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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PETER PERLER and PETER SCHWENTER

Appeal 2020-001674
Application 15/471,378
Technology Center 3700

Before JENNIFER D. BAHR, MICHELLE R. OSINSKI, and
SEAN P. O’HANLON, *Administrative Patent Judges*.

O’HANLON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner’s decision to reject claims 1–7. We have jurisdiction over this appeal under 35 U.S.C. § 6(b). We REVERSE.

In explaining our Decision, we refer to the Specification filed March 28, 2017 (“Spec.”), the Final Office Action mailed November 19, 2018 (“Final Act.”), the Appeal Brief filed July 16, 2019 (“Appeal Br.”),²

¹ We use the term “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Z-Systems AG. Appeal Br. 3.

² The Appeal Brief does not include pagination after page 1. We refer herein

the Examiner's Answer mailed November 1, 2019 ("Ans."), and the Reply Brief filed December 31, 2019 ("Reply Br.").

SUMMARY OF THE INVENTION

Appellant's claimed invention relates to ceramic implants. Spec. ¶ 1. Claim 1, the sole independent claim, is reproduced below from page 15 (Claims Appendix) of the Appeal Brief:

1. A method for producing a dental implant, wherein the dental implant has a ceramic endosseous surface area of an endosseous portion, comprising the steps of:
 - in a first step, providing the implant having an intended shape, which includes the ceramic endosseous surface area, said ceramic endosseous surface area comprising a thread having a first region and a second region, wherein said first region comprises crests and upper flank areas of the thread and the second region comprises a thread root, which is disposed between said upper flank areas of said thread and,
 - in a second step, modifying said ceramic endosseous surface area in order to obtain a roughening or porous structure for promoting osseointegration,
 - wherein in the second step, the implant surface is modified in said first region of the thread to a first extent, whereas said second region of the thread is not modified, or is modified to a second extent, said second extent being less than said first extent.

REFERENCES

The Examiner relies on the following prior art references in rejecting the claims on appeal:

Straub	US 6,482,076 B1	Nov. 19, 2002
Amrich	US 2006/0129161 A1	June 15, 2006

to the remaining pages of the Appeal Brief as if numbered consecutively following page 1.

REJECTIONS

- I. Claims 1–3 and 5–7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Amrich.
- II. Claims 3 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Amrich and Voudouris.
- III. Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Amrich, Voudouris, and Straub.

ANALYSIS

Rejection I – Obviousness based on Amrich

In rejecting claim 1, the Examiner finds that Amrich discloses a method for producing an implant substantially as recited, including regions of textured and non-textured surface area. Final Act. 2 (citing Amrich, Fig. 31, ¶ 155). The Examiner finds that “Amrich does not explicitly state the combination of the ribs (crests and upper flank areas of a first region) being textured and the outer surface (thread root of the second region) non-textured.” *Id.* at 3. The Examiner determines that

[i]t would have been obvious to try this combination of texture since there was a recognized problem or need in the art (strong bone integration of a dental implant), a finite number of identified, predictable potential solutions (that any of the surfaces can be textured or non-textured in [0155]), one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (texturing and non-texturing of surfaces are widely used in the dental art) and the scope and contents of the prior art (textured and non-textured dental implants), differences from the claims (which specific regions are textured or non-textured), ordinary skill in the art (texturing of an implant increases osseointegration), and

the objective evidence detailed above would lead to obviousness.

Id. at 3–4.

Appellant argues that “it would not have been ‘obvious to try’ the texturing required by claimed invention.” Appeal Br. 10. Appellant asserts that “Amrich explicitly teaches texturing of the spaces (root) between threads (ribs) and that an advantage is gained by leaving the threads (ribs) non-textured or smooth, contrary to the present invention.” *Id.* at 9–10; *see also id.* at 10 (asserting that “paragraph [155 of Amrich] teaches only that specific areas may be textured and that it is advantageous to not texture the crests, contrary to the present invention” (emphasis omitted)). Appellant contends that, “[w]ithout knowing the present invention, the skilled person does not have the slightest reason to do what the invention claims – given the fact that the prior art teaches that the opposite configuration is advantageous.” *Id.* at 10–11. According to Appellant, “the proposed modification of Amrich does not have a ‘reasonable expectation of success’ as nothing in the prior art, especially the prior art cited by the Examiner (Amrich), would lead one to believe that texturing the implant in the manner required by the present invention would result in success.” Reply Br. 4 (emphasis omitted). We agree with Appellant.

A claimed invention may be “obvious to try” “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007); *see also Bayer Schering Pharma AG v. Barr Labs., Inc.*, 575 F.3d 1341, 1347 (Fed. Cir. 2009) (interpreting *KSR* as “requiring the field of search to be among a ‘finite number of identified’ solutions” and “the identified solutions be ‘predictable’”). “*KSR* posits a situation with a

finite, and in the context of the art, [a] small or easily traversed[] number of options.” *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1364 (Fed. Cir. 2008).

Here, the Examiner has not adequately supported the conclusion of obviousness based on an “obvious to try” rationale. In particular, the Examiner has not shown that a finite number of identified, predictable solutions are known to exist to solve a problem evidenced by design need or market pressure. Amrich discloses an embodiment in which “outer face 322 is at least partially textured, and ribs 326 are non-textured.” Amrich ¶ 155; Fig. 39A. Using the language of claim 1, Amrich discloses a first region that is *not* modified (i.e., non-textured ribs 326) and a second region that is modified (i.e., textured outer face 322). In other words, Amrich discloses a configuration that is opposite to that recited in claim 1, which calls for a modified first region (i.e., textured ribs) and non-modified second region (i.e., non-textured outer face). Amrich further explains that “[l]eaving crests 392 without texture is believed to facilitate the installation of implant 310, for example, by avoiding excessive fragmentation to tissue (e.g., bone) surrounding the distal end of implant 310.” *Id.* Given this disclosure, it is unclear why one of ordinary skill in the art would have had a reasonable expectation of success in modifying Amrich’s implant so that ribs 326 are *textured* and outer face 322 is not textured. Here, absent improper hindsight reconstruction, we fail to see a sufficiently reasoned explanation based on some rational underpinning explaining why one of ordinary skill in the art would have been led to modify Amrich as proposed by the Examiner, and a reason for such modification is not otherwise evident from the record.

Accordingly, for the foregoing reasons, we do not sustain the rejection of claim 1, or its dependent claims 2, 3, and 5–7, as being unpatentable over Amrich.

Rejections II and III – Obviousness based on Amrich and one or more of Voudouris and Straub

These rejections of claims 3–5, which depend from independent claim 1, rely on the same rationale for the conclusion of obviousness that we find deficient for the reasons discussed above in connection with Rejection I. *See* Final Act. 4–5. The Examiner relies on Voudouris and Straub for teaching additional recited features, but does not articulate any findings or reasoning that would cure the aforementioned deficiencies in Rejection I. *See id.* Accordingly, for the same reasons discussed above, we do not sustain the rejections of claims 3–5.

CONCLUSION

In summary,

Claim(s) Rejected	35 U.S.C. §	Reference(s)	Affirmed	Reversed
1–3, 5–7	103(a)	Amrich		1–3, 5–7
3, 5	103(a)	Amrich, Voudouris		3, 5
4	103(a)	Amrich, Voudouris, Straub		4
Overall Outcome				1–7

REVERSED