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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANDREAS GAUGLER, KONRAD HOLL, STEFAN STOCK,
and WERNER SCHREIBER

Appeal 2019-003084
Application 14/786,199
Technology Center 1700

BEFORE MARK NAGUMO, JEFFREY B. ROBERTSON, and
JAMES C. HOUSEL, *Administrative Patent Judges*.

ROBERTSON, *Administrative Patent Judge*.

DECISION ON APPEAL¹

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the Examiner's decision to reject claims 13, 14, 18–21, 26, and 30. Appeal Br. 1. We have jurisdiction under 35 U.S.C. § 6(b).

¹ This Decision includes citations to the following documents: Specification filed October 22, 2015 (“Spec.”); Final Office Action mailed May 16, 2018 (“Final Act.”); Appeal Brief filed September 5, 2018 (“Appeal Br.”); Examiner's Answer mailed January 8, 2019 (“Ans.”); and Reply Brief filed March 8, 2019 (“Reply Br.”).

² We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as VW-VM FORCHUNGSGESELLSCHAFT MBH & CO, KG. Appeal Br. 1.

We REVERSE.

CLAIMED SUBJECT MATTER

Appellant states the invention relates to a battery having a housing in which at least one individual cell with at least one positive electrode and at least one negative electrode is arranged where a pole stud electrically connected to the at least one positive electrode or to the at least one negative electrode is passed through the housing. Spec. ¶ 1. The battery contains an electrical switch that, in the event of an increase in pressure within the housing, interrupts the electrical connection between at least one of the pole studs and the associated at least one electrode. *Id.* Claim 13, reproduced below, is illustrative of the claimed subject matter (Appeal Br. 6, Claims Appendix):

13. A battery comprising:
 - a housing;
 - at least one individual cell arranged in the housing and comprising at least one positive electrode and at least one negative electrode;
 - a positive pole stud passed through the housing and electrically connected to the at least one positive electrode and/or a negative pole stud passed through the housing and electrically connected to the at least one negative electrode;
 - at least one electrical switch which can be pneumatically operated and changes its switching state in the event of an increase in pressure within the housing beyond a threshold value and thereby interrupts the electrical connection between at least one of the pole studs and an associated at least one electrode; and
 - a resetting device with which an electrical connection which is interrupted as a result of a change in the switching state can be re-established without the housing having to be opened,wherein the pole stud has a hollow space partially delimited by a gas impermeable diaphragm, and the pole stud has

a bore connecting the hollow space and the diaphragm to outside of the housing.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Leysieffer et al. hereinafter “Leysieffer”	US 2002/0098410 A1	July 25, 2002
Hironaka et al. hereinafter “Hironaka”	US 2001/0031391 A1	October 18, 2001

REJECTION

1. The Examiner rejected claims 13, 14, 18–21, 26, and 30 under 35 U.S.C. § 103 as obvious over Leysieffer and Hironaka. Final Act. 4–6.

We limit our discussion to claim 13, which is sufficient for disposition of this appeal.

OPINION

The Examiner’s Rejection

The Examiner found Leysieffer discloses a battery comprising a housing, at least one individual cell arranged in the housing with at least one positive electrode and at least one negative electrode, a positive terminal passed through the housing and electrically connected to the at least one positive electrode and/or a negative terminal passed through the housing and

electrically connected to the at least one negative electrode, and at least one electrical switch (flexible assembly 180 in connection with electrical switch 176 and 178) that can interrupt an electrical connection as a result of a change in the switching state. Ans. 4. The Examiner found Leysieffer discloses the terminals have a hollow space partially delimited by a diaphragm and a bore from flexible assembly 180 connecting the hollow space and the diaphragm to the outside of the housing. *Id.* The Examiner found Leysieffer does not disclose the positive and negative poles are pole studs. *Id.*

The Examiner found Hironaka discloses electrode terminals can be pole studs based on the configuration of the battery and how they connect to the lid plate of the battery in respect to the shaft core of the battery. *Id.* at 4–5, citing Hironaka ¶¶ 89, 91. The Examiner determined it would have been obvious to one of ordinary skill in the art to make the electrode terminals pole studs based on the configuration of the battery and how the terminals connect to the lid plate of the battery in respect to the shaft core of the battery. *Id.* at 5.

Appellant's Contentions

Appellant argues the Examiner has not provided sufficient reasoning to combine the elements of Leysieffer and Hironaka in the arrangement recited in claim 13. Appeal Br. 3–4. Appellant argues Leysieffer discloses a safety mechanism where positive and negative electrodes are accommodated in a hermetically sealed housing. *Id.* at 4. Thus, Appellant argues the requirement in claim 13 that a positive and/or negative pole stud is passed through the housing departs from the principle of operation of Leysieffer.

Id. Appellant argues one skilled in the art would not have had an apparent reason to have further incorporated a safety mechanism including a hollow space, a gas-impermeable diaphragm, and a bore into the pole stud as the safety mechanisms in Leysieffer are integrated into the housing. *Id.*; Reply Br. 2–3.

Issue

The dispositive issue is:

Has Appellant identified reversible error in the Examiner’s determination that a battery including a positive and/or negative pole stud passed through a housing where the pole stud includes a hollow space partially delimited by a gas-impermeable diaphragm and a bore connecting the hollow space and the diaphragm to the outside of the housing would have been obvious over Leysieffer and Hironaka?

Discussion

We are persuaded by Appellant’s argument that because the Examiner has provided insufficient reasoning for including a pole stud having a bore connecting the hollow space and the diaphragm to the outside of the housing in Leysieffer, the claimed battery would not have been obvious in view of Leysieffer and Hironaka. In particular, the Examiner has found only that “Hironka discloses that the electrode terminals can be made to be pole studs,” and “the electrode configuration of Leysieffer already has the hollow space, a gas-impermeable diaphragm, and a bore ‘safety mechanism.’” Ans. 4–5, 7.

Missing from the Examiner's rejection is any particular explanation or analysis as to how or why one of ordinary skill in the art would have incorporated a hollow space partially delimited by a gas-impermeable diaphragm and a bore connecting the hollow space and the diaphragm to the outside of the housing in the pole stud, as expressly recited in claim 13. Such explanation is particularly important where the Examiner did not make any findings that Hironaka discloses such a configuration and the "bore" in Leysieffer relied upon by the Examiner appears to be caused by contact pin 182, which extends through contact membrane 178 in a configuration that is separated from and perpendicular to the positive terminal 174. Leysieffer, ¶ 79, Figs. 6, 8, 9. Thus, we agree with Appellant that the Examiner has not provided sufficient reasoning with rational underpinning to support the conclusion that incorporating the pole stud of Hironaka into Leysieffer would render the pole stud configuration recited in claim 13 obvious. "[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).

Accordingly, we reverse the Examiner's decision to reject claims 13, 14, 18–21, 26, and 30.

CONCLUSION

The Examiner's rejections of claims 13, 14, 18–21, 26, and 30 under 35 U.S.C. § 103(a) are reversed.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
13, 14, 18– 21, 26, 30	103	Leysieffer, Hironaka		13, 14, 18– 21, 26, 30

REVERSED