

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

IMPERATIVE CARE, INC.,
Petitioner,

v.

INARI MEDICAL, INC.,
Patent Owner.

Case No. IPR2025-01264
U.S. Patent No. 12,016,580

SUPPLEMENTAL DECLARATION OF BRIAN BROWN

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	BACKGROUND AND QUALIFICATIONS	5
III.	BASES OF MY OPINION	8
	A. Materials Considered	8
	B. Relevant Legal Principles	9
IV.	SUMMARY OF OPINIONS	12
V.	THE '580 PATENT	12
	A. Overview	12
	B. Prosecution History	21
	C. Person of Ordinary Skill in the Art	22
	D. Claim Construction	24
VI.	GROUND 1: GARRISON DOES NOT ANTICIPATE CLAIMS 1, 5, 9, 11-14, 18, 21-22, 24-28, 30, OR 33-34	24
VII.	GROUND 2-4: GARRISON ALONE OR GARRISON IN COMBINATION WITH SCHAFFER OR HARTLEY DO NOT RENDER OBVIOUS CLAIMS 1, 5, 6, 9, 11-18, 21-30, OR 33-34	35
VIII.	GROUND 5-8: THE COMBINATIONS OF GARRISON AND SCHAFFER, HARTLEY, AND/OR GOFF DO NOT RENDER OBVIOUS ANY OF CLAIMS 15-29	41
IX.	GROUND 1, 2-4, 6-8: DEPENDENT CLAIMS 18, 21-22, AND 24- 28 ARE NOT ANTICIPATED BY GARRISON (GROUND 1), AND DEPENDENT CLAIMS 18-29 ARE NOT RENDERED OBVIOUS BY GARRISON ALONE OR IN COMBINATION WITH ANY OF SCHAFFER, HARTLEY, AND/OR GOFF (GROUND 2-4, 6-8)	42
X.	GROUND 9-14: DEPENDENT CLAIM 10 IS NOT RENDERED OBVIOUS BY GARRISON IN COMBINATION WITH ANY OF LAUB, AKLOG, SCHAFFER, AND/OR HARTLEY	44

XI.	SECONDARY CONSIDERATIONS	52
XII.	CONCLUSION.....	52

I, **Brian Brown**, declare as follows:

I. INTRODUCTION

1. My name is Brian Brown. I have been retained by counsel for Patent Owner Inari Medical, Inc., (“Patent Owner” or “Inari”) as an independent expert consultant in this inter partes review (IPR) proceeding, IPR2025-01264, concerning U.S. Patent No. 12,016,580 (“the ’580 Patent”; EX1001), pending before the U.S. Patent and Trademark Office, Patent Trial and Appeal Board (“Board”).
2. I previously provided a declaration (EX2003) in support of Patent Owner’s Preliminary Response (“Opening Declaration”), incorporated herein by reference. In my Opening Declaration, I addressed certain aspects of the challenged claims and the prior art. This Supplemental Declaration (“Declaration” or “Supplemental Declaration”) is meant to supplement and clarify points in my Opening Declaration. As I explained in my Opening Declaration, I understand that Imperative Care, Inc. (“Petitioner” or “Imperative”) has filed a petition for inter partes review before the Board asserting:

Ground 1: Claims 1, 5, 9, 11-14, 18, 21-22, 24-28, 30, and 33-34 of the ’580 Patent are unpatentable under 35 U.S.C. § 102 as anticipated by U.S. Patent Application Publication No. 2015/0173782 to Garrison et al. (EX1006; “Garrison”);

Ground 2: Claims 1, 5, 9, 11-14, 18, 21-22, 24-28, 30, and 33-34

of the '580 Patent are unpatentable under 35 U.S.C. § 103 as obvious over Garrison;

Ground 3: Claims 1, 5-6, 9, 11-18, 21-30, and 33-34 of the '580

Patent are unpatentable under 35 U.S.C. § 103 as obvious over Garrison in combination with U.S. Patent Application Publication No. 2003/225379 to Schaffer et al. (EX1007, "Schaffer");

Ground 4: Claims 1, 5, 9, 11-14, 18, 21-22, 24-28, 30, and 33-34

of the '580 Patent are unpatentable under 35 U.S.C. § 103 as obvious over Garrison in combination with U.S. Patent Application Publication No. 2003/0116731 to Hartley (EX1008; "Hartley");

Ground 5: Claims 15-17 of the '580 Patent are unpatentable un-

der 35 U.S.C. § 103 as obvious over Garrison in combination with Schaffer and Hartley;

Ground 6: Claims 18-22 and 24-28 of the '580 Patent are un-

patentable under 35 U.S.C. § 103 as obvious over Garrison in combination with WIPO Publication No. 2006/124307 to Goff et al. (EX1005, "Goff");

Ground 7: Claims 18-29 of the '580 Patent are unpatentable under 35 U.S.C. § 103 as obvious over Garrison in combination with Schaffer and Goff;

Ground 8: Claims 18-22 and 24-28 of the '580 Patent are unpatentable under 35 U.S.C. § 103 as obvious over Garrison in combination with Hartley and Goff;

Ground 9: Claim 10 of the '580 Patent is unpatentable under 35 U.S.C. § 103 as obvious over Garrison in combination with U.S. Patent Application Publication No. 2017/0043066 to Laub (EX1012; "Laub");

Ground 10: Claim 10 of the '580 Patent is unpatentable under 35 U.S.C. § 103 as obvious over Garrison in combination with U.S. Patent No. 8,734,374 to Aklog et al. (EX1011; "Aklog");

Ground 11: Claim 10 of the '580 Patent is unpatentable under 35 U.S.C. § 103 as obvious over Garrison in combination with Laub and Schaffer;

Ground 12: Claim 10 of the '580 Patent is unpatentable under 35 U.S.C. § 103 as obvious over Garrison in combination with Laub and Hartley;

Ground 13: Claim 10 of the '580 Patent is unpatentable under 35

U.S.C. § 103 as obvious over Garrison in combination with Aklog and Schaffer; and

Ground 14: Claim 10 of the '580 Patent is unpatentable under 35

U.S.C. § 103 as obvious over Garrison in combination with Aklog and Hartley.

Petition, pg. 14. I have been asked by counsel for Patent Owner to opine on the patentability of the Claims of the '580 Patent.

3. Along with my years of education, research, and experience, my opinions are based on investigation and study of relevant materials. The materials that I evaluated in support of this Declaration include all exhibits cited in this Declaration and in the Petition.
4. I may rely upon these materials, my knowledge and experience, and/or additional materials to rebut arguments raised by Petitioner. Further, I may also consider additional documents and information in forming any necessary opinions, including documents that may not yet have been provided to me.
5. My analysis of the materials produced in this matter is ongoing, and I will continue to review any new material as it is provided. This Declaration represents only those opinions I have formed to date. I reserve the right to revise,

supplement, and/or amend my opinions stated herein based on new information and on my continuing analysis of the materials already provided.

6. My work in this case is being billed at my normal hourly consulting rate, with reimbursement for actual expenses. My compensation is not related to the outcome of this proceeding. I have no personal interest in the outcome of the case.

II. BACKGROUND AND QUALIFICATIONS

7. My qualifications for forming the opinions set forth in this Declaration are summarized here and explained in more detail in my curriculum vitae, which I provide as a first attachment to my Declaration.
8. I received a Bachelor of Science in Mechanical Engineering from North Dakota State University, with an emphasis on electromechanical automation. As part of my studies, I took classes covering many different engineering areas including chemistry, physics, advanced mathematics, statistics, software engineering and architecture, statics, dynamics, thermodynamics, robotics, technical writing, material science, fluid dynamics and engineering design. After my studies, I joined Hutchinson Technology as a machine design engineer. After a few years at Hutchinson, I joined Boston Scientific/SciMED in 1990 and began working with their medical device product lines, including stents and cardiovascular implants.

9. Beginning with my time at SciMED, I have over 30 years of research and development experience working in the cardiovascular and medical device industries across a wide variety of application areas including development of neurovascular, cardiovascular, peripheral vascular, and pulmonary aspiration thrombectomy devices.
10. For 24 years, I served in various roles at SciMED Life Systems and Boston Scientific, including multiple research and development engineering positions in various application areas including catheters, stents, guidewires, thrombectomy systems, and cardiovascular implants. For my final 10 years at Boston Scientific, I served as the global vice president of R&D Interventional Cardiology, where I was tasked to direct worldwide cardiovascular research and development activities for accelerated launches of implantable stents, drug delivery technologies, structural heart devices, disposable catheters, and adjunctive products.
11. Starting in 1991, in collaboration with Possis Medical and SciMED Life Systems, I designed and developed a drive unit to supply high pressure water jet and aspiration to a thrombectomy catheter. From 1992 to 1993, as part of my work, I developed and patented several thrombus removal catheters designed for aspiration, irrigation, and mechanical interaction with thrombi.

12. I also held various leadership roles at medical device and diagnostics companies, including Chief Technology Officer at OvaGene Oncology and Vice President of R&D and Operations at both Cogentix Medical, Inc. and Sunshine Heart, Inc, focused on advancing the medical device and diagnostics industries.
13. For the past 6 years, I have served as a technical consultant for various early-stage medical device companies as the founder and President of Brown-Tech, LLC, including QXMedical, Peytant Solutions, and CardioMech. I am also one of the founding partners for Northern Nitinol, LLC, which is a company that focuses on nitinol design and prototyping for medical device components.
14. I was the two-time recipient of the Boston Scientific Patent of the Year award, recognized as one of Minnesota's leading inventors by Twin City Business Magazine in 2013, elected to College of Fellows, American Institute for Medical and Biological Engineering, and served as an Advisor to the University of Minnesota Office of Technology Commercialization. I also served as a mentor to students enrolled in the University of Minnesota Design of Medical Device program.
15. I am a named inventor on approximately sixty issued U.S. medical device patents covering a wide variety of technologies, including two aspiration thrombectomy patents and several others on stent geometries, nitinol, balloon

catheters, infusion catheters, and ePTFE processing. I am an inventor of U.S. Patent No. 5,419,774 on a thrombus extraction device for quickly removing thrombus from a saphenous vein graft, and U.S. Patent No. 5,417,703 on an intravascular device for removing vascular occlusion material.

16. During my career, I developed a range of medical devices from low profile neurovascular catheters for the treatment of neurovascular disease and embolic stroke to large profile catheters for the treatment of peripheral vascular disease (PVD), deep vein thrombosis (DVT), pulmonary embolism (PE), and structural heart disease (SHD). Larger profile catheters were used for the treatment of PVD, DVT, PE, and SHD to accommodate the delivery of larger therapeutic devices (balloons, stents, valves) to the large diameter vessels. Many of the catheter systems I developed included hemostasis valves, of various designs, on the proximal end to facilitate the introduction of ancillary devices (guidewires, snares, ultrasound, etc.) and the coaxial introduction of a catheter within a catheter to cross challenging anatomy or to extend to distal treatment sites.

III. BASES OF MY OPINION

A. Materials Considered

17. The opinions included in this Declaration are based on the documents I reviewed, my professional judgment, and my education and experience.

18. In forming the opinions expressed in this Declaration, I reviewed all the materials listed in the second attachment I have provided to my Declaration, and any other material I refer to in this Declaration in support of my opinions.

B. Relevant Legal Principles

19. I am not an attorney but, in preparing and forming my opinions, I have been informed of certain legal principles. I have applied my understanding of those principles and taken them into account when forming the opinions I describe. My understanding of the relevant legal principles is summarized below.
20. I understand that claim terms are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art at the time of the invention when read in the context of the specification and prosecution history, unless a patentee sets out a different definition or clearly disavows claim scope.
21. I further understand that extrinsic evidence such as expert and inventor testimony, dictionaries, and learned treatises can help determine the meaning of claim terms, although that evidence is less significant than the claims, specification, and prosecution history, and the extrinsic evidence must not be used to contradict the extrinsic evidence.
22. I have been informed that Petitioner bears the burden of proving unpatentability by a preponderance of evidence. I have been told that this means that

Petitioner must prove that more likely than not that the Claims of the '580 Patent are anticipated by Garrison, obvious over Garrison alone, or obvious over Garrison in combination with one or more of Schaffer, Hartley, Goff, Laub, and Aklog.

23. I understand that my opinions regarding patentability are from the viewpoint of a person having ordinary skill in the field of the technology of the patent as of the time of the invention. For the purposes of this Declaration, I have assumed that date is the earliest priority date of the '580 Patent, January 26, 2018. Petitioner also applies January 26, 2018, as the priority date for the '580 Patent. Petition, pg. 11.
24. I understand that for a patent claim to be anticipated, each claim limitation must be present in a single piece of prior art. It is my understanding from counsel that a prior art reference anticipates a claimed invention if the prior art reference disclosed each of the claimed limitations of the invention either expressly or inherently.
25. I understand that if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains, the claimed invention is obvious.

26. I understand there are four fact-based inquiries involved in determining patent obviousness. These include: (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) objective indicia of non-obviousness. I have been informed that examples of objective indicia include unexpected results, commercial success of the invention, whether the invention satisfied a long felt need in the industry, failure of others to find a solution to the problem at hand, commercial acquiescence via licensing, professional approval, unexpected results, and copying and praise by infringers.
27. I understand that even if all limitations of a claimed invention are disclosed by the prior art combination, the patent challenger must demonstrate an apparent reason to combine the known elements in the fashion of the patent claim at issue and that a person of ordinary skill in the art would have reasonable expectation of success in pursuing that combination.
28. I understand that a prior art reference teaches away from a proposed modification when a person of ordinary skill in the art would be discouraged from following the path set out in the reference or would be led in a direction divergent from the path followed by and claimed in the patent.

IV. SUMMARY OF OPINIONS

29. For the reasons I discuss below, I believe that the Claims of the '580 Patent are not anticipated by Garrison, rendered obvious by Garrison alone, or rendered obvious by any combination of the prior art asserted in the Petition.

V. THE '580 PATENT

A. Overview

30. Thrombi and emboli are blood clots that cause blockages (also called occlusions) of blood vessels or arteries. Blocking blood flow results in oxygen deprivation of tissues that results in tissue death. Clot blockages can cause many very serious health conditions if the clot is located in a critical blood vessel, including stroke (blocking blood flow to or from the brain), pulmonary embolism (blocking the flow of deoxygenated blood to the lungs), heart attacks (blocking blood flow to the heart), and other serious conditions. Venous thromboembolism (VTE) and the related health conditions, e.g., deep vein thrombosis (DVT) and pulmonary embolism (PE), are a huge problem, affecting approximately 900,000 people in the United States every year. *See* (<https://www.cdc.gov/blood-clots/data-research/facts-stats/index.html>). Venous thromboembolism is, in fact, a leading cause of preventable hospital deaths in the United States and worldwide, causing 60,000-100,000 deaths per year in the United States alone. *See id.*

31. A blood clot is essentially a living polymer, comprising a matrix of intertwined and cross-linked strands within which are situated red and white blood cells, platelets and numerous other proteins and components. The mechanical properties of a clot are influenced by the relative percentages of other materials and red blood cells, and clots that are highly fibrous (and highly organized) and have lower red blood cell content tend to be firmer and more cohesive than clots of a higher red cell content. Such clots have also been found to have a higher coefficient of friction, or in other words to be “stickier.” These firm and sticky clots can be challenging to remove from a vessel.
32. Clots that are less organized and with a high red cell content have been found to be less cohesive, more friable (i.e., more easily crumbled) and to have a lower coefficient of friction than the more organized and stickier clots previously described. Fresher (younger) clots are typically characterized as more friable, softer and less organized, whereas older (mature) clots are characterized as more organized, firmer, and stickier. These properties mean that fresher and softer clots may be easier to dislodge from the site of occlusion.
33. DVT is a type of blood clot (thrombus) that typically forms in the deep veins of a limb, such as the leg. EX1001, 1:44-46. Thromboembolism occurs when part or all of a thrombus breaks away from the blood vessel wall. This blood clot (now called an embolus) is then carried in the direction of blood flow.

When the embolus travels from the vein towards the heart and then lungs, a PE may result if such embolus lodges in an artery or branch thereof of the lungs. *Id.* at 1:55-65. Because of their location and how they are formed DVT and PE clots tend to be larger, older, more highly organized, and more fibrous than arterial clots, such as clots in the cerebral vasculature that cause strokes.

34. Treatment of PE and DVT has long been a challenge, with the existing methods of treatment failing to significantly improve patient mortality rates over the last five decades. For example, PE and DVT have traditionally been treated with drugs, e.g., anticoagulants (also called blood thinners), streptokinase (also called SK manufactured by pharmaceutical makers including GSK and BBT Biotech GmbH), urokinase (also called Abbokinase or Kinlytic, manufactured by companies including Abbott Laboratories), or other drugs in a class of agents called “thrombolytics” (or just “lytics”) that break down and dissolve the clot over hours or days, but do not physically remove the clot material from the body. EX1001, 2:24-29. Doctors can treat patients with lytics by introducing the drugs through an IV line or, more preferably for many cases, applying the lytics at the site of the clot using a perfusion catheter placed at the clot. To this day, the use of either anticoagulants or lytics (particularly for certain types of more acute cases) are the most common and recommended treatments for PE and DVT in guidelines by medical organizations

such as the American College of Chest Physicians, European Society of Cardiology, American Heart Association, and the Society of Interventional Radiology.

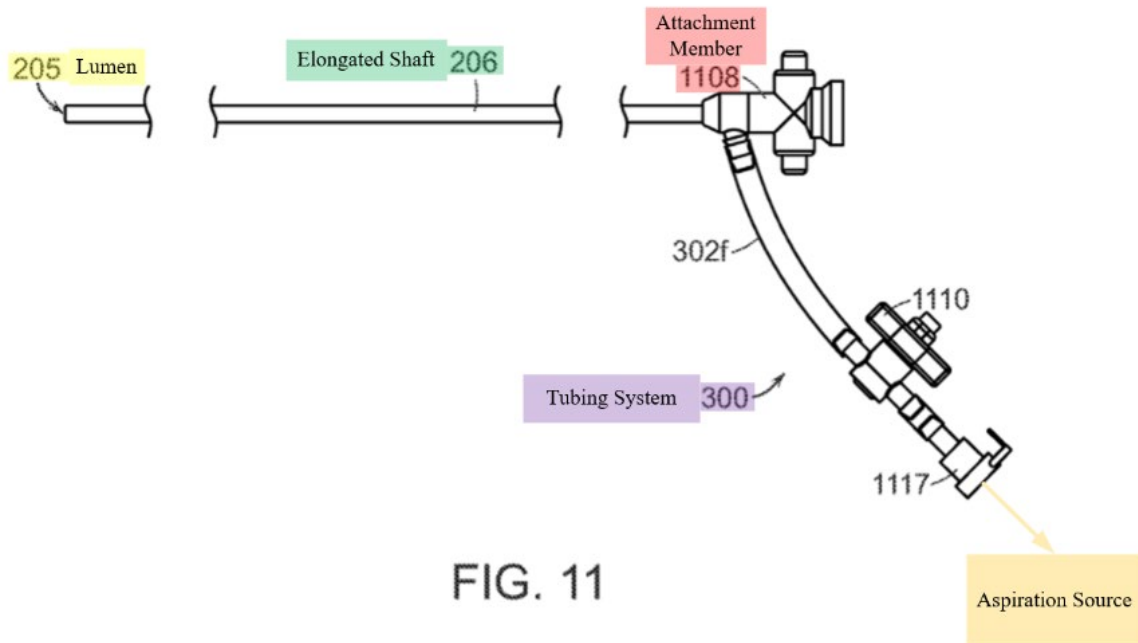
35. Lytics have many disadvantages. First, they can take many hours to work. EX1001, 2:26-27. Second, because the clots are not actually removed from the body, portions of the clot can break off and travel to a different location within the body rather than being eliminated entirely. Additionally, using lytics can cause hemorrhages and serious risks of death, necessitating ICU stays for treatments and monitoring. *Id.* at 2:28-29. Lytic treatments also are very expensive, as they require longer hospital stays, and they cannot be used for many patients because of conditions related to increased risk of bleeding (e.g., active bleeding, recent brain bleed/hemorrhage, recent brain or spine surgery, severe hypertension, severe kidney disease, etc.).
36. Anticoagulant drugs also have many disadvantages. The side effects include bleeding risk and loss of bone density. Anticoagulants also are not effective against existing clots, merely preventing clots from forming or continuing to form (to some degree).
37. In some embodiments, the '580 Patent discloses methods and systems for removing clot material—such as PE or DVT—from the vasculature of a patient that utilize both aspiration to remove clot material and then mechanical

engagement with an interventional device to remove any of that clot material remaining after aspiration and that offer significant benefits over conventional treatments. EX1001, 3:46-49, 4:45-49, & 21:41-52. More particularly, independent Claim 1 of the '580 Patent (the sole independent claim) is directed to a method for the intravascular treatment of clot material with a blood vessel. EX1001, cl. 1. The method includes steps of (i) positioning: "positioning a distal portion of an elongated shaft proximate to the clot material within the vessel," (ii) aspirating some of the clot material: "pre-charging a vacuum in a pressure source" and then "fluidly connecting the pressure source to the elongated shaft to apply the pre-charged vacuum to the elongated shaft to aspirate a first portion of the clot material into the elongated shaft", and then (iii) engaging leftover clot material with an interventional device: "advancing an interventional device distally through the attachment member and the elongated shaft" and then "engaging the interventional device with a second portion of the clot material remaining within the blood vessel."

38. Accordingly, the aspirating steps of Claim 1 include pre-charging a vacuum in a pressure source and then fluidly connecting the pressure source to the elongated shaft to apply the pre-charged vacuum to the elongated shaft to aspirate a first portion of the clot material into the elongated shaft. EX1001, cl. 1. By pre-charging the vacuum, the method can generate large suction forces

(and corresponding fluid flow velocities) to effectively aspirate and remove part of the clot material from the patient. *Id.* at 21:7-15.

39. If any of the clot material remains within the blood vessel after aspiration (e.g., chronic, strongly-lodged, and/or particularly large clots), the interventional device steps of Claim 1 recite steps that include “unsealing an attachment member coupled to a proximal portion of the elongated shaft,” “advancing an interventional device distally through the attachment member and the elongated shaft,” and “engaging the interventional device with a second portion of the clot material remaining within the blood vessel” to remove the remaining clot. *Id.* at cl. 1. In this manner, the interventional device treats a portion of the same clot that remains in the vessel after aspiration.
40. Figure 11 illustrates one example of a clot treatment system that can be used to carry out the method of Claim 1. The system includes a catheter 206 (e.g., an elongated shaft) having a distal portion configured to be positioned near clot material within a blood vessel and a proximal portion coupled to an attachment member 1108:



Id. at 17:7-9. The attachment member 1108 can be a hemostasis valve that can be selectively opened and closed to provide access to a lumen 205 of the catheter 206. *Id.* at 17:46-18:67 & FIGS. 13A-13B. The system further includes a tubing system 300 having a tube 302f fluidly connected to the lumen 205 of the catheter, a connector 1117 that can be connected to an aspiration source (not shown in Figure 11; shown in my annotations), and a stopcock 1110 for controlling flow (e.g., blocking or allowing flow) from the catheter 206 to the aspiration source. *Id.* at 17:12-27.

41. The '580 Patent explains that a "syringe or other pressure source can be fluidly coupled directly to the connector 1117 and used to aspirate the guide catheter 206." *Id.* at 20:58-61. In that arrangement, "opening of the stopcock 1110 flu-
idly connects the syringe to the lumen 205 of the guide catheter 206 and

closing of the stopcock 1110 fluidly disconnects the syringe from the lumen 205 of the guide catheter 206.” *Id.* at 20:61-65. The “syringe or other pressure source can be pre-charged with a vacuum—such as by drawing a plunger of the syringe with the stopcock 1110 closed” and the “stopcock 1110 can then be opened to instantaneously or nearly instantaneously (e.g., immediately) apply the stored vacuum pressure to the tubing system 300 and to the lumen 205 of the guide catheter 206, thereby generating suction throughout the guide catheter 206.” *Id.* at 20:65-21:5.

42. If clot material remains in the blood vessel after aspiration of the catheter 206, the '580 Patent explains that the attachment member 1108 can then be unsealed to provide access to the lumen 205 of the catheter 206 by, for example, depressing one or more buttons of the attachment member. *Id.* at 18:41-48. Then, an interventional device ID can be advanced through the catheter 206 to engage the remaining clot material; an example is shown in Figures 2A-2G:



FIG. 2C

Id. at 21:41-52. The interventional device ID can be retracted through the remaining portion of the clot material to physically engage the clot material and pull all or a portion of it into the catheter 206:

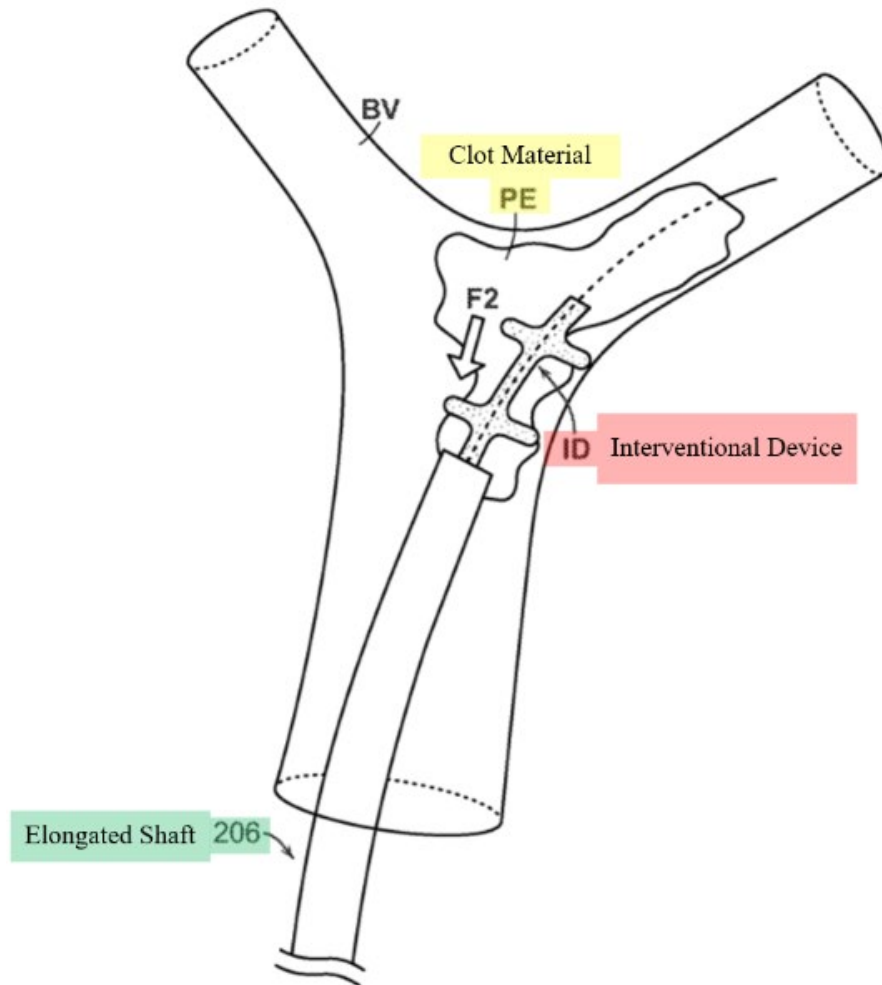


FIG. 2F

Accordingly, the methods claimed in the '580 Patent utilize first aspiration via pre-charged vacuum and then mechanical engagement with an interventional device to effectively remove and treat clot material such as PE and DVT.

B. Prosecution History

43. I have reviewed the prosecution history of the '580 Patent, including the only Office Action mailed June 26, 2023 (EX1002, pgs. 1043-1052), the

Amendments and Response to the Office Action filed September 14, 2023 (*Id.* at pgs. 700-708), and the Notice of Allowance mailed November 8, 2023 (*Id.* at pgs. 674-680). In the sole Office Action, the Examiner allowed independent claim 21 (which became Claim 1 of the '580 Patent challenged here), but rejected the other independent claim 32 as anticipated under 35 U.S.C. § 102(a)(1) over U.S. Patent Application No. 2015/0352325 (EX1009; "Quick"). *Id.* at pgs. 1045-1047. The Examiner found independent claim 21 to be allowable over Quick because that reference did not disclose or suggest "the step of pre-charging the syringe then release valve 310 to apply vacuum to the clot material." *Id.* at pg. 1050.

44. In response to the Office Action, Inari canceled independent claim 32 and added new dependent claims 41-63 from allowable independent claim 21. *Id.* at pgs. 701-708. In the Notice of Allowance, the Examiner simply referred back to their statements of allowance in the Office Action. *Id.* at pg. 679.

C. Person of Ordinary Skill in the Art

45. My opinion on the level of ordinary skill in the art is based upon my personal knowledge and experience as well as my consideration of such things as the education and experience level of persons of skill working in the field. I disagree that a POSITA would have had only "an undergraduate degree in mechanical engineering or a related engineering discipline and 2-4 years of

catheter design experience and, where necessary, would have consulted with a physician regarding the methods of treatment.” Petition, pg. 11. Rather, a POSITA would have been (1) a person with a Bachelor of Science degree in engineering or an equivalent field, with two to four years of academic or industry experience in the mechanical thrombectomy industry or comparable industry experience who would, where necessary or desired, work or consult with others including a physician to develop thrombectomy devices (including for smaller arteries); or (2) an interventional radiologist or pulmonologist with at least three years of experience developing and/or using medical devices in thrombectomy procedures (including for smaller arteries), and who would, where necessary, work or consult with others including an engineer to develop such a medical device. A person with less education but more relevant practical experience, or more relevant education but less practical experience, may also meet this standard. Nevertheless, I apply Petitioner’s standard throughout my declaration as, even under this standard, a POSITA would have understood the Claims of ’580 Patent to be patentable over the prior art references cited in grounds 1-14. I was also at least a person of ordinary skill in the art as of the priority date of the ’580 Patent according to both standards.

D. Claim Construction

46. Petitioner proposes a construction only for the term “filament” recited in dependent Claims 15-17. Petition, pgs. 11-13. Because my analysis here focuses only on the patentability of independent Claim 1, I have not provided a construction of “filament”. I have proposed a construction for filament in other IPR proceeding, and I reserve my right to do so in this matter.

VI. GROUND 1: GARRISON DOES NOT ANTICIPATE CLAIMS 1, 5, 9, 11-14, 18, 21-22, 24-28, 30, OR 33-34

47. Petitioner and its expert, Mr. Thornton, allege that Garrison anticipates Claims 1, 5, 9, 11-14, 18, 21-22, 24-28, 30, or 33-34 of the '580 Patent. Petition, pg. 14. I disagree for the reasons I discuss in further detail in this section.
48. As I explained above, I understand that for a patent claim to be anticipated, each claim limitation must be present in a single piece of prior art. It is my understanding from counsel that a prior art reference can anticipate a claimed invention if the prior art reference disclosed each of the claimed limitations of the invention either expressly or inherently in the same configuration or arrangement as claimed.
49. The sole independent claim, Claim 1, of the '580 Patent requires:
- positioning a distal portion of an elongated shaft proximate to the
 - clot material within the blood vessel;
 - pre-charging a vacuum in a pressure source;

fluidly connecting the pressure source to the elongated shaft to
apply the pre-charged vacuum to the elongated shaft *to as-
pirate a first portion of the clot material into the elon-
gated shaft*;
unsealing an attachment member coupled to a proximal portion
of the elongated shaft;
advancing an interventional device distally through the attach-
ment member and the elongated shaft; and
*engaging the interventional device with a second portion of the
clot material remaining within the blood vessel.*

That is, Claim 1 requires aspirating a first portion of a clot into an elongated shaft via application of a pre-charged vacuum, and then advancing an interventional device through the elongated shaft and engaging the interventional device with a second portion of that same clot that remains in the blood vessel after aspirating.

50. Petitioner relies on Garrison’s catheter 2030 for allegedly disclosing the “elongated shaft” required by Claim 1 and alleges that various additional devices inserted through that catheter 2030 disclose the “interventional device” recited in Claim 1. Petition, pgs. 18-19 & 32-34.
51. But the portions of Garrison relied on by Petitioner for allegedly disclosing the limitation Petitioner labels [1F]—“*engaging the interventional device with a second portion of the clot material remaining within the blood vessel*”—do

not disclose that limitation of Claim 1. Put simply, Petitioner fails to demonstrate that Garrison discloses the method steps required by Claim 1 including engaging an interventional device with a second portion of a clot after aspirating a first portion of that same clot.

52. First, Petitioner alleges that Garrison discloses limitation [1F] based on its disclosure that “if a secondary more distal treatment site needs to be reached *after removal of a first occlusion*, a second, smaller diameter catheter may be inserted through the first catheter, and positioned at the distal treatment site.” EX1006, ¶ [0166], Petition, pg. 35 (emphasis from Petition). But that disclosure of Garrison is for the treatment of a second *different clot* at a different more distal treatment site (i.e. a separate clot at a separate site) after removing a different first clot, as Petitioner emphasizes. Paragraph [0166] of Garrison does not disclose using the second smaller diameter catheter to treat a remaining portion of the *same* clot as required by Claim 1. Put differently, paragraph [0166] of Garrison discloses fully removing a first occlusion (clot) then treating a different more distal clot using a smaller catheter—not treating a remaining portion of the same clot at the same treatment site with the smaller catheter.
53. That Garrison describes that the catheter 2030 “may also be used to deliver additional catheters and/or interventional devices to the site of the occlusion”

does not disclose the claimed method of aspirating a first portion of the clot material through an elongated shaft, advancing an interventional device through the elongated shaft, and then engaging that interventional device with a second portion of the clot material remaining in the blood vessel after aspirating as required by Claim 1. EX1006, ¶ [0054]; Petition, pg. 35. In fact, Petitioner continues that such an additional device can be “an expandable member deliverable through a microcatheter that can remove portions of a clot.” EX1006, ¶ [0143]; Petition, pg. 35. But Garrison discloses that the thrombectomy device 15 shown in Figure 39 is “configured to remove an occlusion *as a single piece by not breaking the occlusion into multiple pieces*” to “minimize or eliminate the creation of emboli distal to the location of the clot.” EX1006, ¶ [0143] (my emphasis added). Removing the occlusion “as a single piece” is the counter to the method of Claim 1 in which aspirating removes a first portion of the clot material, and then the interventional device engages a second portion of the clot material remaining in the blood vessel.

54. Second, Petitioner alleges that “Garrison solves the very problem the ’580 patent purportedly addresses - deploying separate devices to remove a clot” because Garrison incorporates “accessory devices, such as thrombectomy device 4100, into the system.” Petition, pg. 35. Petitioner cites paragraph [0046] of Garrison as a purported example, but a bare disclosure of “multiple

attempts and/or adjunct mechanical thrombectomy devices” does not disclose or render obvious the precise sequence of steps recited in Claim 1. EX1006, ¶ [0046]. Claim 1 requires first “advancing an interventional device distally through the attachment member and the elongated shaft” and then “engaging the interventional device with a second portion of the clot material remaining within the blood vessel.” Garrison’s paragraph [0046] discloses the use of an adjunct mechanical device but does not disclose whether the adjunct device is used prior, during, or after the initial aspiration or that the adjunct device is advanced through the attachment member and the elongated shaft. The adjunct device of Garrison could easily travel beside (next to) the aspiration catheter or in another catheter. That Garrison discloses structures including accessory devices and a catheter 2030 for aspiration does not disclose the specific method recited in Claim 1 including aspirating a first portion of clot material before engaging an interventional device with a second portion of the clot material that remains in the vessel after aspiration. Petitioner concludes that “Garrison discloses that the user can deploy these devices after aspirating a first clot portion” based on paragraph [0166] of Garrison. Petition, pg. 35. But, as I explain above, the disclosure in that paragraph [0166] of Garrison is for treating a second clot at a second more distal treatment site with a second

smaller catheter after removing a first clot—not treating a remaining portion of the same clot at the same treatment site as required by Claim 1.

55. Third, Petitioner’s reliance on paragraphs [0125]-[0126] of Garrison as “describ[ing] aspirating a clot and, ‘if and when the clot becomes stuck in the lumen of the catheter,’ engaging the disruption device with the clot to aspirate additional portions of the clot” is incorrect because the disruption device is inserted into the catheter *before* aspiration and used during the aspiration, rather than being deployed and engaging “clot material *remaining within the blood vessel*” after aspiration as required by Claim 1. The embodiments in paragraphs [0125]-[0126] disclose a catheter with a “structure for morcelating the thrombotic occlusion as it is being aspirated into the catheter” and that is “expanded proximal to the distal tip of the catheter” (i.e., within the catheter). Specifically, Figure 53 shows such a thrombus disruption device 5105 expanded within a catheter 2830 that is “rotated throughout the aspiration step to ensure that the clot is never clogging the distal tip of the catheter but is immediately broken up once aspirated into the distal tip.”

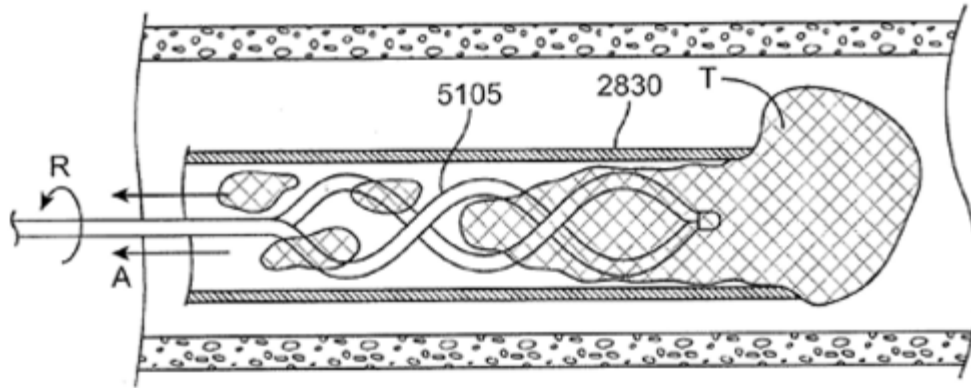


FIG. 53

EX1006, ¶ [0126]. The thrombus disruption device is positioned within the catheter *before* aspiration and used throughout the aspiration treatment rather than being advanced and engaged with remaining clot after aspiration: “a separate thrombus disruption device with an expandable distal segment is inserted into the catheter ... Aspiration is then initiated at the proximal end of the catheter.” *Id.* at ¶ [0125]. Aspiration occurs continuously when the thrombus disruption device is rotated: “Aspiration as indicated by the arrows A is maintained throughout this maneuver to ensure that the morecelated thrombus is removed via the catheter 2830 and not re-inserted into the blood stream.” *Id.* at ¶ [0126].

56. Accordingly, the embodiments in paragraphs [0125]-[0126] do not disclose “engaging [the thrombus disruption device] with a second portion of the clot material remaining within the blood vessel” after aspiration as recited in Claim 1 because the thrombus disruption device is positioned within the

catheter and engages the clot for the full duration the clot is aspirated and removed.. Accordingly, in that embodiment the disruption device disrupts any claimed “first portion of the clot material” that is aspirated “into the elongated shaft” to prevent clogging. The disruption device is never engaged with “a second portion of the clot material remaining within the blood vessel” as required by Claim 1. Likewise, those embodiments do not disclose “unsealing an attachment member,” “advancing the interventional device,” and “unsealing the interventional device” *after* aspirating as required by Claim 1. Instead, the thrombus disruption device is positioned within the catheter for the full duration of aspiration.

57. In sum, none of the portions of Garrison relied on by Petitioner to allege anticipation disclose Petitioner’s limitation [1F]: “*engaging the interventional device with a second portion of the clot material remaining within the blood vessel.*” The embodiment in paragraph [0166] of Garrison describes treating a first clot with a first catheter and then inserting a second catheter through the first to treat another *different clot* at a more distal treatment site—not a remaining portion of the same first clot. And, that the catheter 2030 can receive other devices does not disclose the methodology of Claim 1 including aspirating a first portion of the clot material through an elongated shaft, advancing an interventional device through the elongated shaft, and then

engaging that interventional device with a second portion of the clot material remaining in the blood vessel after aspirating. Finally, the embodiments in paragraphs [0125]-[0126] advance a thrombus disruption device through a catheter before, rather than after, aspiration and that thrombus disruption device remains disrupting the clot during the entirety of aspiration rather than engaging with a portion of the clot remaining afterward.

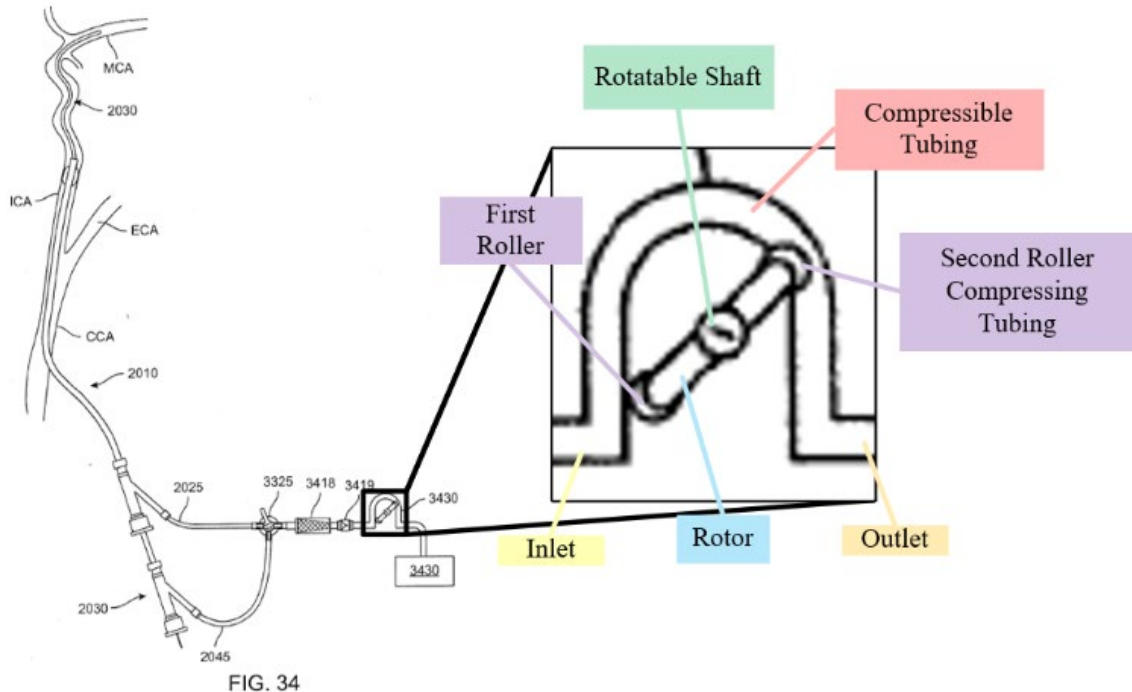
58. Claim 1 also requires steps of “pre-charging a vacuum in a pressure source” (what petitioner labels limitation [1B]) and “fluidly connecting the pressure source to the elongated shaft to apply the pre-charged vacuum to the elongated shaft to aspirate....” (what petitioner labels limitation [1C]). EX1001, Cl. 1.; Petition, pgs. 19, 22. Garrison does not disclose limitations [1B] and [1C] together as arranged in Claim 1 with the other limitations of Claim 1. For connecting the pressure source, the Petition relies on a switching valve 3325 in Garrison’s Figure 34, and for pre-charging the vacuum, the Petition relies on a separate and distinct embodiment mentioned in connection with Garrison’s Figure 35. Petition, pgs. 20, 21.
59. But Garrison’s valve 3325 is not used to pre-charge a vacuum as Petitioner alleges. Instead, it is used to control the connection of two different pathways (i.e., the arterial access device 2010 or the catheter 2030) to the same aspiration source 3340 (a peristaltic pump). EX1006, ¶ [0132], FIG. 34. The

Petitioner cites Garrison's paragraph [0134] to allegedly show pre-charging a vacuum, but paragraph [0134] describes a different embodiment for generating vacuum pressure with a *syringe*, instead of with a peristaltic *pump* as shown in Garrison's Figure 34. EX1006, ¶ [0134]. Garrison does not show any drawings of embodiments that include such a syringe. Garrison's disclosure of "rapid" action purportedly associated with the syringe embodiment in paragraph [0134] does not teach or include using another type of aspiration source (e.g., a peristaltic pump, centrifugal, rotary, positive displacement, or other continuous pump) instead of the syringe to create a vacuum. Accordingly, the only disclosure in Garrison that can be interpreted as generating a precharged/stored vacuum that is later released to perform aspiration is the lone, distinct, unillustrated embodiment in paragraph [0134] that requires a syringe. This embodiment is incompatible with the distinct pump embodiments.

60. There are fundamental differences between a syringe and a peristaltic pump, like the pump 3430 shown in Garrison's Figure 34. *See* EX1006, FIG. 34. A syringe includes a barrel in which vacuum pressure is generated when a plunger is withdrawn. EX1006, ¶ [0134]. That barrel has a fixed volume with one opening for input and output. The fixed volume sets and limits the "maximum level of aspiration." Therefore, when the syringe plunger is withdrawn

with the flow controller closed as described in paragraph [0134] of Garrison, the maximum level of vacuum in the syringe is achieved because the full barrel is evacuated.

61. In contrast, the peristaltic pump in Garrison's Figure 34 (and centrifugal and other positive displacement pumps) is fundamentally different and does not have a fixed volume that limits the "maximum level of aspiration" but instead includes a rotor with rollers that compress and seal tubing, alternating the compression and relaxation of the tubing to draw content into the pump through an inlet and propel that content away from the pump through an outlet:



Generally, continuous pumps like peristaltic, centrifugal, and other positive displacement pumps operate to continuously shuttle fluid through a tube or

conduit with a roller, vane, or the like. Accordingly, there is no fixed volume of the peristaltic pump that can be evacuated like a syringe if a valve were closed to generate a “maximum level of aspiration.” Any “maximum level of aspiration” is dictated by the speed of the pump—i.e., how quickly the rotor rotates to drive material through the pump—and there is not a fixed volume in the peristaltic pump like a syringe that would be evacuated to generate vacuum if a valve were included and closed. Accordingly, Garrison’s syringe is not interchangeable with the pump in the embodiment Petitioner relies upon related to Figure 34 (and it is not disclosed as such). The syringe concepts Petitioner relies upon are not associated with the valve 3325 and the other aspects of Figure 34.

62. Because the portions of Garrison relied on by the Petitioner do not disclose all the limitations of Claim 1, it is my opinion that Garrison does not anticipate Claim 1. And, because Claims 5, 9, 11-14, 18, 21-22, 24-28, 30, and 33-34 depend from Claim 1 and therefore include all the features of Claim 1, those Claims are also not anticipated by Garrison.

VII. GROUNDS 2-4: GARRISON ALONE OR GARRISON IN COMBINATION WITH SCHAFFER OR HARTLEY DO NOT RENDER OBVIOUS CLAIMS 1, 5, 6, 9, 11-18, 21-30, OR 33-34

63. Petitioner and its expert, Mr. Thornton, allege that Garrison alone renders obvious (ground 2) and that Garrison in combination with Schaffer (ground 3)

or Hartley (ground 4) renders obvious Claims 1, 5, 9, 11-14, 18, 21-22, 24-28, 30, or 33-34 of the '580 Patent. Petition, pg. 14. Additionally, Petitioner and its expert allege that Garrison and Schaffer (ground 3) render obvious Claims 6, 15-17, 23, and 29. *Id.* I disagree for the reasons I discuss in further detail in this section.

64. As I explained above, I understand that for a patent claim to be rendered obvious, the differences between the claimed invention and the prior art must be such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains, the claimed invention is obvious. Even if all limitations of a claimed invention are disclosed by the prior art combination, Petitioner must demonstrate an apparent reason to combine the known elements in the fashion of the patent claim at issue and that a person of ordinary skill in the art would have reasonable expectation of success in pursuing that combination. A prior art reference teaches away from a modification of a prior art reference when a person of ordinary skill in the art would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path followed by and claimed in the patent.

65. As I explain above, the portions of Garrison cited by Petitioner for allegedly disclosing limitation [1F] of Claim 1 of the '580 Patent (“*engaging the interventional device with a second portion of the clot material remaining within the blood vessel*”) do not anticipate that limitation. After alleging that Garrison anticipates limitation [1F], Petitioner alleges that if not anticipated Garrison renders obvious that limitation. Petition, pgs. 36-37. But, like Petitioner’s anticipation arguments, the portions of Garrison relied on by Petitioner do not render obvious this limitation.
66. First, Petitioner’s and its expert’s only alleged motivation to modify Garrison that “a POSITA would have been motivated to engage the interventional device inserted through catheter 2030 with the second clot portion” based on paragraph [0165] of Garrison is incorrect because that paragraph of Garrison does not disclose inserting any interventional device through the catheter 2030 (Petitioner’s alleged “elongated shaft”). Petition, pgs. 36-37. Paragraph 0165 also does not disclose removing a second portion of clot material remaining after aspirating a first portion of that same clot material. More specifically, Petitioner’s only motivation to modify Garrison is as follows:

A POSITA would have been motivated to engage an interventional device with a second clot portion based on Garrison. (Ex. 1003, ¶116.) For example, Garrison explains that the clot may be “too large or too strongly embedded into the vasculature such

that it is not possible to remove the occlusion via aspiration alone, [such that] further steps are taken to remove the occlusion.” (Ex. 1006, [0165].) Garrison expressly discloses deploying a thrombectomy device to remove such clots. (*Id.*) Based on this disclosure, a POSITA would have been motivated to engage the interventional device inserted through catheter 2030 with the second clot portion.

Id.; EX1003, ¶ 116. First, the phrase “it is not possible to remove the occlusion via aspiration alone” (EX1006, ¶ [0165]), indicates that no first portion has been removed. And second, Garrison discloses that in such scenarios a “thrombectomy device 15 may be deployed through *the arterial access device* to remove the clot.” *Id.* (my emphasis added). The arterial access device is not the catheter 2030 that Petitioner alleges is the “elongated shaft” of Claim 1. Instead, as set forth in Garrison’s immediately preceding paragraph, the “catheter 2030 is placed through the arterial access device 2010.” *Id.* at ¶ [0164]. And, Figure 32 of Garrison shows the arrangement specified in paragraph [0165] in which a thrombectomy device is inserted through the arterial access device and catheter 2030 is not shown:

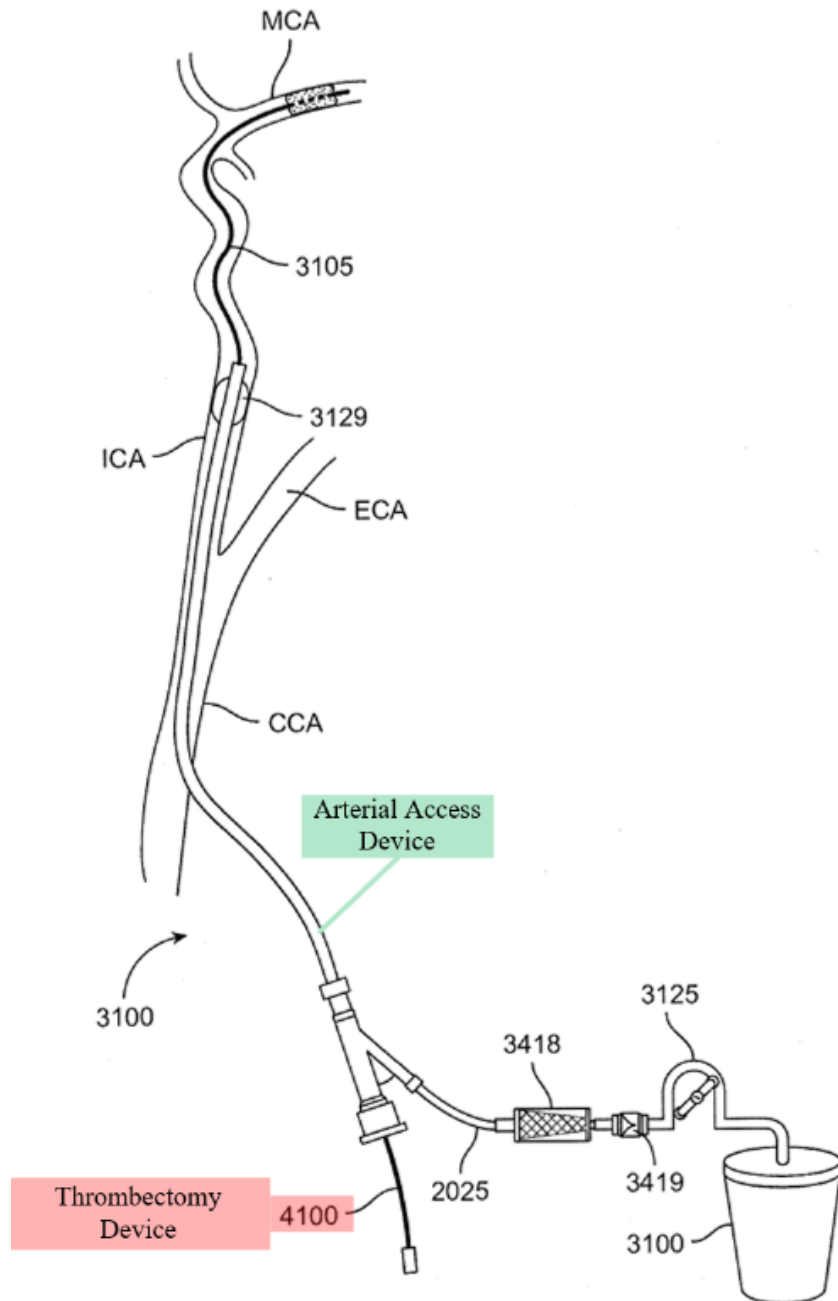


FIG. 32

67. Accordingly, Petitioner's cites for motivation to combine in its obviousness argument discloses inserting a thrombectomy device through a different part of Garrison's system—the arterial access device through which the catheter

2030 is inserted—and not the catheter 2030 that Petitioner alleges is the “elongated shaft” of Claim 1. For that reason, a POSITA would not have been motivated “to engage the interventional device inserted through catheter 2030 with the second clot portion” as Petitioner alleges and would instead have been motivated to engage the clot with a thrombectomy device inserted through the arterial access device, like shown in Figure 32 of Garrison. Petition, pgs. 36-37.

68. Accordingly, no portion of Garrison cited by the Petitioner discloses the methodology of Claim 1 including “engaging [an] interventional device with a second portion of the clot material remaining within the blood vessel” after aspirating a first portion of the clot material. Claim 1 requires what Garrison does not disclose or even suggest: a sequence of steps including an “interventional device” that is advanced through “the elongated shaft” to which a pre-charged vacuum was previously applied. EX1001, cl.1. And, a POSITA would not have been motivated to modify Garrison to advance an interventional device through the catheter 2030 based on paragraph [0165] of Garrison—the only portion of Garrison cited by Petitioner to support its obviousness assertions—because that paragraph discloses that if aspiration alone is not sufficient to remove a clot a thrombectomy device can be inserted through the arterial access device that is separate from and different than the catheter 2030.

69. For those reasons, it is my opinion that Garrison alone does not render obvious Claim 1. Petitioner does not rely on either Schaffer or Hartley for disclosing the above limitation [1F] and, accordingly, it is also my opinion that Garrison in combination with Schaffer or Hartley does not render obvious Claim 1. And, because Claims 5-6, 9, 11-18, 21-30, and 33-34 depend from Claim 1 and therefore include all the features of Claim 1, those Claims are also not rendered obvious by Garrison alone or in combination with Schaffer or Hartley.

VIII. GROUNDS 5-8: THE COMBINATIONS OF GARRISON AND SCHAFER, HARTLEY, AND/OR GOFF DO NOT RENDER OBVIOUS ANY OF CLAIMS 15-29

70. As I explain in §§VI-VII above, independent Claim 1 is not anticipated by Garrison, is not rendered obvious by Garrison alone, and is not rendered obvious by Garrison in combination with Schaffer or Hartley. Dependent Claims 15-29 depend from independent Claim 1. Petitioner does not allege that Schaffer and Hartley (ground 5; claims 15-17), Goff (ground 6; claims 18-22 and 24-28), Schaffer and Goff (ground 7; claims 18-29), or Hartley and Goff (ground 8; claims 18-22 and 24-28) disclose any of the features of independent Claim 1 I discuss above. Therefore, these claims are also not rendered obvious by Garrison in combination with Schaffer, Hartley, and/or Goff

because they incorporate all the features of independent Claim 1. Dependent claims 18-29 are addressed in further detail below.

IX. GROUNDS 1, 2-4, 6-8: DEPENDENT CLAIMS 18, 21-22, AND 24-28 ARE NOT ANTICIPATED BY GARRISON (GROUND 1), AND DEPENDENT CLAIMS 18-29 ARE NOT RENDERED OBVIOUS BY GARRISON ALONE OR IN COMBINATION WITH ANY OF SCHAFFER, HARTLEY, AND/OR GOFF (GROUNDS 2-4, 6-8)

71. Claim 18 depends from claim 1. EX1001, Cl.18. Claim 18 recites “[t]he method of claim 1 wherein the method further comprises collecting at least some of the first portion of the clot material within a filter chamber fluidly coupled between the pressure source and the elongated shaft.” *Id.* In other words, claim 18 requires a filter chamber located between “the pressure source and the elongated shaft.” Petitioner asserts that Garrison alone discloses this arrangement, or that Garrison combined with Goff renders it obvious. Petition, pgs. 59, 61. But Garrison alone does not disclose this arrangement, and the combination of Garrison and Goff does not render it obvious.
72. Garrison does not teach or suggest an embodiment in which a filter (3418) is used in connection with a pre-charged vacuum in the claimed location. As explained above, Petitioner relies on Garrison alone for limitations [1B] and [1C] related to the pre-charged vacuum. And as explained above, for connecting the pressure source ([1C]), the Petition relies on a switching valve 3325 in Garrison’s Figure 34, but for pre-charging the vacuum in the pressure source

([1B]), the Petition relies on a separate and disparate embodiment. Petition, pgs. 20, 21. Similarly, Petitioner relies solely on Garrison's filter 3418 to allege anticipation of claim 18, but the filter 3418 is exclusively part of the Figure 34 embodiment, not Garrison's paragraph [0134] (the syringe embodiment). Petitioner does not connect these embodiments. Petition, pgs. 59, 60.

73. Garrison teaches away from using the filter 3418 in the syringe embodiment—which is required for Petitioner's allegations of a pre-charged vacuum in limitation [1B], and which is the only embodiment Petitioner relies upon for the pre-charged vacuum limitation. For the syringe embodiment, Garrison discloses that the syringe is “attached” to a flow controller rather than indirectly via a filter and a check valve like the peristaltic pump embodiment in Figure 34. EX1006, ¶ [0134]. If that arrangement enables “the maximum level of aspiration” as Garrison says (EX1006, ¶ [0134]), it would be because there is a minimal volume between the syringe and valve. But the intermediate filter 3418 and associated tubing of Figure 34 would increase the total volume relative to the direct connection, which would decrease the maximum vacuum and level of aspiration, because removing the same volume of fluid (Garrison's syringe volume) from a larger volume (the filter 3418, tubing, etc.) rather than a smaller volume (the direct connection to the flow controller as Garrison teaches), results in less vacuum pressure (see the equation below).

The initial volume controls the final vacuum pressure such that Petitioner's purported arrangement with a syringe instead of the peristaltic pump in Figure 34 would generate less vacuum pressure and a correspondingly smaller "level of aspiration" than Garrison's disclosure of attaching the syringe to the flow controller.

$$Pressure_{Final} = Pressure_{Initial} \left(\frac{Volume_{Initial} - \Delta Volume_{Removed}}{Volume_{Initial}} \right)$$

74. Garrison's Figure 34 does not include or relate to Garrison's syringe embodiment, so Garrison's Figure 34 cannot be a basis for anticipation or obviousness of Claim 18, which requires both pre-charging a vacuum (Claim 1) and collecting clot material in a filter chamber (claim 18).
75. It is my opinion that claim 18 is not anticipated by Garrison, nor rendered obvious by Garrison alone or in combination with any of Schaffer, Hartley, and/or Goff. Claims 21, 22, and 24-28 depend from claim 18. Petitioner does not allege that Schaffer and/or Hartley (Grounds 3, 4, 7, 8) disclose any of the limitations of claim 18. Therefore, those dependent Claims are also not rendered obvious by Garrison in combination with Schaffer, Hartley, and/or Goff as explained above with respect to Claim 18 because they incorporate all the features of Claim 18.

X. GROUNDS 9-14: DEPENDENT CLAIM 10 IS NOT RENDERED OBVIOUS BY GARRISON IN COMBINATION WITH ANY OF LAUB,

AKLOG, SCHAFFER, AND/OR HARTLEY

76. Claim 10 depends from claim 1. EX1001, Cl.10. Claim 10 recites “The method of claim 1 wherein the blood vessel is a pulmonary blood vessel.” EX1001, Cl.10. In other words, Claim 10 relates to treating pulmonary embolism (PE).
77. As Petitioner acknowledges, Garrison’s system is for “treatment of cerebral occlusions.” EX1006, ¶ [0002]; Petition, pg .81. Garrison does not disclose a method for intravascular treatment of clot material within a pulmonary blood vessel.
78. Cerebral occlusions and the vessels in which they reside within the brain are materially smaller than occlusions in pulmonary vessels, so Garrison’s system would not have been used in a method to treat an occlusion in a pulmonary vessel. It would not have been obvious to use or modify Garrison’s system in a method for treating PE, specifically not the method of claim 1. In particular, it would not have been obvious in view of Laub and/or Aklog.
79. Petitioner asserts that each of Laub and Aklog discloses a system for removing clots from patients suffering from PE. Petition, pgs. 81, 82. Petitioner asserts that Garrison, Laub, and Aklog disclose “similar” procedures and “the same general components,” including inserting a catheter into the leg, and generating suction. *Id.* at pgs. 83-84. Petitioner suggests that each of Garrison, Laub,

and Aklog “using a syringe or pump,” but Laub and Aklog do not disclose a syringe. *Id.* (citing portions of Laub and Aklog that only suggest a pump). Petitioner asserts that “using Garrison’s system to treat PEs would have been nothing more than the predictable use of prior art elements according to their established function.” *Id.* at pg. 84. Petitioner further suggests that Garrison’s system could simply be enlarged to treat PE based on, for example, “similarities” with “clots in other parts of the body.” *Id.* at pgs. 85-86, 88-89. I disagree with Petitioner because Garrison’s system cannot treat PE, and it would not have been obvious to increase the size of Garrison’s system for use in a method of treating PE. In both circumstances, the patient would be endangered.

80. It would not have been obvious to modify Garrison as Petitioner asserts (i.e., in a method of treating PE) because Petitioner’s references recognize that reintroducing blood to the patient is critical to patient health and safety when treating large clots like PE in large vessels with high blood flow volumes, and Garrison expressly discloses that the embodiments relied on by Petitioner are not suitable for blood reintroduction. For example, Laub explains that omitting substantially continuous blood return “could quickly result in exsanguination of the patient” (EX1012, ¶ [0045]) and/or lead to “occurrences of fluid loss and/or shock,” as Aklog describes (EX1011, 5:19-23). And the

embodiment of Garrison relied on by Petitioner in Figure 34 and paragraph [0134] (the syringe embodiment) is not suitable for returning blood. EX1006, ¶ [0135] (“One disadvantage of current sources of aspiration is that the aspirated blood is received into an external reservoir or syringe. This blood is generally discarded at the end of the procedure, and as such represents blood loss from the patient.”). In particular, in Garrison, blood is pumped to a receptacle 3420 in Figure 34 or received in a syringe in the disparate embodiment in paragraph [0134] and, in both cases, remains “static” and/or is “exposed to air” such that it is not suitable for blood return. EX1006, ¶ [0135]. In each embodiment of Garrison relied on by Petitioner, the aspirated blood is not suitable for blood return and should be “discarded at the end of the procedure.” EX1006, ¶ [0135].

81. Accordingly, it would not have been obvious to modify Garrison in a method to treat PE, based on Laub and Aklog, because Laub and Aklog each emphasize the critical nature of blood return for patient health when treating large clots in large vessels like pulmonary vessels suffering from PE—and the embodiments of Garrison relied on by Petitioner are not suitable for reintroducing blood to a patient. It would not have been obvious to modify Garrison’s system to treat PE in a manner not even disclosed by Garrison and in a manner discouraged by all three of Garrison, Laub, and Aklog.

82. Petitioner also cites an “aspiration pump device 3250” in Garrison’s Figure 36, which “may be configured to return blood to the central venous system *in real time* during the procedure, so there is no reservoir in which the blood remains static.” EX1006, ¶ [0136] (emphasis added); Petition, pgs. 89-90. But this device is incompatible with the other embodiments Petitioner relies on from Garrison. Specifically, Garrison’s Figure 36 shows the aspiration pump device 3250 connected to either or both of the flow lines of the arterial access device or smaller inner catheter and having a chamber 3220 connected to a vacuum source 3230, which is configured to generate (1) negative pressure in the chamber 3220 to cause the expandable portion 3210 of the flow line 2025 to expand to draw blood into the expandable portion 3210 through the upstream one-way check valve 3235 and (2) subsequent normalized pressure in the chamber 3220 to permit the expandable portion 3210 to contract to expel blood from the expandable portion 3210 through the downstream one-way check valve 3235:

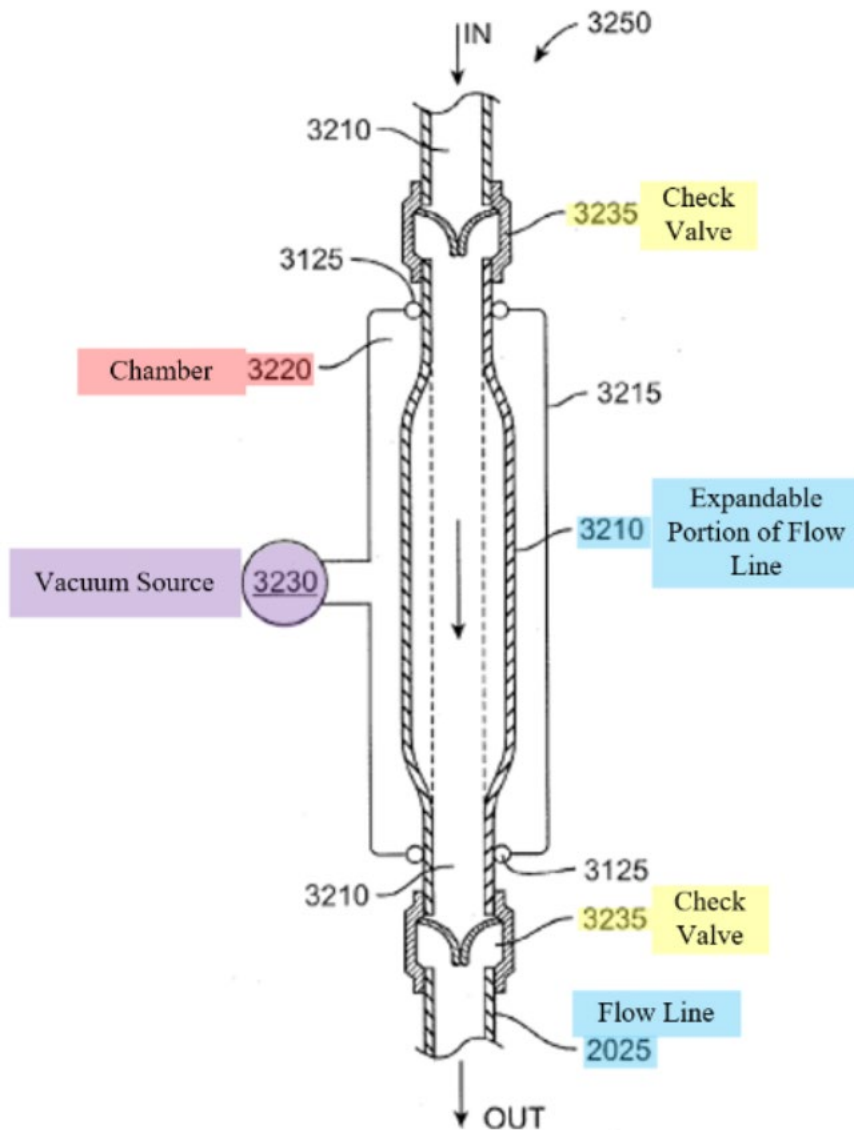


FIG. 36

EX1006, ¶¶ [0136]-[0137]. In this embodiment of Garrison, the pump operates to “return blood to the central venous system in real time” by operating the vacuum source to oscillate the expandable portion between the expanded and retracted states to, together with the one-way check valves, thereby drive fluid through the flow line.

83. The pump in Garrison's Figure 36 is for a system that does not have what Petitioner calls a "fluid control device" (i.e., the valve 3325, *see* Petition, pg. 34). This contradicts Petitioner's reliance on Figure 34 to provide the alleged pre-charging function of limitation [1B], because blood in the Figure 36 device is continuously aspirated and reinfused in real time to prevent the blood from remaining static so it can be returned to the patient. Blood return would not be continuous/real time and blood would remain static if a "fluid control device" were included in Garrison's system and closed to create a vacuum, as Petitioner requires in its arguments against limitations [1B] and [1C] of Claim 1 relating to pre-charging a vacuum.
84. Likewise, Laub and Aklog also disclose continuous aspiration/blood return. In Laub, "reinfusing the patient's blood continuously during aspiration allows for greater suction pressure and/or flow rates (e.g., 2-4 L/min) which can assist in dislodging and removing larger clots and/or tumors than would otherwise be possible." EX1012, ¶ [0045]. Aklog's system "simultaneously reinfuse[s] aspirated (i.e., removed) and filtered fluid, such as blood, back into the patient on a substantially continuous basis to minimize any occurrences of fluid loss and/or shock." EX1011, 5:19-23.
85. Thus, each of Garrison, Laub, and Aklog discloses continuous aspiration and reinfusion when blood is returned to the patient without, and separate from,

“pre-charging a vacuum in a pressure source” and “fluidly connecting the pressure source to the elongated shaft to apply the pre-charged vacuum to the elongated shaft to aspirate a first portion of the clot material into the elongated shaft” as required in Claim 1. EX1001, Cl.1. Such continuous systems would have been incompatible with the pre-charged vacuum aspect of independent Claim 1, which is also required in Claim 10 due to its dependency on Claim 1. Garrison, Laub, and Aklog teach away from Claim 10.

86. Petitioner says “Garrison already accounts for one challenge POSITAs encountered when using larger aspiration catheters – a larger catheter ‘may aspirate an unacceptable volume of blood, resulting in excessive fluid loss and/or shock in the patient’” based on the embodiment in Figure 36 of Garrison. Petition, pgs. 89-90. But, as explained above, the embodiment of Figure 36 is fundamentally different than the embodiments in Figure 34 and paragraph [0134] of Garrison relied on by Petitioner, in which blood is unsuitable to be returned. Moreover, the embodiment in Figure 36 does not include the valve (3325) Petitioner relies upon to meet limitations [1B] and [1C].
87. Accordingly, in my opinion, Claim 10 is patentable over Garrison, Laub, Aklog, Schaffer, and Hartley.

XI. SECONDARY CONSIDERATIONS

88. I have not rendered any opinions on secondary considerations of non-obviousness at this time, but reserve the right to do so.

XII. CONCLUSION

89. For all the above reasons, I find that Petitioner has not met its burden of demonstrating the unpatentability of any challenged claim. Accordingly, I understand that Patent Owner requests the Board confirm the patentability of Claims 1–34.

Declaration of Brian Brown

I, Brian Brown, declare that all statements made herein of my knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Respectfully submitted,

Dated: 12 MAR 2026

By: 
Brian Brown

ATTACHMENT 1

Brian J. Brown

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Professional Experience

**Brown-Tech, LLC.
President**

Hanover, MN

Sept 2017-Present

- Technical Consultant for early stage medical device companies in the areas of product design and intellectual property development (clients: Peytant Solutions, QXMedical, CardioMech)
- Subject Matter Expert for Medical Device patent cases ranging from litigation to Inter Partes Reviews. Responsible for case document reviews, product testing, testing reports, POSA declarations, depositions and testimony.

**Brown-Tech, LLC. (Nitinol)
President**

Maple Plain, MN

Mar 2018-July 2020

- Specialized contract Nitinol design and prototyping for small to large nitinol projects.
- Expertise in the areas of design, laser cutting, shape setting, grit blasting, electro-polishing, passivation and testing.
- Over 25 years of expertise with nitinol stents, guidewires, structural heart, heart failure and misc. components.

**Cogentix Medical Inc.
VP of R&D and Operations**

Minnetonka, MN

Nov 2016 – June 2017

Pelvic Health medical device company developing and commercializing neurostimulators, endoscopes and sphincter bulking agents.

- Responsible for production, R&D, supply chain, planning, QC and Customer Care in MN, NY, and MA
- Owned cross functional leadership of New Business Development and Strategic Growth activities
- Provided oversight of Corporate intellectual property portfolio, outside counsel activities, and patents

**OvaGene Oncology
Chief Technology Officer**

Irvine CA and Edina, MN

2016

A Point of Care (POC) molecular diagnostic company focused on developing and commercializing a diagnostic (Dx) microfluidic chip capable of running self-contained, protein based diagnostic assays.

- Developed a commercial version of a research lab POC Dx prototype
- Sr. Staff member responsible for R&D, Intellectual Property, Operations, Quality, Regulatory, Facilities, and IT.

Sunshine Heart, Inc

Eden Prairie, MN

June 2014 – Jan 2016

Sr. Vice President Technology and Operations

An early-stage, publicly traded medical device company focused on developing, manufacturing and commercializing the C-Pulse System for the treatment of Class III and ambulatory Class IV heart failure.

- Sr. Staff member responsible for R&D, Operations, Facilities, and IT.
- Led the organizational development /optimization of electromechanical, mechanical, sensor and software components for a Class III permanent implant supported by an external controller.
- Led the portfolio planning and technology roadmap efforts for strategic planning
- Provided oversight of Corporate intellectual property portfolio, outside counsel activities, and patents

Boston Scientific Corporation / SciMED, Maple Grove, MN
R&D, Vice President, Cardiovascular (2004-2014)

Feb 1990 – Jan 2014

Directed worldwide Cardiovascular research and development activities for accelerated launches of implantable stents, drug delivery technologies, structural heart devices, disposable catheters and adjunctive products.

- Developed, sustained, and optimized a \$200M/yr. international R&D organization to bring the right new technologies / products to the market
- Aligned company's technology development, M&A activities, and IP portfolio
- Initiated Bio Design partnerships with regional / global research institutions to identify / develop disruptive technologies to fuel future growth.

R&D, Sr. Director, Stents

Created R&D stent and drug elution centers of excellence in MN and Ireland (2001- 2004)

- Championed / built a stent organization bringing BSC's first internally developed nitinol and stainless steel stents to the market.
- Constructed / maintained a world class dual site drug elution organization capturing 70% of the global market launching the Taxus and Promus portfolio of stent products.
- Identified / engaged the technical assessment of business opportunities and integration of new licenses / acquisitions.

Prior History

Previously at Boston Scientific / SciMED held positions of R&D Director Catheters, R&D Director / Manager Stents, Operations Manager Guidewires, Sr. Process Development Engineer, and Sr. Machine Design Engineer. Highlights included developing BSC's core competency in nitinol, stent design, laser cutting, electropolishing, crimping, and fatigue testing. Many ground breaking design, clinical and regulatory competencies were developed to support Boston Scientific's first cardiovascular permanent implants.

Hutchinson Technology (Sep 1984-Jan 1990) as Machine Design Engineer / Supervisor responsible for building and leading equipment / process automation for a rapidly growing company. Examples include automated passivation lines, plating lines, photochemical etching lines, and laser equipment.

Education / Affiliations

North Dakota State University, Fargo, ND

Bachelor of Science, Mechanical Engineering with an emphasis on electro-mechanical automation.

Notable Achievements

- **~60 issued US Patents** in stent geometries, nitinol, balloon catheters, thrombectomy catheters, infusion catheters, and ePTFE processing.
- **Boston Scientific Patent of the Year award, two-time winner**
- **Recognized as one of Minnesota's leading inventors** by the Twin Cities Business Magazine (Jan 13)
- **Developed Boston Scientific's first product development process and design control tools.**
- **Elected to College of Fellows**, American Institute for Medical and Biological Engineering
- **Advisor to University of MN Office of Technology Commercialization** to advance the commercialization of university developed ideas
- **Mentor** for students enrolled in the University of MN Design of Medical Device program.

IPR2025-01025
First Attachment to Declaration of Brian Brown

USA PATENT NUMBER	TITLE	Listed Inventor	GRANT DATE
5358493	VASCULAR ACCESS CATHETER AND METHODS FOR MANUFACTURE THEREOF	Brian J Brown	25-Oct-94
5417703	THROMBECTOMY DEVICES AND METHODS OF USING SAME	Brian J Brown	23-May-95
5419774	THROMBUS EXTRACTION DEVICE	Brian J Brown	30-May-95
5507995	PROCESS FOR MAKING A CATHETER	Brian J Brown	16-Apr-96
5800517	STENT DELIVERY SYSTEM WITH STORAGE SLEEVE	Brian J Brown	1-Sep-98
6013091	STENT CONFIGURATIONS	Brian J Brown	11-Jan-00
6059810	ENDOVASCULAR STENT AND METHOD	Brian J Brown	9-May-00
6096056	FUGITIVE STENT SECUREMENT MEANS	Brian J Brown	1-Aug-00
6123720	STENT DELIVERY SYSTEM WITH STORAGE SLEEVE	Brian J Brown	26-Sep-00
6261319	STENT	Brian J Brown	17-Jul-01
6348060	FUGITIVE STENT SECUREMENT MEANS	Brian J Brown	19-Feb-02
6348065	LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	19-Feb-02
6409753	FLEXIBLE STENT	Brian J Brown	25-Jun-02
6416538	STENT CONFIGURATIONS	Brian J Brown	9-Jul-02
6428569	MICRO STRUCTURE STENT CONFIGURATIONS	Brian J Brown	6-Aug-02
6451052	TISSUE SUPPORTING DEVICES	Brian J Brown	17-Sep-02
6471672	SELECTIVE HIGH PRESSURE DILATION BALLOON	Brian J Brown	29-Oct-02
6478816	STENT	Brian J Brown	12-Nov-02
6551351	SPIRAL WOUND STENT	Brian J Brown	22-Apr-03
6582461	IMPROVED TISSUE SUPPORTING DEVICES	Brian J Brown	24-Jun-03
6602226	LOW-PROFILE STENT DELIVERY SYSTEM AND APPARATUS	Brian J Brown	5-Aug-03
6638468	METHOD OF REDUCING THE WALL THICKNESS OF A PTFE TUBE	Brian J Brown	28-Oct-03
6702843	STENT DELIVERY DEVICE WITH BALLOONS	Brian J Brown	9-Mar-04
6776793	LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	17-Aug-04
6818014	IMPROVED LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	16-Nov-04
6852123	MICRO STRUCTURE STENT CONFIGURATIONS	Brian J Brown	8-Feb-05
6911038	MATCHED BALLOON TO STENT SHORTENING	Brian J Brown	28-Jun-05
6913619	IMPROVED LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	5-Jul-05
6939119	METHOD OF REDUCING THE WALL THICKNESS OF A PTFE TUBE AND PRODUCT FORMED THEREBY	Brian J Brown	6-Sep-05
6945993	STENT	Brian J Brown	20-Sep-05
6962603	IMPROVED LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	8-Nov-05
6970734	FLEXIBLE MARKER BANDS	Brian J Brown	29-Nov-05
6981985	STENT BUMPER STRUTS	Brian J Brown	3-Jan-06
6981986	IMPROVED LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	3-Jan-06
7060089	MULTI-LAYER STENT	Brian J Brown	13-Jun-06
7204848	LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	17-Apr-07
7229470	FLEXIBLE STENT	Brian J Brown	12-Jun-07
7318836	COVERED STENT	Brian J Brown	15-Jan-08
7326243	AN IMPROVED STENT	Brian J Brown	5-Feb-08
7331986	INTRALUMINAL MEDICAL DEVICE HAVING IMPROVED VISIBILITY	Brian J Brown	19-Feb-08
7335225	[IMPROVED] STENT CONFIGURATIONS	Brian J Brown	26-Feb-08
7488343	MEDICAL DEVICES	Brian J Brown	10-Feb-09
7491225	SYSTEM AND METHOD FOR DEPLOYING A DRUG-ELUTING EXTERNAL BODY AND TISSUE SCAFFOLD	Brian J Brown	17-Feb-09

IPR2025-01025
First Attachment to Declaration of Brian Brown

USA PATENT NUMBER	TITLE	Listed Inventor	GRANT DATE
7637938	FLEXIBLE STENT	Brian J Brown	29-Dec-09
7731746	AN IMPROVED STENT	Brian J Brown	8-Jun-10
7879082	MICRO STRUCTURE STENT CONFIGURATIONS	Brian J Brown	1-Feb-11
7914570	NON-SHORTENING HELICAL STENT	Brian J Brown	29-Mar-11
7951187	[IMPROVED] STENT CONFIGURATIONS	Brian J Brown	31-May-11
7988717	LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	2-Aug-11
7988720	LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	2-Aug-11
8038705	INTRALUMINAL MEDICAL DEVICE HAVING IMPROVED VISIBILITY	Brian J Brown	18-Oct-11
8043366	OVERLAPPING STENT	Brian J Brown	25-Oct-11
8114146	LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	14-Feb-12
8147538	COVERED STENT	Brian J Brown	3-Apr-12
8206432	STENT	Brian J Brown	26-Jun-12
8221491	IMPROVED TISSUE SUPPORTING DEVICES	Brian J Brown	17-Jul-12
8348992	IMPROVED LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	8-Jan-13
8377111	MEDICAL DEVICES	Brian J Brown	19-Feb-13
8449597	LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	28-May-13
8668731	STENT	Brian J Brown	11-Mar-14
8685053	TETHER EQUIPPED CATHETER	Brian J Brown	1-Apr-14
8728147	LONGITUDINALLY FLEXIBLE EXPANDABLE STENT	Brian J Brown	20-May-14

ATTACHMENT 2

MATERIALS CONSIDERED

EXHIBIT/PAPER No.	DESCRIPTION
EX1001	U.S. Patent No. 12,016,580 (“the ’580 patent”)
EX1002	’580 Patent Prosecution History
EX1003	Expert Declaration of Troy Thornton
EX1004	Resume of Troy Thornton
EX1005	WIPO Publication No. WO 2006/124307 A2 to Goff et al. (“Goff”)
EX1006	U.S. Patent Publication No. 2015/0173782 A1 to Garrison et al. (“Garrison”)
EX1007	U.S. Patent Publication US 2003/0225379 A1 to Schaffer et al. (“Schaffer”)
EX1008	U.S. Patent Publication No. 2003/0116731 A1 to Hartley (“Hartley”)
EX1009	U.S. Patent Publication No. 2015/0352325 A1 to Quick (“Quick”)
EX1010	U.S. Patent Publication No. 2010/0042118 A1 to Garrison et al.
EX1011	U.S. Patent No. 8,734,374 B2 to Aklog et al. (“Aklog”)
EX1012	U.S. Patent Publication No. 2017/0043066 A1 to Laub (“Laub”)
EX1013	U.S. Patent No. 6,776,770 B2 to Trerotola (“Trerotola”)
EX1014	U.S. Patent No. 5,938,645 to Gordon (“Gordon”)
EX1015	U.S. Patent Publication No. 2014/0296868 A1 to Garrison et al.
EX1016	Certified File History of U.S. Patent Application 10/371,190 (Schaffer File History)
EX1017	U.S. Provisional Patent Application No. 62/554,931 (the “’931 application”)
EX1018	U.S. Patent No. 6,481,439 B1 to Lewis et al.
EX1019	U.S. Patent No. 5,256,150 to Quiachon et al.

EXHIBIT/PAPER No.	DESCRIPTION
EX1020	WIPO Publication No. WO 2018/019829 A1 to Brady et al. (“Brady”)
EX1021	U.S. Patent No. 12,109,384 B2 to Merritt et al.
EX1022	Expert Declaration of Dr. Aquilla S. Turk, III, DO
EX1023	Resume of Dr. Aquilla Turk, III, D.O.
EX1024	Shani, Jacob M.D., et al., Mechanical Manipulation of Thrombus: Coronary Thrombectomy, Intracoronary Clot Displacement, and Transcatheter Aspiration, 72 Am. J. Cardiol. 116G-118G (1993)
EX1025	Bose, A et al., The Penumbra System: A Mechanical Device for the Treatment of Acute Stroke due to Thromboembolism, 29 Am. J. Neuroradiol. 1409-1413 (Aug. 2008)
EX1026	Turk, Aquilla S. et al., Initial clinical experience with the ADAPT technique: A direct aspiration first pass technique for stroke thrombectomy, 6 J. NeuroIntervent. Surg. 231-237 (2014)
EX1027	Turk, Aquilla S. et al., ADAPT FAST study: a direct aspiration first pass technique for acute stroke thrombectomy, 6 J. NeuroIntervent. Surg. 260-264 (2014)
EX1028	April 24, 2024 Letter from Inari to Imperative Care
EX1029	Turk, Aquilla S. et al., Aspiration thrombectomy versus stent retriever thrombectomy as first-line approach for large vessel occlusion (COMPASS): a multicentre, randomized, open label, blinded outcome, non-inferiority trial, 393 Lancet 998-1008 (March 2019)
EX1030	Save, Jeffrey L., Time is Brain – Quantified, American Heart Association Journals, available at http://www.stokeaha.org (2005).
EX1031	Decision Granting Institution of IPR, IPR2024-01157, U.S. Patent No. 11,697,011 B2
EX1032	Decision Granting Institution of IPR, IPR2025-00156, U.S. Patent No. 11,697,012 B2
EX1033	Decision Granting Institution of IPR, IPR2025-00289, U.S. Patent No. 11,554,005 B2

EXHIBIT/PAPER No.	DESCRIPTION
EX1034	Merriam-Webster’s Collegiate Dictionary – Previously Submitted by Patent Owner as Ex. 2002 in IPR2024-00289 – Definition of “Loosen”
EX1035	U.S. Patent No. 7,998,104 B2 to Chang
EX1036	U.S. Patent No. 8,157,760 B2 to Craido et al.
EX1037	Plaintiff Inari’s Supplemental Preliminary Disclosure of Asserted Claims and Infringement Contentions Pursuant to Patent Local Rules 3-1 and 3-2 in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 5:24-cv-03117-EKL (N.D. Cal.)
EX1038	Case Management and Scheduling Order (Dkt. #54) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 5:24-cv-03117-EKL (N.D. Cal.)
EX1039	Imperative Care, Inc.’s Notice of Motion and Motion to Stay Pending <i>Inter Partes</i> Review in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 5:24-cv-03117-EKL (N.D. Cal.)
EX1040	Order Regarding Case Schedule and Motion to Stay in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 5:24-cv-03117-EKL (N.D. Cal.)
EX1041	Order Denying Motion for Preliminary Injunction (Dkt. #136) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.) (issued September 29, 2025)
EX1042	Decision Denying Patent Owner’s Request for Discretionary Denial (Paper 9) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025- 00289 (P.T.A.B. June 12, 2025)
EX1043	Decision Referring the Petition to the Board (Paper 9) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025-00728 (P.T.A.B. July 31, 2025)
EX1044	Decision Referring the Petitions to the Board (Paper 11) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025-01021 (P.T.A.B. Oct. 10, 2025)
EX1045	Decision Referring the Petitions to the Board (Paper 11) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025-01025 (P.T.A.B. Oct. 10, 2025)

EXHIBIT/PAPER No.	DESCRIPTION
EX1046	Order Granting In Part Motion To Stay (Dkt. #137) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.) (issued September 29, 2025)
EX1047	Redacted Excerpts of Deposition Transcript of PO's Expert Brian Brown dated August 27, 2024, submitted as Exhibit 1019 to R. Tyler Kendrick's Declaration in Support of Inari's Statement Regarding Truvic's Administrative Motion Pursuant to Civil L.R. 79-5(C)(1) & (F) (Dkt. #85-1) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.) (filed February 26, 2025)
EX1048	Deposition Transcript of PO's Expert Paul Zalesky, Ph.D. dated June 23, 2025
EX1049	Joint Stipulation to Continue the Stay of Litigation Pending IPR Decisions and Vacate Upcoming Case Management Conference (Dkt. #139) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.) (filed January 21, 2026)
EX1050	Order Granting Joint Stipulation to Continue the Stay of Litigation Pending IPR Decisions and Vacate Upcoming Case Management Conference (Dkt. #140) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.) (issued January 21, 2026)
EX2001	Prosecution History Excerpt from U.S. Patent Application No. 17/865,307
EX2002	U.S. Patent No. 11,849,963 B2 to Quick ("Quick")
EX2004	Hearing Transcript, dated February 6, 2026
EX2006	Deposition Transcript of Petitioner's Expert, Troy L. Thornton (February 18, 2026)
EX2007	Deposition Transcript of Petitioner's Expert, Troy L. Thornton (February 19, 2026)
EX2008	Deposition Transcript of Aquilla S. Turk (February 25, 2026)
EX2009	U.S. Patent No. 11,974,910 to Merritt, et al. ("910 Patent")
Paper 1	Petition for <i>Inter Partes Review</i>

EXHIBIT/PAPER No.	DESCRIPTION
Paper 11	Decision Granting Institution of Inter Partes Review