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Paper 69
Date: 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 SCEINCES LIMITED,
Patent Owner.

IPR2020-01344
Patent RE46,116 E

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

SNEDDEN, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

We have jurisdiction under 35 U.S.C. § 6. We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 in an *inter partes* review involving Medtronic, Inc., and Medtronic Vascular, Inc. ("Petitioner") and Teleflex Life Sciences Limited ("Patent Owner").[1] Based on the record before us, we conclude that Petitioner has not demonstrated, by a preponderance of the evidence, that claims 25–55 ("the Challenged Claims") of U.S. Patent No. RE46,116 E (Ex. 1401, "the '116 patent") are unpatentable.

A. Background

Petitioner filed a Petition requesting an *inter partes* review of claims 25–55 of the '116 patent. Paper 1 ("Pet."). Patent Owner filed a Preliminary Response. Paper 7. We determined, based on the information presented in the Petition and Preliminary Response, that there was a reasonable likelihood that Petitioner would prevail in showing that at least one of the challenged claims was unpatentable over the cited art. Pursuant to 35 U.S.C. § 314, the Board instituted trial on February 24, 2021. Paper 9.

[1] Teleflex Life Sciences Limited ("Teleflex") filed a notice identifying itself as the owner of U.S. Patent No. 8,142,413 B2. Paper 5, 2. Teleflex further explained, "Teleflex Innovations S.A.R.L. merged into Teleflex Medical Devices S.A.R.L., and Teleflex Medical Devices S.A.R.L. transferred ownership of U.S. Patent No. 8,142,413 to Teleflex Life Sciences Limited." *See id*. at 2 n.1 (furthering stating that "[t]he assignment documents were recorded with the United States Patent & Trademark Office on January 27, 2020").

Following institution, Patent Owner filed a Response to the Petition (Paper 21, "PO Resp."), Petitioner filed a Reply to Patent Owner's Response (Paper 37, "Reply"), and Patent Owner filed a Sur-reply (Paper 47).[2]

On November 18, 2021, the parties presented arguments at an oral hearing. The transcript of the hearing has been entered into the record. Paper 68.

II. BACKGROUND

A. 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. 1401, 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 ("the '059 application") 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 (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

[2] Redacted versions of the PO Response and Reply are entered as Papers 22 and 38, respectively.

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, "[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,[3] 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.

The '116 patent purports to resolve issues identified with the prior procedures by using "a coaxial guide catheter that is deliverable through standard guide catheters by utilizing a guidewire rail segment to permit delivery without blocking use of the guide catheter." Ex. 1401, 3:20–23. According to the '116 patent, the coaxial guide catheter "preferably includes a tapered inner catheter that runs over a standard 0.014 inch coronary guidewire to allow atraumatic placement within the coronary artery," and this feature allows removal of the tapered inner catheter after the coaxial guide catheter is in place. *Id.* at 3:23–28.

Figures 1 and 2, reproduced below, show a coaxial guide catheter and a tapered inner catheter in accordance with the invention described in the '116 patent:

[3] 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. 1410, "Takahashi").

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