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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SCOTT E. SOLBERG

Appeal 2019-002876
Application 14/010,076
Technology Center 1700

Before LINDA M. GAUDETTE, JEFFREY B. ROBERTSON, and
JOHN G. NEW, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL¹

The Appellant² appeals under 35 U.S.C. § 134(a) from the Examiner’s decision finally rejecting claims 22–24, 26, 28, and 29 under 35 U.S.C. § 102(a)(1) as anticipated by Chiang (US 2011/0064999 A1, pub. Mar. 17, 2011), and under 35 U.S.C. § 103 as unpatentable over Chiang in view of Sastry (US 2010/0035152 A1, pub. Feb. 11, 2010).³

We REVERSE.

¹ This Decision includes citations to the following documents: Specification filed August 26, 2013 (“Spec.”); Final Office Action dated June 14, 2018 (“Final”); Appeal Brief filed November 13, 2018 (“Appeal Br.”); Examiner’s Answer dated January 22, 2019 (“Ans.”); and Reply Brief filed February 25, 2019 (“Reply Br.”).

² We use the word “Appellant” to refer to “Applicant” as defined in 37 C.F.R. § 1.42. The Appellant identifies the real party in interest as Palo Alto Research Center Incorporated. Appeal Br. 2.

³ We have jurisdiction under 35 U.S.C. § 6(b).

CLAIMED SUBJECT MATTER

The invention relates to a near-three-dimensional (“near 3D”) structure. Spec. ¶ 14. According to the Specification, a one dimensional (“1D”) structure, i.e., a simple stripe of material, results from one circular or one rectangular slot in an extrusion head. *Id.* ¶ 12. Similarly, a two-dimensional (“2D”) structure results from extrusion heads having multiple slots. *Id.* The stripes in a near-3D structure are more complex than those in a 2D structure, e.g., the widths of the stripes vary along their lengths. *Id.* ¶ 14. The stripes in the inventive, near-3D structure are described as “periodically modulated stripes.” *Id.*

Figure 5, reproduced below, illustrates an embodiment of the inventive, near-3D structure. Spec. ¶ 8.

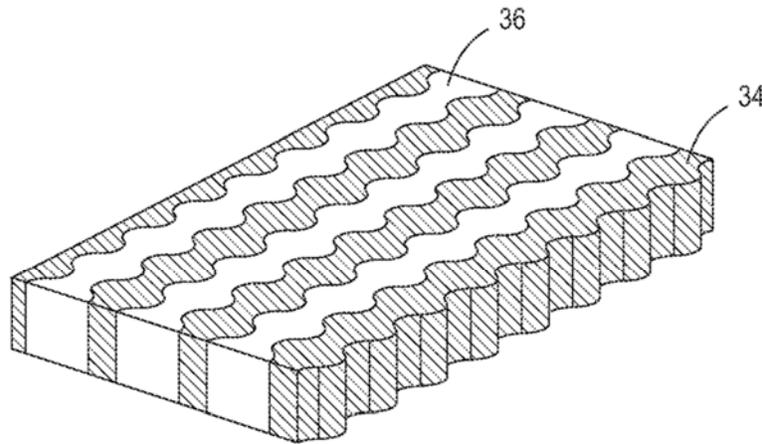


FIG. 5

Figure 5 shows an embodiment of a near-3D structure comprising first extrudate 34 having a first pattern of varying widths, and second extrudate 36 having a complementary second pattern. *Id.* ¶ 15. “[T]he wide portions and narrow portions of the second pattern match up to the narrow portions and wide portions of the first pattern.” *Id.*

Claim 22, reproduced below, is illustrative of the claimed subject matter:

22. A structure, comprising:

a first longitudinal stripe of a first material containing at least one electrochemically active material on a surface, the first stripe having a first continuous, periodic sinusoidal pattern of wider and narrower portions about a centerline of the first stripe; and

a second longitudinal stripe of a second material adjacent to, and in contact with, the first stripe, the second stripe having a second continuous, periodic sinusoidal pattern of wider and narrower portions about a centerline of the second stripe complementary to the first pattern.

Appeal Br. 9 (Claims Appendix).

OPINION

The Examiner rejected claims 22–24, 26, 28, and 29 as anticipated by Chiang. *See* Final 2–4. More specifically, the Examiner found that the claim 22 first and second longitudinal stripes read on anode 12 and cathode 14 in the Chiang Figure 3D embodiment. *Id.* at 2–4. The Examiner’s annotated version of Chiang Figure 3D is reproduced below. *See id.* at 3.

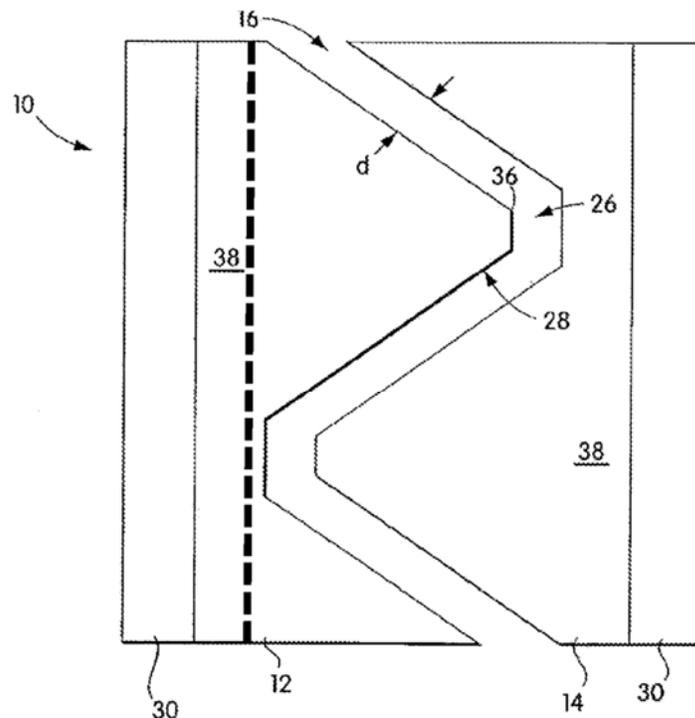


Fig. 3D

Annotated Chiang Figure 3D is a schematic (cross-section) illustration showing battery 10 comprising reticulated structures—anode 12 and cathode 14—each of which is in contact with a respective current collector 30. Chiang ¶¶ 32, 51, 52. The Examiner added a dashed line to identify a centerline of anode 12. Final 3. Chiang discloses that “[t]he reticulations form convexities 28 that are at a separation distance, *d*, from correspondingly-shaped concavities 26.” Chiang ¶ 51. Anode 12 and cathode 14 are separated along their mating interface by a layer or region of electrolyte 16. *Id.* ¶ 53.

The Appellant argues that the Examiner’s dashed line in annotated Chiang Figure 3D does not meet the claim 22 limitation of “a centerline of . . . [a] stripe” of material because the dashed line is not in the center of anode 12, rather, it is to one side of anode 12’s center. Appeal Br. 5. The Examiner argues that “the distribution of the wider and narrower portions about the

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centerline is not specifically defined.” Ans. 9. The Examiner thus contends that the broadest reasonable interpretation of the term “centerline” reads on a line in which the width of the entire stripe varies along the length of the centerline as in the Examiner’s annotated Chiang Figure 3D (Ans. 9), as well as a line in which “the sinusoidal pattern is symmetric about a centerline which bisects a stripe along the longitudinal axis of the stripe” as in Specification Figures 5 and 6 (Final 8).

During examination, claim terms are given their broadest reasonable construction consistent with the Specification. *In re ICON Health & Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007).

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) (citation and internal quotation marks omitted).

The Specification does not include an explicit definition of “centerline,” and the term appears in only paragraph 19 of the written description. *See* Spec. ¶ 19 (“[A]ssuming sinusoidal modulation has shown that the resulting structure has approximately 21% greater periphery while having about 10% less average distance between the centerline of an extruded stripe and the nearest border, compared to a conventional linear extruded structure.”). The American Heritage Dictionary of the English

Language defines “centerline” as “[a] line that bisects something into equal parts.” <https://www.ahdictionary.com/word/search.html?q=centerline>.

Neither the Specification nor the dictionary supports the Examiner’s broad interpretation of the term “centerline.” Accordingly, because the Examiner’s finding that Chiang discloses “a centerline of . . . [a] stripe” of material is based on an overly–broad, unsupported interpretation of the claim 22 term “centerline,” we do not sustain the rejection of claims 22–24, 26, 28, and 29 under 35 U.S.C. § 102(a)(1).

The Examiner also rejected claims 22–24, 26, 28, and 29 as unpatentable over Chiang in view of Sastry. *See* Final 5–7. The Examiner relied on Sastry solely for a suggestion of modifying the surface of Chiang’s convexities 28 and concavities 26 to have a smoother, sinusoidal pattern. *See id.* at 5–6. Because the Examiner has not identified a teaching in Sastry that cures the above-noted deficiency in the Examiner’s findings as to Chiang’s disclosure, we likewise do not sustain the rejection of claims 22–24, 26, 28, and 19 under 35 U.S.C. § 103.

CONCLUSION

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
22–24, 26, 28, 29	102(a)(1)	Chiang		22–24, 26, 28, 29
22–24, 26, 28, 29	103	Chiang, Sastry		22–24, 26, 28, 29
Overall Outcome				22–24, 26, 28, 29

REVERSED