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Paper
Date:

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.

IPR2020-00130
Patent RE45,380

Before SHERIDAN K. SNEDDEN, JON B. TORNQUIST, and CHRISTOPHER G. PAULRAJ, *Administrative Patent Judges*.

TORNQUIST, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining Some Claims Unpatentable
Granting Patent Owner's Contingent Motion to Amend
35 U.S.C. § 318(a)

PUBLIC VERSION

I. INTRODUCTION

Medtronic, Inc. and Medtronic Vascular, Inc. (collectively "Petitioner") filed a Petition (Paper 1, "Pet.") requesting an *inter partes* review of claims 1–4, 6–9, and 12–21 of U.S. Reissue Patent RE45,380 (Ex. 1401, "the '380 patent"). Teleflex Innovations S.À.R.L. ("Patent Owner"[1]) filed a Preliminary Response to the Petition (Paper 9). Upon review of the Petition and the Preliminary Response, we instituted an *inter partes* review of all claims and grounds set forth in the Petition (Paper 20, "Institution Decision" or "Inst. Dec.").

Patent Owner subsequently filed a Patent Owner Response (Paper 39, "PO Resp.") (redacted version available at Paper 40), Petitioner filed a Reply (Paper 69, "Pet. Reply") (redacted version available at Paper 70), and Patent Owner filed a Sur-Reply (Paper 84, "Sur-Reply") (redacted version available at Paper 85).

Patent Owner also filed a Contingent Motion to Amend (Paper 35, "Motion") requesting that if either of claims 1 or 12 of the '380 patent are determined to be unpatentable, that the Board substitute those claims with proposed substitute claims 43 and 44. Motion 1. Petitioner filed an opposition to the Motion (Paper 72, "Pet. MTA Opp."), Patent Owner filed a reply (Paper 87, "PO MTA Reply"), and Petitioner filed a sur-reply (Paper 93, "Pet. MTA Sur-Reply").

[1] Patent Owner informs us that Teleflex Innovations S.A.R.L has "merged into Teleflex Medical Devices S.A.R.L," who subsequently transferred ownership of the '380 patent to Teleflex Life Sciences Limited. Paper 7, 2.

An oral hearing was held on March 8, 2021, and a transcript of the hearing is included in the record. Paper 102 ("Tr.") (redacted version available at Paper 101).

A. Related Matters

The parties indicate that the '380 patent is the subject of litigation in *Vascular Solutions LLC, et al. v. Medtronic, Inc., et al.*, No. 19-cv-01760 (D. Minn.) and *QXMedical, LLC v. Vascular Solutions, LLC*, No. 17-cv-01969 (D. Minn). Pet. 4–5; Paper 4, 2. The '380 patent is also at issue in IPR2020-00128, IPR2020-00129, and IPR2020-00131 (institution denied). Paper 4, 2–3; Pet. 5.

The following proceedings before the Board also involve the same parties and related patents: IPR2020-00126 (U.S. Patent No. 8,048,032 B2), IPR2020-00127 (U.S. Patent No. 8,048,032 B2), IPR2020-00132 (U.S. Patent No. RE45,760 E1), IPR2020-00134 (U.S. Patent No. RE45,760 E1), IPR2020-00135 (U.S. Patent No. RE45,776 E1), IPR2020-00136 (U.S. Patent No. RE45,776 E1), IPR2020-00137 (U.S. Patent No. RE47,379 E1), IPR2020-00138 (U.S. Patent No. RE47,379 E1).

B. Real Parties-in-Interest

Petitioner identifies Medtronic, Inc. and Medtronic Vascular, Inc. as the real parties-in-interest and notes that Medtronic plc "is the ultimate parent of both" entities. Pet. 4.

Patent Owner identifies Vascular Solutions LLC, Arrow International, Inc. and Teleflex LLC as the real parties-in-interest, and notes that Teleflex Incorporated is the ultimate parent of each of these entities. Paper 7, 2.

C. The '380 Patent

The '380 Patent is a reissue of U.S. Patent 8,292,850, and claims priority as a division of application No. 11/416,629, filed on May 3, 2006, now U.S. Patent 8,048,032. Ex. 1401, codes (62), (64). The '380 patent relates to catheters used in interventional cardiology procedures and, in particular, to "methods and apparatus for increasing backup support for catheters inserted into the coronary arteries from the aorta." *Id.* at 1:31–35.

"In coronary artery disease the coronary arteries may be narrowed or occluded by atherosclerotic plaques or other lesions." *Id.* at 1:44–46. This narrowing is referred to as stenosis. *Id.* at 1:48–49. To treat this stenosis, "it is commonly necessary to pass a guidewire or other instruments through and beyond the occlusion or stenosis of the coronary artery." *Id.* at 1:49–52. In this method, a guide catheter is inserted through the aorta and into the ostium of the coronary artery where it is typically seated into the opening or ostium of the artery to be treated. *Id.* at 1:53–57. A guidewire or other instrument is then passed through the lumen of the guide catheter and inserted into the artery beyond the stenosis. *Id.* at 1:39–41, 1:57–59. Crossing the tough lesions, however, may create enough backwards force to dislodge the guide catheter from the ostium of the artery being treated, making it difficult or impossible to treat certain forms of coronary artery disease. *Id.* at 1:59–63.

The system of the '380 patent utilizes a coaxial guide catheter that includes a tapered inner catheter that runs over a standard coronary

guidewire to allow atraumatic placement within the coronary artery. *Id.* at 3:12–15. Figures 1 and 2 of the '380 patent are reproduced below:

Fig. 1

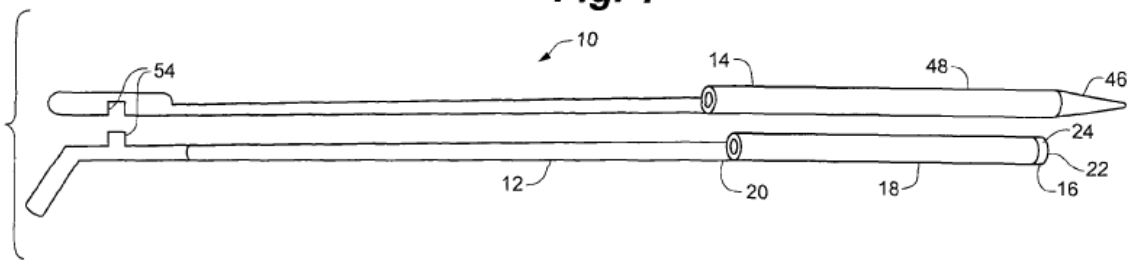

Fig. 2

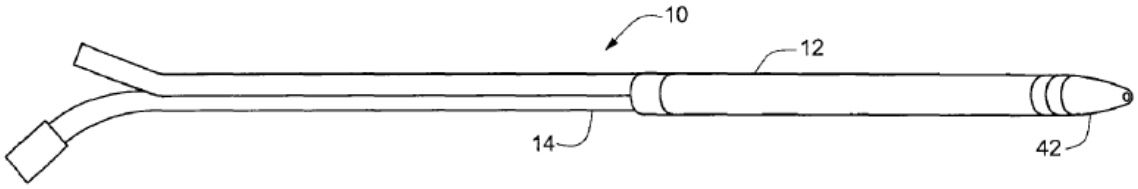

Figure 1 is a schematic depiction of a coaxial guide catheter and a tapered inner catheter and Figure 2 is a schematic depiction of these two elements assembled. *Id.* at 5:40–45. As shown in Figure 1, coaxial guide catheter 12 includes tip portion 16, reinforced portion 18, and rigid portion 20. *Id.* at 6:34–35. Tapered inner catheter 14 includes tapered portion 46 at a distal end thereof and straight portion 48. *Id.* at 7:16–17. Clip 54 releasably joins tapered inner catheter 14 to coaxial guide catheter 12. *Id.* at 7:21–23.

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