

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

US CONEC LTD.,
Petitioner,

v.

SENKO ADVANCED COMPONENTS, INC.,
Patent Owner.

IPR2024-00122
Patent 11,061,190 B2

Before BARBARA A. PARVIS, ELIZABETH M. ROESEL, and
BRIAN D. RANGE, *Administrative Patent Judges*.

PARVIS, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314; 37 C.F.R. § 42.4

I. INTRODUCTION

US Conec Ltd. (“Petitioner”) filed a Petition (Paper 2 (“Pet.”)) requesting *inter partes* review of claims 1–3, 6–16, 19, and 20 (“challenged claims”) of U.S. Patent No. 11,061,190 B2 (Ex. 1001, “the ’190 patent”). Senko Advanced Components, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

We have authority to determine whether to institute review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4. We may institute an *inter partes* review if “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

Upon consideration of the contentions and the evidence of record, we conclude Petitioner does not establish a reasonable likelihood of prevailing in demonstrating the unpatentability of any of the challenged claims of the ’190 patent. Accordingly, we do not institute an *inter partes* review.

II. BACKGROUND

A. *Real Parties in Interest*

Petitioner identifies itself as a real party in interest. Pet. 130. Petitioner also “states that the following entities each own 10% or more of its stock: Corning Optical Communications, LLC; Fujikura Ltd.; and NTT Advanced Technology Corporation.” *Id.* Patent Owner names itself and Senko Advance Co., Ltd. as the real parties in interest. Paper 4, 2.

B. *The ’190 Patent*

The ’190 patent is titled “Small Form Factor Fiber Optic Connector with Multi-Purpose Boot Assembly.” Ex. 1001, code (54). The ’190 patent

describes “multi-purpose rotatable boot assembly for polarity change.” *Id.* at code (57). A micro connector is illustrated in Figure 24, which is reproduced below. *Id.* at 7:48.

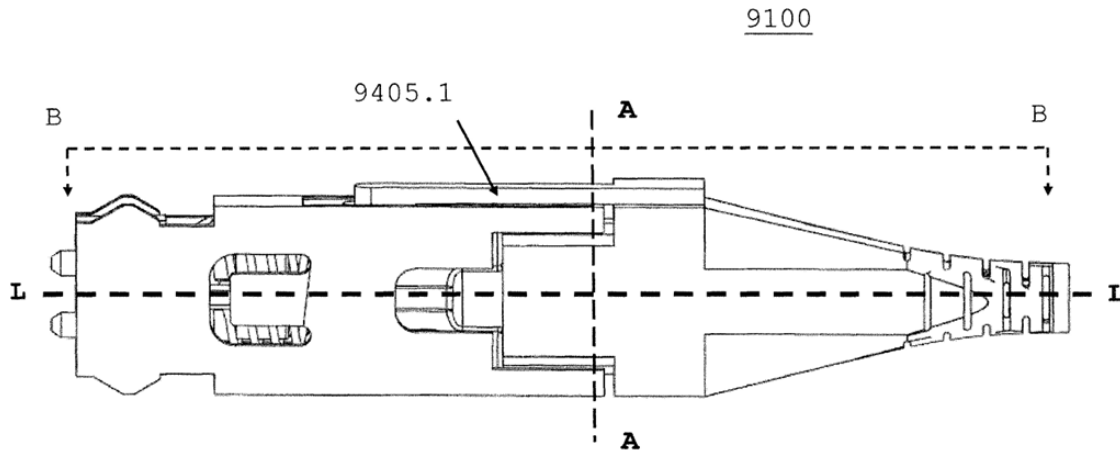


FIG. 24

Figure 24 illustrates micro connector 9100, which has a cross-section along a line labeled “A-A,” for illustrating a polarity change using multi-purpose rotatable boot assembly 9209.1. *Id.* at 7:48–51.

A front view of the cross-section cut of micro connector 9100 is shown in Figure 25, which is reproduced below. *Id.* at 7:55–56.

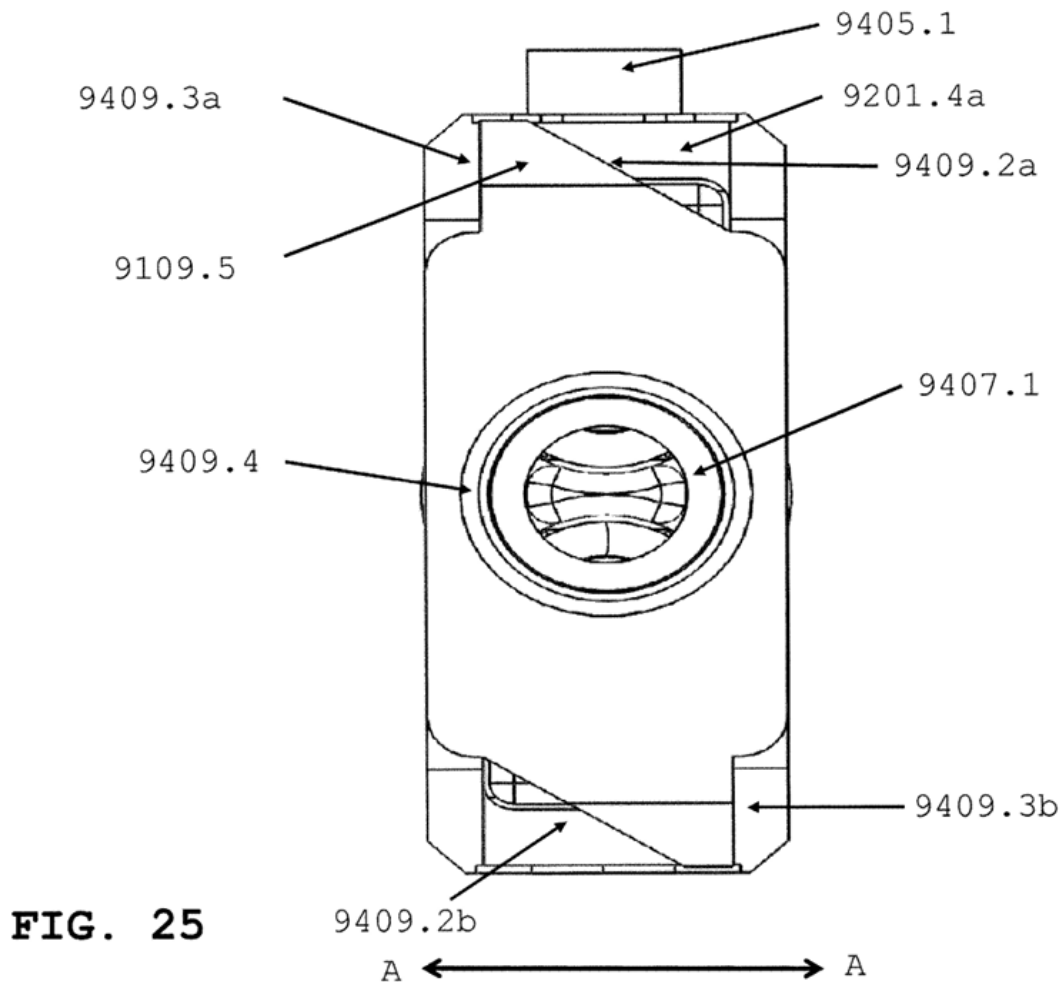
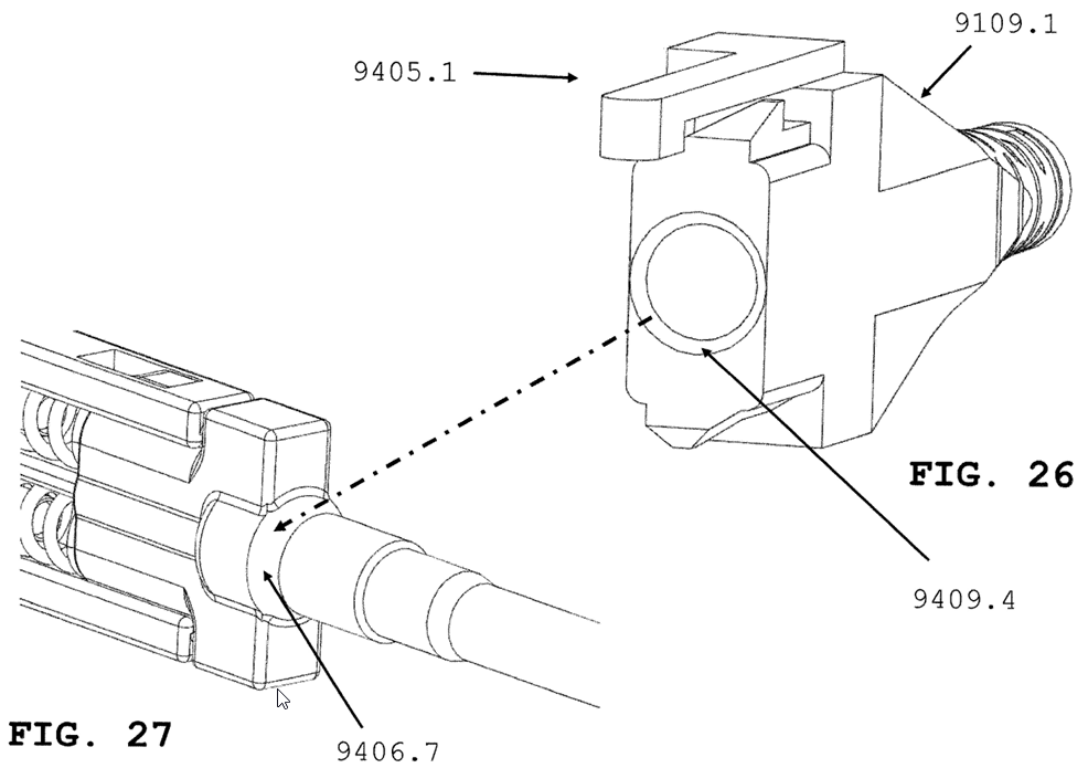


Figure 25 depicts the front view of the cross-section cut along the line labeled “A-A” in Figure 24 above showing an opening of micro connector 9100 through which fiber cabling (not shown) travels and crimp ring surface 9407.1 that is surrounded by inner round 9409.4. *Id.* at 7:55–59.

Reproduced below are Figures 26 and 27 showing a boot assembly and back body, respectively. *Id.* at 3:11–14.



Figures 26 and 27 depict mating surfaces that allow a multi-purpose boot assembly to be rotated about a fiber optic connector housing. *Id.* at 7:59–65. As shown in Figure 26 above, inner round 9409.4 engages back post surface 9406.7 formed as an outer round shown in Figure 27. *Id.* at 7:59–61. Inner round 9409.4 and the outer round form mating surfaces that can freely rotate thereby allowing multi-purpose boot assembly 9209.1 to be rotated about the fiber optic connector housing. *Id.* at 7:62–65.

C. Illustrative Claim

Petitioner challenges claims 1–3, 6–16, 19, and 20 of the '190 patent. Pet. 1. Claim 1 is the only independent challenged claim. Claims 2, 3, 6–16, 19, and 20 depend, directly or indirectly, from claim 1. Independent claim 1, reproduced below, is illustrative of the claimed subject matter.

1. [1.P¹] An optical fiber connector comprising:
 - [1.1] a front body configured to hold first and second ferrules;
 - [1.2] a back body having a proximal end portion and a distal end portion spaced apart along a longitudinal axis, the proximal end portion of the back body configured to couple to the front body, the distal end portion of the back body comprising a cylindrical back post having an outer round surface extending along the longitudinal axis, the back body defining a back body passageway extending from the distal end portion through the proximal end portion; and
 - [1.3.1] a rotatable boot assembly having a proximal end portion and a distal end portion spaced apart along the longitudinal axis, [1.3.2] the rotatable boot assembly comprising a main body and a strain relief sleeve extending longitudinally from the main body to the distal end portion of the rotatable boot assembly, [1.3.3] the rotatable boot assembly comprising a boot passageway extending from the distal end portion through the main body, the main body comprising an inner round surface extending along the longitudinal axis, the inner round surface defining a proximal end portion of the boot passageway, [1.3.4] the rotatable boot assembly configured to be disposed on the back body such that (i) the outer round surface of the back post is matingly received in the inner round surface of the main body and [1.3.5] (ii) the cable boot member is slidable along the longitudinal axis relative to the back body for releasing the optical fiber connector from an adapter, [1.3.6] the optical fiber connector being configured to terminate a fiber optic cable such that a jacket of the cable is received in the strain relief sleeve in the boot passageway, [1.3.7] the boot passageway and the back body passageway configured to align for passing first and second fibers from the fiber optic cable to the front body to complete a signal path to the first and second

¹ Herein, we use Petitioner's designations for the limitations of claim 1. Pet. 133–134.

ferrules within the front body; [1.3.8] the main body further comprising at least one boot hook configured for releasably securing the multi-purpose rotatable boot assembly against rotation relative to the back body, [1.3.9] and the rotatable boot assembly further comprising an elongate arm extending longitudinally from the main body in a proximal direction along the longitudinal axis, the elongate arm being configured for selectively setting the optical fiber connector to each of a first polarity and a second polarity.

Ex. 1001, 11:5–49.

D. Evidence

Petitioner relies on the prior art references in the table below.

Name	Reference	Exhibit
Veatch	US 9,684,130 B2, issued June 20, 2017	1004
Connelly	US 6,575,640 B2, issued June 10, 2003	1005
Cline	US 8,662,760 B2, issued Mar. 4, 2014	1006
Nakagawa	US 2011/0299814 A1, published Dec. 8, 2011	1007
Raven	US 9,557,495 B2, issued Jan. 31, 2017	1008

Petitioner also relies on the Declaration of James F. Brennan III, Ph.D. (Ex. 1016) to support its contentions that the challenged claims are unpatentable. Patent Owner relies on the Declaration of Mr. Eric Pearson (Ex. 2007) to support its contentions that Petitioner has not shown that the challenged claims are unpatentable.

E. Asserted Grounds

Petitioner asserts that the challenged claims of the '190 patent are unpatentable based on the grounds in the table below (Pet. 10):

Claims Challenged	35 U.S.C. § ²	Reference/Basis
1–3, 6–16, 19	103	Nakagawa, Raven
20	103	Nakagawa, Raven, Cline
1–3, 6–11, 13–16, 19	103	Veatch, Connelly
20	103	Veatch, Connelly, Cline

III. ANALYSIS

A. *Legal Standards*

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person of ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness, i.e., secondary considerations.³ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the challenged claims of the ’190 patent have an apparent effective filing date after March 16, 2013, the AIA version of § 103 applies.

³ Neither party presents objective evidence of nonobviousness at this stage of the proceeding.

B. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art would have had

(1) at least a bachelor's degree in mechanical engineering, electrical engineering, physics, or a related field and three years of experience in fiber optics and fiber optic connectors; (2) a master's degree in mechanical engineering, electrical engineering, physics, or a related field and at least one year of experience in fiber optics and fiber optic connectors; or (3) industry experience (at least five years) designing fiber optic connectors in lieu of a formal degree.

Pet. 8 (citing Ex. 1016 ¶¶ 34–40).

Petitioner's proposal is undisputed. Prelim. Resp. 38. For purposes of this Decision, we adopt Petitioner's assessment of the level of skill for one of ordinary skill in the art, except we decline to adopt "at least" as that language is vague and open-ended. Otherwise, we find that Petitioner's proposed definition is consistent with the level of skill reflected in the specification of the '190 patent and the asserted prior art references.

C. Claim Construction

We interpret the challenged claims

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b). Under this standard, the words of a claim generally are given their "ordinary and customary meaning," which is the meaning the term would have had to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification.

Phillips v. AWH Corp., 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Petitioner states that it “does not believe any claim terms require specific construction and thus should receive their plain and ordinary meaning.” Pet. 9. For purposes of this decision, we use the plain and ordinary meaning of the terms of the claims. Based on the record before us, we need not make express determinations regarding claim construction to resolve a dispute between the parties. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Asserted Obviousness over Nakagawa and Raven

Petitioner argues that claims 1–3, 6–16, and 19 are unpatentable as obvious over Nakagawa and Raven. Pet. 10. Petitioner argues that claim 20 is unpatentable as obvious over Nakagawa, Raven, and Cline. *Id.*

Claim 1 is the only challenged, independent claim. Patent Owner disputes Petitioner’s arguments relating to limitations 1.1, 1.2, 1.3.3, and 1.3.9. Prelim. Resp. 39–66. We find Patent Owner’s arguments regarding limitation 1.3.3 to be dispositive. Petitioner relies on Nakagawa for limitation 1.3.3. Pet. 39–42. We begin with an overview of Nakagawa and then turn to the parties’ arguments.

1. Nakagawa

Nakagawa is titled “Duplex Optical Connector Unit.” Ex. 1007, code (54). Nakagawa relates to “a duplex optical connector unit for bidirectional communication including a pair of optical connectors.” *Id.* ¶ 1.

Optical connector unit 1 is illustrated in Figure 2, which is reproduced below.

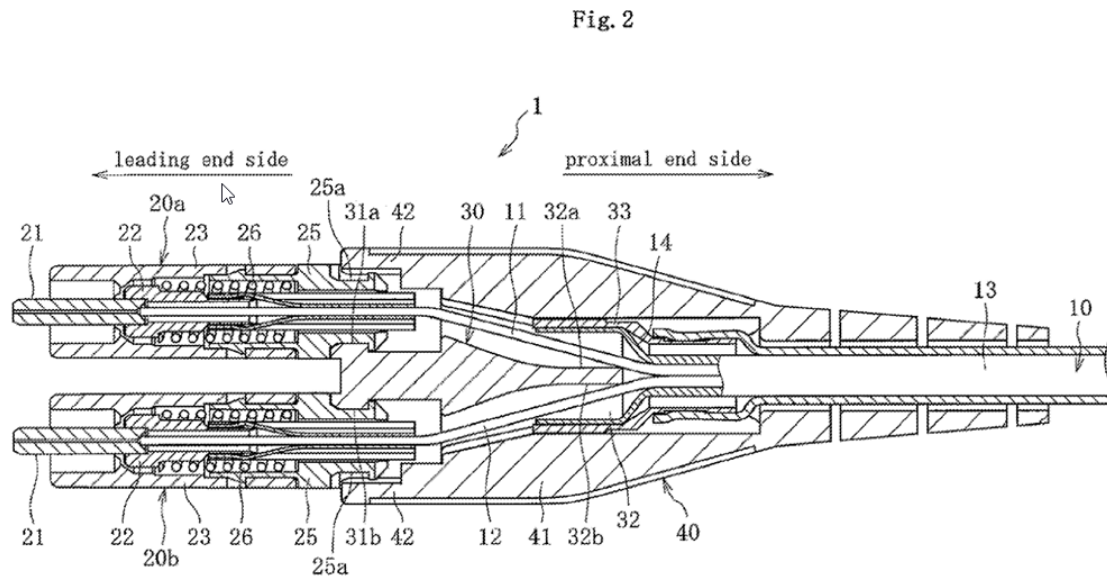


Figure 2 is a cross-sectional view of optical connector 1 having input optical connector 20a, output optical connector 20b, holder 30, and boot 40. *Id.* ¶¶ 22, 46.

Input optical connector 20a and output optical connector 20b are fixed to the leading ends of bare fibers 11, 12, respectively. *Id.* ¶ 47. Holder 30 includes main body portion 31 (not separately labeled in Figure 2) and cable fixing portion 32. *Id.* ¶ 51. Main body portion 31 is provided with connector fixing portions 31a and 31b for fixing optical connectors 20a and 20b. *Id.*

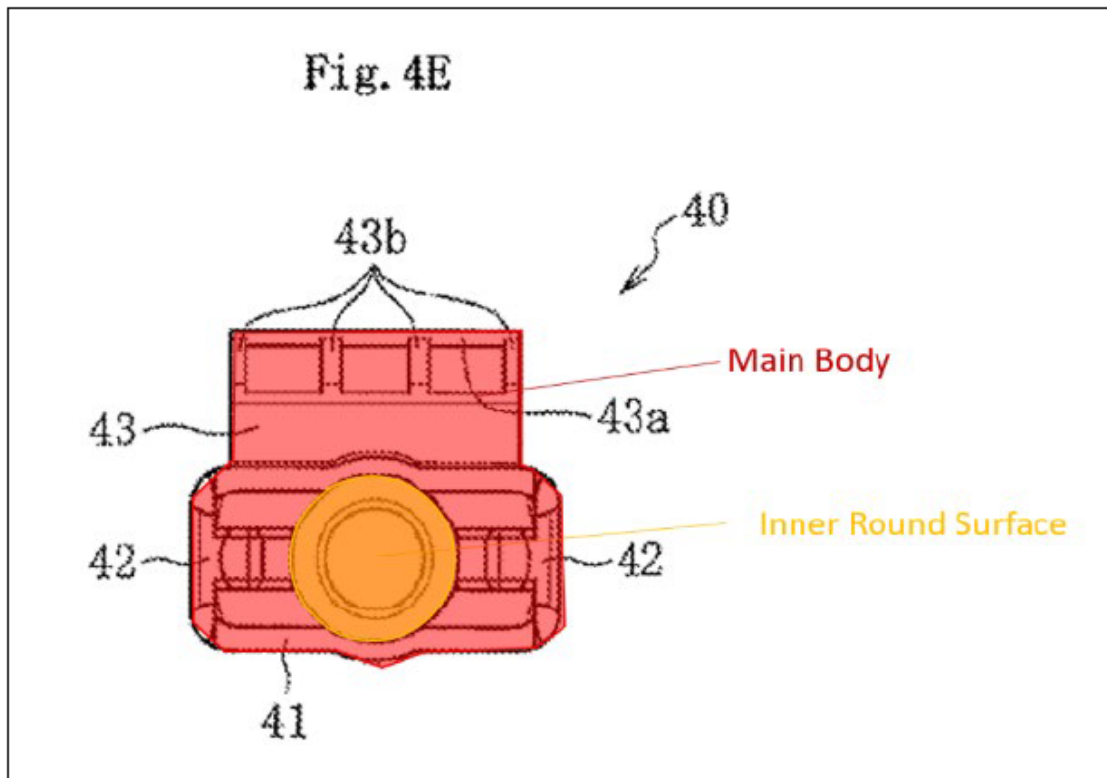
Boot 40 is formed of flexible material and integrally includes tubular main body portion 41. *Id.* ¶ 56. Boot 40 also includes fixing portions 42, which extend from both ends of a leading end portion of tubular main body

portion 41, and operation lever 43 (not shown in Figure 2), which is provided in a top surface of main body portion 41. *Id.* ¶ 56, Figs. 4A, 4B. Tubular main body portion 41 narrows as it extends farther from the leading end side. *Id.* ¶ 56, Figs. 2, 4A, 4B.

2. *Independent Claim 1*

Our analysis focuses on the parties' dispute regarding limitation 1.3.3, which recites "the rotatable boot assembly comprising a boot passageway extending from the distal end portion through the main body, the main body comprising an inner round surface extending along the longitudinal axis, *the inner round surface defining a proximal end portion of the boot passageway*" (emphasis added).

Relying on the testimony of Dr. Brennan, Petitioner argues that the "inner round surface" recited in limitation 1.3.3. is taught by "the surface of the tubular main body portion." Pet. 40 (citing Ex. 1016 ¶ 165). Dr. Brennan's testimony includes an annotated version of Figure 4E of Nakagawa, which is reproduced below. Ex. 1016 ¶ 165.



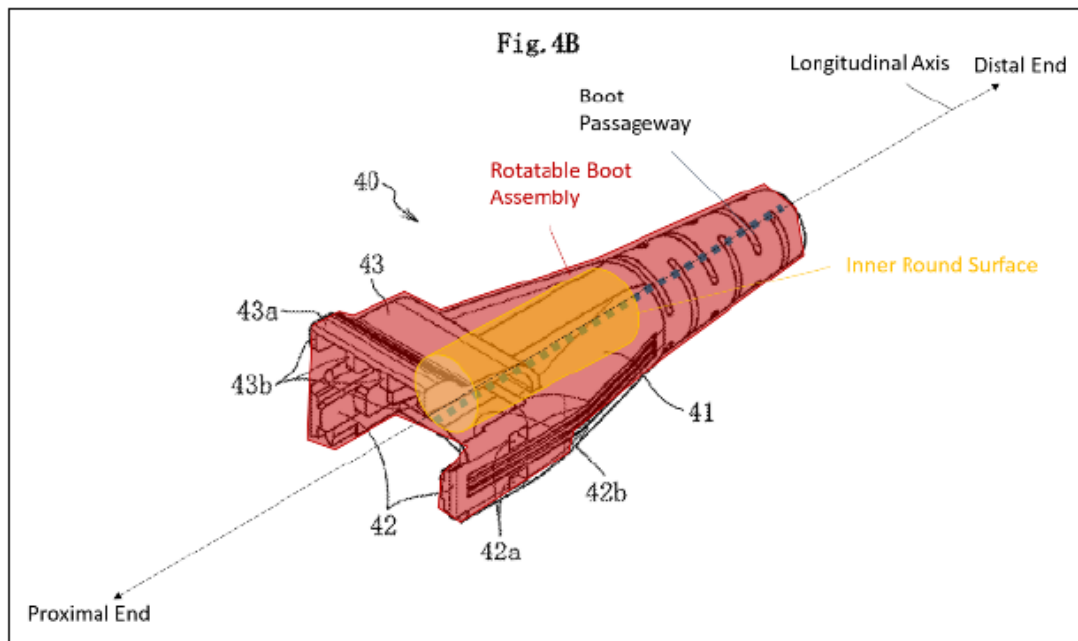
EX1007, FIG. 4E (annotated).

Annotated version of Figure 4E of Nakagawa, above, illustrates a side view⁴ of boot 40 (Ex. 1007 ¶ 33) that includes red highlighting of boot 40 and yellow highlighting of a circular shape within tubular main body portion 41. Ex. 1016 ¶ 165.

Dr. Brennan testifies “a POSITA would also have understood this inner round surface to extend along the longitudinal axis as represented in Figure 4B above.” Ex. 1016 ¶ 165. Dr. Brennan’s testimony includes an

⁴ Nakagawa describes Figure 4E as a “side view . . . seen from the direction E” in Figure 4C. *Id.* ¶ 33. Figure 4C is a plan view of boot 40 without holder 30 shown in Figure 2. *Id.* ¶ 31, Fig. 4C. Based on this description, we understand Figure 4E to show boot 40 as seen looking from the “leading end side” of the optical connector illustrated in Figure 2. *See* Ex. 1007, Fig. 2.

annotated version of Figure 4B of Nakagawa, which is reproduced below.
Id. ¶ 164.



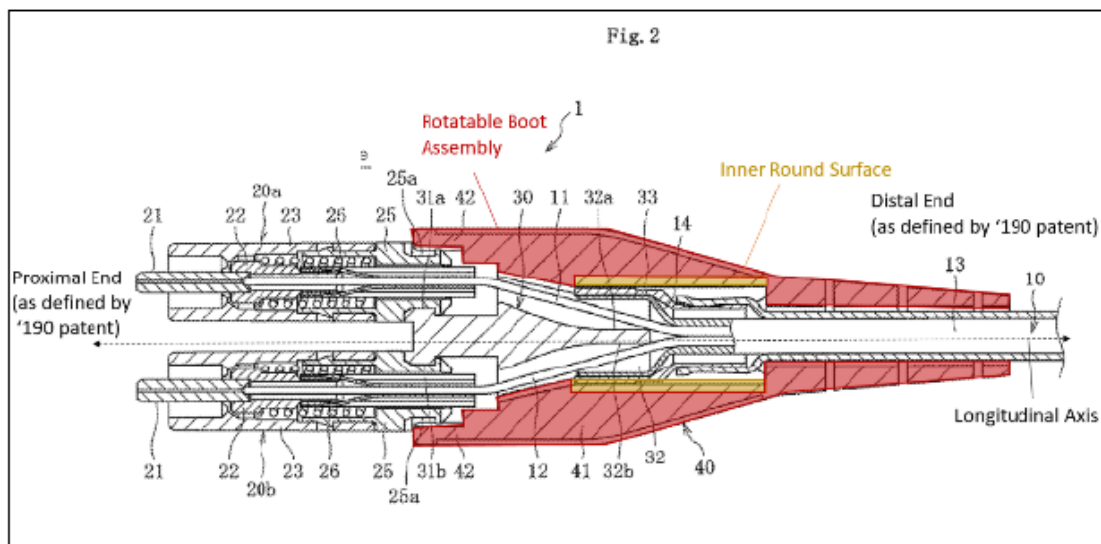
EX1007, FIG. 4B (annotated).

Annotated version of Figure 4B of Nakagawa, above, is a perspective view of boot 40 (Ex. 1007 ¶ 30) that includes red highlighting of boot 40 and yellow highlighting in the form of a cylinder, which Dr. Brennan testifies would have been understood to have been an inner round surface extending along a longitudinal axis within tubular main body portion 41. Ex. 1016 ¶¶ 164–165.

We find that Dr. Brennan’s testimony regarding Figure 4B is not consistent with or supported by Nakagawa’s teachings. Dr. Brennan modifies Nakagawa Figure 4B by adding yellow highlighting in the form of a cylinder and opines that the added highlighting represents an inner round surface extending along a longitudinal axis within tubular main body portion 41. Ex. 1016 ¶¶ 164–165. Dr. Brennan’s testimony does not take into account that the circular shape highlighted yellow in his annotation of Figure

4E is recessed within boot 40 and does not extend to the proximal end of the boot.⁵ Nakagawa does not support Dr. Brennan’s addition of a yellow-highlighted cylindrical surface extending to the proximal end of the boot, as depicted in his annotation of Figure 4B.

Nakagawa’s deficiency is apparent from Figure 2. As noted above, claim limitation 1.3.3 recites an “inner round surface defining a proximal end portion of the boot passageway.” Dr. Brennan testifies “As shown in Figures 4B and 2 of Nakagawa, reproduced above and below, respectively, a POSITA would have understood that Nakagawa’s inner round surface defines the proximal end at the center of the rotatable boot assembly.” Ex. 1016 ¶ 166.



EX1007, FIG. 2 (excerpt², annotated).

Annotated version of Figure 2 of Nakagawa, above, is a cross-sectional view of optical connector 1 having, among other things, boot 40 (Ex. 1007 ¶¶ 22, 46) and includes red highlighting of boot 40 and yellow highlighting of a

⁵ Like Petitioner and Dr. Brennan, we use the term “proximal end” consistent with the definition in the ‘190 patent. Ex. 1016 ¶ 166 n.2.

surface within tubular main body portion 41 of boot 40. *Id.* ¶ 56; Ex. 1016 ¶ 166.

Relying on the testimony of Mr. Pearson, Patent Owner argues that the “inner round surface” of Nakagawa relied on by Petitioner “defines an *intermediate* portion of a boot passageway, that is distal of the proximal end portion of the boot passageway.” Prelim. Resp. 57 (citing Ex. 2007 ¶ 120). Upon consideration of Petitioner’s arguments and evidence and Patent Owner’s arguments and evidence, we agree with Patent Owner. As shown in Figure 2, the highlighted yellow surface relied on by Petitioner is recessed and does not define “*a proximal end portion of the boot passageway*” as recited in limitation 1.3.3. Dr. Brennan identifies the “boot passageway” as extending the entire length of Nakagawa’s boot 40. Ex. 1016 ¶ 164 (annotation of Nakagawa Figure 4B identifying boot passageway with dotted blue line). Dr. Brennan does not, however, identify an inner round surface that defines a proximal end of the boot passageway. We find that Dr. Brennan’s testimony (*id.* ¶ 166) is not supported by the teachings of Nakagawa and, therefore, we give little to no weight to Dr. Brennan’s testimony concerning an inner round surface.

For the foregoing reasons, we determine that Petitioner has not shown that the combination of Nakagawa and Raven teaches limitation 1.3.3. Accordingly, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claim 1 is unpatentable under 35 U.S.C. § 103 as obvious over the combination of Nakagawa and Raven.

3. *Dependent Claims 2, 3, 6–16, 19, and 20*

Claims 2, 3, 6–16, 19, and 20 depend, directly or indirectly, from claim 1. Petitioner’s arguments and evidence for dependent claims 2, 3, 6–

16, 19, and 20 do not remedy the deficiencies discussed with respect to claim 1. Pet. 55–86.

Accordingly, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claims 2, 3, 6–16, and 19 are unpatentable under 35 U.S.C. § 103 as obvious over the combination of Nakagawa and Raven. We also conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claim 20 is unpatentable under 35 U.S.C. § 103 as obvious over the combination of Nakagawa, Raven, and Cline.

E. Asserted Obviousness over Veatch and Connelly

Petitioner argues that claims 1–3, 6–11, 13–16, and 19 are unpatentable as obvious over Veatch and Connelly. Pet. 10. Petitioner argues that claim 20 is unpatentable as obvious over Veatch, Connelly, and Cline. *Id.*

Claim 1 is the only challenged, independent claim. Patent Owner disputes Petitioner’s arguments relating to limitations 1.2 and 1.3.3. Prelim. Resp. 67–84. We find Patent Owner’s arguments regarding limitation 1.3.3 to be dispositive. Petitioner relies on Veatch for limitation 1.3.3. We begin with an overview of Veatch and then turn to the parties’ arguments.

1. Veatch

Veatch is titled “Fiber Optic Connector with Polarity Change.” Ex. 1004, code (54). Veatch describes a fiber optic connector that includes a boot receiving an optical fiber, a connector body, and a latch that is “repositionable relative to the connector body to enable polarity change of the fiber optic connector without changing a relative position of the connector body and the optical fiber.” *Id.* at code (57).

Figure 1 of Veatch, below, illustrates a fiber optic connector.

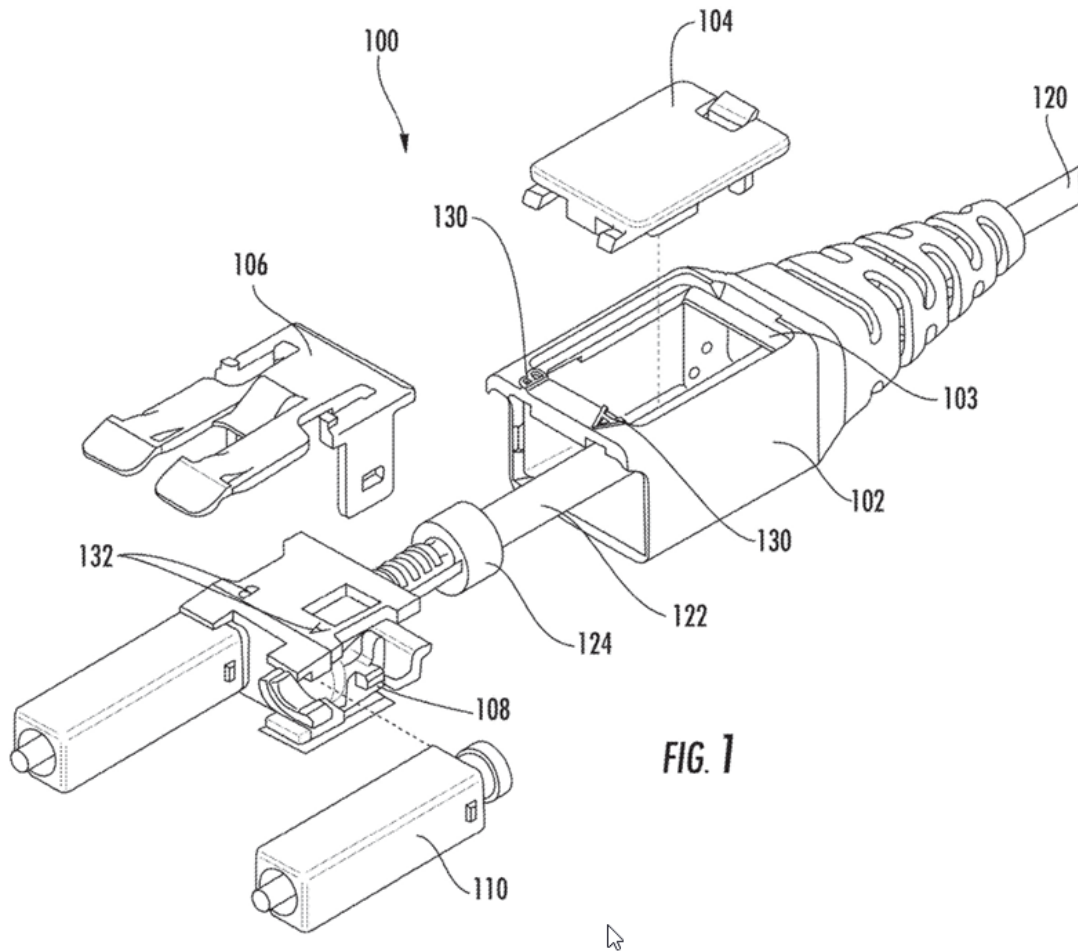


Figure 1 is an exploded, perspective view of connector 100 including boot 102, cover 104, latch 106, fiber holder 108, and connector bodies 110. *Id.* at 1:32–33, 2:14–16.

As shown in Figure 1, cable 120 runs through boot 102 and encases at least two optical fibers. *Id.* at 2:19–20. Shrink material 122 encases at least a portion of cable 120 and crimp ring 124 is secured to cable 102. *Id.* at 2:20–22. Connector bodies 110 terminate the two optical fibers in cable 102. *Id.* at 2:22–23.

To change polarity, boot 102 is pulled back along cable 120 to expose fiber holder 108. *Id.* at 3:13–16. Next, boot 102 is rotated 180 degrees and

latch 106 is moved from a first side of fiber holder 108 to a second side of fiber holder 108. *Id.* at 3:17–20. Then fiber holder 108 is repositioned in boot 102 and cover 104 is snapped back into position. *Id.* at 3:33–36.

2. *Independent Claim 1*

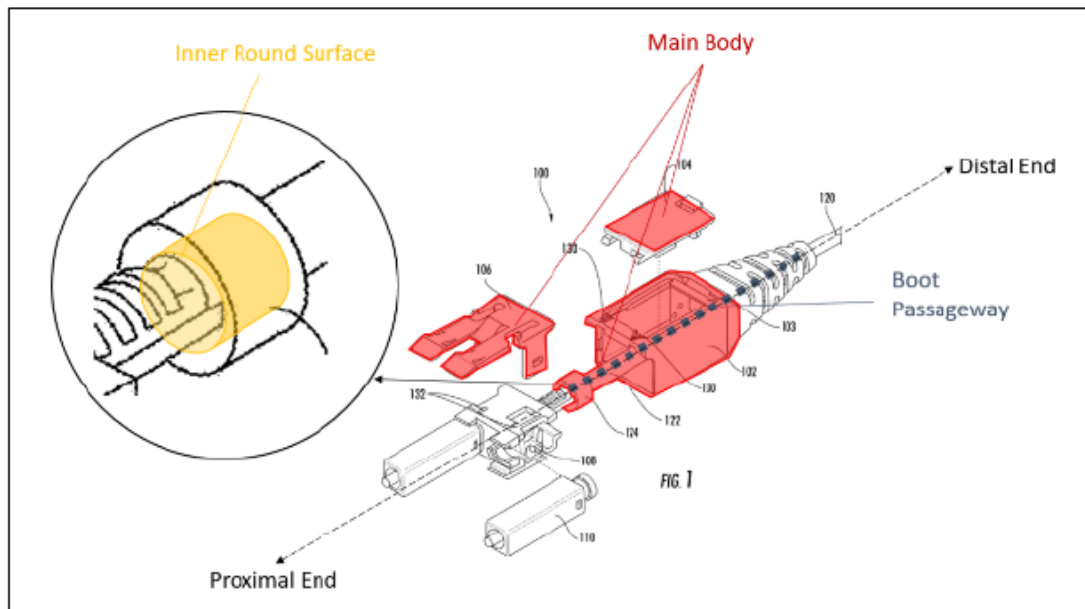
Our analysis focuses on the parties’ dispute regarding limitation 1.3.3, which recites “the rotatable boot assembly comprising a boot passageway extending from the distal end portion through the main body, *the main body comprising an inner round surface* extending along the longitudinal axis, the inner round surface defining a proximal end portion of the boot passageway” (emphasis added). Relying on the testimony of Dr. Brennan, Petitioner argues that the “inner round surface” recited in limitation 1.3.3. is taught by “an inner round surface inside” crimp ring 124. Pet. 99 (citing Ex. 1016 ¶ 314).

Dr. Brennan testifies as follows:

Veatch teaches that the boot 102 accommodates “a crimp ring 124” inside the boot 102. EX1004, 2:22. A POSITA would have understood that the crimp ring 124 has an inner round surface inside the crimp ring, as shown in the annotated Figure 1. In addition, this inner round surface defines the proximal end portion of the boot passageway. Thus, a POSITA would have understood that the inner round surface of the boot shown in Figure 1 of Veatch corresponds to the recited inner round surface.

Ex. 1016 ¶ 314.

Dr. Brennan’s testimony includes an annotated version of Figure 1 of Veatch, which is reproduced below. *Id.*



EX1004, FIG. 1 (annotated).

Annotated version of Figure 1 of Veatch, above, is a perspective view of connector 100 (Ex. 1004, 2:14–16) that includes red highlighting of boot 102 and crimp ring 124. Ex. 1016 ¶ 314. Petitioner’s annotations also include a portion of Figure 1 with crimp ring 124 that is enlarged and includes yellow highlighting in the form of a cylinder within crimp ring 124. *Id.*

Relying on the testimony of Mr. Pearson, Patent Owner argues “crimp ring 124 is not part of the claimed ‘main body’ of the rotatable boot assembly.” Prelim. Resp. 76 (citing Ex. 2007 ¶ 152). Patent Owner argues that crimp ring 124 “does not rotate and is in no way correlated to the rotation of Veatch’s boot 102.” *Id.*

Upon consideration of Petitioner’s arguments and evidence and Patent Owner’s arguments and evidence, we agree with Patent Owner. Petitioner does not show that Veatch’s boot assembly has a “main body comprising an inner round surface,” as claimed. Although Petitioner argues that Veatch’s crimp ring 124 has an inner round surface (Pet. 99), Petitioner does not show that Veatch’s crimp ring 124 is part of a main body of a boot assembly.

Veatch describes that “crimp ring 124 is secured to cable 102.” Ex. 1004, 2:22. Consistent with Veatch’s description, Mr. Pearson testifies that a “person of ordinary skill in the art knows that crimp rings like the one disclosed in Veatch are tubes of material that are compressed (i.e., crimped) onto a back post to firmly secure reinforcement strength members of a cable to the back post.” Ex. 2007 ¶ 153 (citing Ex. 2018 ¶ 3, Fig. 4; Ex. 2014, 2; Ex. 2015, 1; Ex. 2016, 2). Mr. Pearson’s testimony is supported by the evidence of a crimp or crimping meaning a device or action to secure two items as set forth in the evidence cited by Mr. Pearson. Ex. 2018 ¶ 3, Fig. 4 (describing and illustrating a crimp band to secure the strength member of the fiber optic cable); Ex. 2014, 2 (describing the role of crimping as using mechanical force to form a tight bond); Ex. 2015, 1 (describing crimping as providing a durable connection); Ex. 2016, 2 (describing securing a cable jacket with a crimp as helping prevent the jacket from detaching or twisting). We find that Dr. Brennan’s testimony that Veatch teaches limitation 1.3.3 is not supported by the teachings of Veatch or other evidence of record and, therefore, we give Dr. Brennan’s testimony little to no weight.

For the foregoing reasons, we determine that Petitioner has not shown that the combination of Veatch and Connelly teaches a “rotatable boot assembly comprising a main body” and “*the main body comprising an inner round surface* extending along the longitudinal axis, the inner round surface defining a proximal end portion of the boot passageway” (emphasis added) as recited in limitation 1.3.3. Accordingly, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claim 1 is unpatentable under 35 U.S.C. § 103 as obvious over the combination of Veatch and Connelly.

3. *Claims 2, 3, 6–11, 13–16, 19, and 20*

Claims 2, 3, 6–11, 13–16, 19, and 20 depend, directly or indirectly, from claim 1. Petitioner’s arguments and evidence for dependent claims 2, 3, 6–11, 13–16, 19, and 20 do not remedy the deficiencies discussed with respect to claim 1. Pet.

Accordingly, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claims 2, 3, 6–11, 13–16, and 19 are unpatentable as obvious over Veatch and Connelly. We also conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claim 20 is unpatentable as obvious over Veatch, Connelly, and Cline.

IV. CONCLUSION

We have reviewed the parties’ arguments and have considered all of the evidence presented by Petitioner and Patent Owner. For the foregoing reasons, we conclude that the information presented in the Petition does not establish a reasonable likelihood that Petitioner would prevail in showing that any of the challenged claims of the ’190 patent is unpatentable on the grounds asserted in the Petition.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied*, and no trial is instituted.

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