion to prove unpatentability of each challenged claim by a preponderance of the evidence. 35 U.S.C. § 316(e). This burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the Petition and Patent Owner’s Preliminary Response shows that there is a reasonable likelihood that Petitioner will prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 314(a).

Anticipation under 35 U.S.C. § 102 requires that a prior art reference set forth each and every element of a claim as set forth in the claim. *Verdegaal Bros. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987); *see also Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008) (anticipation not only requires that each element of a claim be present in a prior art reference, but also the arrangement or combination of those elements).

A claim is unpatentable as obvious under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains. 35 U.S.C. § 103(a) (2006); *see also KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) any objective indicia of nonobviousness.<sup>5</sup> *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). An obviousness determination requires finding a reason to combine accompanied by a reasonable expectation of achieving what is claimed in the challenged patent. *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016). “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR*, 550 U.S. at 419–20.

*C. Level of Ordinary Skill in the Art*

We consider the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art at the time of the invention. *Graham*, 383 U.S. at 17–18. Petitioner contends that a person of ordinary skill in the art (sometimes abbreviated herein as “POSITA”):

as of September 3, 2010, would have had a bachelor’s degree in mechanical engineering or biomedical engineering and two or more years of experience in biomechanical engineering, biomedical engineering, and/or spinal implant devices. A person could also have qualified as a POSITA with some combination of more formal education (e.g., an M.D.) and less technical experience or less formal education and more

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<sup>5</sup> Patent Owner does not presently assert objective indicia supporting nonobviousness of the challenged claims. *See generally* Prelim. Resp.; Prelim. Sur-reply.

technical or professional experience in the foregoing fields, and would have had further appreciation of various technical concepts in this field, as explained by Prof. Drewry.

Pet. 5–6 (citing Ex. 1002 (Drewry Decl.) ¶¶ 31, 43–64). Patent Owner does not presently dispute Petitioner’s proposal. Prelim. Resp. 6–7.

Because Petitioner’s proposed level of ordinary skill in the art appears to be consistent with the cited prior art and is undisputed on this record, we adopt it for purposes of this Decision. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (indicating that the prior art itself may reflect an appropriate skill level).

#### *D. Claim Construction*

In AIA proceedings we interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b). Under this standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*; *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc).

Petitioner argues that, “for purposes of considering the prior art presented in this IPR,” no claim terms “require constructions differing from their plain and ordinary meaning.” Pet. 5. Patent Owner responds that, because “Petitioner was required to identify how the challenged claims are to be construed,” any “further discussion of the plain and ordinary meaning of any claim term . . . is provided with regard to the relevant claim elements.” Prelim. Resp. 7.

Having considered the record, we conclude that no express claim construction is necessary for any claim terms for this Decision. *See Nidec*

*Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (holding that only claim terms in controversy need to be construed, and only to the extent necessary to resolve the controversy (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

*E. Overview of Asserted Prior Art*

*1. Chung (Ex. 1005)*

Chung, titled “A lumbar holder,” relates “to a medical device for correcting the back.” Ex. 1004, code (54), 2, 4. Chung discloses “a lumbar holder that is inserted between the back bones consisting of the lumbar in order to fix the back bones robustly while freely adjusting the height in order to maintain the appropriate space according to the patient’s state.” *Id.* at 4.

Figure 1 of Chung, reproduced below, is a perspective view of a lumbar holder. *Id.* at 3.

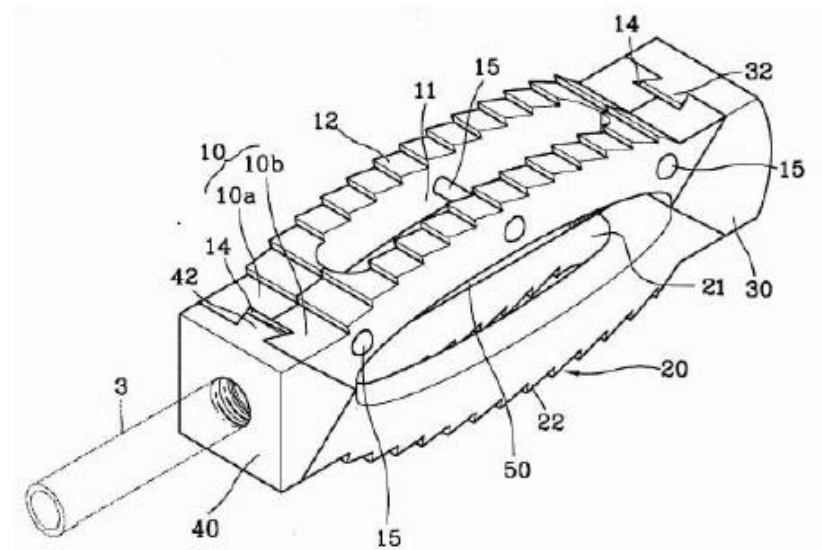


Figure 1 of Chung, reproduced above, depicts main holder bodies 10 and 20, lead wedge 30, and opposing wedge 40. *Id.* at 6.

Figure 2 of Chung, reproduced below, is an exploded view of the lumbar holder in Figure 1 above.

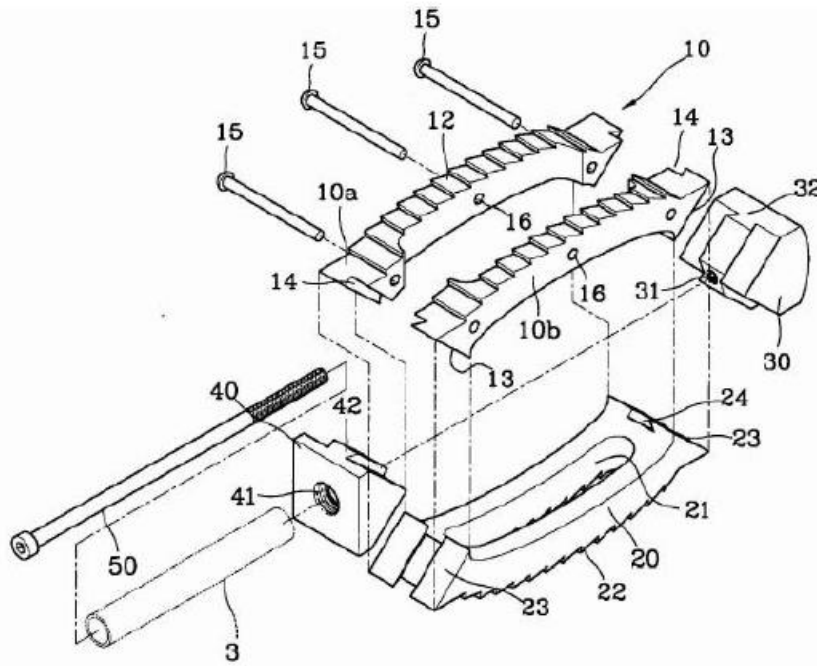


Figure 2 of Chung, reproduced above, depicts groove fastening screw 50, which fastens to screw hole 31 of lead wedge 30. *Id.* at 6. Opposing wedge 40 has penetrating hole 41, which has a raised spot to hold the head of groove fastening screw 50. *Id.* at 7. Tightening or loosening groove fastening screw 50 adjusts the distance between lead wedge 30 and opposing wedge 40, which slide along guiding surfaces 13 and 23 of holder bodies 10 and 20 to widen or narrow the space between the holder bodies. *Id.* at 6–7.

Figure 4 of Chung is reproduced below.

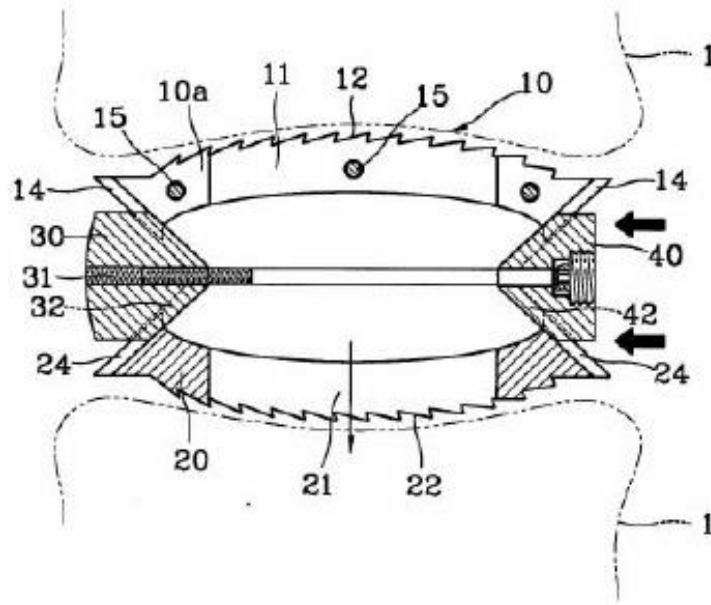


Figure 4 of Chung, reproduced above, is a cross-section view of a lumbar holder inserted between back bones. Chung discloses that, in operation, the lumbar holder is inserted between back bones and a wrench is used to tighten groove fastening screw 50, which brings lead wedge 30 and opposing wedge 40 together such that the wedges push main holder bodies 10 and 20 outward into contact with the back bones. *Id.* at 7. Conversely, loosening groove fastening screw 50 moves lead wedge 30 and opposing wedge 40 apart, which pulls main holder bodies 10 and 20 together. *Id.*

## 2. Olmos (*Ex. 1006*)

Olmos, titled “Intervertebral Implant,” relates to “[a]n adjustable spinal fusion intervertebral implant.” *Ex. 1006*, code (54), (57). Figure 16A of Olmos is reproduced below.

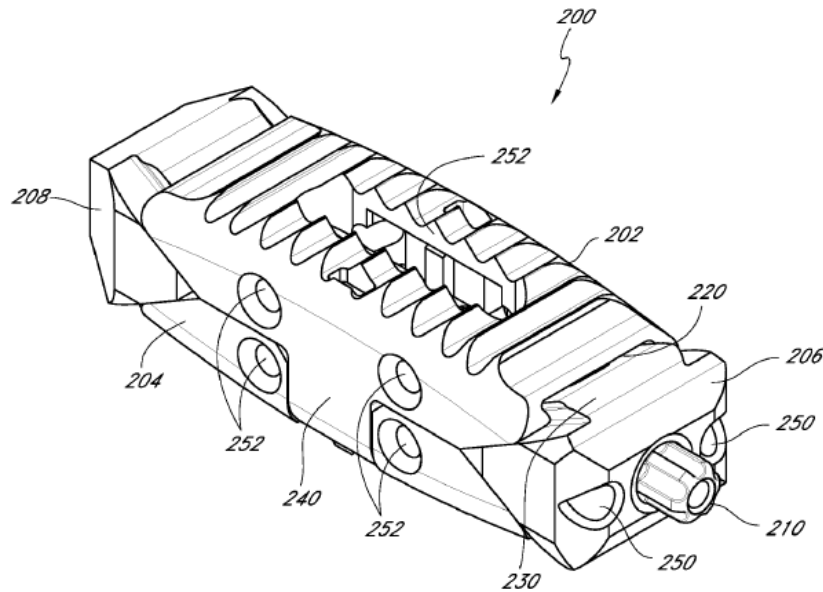


FIG. 16A

Figure 16A of Olmos, reproduced above, is a perspective view of intervertebral implant 200 in an unexpanded state. *Id.* ¶ 152. Implant 200 comprises upper body portion 202, lower body portion 204, proximal wedge member 206, distal wedge member 208, and actuator shaft 210. *Id.* ¶¶ 152, 156. Proximal wedge member 206 includes upper guide member 230 engaging a corresponding slot in upper body portion 202 to enhance stability. *Id.* ¶ 156; *see also id.* (describing that proximal wedge member 208 includes a similar feature).

Figure 18 of Olmos is reproduced below.

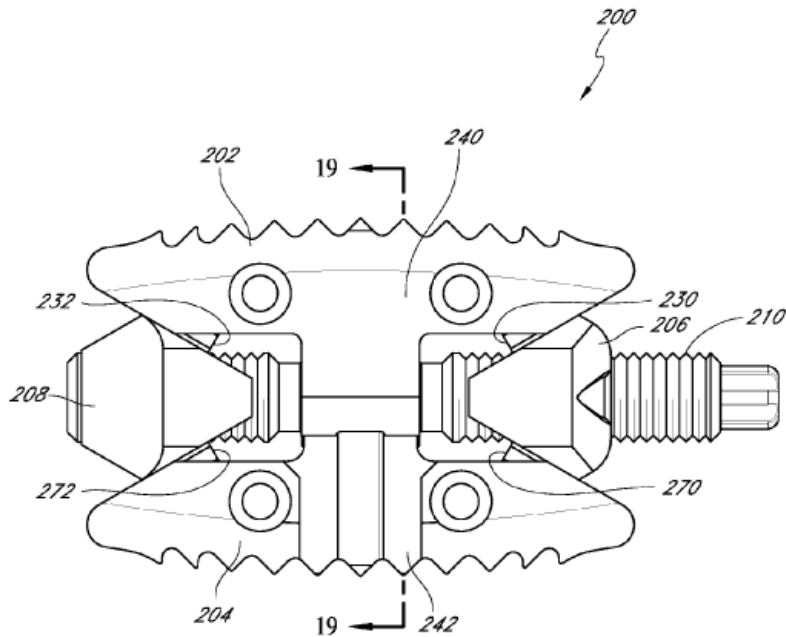


FIG. 18

Figure 18 of Olmos, reproduced above, is a side view of intervertebral implant 200 in an expanded state. *Id.* ¶ 168. Actuator shaft 210 includes threads to engage at least one of the proximal and distal wedge members 206 and 208. *Id.* ¶ 159. Rotating actuator shaft 210 causes proximal and distal wedge members 206 and 208 to move towards each other and separate upper and lower body portions 202 and 204. *Id.* ¶ 155. Proximal wedge member 206 includes upper guide member 230 and lower guide member 270 and distal wedge member 208 includes upper guide member 232 and lower guide member 272. *Id.* ¶¶ 156, 167. Olmos discloses that the slots and guide members may have a dovetail shape to ensure secure engagement between the wedge members and the body portions. *Id.* ¶ 167.



*F. Ground 1 – Alleged Anticipation by Chung*

For Ground 1, Petitioner asserts that claims 1–8, 10–18, and 20 are unpatentable as anticipated by Chung. Pet. 8–57. Patent Owner disputes Petitioner’s contentions. Prelim. Resp. 31–34, 45–60.

*1. Independent Claims 1 and 11*

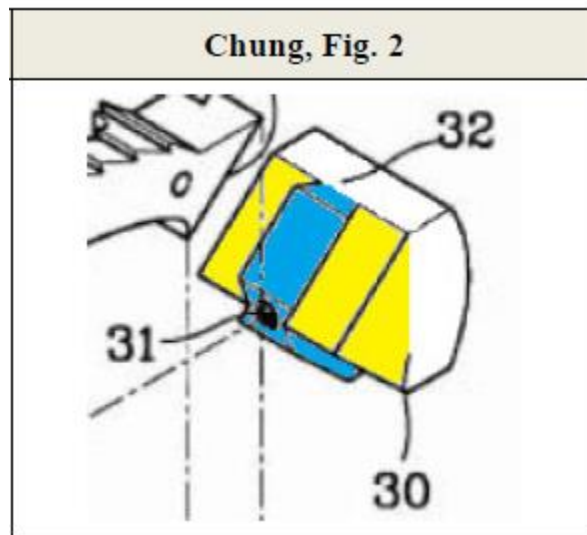
Petitioner provides a limitation-by-limitation analysis alleging that Chung discloses each and every limitation of the challenged claim 1 and 11 and therefore anticipates those claims. See Pet. 8–26 (claim 1), 40–46 (claim 11). At this stage of the proceeding, Patent Owner disputes, among other things, Petitioner’s contentions regarding limitations 1[d] and 11[d]. See Prelim. Resp. 26–67.

Limitation 1[d] recites “the central ramp non-rotationally coupled to the first and second endplates, and including a threaded bore, a first expansion portion, and a second expansion portion longitudinally spaced from the first expansion portion.” Ex. 1001, 21:51–55. Limitation 11[d] recites “the central ramp non-rotationally coupled to the first and second endplates, and including a threaded bore, a first expansion portion including at least one ramped surface, and a second expansion portion including at least one ramped surface, the second expansion portion being longitudinally spaced from the first expansion portion.” *Id.* at 22:33–39. Relevant to this Decision, the parties dispute whether Chung teaches “a first expansion portion” and “a second expansion portion,” where the “second expansion portion” is “longitudinally spaced from the first expansion portion.” See, e.g., Pet. 13–18, 40–43; Prelim. Resp. 38–48.

Petitioner maps (i) Chung’s “lead wedge (30)” to the claimed “central ramp;” (ii) Chung’s ramped surfaces that flank dovetail (32) to the claimed

“first expansion portion;” and (iii) Chung’s “dovetail (32)” to the claimed “second expansion portion.” Pet. 14. Petitioner contends that the second expansion portion (i.e., “dovetail (32)”) is “longitudinally spaced from the first expansion portion.” *Id.* (citing Ex. 1005, 5, Figs. 1–4).

To illustrate, we reproduce below Petitioner’s annotated excerpt of Chung’s Figure 2:

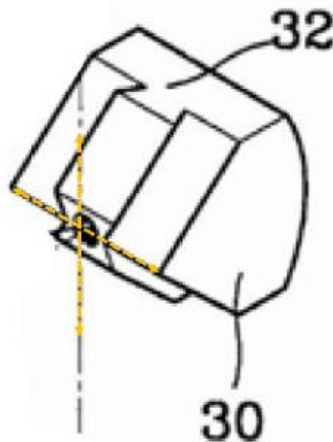


Pet. 15. Petitioner’s annotated excerpt of Chung’s Figure 2, reproduced above, shows Chung’s lead wedge (30). Petitioner highlighted dovetail (32) (which Petitioner maps to the claimed “second expansion portion”) in blue, and highlighted the ramped surfaces that flank dovetail (32) (which Petitioner maps to the claimed “first expansion portion”) in yellow. *Id.* at 14–15; *see also id.* at 16 (citing Ex. 1002 (Drewry Decl.) ¶¶ 87–93).

Petitioner contends that the second expansion portion (blue) is “longitudinally spaced” from the first expansion portion (yellow) “because it extends longitudinally (i.e., parallel to the actuator) from the surface of the

first expansion portion, without leaving an intervening gap.” *Id.* at 16 (citing Ex. 1010, 5–6).

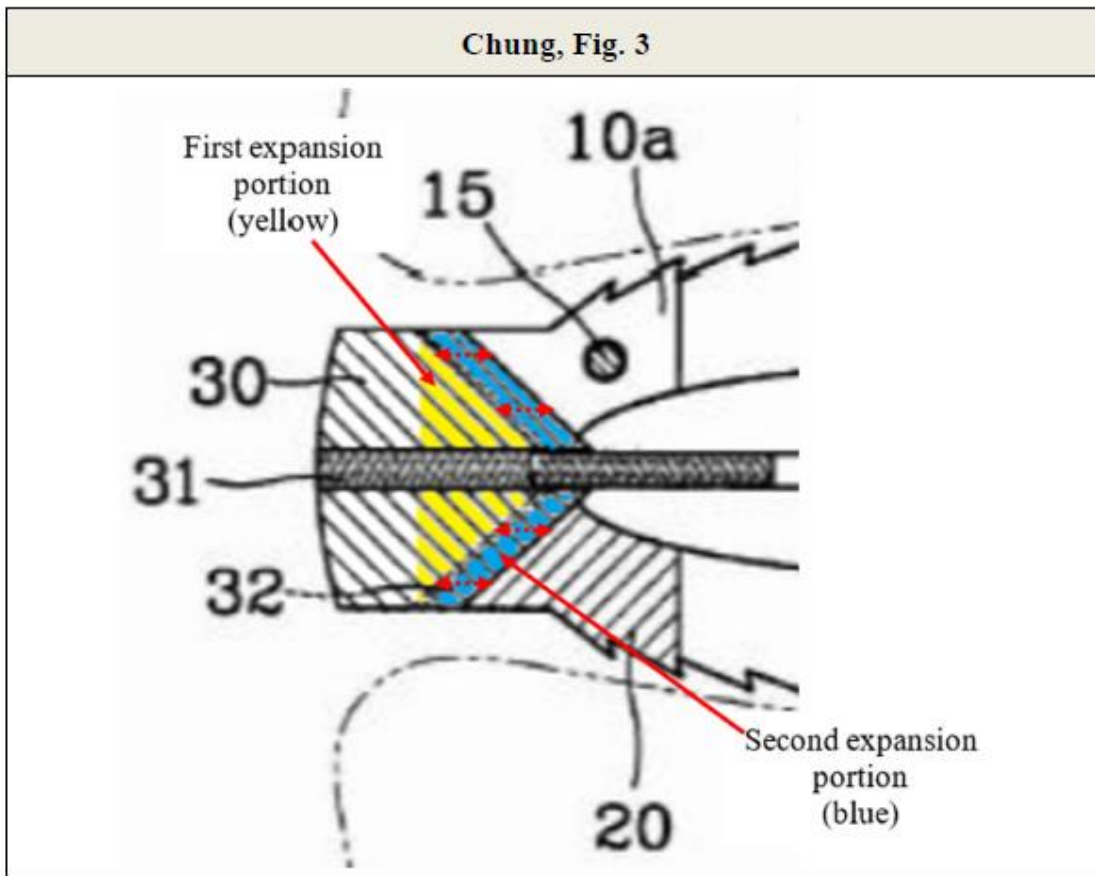
Petitioner’s argument is not persuasive. In pertinent part, limitations 1[d] and 11[d] recite that the “second expansion portion” is “longitudinally spaced *from the first expansion portion.*” Ex. 1001, 21:54–55, 22:38–39 (emphasis added). On this record, we find that the annotated excerpt of Chung’s Figure 2 is inconclusive as to whether dovetail (32) (blue) is longitudinally spaced from the expansion portion (yellow). Based on the excerpt of Chung’s Figure 2, it is equally likely that the structures colored blue and yellow terminate in the same plane, as shown in Patent Owner’s annotated excerpt of Chung’s Figure 2, reproduced below:



Prelim. Resp. 45–46. In Patent Owner’s annotated excerpt of Chung’s Figure 2 reproduced above, Patent Owner demonstrates that Chung’s dovetail (32) longitudinally terminates in the same plane as the ramped surfaces that flank the dovetail (shown by the orange arrows), and does not appear to be longitudinally spaced past the plane where the expansion portion terminates. *See id.* (citing Ex. 1005, 10; Ex. 2001 (Culbert Decl.)

¶ 85). On this record, we find Patent Owner’s interpretation of Chung Figure 2 more plausible than Petitioner’s.

Petitioner also relies on an annotated excerpt of Chung’s Figure 3, which we reproduce below:



Pet. 16, 41. In the annotated excerpt of Chung’s Figure 3, reproduced above, Petitioner denotes the “longitudinal spacing” by red dashed arrows. *Id.* at 15–16.

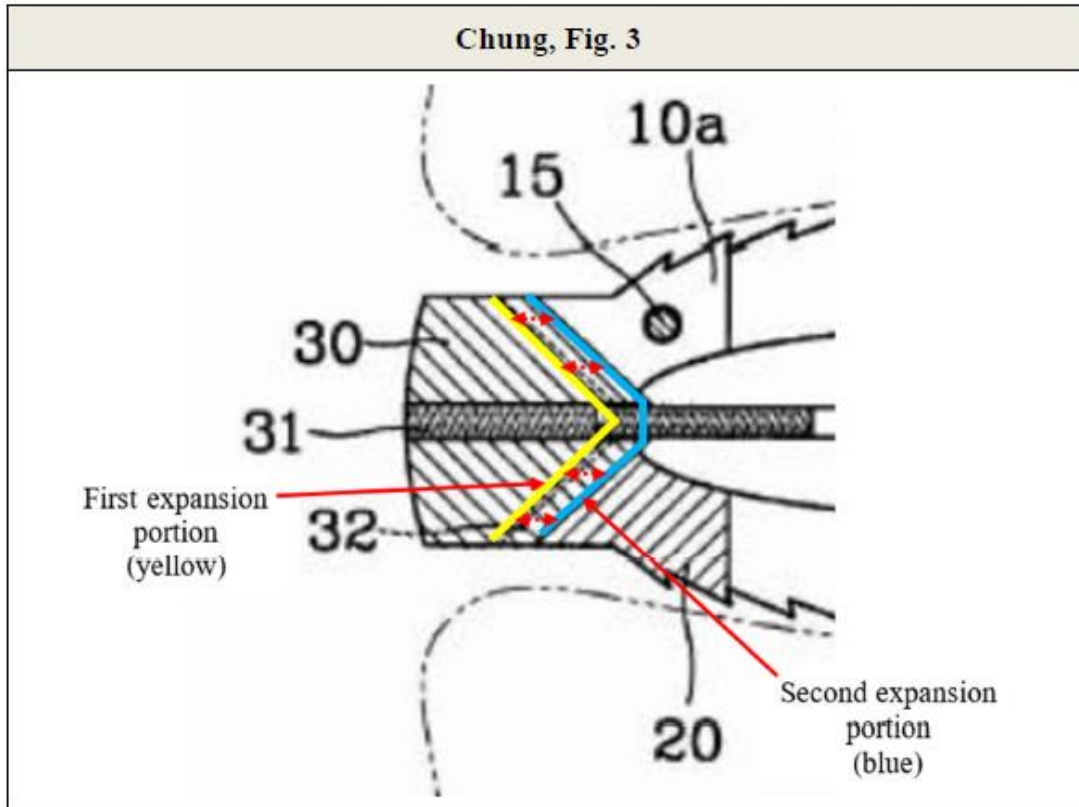
Patent Owner argues that Petitioner’s annotations to this figure are misleading. Prelim. Resp. 41–45. Patent Owner explains that Chung teaches that Figure 3 is a “cross-sectional diagram”—i.e., a diagram of the surface exposed by making a straight cut through the center.” *Id.* at 42 (citing Ex. 1005, 3; Ex. 2001 (Culbert Decl.) ¶ 79). Patent Owner contends

that “a POSITA would have understood the figure to depict the surfaces exposed by making a straight cut through the center of apparatus,” but not “the surfaces that can be seen from the outside of the lead wedge.” *Id.* (citing Ex. 2001 (Culbert Decl.) ¶ 79). Patent Owner argues that in a cross-section view, the yellow structure would be hidden behind the exposed central layer, making it impossible for Figure 3 to depict any portion of the dovetail (32) (blue) longitudinally spaced the yellow structure, as shown in Petitioner’s annotations. *Id.* at 43–45.

On this record, we agree with Patent Owner that Petitioner has inaccurately annotated Chung’s Figure 3. As Patent Owner explains, given that Chung’s Figure 3 is “a cross-sectional diagram” (Ex. 1005, 3), the yellow structure would not be visible for the reasons Patent Owner explains on pages 41–45 of the Preliminary Response. In other words, properly annotated, the yellow portions of lead wedge 30 (which Petitioner highlighted in Chung Figure 2) are hidden behind the central layer material of the lead wedge 30 in Chung’s Figure 3. *See* Prelim. Resp. 41–45. Accordingly, on this record we find that Chung’s Figure 3 does not support Petitioner’s contention that dovetail (32) is “longitudinally spaced from the first expansion portion” as claimed.

Finally, Petitioner contends that Chung also teaches limitations 1[d] and 11[d] under alternative interpretations of the first and second expansion portions—i.e., where “the ‘first expansion portion’ is interpreted to encompass only the ramped surfaces adjacent to dovetail (32) and the ‘second expansion portion’ is interpreted to encompass only the ramped surfaces of dovetail (32).” Pet. 17, 41. For this argument, Petitioner relies

on another, alternatively annotated excerpt of Chung's Figure 3, which we reproduce below:



Pet. 17, 42. Petitioner's alternatively annotated excerpt of Chung's Figure 3, reproduced above, shows Chung's lead wedge (30). In this version of Chung's Figure 3, Petitioner maps "only the ramped surfaces adjacent to dovetail (32)" to the "first expansion portion," and "only the ramped surfaces of dovetail (32)" to the "second expansion portion." *Id.* But, as with its previous annotated excerpt of Figure 3, Petitioner denotes the "longitudinal spacing with dashed arrows." *Id.*

On this record, we find that Petitioner's alternative argument based on different interpretations for "first expansion portion" and "second expansion portion" suffers from the same defect as its previous argument. Because Chung's Figure 3 is "a cross-sectional diagram" (Ex. 1005, 3), the narrow

yellow lines in Petitioner’s alternatively annotated excerpt would not be visible for the reasons discussed immediately above. Accordingly, Chung’s Figure 3 does not support Petitioner’s contention that dovetail (32) is “longitudinally spaced from the first expansion portion,” even if only the ramped surfaces of dovetail (32) represent the “second expansion portion” and only the ramped surfaces that flank dovetail (32) represent the “first expansion portion.”

For these reasons, we determine that Petitioner has failed to establish sufficiently for institution that Chung teaches limitations 1[d] and 11[d]. We note that Petitioner makes no argument that these limitations would have been obvious over Chung. *See* Pet. 45–47.

### *2. Dependent Claims 2–8, 10, 12–18, and 20*

Claims 2–8 and 10 depend directly or indirectly from claim 1, and thus include all the limitations of claim 1. Claims 12–18 and 20 depend directly or indirectly from claim 11, and thus include all the limitations of claim 11. Petitioner’s arguments for these dependent claims do not address or overcome the deficiencies discussed immediately above with respect to independent claims 1 and 11. Accordingly, for at least the same reasons discussed above for claims 1 and 11, on this record we determine that Petitioner has not shown a reasonable likelihood that Chung anticipates claims 2–8, 10, 12–18, and 20.

### *3. Summary for Ground 1*

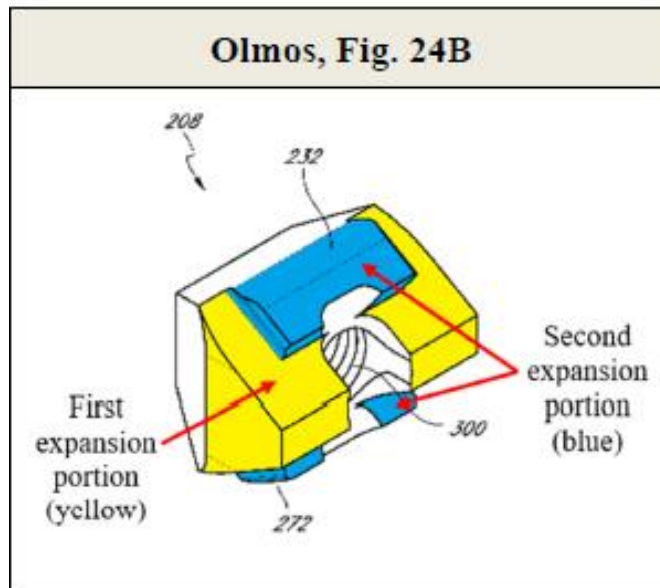
In sum, based on the record before us, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that claims 1–8, 10–18, and 20 are unpatentable as anticipated by Chung.

*G. Ground 2– Alleged Anticipation by Olmos*

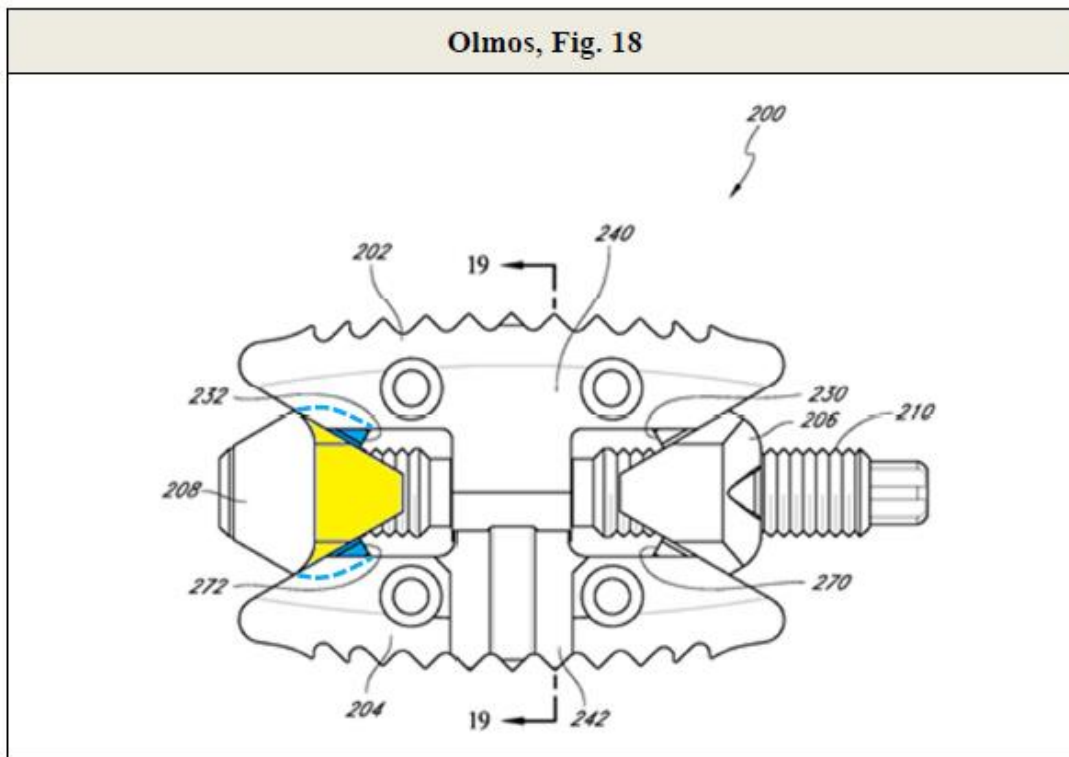
For Ground 2, Petitioner asserts that claims 1–5, 8, 10–15, 18, and 20 are unpatentable as anticipated by Olmos. Pet. 57–99. Petitioner provides a limitation-by-limitation analysis as to how Olmos allegedly teaches each and every limitation of the challenged claims. *See id.* Patent Owner disputes Petitioner’s contentions. Prelim. Resp. 55–81.

*1. Independent Claims 1 and 11*

For the claimed “second expansion portion” that is “longitudinally spaced from the first expansion portion” (i.e., limitations 1[d] and 11[d]), Petitioner relies on annotated versions of Olmos Figure 24B and Figure 18 showing distal wedge member 208, reproduced below:





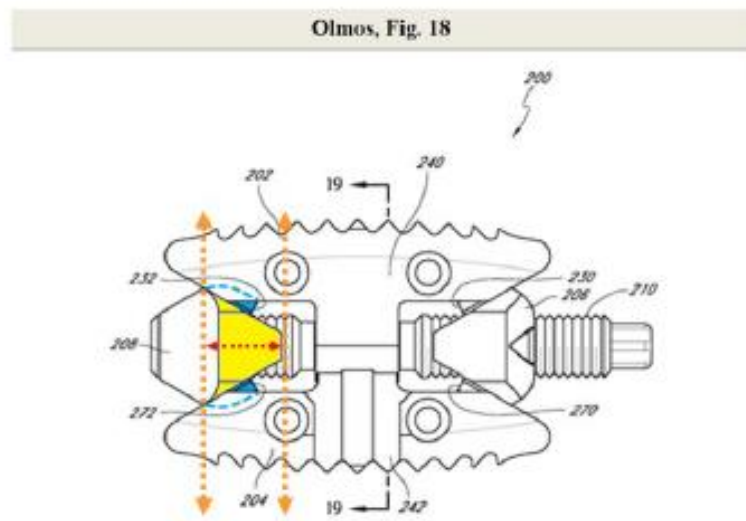


Pet. 64. In Petitioner’s annotated version of Olmos Figure 24B, reproduced above, Petitioner highlights “guide members 232, 272” in blue and structure flanking the guide members in yellow. *See id.* at 63–64, 86–87. Petitioner maps the “guide members 232, 272” (blue) to the claimed “second expansion portion,” and the flanking structure (yellow) to the claimed “first expansion portion.” *Id.* at 63 (citing Ex. 1006 ¶¶ 111, 156, 159, 168, 170, 178; Ex. 1001, 18:51–56, Fig. 56). In Petitioner’s annotated version of Olmos Figure 18, reproduced above, Petitioner highlights “the outer bounds of the second expansion portion when extending into the endplates approximated in dashed blue lines.” *Id.* Petitioner argues that guide members 232/272 are “‘longitudinally spaced’ from the first expansion portion because it extends longitudinally (i.e., parallel to the actuator) from the surface of the first expansion portion, without an intervening gap.” *Id.* at 64–65 (citing Ex. 1010, 6–7); *see also id.* at 86.

Patent Owner argues that, even if Olmos's guide members 232/272 qualify as a "second expansion portion" under the challenged claims, they "are not longitudinally spaced from the first expansion portion." *See, e.g.*, Prelim. Resp. 60–67.

We agree with Patent Owner. Referring to Petitioner's annotated version of Olmos's Figure 24B, reproduced above, guide members 232/272 (blue) and the ramped portions (yellow) appear to terminate in the same plane on the rear side of distal wedge 208. On the front side of distal wedge 208, the guide members 232/272 (blue) appear to terminate before the ramped portions (yellow). On this record, we determine that the Petition fails to adequately explain how this arrangement meets the claim limitation requiring "a second expansion portion longitudinally spaced from the first expansion portion," as recited in limitations 1[d] and 11[d].

Additionally, on this record, we find that Petitioner's annotated excerpt of Olmos's Figure 18 is inconclusive as to whether guide members 232/272 are longitudinally spaced from the expansion portion (yellow). Petitioner asserts that the dashed blue lines in Figure 18 show "the outer bounds of the second expansion portion [blue] when extending into the endplates." Pet. 63. But Petitioner fails to explain sufficiently or in any detail how the dashed blue lines show that the second expansion portion extends longitudinally from the first expansion portion. *Id.* at 64–65. On this record, we find Patent Owner's further annotated excerpt of Olmos's Figure 18, reproduced below, demonstrates that Olmos's guide members 232/272 (blue) are not longitudinally spaced from the first expansion portion (yellow):



Prelim. Resp. 67. In Patent Owner’s further annotated excerpt of Olmos’s Figure 18 reproduced above, Patent Owner demonstrates that Olmos’s guide members 232/272 (blue) do not extend longitudinally beyond the first expansion portion (yellow) at any point, but instead lie completely within the longitudinal footprint of the first expansion portion (orange lines). *Id.* (citing Ex. 2001 ¶ 123). On this record, we find Patent Owner’s interpretation of Olmos Figure 18 more plausible than Petitioner’s.

Petitioner also contends that Olmos teaches limitations 1[d] and 11[d] under alternative interpretations of the first and second expansion portions—i.e., where “the ‘first expansion portion’ is interpreted to encompass only the ramped surfaces adjacent to guide members 232, 272 and the ‘second expansion portion’ is interpreted to encompass only the ramped surfaces of guide members 232, 272.” Pet. 65. For this argument, Petitioner relies on another, alternatively annotated excerpt of Olmos’s Fig. 24B, which we reproduce below:



axis, but does not appear to be longitudinally spaced from the first expansion portion (yellow).

For these reasons, we determine that Petitioner has failed to establish sufficiently for institution that the Olmos teaches limitations 1[d] and 11[d]. We note that Petitioner makes no argument that these limitations would have been obvious over Olmos. *See* Pet. 61–66, 86–87.

### *2. Dependent Claims 2–5, 8, 10, 12–15, 18, and 20*

Petitioner’s arguments for these dependent claims do not address or overcome the deficiencies discussed immediately above with respect to independent claims 1 and 11. Accordingly, for at least the same reasons discussed above for claims 1 and 11, on this record we determine that Petitioner has not shown a reasonable likelihood that Olmos anticipates claims 2–5, 8, 10, 12–15, 18, and 20.

### *3. Summary for Ground 2*

In sum, based on the record before us, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that claims 1–5, 8, 10–15, 18, and 20 are unpatentable as anticipated by Olmos.

#### *H. Ground 3 – Alleged Obviousness Over Olmos in View of Chung*

For Ground 3, Petitioner asserts that claims 1–8, 10–18, and 20 are unpatentable as obvious over Olmos in view of Chung. Pet. 99–106. In brief, Petitioner asserts that, while “Olmos discloses each and every element of” the challenged claims, the claims also would have been obvious “over Olmos in view of Chung.” *Id.* at 99–100 (citing Ex. 1002 (Drewry Decl.) ¶¶ 317–349). Patent Owner disputes Petitioner’s contentions. Prelim. Resp. 81–95.

*1. Independent Claims 1 and 11*

Petitioner relies on the combination of Olmos and Chung to teach certain limitations of claims 1 and 11 (i.e., limitations 1[f], 1[g], 11[f], 11[e]), but relies only on Olmos for limitations 1[d] and 11[d]. *See* Pet. 99 (stating that “Olmos discloses each and every element of” the challenged claims); *id.* at 99–101 (discussing the combination of Olmos and Chung with respect to only limitations 1[f], 1[g], 11[f], 11[e]); *see also* Prelim. Resp. 82 (noting that, for claim limitations 1[d] and 11[d], “Petitioner’s analysis of the asserted combination relies completely on its discussion of Olmos”).

We refer back to our analysis above in determining that Petitioner has not sufficiently shown for institution that Olmos teaches limitations 1[d] and 11[d] (relating to “second expansion portion” that is “longitudinally spaced from the first expansion portion”). *Supra* § II.G. Accordingly, for at least the same reasons discussed above for claims 1 and 11, on this record we determine that Petitioner has not shown a reasonable likelihood that these claims are unpatentable as obvious over Olmos in view of Chung.

*2. Dependent Claims 2–8, 10, 12–18, and 20*

Petitioner’s arguments for these dependent claims do not address or overcome the deficiencies discussed immediately above with respect to independent claims 1 and 11. Accordingly, for at least the same reasons discussed above for claims 1 and 11, on this record we determine that Petitioner has not shown a reasonable likelihood that Olmos in view of Chung renders obvious claims 2–8, 10, 12–18, and 20.

*3. Summary for Ground 3*

In sum, based on the record before us, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing

that claims 1–8, 10–18, and 20 are unpatentable as obvious over Olmos in view of Chung.

### III. PETITIONER’S MOTION TO SEAL

Concurrent with the Petition, Petitioner filed a Motion to File Under Seal. Paper 3 (“Motion”). Petitioner requests that we seal Exhibit 1010 (a claim chart submitted as an exhibit to Patent Owner’s litigation infringement contentions). *Id.* at 1. Petitioner represents that the material it seeks to seal contains its trade secrets. *Id.* at 2–3. Petitioner filed a proposed protective order, which includes modifications to the Board’s default protective order. *See* Ex. 1018; Ex. 1019.

Patent Owner filed a Response to Petitioner’s Motion. Paper 7. Patent Owner indicates that it does not oppose “the Board sealing Petitioner’s confidential information,” but does oppose Petitioner’s proposed protective order. *Id.* at 1 (citing Ex. 1018; Ex. 1019). However, Patent Owner represents that “the parties have conferred and agree to the terms of the stipulated protective order filed as Exhibit 2100.” *Id.*; *see also* Ex. 2101 (redline comparison of Ex. 2100 to the Board’s default protective order).

We find that Petitioner has established good cause to seal its trade secret information. Accordingly, we grant Petitioner’s Motion. 37 C.F.R. § 42.14. We also enter the stipulated protective order filed as Exhibit 2100.

We remind the parties that confidential information that is subject to a protective order ordinarily becomes public forty-five days after denial of a petition to institute trial or 45 days after final judgment in a trial. *See* Consolidated Office Trial Practice Guide, 21–22. There is an expectation that information will be made public where the existence of the information is referred to in a decision to grant or deny a request to institute a review. *Id.*

at 22. A party seeking to maintain the confidentiality of information, however, may file a motion to expunge the information from the record prior to the information becoming public. *Id.*; 37 C.F.R. § 42.56.

#### IV. CONCLUSION

Petitioner has not shown a reasonable likelihood of prevailing on the obviousness ground for any challenged claim. Thus, we do not institute an *inter partes* review. *See* 35 U.S.C. § 314(a).

#### V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied*, and no trial is instituted; and

FURTHER ORDERED that Petitioner's motion to seal is *granted*.



IPR2022-01601  
Patent 10,925,752 B2

For PETITIONER:

Michael R. Houston  
Scott D. Anderson  
Jeffrey N. Costakos  
George Beck  
Roberto Fernandez  
FOLEY & LARDNER LLP  
mhouston@foley.com  
sanderson@foley.com  
jcostakos@foley.com  
gbeck@foley.com  
rfernandez@foley.com

For PATENT OWNER:

Stephen D. Zinda  
James H. Hall  
J. David Cabello  
CABELLO HALL ZINDA, PLLC  
stephen@chzfirm.com  
james@chzfirm.com  
david@chzfirm.com