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EXAMINER

MORELLO, JEAN F

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ENRI DUQI, SEBASTIANO CONTI, and SONIA COSTANTINI

Appeal 2019-003229
Application 14/980,373
Technology Center 2800

Before KAREN M. HASTINGS, JEFFREY R. SNAY, and
JANE E. INGLESE, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ seeks our review under 35 U.S.C. § 134(a) of the Examiner's Final Rejection of claims 1–8 and 19–31 under 35 U.S.C. 103(a) as being unpatentable over at least the combined prior art of Combi (US 2008/0315333 A1; pub. Dec. 25, 2008) and Silverbrook (US 2006/0081042

¹ We use the word “Appellant” to refer to the “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies STMicroelectronics S. r. l. as the real party of interest (Appeal Br. 2).

A1; pub. Apr. 20, 2006).² We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We REVERSE.

Claim 1 is illustrative of the claimed subject matter (emphasis added to highlight key disputed limitations):

1. A pressure sensor configured to detect a value of ambient pressure of an environment external to the pressure sensor, comprising:

a first semiconductor body *having an inner buried cavity and a membrane suspended over the buried cavity, a first surface of the membrane defining a top of the buried cavity;*

a second semiconductor body different from the first semiconductor body and having a recess, the second semiconductor body being hermetically coupled to the first semiconductor body in such a way that said recess faces a second surface of the membrane *opposite to the first surface, thus defining a sealed cavity having an internal pressure value that provides a pressure-reference value;* and

a channel formed at least in part in the first semiconductor body and configured to set the buried cavity in fluidic communication with the environment external to the pressure sensor,

said membrane being configured to undergo deflection as a function of a pressure difference between the pressure-reference value in the sealed cavity and a pressure value in the buried cavity.

² An additional reference, Robert (US 2013/0000411 A1; pub. Jan. 3, 2013), was applied to dependent claims 8 and 28 and is listed in the Summary Table located at the end of this Decision. A discussion of this reference is not needed for disposition of this appeal.

Independent claims 19 and 24 are also directed to a pressure sensor having similar structure of a buried cavity with a membrane suspended over it, a sealed cavity opposite and overlapping the buried cavity, and a channel configured to set the buried cavity in fluidic communication with the external environment (Appeal Br. Claims Appendix 26, 27).

ANALYSIS

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). “[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.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), quoted with approval in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

After review of the respective positions provided by Appellant and the Examiner, we conclude that the preponderance of the evidence supports Appellant’s position that the Examiner has not met the burden in this case for substantially the reasons set forth by Appellant in the Briefs. Accordingly, we reverse the Examiner’s § 103 rejections of all the claims on appeal.

We add the following primarily for emphasis.

“[D]uring examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification.” *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1256 (Fed. Cir. 2007) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)).

As stated in *In re Smith*,

The correct inquiry in giving a claim term its broadest reasonable interpretation in light of the specification is not whether the specification proscribes or precludes some broad reading of the claim term adopted by the examiner. And it is not simply an interpretation that is not inconsistent with the specification. It is an interpretation that corresponds with what and how the inventor describes his invention in the specification, *i.e.*, an interpretation that is “consistent with the specification.”

In re Smith Int’l, Inc., 871 F.3d 1375, 1382–83 (Fed. Cir. 2017) (quoting *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997)). *Cf. Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005). (“[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” (Internal citation omitted)).

We agree with Appellant that the broadest reasonable interpretation of “an inner buried cavity,” with a membrane suspended thereover as recited in claim 1 (and claims 19 and 24) and consistent with the Specification does **not** encompass Combi’s “empty space 25” which “remains over the membrane 4” and which “is delimited partly by the walls of the sensor cavity 24” (Combi ¶ 39) orientated upside down as proposed by the Examiner, as the “inner buried cavity” must be inner and buried. As pointed out by Appellant, Combi’s cavity 24/25 is exposed to body 20 that is external to body 21 such that it is not an inner buried cavity to body 21 (Appeal Br. 17; Reply Br. 5, 6).

Thus, the Examiner’s reliance on Figure 5 of Combi orientated upside down to teach or suggest the claimed inner cavity with a membrane suspended over the buried cavity is unfounded. The Examiner does not

proffer sufficient reasoning or rely upon any other reference to cure these deficiencies.

The Examiner also offers some obviousness reasoning with regards to e.g., Figure 6 of Combi, appearing to alternatively assert that one would have closed the channel/access duct 26 that goes to empty space 24/25 and relying on channel 30 in communication with buried cavity 3 in the Figure 6 embodiment (Ans. 5, 6). However, as pointed out by Appellant, Combi teaches that the access duct 26 is required such that the Examiner's proposed modification appears to be based on an impermissible hindsight reconstruction of Combi (Appeal Br. 20, e.g., Combi ¶71; Reply Br. 9). A preponderance of the evidence supports Appellant's position that the proposed modification of Combi to close off channel 26 would be based on improper hindsight reconstruction for the reasons discussed by Appellant in the Briefs. The fact finder must be aware "of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. at 421 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966) (warning against a "temptation to read into the prior art the teachings of the invention in issue"))).

Accordingly, we reverse the rejections of claims 1–8 and 19–31 which all rely upon the Examiner's flawed interpretation of the claim language or on an impermissible hindsight reconstruction.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-7, 19-27, 29-31	103	Combi, Silverbrook		1-7, 19- 27, 29-31
8, 28	103	Combi, Silverbrook, Robert		8, 28
Overall Outcome				1-8, 19-31

REVERSED