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Paper No. 11
Entered: March 9, 2017

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RESMED LIMITED, RESMED INC., AND RESMED CORP,
Petitioner,

v.

FISHER & PAYKEL HEALTHCARE LIMITED,
Patent Owner.

Case IPR2016-01723
Patent 8,186,345 B2

Before THOMAS L. GIANNETTI, RAMA G. ELLURU, and TINA E. HULSE, *Administrative Patent Judges*.

GIANNETTI, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

ResMed, Inc., ResMed Corp., and ResMed Limited (collectively, "Petitioner" or "ResMed") filed a Petition (Paper 4, "Pet.") seeking *inter partes* review of claims 1–11 (all claims) of U.S. Patent No. 8,186,345 B2 (Ex. 1001, "the '345 patent") pursuant to 35 U.S.C. §§ 311–319. Fisher & Paykel Healthcare, Limited ("Patent Owner") filed a Patent Owner Preliminary Response (Paper 8, "Prelim. Resp."). The Preliminary Response was accompanied by a statutory disclaimer of claims 8 and 9 of the '345 patent. Ex. 2009.

We have authority to determine whether to institute a trial under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). An *inter partes* review may be instituted only 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).

We are persuaded there is not a reasonable likelihood that Petitioner would prevail in showing that the challenged claims are unpatentable. Pursuant to 35 U.S.C. § 314, we do not institute an *inter partes* review as to claims 1–7, 10 and 11 of the '345 patent[1].

II. BACKGROUND

A. The '345 Patent

The '345 patent is titled: "Apparatus for Supplying Gases to a Patient." The Abstract describes the subject matter as follows:

[1] As noted, Patent Owner has disclaimed claims 8 and 9.

> The gases temperature supplied to a patient when the patient is undergoing treatment such as oxygen therapy or positive pressure treatment for conditions such as Obstructive Sleep Apnea (OSA) or Chronic Obstructive Pulmonary Disease (COPD) is often measured for safety and to enable controlling of the humidity delivered to the patient. The invention disclosed is related to measurement of properties, particularly temperature, of gases flowing through a heated tube, supplying gases to a patient, which utilizes the heating wire within the tube.

Ex. 1001, Abstract. The stated purpose of the invention is "to measure various properties, for example temperature or humidity, at the end of a gas delivery tube or conduit using sensors mounted on a wire, such as a wire used for heating the gases flow through the tube or conduit, where the wire resides within the delivery tube or conduit." *Id.* at col. 2, ll. 61–66. Figure 1 of the patent follows:

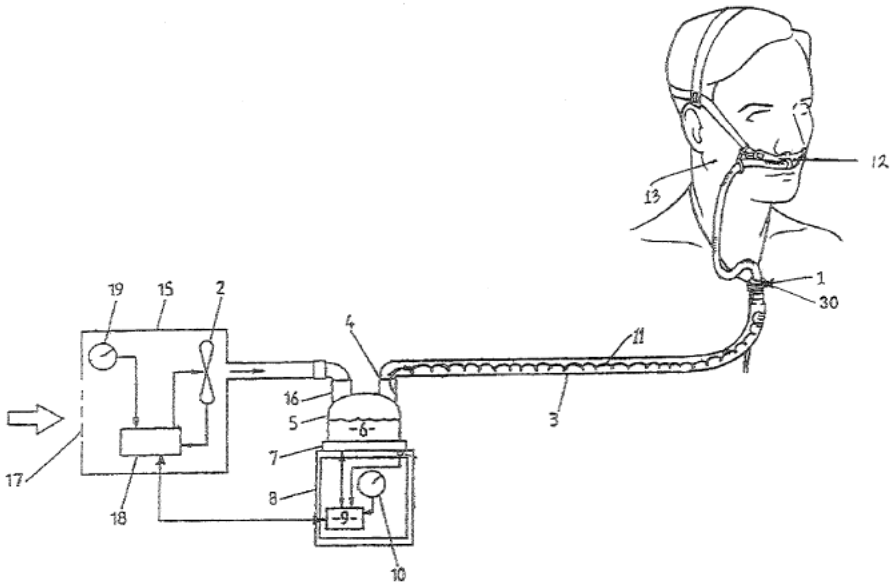


Figure 1

Figure 1 of the ’345 patent is described as an illustration of a respiratory humidifier system for measuring the temperature of gasses supplied to a patient. *Id.* at col. 2, ll. 42–44. The figure depicts gas inlet 17, blower 15, humidifier 8, controller 9, heated tube or conduit 3, heating wire 11, and nasal cannula 12. *Id.* at col. 3, ll. 3–39. Air drawn in by the blower is humidified by the humidifier and delivered to patient 13 through tube or conduit 3. *Id.* at col. 3, ll. 40–48. Heating wire 11 within or around the conduit helps prevent condensation of the humidified gasses within the conduit. *Id.* at col. 3, ll. 49–51.

In one embodiment, a thermistor and associated circuitry are provided to measure the temperature of the humidified gasses in the conduit. *Id.* at col. 4, ll. 12–29; Fig. 2. The thermistor can be replaced by an impedance (for example, a resistor and capacitive sensor) for pressure and humidity measurement. *Id.* at col. 4, ll. 30–32. Also, the thermistor’s value can be chosen to have different resistance curves so that the choice of a particular thermistor allows identification and matching by the control system of that thermistor value with a specific conduit or tubing. *Id.* at col. 4, ll. 52–57. In another embodiment, one or more of the sensing elements can be replaced by a fixed impedance to allow identification of the tube so that different control algorithms can be used for different conduits or tubes. *Id.* at col. 5, ll. 35–39.

B. Related Matters

The parties identify two civil actions involving the ’345 patent, one of which has been dismissed. Pet. 3; Paper 6.

C. Illustrative Claim

After the disclaimer of claim 8, claim 1 is the only remaining independent claim. Claim 1 reads as follows:

> 1. An apparatus for supplying gases to a patient comprising:
>
> a gases supply,
>
> a delivery conduit including a heater wire for heating said conduit, wherein said heater wire is located within, around or throughout said conduit and utilized in an electrical circuit including at least one identification element having a characteristic impedance,
>
> a controller for controlling the heating of the heater wire and wherein said controller is adapted to measure said characteristic impedance of said identification element and identify said delivery conduit based on said characteristic impedance and to apply power to said heater wire based at least in part on the identified conduit.

D. References

The following references are relied on by Petitioner:

MR810 Manual	Fisher & Paykel Respiratory Humidifier Technical Manual (Revision C)	Ex. 1006
Gradon	US 6,272,933	Ex. 1005
Edirisuriya	US Pat. Pub. No. 2003/0236015	Ex. 1004
Figley	US 6,668,828	Ex. 1029
Johnson	US 5,164,652	Ex. 1007

The Petition also relies on the Declaration of Andrew Bath (Ex. 1003, "Bath Decl.") as support for the various contentions.

E. Grounds Asserted

The Petition challenges the patentability of the '345 patent claims on the following grounds:[2]

References	Basis	Challenged Claims
MR810 Manual	35 U.S.C. § 102	1, 2 , 4–7, 10, and 11
MR810 Manual, Gradon, Edirisuriya, and Figley	35 U.S.C. § 103	1–3, 5–7, 10, and 11
MR810 Manual, Gradon, Edirisuriya, and Johnson	35 U.S.C. § 103	1–7, 10, and 11

III. ANALYSIS

A. Preliminary Matters

1. Whether Institution of an IPR is Barred Under 35 U.S.C. § 315(a)(1)

Patent Owner asserts the Petition is barred under 35 U.S.C. § 315(a)(1) because Petitioner filed a declaratory judgment action in the U.S. District Court for the Southern District of California challenging the validity of the '345 patent before filing the Petition. Prelim. Resp. 4–11; Ex. 1026. Petitioner contends that it is not barred because Petitioner voluntarily dismissed the complaint without prejudice on August 18, 2016. Pet. 3–4 (citing Ex. 1027).

Patent Owner's argument fails. Prior Board decisions have consistently interpreted 35 U.S.C. § 315(a)(1) as not barring *inter partes*

[2] Claims 8 and 9 were disclaimed and have therefore been omitted from this listing.

review if the previously filed civil action was dismissed without prejudice, as is the case here. *See, e.g.*, *Microsoft Corp. v. Parallel Networks Licensing, LLC*, Case IPR2015-00486, slip op. at 6–7 (PTAB Jul. 15, 2015) (Paper 10); *Oracle Corp. v. Click-to-Call Techs. LP*, Case IPR2013-00312, slip op. at 12–13 (PTAB Oct. 28, 2014) (Paper 52).

Patent Owner now challenges the Board's interpretation of 35 U.S.C. § 315(a)(1). We note that Patent Owner made a similar argument in a related district court action that the statutory bar under § 315(a)(1) would not apply to this proceeding and, therefore, the court should not impose a stay of litigation. *See* Ex. 3001[3], 3. Noting that Petitioner's declaratory judgment action was voluntarily dismissed "without prejudice" before filing the instant Petition, the district court held that "the effect of a voluntary dismissal w/out prejudice is to render the prior action a nullity" such that it is "treated as if it was not 'filed' at all" and thus "cannot give rise to a statutory bar under 35 U.S.C. § 315(a)(1)." *Id.* at 4. In doing so, the district court relied upon, and expressly adopted, the reasoning of prior Board decisions that came to a similar conclusion.[4] *Id.* Moreover, the district court in the related action noted that "at least eight Circuits had likewise determined that a dismissal without prejudice makes the situation as if the action as had never been filed." *Id.*; *see also Holloway v. U.S.*, 60 Fed. Cl. 254, 261 (2004), *aff'd* 143 F. App'x 313 (Fed. Cir. 2005) (treating civil action dismissed without prejudice "as if it never existed."); *Bonneville Assoc., Ltd. P'ship v. Barram*,

[3] The District Court's decision has been included in the record as Ex. 3001.
[4] In doing so, the district court's decision is consistent with U.S. Supreme Court precedent that states that "an agency's interpretation of the statute under which it operates is entitled to some deference." *Southeastern Community College v. Davis*, 442 U.S. 397, 411 (1979).

165 F.3d 1360, 1364 (Fed. Cir. 1999) ("The rule in the federal courts is that '[t]he effect of a voluntary dismissal without prejudice pursuant to Rule 41(a) is to render the proceedings a nullity and leave the parties as if the action had never been brought.'") (citations and some internal quotations omitted).

We see no reason to deviate from our prior decisions interpreting 35 U.S.C. § 315(a)(1) or the district court's concurring analysis of this issue, and Patent Owner's arguments to the contrary do not persuade us otherwise. Thus, we hold that the Petition is not barred by 35 U.S.C. § 315(a)(1).

2. Whether the MR810 Manual is a Printed Publication

The Petition asserts that the MR810 Manual was published by Patent Owner Fisher & Paykel in April 2004. Pet. 6. Petitioner cites the indication of "Date Issued" in the revision history appearing in the Manual itself, and various publications by Patent Owner relating to the public availability of the MR810 apparatus. *Id*. at 7.

Patent Owner responds that the "Petition should be denied because it fails to provide the required evidence necessary to establish the prior art status of [the MR810] technical manual." Prelim. Resp. 25. Patent Owner asserts "[w]hether a reference has been established as prior art is not merely an evidentiary matter, but a substantive element of Petitioner's *prima facie* case of invalidity." *Id.* Patent Owner responds to the proofs that its own manual was published by April 2004, including the issue date appearing in the Manual itself, by challenging them as "unclear":

> In attempting to establish the prior art status of the MR810 Manual, i.e., that it was "published in April 2004," the Petition purports to rely on an "April 2004" "Date Issued" date corresponding to Revision C on page 6 of the MR810

> Manual. Pet. at 6; Ex. 1006 at 6. But it is unclear from the document what this means, or to whom the document was actually "issued."

Id. at 27–28. We do not find this argument, coming from the party that produced the Manual and presumably knows when it was published, to be credible. Instead, on this record, we determine that Petitioner's showing that the MR810 Manual was published in April 2004 is sufficient at this stage. Nor do we agree with Patent Owner's suggestion that the determination whether the Manual qualifies as prior art is not "evidentiary." *See* Fed. R. Evid. 104(b) ("When the relevance of evidence depends on whether a fact exists, proof must be introduced sufficient to support a finding that the fact does exist.")

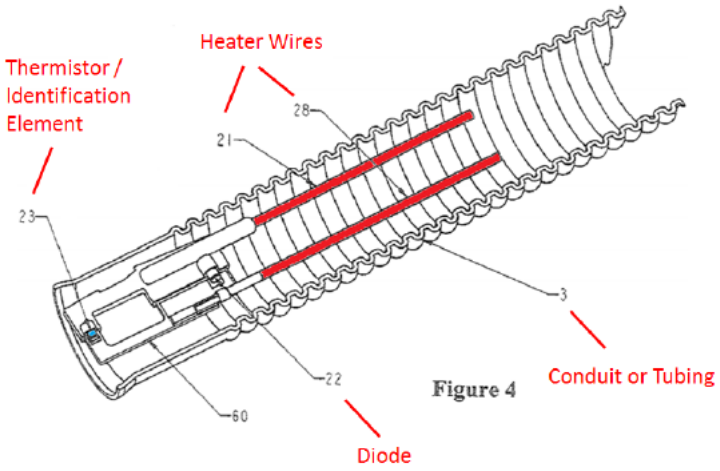
B. Claim Construction

In an *inter partes* review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.100(b); *see also Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142–46 (2016) (upholding the use of the broadest reasonable interpretation standard). The parties have requested that we construe the following terms:

1. "heater wire" and "identification element"

These limitations appear in all challenged claims. Petitioner contends that "nothing in the claims require[s] the identification element [to] be a separate component from the heater wire." Pet. 17. Patent Owner contends this is incorrect. Prelim. Resp. 31. Patent Owner relies on the "plain language" of claim 1, as well claim 2, which locates the identification element at the "patient end" of the conduit. *Id.* at 32. Patent Owner relies also on Figure 1 *supra*, and the description of the heater wire in the '345

patent specification. *Id.* at 32–37. For example, Patent Owner relies on Figure 4 of the patent, reproduced below as annotated by Patent Owner:



We are persuaded by Petitioner's argument that their construction is correct as to some, but not all challenged claims. Specifically, claim 1 identifies the "heater wire" and "identification elements" as separate elements. "Where a claim lists elements separately, the clear implication of the claim language is that those elements are distinct components of the patented invention." *Becton, Dickinson and Co. v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1253 (Fed. Cir. 2010) (internal quotation marks and alterations omitted).

Furthermore, we agree with Patent Owner that the '345 patent specification "consistently teaches that the heater wire is a separate component connected in series with the identification element." Prelim. Resp. 34–37. As the Federal Circuit said in *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015), "[t]he protocol of giving claims their broadest reasonable interpretation . . . does not include giving claims a legally incorrect interpretation." (internal quotation marks omitted). Further,

the Court stated: "Even under the broadest reasonable interpretation, the Board's construction cannot be divorced from the specification and the record evidence." *Id.* (internal quotation marks omitted). We conclude, therefore, that the terms "heater wire" and "identification element" in challenged claim 1 and its dependent claims 2 and 4–7 should be construed as requiring separate elements.

Claims 10 and 11 present a different situation. These claims depend from claim 8. That claim, directed to a method for identifying a conduit attached to an apparatus, recites the following step: "attaching a conduit comprising a heater wire *including* an identification element to said apparatus." (emphasis added). In the context of these claims, and based on the language of the claims themselves, we conclude that "a heater wire including an identification element" could reasonably be construed to encompass a heater wire that is also the identification element.

2. "characteristic impedance"

This limitation appears in all challenged claims. Petitioner contends that "[t]he characteristic impedance of the 'identification element' may be fixed (e.g. a particular impedance value) or a range of impedance values." Pet. 20. Petitioner further contends that the term "must be read broadly enough to cover a fixed resistance and a range of resistances. In support, Petitioner points to dependent claims 3 (reciting a "thermistor resistance range") and 4 (reciting a "fixed resistor"). *Id.*

We do not need to construe this term in light of our decision following.

3. "said identification element is located at a patient end of said conduit"

This limitation appears in claim 2. Patent Owner asserts the phrase "conveys that the identification element as a whole—not some part or portion of the identification element—is located at the patient end of the conduit." Prelim. Resp. 39–40.

We do not need to construe this term in light of our decision following.

4. "fixed resistor"

This term appears in claim 4. Patent Owner contends that "fixed resistor" should be construed consistent with its ordinary meaning to mean "a device that provides fixed resistance and whose primary function is resisting current flow." Prelim. Resp. 42.

We do not need to construe this term in light of our decision following.

C. Overview of the References

1. MR810 Manual (Ex. 1006)

The MR810 Manual describes a respiratory humidification system similar to that shown in Figure 1 of the '345 patent, reproduced *supra*. The system may operate in two modes, depending whether a breathing tube of the "heated" or "unheated" type is connected to the apparatus. The MR810 system automatically determines which type of heating tube is connected by measuring the impedance of the heater wire circuit. If the apparatus detects an impedance in the range 10–28 ohms, the MR810 will automatically institute the heater-wire mode of control. Ex. 1006, 13. If no heater wire is detected, the MR810 initiates the non-heater wire mode. *Id.* at 14.

2. Gradon (Ex. 1005)

Gradon discloses a breathing system similar to that described in the '345 patent and the MR810 manual. Gradon is cited by Petitioner for its disclosure of an electrical circuit having a temperature sensor with a characteristic impedance located near the patient end of the breathing tube. Pet. 35. Figure 5 of Gradon, annotated by Petitioner, follows:

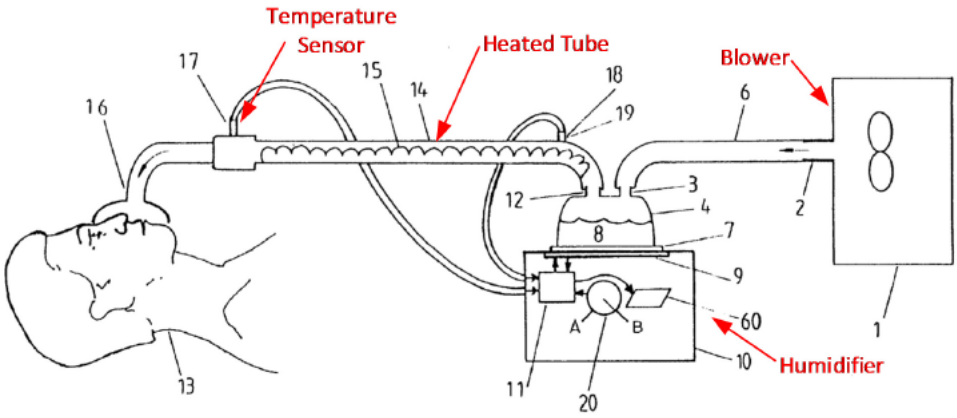


FIG. 5

3. Edirisuriya, (Ex. 1004) and Figley (Ex. 1029)

Edirisuriya discloses another air delivery system for respiratory humidification. Petitioner relies on Edrisuriya as disclosing "use of a heater wire itself to transmit signals between measurement sensors positioned on the breathing conduit and a controller." Pet. 36.

Figley is a respiratory system for supplying breathing gases to a patient through a cannula. In Figley, the cannula connector includes a resistor to identify the type and characteristics of the device. Pet. 39.

4. Johnson (Ex. 1007)

Johnson describes using a thermistor or resistor to indicate a particular battery installed in a communications device. Pet. 54–56.

D. Anticipation by MR810 Manual (Claims 1, 2, 4–7, 10, and 11)

Petitioner identifies the heater wire circuit described in the MR810 manual as meeting the identification element limitation in the challenged claims. Pet. 25 (claim element [1.5]). Our construction of the terms "heater wire" and "identification element" as used in claims 1, 2, and 4–7 requires them to be separate components. *See supra.* Accordingly, we determine that for claims 1, 2, and 4–7, Petitioner has not demonstrated that this limitation is met by the MR810 Manual, which does not disclose separate components. Petitioner has, therefore, not demonstrated a reasonable likelihood of prevailing on this challenge.

Based on our construction of "heater wire including an identification element" in claims 10 and 11, however, we determine that the heater wire described in the MR810 Manual does meet the "identification element" limitation in those claims. However, claims 10 and 11 contain the added limitation: "wherein said characteristic impedance is compared with a plurality of predetermined impedance ranges." Patent Owner asserts that the MR810 Manual does not meet this limitation. Prelim. Resp. 47–49. We are persuaded by this argument. As discussed *supra*, the MR810 apparatus determines whether the impedance of the heater wire falls within the range 10–28 ohms. There is no comparison with a plurality of ranges as these

claims require. We, therefore, conclude that Petitioner has not demonstrated a reasonable likelihood of prevailing on this challenge to claims 10 and 11.[5]

E. Obviousness Based on MR810 Manual, Gradon, Edirisuriya, and Figley (Claims 1–3, 5–7, 10, and 11)

1. Claims 1–3, 5–7

In its obviousness challenge to these claims, Petitioner contends that a person of ordinary skill would have combined the MR810 Manual, Gradon, Edirisuriya, and Figley. Pet. 40–46. Patent Owner contends that this is "impermissible hindsight reconstruction, using the challenged claims as a starting point to combine individual elements from the prior art in a multi-step process." Prelim. Resp. 55. Patent Owner points out that the MR810 Manual does not disclose a separate identification element. *Id.* We agree as to these claims. *See* discussion *supra.*

Patent Owner further asserts that Gradon discloses using thermistors as temperature sensors connected using external wires, not as identification elements connected to heater wires. *Id.* Further, Patent Owner asserts that Edirisuriya also does not teach that thermistors can be identification elements. Finally, Patent Owner argues: "because Petitioners fail to show that a [person of ordinary skill] would have combined the first two references on which Petitioners rely, Petitioners certainly fail to show that a [person of ordinary skill] would have proceeded to combine all four of the references." *Id.* at 60.

We are not persuaded by Petitioner's obviousness analysis of claims 1–3 and 5–7 involving these four references. None of the references, except possibly Figley, discloses what could be considered the separate

[5] We note that the same limitation appears in claims 6 and 7, discussed elsewhere in this decision.

identification element recited in these claims and missing from the MR810 Manual. And we find no convincing rationale for why a person of ordinary skill would have added Figley's fixed resistor to the heater wire in the MR810 apparatus, which already provides identification of conduit types.

Instead, Patent Owner presents a convoluted argument in which Gradon's thermistor is first added to the MR810 to measure flow or temperature, the MR810's heater wires are then modified to transmit signals between measurement sensors as in Edirisuriya, and finally, Figley's fixed resistor is substituted for Gradon's thermistor— which was placed there for an entirely different purpose. As the Federal Circuit recently reminded us: "Since *KSR*, we have repeatedly explained that obviousness findings grounded in common sense must contain explicit and clear reasoning providing some rational underpinning why common sense compels a finding of obviousness." *In re Van Os*, 844 F. 3d 1359, 1361 (Fed. Cir. 2017) (citations and internal quotation marks omitted).

We determine, therefore, that on this record, Petitioner has failed to demonstrate a reasonable likelihood of prevailing on this challenge.

2. Claims 10 and 11

Based on our construction of "heater wire including an identification element" in the context of these claims, we determine that the heater wire described in the MR810 Manual also meets the "identification element" limitation. Petitioner relies on the MR810 Manual alone to meet the limitation of these claims calling for a "comparison with a plurality of ranges." Pet. 53–54 (*see* claim elements [10.2] and [11.2], referring back to [6.2]). However, we have determined that the MR810 does not meet this limitation. *See* discussion *supra*. We are persuaded, therefore, that

Petitioner has failed to demonstrate a reasonable likelihood of prevailing on this challenge.

F. Obviousness Based on MR810 Manual, Gradon, Edirisuriya, and Johnson (Claims 1–7, 10, 11)

1. Claims 1–7

Our decision on this challenge follows from the previous discussion of claims 1–3 and 5–7. In this challenge, Johnson's thermistor or resistor, used to indicate a particular battery installed in a communications device, replaces Figley's resistor. Pet. 56–58. Patent Owner's response challenges Petitioner's reliance on Johnson as non-analogous art. Prelim. Resp. 64–67. Whether or not Johnson is analogous art, for the same reasons discussed above with respect to Figley, we are not persuaded by Petitioner's argument that a person of ordinary skill would have applied Johnson's thermistor or resistor to the MR810 as called for in the challenged claims.

2. Claims 10 and 11

Petitioner relies on Johnson and the MR810 Manual to meet the limitation of these claims calling for a "comparison with a plurality of ranges." Pet. 63–64 (*see* claim elements [10.2] and [11.2], referring back to [6.2]). However, we have determined that the MR810 does not meet this limitation. *See* discussion *supra*. As to Johnson, we are not persuaded that a person of ordinary skill would have applied Johnson's thermistor or resistor to the MR810 for the reasons stated above with respect to Figley. We are persuaded, therefore, that Petitioner has failed to demonstrate a reasonable likelihood of prevailing on this challenge.

IV. ORDER

It is, therefore,

ORDERED that the Petition is denied and no *inter partes* review is instituted.

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