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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte OSWIN OETTINGER and FRANK HILTMANN

Appeal 2017-010108
Application 13/377,245¹
Technology Center 1700

Before TERRY J. OWENS, JEFFREY B. ROBERTSON, and
SHELDON M. MCGEE, *Administrative Patent Judges*.

MCGEE, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134, Appellants seek our review of the
Examiner's rejections of claims 14–16, 18–20, and 26–28. Br. 1.

We have jurisdiction. 35 U.S.C. § 6.

We affirm.

¹ Appellants identify SGL Carbon SE as the real party in interest. Br. 1.

BACKGROUND

The subject matter on appeal is directed to a cathode structure in an electrolytic cell. Spec. 1:3–5.

Claim 14 is illustrative of the appealed subject matter, and is copied below from the Claims Appendix to the Appeal Brief, with emphasis added to the relevant limitation at issue in this appeal:

14. A cathode bottom for an electrolytic cell for producing aluminum, the cathode bottom comprising:

at least one cathode block;

at least one further cathode block disposed at a predetermined distance from said at least one cathode block forming at least one gap therebetween, said at least one further cathode block having a side wall; and

a material configured to be disposed on at least one of said cathode blocks, said material filling said at least one gap and contacting said side wall, *said material including a pre-compressed plate based on expanded graphite.*

Br. 13.

STATEMENT OF THE CASE

The Examiner rejects claims 14–16, 19, 20, and 26–28 under 35 U.S.C. § 103(a) as unpatentable over Bertaud,² in view of Bowman.³ Final Act. 2–8. The Examiner rejects claim 18 as unpatentable over these references and additional prior art. *Id.* at 9.

Bertaud discloses electrolysis cells including multiple cathode blocks that are sealed into contact with each other via “a carbonaceous paste or coating which is based on pitch and coke or anthracite.” Bertaud 1:8–22.

² US 4,488,955, issued Dec. 18, 1984.

³ US 2005/0175062A1, published Aug. 11, 2005.

Relevant to this appeal, the Examiner finds, and Appellants do not dispute, that Bertaud discloses the claimed cathode structure, except for the limitation requiring the sealing “material [to] include[] a pre-compressed plate based on expanded graphite.” Final Act. 3–4; Spec. 4:12–14. The Examiner relies on Bowman to address this difference. *Id.* at 4.

Bowman discloses various sealing materials, including sheets of pre-compressed expanded graphite — also known as “flexible graphite” — for joining electrodes. Bowman ¶¶ 2, 34. Bowman teaches that flexible graphite has advantageous properties including having “an appreciable degree of anisotropy,” being “coherent, with good handling strength, and are suitably compressed.” *Id.* at ¶¶ 48, 50.

Based on this disclosure, the Examiner determines that it would have been obvious for the skilled artisan to modify Bertaud’s cathode structure by substituting the carbonaceous paste filling in favor of Bowman’s pre-compressed expanded graphite. Final Act. 4–5. The Examiner reasons that doing so would yield a cathode structure with the advantages associated with having the flexible graphite as a sealing material — e.g., good strength. *Id.* The Examiner further notes that “[t]he strength and stability of [Bowman’s] graphite sheet . . . is important for Bertaud because Bertaud teaches that unstable carbonaceous pastes can cause ‘fissures such as in the paste may be formed’” by differential expansion, leading to cryolite seepage. Ans. 10 (citing Bertaud 1:24–27).

OPINION

Appellants argue the rejection of claims 14–16, 19, 20, and 26–28 as a group.⁴ We, therefore, select claim 14 as representative and decide the propriety of this rejection on the basis of this claim alone. Claims 15, 16, 19, 20, and 26–28 stand or fall with claim 14. 37 C.F.R. § 41.37(c)(1)(iv). Appellants also do not substantively argue the rejection of claim 18, so this claim likewise stands or falls with claim 14.

We have considered Appellants’ arguments and are unpersuaded that Appellants have identified reversible error in the Examiner’s rejection. *In re Jung*, 637 F.3d 1356, 1365–66 (Fed. Cir. 2011). Therefore, we sustain the obviousness rejections before us based on the findings of fact, conclusions of law, and rebuttals to arguments well-stated by the Examiner in the Final Action and in the Answer. We add the following.

Appellants’ arguments primarily focus on the objective of the invention vis-à-vis the objectives of the cited art. Br. 6–9. According to Appellants, because these objectives differ, the Examiner engaged in impermissible hindsight in rejecting the claims as obvious. *Id.* Such arguments, however, do not reveal error in the Examiner’s obviousness determination.

⁴ We do not consider Appellants’ recitation of claim limitations and general statements that the prior art does not disclose such limitations to be separate arguments for patentability. Br. 10–11. *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[T]he Board [has] reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”).

As our reviewing court makes clear, “[i]n considering motivation in the obviousness analysis, the problem examined is not the specific problem solved by the invention but the general problem that confronted the inventor before the invention was made.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). *See also Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1323 (Fed. Cir. 2005) (“One of ordinary skill in the art need not see the identical problem addressed in the prior art reference to be motivated to apply its teachings.”); *In re Beattie*, 974 F.2d 1309, 1312 (Fed. Cir. 1992) (“[T]he law does not require that the references be combined for the reasons contemplated by the inventor.”).

Thus, in assessing the patentability of claims under Section 103, the Examiner is not constrained to consider only an invention’s purported “objective” as set forth in the application. Rather, “[i]n determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. . . . [A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 419–420 (2007).

Here, not only does the Examiner establish that the various elements recited in the claims were known in the prior art (Final Act. 3–4; Ans. 3–4), the Examiner also provides a suitable rationale for modifying Bertaud’s cathode structure with Bowman’s pre-compressed expanded graphite sealant (Final Act. 4; Ans. 4). Notably, the Examiner provides additional rationale in the Answer (Ans. 10) which goes uncontested by Appellant, i.e., no Reply Brief was filed.

Thus, for these reasons, and those provided by the Examiner, we are of the opinion that Appellants have failed to identify reversible error in the Examiner's rejections of claims 14–16, 18–20, and 26–28. It follows that we sustain the Examiner's rejections of these claims.

DECISION

The Examiner's final decision to reject claims 14–16, 18–20, and 26–28 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED