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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/771,940	09/01/2015	Seung Jae HWANG	JLE0130US	7540
23413	7590	11/15/2019	EXAMINER	
CANTOR COLBURN LLP 20 Church Street 22nd Floor Hartford, CT 06103			HANDVILLE, BRIAN	
			ART UNIT	PAPER NUMBER
			1783	
			NOTIFICATION DATE	DELIVERY MODE
			11/15/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* SEUNG JAE HWANG

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Appeal 2018-008158  
Application 14/771,940  
Technology Center 1700

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Before GRACE KARAFFA OBERMANN, DONNA M. PRAISS, and  
DEBRA L. DENNETT, *Administrative Patent Judges*.

PRAISS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant<sup>1</sup> appeals under 35 U.S.C. § 134(a) from the Examiner's decision<sup>2</sup> finally rejecting claims 1–5 and 7–11.<sup>3</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Amogreentech Co., Ltd. is identified as the real party in interest. Appeal Brief, filed January 26, 2018 (“Appeal Br.”) 3.

<sup>2</sup> Final Office Action, dated November 15, 2017 (“Final Act.”).

<sup>3</sup> Appellant requests “[r]ejoinder of Claims 12-14.” Appeal Br. 13. Claims 12–14 are not before us in this Appeal because they are not the subject of the Examiner's decision from which this Appeal is taken. 37 C.F.R. § 41.31(a)(1).

STATEMENT OF THE CASE

*Background*

The subject matter on appeal relates to “a slim type insulator” having an insulator core “provided with a plurality of fine pores of a three-dimensional structure capable of trapping air.” Specification, filed September 1, 2015 (“Spec.”) 1:10–13. According to the Specification, a core member comprises “a multi-layered laminate of nanowebs made of nanofibers . . . obtained by electrospinning a polymer material with a low thermal conductivity.” *Id.* at 1:13–15.

Of the appealed claims, claim 1 is the sole independent claim. Claim 1 is representative of the subject matter on appeal, and reproduced below:

1. An insulator core having a three-dimensional fine-pore structure, comprising:

two or more porous nanoweb layers, wherein each of the two or more porous nanoweb layers is formed of nanofibers having a diameter of less than 3  $\mu\text{m}$  so as to form fine pores where air is trapped, and the nanofibers are made of a polymer having a low thermal conductivity.

Appeal Br. 15 (Claims Appendix).

The Examiner maintains the following rejections over the following references on appeal. Ans. 3–9; Final Act. 2–8.

*The References*

<b>Name</b>	<b>Reference</b>	<b>Date</b>
Field	US 2005/0025952 A1	Feb. 3, 2005
Shaffer	US 2005/0272338 A1	Dec. 8, 2005
Lee	US 2013/0078527 A1	Mar. 28, 2013
Masahito	JP 2004162914 A	June 10, 2004

*The Rejections*

<b>Claim(s)</b>	<b>35 U.S.C. §</b>	<b>Reference(s)</b>
1, 2, 4, 5, 7–10	103(a)	Masahito, Lee
3	103(a)	Masahito, Lee, Shaffer
11	103(a)	Masahito, Lee, Field

OPINION

After considering the evidence presented in this Appeal and each of Appellant’s contentions, we are not persuaded the Examiner erred harmfully.

Appellant argues the rejection of claim 1 and points out that claims 2–5 and 7–11 depend from claim 1. Appeal Br. 9. Accordingly, and based upon the lack of arguments directed to the subsidiary rejections, claims 2–5 and 7–11 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

Appellant asserts that the Examiner erred harmfully in combining the teachings of Masahito and Lee because Lee is non-analogous art. Appeal Br. 10. Appellant contends that Lee is non-analogous art because it is not in the same field of endeavor. *Id.* at 11. Appellant asserts that Lee is directed to a battery separator with pores for shut-down of current flow rather than an insulator core that enhances thermal insulation using a nanoweb having fine pores to trap air, thus creating an air pocket. *Id.* Appellant also contends that Lee is not directed to and does not address any heat-insulating problems and, therefore, is not reasonably pertinent to the particular problem addressed by the inventor. *Id.* at 12. According to Appellant, Lee discloses thermal stability of the battery and not thermal stability of the battery separator itself. *Id.* at 11. Appellant argues that because Lee’s separator is designed to be melt-down or collapsed above a predetermined temperature, it cannot be

used as an insulator core because thermal stability is ensured by Lee's shut-down function. *Id.* at 12.

In response to Appellant's arguments, the Examiner finds that Lee is in the same field of endeavor because Appellant's claims are directed to a general insulator core and Lee discloses a core layer between a cathode and an anode within a battery that thermally insulates. Ans. 10 (citing Lee Abstract, ¶ 3). The Examiner finds that Lee teaches or suggests the battery separator provides heat resistance (or thermal insulation) between the cathode and anode of the battery. *Id.* at 11. The Examiner finds that Lee's porous nanoweb provides a dual function of facilitating a battery shutdown mechanism as well as providing heat resistance. *Id.* (citing Lee Abstract, ¶ 20); *see id.* at 12 ("Lee teaches (abstract) the porous nanoweb includes first and second nanofilaments, which facilitates to perform heat resistance simultaneously with a shutdown function."). The Examiner also finds that Lee's discussion of the battery's thermal stability does not suggest that Lee's battery separator does not provide thermal insulation. *Id.* at 11 (citing Lee ¶ 4).

The preponderance of the evidence cited in this Appeal record supports the Examiner's rejection of claim 1. Appellant does not dispute the Examiner's finding (Ans. 11) that Lee's separator functions to provide heat resistance. The record supports the Examiner's finding. Lee Abstract, ¶ 13. Appellant also does not dispute the Examiner's finding (Ans. 11) that heat resistance is thermal insulation. Therefore, even if Lee is not in the same field of endeavor as Masahito or Appellant's insulation material, Lee discloses a material that provides heat resistance. Therefore, even if Lee is not in the same field of endeavor as Masahito or Appellant's insulation

material, Lee discloses a material that provides thermal insulation, therefore it is reasonably pertinent to the problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992).

Moreover, because claim 1 is directed generally to a structure having thermal insulation, the fact that Lee's material provides heat resistance as well as a shutdown function in a battery separator application does not render it non-analogous art. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007) ("In determining whether the subject matter of a . . . claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim. If the claim extends to what is obvious, it is . . . [unpatentable] under § 103."); *In re Talkowski*, Appeal No. 2012-002290, at 15 (PTAB May 24, 2013) (Informative) ("§ 103 obviousness considerations have not been restricted to an analysis based solely from an inventor's point of view. Rather, § 103 analysis focuses on what is claimed apart from the motivation of the inventor.") (citing *In re Dillon*, 919 F.2d 688 (Fed. Cir. 1990) (en banc)).

Accordingly, for these reasons and those the Examiner provides, we affirm the Examiner's rejection of claims 1–5 and 7–11 under § 103(a) over the cited prior art references.

## CONCLUSION

The Examiner's rejections of claims 1–5 and 7–11 under 35 U.S.C. § 103(a) is affirmed.

In summary:

<b>Claim(s) Rejected</b>	<b>35 U.S.C. §</b>	<b>References/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 2, 4, 5, 7-10	103(a)	Masahito, Lee	1, 2, 4, 5, 7-10	
3	103(a)	Masahito, Lee, Shaffer	3	
11	103(a)	Masahito, Lee, Field	11	
<b>Outcome</b>			1-5, 7-11	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED