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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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MEDTRONIC, INC., and MEDTRONIC VASCULAR, INC.,  
Petitioner,

v.

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

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IPR2020-00127  
Patent 8,048,032 B2

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

SNEDDEN, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision

Determining Some Challenged Claims Unpatentable  
Granting Patent Owner's Contingent Motion to Amend  
*35 U.S.C. § 318(a)*

## I. INTRODUCTION

Medtronic, Inc. and Medtronic Vascular, Inc. (“Petitioner”) filed a Petition for *inter partes* review of claims 1–9 and 11–20 of U.S. Patent No. 8,048,032 (“the ’032 patent,” Ex. 1401). Paper 3 (“Pet.”). Teleflex Innovations S.À.R.L. (“Patent Owner”)<sup>1</sup> filed a Preliminary Response. Paper 10 (“Prelim. Resp.”). Upon review of the parties’ arguments and supporting evidence, we instituted an *inter partes* review of all claims and grounds asserted in the Petition. Paper 20 (“Inst. Dec.”).

Patent Owner subsequently filed a Patent Owner Response (Paper 40, “PO Resp.”) (redacted version available at Paper 41), Petitioner filed a Reply (Paper 71, “Pet. Reply”) (redacted version available at Paper 70), and Patent Owner filed a Sur-Reply (Paper 86, “Sur-Reply”) (redacted version available at Paper 87).

Patent Owner also filed a Contingent Motion to Amend. Paper 82 (“MTA”). The Motion requests that if claims 1 or 12 of the ’032 patent are determined to be unpatentable, they should be replaced by proposed substitute claims 23–25 (“proposed substitute claims” or “proposed claims”). MTA 1. Petitioner filed an Opposition to the Motion to Amend (Paper 85, “Pet. MTA Opp.”), to which Patent Owner filed a reply (Paper 89, “PO MTA Reply”), and Petitioner filed a sur-reply (Paper 95, “Pet. MTA Sur-reply”).

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<sup>1</sup> Patent Owner represents that “Teleflex Innovations S.A.R.L. merged into Teleflex Medical Devices S.A.R.L,” which subsequently “transferred ownership of [the ’032 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 104 (“Tr.”) (redacted version available at Paper 103).

*A. Real Parties in Interest*

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

Patent Owner identifies its real parties-in-interest as Teleflex Medical Devices S.À.R.L.; Vascular Solutions LLC; Arrow International, Inc.; and Teleflex LLC. Paper 4, 2. Patent Owner also notes that “Teleflex Incorporated is the ultimate parent of the entities listed above.”

*B. Related Matters*

The parties indicate that the ’032 patent is the subject of litigation in *Vascular Solutions LLC, et al. v. Medtronic, Inc., et al.* No. 19-cv-01760 (D. Minn. filed July 2, 2019) (“*Medtronic*”) and *QXMedical, LLC v. Vascular Solutions, LLC*, No. 17-cv-01969 (D. Minn., filed June 8, 2017). Pet. 4–5; Paper 4, 2.

The ’032 patent was the subject of two previous *inter partes* reviews: IPR2014-00760, filed May 16, 2014 and terminated August 11, 2014 by way of joint motion to terminate, and IPR2014-00761, filed May 16, 2014 and terminated August 11, 2014 by way of joint motion to terminate. Paper 4, 2–3.

Petitioner has filed a separate Petition for *inter partes* review of claims 1–20 and 22 of the ’032 patent as IPR2020-00126.

*C. The '032 Patent*

*1. Specification*

The '032 patent, entitled “Coaxial Guide Catheter for Interventional Cardiology Procedures,” issued on November 1, 2011, from a non-provisional application filed May 3, 2006. Ex. 1401, codes (45), (54), (22).

The '032 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. 1401, Abstract. According to the '032 patent, interventional cardiology procedures often include inserting guidewires or other instruments through catheters into coronary arteries that branch off from the aorta. *Id.* at 1:15–17. 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 1:20–26. 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 1:30–36. However, crossing 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 1:36–40.

To solve this problem, the '032 patent describes a coaxial guide catheter that is deliverable through standard guidewires by utilizing a guidewire rail segment to permit delivery without blocking use of the guide catheter. *Id.* at 2:53–56. The '032 patent teaches that 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 2:57–61. Figures 1 and 2, reproduced below, show a coaxial guide catheter and a tapered inner catheter in accordance with the invention described in the '032 patent:

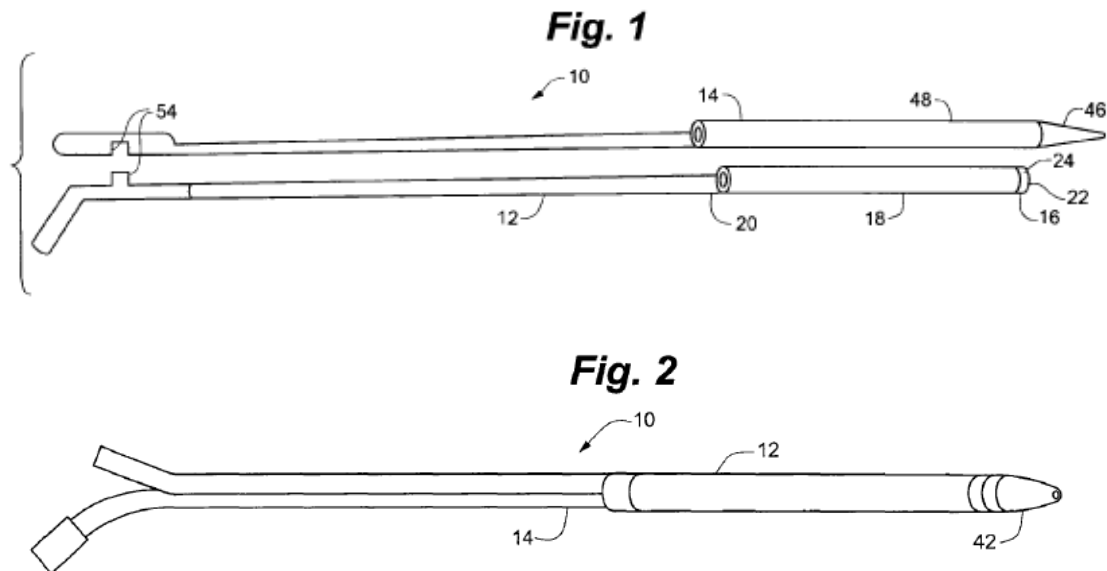


Figure 1 is a schematic depiction of the coaxial guide catheter and tapered inner catheter separately, and Figure 2 depicts those two elements assembled together. *Id.* at 5:15–21; Figs. 1 and 2. As shown above, coaxial guide catheter assembly 10 includes coaxial guide catheter 12 and tapered inner catheter 14. *Id.* at 6:6–8. Coaxial guide catheter 12 includes tip portion 16, reinforced portion 18, and rigid portion 20. *Id.* at 6:9–10. Tip portion 16 generally includes bump tip 22 and marker band 24. *Id.* at 6:13–14. Bump tip 22 includes taper 26 and is relatively flexible. *Id.* at 6:14–15. Marker band 24 is formed of a radiopaque material such as platinum/iridium alloy. *Id.* at 6:19–20. Tapered inner catheter tip 42 includes tapered portion 46 at a distal end thereof, and straight portion 48. *Id.* at 6:59–60. Both tapered portion 46 and straight portion 48 are pierced by lumen 50 (not labeled in figures above). *Id.* at 6:60–61. Tapered inner catheter 14 may also include

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