

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GLOBUS MEDICAL, INC.,
Petitioner,

v.

MOSKOWITZ FAMILY LLC,
Patent Owner.

IPR2020-01309
Patent 10,028,740 B2

Before MEREDITH C. PETRAVICK, NEIL T. POWELL, and
JAMES J. MAYBERRY, *Administrative Patent Judges*.

PETRAVICK, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

Petitioner Globus Medical, Inc. filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1, 3, 6, 8, 11, 15–18, and 20 of U.S. Patent No. 10,028,740 B2 (Ex. 1001, “the ’740 Patent”). Patent Owner Moskowitz Family LLC filed a Preliminary Response (Paper 6, “Prelim. Resp.”).

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition and any response thereto shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Taking into account the arguments presented in the parties’ briefs, we conclude that the information presented in the Petition fails to establish that there is a reasonable likelihood that Petitioner would prevail in challenging at least one of claims 1, 3, 6, 8, 11, 15–18, and 20 of the ’740 Patent as unpatentable under the grounds presented in the Petition.

Pursuant to § 314, we decline to institute an *inter partes* review as to these claims of the ’740 Patent.

A. *Related Matters*

The ’740 Patent is the subject of *Moskowitz Family LLC v. Globus Medical Inc.*, Case No. 2:20-cv-03271 (“Pending Litigation”) in the U.S. District Court for the Eastern District of Pennsylvania. Pet. 2–3; Paper 4, 2.

B. *The ’740 Patent*

The ’740 Patent is titled “Spinal Fusion Implant With Curvilinear Nail-Screw.” Ex. 1001, code (54). The ’740 Patent discloses a horizontal-

transvertebral curvilinear nail-screw (“HTCN”) for interconnecting adjacent vertebrae with a rod. *Id.* at 1:25–36. Figures 1E and 1G of the ’740 Patent are reproduced below side-by-side.

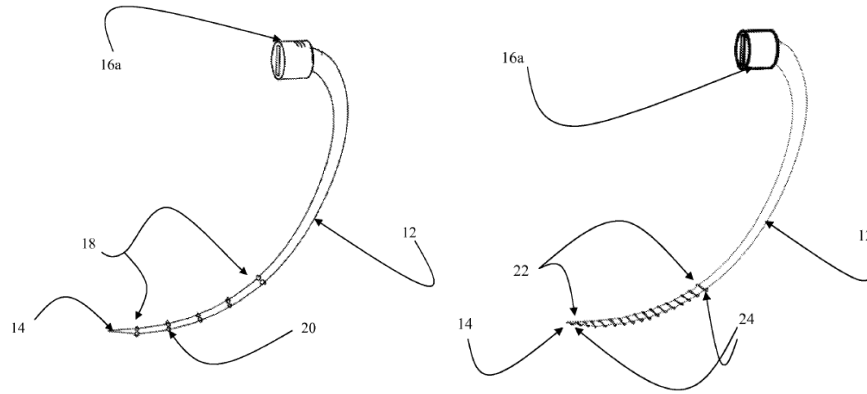


FIGURE 1E

FIGURE 1G

Figures 1E and 1G depict exemplary embodiments of the HTCN having radially arranged fish-hooks 20 and threaded tail-screw 22, respectively, for engaging the cancellous core of the vertebral body. *Id.* at 4:66–5:3, 5:6–9.

Figure 4A of the ’740 Patent is reproduced below.

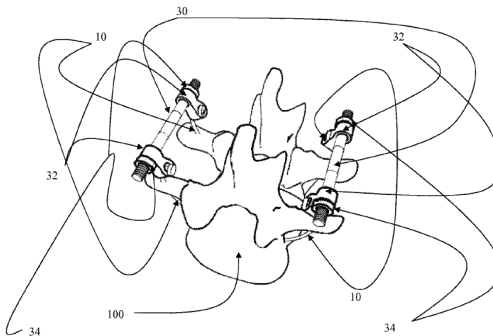


FIGURE 4A

Figure 4A depicts an embodiment of “a rigid connecting bar-HTCN construct.” *Id.* at 6:8–10. Two HTCNs 10 are coupled together by rigid HTCN connecting bar 30 to fuse two vertebrae. *See id.* at 6:8–67.

C. Challenged Claims

Petitioner challenges claims 1–3, 6, 8, 11, 15–18, and 20. Of the challenged claims, claims 1 and 17 are independent. Claims 2, 3, 6, 8, 11, 15, and 16 depend from claim 1. Claims 18 and 20 depend from claim 17. Claim 1 is illustrative of these claims and reproduced below:

1. A spinal fusion implant comprising:
 - a first curvilinear nail-screw for penetration and implantation into a first vertebral body along a first curved trajectory that avoids penetrating pedicles, wherein the first curvilinear nail screw extends from a first proximal end to a first distal end along the first curved trajectory with a first head at the first proximal end and a first bone penetrating pointed tip at the first distal end, wherein the first curvilinear nail-screw comprises first means for engaging a first cancellous core of the first vertebral body positioned along a first distal portion of the first curvilinear nail-screw proximate the first distal end, wherein the first curved trajectory is along a first single continuous arc;
 - a second curvilinear nail-screw for penetration and implantation into a second vertebral body along a second curved trajectory that avoids penetrating pedicles, wherein the second curvilinear nail screw extends from a second proximal end to a second distal end along the second curved trajectory with a second head at the second proximal end and a second bone penetrating pointed tip at the second distal end, wherein the second curvilinear nail-screw comprises second means for engaging a second cancellous core of the second vertebral body positioned along a second distal portion of the second curvilinear nail-screw proximate the second distal end, wherein the second curved trajectory is along a second single continuous arc; and
 - a connecting support structure defining a first hole sized and configured for receiving the first curvilinear nail screw and a second hold sized and configured for receiving the second curvilinear nail screw such that the first curvilinear nail-screw held with respect to the second curvilinear nail-screw with the

first curvilinear nail-screw extending into the first vertebral body without penetrating pedicles and second curvilinear nail-screw extending into the second vertebral body without penetrating pedicles.

Ex. 1001, 13:26–63.

D. Alleged Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 3, 11, 15–18, 20	103(a)	Allain ¹
6, 8	103(a)	Allain, and Mathieu ²

Pet. 4. In addition to the references listed above, Petitioner relies on the Declaration of Jorge A. Ochoa, Ph.D., P.E. (Ex. 1003).

II. ANALYSIS

It is Petitioner’s burden to prove unpatentability of the challenged claims, and the burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). At this stage of the proceeding, Petitioner must establish a reasonable likelihood that it will prevail with respect to at least one of the challenged claims. 35 U.S.C. § 314(a). We analyze Petitioner’s asserted grounds of unpatentability to determine whether Petitioner has met the

¹ U.S. Patent Application Publication No. 2009/0105832 A1, published Apr. 23, 2009 (Ex. 1028) (“Allain”).

² U.S. Patent Application Publication No. 2005/0177236, published Aug. 11, 2005 (Ex. 1005) (“Mathieu”).

threshold standard of 35 U.S.C. § 314(a). For the reasons explained in the analysis below, we determine that Petitioner fails to meet its burden.

A. Claim Construction

In an *inter partes* review proceeding, a claim of a patent is construed using the same standard used in federal district court, including construing the claim in accordance with the ordinary and customary meaning of the claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b) (2019). According to the applicable standard, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317. Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. America Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Arguing that most terms in the challenged claims “should be given their ordinary and customary meaning,” Petitioner asserts that it “adopts the claim construction position [Patent Owner] has taken in the Pending

Litigation, although Petitioner will continue to dispute Moskowitz's construction of" those limitations before the district court. Pet. 9–11. Patent Owner argues that Petitioner does not meet our requirements for construing claim language because Petitioner did not explain adequately its bases for the claim constructions that the Petition does propose. Prelim. Resp. 6–11.

We find it necessary to discuss only one claim-construction issue. Claims 1 and 17 recite: "first means for engaging a first cancellous core of the first vertebral body" and "second means for engaging a second cancellous core of the second vertebral body. Ex. 1001, 13:26–63, 15:5–16:11. Petitioner asserts that, in the Pending Litigation, the parties agreed that these limitations should be construed as means-plus function limitations as permitted under 35 U.S.C. § 112(6). Pet. 10. The Petition states:

The parties also agree that the function associated with these limitations is to engage a cancellous core. In the Pending Litigation, Petitioner contends that the specific portions of the specification that describe the structure for "engaging . . . [the] cancellous core[s]" of the vertebrae is found in the '740 patent at 4:66-5:11 and FIGs.1E, 1F, 1G and 1H. *See also*, EX1002 at 59-60 (during prosecution, the Examiner likewise treated these limitations under § 112(f) without objection by applicant). Specifically, the structures described are "radially arranged fish-hooks 20" and "threads 24." *Id.* Petitioner, therefore, submits before the district court that these claim terms should be construed to encompass threads or fishhooks. Moskowitz, on the other hand, contends that the structure may consist of a series of fish-hooks, threads, ridges, or equivalent structure known to a PHOSITA, extending along a linear direction of the curvilinear nail-screw. For purposes of this proceeding, Petitioner adopts the claim construction position that Moskowitz has taken in the Pending Litigation; however, Petitioner will continue to dispute Moskowitz's construction of the limitation before the district court.

Pet. 10–11.

We do not find it necessary to resolve the disputed between Petitioner and Patent Owner as to the correct construction. Even applying the proposed construction of “[first/second means] for engaging a first cancellous core of the first vertebral body” of “fish-hooks, threads, ridges, or equivalent structure known to a [person having ordinary skill in the art], extending along a linear direction of the curvilinear nail-screw,” as discussed in detail below, the Petition’s analysis of Allain is deficient.

B. Principles of Law

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under § 103 that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) “secondary considerations” of non-obviousness such as “commercial success, long-felt but unsolved needs, failure of others, etc.” *Id.* at 17–18. “While the sequence of these questions might be reordered in any particular case,” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the Federal Circuit has “repeatedly emphasized that an obviousness inquiry requires examination of all four *Graham* factors and that an obviousness determination can be made only after consideration of each factor.” *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1335 (Fed. Cir. 2016).

We note that, with respect to the fourth *Graham* factor, the record in this proceeding does not include any argument or evidence directed to secondary considerations of nonobviousness. The analysis below addresses the first three *Graham* factors.

C. Level of Ordinary Skill in the Art

In determining the level of skill in the art, we consider the type of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus. Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986); *Orthopedic Equip. Co. v. U.S.*, 702 F.2d 1005, 1011 (Fed. Cir. 1983).

Petitioner contends that a person having ordinary skill in the art (“PHOSITA”) at the time of the invention of the ’740 Patent would have had the following education and experience:

a Bachelor’s or equivalent degree in Mechanical Engineering or a related discipline (e.g. biomechanics or biomedical engineering), and at least five years of experience. The experience would consist of a) designing, developing, evaluating and/or using prosthetic devices, b) anatomy, physiology and biology of soft and calcified tissues including bone healing and fusion, and c) biomechanical and functional loading of orthopedic implants. Alternatively, a POSITA could have an advanced degree, in the technical disciplines provided above, or a Doctor of Medicine, and at least two years of experience in the subject areas provided above

Pet. 12 (citing Ex. 1003 ¶¶ 25–30).

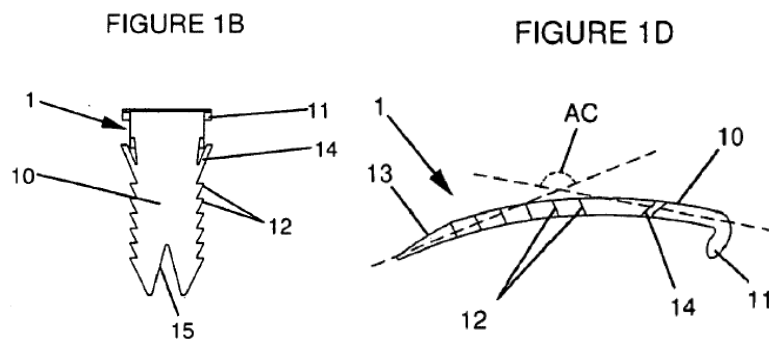
Patent Owner does not dispute Petitioner’s definition of the level of ordinary skill in the art. *See generally* Prelim. Resp.

For purposes of this Decision, we adopt Petitioner’s proposal as reasonable and consistent with the prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art may reflect an appropriate level of skill in the art).

D. *Allain*

1. *Overview of Allain*

Allain is titled “Intersomatic Cage, Intervertebral Prosthesis Anchoring Device and Implanation Instruments” and issued on April 23, 2009. Ex. 1028, code (43), (54). Allain discloses anchoring device 1 for intervertebral disc prostheses 2c. *Id.* ¶ 24. Figures 1B and 1D of Allain is reproduced below.



Figures 1B and 1D depict two embodiments of anchoring device 1. *Id.* ¶ 13. Anchoring device 1 has a body 10 and notches 12. *Id.* ¶¶ 26, 38. With respect to notches 12, Allain states:

In certain methods of implementation of the invention, the body (10) is equipped with notches (12) that are orientated so as to oppose the withdrawal of the device (1) after it has been implanted in a vertebra. . . . [T]he number, the dimension and the shape of these notches (12) may vary according to the implementation variants, without moving outside the spirit of the invention.

Id. ¶ 38.

2. *Analysis*

a) *Independent Claims 1 and 17*

Petitioner contends that Allain teaches or renders obvious all of the limitations of independent claims 1 and 17. Pet. 17–33. In particular, Petitioner contends that Allain’s notches 12 meet the claimed first/second

means for engaging a first/second cancellous core of the first/second vertebral body. Pet 21–22 (citing Ex. 1028 ¶ 38, Figs. 1B, 1D). The Petition asserts a “PHOSITA would have recognized that notches 12 . . . are shaped to oppose withdrawal from the cancellous core of the vertebra into which the anchor 1 is penetrated” and “would have, therefore, considered the notches 12 of the anchor 1 taught by Allain to be the same or similar structure to the [’740 Patent’s] radially arranged fish-hooks 20 and/or threads 24.” Pet. 22 (citing Ex. 1003 ¶ 57).

Patent Owner responds that Petitioner has not shown that Allain’s notches 12 is an equivalent structure to the ’740 Patent’s fish-hooks 20 or threads 24. Prelim. Resp. 14–17. Patent Owner argues that “[i]t is . . . not enough for Petitioner to imply that Allain’s notches perform the same *function* as the ’740 Patent’s radially arranged fish-hooks 20 or threads 24 — i.e., ‘oppos[ing] withdrawal from the cancellous core’” and “the complete lack of a *structural* analysis in the Petition justifies denial.” *Id.* at 14–15.

We agree with Patent Owner.

“Structural equivalence under § 112, ¶ 6 is met only if the differences are insubstantial, *see Chiuminatta [Concrete Concepts, Inc. v. Cardinal Indus., Inc.]*, 145 F.3d [1303, 1308, (Fed. Cir. 1998)]; that is, if the assertedly equivalent structure performs the claimed function in substantially the same way to achieve substantially the same result as the corresponding structure described in the specification.” *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267 (Fed. Cir. 1999). “[S]ection 112, paragraph 6, rules out the possibility that any and every means which performs the function specified in the claim *literally* satisfies that limitation.’ *Pennwalt Corp. [v. Durand-Wayland, Inc.]*, 833 F.2d [931,] at 934, 4 USPQ2d [1731]

at 1739 (Fed. Cir. 1987). The proper test is whether the differences between the structure in the accused device and any disclosed in the specification are insubstantial.” *Chiuminatta*, 145 F.3d at 1309.

The Petition conclusory assertions that Allain’s notches 12 perform the same function and are structurally the same or similar to the ’740 Patent’s fish-hooks 20 or threads 24 are not sufficiently supported by explanation or evidence. For example, the Petition includes no analysis or explanation showing that the differences between Allain’s notches 12 and the ’740 Patent’s fish-hooks 20 or threads 24 are insubstantial. Likewise, Dr. Ochoa’s testimony that “[a] PHOSITA would have also understood that the notches of the anchor are at least structurally equivalent to radially arranged fishhooks and/or threads disclosed in the ‘740 patent” (Ex. 1003 ¶ 57) is conclusory and unsupported by explanation and evidence.

Petitioner fails to demonstrate sufficiently that Allain’s notches 12 are structurally equivalent to the ’740 Patent’s fish-hooks 20 or threads 24. Accordingly, we determine that Petitioner fails to establish a reasonable likelihood that independent claims 1 and 17 are unpatentable under 35 U.S.C. § 103 over Allain.

b) Dependent Claims 3, 11, 15, 16, 18, and 20

Claims 3, 11, 15, 16, 18, and 20 depend directly or indirectly from claims 1 or 17. Accordingly, we determine that Petitioner fails to establish a reasonable likelihood that claims 3, 11, 15, 16, 18, and 20 are unpatentable under 35 U.S.C. § 103 over Allain. *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (“[D]ependent claims are nonobvious if the independent claims from which they depend are nonobvious.”).

E. Allain and Mathieu

Claims 6 and 8 depend from claim 1. Petitioner does not rely upon Mathieu to cure the deficiencies of Allain discussed above. Accordingly, we determine that Petitioner fails to establish a reasonable likelihood that claims 6 and 8 are unpatentable under 35 U.S.C. § 103 over Allain and Mathieu.

III. CONCLUSION

We conclude that the information presented in the Petition fails to establish that there is a reasonable likelihood that Petitioner would prevail in challenging at least one of claims 1, 3, 6, 8, 11, 15–18, and 20 of the '740 Patent. Accordingly, we deny institution of *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is hereby:
ORDERED that the Petition is denied.

IPR2020-01309
Patent 10,028,740 B2

For PETITIONER:

George Moustakas
David Utykanski
HARNES, DICKEY, & PIERCE, PLC
gdmoustakas@hdp.com
davidu@hdp.com

For PATENT OWNER:

Timothy Riffe
Joseph Colaianni
Indranil Mukerji
Brian Livedalen
Kenneth Darby
Laura Whitworth
FISH & RICHARDSON P.C.
riffe@fr.com
colaianni@fr.com
mukerji@fr.com
bvl@fr.com
kdarby@fr.com
whitworth@fr.com