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Paper No. 93
Date: February 7, 2022

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

TELEFLEX INNOVATIONS S.À.R.L.,
Patent Owner.

IPR2020-01341
Patent 8,142,413 B2

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

TARTAL, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
Dismissing Petitioner's Motion to Exclude
35 U.S.C. § 318(a)

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). For the reasons discussed below, we determine Medtronic, Inc. and Medtronic Vascular, Inc. ("Petitioner")[1] has not shown by a preponderance of the evidence that any of claims 1, 2, 4, 5, and 7–14 ("the Challenged Claims") of U.S. Patent No. 8,142,413 B2 (Ex. 1001, "the '413 patent") are 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 11 ("Inst. Dec."). Teleflex Innovations S.À.R.L. ("Patent Owner")[2] filed a Patent Owner Response.[3] Paper 23 ("PO Resp.") (under seal), 24 (redacted, publicly accessible). Petitioner filed a Reply to the Patent Owner Response. Paper 51 ("Pet. Reply") (under seal), 52 (redacted, publicly accessible).

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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 both entities." Pet. 4.

[2] Patent Owner identifies as real parties-in-interest Teleflex Medical Devices S.À.R.L.; Vascular Solutions LLC; Arrow International, Inc.; and Teleflex LLC. Paper 7, 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 to the Petition directed primarily to whether discretionary denial of the Petition was warranted, not to the merits of Petitioner's unpatentability contentions. *See* Paper 8. Patent Owner also filed a Contingent Motion to Amend (Paper 26), which Patent Owner subsequently withdrew (Paper 56).

Patent Owner filed a Sur-reply in support of the Patent Owner Response. Paper 67 ("PO Sur-reply").

Following oral argument, we entered a transcript of the hearing in the record. Paper 92 ("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 also challenges claims 1, 2, 4, 5, and 7–14 of the '413 patent under separate grounds in IPR2020-01342. Pet. 5–6; Paper 7, 3. The '413 patent also was the subject of a previous *inter partes* review in *Boston Scientific Corp. and Boston Scientific Scimed, Inc., v. Vascular Solutions, Inc.*, IPR2014-00759, which was terminated based on settlement and no final written decision was issued. IPR2014-00759, Paper 10, 2–3 (PTAB August 11, 2014).

The parties state the '413 patent is a subject of *Vascular Solutions LLC, et al. v. Medtronic, Inc., et al.* No. 19-cv-01760 (D. Minn. filed July 2, 2019) and *QXMedical, LLC v. Vascular Solutions, LLC*, No. 17-cv-01969 (D. Minn. filed June 8, 2017). Pet. 4–5; Paper 7, 2. Patent Owner indicates that both of these district court proceedings currently are stayed. Paper 7, 2.

Additionally, Petitioner filed petitions challenging patents related to the '413 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 IPR2021-01343 and IPR2021-01344 (Patent RE46,116 E). Institution of *inter partes* review was denied in IPR2020-00131 and IPR2020-00133. Final written decisions are pending in IPR2021-01343 and IPR2021-01344. In the remaining listed proceedings, final written decisions were entered determining that a preponderance of the evidence did not show any claim challenged was unpatentable.

C. The '413 Patent

The '413 patent, titled "Coaxial Guide Catheter for Interventional Cardiology Procedures," issued on March 27, 2012, from a non-provisional application filed June 28, 2010. Ex. 1001, codes (45), (54), (22). The '413 patent relates generally to a coaxial guide catheter for use with interventional cardiology devices that are insertable into a branch artery that branches off from a main artery. Ex. 1001, Abstract.

According to the '413 patent, interventional cardiology procedures often include inserting guidewires or other instruments through catheters into coronary arteries that branch off from the aorta. *Id.* at 1:21–23. In coronary artery disease, atherosclerotic plaques or other lesions may narrow or occlude the coronary arteries. *Id.* at 1:26–30. The '413 patent states that "[n]arrowing is referred to as stenosis." *Id.* at 1:30–31. "In treating a stenosis, a guide catheter is typically inserted through the aorta and into the ostium of the coronary artery," sometimes with the aid of a guidewire. *Id.* at 1:35–37. The '413 patent further states as follows:

> A guide catheter is typically seated into the opening or ostium of the artery to be treated and a guidewire or other instrument is passed through the lumen of the guide catheter and inserted into the artery beyond the occlusion or stenosis. Crossing tough lesions can create enough backward force to dislodge the guide

> catheter from the ostium of the artery being treated. This can make it difficult or impossible for the interventional cardiologist to treat certain forms of coronary artery disease.

Id. at 1:37–45. The '413 patent discusses "four categories" of "[p]rior attempts to provide support to the guiding catheter to prevent backward dislodgement from the coronary ostium (referred to as 'backup support')," consisting of: (1) "guiding catheters that, through a combination of shape and stiffness, are configured to draw backup support from engaging the wall of the aortic arch;" (2) "guiding catheters that include a retractable appendage;" (3) guide catheters that have apportion that seeks to expand laterally;" and, (4) "placement of a smaller guide catheter within a larger guide catheter in order to provide add support." *Id.* at 1:46–2:39. The '413 patent identifies various deficiencies with these prior attempts, including an increased risk of damage to the aortic wall and mechanical complexity. *See id.* Specifically, with regard to the fourth category of prior attempts, the '413 patent states as follows:

> This technique is used in order to provide a method of deep seating the guide catheter within the ostium of the coronary artery. Deep seating refers to inserting the catheter more deeply into the ostium of the coronary artery than typically has been done before. Unfortunately, deep seating by this technique with a commonly available guide catheter creates the risk that the relatively stiff, fixed curve, guide catheter will damage the coronary artery. This damage may lead to dissection of the coronary artery when the catheter is advanced past the ostium.
>
> Several other problems arise when using a standard guide catheter in this catheter-in-a-catheter fashion. First, the inner catheters must be substantially longer than the one hundred centimeter guide catheter. Second, a new hemostasis valve must be placed on the inner guide catheter which prevents the larger guide catheter from being used for contrast injections or pressure measurements. Third, the smaller guide catheter still must be inserted into the coronary vessel with great care since the smaller

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