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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 95/001,684 | 07/11/2011 | RE41,886 E | ENZH.255771 | 2547 |
| 5251 | 7590 | 12/06/2016 | EXAMINER | |
| SHOOK, HARDY & BACON LLP INTELLECTUAL PROPERTY DEPARTMENT 2555 GRAND BLVD KANSAS CITY, MO 64108-2613 | | | DIAMOND, ALAN D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3991 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 12/06/2016 | PAPER |

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Spectrum Brands, Inc.
Requester

v.

Patent of
Energizer Brands, LLC¹
Patent Owner and Appellant

Appeal 2016-005093
Reexamination Control 95/001,684
Patent RE 41,886 E
Technology Center 3900

Before ROMULO H. DELMENDO, RICHARD M. LEBOVITZ, and
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

ROBERTSON, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ Patent Owner provided notice that the real party-in-interest changed from Eveready Battery Company, Inc. to Energizer Brands, LLC in an assignment recorded at Reel 36019/Frame 814 on July 24, 2015 in a paper entitled “NOTICE OF CHANGE IN REAL PARTY-IN-INTEREST”.

Patent Owner Energizer Brands, LLC (“Patent Owner”) appeals the Examiner’s decision under 35 U.S.C. §§ 134(b) and 315(a) (pre-AIA) to reject claims 1–14 and 25–74.² Third-Party Requester Spectrum Brands, Inc. (hereinafter “Requester”) urges that the Examiner’s decision must be affirmed.³ We have jurisdiction under 35 U.S.C. §§ 134(b) and 315(a). We affirm the Examiner’s decision to reject claims 1–14 and 25–74.

STATEMENT OF THE CASE

United States Reissued Patent RE 41,886 E (hereinafter the “’886 Patent”), which is the subject of the current *inter partes* reexamination, issued to Jack W. Marple on October 26, 2010. The ’886 Patent is a reissued patent of U.S. Patent No. 7,157,185, which issued from Application No. 10/977,775, and claims to be a continuation of Application No. 10/164,239, which issued as U.S. Patent No. 6,849,360 (hereinafter the “’360 Patent”). The ’360 Patent is the subject of *inter partes* reexamination Control No. 95/001,683 (hereinafter the “’360 Patent reexamination,” in which a decision on appeal was rendered by this Board on April 9, 2015 affirming the Examiner’s decision to reject the claims. (Decision on Appeal in Appeal No. 2014-006751, hereinafter the “’360 Decision.”) The Board’s ’360 Decision was affirmed by the United States Court of Appeals for the

² See Patent Owner’s Appeal Brief 1 (filed November 17, 2014) (hereinafter “App. Br.”) Examiner’s Answer (mailed April 15, 2015) (hereinafter “Ans.”); Right of Appeal Notice (mailed August 15, 2014) (hereinafter “RAN.”).

³ See Requester’s Respondent Brief (filed March 27, 2015) (hereinafter “Resp. Br.”).

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Federal Circuit on May 31, 2016. *See Eveready Battery Co., Inc. v. Spectrum Brands, Inc.*, 650 Fed. Appx. 985 (Fed. Cir. 2016.)

We are also informed by Patent Owner that the '886 Patent and the '360 Patent were the subject of district court proceedings that have been dismissed. (App. Br. 1.)

We heard oral arguments from counsels for both Patent Owner and Requester on October 19, 2016, a transcript of which was entered into the electronic record on November 14, 2016.

The '886 Patent relates to a non-aqueous electrochemical cell including a lithium active anode material and an iron disulfide active cathode material, where the anode to cathode input ratio is less than or equal to 1.0. (Col. 1, ll. 24–28.) The '886 Patent states that the energy density for the cell “can be improved by approximately 20 to 25% while only increasing the volume of the cathode coating solids by approximately 10% through a unique and novel cathode coating formulation.” (Col. 2, ll. 50–55.) The '886 Patent discloses that the electrochemical cell has an anode underbalance, or an anode to cathode (A/C) ratio of less than or equal to 1.0. (Col. 2, ll. 45–50.) The '886 Patent discloses further that the A/C ratio is calculated using the “interfacial electrode width,” which is defined in the patent as the “linear dimension that shares an interfacial area between the cathode and the anode.” ('886 Patent, col. 4, l. 63 – col. 5, l. 13.)

Claim 1, which is illustrative of the appealed subject matter, reads as follows:

1. An electrochemical cell comprising a nonaqueous electrolyte, an anode and a cathode assembly, the electrolyte comprising a solvent, the cathode assembly comprising a

metallic cathode current collector having two major surfaces and a cathode coating disposed on at least one of the two major surfaces, the coating comprising iron disulfide, and the anode comprising metallic lithium, wherein the interfacial anode to cathode input ratio is less than or equal to 1.0.

(App. Br. 78 Claims App'x.)

The Examiner maintained the following grounds of rejection⁴ under 35 U.S.C. § 102:

I. Claims 1, 2, and 26 as anticipated by Kaun⁵ as evidenced by Declaration of Dr. Gerbrand Ceder under 37 C.F.R. § 1.132 executed on July 11, 2011 and filed with the Request for Reexamination (“First Ceder Declaration”) (Issue 1);

II. Claims 1, 2, 26-28, 30, 33-36, 40, 42, 46, 48, 49, 55, 57, 64, and 65 as anticipated by Spillman⁶ as evidenced by the First Ceder Declaration (Issue 2);

The Examiner also maintained numerous grounds of rejection under 35 U.S.C. § 103, summarized below with respect to the primary references relied upon:

III. Claims 3-5, 28, 37, 38, 45, 47, 50-52, 55, 58, and 61-63 as obvious over Spillman as evidenced by the First Ceder Declaration, or in further combination with Watanabe,⁷ Marple,⁸ or Beatty⁹ (Issues 3-6);

⁴ The Examiner's rejections are also identified with respect to the issues identified by Patent Owner in the Appeal Brief. (App. Br. 2-6.)

⁵ U.S. Pat. No. 4,764,437, issued Aug. 16, 1988.

⁶ U.S. Pat. No. 6,165,638, issued Dec. 26, 2000.

⁷ U.S. Pat. No. 6,083,644, issued July 4, 2000.

⁸ U.S. Pat. No. 4,963,445, issued Oct. 16, 1990.

IV. Claims 1–14 and 25–74 as obvious over Gan¹⁰ as evidenced by the First Ceder Declaration, or in further combination with Watanabe, Manna,¹¹ Liu,¹² Marple, Beatty, Marugan,¹³ Ilic,¹⁴ Anderman,¹⁵ Timrex¹⁶ (Issues 7-24);

V. Claims 1–8, 11-13, 25-28, 30, 33–42, 45-57, 61-69, and 74 as obvious over Leger,¹⁷ as evidenced by the First Ceder Declaration, or in further combination with Munshi,¹⁸ Watanabe, Marple, Beatty, Marugan, Ilic, Anderman, and/or Timrex (Issues 25-39);

VI. Claims 1–5, 26-28, 33-38, 40, 45-52, 55, 56, 58, and 61-65 as obvious over Smesko¹⁹ as evidenced by the First Ceder Declaration, or in further combination with Marple, Watanabe, or Beatty (Issues 40-43);

VII. Claims 1–3 and 26-28 as obvious over Nagaura²⁰ as evidenced by the First Ceder Declaration, or in further combination with Watanabe (Issues 44-45); and

VIII. Claims 1, 26-28, and 30 as obvious over Davis²¹ as evidenced by the First Ceder Declaration, or in further combination with Watanabe (Issues 46-47).

⁹ U.S. Pat. No. 4,049,882, issued Sept. 20, 1977.

¹⁰ EP 0 930 664 A2, published July 21, 1999.

¹¹ US Pub. No. 2002/0172868 A1, published Nov. 21, 2002.

¹² WO 99/44246, published Sept. 2, 1999.

¹³ U.S. Pat. No. 6,455,202 B1, issued Sept. 24, 2002.

¹⁴ U.S. Pat. No. 5,158,722, issued Oct. 27, 1992.

¹⁵ U.S. Pat. No. 4,853,305, issued Aug. 1, 1989.

¹⁶ Brochure entitled "TIMREX® Solutions for Alkaline Batteries" (2000).

¹⁷ U.S. Pat. No. 4,952,330, issued Aug. 28, 1990.

¹⁸ U.S. Pat. No. 6,627,353, issued Sept. 30, 2003.

¹⁹ U.S. Pat. No. 5,569,553, issued Oct. 29, 1996.

²⁰ U.S. Pat. No. 4,687,716, issued Aug. 18, 1987.

In addition to the prior art cited in the rejections, Requester relies on additional evidence as noted in the Evidence Appendix to the Respondent Brief. (Resp. Br. 33.)

Patent Owner relies on additional evidence as noted in the Evidence Appendix to the Appeal Brief. (App. Br. 83-84.)

We have considered Patent Owner's and Requester's evidence in this decision as further discussed *infra*.

*Substantial New Question of Patentability*²²

Patent Owner contends that the rejections based on Gan, Leger, and Nagaura are improper because they do not raise a substantial new question of patentability (SNQ), such references having been considered in the reissue proceeding leading to the '886 Patent.²³ (App. Br. 12-14; Reb. Br. 1-6.) Patent Owner further cites *In re Swanson*, 540 F.3d 1368, 1380 (Fed. Cir. 2008) and *In re Recreative Technologies Corp.*, 83 F.3d 1394, 1396-97 (Fed. Cir. 1996), which relate to *ex parte* reexaminations to support its position. (See App. Br. 12.)

²¹ U.S. Pat. No. 4,450,214, issued May 22, 1984.

²² The current reexamination was filed on July 11, 2011, which is prior to the enactment of the America Invents Act, and thus the Substantial New Question of Patentability standard applies.

²³ Patent Owner asserts that the Gan reference considered during the reissue proceeding was U.S. Patent No. 6,171,729, "which is substantially identical to the European version of Gan" at issue in the current reexamination. (App. Br. 12.)

We do not have jurisdiction to consider this issue. In particular, 35 U.S.C. § 312(a) (pre-AIA), which governs determinations by the Director with respect to *inter partes* reexaminations states, in pertinent part:

“the Director shall determine whether a substantial new question of patentability affecting any claim of the patent concerned is raised by the request, with or without consideration of other patents or printed publications.”

In addition, 35 U.S.C. § 312(c) (pre-AIA) states (emphasis added): “A *determination by the Director under subsection (a) shall be final and non-appealable.*”

By contrast, 35 U.S.C. § 303(c), which governs determinations by the Director in *ex parte* reexaminations, states (emphases added): “A determination by the Director pursuant to subsection (a) of this section *that no substantial new question of patentability has been raised will be final and nonappealable.*”

Further, the Federal Register Notice setting forth the procedure for obtaining review of an SNQ determination in an *ex parte* reexamination states: “The procedure set forth in this notice does not apply to *inter partes* reexamination proceedings. A determination by the USPTO in an *inter partes* reexamination either that no SNQ has been raised or that a reference raises a SNQ is final and non-appealable. *See* 35 U.S.C. 312(c).” 75 Fed. Reg. 36,357 (June 25, 2010).

Thus, it is clear that, with respect to *inter partes* reexaminations, both the determination by the Director of an SNQ and a determination of no SNQ are final and non-appealable, whereas with *ex parte* reexaminations, only the

determination of no SNQ is final and non-appealable. Stated another way, in *ex parte* reexaminations, a Patent Owner who follows the correct procedure may appeal a determination finding a SNQ, whereas in *inter partes* reexaminations, a Patent Owner may not appeal a determination finding a SNQ. Rather, a Patent Owner dissatisfied with the determination finding a SNQ in an *inter partes* reexamination may challenge such a determination by way of a timely filed petition to the Director.

Accordingly, we do not have jurisdiction to decide Patent Owner's contention that Gan, Leger, and Nagaura fail to raise a substantial new question of patentability.

PRIOR ART REJECTIONS

Reliance on First Ceder Declaration

As noted above, the First Ceder Declaration is cited as evidence in all of the rejections on appeal. Patent Owner contends that the Examiner improperly relied on the First Ceder Declaration in rejecting the claims on appeal, because the First Ceder Declaration is used not to explain the content of the patents or printed publications relied upon, but to supplement the disclosures of the prior art. (App. Br. 9-12.)

The Examiner's position is that the First Ceder Declaration explains the contents of the references relied upon in the rejections, by further explaining the jellyroll battery structure disclosed in the references. (RAN 78.) Requester agrees with the Examiner, that the First Ceder Declaration were used to show what a person of ordinary skill in the art would have

understood about a jellyroll structure, which is disclosed in Gan, for example. (Resp't Br. 6-7.)

Patent Owner points to the Examiner's discussion of the First Ceder Declaration in the rejections, and in particular the Examiner's discussion of paragraphs 24 and 25 of the First Ceder Declaration, to make the argument that the First Ceder Declaration was used to supplement the teachings of the prior art, rather than explain the prior art. (App. Br. 9, citing RAN 8-9 and 37.) Patent Owner argues that the conclusion of obviousness made by the Examiner is evidence of this, because it relies on information that is only found in the First Ceder Declaration with respect to the conclusion that the anode and cathode in a jellyroll battery should overlap as much as possible. (App. Br. 10-11.)

The Board rejected a similar argument from Patent Owner in the appeal in '360 Patent reexamination, in which Patent Owner had argued that the Examiner improperly relied on the First Ceder Declaration in rejecting the claims as obvious over Gan, using the same rationale as set forth by the Examiner in the instant reexamination and affirmed by the Federal Circuit in the related reexamination. ('360 Decision pp. 8, 13-14, *see* discussion of Gan rejection *infra*; *Eveready Battery* 650 Fed. Appx. at *989.) As acknowledged by Patent Owner, the First Ceder Declaration in the '360 Patent reexamination is the same First Ceder Declaration in the current reexamination. (Or. Hr'g Trans. p. 13, ll. 20-24.) Accordingly, we decline to revisit this issue and determine that the Examiner's reliance on the First Ceder Declaration was proper for similar reasons as set forth in the '360 Decision.

Rejection IV – Obviousness Rejections based on Gan

As explained above, the Federal Circuit affirmed the Board's decision in the '360 Patent reexamination affirming the Examiner's rejections of the claims based on the Gan reference. *Eveready Battery* 650 Fed. Appx. at *989. The Board's decision on appeal in the '360 Patent reexamination was addressed in Patent Owner's Rebuttal Brief, which asserts that many issues in the current reexamination differ from the issues decided in the Board's '360 Decision, as a result of significant differences in the prosecution history, evidence, and arguments. (Reb. Br. 1.) However, the Rebuttal Brief appears to simply point to perceived errors in the '360 Decision, rather than identify what aspects of the record in the current reexamination are different from the '360 reexamination. (See Reb. Br. 9, 19.)

The only difference between the independent claims in the '360 Patent and the '886 Patent is the recitation of a nonaqueous electrolyte in the '886 independent claims, which limitations Patent Owner does not argue separately.²⁴

The Examiner's findings and reasoning for rejecting the claims as obvious in this reexamination are nearly identical to the rejection set forth in the '360 Patent reexamination. (See '360 Decision 7-8; RAN 8-9.)

Notwithstanding the arguments already addressed above, Patent Owner makes similar arguments with respect to the rejection based on Gan

²⁴ During reexamination of the '360 Patent, dependent claims 28 and 33 were added reciting a non-aqueous electrolyte comprising one or more organic solvents, such claims were also rejected and not argued separately in the '360 Patent reexamination.

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as in the '360 Patent reexamination. (*See* '360 Decision 8-9; App. Br. 8, 15-28, 47-53.)

Patent Owner argues:

Further, the results achieved by implementing the teachings of the '886 patent were unexpected, in that the results did not reduce battery capacity as would be expected. *See* Ex.A1, First White Dec. ¶¶21, 22; *See also* pages 105-107 of Transcript (Ex.A18)(Court weighing evidence of secondary considerations). In fact, battery capacity is increased, as recognized by Consumer Reports (Ex.A 7), which recently rated the Eveready Li/FeS₂ batteries as the only “excellent” and “recommended” batteries among all those tested. *See also*, Ex.A1, First White Dec. ¶22.

(App. Br. 18.)

In addition, for dependent claims 26, 34, and 36, which recite that interfacial A/C input ratio is less than or equal to 0.95, Patent Owner contends that the rejection relies on the position that the electrochemical cell of Gan can be constructed as a jellyroll while avoiding wasted material, and does not supply any reason for constructing a jellyroll electrochemical cell having the recited interfacial A/C input ratio. (App. Br. 53-54.)

For dependent claims 48-65, which recite a particular formula for calculating the interfacial A/C ratio, Patent Owner contends that the rejection does not point to any disclosures in Gan for certain variables recited in the claims. (App. Br. 54.) For claims 70-73, Patent Owner contends that “[t]here is not the slightest indication in Gan that Gan’s alkali metal electrochemical cell should contain from about 90.0 to 94.0 percent by weight of iron disulfide.” (App. Br. 55.)

DISCUSSION

At the outset, we observe that Patent Owner does not argue any of the additional references beyond Gan. As such, our comments below apply equally to all the rejections identified as Rejection IV above, all of the rejections based on Gan.

The Federal Circuit held that the Board's '360 Decision affirming the Examiner's rejections of the claims based on Gan was supported by substantial evidence. *Eveready Battery* 650 Fed. Appx. at *987-989. As discussed above, independent claims 1 and 33 on appeal in the instant reexamination differ from the independent claims in the '360 Patent in the recitation of a nonaqueous electrolyte in the '886 Patent independent claims. The obviousness of this limitation was not disputed and thus does not change our conclusions. Thus, because the findings of fact and analysis of the Gan rejection in the '360 Decision equally applies in the present appeal, we adopt and incorporate by reference those portions of the '360 Decision.²⁵ ('360 Decision 10-16.)

We take this opportunity to address expressly Patent Owner's arguments pertaining to unexpected results. As outlined above, Patent Owner contends that one of ordinary skill in the art would have expected

²⁵ We observe that the Declaration of Dr. Gerbrand Ceder dated January 4, 2013("Third Ceder Declaration"), referred to on page 13 of the '360 Decision with references to Pedicini (U.S. Patent No. 4,794,056, issued December 27, 1988) and the Handbook of Batteries (Linden, Handbook of Batteries, 3rd Ed. 2002) does not appear to be of record in the present reexamination. However, Pedicini and the Handbook of Batteries are also of record in the present reexamination. (*See* RAN 93; App. Br., Evidence App'x, Exh. A12.)

battery capacity to be reduced in implementing the teachings of the '886 Patent, whereas Patent Owner contends that battery capacity is increased unexpectedly by implementing the teachings of the '886 Patent, citing to the Declaration Under 37 C.F.R. § 1.132 of Ralph E. White dated March 2, 2012 (the "First White Declaration"), portions of a transcript of District Court proceedings,^{26, 27} and Consumer Reports.²⁸ (App. Br. 18.)

The Examiner found this evidence unpersuasive, because "[t]he comparison with alkaline or nickel oxyhydroxide batteries in the [Consumer Reports] article is not a fair comparison in view of the fact that the prior art is directed to lithium batteries such as the Li/FeS₂ cell." (RAN 98.) The Examiner also found that the exact A/C input ratios and battery structures for the Energizer batteries allegedly produced in accordance with the '886 Patent and the comparative batteries are not known, such that a definitive conclusion with respect to unexpected results cannot be reached. (RAN 98-99.) The Examiner again points to Gan for the position that Gan discloses that swelling occurs in in alkali metal electrochemical cells, which Gan solves by employing an A/C capacity ratio balanced to improve cell swelling without detracting appreciably from cell efficiency. (RAN 99-100.)

²⁶ Transcript of Preliminary Injunction Hearing of October 30, 2008, *Energizer v. Spectrum*, US District Court of Western District of Wisconsin, Case No. 08-CV-00431. (Exhibit Y to Request)

²⁷ We observe that in the cited portion of the District Court Transcript contains references to evidence of copying and commercial success. (Trans. p. 106, ll. 12-22.) We have not been directed to such evidence of commercial success and copying on this record.

²⁸ Consumer Reports, December, 2011 Issue at page 7.

The First White Declaration sets forth the position that one of ordinary skill in the art would have used excess lithium anode prior to the '886 Patent, because lithium anode would not react uniformly and consistently across its entire length and width, and as a result one of ordinary skill in the art would not have expected a lithium/iron disulfide battery with a total anode to cathode ratio of less than one would still provide the full capacity of the cell. (First White Decl. ¶¶19, 21.) Accordingly, the First White Declaration states that it would have been unexpected and surprising that full battery capacity was realized with a cell having an interfacial anode to cathode capacity of less than or equal to one. (First White Decl. ¶22.) The First White Declaration states that based on firsthand knowledge, the Energizer lithium/iron disulfide batteries sold today have an interfacial anode to cathode capacity ratios less than one, which contributes to their increased capacity, and that Consumer Reports rated Energizer's lithium/iron disulfide battery as the longest lasting battery out of twelve different AA batteries tested. (First White Decl. ¶22.)

We have considered the evidence of unexpected results presented by Patent Owner and we are not persuaded that such evidence, when weighed against the evidence in favor of obviousness, is sufficient to support a finding of nonobviousness. That is, as discussed above, the First White Declaration, in opining that a cell having an interfacial anode to cathode capacity of less than or equal to one produces unexpected results, begins with the premise that as of the time of the invention, one of ordinary skill in the art would have selected an anode overbalance, i.e., an anode to cathode capacity ratio of greater than one. (First White Decl. ¶21.)

However, as discussed by the Examiner, and previously discussed in the '360 Decision, Gan discloses A/C ratios of less than or equal to one, without detracting from cell efficiency. ('360 Decision, p. 10-12; Gan, Paras. [0001], [0031], [0039], [0040].) Thus, there is evidence of record contradicting the premise in support of the opinions set forth in the First White Declaration regarding unexpected results, namely the existence of cells having an anode to cathode capacity of less than or equal to one.

In addition, as to the position that the increased capacity reflected in the Consumer Reports is in part due to the interfacial anode to cathode capacity ratio, Patent Owner directs us to no details regarding the other batteries tested in Consumer Reports, and none of the other batteries tested therein appear to be lithium batteries having a Li/FeS₂ cell, which were known in the prior art as evidenced by Gan and to which the claims are directed. (*See* Consumer Reports, p. 7, listing only Energizer Batteries under “Lithium Batteries”.) Thus, it is not possible to discern, based on this record, how much the interfacial A/C ratio contributes to the increased capacity and whether such results would have been unexpected, particularly in view of the teachings of Gan. Accordingly, the evidence in the record is insufficient to support the statements in the First White Declaration.

Although not directly argued by Patent Owner, the Examiner also observed that the '886 Patent states in column 2, lines 50-55: “We have discovered, unexpectedly, that the energy density for the cell both volumetrically and gravimetrically can be improved by approximately 20 to 25% while only increasing the volume of the cathode coating solids by

approximately 10% through a unique and novel cathode coating formulation.” (RAN 98.) As noted by the Examiner, the ’886 Patent does not provide any comparative data to support this statement. (RAN 98.) There is also unrebutted testimony on the record suggesting that such calculations are inaccurate, and that the increase in discharge capacity would have been expected when properly taking all variables into account. (*See* First Ceder Declaration, ¶¶112-115.)

Accordingly, for the reasons discussed above, we are of the view that when the evidence of record is evaluated as a whole, the evidence in favor of obviousness outweighs the evidence in favor of non-obviousness.

Claims 26, 34, and 36

As discussed above, Patent Owner contends that the rejection relies on the position that the electrochemical cell of Gan can be constructed as a jellyroll while avoiding wasted material, and does not supply any reason for constructing a jellyroll electrochemical cell having the recited interfacial A/C input ratio less than or equal to 0.95. (App. Br. 53-54.)

The Examiner’s position appears to be that Gan discloses A/C ratios of about 0.68 to about 0.96 (falling within the claimed range), which is not limited to any particular combination of anode and cathode. (RAN 8, 112, citing to Gan, claims 3 and 9.)

As noted in the Federal Circuit Decision, the Board previously observed that the claims of the ’360 Patent did not require any specific ratio, only that the ratio not be overbalanced by having an excess of anode capacity. (*Eveready Battery* 650 Fed. Appx. at *989; ’360 Decision 15.)

However, consistent with the Examiner's findings above, we acknowledged that Gan disclosed the experimental results used to produce the A/C ratio range of 0.96 to 0.68 related to Li/SVO electrochemical cells, but that "the skilled working reading Gan would have recognized that while the specific A/C range was determined by an Li/SVO cell, it would have been broadly applicable to other cathode materials." ('360 Decision 12-13.) The Examiner's findings with respect to claim 3 of Gan, which recites that the "anode-to-cathode capacity ratio is from about 0.68 to about 0.96," and claim 9 of Gan, which depends from claim 3 and recites that the active material is a metal sulfide, are consistent with the '360 Decision.

Given that claims 26, 34, and 36 only require an interfacial A/C input ratio of 0.95 or less, which is at the high end of the ratios disclosed by Gan, we agree that the ranges recited would have been obvious to one of ordinary skill in the art. *See In re Peterson*, 315 F.3d 1325, 1330 (Fed Cir. 2003) ("the existence of overlapping or encompassing ranges shifts the burden to the applicant to show that his invention would not have been obvious."). The evidence of record indicates that the amount of non-overlap that would need to be present in a jellyroll assembly between the anode and cathode having an anode-to-cathode capacity ratio particularly at the lower end of the range of about 0.68 to about 0.96 in order to result in an interfacial A/C input ratio greater than 0.95 would be wasteful and not be accommodated in practice. (First Ceder Decl. ¶28.)

Thus, we affirm the Examiner's Decision that claims 26, 34, and 36 would have been obvious to one of ordinary skill in the art.

Claims 48-65

The Examiner's position is that the formula in claim 48 is directed to the same subject matter disclosed in claim 1, because the recited formula is the only formula for calculating interfacial A/C input ratio disclosed in the '886 Patent. (RAN 90-91, citing '886 Patent, cols. 4 and 5.) The Examiner stated that the formula would be met by the jellyroll configuration disclosed in Gan, which would result in a number of the variables dropping out of the equation. (RAN 91.)

As discussed above, Patent Owner contends that notwithstanding the Examiner's position, the rejection does not point to any disclosures in Gan for parameters affecting the interfacial capacities such as the anode capacity including foil thickness and density of lithium foil and various capacities affecting the cathode capacity recited in the claims. (App. Br. 54.)

However, despite Patent Owner's arguments in this regard, Patent Owner does not appear to refute the Examiner's position that the equation would be satisfied based on the battery structure of a jellyroll assembly and the A/C capacity ratio disclosed in Gan. In addition, we have not been directed to any other way to calculate the interfacial A/C input ratio that would support the position that a change in the way such ratio is calculated would produce an interfacial A/C input ratio that would not fall within the scope of claim 1. Accordingly, we affirm the Examiner's decision to reject claims 48-65.

Claims 70-73

As discussed above, Patent Owner contends that “[t]here is not the slightest indication in Gan that Gan’s alkali metal electrochemical cell should contain from about 90.0 to 94.0 percent by weight of iron disulfide.” (App. Br. 55.)

The Examiner found that “Gan teaches that the iron disulfide is present in the cathode in the range of about 80 to about 99 weight percent (see p. 4, lines 4-7). This weight percent range completely encompasses the claimed range of from 90.0 to 94.0 weight percent, and thus renders it obvious.” (RAN 10, *see also* RAN 25-26.)

Patent Owner does not explain, much less address why the Examiner’s rationale is in error. Accordingly, we affirm the Examiner’s rejection of claims 70-73.

Rejections I-III and V–VIII

The Federal Circuit declined to address any of the other rejections on appeal in the ’360 Decision, which are similar to the additional rejections in the instant appeal, with the exception of the rejections based on Nagaura and Davis. *Eveready Battery* 650 Fed. Appx. at *989. We likewise find it unnecessary to address the additional rejections in this appeal. In addition, because we have affirmed the Examiner’s rejections above, which include all of the claims on appeal, we find it unnecessary to reach the remaining grounds of rejection. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984); *cf. In re Gleave*, 560 F.3d 1331, 1338 (Fed. Cir. 2009). *See also* 37 C.F.R. 41.77 (a) (“The Patent Trial and Appeal Board ... may affirm

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or reverse each decision of the examiner on all issues raised on each appealed claim”) and *Gleave*, 560 F.3d at 1338.

CONCLUSION

We affirm the Examiner’s rejections based on Gan (Rejection IV).

DECISION

The Examiner’s decision to reject claims 1–14 and 25–74 is affirmed.

In accordance with 37 C.F.R. § 41.79(a)(1), the “[p]arties to the appeal may file a request for rehearing of the decision within one month of the date of: . . . [t]he original decision of the Board under § 41.77(a).” A request for rehearing must be in compliance with 37 C.F.R. § 41.79(b). Comments in opposition to the request and additional requests for rehearing must be in accordance with 37 C.F.R. § 41.79(c) & (d), respectively. Under 37 C.F.R. § 41.79(e), the times for requesting rehearing under paragraph (a) of this section, for requesting further rehearing under paragraph (d) of this section, and for submitting comments under paragraph (c) of this section may not be extended.

An appeal to the United States Court of Appeals for the Federal Circuit under 35 U.S.C. §§ 141-144 and 315 and 37 C.F.R. § 1.983 for an *inter partes* reexamination proceeding “commenced” on or after November 2, 2002 may not be taken “until all parties' rights to request rehearing have been exhausted, at which time the decision of the Board is final and

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appealable by any party to the appeal to the Board.” 37 C.F.R. § 41.81. *See also* MPEP § 2682 (8th ed., Rev. 7, July 2008).

AFFIRMED

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