

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MEDTRONIC, INC.,
Petitioner

v.

MOSKOWITZ FAMILY LLC,
Patent Owner.

Case IPR2026-00162
Patent No. 12,011,367

PETITIONER'S REPLY TO PRELIMINARY RESPONSE

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LIST OF EXHIBITS

Exhibit No.	Document	Previously Submitted
Ex. 1001	U.S. Patent No. 12,011,367 to Moskowitz et al. (“the ’367 patent”)	X
Ex. 1002	Declaration of Brad Culbert	X
Ex. 1003	Curriculum Vitae of Brad Culbert	X
Ex. 1004	File History for U.S. Patent No. 12,011,367	X
Ex. 1005	RESERVED	
Ex. 1006	U.S. Patent Application Publication No. 2008/0249569 A1 to Waugh et al. (“Waugh”)	X
Ex. 1007- Ex. 1019	RESERVED	
Ex. 1020	Phulchand Prithvi Raj, <i>Intervertebral Disc: Anatomy-Physiology-Pathophysiology-Treatment</i> , 8(1) PAIN PRACT. 18 (2008)	X
Ex. 1021	Fabio Galbusera et al., <i>Ageing and degenerative changes of the intervertebral disc and their impact on spinal flexibility</i> , 23(3) EUR. SPINE J. 324 (2014)	X
Ex. 1022	Dil Patel et al., <i>Interbody options in lumbar fusion</i> , 5(1) J. SPINE SURG. S19 (2019)	X
Ex. 1023	RESERVED	
Ex. 1024	U.S. Patent No. 9,585,766 to Robinson (“Robinson”)	X
Ex. 1025- Ex. 1039	RESERVED	

Exhibit No.	Document	Previously Submitted
Ex. 1040	Amended Complaint, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn. filed May 23, 2025), Dkt. 27.	X
Ex. 1041	Answer to Amended Complaint, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn. filed June 27, 2025), Dkt. 29.	X
Ex. 1042	Sotera Stipulation, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn. filed Jan. 6, 2026), Dkt. 50.	X
Ex. 1043	Second Amended Complaint, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn. filed Jan. 29, 2026), Dkt. 48.	X
Ex. 1044	Plaintiff's Responses to Defendants' First Set of Interrogatories (Nos. 1-12), <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Minn. Jan. 5, 2026).	X
Ex. 1045	Administrative Office of the United States Courts, U.S. District Court – Judicial Caseload Profile (June 30, 2025), https://www.uscourts.gov/sites/default/files/document/fcms_na_distprofile0630.2025.pdf	X
Ex. 1046	Patent Owner's Request for Discretionary Denial, Paper 6 (February 9, 2026), <i>Medtronic, Inc. v. Moskowitz Family LLC</i> , IPR2025-01598	X
Ex. 1047	U.S. Patent No. 6,342,074 to Simpson ("Simpson")	X
Ex. 1048- Ex. 1052	RESERVED	

Exhibit No.	Document	Previously Submitted
Ex. 1053	Anne Polikeit et al., <i>The importance of the endplate for interbody cages in the lumbar spine</i> , 12(6) EUR. SPINE J. 556 (2003)	X
Ex. 1054- Ex. 1055	RESERVED	
Ex. 1056	File History for U.S. Patent No. 10,016,284	X
Ex. 1057	U.S. Patent No. 9,445,919 to Palmatier et al. (“Palmatier”)	X
Ex. 1058	RESERVED	
Ex. 1059	Patent Owner’s Infringement Claim Charts, Exhibit K1, <i>Moskowitz Family, LLC v. Medtronic, Inc.</i> , No. 0:25-cv-00769 (D. Mass.), served October 30, 2025.	X
Ex. 1060	Senthil Eswaran et al., <i>The micro-mechanics of cortical shell removal in the human vertebral body</i> , 31 COMPUT. METHODS APPL. MECH. ENGRG. 3025 (2007)	X
Ex. 1061	Vivek Palepu et al., <i>Biomechanics of Disc Degeneration</i> , ADV. ORTHOP (2012)	X
Ex. 1062	Kai-Uwe Lewandrowski, <i>Surgical Technique of Endoscopic Transforaminal Decompression and Fusion with a Threaded Expandable Interbody Fusion Cage and A Report of 24 Cases</i> , 7(2) J. SPINE 1 (2018)	X
Ex. 1063	Erik Emstad et al., <i>The VariLift(®) Interbody Fusion System: expandable, standalone interbody fusion</i> , 8 MED. DEVICES (AUKL.) 219 (2015)	X

Exhibit No.	Document	Previously Submitted
Ex. 1064	Gstoettner Michaela et al., <i>Footprint mismatch in lumbar total disc arthroplasty</i> , 17(11) EUR. SPINE J. 1470 (2008)	X
Ex. 1065	Thomas Steffen et al., <i>Cages: designs and concepts</i> , 9 EUR. SPINE J. S89 (2000)	X
Ex. 1066	Thomas Lowe et al., <i>A Biomechanical Study of Regional Endplate Strength and Cage Morphology as It Relates to Structural Interbody Support</i> , 29(21) SPINE 2389 (2004)	X
Ex. 1067	U.S. Patent No. 6,102,950 to Vaccaro (“Vaccaro”)	X
Ex. 1068	File History for U.S. Patent No. 10,426,633	X
Ex. 1069	RESERVED	
Ex. 1070	U.S. Patent No. 10,016,284 to Moskowitz et al. (“the ’284 patent”)	X

**I. MOSKOWITZ’S ANTEDATING DEFENSE
CANNOT SUPPORT DENIAL OF INSTITUTION**

Patent Owner Moskowitz’s Preliminary Response (“POPR”) does not challenge Medtronic’s showing that Palmatier discloses or renders obvious every limitation of the challenged claims. Instead, Moskowitz contends that Palmatier is not prior art because the challenged claims were allegedly conceived before Palmatier’s December 19, 2011 filing date and diligently reduced to practice in the October 25, 2012 provisional application. (POPR at 5–66.) Moskowitz’s evidence falls far short of the high evidentiary burden of proving antedation, and only further confirms that institution is warranted in order for that evidence to be properly developed and tested at trial.

The evidence, including the testimony of one co-inventor (Dr. Nathan Moskowitz, Ex. 1024), regarding the alleged conception and diligent reduction to practice of the claimed subject matter raises serious factual issues (examples discussed below) that **cannot** be resolved on this preliminary record without the benefit of robust cross-examination of Dr. Moskowitz. The testimony of Dr. Moskowitz is also “stuck in a catch-22 of corroboration: [Moskowitz] attempts to corroborate [Dr. Moskowitz’s] testimony with [] emails and [] drawings, but the emails and drawings can only provide that corroboration with help from [Dr. Moskowitz’s] testimony.” *Apator Miitors ApS v. Kamstrup A/S*, 887 F.3d 1293,

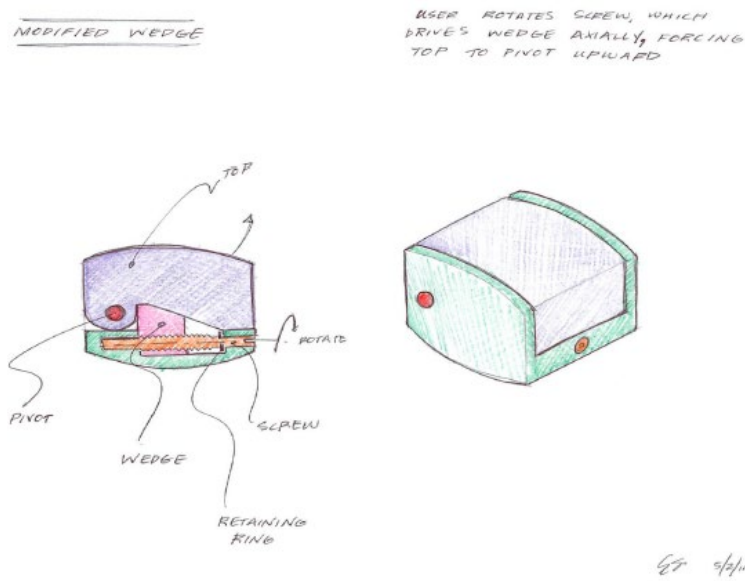
1296 (Fed. Cir. 2018). Institution is thus warranted so that the issue of conception and diligence can adjudicated on a more developed record. *See IQE PLC v. Cornell Research Foundation Inc.*, IPR2024-00609, Paper 9 at 41 (Sep. 13, 2024) (granting institution because “Patent Owner’s arguments [regarding conception/reduction to practice] raise disputed factual issues that are best resolved on a more fully developed record”).

A. Insufficient Evidence of Conception

“Conception is the . . . completion of the mental part of invention. . . . It is ‘the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice.’” *Burroughs Wellcome Co. v. Barr Lab'ys, Inc.*, 40 F.3d 1223, 1228 (Fed. Cir. 1994) (internal citation omitted). Moskowitz’s evidence does not demonstrate that the inventor(s) had conceived of a “complete and operative invention.” *Id.*

Both independent claims (8 and 17) at issue here recite an “expandable intervertebral device” having a first and a second body, and a wedge that slides in a space between the two bodies to expand or compress the device. (*See* Ex. 1001, claims 8, 17.) The claimed expandable device also includes “ridges” on the vertebral body engagement surfaces of the first and/or second bodies. (*See id.*) Moskowitz alleges that this arrangement was conceived based on a “modified wedge” design attached with Eric Sugalski’s May 3, 2011 e-mail. (*See* POPR, 8-36; Ex. 2027, 10.)

The “modified wedge” design does not, however, disclose the claimed ridges on the vertebral body engagement surfaces. (*See* Ex. 2027, 10; POPR, 13, 22.) As shown in the figure below, the “modified wedge design” has a smooth outer surface with no ridges. (Ex. 2027, 10.) The absence of ridges is a functionally significant difference from the claimed invention because, per Dr. Moskowitz, ridges help engage bone. (Ex. 2024, ¶38.)



Patent Owner’s attempt at gap-filling this deficiency with vague testimony from Dr. Moskowitz that he allegedly instructed his collaborator that the devices “need to maintain something like ridges” and “ridges are very important,” fails. (POPR, 11-17; Ex. 2024, ¶ 28 (citing Ex. 2057), ¶34 (citing Ex. 2028), ¶ 38 (citing Ex. 2059).) *First*, these statements lack sufficient context as it is unclear whether they are referring to the “modified wedge” embodiment shown above. In fact,

Moskowitz has withheld important details (*e.g.*, the “e-drawing”) attached to Exhibit 2059, which could shed light on what device or embodiment the “ridges” were for. (*See* Ex. 2059). *Second*, the referenced ridges appear to have been for “fusion wedges” for a “3D Screw Version” device (Ex. 2028, 1), but Dr. Moskowitz has provided no explanation regarding what the “3D Screw Version” is and how it relates to the claims. If the “3D Screw Version” device is a separate embodiment from the “modified wedge” design, then Moskowitz cannot show that he had conceived a “complete and operative invention.” *Burroughs, Inc.*, 40 F.3d at 1228. At a minimum, these issues require an explanation of why Dr. Moskowitz did not provide missing attachments as exhibits and should be resolved on a complete record, which includes cross-examination of Dr. Moskowitz.

Moreover, the exhibits (*e.g.*, emails) cited by Dr. Moskowitz are plainly insufficient to establish prior conception because they lack corroboration from anyone other than Dr. Moskowitz. The Federal Circuit has explained that, among other things, “unwitnessed emails and drawings, alone, cannot corroborate [an inventor’s] testimony of conception.” *See Apator*, 887 F.3d at 1296–97.

B. The October 25, 2012 Provisional Application Is Not A Constructive Reduction to Practice of the ’367 Patent Claims

To obtain the benefit of a provisional filing date, “the written description of the provisional must adequately support the claims of the non-provisional

application.” *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290 (Fed. Cir. 2002). Specifically, the figures 6A-6D embodiment of the provisional application (Ex. 2053) relied upon by Moskowitz does not show, or contemplate, ridges on the vertebral engagement surfaces. (*See, e.g.*, POPR, 16, 20.) Moskowitz’s attempt at gap-filling by relying on figure 1A fails because figure 1A is a totally different device; there is no wedge moving between two bodies to expand or compress the implant. (*See* Ex. 2053, 1A.) Thus, the provisional application cannot serve as a constructive reduction to practice for the ’367 patent claims.

II. MOSKOWITZ’S SPECULATION OF FUTURE INCONSISTENT POSITIONS IS NO REASON TO DENY REVIEW

Moskowitz seeks denial of the Petition based on Medtronic’s hypothetical future conduct—a standard that finds no support in the Director’s decisions or the Board’s rules. (POPR, 70-79.) Moskowitz has not identified a single inconsistent position taken by Medtronic, nor can it. Moskowitz’s contention that the Petition had to disclose every claim term that Medtronic may construe in district court (*id.*, 75) is equally meritless. *See Samsung Elecs. Co. Ltd, v. CM HK Ltd.*, IPR2025-01023, Paper 17 at 19 (Dec. 17, 2025).

The Board should institute review of claims 8, 9, 13, and 17-21.

Respectfully submitted,

Dated: April 14, 2026

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CERTIFICATE OF SERVICE

I certify that I caused to be served on the counsel identified below a true and correct copy of the foregoing Petitioner's Reply to Preliminary Response by electronic means on April 14, 2026:

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