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Maginot, Moore & Beck LLP One Indiana Square, Suite 2200 Indianapolis, IN 46204			D'ANIELLO, NICHOLAS P	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte FELIX EBERLE, ALEXANDER REITZLE, and
BERENGAR KRIEG

Appeal 2019-001353
Application 14/364,323
Technology Center 1700

Before MICHELLE N. ANKENBRAND, *Acting Vice Chief Administrative
Patent Judge*, DONNA M. PRAISS, and JEFFREY R. SNAY,
Administrative Patent Judges.

SNAY, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellants² appeal under 35 U.S.C. § 134(a) the Examiner’s decision
rejecting claims 1, 2, and 4–15. We have jurisdiction under
35 U.S.C. § 6(b).

We REVERSE.

¹ Our Decision refers to the Specification filed June 11, 2014 (“Spec.”), the Examiner’s Answer dated Oct. 2, 2018 (“Ans.”), the Appeal Brief filed May 9, 2018 (“Appeal Br.”), and the Reply Brief dated Nov. 30, 2018 (“Reply Br.”).

² Applicants Robert Bosch GmbH and Samsung SDI Co., Ltd. are identified as the real parties in interest. Appeal Br. 2.

BACKGROUND

The subject matter on appeal relates to battery cells, batteries, and motor vehicles (*see, e.g.*, claims 1, 8, and 9). Appeal Br. 18–20 (Claims Appendix). The Specification describes a battery cell with a membrane configured to expand outwardly in the event of an increase in pressure within the battery cell. Spec. 4:24–30. Pressure-induced movement of the membrane causes a conductor to electrically connect the battery cell poles. *Id.* at 4:30–37.

According to the Specification, impacts or vibrations can result in premature movement of the conductor. *Id.* at 6:18–23. To address that problem, an anti-vibration element is provided, which restricts oscillation of the conductor while permitting conductor movement due to pressure-induced expansion of the membrane. *Id.* at 6:23–29.

Independent claim 1 is illustrative and is reproduced below from the Claims Appendix of the Appeal Brief. Limitations at issue are italicized.

1. A battery cell, comprising:
 - a battery cell housing that includes a membrane configured to curve outwards in response to an increase in pressure within the battery cell;
 - a first pole electrically conductively connected to the battery cell housing;
 - a second pole electrically insulated from the battery cell housing;
 - a conductor that is disposed in direct contact with an outer side of the battery cell housing, that is electrically conductively connected to the battery cell housing, and that is configured such that as the membrane curves outward, the membrane lifts at least one side of the conductor off from the battery cell housing and into direct contact with the second pole to electrically conductively connect the second pole to the first pole; and

an anti-vibration member configured to engage the conductor in at least one of a form-fitting and friction-fitting fashion to inhibit oscillation of the conductor.

REJECTIONS ON APPEAL

- I. Claims 1, 4, and 7–15³ under 35 U.S.C. § 103(a) as being unpatentable over Byun '197⁴ in view of Chun;⁵
- II. Claim 2 as being unpatentable under 35 U.S.C. § 103(a) over Byun '197 in view of Chun and further in view of Byun '421⁶ and Byun '205;⁷ and
- III. Claims 5 and 6 as being unpatentable under 35 U.S.C. § 103(a) over Byun '197 in view of Chun and further in view of Byun '421.

DISCUSSION

Rejection I

Claims 1, 4, and 7–15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Byun '197 in view of Chun.

The Examiner finds Byun '197 discloses a battery cell including, among other things, first and second poles, a membrane, and a conductor

³ The Examiner does not identify claims 14 and 15 in the statement of the rejection (Ans. 3), but addresses the rejection of those claims in the body of rejection (*id.* at 9).

⁴ Byun et al., US 2011/0183197 A1, published July 28, 2011 (“Byun '197”).

⁵ Chun, US 2010/0279162 A1, published Nov. 4, 2010 (“Chun”).

⁶ Byun et al., US 2010/0291421 A1, published Nov. 18, 2010 (“Byun '421”).

⁷ Byun et al., US 2010/0227205 A1, published Sept. 9, 2010 (“Byun '205”).

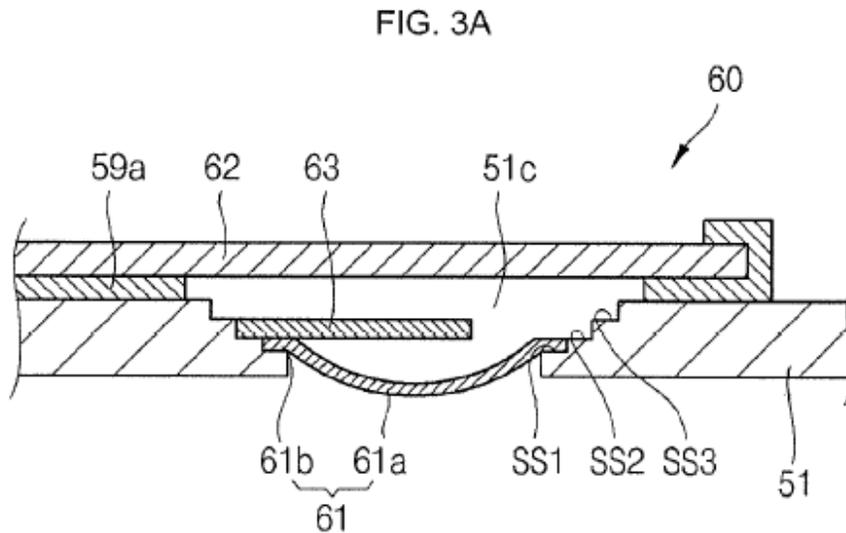


Figure 3A is a cross sectional view showing portion A of Figure 2.

As depicted in Figure 3A above, the short circuit member includes first short circuit plate 61, second short circuit plate 62, and third short circuit plate 63. *Id.* ¶ 52. When battery pressure exceeds a threshold, plate 61 urges plate 63 to contact plate 62, resulting in a short circuit. *Id.* ¶ 55. This short circuit condition is illustrated in Figure 3B of Byun '197, which is reproduced below.

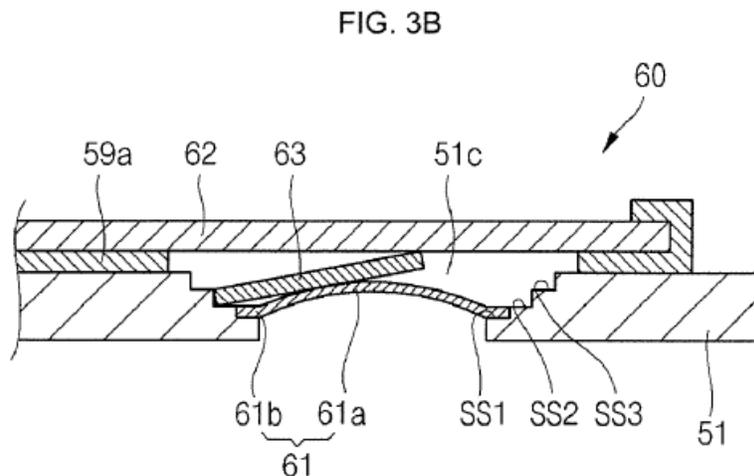


Figure 3B is a cross sectional view showing when the third short circuit plate contacts the second short circuit plate.

Chun is directed to an energy storage device capable of, among other things, suppressing relative movement of an electrode winding body in a can. Chun ¶ 2. Figure 10 of Chun is reproduced below.

【Figure 10】

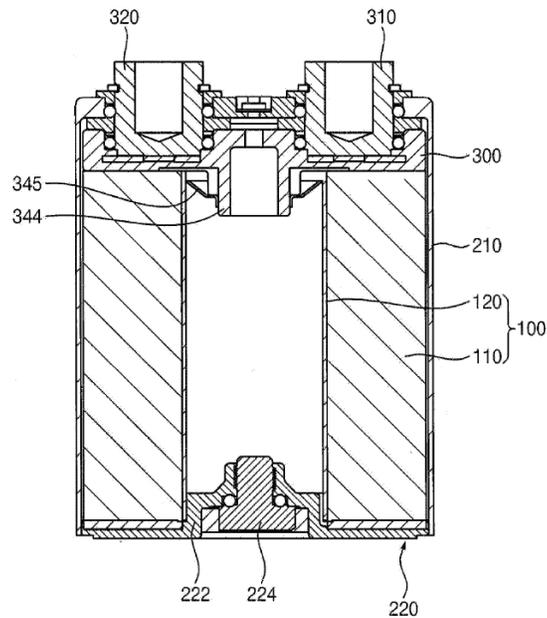


Figure 10 is a cross-sectional view of an electric energy storage device.

Chun teaches that gas by-products generated during operation of the energy storage device increase the internal pressure, causing the electrode winding body to move and negatively affect electrical connections. *Id.* ¶ 13. To address that issue, Chun fastens anti-vibration member 345 on the end of projection 344 of terminal block 300. *Id.* ¶¶ 57, 66, 68, 69. Anti-vibration member 345 includes blade part 345b having good resilience characteristics so that, once projection 344 is inserted into winding core 120, a strong

friction force is applied between blade part 345b and the inner surface of winding core 120. *Id.* ¶¶ 69, 70. Chun teaches that this arrangement makes it “impossible to readily separate the first projection **344** from the winding core **120** even when an axial load is applied in an upward direction of the winding core.” *Id.* ¶ 70.

Appellants argue the Examiner has not articulated how or why one would arrange Chun’s anti-vibration member in Byun ’197’s battery. Appeal Br. 7–13; Reply Br. 2–6. Appellants’ argument is persuasive.

The Examiner has not articulated some reasoning with rational underpinning why one of ordinary skill in the art would have added Chun’s anti-vibration member to Byun ’197’s battery. “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

The Examiner states that one of ordinary skill in the art would have appreciated the benefits of Chun’s anti-vibration member in Byun ’197’s battery device because unwanted movement of Byun ’197’s short circuit plate clearly would have been undesirable. Ans. 12. However, the evidence cited in this appeal record does not support the Examiner’s finding that an ordinarily skilled artisan would have considered the vibrational movement of Byun ’197’s short circuit plate problematic. Nor does the Examiner explain how Chun’s anti-vibration member might be configured and positioned in Byun ’197’s device without prohibiting the necessary short circuit connection under excessive battery pressure. As Appellants explain,

engaging Byun '197's third short circuit plate 63 with Chun's anti-vibration member would prevent plate 63 from engaging a battery pole and causing the desired short circuit. Appeal Br. 12. The Examiner's response that Byun '197's gasket 54 could have been extended to serve as an anti-vibration member (Ans. 13) lacks evidentiary support and adequate reasoning and, therefore, is conclusory.

For the foregoing reasons, we are persuaded that Appellants identify reversible error in the Examiner's § 103(a) rejection of claim 1 over Byun '197 and Chun, as well as claims 4, 7, and 10–15, which depend from claim 1. The Examiner relies on similar reasoning to reject independent claims 8 and 9. Accordingly, we do not sustain the Examiner's § 103 rejection of claims 1, 4, and 7–15 over Byun '197 and Chun.

Rejections II and III

Dependent claim 2 is rejected as being unpatentable under 35 U.S.C. § 103(a) over Byun '197 in view of Chun and further in view of Byun '421 and Byun '205.

Dependent claims 5 and 6 are rejected as being unpatentable under 35 U.S.C. § 103(a) over Byun '197 in view of Chun and further in view of Byun '421.

The Examiner does not rely on Byun '421 or Byun '205 to remedy the deficiencies discussed above with regard to the § 103 rejection of claim 1 over Byun '197 and Chun. Therefore, we do not sustain the § 103 rejections of claims 2, 5, and 6 for the same reasons.

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DECISION

On the record before us and for the reasons given in Appellant's Appeal Brief and above, we *reverse* the Examiner's rejections.

REVERSED