

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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IMPERATIVE CARE, INC.,  
Petitioner,

v.

INARI MEDICAL, INC.,  
Patent Owner.

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Case No. IPR2025-00989  
U.S. Patent No. 11,865,291

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**PATENT OWNER'S SUR-REPLY**

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### EXHIBIT LIST

|         | Petitioner's Exhibits                                                                                                                                                                 |
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| Exhibit | Description                                                                                                                                                                           |
| 1001    | U.S. Patent No. 11,865,291 ("the '291 patent")                                                                                                                                        |
| 1002    | Prosecution History of the '291 Patent                                                                                                                                                |
| 1003    | Expert Declaration of Troy Thornton                                                                                                                                                   |
| 1004    | Resume of Troy Thornton                                                                                                                                                               |
| 1005    | U.S. Patent Publication US 2003/0225379 A1 to Schaffer et al. ("Schaffer")                                                                                                            |
| 1006    | U.S. Patent Publication US 2003/0116731 A1 to Hartley ("Hartley")                                                                                                                     |
| 1007    | U.S. Patent No. 9,980,813 B1 to Eller ("Eller")                                                                                                                                       |
| 1008    | Certified File History of U.S. Patent Application 10/371,190 (Schaffer File History)                                                                                                  |
| 1009    | U.S. Patent No. 5,429,616 to Schaffer ("Schaffer '616")                                                                                                                               |
| 1010    | RESERVED                                                                                                                                                                              |
| 1011    | U.S. Patent Publication US 2015/0173782 A1 to Garrison et al. ("Garrison")                                                                                                            |
| 1012    | U.S. Patent No. 11,697,011 ("the '011 patent")                                                                                                                                        |
| 1013    | Inari's Supplemental Infringement Contentions (without claim charts) from <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , No. 24-cv-3117 (N.D. Cal.) (served February 7, 2025). |
| 1014    | New Oxford American Dictionary, 3rd ed. (2010) – definitions of "diameter," "filament," and "loop"                                                                                    |
| 1015    | RESERVED                                                                                                                                                                              |
| 1016    | U.S. Patent No. 12,109,384 B2 to Merritt et al.                                                                                                                                       |

|         | Petitioner's Exhibits                                                                                                                                                                                           |
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| Exhibit | Description                                                                                                                                                                                                     |
| 1017    | Decision Granting Institution of <i>Inter Partes</i> Review for U.S. Patent No. 11,697,011 (Paper 7) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2024-01157 (P.T.A.B. Jan. 23, 2025)            |
| 1018    | PCT Patent Publication WO 2018/019829 A1 to Brady et al.                                                                                                                                                        |
| 1019    | Inari's Notice of Motion and Motion for Leave to File Third Amended Complaint (Dkt. #88) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.) (filed March 5, 2025)             |
| 1020    | U.S. Patent No. 6,776,770 B2 to Trerotola                                                                                                                                                                       |
| 1021    | Case Management & Scheduling Order (Dkt. #54) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.) (issued December 19, 2024)                                                   |
| 1022    | U.S. Patent No. 11,697,012 B2 ("the '012 patent")                                                                                                                                                               |
| 1023    | Decision Granting Institution of <i>Inter Partes</i> Review for U.S. Patent No. 11,697,012 (Paper 6) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025-00156 (P.T.A.B. Apr. 22, 2025)            |
| 1024    | Imperative Care's Opposition to Inari's Motion for Leave to File Third Amended Complaint (Dkt. #98) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.) (filed March 26, 2025) |
| 1025    | Imperative Care's Notice of Motion and Motion to Stay Pending <i>Inter Partes</i> Review (Dkt. #100) in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.) (filed April 2, 2025) |
| 1026    | Patent Owner's Exhibit 2002 filed in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025-00289 (P.T.A.B.)                                                                                             |
| 1027    | Claim Construction Excerpt Report of Troy Thornton in <i>Inari Medical, Inc. v. Imperative Care, Inc.</i> , 24-cv-03117-EKL (N.D. Cal.)                                                                         |

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| 1028    | 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)                                                                                        |
| 1029    | Deposition Transcript of PO's Expert Paul Zalesky, Ph.D. dated June 23, 2025 from IPR2024-01157                                                                                                                                                                     |
| 1030    | Supplemental Declaration of Troy L. Thornton in Support of Petitioner's Reply for <i>Inter Partes</i> Review of U.S. Patent No. 11,697,011                                                                                                                          |
| 1031    | 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)                 |
| 1032    | 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) |
| 1033    | Final Written Decision Determining All Challenged Claims Unpatentable, (Paper 35) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2024-01157 (P.T.A.B. Jan. 16, 2026)                                                                                   |
| 1034    | Coke Morgan Stewart, Memorandum Regarding PTAB consideration of prior findings of fact and conclusions of law (Sept. 16, 2025)                                                                                                                                      |
| 1035    | Deposition Transcript of PO's Expert Paul Zalesky, Ph.D. dated March 24, 2026                                                                                                                                                                                       |
| 1036    | U.S. Patent Publication US 2011/0144592 A1 to Wong et al. ("Wong")                                                                                                                                                                                                  |
| 1037    | U.S. Patent Publication US 2008/0087853 A1 to Kees ("Kees")                                                                                                                                                                                                         |

|         | Petitioner's Exhibits                                                                                                                                                                                           |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exhibit | Description                                                                                                                                                                                                     |
| 1038    | Final Written Decision Determining All Challenged Claims Unpatentable (Paper 33) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025-00156 (P.T.A.B. Apr. 7, 2026)                                 |
| 1039    | Decision Granting Institution of <i>Inter Partes</i> Review for U.S. Patent No. 11,554,005 (Paper 10) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025-00289 (P.T.A.B. June 18, 2025)           |
| 1040    | Decision Granting Institution of <i>Inter Partes</i> Review for U.S. Patent No. 11,844,921 (Paper 13) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025-00728 (P.T.A.B. Oct. 10, 2025)           |
| 1041    | Notice of Decision Granting Institution of <i>Inter Partes</i> Review for U.S. Patent No. 12,109,384 (Paper 10) in <i>Imperative Care, Inc. v. Inari Medical, Inc.</i> , IPR2025-01562 (P.T.A.B. Mar. 17, 2026) |

|         | Patent Owner's Exhibits                                     |
|---------|-------------------------------------------------------------|
| Exhibit | Description                                                 |
| 2001    | Declaration of Paul J. Zalesky                              |
| 2002    | Merriam-Webster's Collegiate Dictionary (11th ed. 2014)     |
| 2003    | New Oxford American Dictionary (3rd ed. 2010)               |
| 2004    | U.S. Patent Application Publication No. 2018/0193043        |
| 2005    | Deposition Transcript of Troy Thornton (September 30, 2024) |
| 2006    | Deposition Transcript of Troy Thornton (March 19, 2025)     |
| 2007    | Deposition Transcript of Troy Thornton (June 25, 2025)      |
| 2008    | U.S. Patent No. 7,682,380 to Thornton ("Thornton")          |
| 2009    | Supplemental Declaration of Paul J. Zalesky                 |
| 2010    | Deposition Transcript of Troy Thornton (November 20, 2025)  |
| 2011    | Merriam-Webster's Collegiate Dictionary (11th ed. 2014)     |
| 2012    | Deposition Transcript of Troy Thornton (August 15, 2025)    |

## **I. INTRODUCTION**

Petitioner has failed to demonstrate that any of Claims 1-8 and 12-19 of the '291 Patent are unpatentable.<sup>1</sup> Grounds 1-2 (Schaffer alone) fail because Schaffer does not disclose or suggest a “filament,” which requires flexibility, as recited in independent Claim 1. The Board preliminarily agreed. Institution Decision, pp.33-34. And, in two Final Written Decisions for related IPRs for U.S. Patent Nos. 11,697,011 and 11,697,012 (the “Related FWDs”), the Board found that Schaffer did not disclose or suggest a valve with a “filament.” EX1033, pp.38-40; EX1038, pp.41-42. For those same reasons, grounds 1-2 fail. Petitioner's Reply to Patent Owner's Response (“Pet. Reply”; Paper 19) does not contest those findings from the Related FWDs. Pet. Reply, p.1. As the Board preliminarily found, ground 5 likewise fails because Petitioner relies on Schaffer alone (rather than Garrison) for disclosing the “filament” and other structural hemostasis valve limitations of independent Claim 18. Institution Decision, p.40.

Grounds 3-4 (Schaffer in combination with Hartley or Eller) and grounds 6-7 (Garrison in combination with Schaffer and Hartley or Eller) fail for all the reasons set forth in Patent Owner's Response (“POR”; Paper 15). Petitioner asserts that the Related FWDs resolve all the disputed issues for the Claims of the '291 Patent here

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<sup>1</sup> The Petition does not challenge the patentability of Claims 9-11 or 20.

aside from those pertaining to the limitation of the actuator having a first member “movably coupled to the support.” Pet. Reply, p.1. Petitioner is wrong.

For example, Petitioner ignores a new issue that the Board has not addressed in this or any related IPR—namely, that Petitioner’s repeated cherry-picking of multiple different substitutions/combinations as the purported simple substitution and/or obvious combination to meet whatever claim limitation is at issue demonstrates that Petitioner’s obvious arguments are based on impermissible hindsight. Here and in other related IPRs Petitioner and its expert have advanced multiple different allegedly obvious combinations (“simple substitutions”) of Schaffer and Hartley/Eller including: (1) a single string/wire substituted into Schaffer’s valve in a loop (Petition, pp.50-51, 58; EX1003, ¶¶106-117, 123-131), (2) two strings/wire substituted for Schaffer’s actuating members to have like U-shapes (*see, e.g., Imperative Care, Inc. v. Inari Medical, Inc.*, IPR2025-00728, Paper 1, pp.68-70 and EX1003, ¶¶154-155, 158), and (3) two strings/wires substituted into Schaffer’s valve in loops (*see, e.g., Imperative Care, Inc. v. Inari Medical, Inc.*, IPR2025-01562, Paper 2, pp.48-49 and EX1003, ¶¶105-106). Those purported combinations/substitutions are vastly different and contradictory in structure. As such each Petitioner’s proposed particular structural variations is nothing more than the result of “selectively culling” features and combinations from the prior art

improperly using the '291 Patent (and the related patents) as a roadmap. *ATD Corp. v. Lydall, Inc.* 159 F.3d 534, 546 (Fed. Cir. 1998); EX2009, ¶142.

All grounds 1-7 further fail because Schaffer does not disclose “an actuator having at least ***a first member movably coupled to the support***” as recited in both challenged independent claims (Claims 1 and 18). Petitioner asserts that Schaffer's housing 20 is the claimed “support,” that one of Schaffer's actuator buttons 261 is the claimed “first member,” and that Schaffer's actuator buttons 261 are “movably coupled to” that housing because each actuator button is “configured cylindrically to slide along the cylindrical interior wall 11 of the housing 20 from a first position to a second position.” Petition, pp.35-37. Petitioner is wrong. POR, pp.36-39; EX2009, ¶¶97-99.

The only structure that Schaffer's actuator buttons 261 are connected to are Schaffer's actuating members 55, which themselves are coupled to the seal module 100. EX1005, FIG. 32; EX2009, ¶98. Thus, neither the component that Petitioner relies upon as disclosing the first member (the actuator buttons 261) nor the component that the first member is actually connected to (the actuating members 55) are connected to the housing. *Id.* Stated otherwise, the actuator buttons 261 are neither directly nor indirectly “coupled to” Schaffer's alleged support.

Petitioner's attempts to cure Schaffer's defects are unsupported by law or fact. For example, Petitioner invents a “friction fit” between “the cylindrical shape of the

housing walls” found nowhere in Schaffer to allege that “the actuator buttons are movably coupled to the support.” Pet. Reply, pp.6-7. But Petitioner’s fabricated “friction fit” is not supported by any evidence, is not found in Schaffer, and would not make sense to incorporate into Schaffer. Petitioner also mischaracterizes Patent Owner’s position as advocating that “movably coupled” requires direct coupling or the specific retention features disclosed in the ’291 Patent. Pet. Reply, pp.8-13. Patent Owner has not advocated for such constructions, and Petitioner’s comments to that effect are moot. Petitioner has failed to demonstrate that Schaffer discloses “a first member movably coupled to the support” because Schaffer does not do so.

For those and the reasons set forth herein, Petitioner has failed to demonstrate a reasonable likelihood that any of Claims 1-8 and 12-19 are unpatentable under any of grounds 1-7.

## **II. THE CLAIMS ARE NOT ANTICIPATED BY OR RENDERED OBVIOUS BY SCHAFFER ALONE (GROUNDS 1-2)**

### **A. Schaffer does not disclose or suggest a “filament.”**

Schaffer does not disclose or suggest a “filament,” which requires flexibility. POR, pp.16-30; EX2009, ¶¶63-88. In the Institution Decision, the Board preliminarily agreed. Institution Decision, pp.33-34. And, in the two Related FWDs, the Board found that Schaffer did not disclose or suggest a valve with a “filament.” EX1033, pp.38-40; EX1038, pp.41-42. Petitioner does not provide any additional

arguments or evidence here to contest those findings. As a result, Schaffer does not anticipate or render obvious the Claims and grounds 1-2 fail.

**B. Schaffer does not disclose the “actuator having at least a first member movably coupled to the support.”**

Claim 1 requires “a support” and “an actuator having at least a first member *movably coupled* to the support.” Petitioner asserts that Schaffer’s housing 20 is the claimed “support,” that one of Schaffer’s actuator buttons 261 is the claimed “first member,” and that the actuator buttons 261 are “movably coupled to” that housing 20 because each actuator button is “configured cylindrically to slide along the cylindrical interior wall 11 of the housing 20 from a first position to a second position.” Petition, pp.35-37. Petitioner is wrong. POR, pp.36-39; EX2009, ¶¶97-99.

Schaffer’s actuator buttons 261 are only connected to the U-shaped actuating members 55, not any other structure, and accordingly are not coupled to any portion of Schaffer’s housing 20. EX1005, FIG. 32; EX2009, ¶98. Because Petitioner asserts that Schaffer’s “actuating members 55 are a ‘filament’ as claimed in the ’291 Patent” (Petition, p.40), and thus not the “support,” Schaffer’s disclosure of coupling the actuating members 55 to the actuator buttons 261 does not disclose “a first member movably coupled to the support.” In fact, independent Claims 1 and 18 distinguish the “filament” from the “support” by reciting and requiring both as separate

limitations, namely, reciting both “a first member movably coupled to the support” and also “a filament ... having at least a first end portion extending away from the loop to the first member.”

Moreover, Schaffer's actuating members 55 themselves are not connected to any portion of Schaffer's housing 20 (i.e., the alleged “support”). EX1005, FIG. 32; EX2009, ¶98. Instead, the actuating members 55 are connected to Schaffer's seal module 100. *Id.* Without the seal module, Schaffer's actuator buttons 261 would simply fall out of the housing 20. EX2009, ¶99. Thus, the actuator buttons 261 are neither directly nor indirectly—and therefore not “movably”—coupled to Schaffer's alleged support.

Petitioner misconstrues Schaffer to allege that Schaffer's actuator buttons 261 are movably coupled to the housing 20. For example, Petitioner argues that “Schaffer further discloses that the housing includes an inner flange 265 that restrains the resilient members 267 and the actuator buttons 261.” Pet. Reply, p.6. But, Schaffer's inner flange 265 merely acts as a stop against pushing the actuator buttons 261 too far toward the seal module 100. EX1005, ¶78. The inner flange 265 in no way “couples” the actuator buttons 261 to the housing 20. Indeed, unlike the retention features 140 disclosed in the '291 Patent (POR, pp.37-38; EX2009, ¶99), Schaffer's inner flange 265 would do nothing to prevent Schaffer's actuator buttons 261 from falling out of the housing 20. EX1005, ¶¶76, 78, 80 & FIGS. 30-34.

Petitioner then invents a “friction fit” between “the cylindrical shape of the housing walls” that, according to Petitioner, “ensures that the actuator buttons are movably coupled to the support.” Pet. Reply, pp.6-7. But Petitioner’s fabricated “friction fit” is not supported by any evidence and in fact, is not found in Schaffer. To the contrary, Schaffer does not disclose any friction fit between the actuator buttons and the housing, let alone one that would “movably couple” the actuator buttons and the support. Nor would a POSA have included such a friction fit in Schaffer because it would interfere with the operation of the valve. First, for example, such a friction fit would make it more difficult to push Schaffer’s actuator buttons 261 inward to “open” the sealing member 100 and, second, would inhibit the ability of the actuator buttons 261 to return outward to allow the sealing member 100 to return to the undepressed position to “close” the valve (e.g., by leaving the valve stuck in the open position). There is no evidence supporting that Schaffer discloses (either expressly or inherently) any alleged “friction fit.”

Similarly, Petitioner’s related statement that “PO presents no evidence to suggest that the friction fit between the actuator buttons and the cylindrical walls do not help hold the buttons in place” is also contrary to law. Pet. Reply, pp.6-7. Patent Owner does not have the burden to show that the friction fit does not hold the buttons in place. *In re Magnum Oil Tools International, Ltd.*, 829 F.3d 1364, 1375 (Fed. Cir. 2016). Instead, Petitioner must show that Schaffer discloses a friction fit—which it

does not—and that such a friction fit is sufficient to render the actuator buttons 261 movably coupled to the housing 20. *Id.* (“In an *inter partes* review, the burden of persuasion is on the petitioner to prove unpatentability by a preponderance of the evidence ... and that burden never shifts to the patentee.” (internal citations omitted)).

Petitioner's attempt to paint Patent Owner's argument as requiring the incorporation of the term “directly” into the claim is wrong. Pet. Reply, pp.7-9. Patent Owner is not arguing and has not argued that the Claims require a direct connection between the “first member” and the “support,” and so Petitioner's arguments to that effect are moot. Rather, as set forth above, Schaffer's actuating buttons 261 are neither *directly* nor *indirectly* coupled to the housing 20 at least because the structure that Schaffer's actuating buttons 261 are connected to (Schaffer's actuating members 55) are themselves not connected to Schaffer's housing 20. EX1005, FIG. 32; EX2009, ¶98.

Petitioner's characterization of Patent Owner's argument related to the retention feature 140 is similarly wrong. Pet. Reply, pp.11-13. Patent Owner has not asserted that the claims require the disclosed retention features, and so Petitioner's arguments to that effect are moot. Rather, Patent Owner explains that the disclosed retention feature 140 that “can couple the actuator 142 to the housing 128” sets forth an example in the specification of “a first member movably coupled to the support”

and how that coupling can be implemented. POR, pp.37-38; EX2009, ¶99. That same disclosure also confirms that simply connecting a button to a filament does not disclose “a first member movably coupled to the support” as claimed. Specifically, the specification of the '291 Patent discloses that the retention feature 140 “can engage with and retain all or portions of the constricting mechanism 141,” which “can comprise: an actuator 142 which can be a manual actuator such as one or several buttons 144; and the at least one filament 150 ...” EX1001, 8:8-11, 19-20. In other words, the retention feature 140 can retain and couple both the button and the filament to the housing. The filament does not movably couple the button to the housing.

Thus, Schaffer does not disclose or render obvious “a first member movably coupled to the support” as claimed. Accordingly, grounds 1-2 fail.

### **III. THE CLAIMS ARE NOT RENDERED OBVIOUS BY SCHAFFER IN COMBINATION WITH HARTLEY, ELLER AND/OR GARRISON (GROUNDS 3-7)**

#### **A. Like Schaffer, the additional references of Hartley, Eller, and Garrison also do not disclose the “actuator having at least a first member movably coupled to the support.”**

Petitioner relies on Schaffer alone to allegedly disclose the “first member movably coupled to the support,” as recited in independent Claims 1 and 18. However, Schaffer does not disclose this claim feature. *Supra* at §II.B.; POR, pp.36-39. Accordingly, grounds 3-7 fail to render any challenged claim obvious at least

because none of the combinations of references disclose the “first member movably coupled to the support.”

**B. Petitioner's Obviousness Theories Rely Upon Hindsight Bias**

Petitioner asserts that the Related FWDs resolve the disputed issues for all challenged claims of the '291 Patent, except for whether Schaffer discloses an actuator “movably coupled to the support.” Pet. Reply, p.1. Petitioner is wrong. For example, Petitioner ignores that the Board has not addressed or resolved (here or in any related IPRs) Petitioner's evolving theories of obviousness that cherry-pick multiple different and contradicting substitutions/combinations as the purported simple substitution or obvious combination to meet whatever claim limitation is at issue. Those changing and contradicting theories demonstrate that Petitioner's obvious arguments are based on impermissible hindsight.

It is well established law that the “[d]etermination of obviousness can not be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention.” *ATD Corp. v. Lydall, Inc.* 159 F.3d 534, 546 (Fed. Cir. 1998). That is, it is impermissible to “allow hindsight bias to be the thread that stitches together prior art patches into something that is the claimed invention.” *Metalcraft of Mayville, Inc. v. The Toro Company*, 848 F.3d 1358, 1367 (Fed. Cir. 2017), citing *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

Here and in other related IPRs Petitioner and its expert have advanced multiple different and contradictory allegedly obvious combinations (“simple substitutions”) of Schaffer and Hartley/Eller, including:

- 1) Connecting Hartley's single string or Eller's wire between Schaffer's two actuator buttons in place of Schaffer's two U-shaped members. Petition, pp.50-51, 58; EX1003, ¶¶106-117, 123-131; EX2012, 43:24-46:16.
- 2) Or, replacing each of Schaffer's two U-shaped members with a string (from Hartley) or wire (from Eller), such that there are two strings/wires each connected to only one of Schaffer's actuator buttons and each formed in a U-shape. *See, e.g., Imperative Care, Inc. v. Inari Medical, Inc.*, IPR2025-00728, Paper 1, pp.68-70 and EX1003, ¶¶154-155, 158.
- 3) Or, connecting two strings (Hartley) or wires (Eller) to each of Schaffer's actuator buttons such that they each loop around Schaffer's seal module. *See, e.g., Imperative Care, Inc. v. Inari Medical, Inc.*, IPR2025-01562, Paper 2, pp.48-49 and EX1003, ¶¶105-106.

Those purported combinations/substitutions are meaningfully different in structure. For example, some of the combinations involve replacing Schaffer's two separate actuating members with a single string/wire, while other combinations entail replacing Schaffer's two separate actuating members with multiple

strings/wires. Some of the combinations involve connecting a single string/wire to only one of Schaffer's two actuator buttons, while other combinations involve connecting a single string/wire to both of Schaffer's actuating members. Some of the combinations involve looping the string/wire all the way around Schaffer's seal module, while other combinations involve extending the string/wire only partially around Schaffer's seal module. Petitioner's proposed combinations require a POSA who is "selectively culling" features and combinations from the prior art improperly using the '291 Patent (and the related patents) as a roadmap. *ATD Corp.*, 59 F.3d at 546; EX2009, ¶142.

The testimony of Petitioner's expert (Mr. Thornton) further reflects that reliance upon hindsight bias. Mr. Thornton had no knowledge of or familiarity with any prior art hemostasis valve that employed a filament to constrict a lumen before reviewing the '291 Patent (or related patent). POR, p.63; EX2010, 14:1-11, 15:16-23, 16:11-17:5. Yet for each of the multiple structurally different combinations he only considered the claimed combination, ignoring any other possibility. Then Petitioner's expert—without ever encountering a hemostasis valve employing a filament prior to this matter despite decades of experience with hemostasis valves—concludes that each of the different and contradictory combinations, none of which are found in the prior art, are "known," "simple" or "obvious" substitutions to a POSA. To the contrary, a POSA could not have come to such conclusions *without*

relying upon the '291 Patent as a roadmap. That is precisely the type of hindsight analysis that *KSR* and other longstanding precedents prohibit.

In reply, Petitioner claims that “Petitioner and Mr. Thornton have consistently explained that replacing Schaffer’s U-shaped actuating members with Hartley’s string or Eller’s wire would entail a simple substitution that a POSITA could accomplish by attaching the ends of the string/wire to Schaffer’s opposing actuator buttons.” Pet. Reply, p.19. But Petitioner’s statement does not address Petitioner’s impermissible use of hindsight bias because Petitioner’s statement ignores the other combinations/substitutions Petitioner and its expert advocate for elsewhere. Namely, Petitioner does not square the purported substitutions in which Hartley’ string or Eller’s wire are attached to Schaffer’s opposing actuator buttons with the other substitutions in which two strings or wire members are invoked.

It is also inaccurate that the “Board agreed in the Related FWD and rejected PO’s unsupported claims of hindsight bias.” Pet. Reply, p.20. The Board did not finally address or resolve Patent Owner’s hindsight-bias arguments presented in this IPR that are based on the Petitioner’s continually changing and differing theories of obviousness to meet the claims of the '291 Patent and other related patents.

Petitioner’s changing assertions of the simple substitution from one, to another, to yet another depending on the challenged claims demonstrates that each

is hindsight motivated only by the need to arrive at a particular claimed configuration.

#### **IV. CONCLUSION**

For the reasons set forth herein and in the POR, Petitioner has failed to demonstrate that any of Claims 1-8 and 12-19 are unpatentable over grounds 1-7.

Respectfully submitted,

Dated: May 21, 2026

By: / Joseph P. Hamilton /  
Joseph Hamilton  
Reg. No. 51,770  
Lead Counsel for Patent Owner

**CERTIFICATE OF COMPLIANCE**

Pursuant to 37 C.F.R. § 42.24(d), I, Joseph Hamilton, certify that **PATENT OWNER'S Sur-Reply** contains 3,006 words, excluding those portions identified in 37 C.F.R. § 42.24(a), as measured by the word-processing system used to prepare this paper.

Dated: May 21, 2026

By: / Joseph P. Hamilton /  
Joseph Hamilton  
Reg. No. 51,770  
Lead Counsel for Patent Owner

**CERTIFICATE OF SERVICE**

Pursuant to 37 C.F.R. § 42.6(e), I certify that on May 21, 2026, a copy of  
**PATENT OWNER'S SUR-REPLY and EXHIBIT 2012** were served upon the  
below-listed counsel by electronic mail:

Joshua J. Stowell  
Joshua.Stowell@knobbe.com  
Joseph R. Re  
Joe.Re@knobbe.com  
Brian C. Barnes  
Brian.Barnes@knobbe.com  
BoxImperative291@knobbe.com

Dated: May 21, 2026

By:  / Kate Rose /  
Kate Rose