

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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NATUS MEDICAL INC., NATUS NEUROLOGY INC.,  
EMBLA SYSTEMS LLC, and EMBLA SYSTEMS LTD.,  
Petitioner,

v.

NOX MEDICAL EHF,  
Patent Owner.

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Case IPR2016-01822  
Patent 9,059,532 B2

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Before ERICA A. FRANKLIN, SUSAN L. C. MITCHELL, and  
AMANDA F. WIEKER *Administrative Patent Judges.*

MITCHELL, *Administrative Patent Judge.*

FINAL WRITTEN DECISION  
*Inter Partes* Review  
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

## I. INTRODUCTION

This is a final written decision in an *inter partes* review of claims 1–9 and 13 of U.S. Patent No. 9,059,532 B2 (Ex. 1001, “the ’532 patent”) entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons set forth below, we determine that Petitioner has not shown, by a preponderance of the evidence, that claims 1–9 or 13 of the ’532 patent are unpatentable under 35 U.S.C. § 103(a). *See* 35 U.S.C. § 316(e).

### A. Procedural History

Petitioner Natus Medical Inc., Natus Neurology Inc., Embla Systems LLC, and Embla Systems Ltd. (collectively, “Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–9 and 13 (the “challenged claims”) of the ’532 patent. *See* 35 U.S.C. §§ 311–319. Petitioner relied upon a Declaration of Dr. Justin C. Williams (Ex. 1002) in support of its Petition. *See* Pet. 2–63. Patent Owner Nox Medical Ehf (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

Pursuant to 35 U.S.C. § 314(a), on March 23, 2017, we instituted an *inter partes* review of challenged claims 1–9 and 13 to determine if the claims are unpatentable under 35 U.S.C. § 103 as obvious over the combination of McIntire and Kristbjarnarson or Linville in further view of Archer, Caldecott, Uehara, Abizaid, or Orewiler. Paper 9, 26 (“Dec.”).

Patent Owner filed its Patent Owner Response (Paper 26, “PO Resp.”), along with a Declaration of Mr. Alan L. Oslan (Ex. 2013) to support its positions. Petitioner filed a Reply (Paper 34, “Reply”) to the Patent Owner Response. With the Board’s authorization (*see* Paper 38), Patent Owner filed a Sur-Response on Objective Evidence of Nonobviousness. Paper 41 (“Sur-Response”).

Both Petitioner and Patent Owner each filed three motions to seal various papers and exhibits. *See* Papers 23, 33, 37, 42, 49, 53. Patent Owner also filed a Motion to Exclude certain exhibits. Paper 43.

An oral hearing was held on December 14, 2017. A transcript of the hearing is included in the record. Paper 57 (“Tr.”).

*B. Related Proceedings*

The parties indicate that the ’532 patent was asserted against Petitioner in *Nox Medical Ehf. v. Natus Neurology Inc.*, Civ. Action No. 15-709-RGA (D. Del. 2015). Pet. 1; Paper 5, 2.

*C. The ’532 Patent (Ex. 1001)*

The ’532 patent involves a belt connector for use on a human or animal that electrically connects an electrode belt to a biometric device for measuring biosignals, such as cardiographic measurements, or for performing respiratory inductive plethysmography. *See* Ex. 1001, Abst., 1:5–8, 1:22–24, 2:20–23. Such a belt connector is preferably made from one single piece of “a molded plastic frame having a front side and a rear side, the frame having a receiving hole, having radial flexibility to function as a female snap button fastener for receiving and fastening on the front side of the frame a male snap protrusion.” *Id.* at 1:24–32. The radial flexibility is further described as being achieved by one or more slots formed by one or more elongated members “having flexibility transverse to its longitudinal axis (e.g. by being sufficiently thin), thus imparting flexibility to the width of the hole.” *Id.* at 3:6–10.

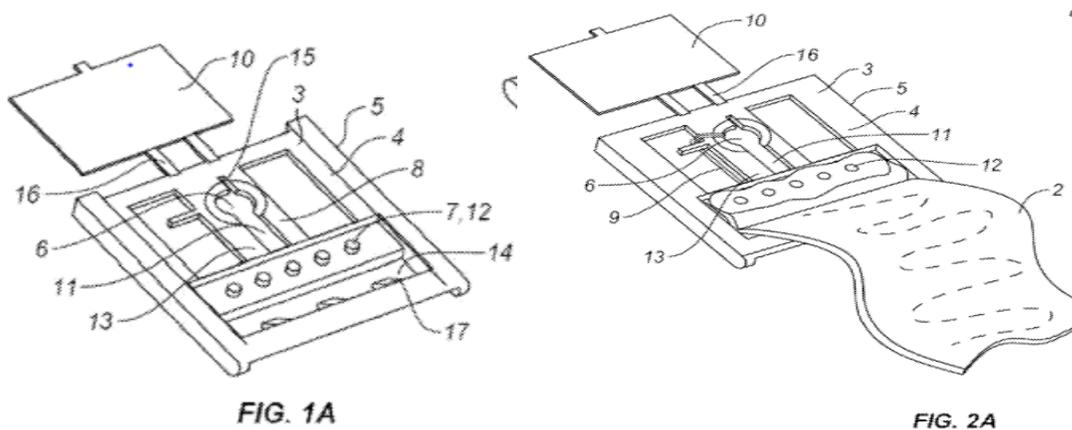
The ’532 patent further describes

fastening means for fastening to the frame a belt end of said electrode belt, and a member adjacent to said snap fastener

receiving hole to engage an electrode wire end electrically connected to said belt such that said wire end is in electrical contact with said hole, either by extending into the hole or coming in electrical contact e.g. through a bridging conductor, with a conducting male snap fastener inserted in said receiving hole.

*Id.* at 1:33–40, *see id.* at 3:16–19.

Figures 1A and 2A, set forth below, and their descriptions as set forth in the '532 patent provide further elucidation concerning the claimed electrode belt and belt connector.



Figures 1A and 2A depicted above show different embodiments of the belt connector. *See id.* at 4:55–57, 4:64–65. Specifically, Figures 1A and 2A show the following:

[A] biometric belt connector (1) is electrically connected to an electrode belt (2). The connector (1) may comprise a molded plastic frame (3) having a front side (4) and a rear side (5), a shaped circular or semi-circular hole (6) with radial flexibility to function as a female snap button fastener, fastening means (7) which comprise a ridge member (12). . . . The frame (3) may include two members (8, 13) adjacent to said hole (6), the two members (8, 13) forming a slot (11) extending from the hole and a second slot (15) across from the first slot (11).

The elongated members and slots provide the hole with sufficient flexibility (i.e. elasticity in the width of the hole) to

function as a female snap fastener. The member (13) also functions to engage an electrode wire end (9) from the belt end electrically connecting the belt with the hole and which comes in electrical contact with a conducting male snap fastener inserted in said hole. The connector further comprises a belt slot (14) with teeth members or pins (17), through which slot a loop of said belt (2) can be inserted such that it is held by the teeth/pins when pulled back, to adjust the length of the belt.

The connector further comprises a shield member (10) which may be molded in one piece with the frame (3) and joined to the frame with foldable hinges (16) such that the shield member can be folded over to cover the rear side of the hole and wire end.

*Id.* at 5:4–33 (emphases omitted).

*D. Illustrative Claims*

Of the challenged claims, claim 1 is the only independent claim of the '532 patent. The remaining challenged claims 2–9 and 13 depend directly or indirectly from claim 1. Claim 1 is illustrative of the challenged claims and recites (with pertinent portions emphasized):

1. An electrode belt and a belt connector for electrically connecting a conductor of the electrode belt to a male portion of a snap connector electrode connected to a biometric device, the belt connector comprising:
  - a molded plastic frame including a receiving hole having radial flexibility, the receiving hole being configured to function as a female snap button fastener for receiving and fastening the frame to a protrusion of the male portion of the snap connector electrode,
  - a fastener configured to fasten the frame to a first end of said electrode belt, and
  - an engaging member adjacent to said receiving hole, the

engaging member engaging the conductor of the electrode belt *by the conductor passing through the receiving hole while being wrapped around the engaging member*, such that when the male portion of the snap connector electrode penetrates the receiving hole, the conductor is forced into physical contact with at least a lateral surface of the male portion of the snap connector electrode,

wherein radial flexibility of said receiving hole is achieved by one or more slot extending from said hole, and *wherein said receiving hole and one or more slot are formed by at least one elongated member having flexibility transverse to its longitudinal axis*, thus imparting flexibility to the width of the hole.

Ex. 1001, 5:36–60 (emphases added).

*E. Ground of Unpatentability*

We instituted the instant trial based on the following ground of unpatentability: Claims 1–9 and 13 as unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of McIntire<sup>1</sup> and Kristbjarnarson<sup>2</sup> or Linville<sup>3</sup> in further view of Archer,<sup>4</sup> Caldecott,<sup>5</sup> Uehara,<sup>6</sup> Abizaid,<sup>7</sup> or

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<sup>1</sup> James F. McIntire and Brian Erik Haug, U.S. Patent No. 8,251,736 B2 (Aug. 28, 2012) (Ex. 1018) (“McIntire”).

<sup>2</sup> Helgi Kristbjarnarson et al., U.S. Patent No. 6,461,307 B1 (Oct. 8, 2002) (Ex. 1012) (“Kristbjarnarson”).

<sup>3</sup> David James Linville, Pub. No. US 2006/0258948 A1 (Nov. 16, 2006) (Ex. 1013) (“Linville”).

<sup>4</sup> Michael F. Archer, U.S. Patent No. 4,671,591 (June 9, 1987) (Ex. 1008) (“Archer”).

<sup>5</sup> Steven Caldecott, Pub. No. WO 2008/102140 A1 (Aug. 28, 2008) (Ex. 1015) (“Caldecott”).

<sup>6</sup> Ryoichiro Uehara and Yoshinobu Takahashi, U.S. Patent No. 6,148,486 (Nov. 21, 2000) (Ex. 1011) (“Uehara”).

<sup>7</sup> Alkoury A. Abizaid, U.S. Patent No. 1,115,459 (Oct. 27, 1914) (Ex. 1005) (“Abizaid”).

Orewiler.<sup>8</sup>

## II. ANALYSIS

### A. Claim Interpretation

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under the broadest reasonable interpretation approach, claim terms are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). An inventor may assign a different meaning to a term other than its ordinary and customary meaning by providing a definition of the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, limitations are not to be read from the specification into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

In its Petition, Petitioner offers an express construction of two claim terms, “flexibility” and “passing through the receiving hole.” Pet. 7–8.

Petitioner states that “flexibility” is “the ability of a part (related to its geometry and material properties) to elastically deform under an applied stress.” Pet. 7 (citing Ex. 1002 ¶ 24). Patent Owner does not dispute this interpretation of “flexibility.” PO Resp. 5. As we found in our institution

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<sup>8</sup> Benjamin F. Orewiler, U.S. Patent No. 1,193,050 (Aug. 1, 1916) (Ex. 1006) (“Orewiler”).

decision, we also find here that we need not provide an express construction of “flexibility” for purposes of this Decision. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (stating that claim terms only need to be construed to the extent necessary to resolve the case).

There is a dispute among the parties regarding the proper interpretation of the claim terms “wrapped around” and “passing through the receiving hole.” *Compare* PO Resp. 9–11, *with* Reply 5–6 (regarding “wrapped around”); *compare* Pet. 8, *with* PO Resp. 5–9 (regarding “passing through the receiving hole”). We find it necessary to resolve these disputes regarding the proper interpretation of these two claim terms to determine whether the challenged claims are unpatentable as obvious over the asserted references.

1. “*wrapped around*”

Petitioner did not propose a construction for the term “wrapped around” in the Petition. Patent Owner proposed a construction for this term in its Patent Owner Response to address statements Dr. Williams made in related litigation. *See* PO Resp. 9–11 (citing Ex. 2019, 101:20–108:8). In particular, Patent Owner asserts that Dr. Williams testified in that related litigation that the minimum boundary for a conductor to travel around an engaging member to be considered “wrapped around” is depicted in the figure below where the conductor touches only one side.<sup>9</sup>

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<sup>9</sup> We agree with Petitioner that Dr. Williams addressed an incomplete hypothetical when answering what is meant by “wrapped around.” For instance, Dr. Williams was told repeatedly to ignore the additional claim limitations of the challenged claims of the ’522 patent when drawing his depiction of the minimum requirement for a conductor to be considered “wrapped around” the engaging member. *See* Ex. 2019, 102:6–10 (“It does



PO Resp. 9 (Ex. 2059).

In response to that testimony, Patent Owner submits the opinion of Mr. Oslan, Patent Owner’s declarant. Mr. Oslan testifies that a person of ordinary skill in the art would have understood the broadest reasonable interpretation of “wrapped around,” as used in the ’532 patent, to mean “following a path that substantially surrounds and encloses.” PO Resp. 10 (citing Ex. 2013 ¶ 38). Mr. Oslan bases his interpretation upon dictionary definitions. *Id.* at 10–11; Ex. 2013 ¶ 38.

In Petitioner’s Reply, Petitioner asserts the broadest reasonable interpretation of “‘wrapped around’ simply requires that the conductor make physical contact with the lateral surface of a male snap inserted into a

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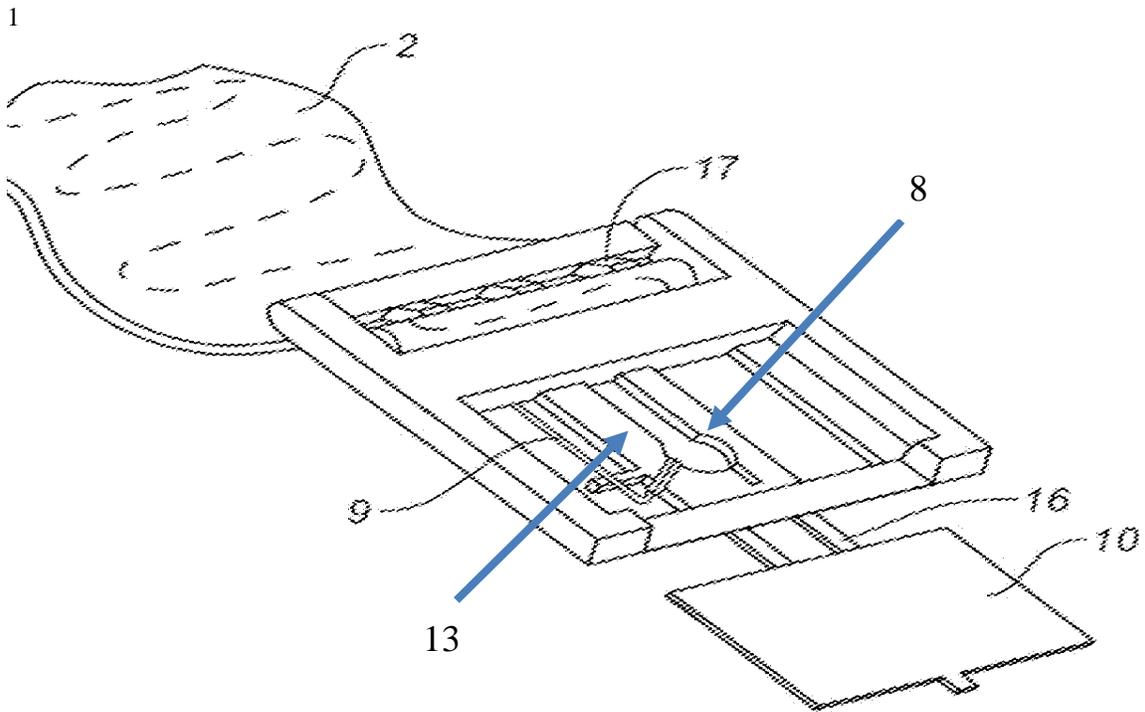
not have to meet any other claim limitation other than wrapped around. It doesn’t have to be forced into contact with the male snap.”); 103:7–11 (“There’s no snap. It does not need to meet the requirement of being forced into physical contact with the male electrode. It does not need to meet that requirement. It only needs to meet the requirement of being wrapped around.”); 105:22–23 (“Just wrapped around. It doesn’t have to do anything but wrap around.”); 106:19 (“Does not need to pass through a receiving hole?”).

receiving hole, with no minimum requirement on the extent to which it must ‘wrap around’ an adjacent engaging member.” Reply 6. Petitioner asserts that Mr. Oslan’s reliance on dictionary definitions does not support an interpretation that something “wrapped around” must be “surrounded and enclosed.”<sup>10</sup> *Id.* Petitioner does not support its interpretation with any citation to dictionary definitions, the ’532 patent Specification, or testimony from Dr. Williams. *See* Reply 5–6.

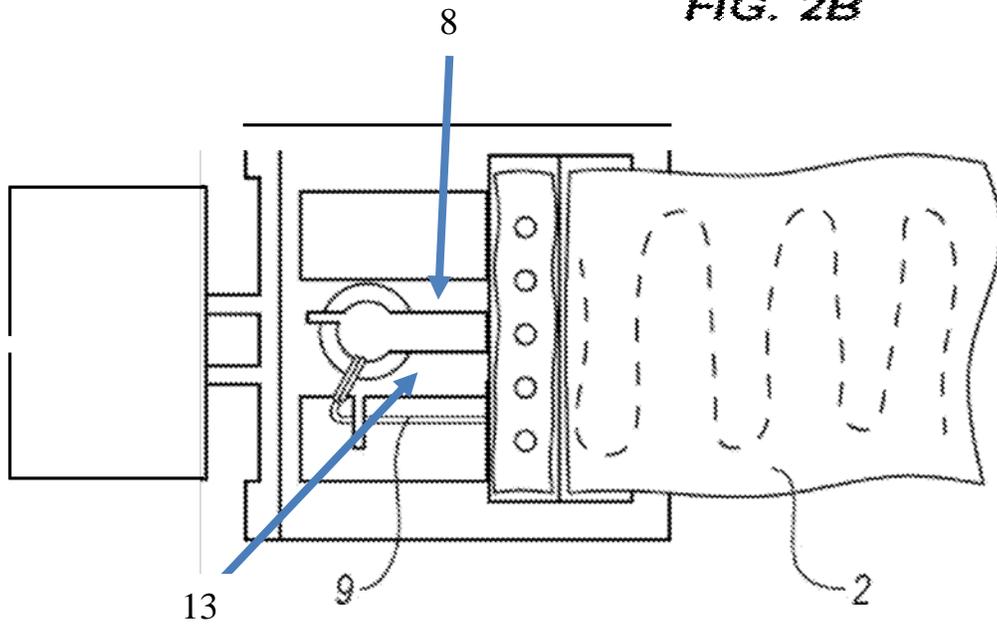
The term “wrapped around” is not defined explicitly in the Specification of the ’532 patent, but the Specification provides figures illustrating a conductor “wrapped around” an engaging member. *See* Ex. 1001, Figures 2A, 2B, 2C. For instance, Figure 2B shows a bottom view of one embodiment of the ’532 patent, and Figure 2A (shown above, *see supra* Section IC) and Figure 2C show top views of the same embodiment. *Id.* at 4:66–5:2. Figures 2B and 2C, as annotated to include designations for the elongated members, are depicted below.

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<sup>10</sup> Petitioner also notes testimony of Dr. Oslan from the related district court litigation that it asserts shows how Dr. Oslan’s interpretation of “wrapped around” does not comport with the ordinary meaning of this term. Reply 6 (citing Ex. 1059, 161:4–165:15, 168:6–13, 162: 20–163:14).



**FIG. 2B**



**FIG. 2C**

The semi-circular hole shown in Figures 2B and 2C set forth above is formed by two elongated members 8 and 13. *See* Ex. 1001, 3:10–13, 5:13–17. The Specification of the '532 patent states that elongated member 13 “functions to engage an electrode wire end (9) from the belt end electrically connecting the belt with the hole and which comes in electrical contact with a conducting male snap fastener inserted in said hole.” *Id.* at 5:20–24.

In all three figures, electrical wire 9 is depicted as completely encircling or enclosing a portion of elongated member 13, as shown by electrical wire 9 appearing to be doubled around elongated member 13, showing it was “wrapped around” and looped around the engaging member at least one complete time. Although the Specification describes electrically connecting the electrical wire with the belt in terms of making electrical contact with the male snap fastener when inserted into the female snap fastener hole, *see, e.g.*, Ex. 1001, Abst., 1:32–40, 1:56–60, 4:44–48, none of these portions of the Specification describes specifically how such electrical contact is made when the electrical wire is “wrapped around” an elongated member, as claimed. Petitioner’s definition of “wrapped around” relies upon additional claim language directed to electrical engagement of the conductor with the male portion of the snap connector electrode, and is not the broadest reasonable interpretation of the claim term “wrapped around” itself, as evidenced by the Specification of the '532 patent or the ordinary and customary meaning of the term “wrapped around,” as reflected in the dictionary definitions submitted as evidence in this proceeding.

In defining the ordinary and customary meaning of “wrapped,” the dictionary definition provided by Patent Owner that appears the most apt when defining how the electrical wire or conductor engages the elongated

member as described in the Specification of the '532 patent is “[t]o coil or twist about or around something.” See PO Resp. 10–11 (quoting Ex. 2018 (The American Heritage Dictionary of the English Language)); see also Exs. 2016–2018. “Around” means “on all sides; about.” See Dictionary.com, available at [www.dictionary.com/browse/around?s=t](http://www.dictionary.com/browse/around?s=t) (last accessed March 16, 2018).

In light of the teachings of the Specification of the '532 patent and the referenced dictionary definitions of the terms “wrapped” and “around,” we interpret the claim phrase “wrapped around” to mean “following a path that substantially surrounds and encloses.”

2. “*passing through the receiving hole*”

Petitioner characterizes the meaning of the claim phrase “passing through the receiving hole” as “self-evident” and “without any limitation as to direction or extent.” Pet. 8 (citing Ex. 1002 ¶ 59). Petitioner asserts that the only requirement for the conductor “passing through the receiving hole” is for it to “make physical (and thus electrical) contact with a male electrode inserted into the receiving hole.” Pet. 8 (citing Ex. 1002 ¶ 59; Ex. 1001, 5:49–54, 3:14–24). In this manner, Petitioner construes this phrase commensurate with its interpretation of the “wrapped around” language, discussed above.

During the pre-institution phase of this proceeding, Patent Owner asserted that Petitioner’s construction is too broad, not taking into account that the wire must pass *through* the receiving hole. Prelim. Resp. 33–35. Patent Owner asserted that the ordinary meaning of “passing through the receiving hole” requires “the wire conductor to enter the receiving hole and then exit the receiving hole.” *Id.* at 33. Patent Owner concluded that a

“conductor wire that comes into contact with a male electrode inserted into the receiving hole but that does not pass ‘through’ the receiving hole does not meet the language of claim 1.” *Id.* at 35.

In our Decision on Institution, we agreed with Patent Owner that Petitioner’s construction is too broad, finding that “the claim language itself requires that the conductor penetrate the receiving hole so that it at least can come into physical contact with the side of the male portion of the snap connector electrode.” Dec. 9 (citing Ex. 1001, 5:49–54). We determined that “passing through the receiving hole” requires “at least the wire conductor to penetrate the receiving hole to a degree to have physical contact with the lateral surface of the male snap fastener,” but declined to require that the conductor exit the receiving hole. *Id.* We reached this determination based on the disclosure in the Specification of the ’532 patent that the conductor may be in electrical contact when “the wire end is crimped onto [the engaging] member” or when the conductor comes into electrical contact with the receiving hole “either by *extending into the hole* or coming in electrical contact e.g. through a bridging conductor, with a conducting male snap fastener inserted in said receiving hole.” *Id.* at 9–10 (quoting Ex. 1001, 3:14–24) (emphasis added).

Patent Owner reiterates in its post-institution Response that the claim phrase “passing through the receiving hole” requires “entering and exiting the receiving hole.” PO Resp. 5–7. Patent Owner asserts that the prosecution history of the ’532 patent informs the construction of “passing through the receiving hole,” as claim 1 was narrowed to include this limitation in response to a prior art rejection. *Id.* at 6. Patent Owner also specifically relies on Figures 2A through 2C and the accompanying

description of these drawings to support the contention that when “a conductor wire from the belt passes through the receiving hole while being wrapped around the engaging member,” the wire conductor exits the receiving hole. *Id.* at 4 (citing Ex. 1001, 5:18–24, Figs. 2A–2C), 7 (citing Ex. 1001, Figs. 2A–2C). Patent Owner also relies on dictionary definitions of “through,” and a district court interpretation of “through the receiving hole” as recited in the claims of the ’532 patent to mean “entering the hole, passing through the hole, and exiting the hole.” *Id.* at 7–8; Ex. 2056, 6–8 (district court memorandum considering dictionary definition and the embodiments disclosed in the ’532 patent); Ex. 2058, 1. Finally, Patent owner cites to an expert report of Dr. Williams in the related litigation in which, Patent Owner asserts, Dr. Williams agreed with the district court’s construction. PO Resp. 8.

Petitioner responds that Patent Owner “did not distinguish the prior art on the basis of the conductor ‘exiting’ the receiving hole,” and that “[Patent Owner’s] amendment is not a ‘clear and unmistakable disavowal’ of claim scope that limits the BRI of ‘passing through.’” Reply 4. Petitioner does not respond to the additional evidence that Patent Owner asserts supports its position. *See id.* at 3–5. Petitioner asserts that our initial claim construction is correct, and that “passing through the hole” does not necessarily mean that the conductor exits the hole. *Id.* at 5.

In reviewing the complete record now before us, we are persuaded that Patent Owner’s construction of “passing through the receiving hole” is the correct interpretation of this limitation. Although we remain convinced that the dictionary definitions of “through” evidencing the ordinary meaning of this term do not necessarily require “exiting,” *see* Tr. 27–29, review of the

Specification, the prosecution history, and the claim language of the '532 patent convinces us that in the context of the challenged claims of the '532 patent, when the conductor is “passing through the receiving hole” it must exit it as well. In other words, the conductor must be passing completely *through* and not merely *into* the receiving hole, when read in context of the claim as a whole, which also requires that the conductor be “wrapped around” the engaging member.

First, in reviewing the claim language regarding the conductor, it not only must pass through the receiving hole, but must also be wrapped around the engaging member so that the conductor is forced into physical contact with at least a lateral surface of the male portion of the snap when it penetrates the receiving hole. *See* Ex. 1001, 5:46–54. When the conductor is passing through the receiving hole while being wrapped around the engaging member, *i.e.*, while substantially surrounding and enclosing it, the conductor must enter and exit the receiving hole. *See id.* at Figs. 2A–2C. Patent Owner added this claim language requiring the conductor to be “passing through the receiving hole while being wrapped around the engaging member” to overcome a rejection based on the Gobron<sup>11</sup> reference, thus narrowing the scope of the claim from only requiring the conductor to be in contact with the receiving hole and to come into electrical contact with the male snap fastener inserted into the receiving hole. *See* Ex. 1023, 5, 11–13.<sup>12</sup>

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<sup>11</sup> Stephane Gobron et al., Pub. No. US 2007/0167089 A1 (July 19, 2007) (Ex. 1014) (“Gobron”).

<sup>12</sup> Although Mr. Oslan agrees that Gobron has a conductor that contacts, but does not enter, a receiving hole, *see* Reply 4 (citing Ex. 1060, 132:4–134:10); *see also* Tr. 21–24 (discussing the amendment during prosecution

The district court’s construction, although rendered under a different claim construction standard, is in accord with our reading of “passing through the receiving hole” in combination with the additional requirement that the conductor be “wrapped around the engaging member.” The district court’s construction also requires the conductor to exit the hole, recognizing that the “conductor must still pass through the receiving hole while being wrapped around the engaging member.” Ex. 2052, 7–8, 8 n.2.

Upon a review of all of the information provided in this proceeding, we conclude that “passing through the receiving hole” requires that the conductor enters the receiving hole so that it can come into physical contact with the lateral side of the male portion of the snap connector electrode and then exits the receiving hole.

*B. Principles of Law*

A patent claim is unpatentable under 35 U.S.C. § 103(a) 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 having 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, when presented, (4) objective

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based on the Gobron referend), we find that the additional language added by Patent Owner requiring that the conductor be “passing through” the receiving hole, while being “wrapped around” the engaging member does require the conductor to enter and exit the receiving hole.

evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We analyze the asserted grounds of unpatentability in accordance with the above-stated principles.

*C. Level of Skill in the Art*

Dr. Williams provided three alternative descriptions of the level of skill of an ordinary artisan. Ex. 1002 ¶ 31. These alternatives are (1) a Bachelor's degree in mechanical engineering, bio-medical engineering, or an equivalent field from an accredited university, and about one year of relevant experience in industry or academia, (2) an associate's degree in mechanical design or an equivalent field from an accredited university, and about three years of relevant experience in designing medical devices, or (3) a master's or doctorate degree in mechanical engineering, bio-medical engineering, or an equivalent field from an accredited university. *Id.* Mr. Oslan accepted this description with the caveat that an equivalent field is electrical engineering and that someone who holds a doctorate degree has more experience than the other two alternatives or someone with a master's degree.

The level of skill in the art is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999). Based upon our review of the record, we adopt Dr. Williams' description of the level of skill in the art for an ordinary artisan, including Dr. Oslan's caveat recognizing electrical engineering as an equivalent field. The level of ordinary skill in the art also is reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

*D. Obviousness over McIntire in Combination with Kristbjarnarson or Linville in Further View of Archer, Caldecott, Uehara, Abizaid, or Orewiler*

Petitioner asserts that claims 1–5, 9, and 13 are unpatentable under 35 U.S.C. § 103 as obvious over McIntire in combination with either Kristbjarnarson or Linville. Pet. 35. Petitioner also asserts that claims 6–8 are unpatentable under 35 U.S.C. § 103 as obvious over the combination of McIntire and Kristbjarnarson. *Id.* Petitioner also asserts that Archer or Caldecott, which teach well-known technology related to protective coatings and insulating films, when added to this challenge individually, also render claims 4 and 5 unpatentable as obvious. Pet. 51–55. Petitioner further asserts that Uehara, Abizaid, or Orewiler, which all teach well-known methods of belt fastening and adjusting, when added to this challenge individually, also render claims 6–8 unpatentable as obvious. *Id.* at 56–61.

In our Decision on Institution, we considered the proposed grounds and instituted trial on one combined ground for all the challenged claims 1–9 and 13 as follows: Whether the challenged claims are obvious over the combination of McIntire and Kristbjarnarson or Linville in further view of Archer, Caldecott, Uehara, Abizaid, or Orewiler.

As support, Petitioner provides detailed explanations as to how each claim limitation is met by the references and rationales for combining the references, as well as the declaration of Dr. Williams. Pet. 35–42; Ex. 1002, Attachment A (claim charts).

Patent Owner does not dispute Petitioner’s characterization of the teachings of Kristbjarnarson, Linville, Uehara, Archer, Caldecott, Abizaid,

or Orewiler. *See* PO Resp. 43–46.<sup>13</sup> However, Patent Owner focuses on the teachings of McIntire and asserts that Petitioner fails to show that any embodiment of McIntire discloses all of the features of the challenged claims, and Petitioner fails to provide a rationale as to why one of skill in the art would combine any feature of one embodiment of McIntire with another. PO Resp. 17–46.

We have reviewed the complete record before us, including the parties’ explanations and supporting evidence presented during this trial. We determine that given the evidence on this record, Petitioner has failed to show by a preponderance of the evidence that claims 1–9 and 13 are unpatentable as obvious over the combination of McIntire and Kristbjarnarson or Linville in further view of Archer, Caldecott, Uehara, Abizaid, or Orewiler.

1. *McIntire (Ex. 1018)*

McIntire describes several embodiments of a connector assembly for connecting an electrical lead to the electrical contact of an electrode for taking, for example, electrocardiograph measurements. Ex. 1018, Abst., 1:5–47. Petitioner focuses on two such embodiments shown in Figures 13 and 14 that it asserts teaches “a conductor that wraps around structure adjacent a receiving hole in the connector, wherein the conductor passes through the receiving hole to make electrical contact with a lateral surface of

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<sup>13</sup> Patent Owner does dispute whether one of skill in the art would have a reason to combine the teachings of McIntire concerning the connector with the belts of Kristbjarnarson, Linville, or Uehara (especially when Uehara has no conductor at all). *See* PO Resp. 43–46. Because we find that features of the claims are not taught by any reference, we need not reach this issue.

a male snap electrode inserted in the hole.” Pet. 23; *see id.* at 22–24.

Therefore, we will focus our discussion on Figures 13 and 14 of McIntire set forth below.

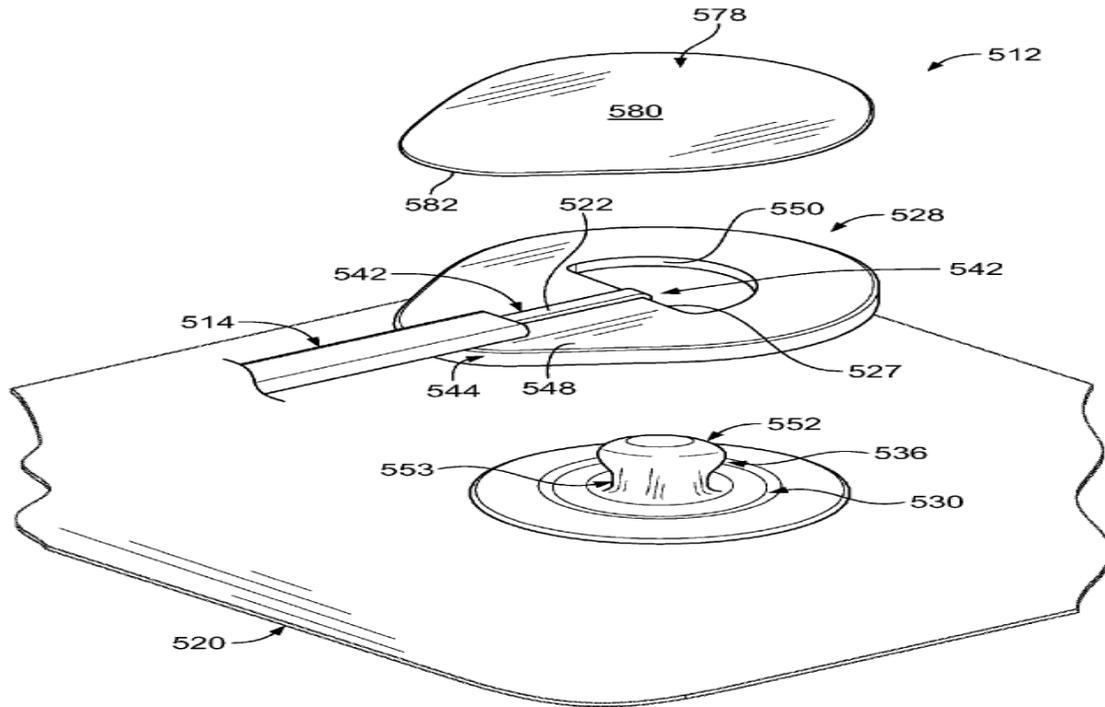


FIG. 13

Figure 13, shown above, depicts electrode lead assembly 512 that includes electrical lead 514, electrode 520, and connector assembly 528. Ex. 1001, 11:38–40. Electrode 520 is described as including electrical contact 530, and electrical lead 514 is described as including electrical conductor 522. *Id.* at 11:40–42. Connector assembly 528 includes retention plate 544 that further includes “a body **548** having an opening **550** extending therethrough. The opening **550** has a size and shape that enables the opening **550** to receive an end portion **536** of the electrical contact **530** therethrough,” in other words a male/female snap connection. *Id.* at 11: 42–47.

In describing how the electrical connection is made as depicted in Figure 13, McIntire explains as follows: “A portion of an end portion **542** of the electrical conductor **522** is held between, and in engagement with, the electrical contact **530** and a wall **527** of the retention plate body **548** that defines the opening **550**. The cover sheet **578** holds a portion of the electrical lead **514** on the retention plate **544**.” *Id.* at 11:61–65.

Figure 14, set forth below, depicts another embodiment of a connector assembly taught by McIntire.

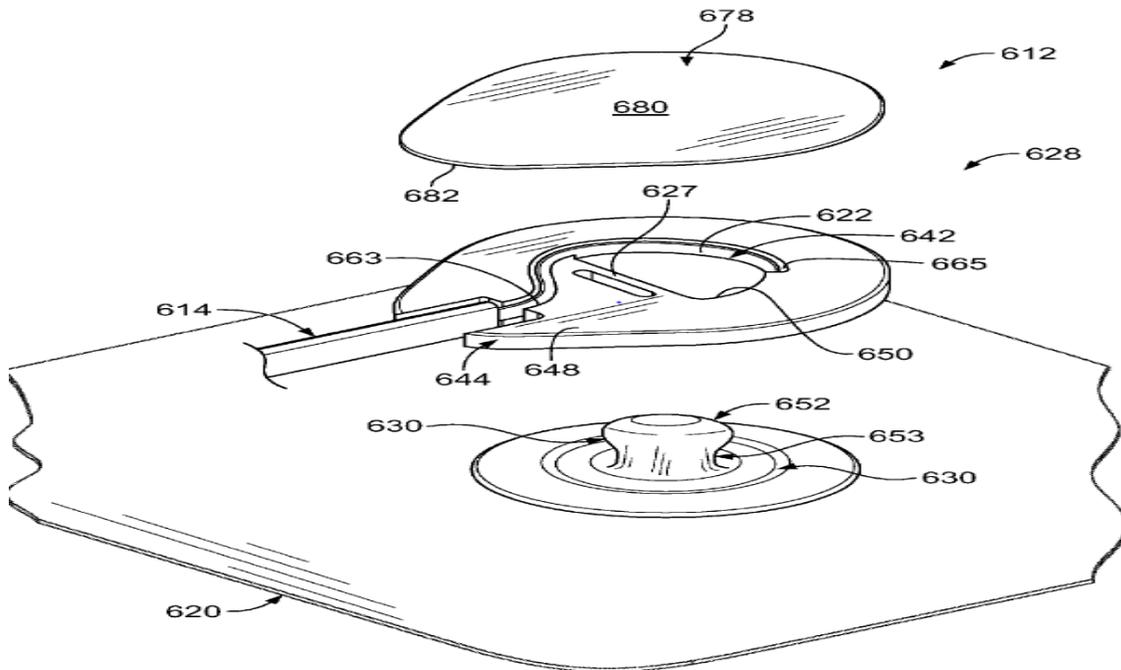


FIG. 14

Electrode assembly 612 shown in Figure 14 above includes retention plate 644 with body 648 having opening 650 extending therethrough and optional cover sheet 678. *Id.* at 12:16–19. McIntire further describes this embodiment as follows.

The opening 650 has a size and shape that enables the opening 650 to receive an end portion 636 of the electrical contact 630 therethrough. In the exemplary embodiment, the opening 650 is sized smaller than an enlarged-diameter portion 652 of the

electrical contact 630. The portion of the retention plate body 648 adjacent the opening 650 is sufficiently resilient such that the size of the opening 650 may deform to allow the enlarged-diameter portion 652 of the electrical contact 630 to be forced through the opening 650. For example, in the exemplary embodiment a portion of the retention plate body 648 that defines a portion of the opening 650 is provided as a flexible beam 627. Once the enlarged-diameter portion 652 has passed through the opening 650, the beam 627, and thereby the opening 650, returns toward the undeformed size to engage a reduced-diameter portion 653 of the electrical contact 630, such that in the exemplary embodiment the body 648 of the retention plate 644 connects to the electrical contact 630 in a snap-fit connection.

The body 648 of the retention plate 644 includes a channel 663 that holds an end portion 642 of the electrical conductor 622 therein. A portion of the end portion 642 is held between, and in engagement with, the electrical contact 630 and a wall 665 of the retention plate body 648 that defines the opening 650.

*Id.* at 12:19–43 (emphases omitted).

## 2. *Kristbjarnarson (Ex. 1012)*

*Kristbjarnarson* describes a disposable sensor for monitoring and measuring the respiration of a patient. *Ex. 1012, Abst.*, 3:17–19.

*Kristbjarnarson* also states that “[t]he disposable sensor includes at least one flexible band adapted to encircle a portion (e.g., the chest or abdomen) of the patient. A conductor strip is secured to the ribbon” in a zig-zag or other predetermined pattern. *Id.* at 3:19–24. *Kristbjarnarson*’s disposable sensor also has a connector assembly to connect and secure the free ends of the ribbon, and is “operatively coupled to the conductor strip, and is further adapted to be connected to a monitoring device.” *Id.* at 3:37–41.

3. *Linville (Ex. 1013)*

Linville describes a reusable transducer made of a woven fabric “providing a substantially flat extensible belt for encircling a portion of a patient for a wide range of patient sizes.” Ex. 1013, Abst. Linville also teaches an electrical conductor is woven directly into the fabric and has “a number and orientation of inductive turns that improves the transducer expandability and the electrical performance . . . .” *Id.* at Abst., ¶ 1. Linville also describes releasable connectors to attach the ends of the belt to secure the belt around the body of a patient and electrical connectors conductively attached to conductor ends at each end of the belt “to facilitate electrical interfacing of the transducer with inductance measurement circuitry.” *Id.* ¶ 28.

4. *Analysis*

The focus of our analysis is on the features of the challenged claims that we find are not taught by the asserted reference, McIntire. As stated above, Petitioner relies on two figures, and their accompanying description, as teaching the claim limitation of “an engaging member adjacent to said receiving hole, the engaging member engaging the conductor of the electrode belt by the conductor passing through the receiving hole while being wrapped around the engaging member, such that when the male portion of the snap connector electrode penetrates the receiving hole, the conductor is forced into physical contact with at least a lateral surface of the male portion of the snap connector electrode.” *See* Pet. 22–24; *see also* PO Resp. 18–19 (stating Petitioner relies “solely on McIntire as teaching claim 1’s requirements for a connector” meeting this claim limitation).

Specifically, Petitioner states the following:

McIntire teaches at least two embodiments of an electrode connector including a conductor that wraps around structure adjacent a receiving hole in the connector, wherein the conductor passes through the receiving hole to make electrical contact with a lateral surface of a male snap electrode inserted in the hole.

In Figure 13 . . . electrical conductor 522 wraps around retention plate 544 (engaging member) and passes through opening 550 such that the electrical conductor 522 is forced into contact with a lateral surface of a male snap electrode 530 when inserted into opening 550. Ex. 1018, fig. 13; col. 11 ll. 61; col. 12 ll. 38-43; Ex. 1002 at 35-38, 71-73. [Annotated Figure 13 omitted.]

In Figure 14, end portion 642 of electrical conductor 622 wraps around channel 663 formed in retention plate 644 (engaging member) adjacent to an opening 650. End portion 642 passes through opening 650 such that the conductor 642 is forced into contact with a lateral surface of male snap electrode 630 when inserted into opening 650: [Figure 14 omitted.] [Ex. 1018] fig. 14, col. 12 ll. 38-43; Ex. 1002 at 72-73.

Pet. 23–24, 40; *see* PO Resp. 18 (agreeing that Petitioner incorporated arguments concerning McIntire from an uninstituted ground into the ground upon which trial was instituted).

Patent Owner asserts that Petitioner has failed to show that the challenged claims are unpatentable as obvious because “Petitioner’s expert has changed his opinion about how the prior art satisfies the requirements of the claims no less than four times, and has still failed to arrive at a position that satisfies those requirements, demonstrating that Petitioner’s expert is relying on hindsight and is simply not credible.” PO Resp. 2.<sup>14</sup> Specifically,

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<sup>14</sup> Patent Owner addresses whether Figure 11 or 12 of McIntire disclose the limitations “an engaging member” or “the conductor passing through the

Patent Owner asserts that Figure 13 of McIntire and the accompanying description do not disclose any of the following claim limitations required by all challenged claims: “a slot extending from said hole;” an “elongated member;” a conductor “wrapped around” an engaging member; or a conductor “passing through the receiving hole.” PO Resp. 21–25, 37–38. Patent Owner also asserts that Figure 14 of McIntire and the accompanying description do not disclose a conductor “passing through the hole” or an “engaging member” that has a conductor “wrapped around” it as required by all challenged claims. *Id.* at 26–38.

Because we find that Petitioner has not established that any embodiment or description in McIntire teaches an “engaging member engaging the conductor of the electrode belt by the conductor passing through the receiving hole while being wrapped around the engaging member,” we find that Petitioner has failed to show by a preponderance of the evidence that the challenged claims are unpatentable.

*a. Figure 13 of McIntire*

With regard to Figure 13 of McIntire, Patent Owner takes issue with Dr. Williams’ statements, upon which Petitioner relies, *see* Pet. 23, that one of skill in the art “knew and understood that conductor 522 extended through opening 550 to wrap around the backside (closest to electrode snap 530) of retention plate 544 for at least the reason that if conductor 522 did not engage the backside of the retention plate 544, the conductor 522 would be

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receiving hole while being wrapped around the engaging member.” PO Resp. 20–21. Because Petitioner does not rely on Figures 11 or 12 to teach either of these limitations, *see* Pet. 22–24, we need not address Patent Owner’s arguments here.

forced out of opening 550,” PO Resp. 23 (citing Ex. 1002, Appendix, 71–72). Patent Owner points out that Dr. Williams reaches this conclusion from the statement that “[a] portion of an end portion 542 of the electrical conductor 522 is held between, and in engagement with, the electrical contact 530 and a wall 527 of the retention plate body 548 that defines the opening 550.” *Id.* at 15; *see* Ex. 1018, 11:61–65; Ex. 1002, Appendix, 71. We agree with Patent Owner that this statement in McIntire concerning Figure 13 does not support Dr. Williams’ conclusion.

We agree with Patent Owner that “McIntire only discloses that conductor 522 rests on top of the retention plate 544 and turns downward to run along wall 527 so that conductor 522 ‘is held between, and in engagement with, the electrical contact 530 and [a] wall 527.’” PO Resp. 24. McIntire does not disclose expressly that conductor 522 exits the hole and wraps under the retention plate that Petitioner asserts is the engaging member. *See* PO Resp. 24; Ex. 1018, 11:62–63; Ex. 2010, 139:4–8 (Dr. Williams admitting that McIntire does not have a view of the backside of the retention plate in Figure 13 to show whether conductor 522 is wrapped around the retention plate to the backside). Therefore, Figure 13 of McIntire does not teach a conductor “passing through the receiving hole” because it does not teach that the conductor exits the receiving hole.

Mr. Oslan testifies that other means exist for conductor 522 to be held in place for engagement with the electrical contact and wall of the retention plate other than having the conductor 522 wrap under the bottom side of the retention plate. For instance, Mr. Oslan testifies that:

[W]all 527 could be angled from the vertical such that conductor 522 is not forced out of opening 550 as electrical contact 530 is pushed through opening 550. If wall 527 is

vertical, gripping features such as serrations could be formed in the conductor in order to allow the conductor to grip wall 527, an adhesive could be used as taught in McIntire.

Ex. 2013 ¶ 42. We find Mr. Oslan's testimony to present credible alternatives to conductor 522 exiting the hole and wrapping around the underside of the retention plate, in the absence of any relevant discussion in McIntire itself.

Dr. Williams testified that he considered alternatives to having the conductor wrap under the bottom side of the retention plate but dismissed them in view of the "straightforward way of wrapping it around." Ex. 2010, 139:13–140:10. Dr. Williams did not provide any supporting facts or data for his reasoning concerning his evaluation of any of these alternatives; Dr. Williams simply presented the conclusory statement that McIntire's Figure 13 teaches "conductor 552 that wraps around retention plate 544 while passing through opening 550." Ex. 1002, 71 (Appendix); *id.* ¶ 87. Such an opinion is entitled to little weight. *See* 37 C.F.R. § 42.65(a).

Dr. Williams also testified that even if the conductor terminates where, in Figure 13, it is merely "turning the corner, entering into the hole, [and] wrapping around the corner of . . . the engaging member," he would still consider it to have "wrapped around" the retention plate. Dr. Williams reaches this conclusion because in his view, the term "wrapped around" is not limited by any extent to which the conductor must be "wrapped around." *See* Ex. 2010, 141:22–145:20; *see also id.* at 141:8–13 (stating the conductor "doesn't have to wrap around, you know, the entirety of that body. There's no further limitations in that."). Because we have interpreted the claim term "wrapped around" to mean "following a path that substantially surrounds and encloses," we do not agree with Dr. Williams' conclusion that merely

wrapping the conductor around a corner of the retention plate satisfies the claim feature of “being wrapped around the engaging member.”

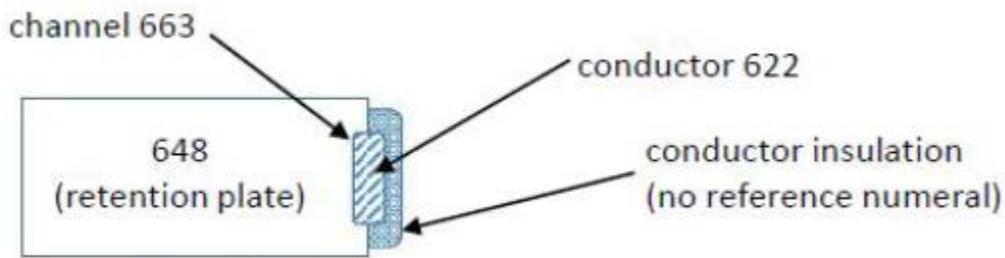
Therefore, we determine that the embodiment depicted in Figure 13 of McIntire does not teach an “engaging member engaging the conductor of the electrode belt by the conductor passing through the receiving hole while being wrapped around the engaging member.”

*b. Figure 14 of McIntire*

With regard to Figure 14 of McIntire, Patent Owner asserts that Petitioner is not clear whether it is asserting that channel 663 or retention plate 644 is the claimed “engaging member” in Figure 14. PO Resp. 26–28. Regardless of which feature Petitioner considers as the “engaging member,” however, Patent Owner asserts that conductor 622 is not “wrapped around” either the channel in which it is located or retention plate 644. *Id.* at 28. Patent Owner asserts that the channel or retention plate would be considered to be “wrapped around” the conductor. *Id.* We agree that under our interpretation of “wrapped around,” the conductor is not wrapped around either channel 663 or retention plate 644 because the conductor does not follow a path that substantially surrounds and encloses either of them.

Dr. Williams’ testimony supports this view. Dr. Williams testified that a hand holding a bottle is “wrapped around” the bottle, but stated that the bottle is not “wrapped around” the hand. PO Resp. 29; Ex. 2010, 77:11–80:2 (explaining ordinary meaning of “wrapped around” in terms of a hand holding a bottle). That analogy applies to Figure 14 of McIntire; the conductor does not “wrap around” the channel or retention plate. Therefore, Dr. Williams’ testimony supports Patent Owner’s view.

Petitioner relies on Dr. Williams’ expert report in the related district court litigation to explain that one of skill in the art would understand channel 663 to “have walls and a floor—i.e., the structure that defines the channel and required to ‘hold’ the conductor 642 in place.” Reply 9 (citing Ex. 2020, 4; Ex. 1018, 12:38–40). Dr. Williams explains that this channel has a ridge that is holding the conductor. *Id.* Petitioner provides the following demonstrative figure to show what it asserts is a cross-section of the retention plate showing the channel and conductor.



Reply 9.

Petitioner’s figure set forth above shows a conductor embedded in a channel with insulation on top of the conductor. This figure is constructed by Petitioner to illustrate its argument, but has no support in McIntire except the statement that “[t]he body 648 of the retention plate 644 includes a channel 663 that holds an end portion 642 of the electrical conductor 622 therein.” Ex. 1018, 12:42–43.

From Petitioner’s depiction of the conductor in a channel, Petitioner asserts that the “conductor 622 and the structure of channel 663 therefore wrap around each other as the conductor follows the S-shaped path of the channel, such that the conductor is forced into contact with a male snap inserted in the receiving hole.” Reply 10. Petitioner points to statements by Dr. Williams and Mr. Oslan agreeing that two things can be wrapped around

each other. *See id.* Petitioner concludes that as the conductor “wraps around and *substantially surrounds and encloses* the structure of the channel 663 it engages as it follows the S-shaped path of the channel (in much the same way as the hand surrounds and encloses the bottle) meeting even Nox’s construction of ‘wrapped around.’” *Id.* at 11.

This discussion by Petitioner is not supported by any specific testimony from Dr. Williams discussing Petitioner’s figure of the channel set forth above or how the channel and the conductor can be considered to be wrapped around each other. Without such support or any other evidentiary support, Petitioner’s arguments are entitled to little weight. *See Meitzner v. Mindick*, 549 F.2d 775, 782 (CCPA 1977) (finding argument of counsel cannot take the place of evidence lacking in the record).

Even assuming that Petitioner’s demonstrative figure set forth above accurately depicts the conductor within channel 663, we do not agree that the conductor is “wrapped around” an engaging member. The conductor is shown to be surrounded and enclosed by the channel that is in the retention plate, so the channel is “wrapped around” the conductor, but the conductor is not “wrapped around” the channel. Dr. Williams’ testimony concerning two items that may be said to be “wrapped around” each other does not support Petitioner’s differing view. *See Ex. 2010*, 196:6–197:3. Dr. Williams provides an example of a helical wire where, depending on your perspective as to which wire you are viewing, the other wire is wrapped around it. Here, when viewing the conductor in a channel as shown in Petitioner’s drawing, the conductor is not wrapping around the channel or retention plate, but the channel or retention plate is wrapping around the conductor, similar to the

example of a hand wrapping around a bottle where it cannot be said that the bottle is wrapping around the hand. *See* Ex. 2010, 196:19–197:3.

We also agree with Patent Owner that neither Figure 14 nor its description teaches that the conductor is “passing through the receiving hole” because it is not shown or described as exiting the receiving hole. PO Resp. 36 (citing Ex. 2013 ¶ 60). Petitioner appears to agree that Figure 14 of McIntire does not show that the conductor exits the receiving hole, *see* Reply 7–8, but argues that it would be obvious to modify Figure 14 so that the conductor exits the receiving hole by extending it into a slot in the retention place. *Id.* at 8.

Petitioner relies on the testimony of Mr. Oslan, not its declarant Dr. Williams, to support this view. The cited testimony of Mr. Oslan, however, supports the opposite conclusion; Mr. Oslan’s testimony supports the conclusion that it would not have been obvious to a person of ordinary skill to have the conductor exit the receiving hole. *See* Ex. 1060, 176:1–197:1. During Mr. Oslan’s deposition, Petitioner showed Mr. Oslan an annotated Figure 14 from McIntire, Ex. 1055, in which a mark had been placed along the right-hand side of opening 650 that “is meant to indicate a slot that would be cut in the retention plate 648, and that wire 622 were to extend into that slot” so that wire 622 exits the receiving hole 650. Ex. 1060, 176:1–177:8. When asked if adding the depicted slot would be an obvious variant of Figure 14 of McIntire, Mr. Oslan answered that “I’m not sure what [a person of skill in the art’s] motivation would be to do this.” *Id.* 177:19–25. Mr. Oslan went on to testify that such a slot may create problems with appropriate fastening force for the retention hole or might weaken the retention plate such that “[i]t might break or tear in that area

when you put the snap in.” *Id.* at 178:1–179:19. Therefore, far from agreeing that adding the slot would be an obvious variant of Figure 14, Mr. Oslan testified that there would be no motivation to do so and it might cause problems with the snap fit of the retention hole and the male portion of the snap connector.

*E. Conclusion*

After reviewing the record in this trial, we conclude the Petitioner has failed to show that any embodiment of McIntire teaches the requirement of “the engaging member engaging the conductor of the electrode belt by the conductor passing through the receiving hole while being wrapped around the engaging member.” Moreover, Petitioner has not relied upon any of the additional references to teach or suggest this missing claim limitation. *See* Pet. 23–24, 40. Thus, none of the additional references cures the deficiency of McIntire.

Because no embodiment of McIntire upon which Petitioner relies to teach these requirements does so, we need not reach whether there is a reason or rationale as to why one of skill in the art would combine features from different embodiments in McIntire or combine any such embodiment of McIntire with any teachings of the other asserted references. We also need not address Patent Owner’s evidence of secondary considerations.

On this record, we determine that Petitioner has failed to show by a preponderance of the evidence that the challenged claims 1–9 or 13 of the ’532 patent are unpatentable under 35 U.S.C. § 103(a).

### III. MOTIONS TO SEAL

#### A. *Patent Owner's Motions to Seal*

Patent Owner has filed three motions to seal certain papers and exhibits. *See* Papers 23, 42, 53. Petitioner has filed no opposition to any of Patent Owner's Motions to Seal. We have previously entered a stipulated Protective Order. *See* Paper 18.

##### 1. *First Motion to Seal (Paper 23)*

In the first Motion to Seal, Patent Owner moved to seal its Patent Owner Response (Papers 24, 25) and Exhibits 2011–2013, 2015, 2019–2051, 2054–2057, and 2059–2062 filed in support of its Response. Paper 23, 1. Patent Owner has filed a redacted nonconfidential version of its Response and Exhibits 2011, a Declaration of Scott W. Cragun, and 2013, a Declaration of Mr. Oslan. *See* Paper 26, Exhibits 2011, 2013. Patent Owner asserts that there is good cause to seal these exhibits because they contain confidential information of Patent Owner, Petitioner, or a third party and have been designated as such in the related district court litigation pursuant to protective order. *See* Paper 23, 1–3. Patent Owner seeks to seal its Response because it contains confidential information from many of these exhibits. *Id.* at 3.

We have considered Patent's Owner's argument to seal its Patent Owner Response and Exhibits 2011–2013, 2015, 2019–2051, 2054–2057, and 2059–2062 filed in support of its Response. We determine that Patent Owner has demonstrated good cause for sealing confidential portions of its Patent Owner Response, Exhibit 2011, and Exhibit 2013, in addition to Exhibits 2012, 2015, 2019–2051, 2054–2057, and 2059–2062. Therefore, we grant Patent Owner's First Motion to Seal.

*2. Second Motion to Seal (Paper 42)*

Patent Owner moves to seal its Sur-Response on Objective Evidence of Nonobviousness (Paper 41) because it contains confidential information from Exhibits produced subject to protective order in the related district court litigation. *See* Paper 42, 1. Patent Owner provided a redacted version of its Sur-Response on Objective Evidence of Nonobviousness. Paper 46.

We determine that Patent Owner has demonstrated good cause for sealing confidential portions of its Sur-Response on Objective Evidence of Nonobviousness. Therefore, we grant Patent Owner's Second Motion to Seal.

*3. Third Motion to Seal (Paper 53)*

Patent Owner moves to seal its Patent Owner's Reply in Further Support of Patent Owner's Motion to Exclude Evidence (Paper 52) because it contains confidential information from Exhibits produced subject to protective order in the related district court litigation. Paper 53, 1. Patent Owner provided a redacted version of its Reply. Paper 54.

We determine that Patent Owner has demonstrated good cause for sealing confidential portions of its Reply in Further Support of Patent Owner's Motion to Exclude Evidence. Therefore, we grant Patent Owner's Third Motion to Seal.

*B. Petitioner's Motions to Seal*

Petitioner has filed three motions to seal certain papers and exhibits. *See* Papers 33, 37, 49. Patent Owner has filed no opposition to any of Petitioner's Motions to Seal.

1. *First Motion to Seal (Paper 33)*

Petitioner moves to seal its Reply (Paper 32) and Exhibits 1054–1061, 1063–1067, 1069–1071, 1073–1075, and 1077–1078. Paper 33, 1.

Petitioner has filed a redacted nonconfidential version of its Reply. *See* Paper 34. Petitioner asserts that there is good cause to seal these exhibits because they contain confidential information of Patent Owner, Petitioner, or a third party and have been designated as such in the related district court litigation pursuant to protective order. *Id.* Petitioner seeks to seal its Reply because it contains confidential information from many of these exhibits. *Id.*

We determine that Petitioner has demonstrated good cause for sealing confidential portions of its Reply and Exhibits 1054–1061, 1063–1067, 1069–1071, 1073–1075, and 1077–1078. Therefore, we grant Patent Owner’s First Motion to Seal.

2. *Second Motion to Seal (Paper 37)*

Petitioner moves to seal its Response to Patent Owner’s Objections and Supplemental Evidence (Paper 36), along with Exhibits 1079–1081, and 1084. Paper 37, 1–2. Petitioner has filed a redacted nonconfidential version of its Objections and Supplemental Evidence. Paper 46. Petitioner asserts that there is good cause to seal these exhibits because they contain confidential information of Patent Owner, Petitioner, or a third party and have been designated as such in the related district court litigation pursuant to protective order. *Id.* Petitioner seeks to seal its Response to Patent Owner’s Objections and Supplemental Evidence because it contains confidential information from many of these exhibits. *Id.*

We determine that Petitioner has demonstrated good cause for sealing confidential portions of its Response to Patent Owner’s Objections and

Supplemental Evidence and Exhibits 1079–1081, and 1084. Therefore, we grant Patent Owner’s Second Motion to Seal.

3. *Third Motion to Seal (Paper 49)*

Petitioner moves to seal its Opposition to Patent Owner’s Motion to Exclude Evidence (Paper 48) because it discusses confidential information of Patent Owner designated as such in the related district court litigation pursuant to protective order. Paper 49, 1. Petitioner has filed a redacted nonconfidential version of its Opposition to Patent Owner’s Motion to Exclude Evidence. *See* Paper 50.

We determine that Petitioner has demonstrated good cause for sealing confidential portions of its Opposition to Patent Owner’s Motion to Exclude Evidence. Therefore we grant Petitioner’s Third Motion to Seal.

The parties are advised that:

Confidential information that is subject to a protective order ordinarily will become public 45 days after denial of a petition to institute a trial or 45 days after final judgment in a trial. There is an expectation that information will be made public where the existence of the information is referred to in a decision to grant or deny a request to institute a review or is identified in a final written decision following a trial. A party seeking to maintain the confidentiality of information, however, may file a motion to expunge the information from the record prior to the information becoming public.

77 Fed. Reg. No. 157, Part V at Section I.E.6. (Aug. 14, 2012); *see also* 37 C.F.R. § 42.56 (“After denial of a petition to institute a trial or after final judgment in a trial, a party may file a motion to expunge confidential information from the record.”).

#### IV. PATENT OWNER'S MOTION TO EXCLUDE

Patent Owner moves to exclude Exhibits 1056–1058, 1067, 1069, and 1072. Paper 43. Petitioner filed an opposition (Paper 50), and Patent Owner filed a reply (Paper 54).

Our Final Written Decision does not rely on evidence contained in any of the challenged exhibits. Accordingly, Patent Owner's Motion to Exclude is dismissed as moot.

#### V. ORDER

Accordingly, it is

ORDERED that claims 1– 9 and 13 of U.S. Patent No. 9,059,532 B2 have not been shown by a preponderance of the evidence to be unpatentable;

FURTHER ORDERED that Patent Owner's Motions to Seal (Papers 23, 42, 53) are *granted*;

FURTHER ORDERED that Petitioner's Motions to Seal (Papers 33, 37, 49) are *granted*;

FURTHER ORDERED that Papers 24, 25, 32, 36, 41, 48, and 52, and Exhibits 1054–1061, 1063–1067, 1069–1071, 1073–1075, 1077–1081, 1084, 2011–2013, 2015, 2019–2051, 2054–2057, and 2059–2062 shall be sealed as “Board and Parties Only,” and will be kept under seal unless and until we refer to material in the exhibit in a final written decision;

FURTHER ORDERED that Patent Owner's Motion to Exclude is *dismissed as moot*; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2016-01822  
Patent 9,059,532 B2

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