

Filed on behalf of Eve Energy Co., Ltd.

By: Timothy J. Maier
Siddhesh V. Pandit
Christopher J. Maier
Maier & Maier PLLC
345 S. Patrick Street
Alexandria, VA 22314
Tel: (703) 740-8322
Fax: (703) 991-7071
tjm@maierandmaier.com
svp@maierandmaier.com
cjm@maierandmaier.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EVE ENERGY CO., LTD.
Petitioner

v.

VARTA MICROBATTERY GMBH,
Patent Owner

Case IPR2021-00474

**PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO.
9,496,581**

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

VARTA Ex. 2022 Page 1 of 98

Table of Contents

I.	INTRODUCTION	1
II.	MANDATORY NOTICES (37 C.F.R. § 42.8(a)(1)).....	1
A.	Real Party-in-Interest	1
B.	Related Matters	1
C.	Lead and Back-up Counsel	4
III.	SERVICE INFORMATION	4
IV.	PAYMENT OF FEES	4
V.	TIME FOR FILING PETITION	5
VI.	GROUND FOR STANDING (37 C.F.R. § 42.104(a)).....	5
VII.	35 U.S.C. § 325(d) and § 314(a)	5
VIII.	THE TECHNICAL BACKGROUND RELATED TO THE ‘581 PATENT	7
IX.	RELIEF SOUGHT	8
X.	OVERVIEW OF THE ‘581 PATENT	10
A.	Summary of the ‘581 Patent	10
B.	Relevant Prosecution History	16
XI.	THE PERSON OF ORDINARY SKILL IN THE ART	16
XII.	CLAIM CONSTRUCTION	16
XIII.	OVERVIEW OF THE APPLIED REFERENCES	17
A.	U.S. Patent No. 3,748,182 to Brown (“Brown”)	17
B.	The ‘572 Publication (“Higuchi”)	20
C.	U.S. Patent Application No. 2006/0124973 (“Arai”)	23
D.	Japanese Patent Publication H07-153488 (“Kageyama”)	26
E.	EP 0829105 to Okochi <i>et al.</i> (“Okochi”)	27

F. Japanese Patent Publication P2003-31266A (“Kano”)	29
XIV. UNPATENTABILITY OF THE CHALLENGED CLAIMS AS OF FEBRUARY 9, 2009	30
A. Ground 1: Claims 1-12 Are Unpatentable under 35 U.S.C. § 103 over Brown, Arai, Okochi, and Higuchi	31
1. A POSITA Would Have Been Motivated to Combine Brown, Arai, Okochi, and Higuchi	31
2. Claim 1	33
a. Preamble – “A button cell comprising:”	33
b. “a housing cup and a housing top separated from one another by an electrically insulating seal and which form a housing with a flat bottom area and a flat top area parallel to it”	34
c. “and an electrode-separator assembly within the housing comprising at least one positive and at least one negative electrode in the form of flat layers and connected to one another by at least one flat separator”	35
d. “wherein the electrode layers are aligned essentially at right angles to the flat bottom area and the flat top area”	38
e. “and the electrode-separator assembly is a spiral winding having end faces defining side surfaces of the spiral winding facing in an axial direction relative to the flat bottom area and the flat top area”	41
f. “and one of the electrodes connects to the flat bottom area or the flat top area via an output conductor comprising a foil resting flat between an end face of the spiral winding and the flat top or the flat bottom area to which it is connected.”	44
3. Claim 2	49
4. Claim 3	52
5. Claim 4	54
6. Claim 5	57
7. Claim 6	58
8. Claim 7	61
9. Claim 8	62

10. Claim 9.....	64
11. Claim 10.....	66
12. Claim 11.....	70
13. Claim 12.....	71
B. Ground 2: Claim 13 Is Unpatentable Under 35 U.S.C. § 103 Over the Combination of Brown, in view of Arai, Okochi, Higuchi, and Kageyama.....	72
1. A POSITA Would Have Been Motivated to Modify Brown, in view of the teachings of Arai, Okochi, Higuchi, and Kageyama.....	72
2. Claim 13.....	74
XV. Ground 3: Claims 1-2, 4-5, and 8-11 are Anticipated By Kano under 35 U.S.C. § 102	77
1. Claim 1	77
a. Preamble – “A button cell comprising:”	77
b. “a housing cup and a housing top separated from one another by an electrically insulating seal and which form a housing with a flat bottom area and a flat top area parallel to it”	78
c. “and an electrode-separator assembly within the housing comprising at least one positive and at least one negative electrode in the form of flat layers and connected to one another by at least one flat separator”	79
d. “wherein the electrode layers are aligned essentially at right angles to the flat bottom area and the flat top area”	80
e. “and the electrode-separator assembly is a spiral winding having end faces defining side surfaces of the spiral winding facing in an axial direction relative to the flat bottom area and the flat top area”	80
f. “and one of the electrodes connects to the flat bottom area or the flat top area via an output conductor comprising a foil resting flat between an end face of the spiral winding and the flat top or the flat bottom area to which it is connected.”	82
2. Claim 2	82
3. Claim 4	83
4. Claim 5	84

5. Claim 8	84
6. Claim 9	85
7. Claim 10	85
8. Claim 11	87
XVI. CONCLUSION	87
XVII. CERTIFICATION OF SERVICE (37 C.F.R. §§ 42.6(e), 42.105(a))	89
XVIII. CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATION.....	90

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.