UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD ALPHATEC HOLDINGS, INC. AND ALPHATEC SPINE, INC. Petitioners, v. NUVASIVE, INC., Patent Owner. Case No. IPR2019-00362 United States Patent No. 8,361,156

PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE



TABLE OF CONTENTS

I.	INT	RODUCTION	1
II.	STATE-OF-THE-ART		
III.	CLAIM CONSTRUCTION		
IV.	GROUND 1		
	A.	Motivation to combine Brantigan, Baccelli, and Berry	6
	В.	"first radiopaque marker extends into said first sidewall at a position proximate to said medial plane, and said second radiopaque marker extends into said second sidewall at a position proximate to said medial plane"	6
	C.	"first fusion aperture having: a longitudinal aperture length extending generally parallel to the longitudinal length"	8
	D.	"maximum lateral width of said implant is approximately 18 mm"	8
	E.	"medial support" and "second fusion aperture"	9
V.	GROUND 2		
	A.	Motivation to combine Brantigan, Baccelli, and Michelson	10
	B.	"first radiopaque marker"	13
	C.	"maximum lateral width of said implant is approximately 18 mm"	14
VI.	OBJI	ECTIVE INDICIA	16
VII.	CONCLUSION		



TABLE OF AUTHORITIES

	Page(s)
Cases	
Agrizap, Inc. v. Woodstream Corp., 520 F.3d 1337 (Fed. Cir. 2008)	16
In re Applied Materials, Inc., 692 F.3d at 1298	9, 14
In re Carlson, 983 F.2d 1032 (Fed. Cir. 1992)	4
Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc., 807 F.2d 955 (Fed. Cir. 1986)	4
Fox Factory, Inc. v. SRAM, LLC, 944 F.3d 1366 (Fed. Cir. 2019)	16
Henny Penny Corp. v. Frymaster LLC, 938 F.3d 1324 (Fed. Cir. 2019)	16
In re Huai-Hung Kao, 639 F.3d 1057 (Fed. Cir. 2011)	16
Iron Grip Barbell Co. v. USA Sports, Inc., 392 F.3d 1317 (Fed. Cir. 2004)	18
In re: NuVasive, Inc., No. 2015-1670, Opinion (Fed. Cir. Dec. 7, 2016)	4
Ohio Willow Wood Co. v. Alps S., LLC, 735 F.3d 1333 (Fed. Cir. 2013)	16
Realtime Data, LLC v. Iancu, 912 F.3d 1368 (Fed. Cir. 2019)	4
<i>In re Rouffet</i> , 149 F.3d 1350 (Fed. Cir. 1998)	4
In re: Warsaw Orhtopedic, Inc., Nos. 2015-1050, 2015-1058 (Fed. Cir. Aug. 9, 2016)	4
Warsaw Orthopedic, Inc. v. NuVasive, Inc., No. 2013-1576, -1577	4



IPR2019-00362

No. 3:08-cv-1512	4
WMS Gaming Inc. v. Int'l Game Tech., 184 F.3d 1339 (Fed. Cir. 1999)	16
Other Authorities	
37 C.F.R. § 42.6(e)	5
37 C.F.R. § 42.24(d)	1
37 C.F.R. § 42.105(a)	5
Berry et al. "A Morphometric Study of Human Lumbar and Selected Thoracic Vertebrae,"	
12 Spine, 362-367 (1987)	4



I. INTRODUCTION

Patent Owner argues the following: (1) most interbody implants available in the late-1990's were allograft bone; (2) Petitioner "asserts a POSA would have wanted a 38 mm-wide implant;" (3) "a POSA would not have made the modular implant proposed by Petitioner because it would have been less safe and would increase invasiveness;" and (4) implementing a "marker configuration [that would] 'allow[] surgeons to align the markers with the spinous process during and after the implant is inserted laterally" fails because Baccelli does not teach the configuration and it is impermissibly based on hindsight. Response, 13, 1–2, 25, 38. None of this is true. Moreover, Patent Owner's arguments concerning the orientation of four radiopaque markers disclosed in Baccelli (EX1008) and combined with a Brantigan (EX1007) implant that otherwise has no markers overlooks the undisputed teaching that the Brantigan implant can be inserted using different approaches, including lateral.

Patent Owner argues there is no motivation to combine the cited references based on a strawman—Patent Owner's assertion that Petitioner "theorized sequential insertion of pieces into the disc space, moving the pieces around, and *assembling them within the disc space*"—that Patent Owner contends "increase risks to patients and make the procedure more invasive, not less invasive." Response, 12. Petitioner never makes this argument.

It is undisputed that Michelson (EX1032), and Brantigan teach modular implants. Neither requires assembly. Indeed, Patent Owner's suggested assembly of modular implants conflicts with the cited art and fact that insertion of modular non-bone spinal implants from a lateral approach to the spine was known and widely

¹ Unless otherwise noted, all emphasis is added and internal citations and quotations are omitted.



1

DOCKET

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

