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Paper 85
Entered: February 23, 2022

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MEDTRONIC, INC. AND MEDTRONIC VASCULAR, INC.,
Petitioner,

v.

TELEFLEX LIFE SCIENCES LIMITED,
Patent Owner.

IPR2020-01343
Patent RE46,116 E

Before SHERIDAN K. SNEDDEN, JAMES A. TARTAL, and CHRISTOPHER G. PAULRAJ, *Administrative Patent Judges.*

Opinion for the Board filed by *Administrative Patent Judge* TARTAL.

Opinion Concurring by *Administrative Patent Judge* PAULRAJ.

JUDGMENT
Final Written Decision
Determining Some Challenged Claims Unpatentable
35 U.S.C. § 318(a)

ORDER
Denying Petitioner's Motion to Exclude
37 C.F.R. § 42.64(c)

We have jurisdiction to conduct this *inter partes* review under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) (2018) and 37 C.F.R. § 42.73 (2019). Medtronic, Inc. and Medtronic Vascular, Inc. ("Petitioner")[1] contends that claims 25–40, 42, 44–48, 52, and 53 ("the Challenged Claims") of U.S. Patent No. RE46,116 E (Ex. 1001, "the '116 patent") are unpatentable. For the reasons discussed below, we determine that Petitioner has shown by a preponderance of the evidence that each of claims 52 and 53 of the '116 patent is unpatentable, but has not shown by a preponderance of the evidence that any of claims 25–40, 42, and 44–48 of the '116 patent is unpatentable.

I. INTRODUCTION

A. Summary of Procedural History

Petitioner filed a Petition pursuant to 35 U.S.C. §§ 311–319 requesting an *inter partes* review of the Challenged Claims. Paper 1 ("Pet."). We instituted an *inter partes* review of the Challenged Claims on all grounds of unpatentability asserted in the Petition. Paper 9 ("Inst. Dec."). Teleflex Life Sciences Limited ("Patent Owner")[2] filed a Patent Owner Response.[3] Paper 21 ("PO Resp.") (under seal), 22 (redacted, publicly

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[1] Petitioner identifies as real parties-in-interest Medtronic, Inc. and Medtronic Vascular, Inc., and states, "Medtronic plc is the ultimate parent of Medtronic Inc." Pet. 5.

[2] Patent Owner identifies as real parties-in-interest Teleflex Life Sciences Limited; Teleflex Medical Devices S.À.R.L.; Vascular Solutions LLC; Arrow International, Inc., and Teleflex LLC. Paper 4, 2. Patent Owner also states "Teleflex Incorporated is the ultimate parent of the entities listed above." *Id.*

[3] Prior to institution, Patent Owner filed a Preliminary Response directed primarily to whether discretionary denial of the Petition was warranted, not to the merits of Petitioner's unpatentability contentions. *See* Paper 7.

accessible). Petitioner filed a Reply to the Patent Owner Response. Paper 46 ("Pet. Reply") (under seal), 47 (redacted, publicly accessible). Patent Owner filed a Sur-reply in support of the Patent Owner Response. Paper 59 ("PO Sur-reply").

Following oral argument, we entered a transcript of the hearing in the record. Paper 84 ("Tr."). Petitioner bears the burden of proving unpatentability of each claim it has challenged by a preponderance of the evidence, and the burden of persuasion never shifts to Patent Owner. *See* 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d); *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

B. Related Proceedings

Petitioner challenges claims 25–55 of the '116 patent under separate grounds in IPR2020-01344. Pet. 6; Paper 4, 3. The parties identify the '116 patent as a subject of: (1) *Vascular Solutions LLC, et al. v. Medtronic, Inc., et al.*, No. 19-cv-01760 (D. Minn.), and (2) *QXMedical, LLC v. Vascular Solutions, LLC*, No. 17-cv-01969 (D. Minn.). Pet. 5–6; Paper 4, 2. Patent Owner states that both of these district court proceedings are currently stayed. Paper 4, 2. The parties further state that the '116 patent is a reissue of the '850 patent and that the '850 patent was a subject of: (1) *Vascular Solutions, Inc. v. Boston Scientific Corp.*, No. 13-cv-01172 (D. Minn.), and (2) *Boston Scientific Corp. v. Vascular Solutions, Inc.*, IPR2014-00762, IPR2014-00763 (PTAB, terminated). Pet. 6; Paper 4, 2–3.

Additionally, Petitioner filed petitions challenging patents related to the '116 patent in the following proceedings: IPR2020-00126 and IPR2020-00127 (Patent 8,048,032 B2); IPR2020-00128, IPR2020-00129, IPR2020-00130, and IPR2020-00131 (Patent RE45,380 E); IPR2020-00132, IPR2020-00133, and IPR2020-00134 (Patent RE45,760 E); IPR2020-00135

and IPR2020-00136 (Patent RE45,776 E); IPR2020-00137 and IPR2020-00138 (Patent RE47,379 E); and IPR2020-01341 and IPR2020-01342 (Patent 8,142,413 B2). Institution of *inter partes* review was denied in IPR2020-00131 and IPR2020-00133.

C. The '116 Patent

The '116 patent, titled "Coaxial Guide Catheter for Interventional Cardiology Procedures," issued August 23, 2016, from Application No. 14/195,435, filed March 3, 2014. Ex. 1001, codes (21), (22), (45), (54). The '116 patent is a reissue of U.S. Patent No. 8,292,850 ("the '850 patent") from Application No. 13/359,059 filed on January 26, 2012, which the '116 patent states is a continuation of an application filed on November 1, 2013 (issued as U.S. Patent No. RE45,380), which is an application for the reissue of U.S. Patent No. 8,292,850, which is a division of an application filed on June 28, 2010 (issued as U.S. Patent No. 8,142,413), which is a division of an application filed on May 3, 2006 (Application No. 11/416,629 ("the '629 application"), issued as U.S. Patent No. 8,048,032). *Id.* codes (60), (64). The '116 patent is directed to "methods and apparatus for increasing backup support for catheters inserted into the coronary arteries from the aorta." *Id.* at 1:38–40.

The '116 patent explains, as background, that in "[i]nterventional cardiology procedures," guidewires or other instruments, such as balloon catheters and stents, are often inserted through guide catheters into coronary arteries that branch off from the aorta. *Id.* at 1:44–50. In coronary artery disease, "the coronary arteries may be narrowed or occluded by atherosclerotic plaques or other lesions" in a phenomenon known as stenosis. *Id.* at 1:50–54. In treating the stenosis, "a guide catheter is inserted through the aorta and into the ostium of the coronary artery,"

sometimes with the aid of a guidewire, and is passed beyond the occlusion or stenosis. *Id.* at 1:59–65. However, according to the '116 patent, "[c]rossing tough lesions can create enough backward force to dislodge the guide catheter from the ostium of the artery being treated," which "can make it difficult or impossible for the interventional cardiologist to treat certain forms of coronary artery disease." *Id.* at 1:66–2:3.

The '116 patent discusses four categories of previous "attempts to provide support to the guiding catheter to prevent backward dislodgement from the coronary ostium (referred to as 'backup support')." *Id.* at 2:4–7. One category of guiding catheters "are configured to draw backup support from engaging the wall of the aortic arch opposing the ostium of the coronary artery that is being accessed." *Id.* at 2:8–11. A second category are "guiding catheters that include a retractable appendage. *Id.* at 2:25–26. A third category are "guide catheters that have a portion that seeks to expand laterally to grip the interior wall of the ostium." *Id.* at 2:36–41. A fourth category, or "technique," of the prior attempts "includes the placement of a smaller guide catheter within a larger guide catheter in order to provide added support for the crossing of lesions or for the distal delivery of balloons and stents." *Id.* at 2:50–53. The '116 patent states this fourth technique was described in Takahashi,[4] which uses a guide catheter inserted "more deeply into the ostium of the coronary artery than typically has been done before." *Id.* at 2:53–62. The '116 patent states that such "deep seating" by this technique "creates the risk that the relatively stiff, fixed curve, guide catheter will damage the coronary artery." *Id.* at 2:63–65.

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[4] Saeko Takahashi, et al., *New Method to Increase a Backup Support of a 6 French Guiding Coronary Catheter*, 63 CATHETERIZATION AND CARDIOVASCULAR INTERVENTIONS 452–456 (2004) (Ex. 1010, "Takahashi").

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