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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/560,654	12/04/2014	Kyle E. Lappin	265280-232334	8138

23643 7590 11/09/2018

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EXAMINER
SNOW, BRUCE EDWARD

ART UNIT	PAPER NUMBER
3774	

NOTIFICATION DATE	DELIVERY MODE
11/09/2018	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KYLE E. LAPPIN

Appeal 2017-009215
Application 14/560,654
Technology Center 3700

Before RICHARD M. LEBOVITZ, JEFFREY N. FREDMAN, and TIMOTHY G. MAJORS, *Administrative Patent Judges*.

FREDMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal[1,2] under 35 U.S.C. § 134 involving claims to a reverse shoulder orthopaedic implant. The Examiner rejected the claims as obvious. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

Statement of the Case

Background

"During the lifetime of a patient, it may be necessary to perform a total shoulder replacement procedure on the patient as a result of, for

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[1] Appellant identifies the Real Party in Interest as DePuy Synthes Products, Inc., a Johnson & Johnson Company (*see* App. Br. 2).

[2] We have considered and herein refer to the Specification of Dec. 4, 2014 ("Spec."); Final Office Action of Aug. 30, 2016 ("Final Action"); Appeal Brief of Jan. 30, 2017 ("App. Br."); Examiner's Answer of Apr. 18, 2017 ("Ans."); and Reply Brief of June 16, 2017 ("Reply Br.").

example, disease or trauma" (Spec. ¶ 4). "[I]n some cases the patient's natural shoulder, including its soft tissue, has degenerated to a severe degree of joint instability and pain. In many such cases, it may be necessary to change the mechanics of the shoulder." (Spec. ¶ 5). "Reverse shoulder implants are used to do so. As its name suggests, a reverse shoulder implant reverses the anatomy, or structure, of the healthy shoulder" (*id.*).

The Claims

Claims 1–19 are on appeal. Claim 1 is representative and reads as follows:

1. A reverse shoulder orthopaedic implant, comprising:

a humeral prosthesis including a humeral cup and an elongated stem component configured to be implanted into an intramedullary canal of a patient's humerus, and

a glenosphere component having (i) a curved lateral bearing surface configured to articulate with the humeral cup of the humeral prosthesis, and (ii) a medial surface having a tapered bore formed therein,

wherein the glenosphere component has (i) an anterior/posterior width defined by the distance between an anterior-most point of the lateral bearing surface and a posterior-most point of the lateral bearing surface, (ii) a superior/inferior width defined by the distance between a superior-most point of the lateral bearing surface and an inferior-most point of the lateral bearing surface, and (iii) the anterior/posterior width of the glenosphere component is greater than the superior/inferior width of the glenosphere component.

The Rejections

A. The Examiner rejected claims 1–19 under 35 U.S.C. § 103(a) as obvious over Winslow[3] and Splieth[4] (Final Act. 4–8).

B. The Examiner rejected claims 1–19 under 35 U.S.C. § 103(a) as obvious over Winslow and Tornier[5] (Final Act. 8–11).

Because both of the obviousness rejections turn on the same issue and rely upon Winslow, we will consider them together.

The Examiner relies on Winslow for elements of the reverse shoulder orthopaedic implant including the limitation in claim 1 that "the anterior/posterior width of the glenosphere component is greater than the superior/inferior width of the glenosphere component." The Examiner acknowledges that "Winslow does not specifically describe the metaglene attach[]ment component" (Final Act. 5, 9). The Examiner relies upon either Splieth or Tornier to suggest metaglene attachment components consistent with claim 1 (Final Act. 6, 10).

The Examiner finds, regarding the dimensions of the glenosphere component, that "the combination implant would be fully capable of being implanted such that the longitudinal axis of the lateral bearing surface of the glenosphere component extends in an anterior/posterior direction" (Final Act. 3 (emphasis omitted)).

The issue with respect to this rejection is: Does the evidence of record support the Examiner's conclusion that Winslow and Splieth or

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[3] Winslow, US 7,241,314 B1, issued July 10, 2007.
[4] Splieth et al., US 2013/0150973 A1, published June 13, 2013.
[5] Tornier et al., US 7,462,197 B2, issued Dec. 9, 2008.

Tornier suggest a glenosphere component where "the anterior/posterior width of the glenosphere component is greater than the superior/inferior width of the glenosphere component" as required by claim 1?

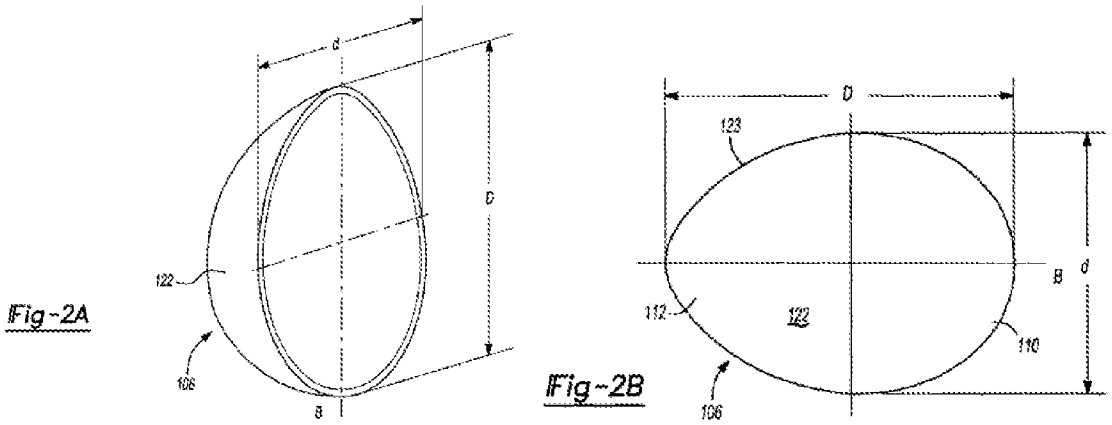
Findings of Fact

1. Winslow teaches

> a reverse shoulder prosthesis. The reverse shoulder prosthesis includes a humeral socket having a concave surface, and a glenoid component having a major diameter and a convex surface for articulating with the concave surface of the socket. The convex surface has a height from the major diameter that is less than a corresponding spherical surface height. The convex surface can be, for example, ovoid.

(Winslow 1:24–31).

2. Figures 2A and 2B of Winslow are reproduced below:



Figures 2A and 2B show the "glenoid component **106** has a convex articulating surface **122** and a planar attachment surface **128**. The convex articulating surface **122** can be ovoid (egg-shaped) and has an axis of symmetry B, a major diameter 'D' along the axis of symmetry, and a minor diameter 'd' orthogonal to the axis B" (Winslow 2:25–30).

3. Winslow teaches the "glenoid component **106** can be attached to the scapula **60** such that the broad end **110** is inferior to the narrow end **110** or conversely" (Winslow 2:41–43).

3. Splieth teaches regarding reverse shoulder prosthesis that:

> In some systems, the baseplate may be fastened to the glenoid cavity of the scapula by a plurality of screws and a glenosphere having a convex joint surface may be screwed into the baseplate using an axial threaded feature and/or taper locked to a periphery of the baseplate. In other systems, the glenosphere may engage the baseplate solely via a taper connection.

(Splieth ¶ 2).

4. Tornier teaches regarding reverse shoulder prosthesis "to obtain . . . immobilization of the glenoidal head **22** on the base **21** in the manner of a Morse cone" (Tornier 4:14–16).

Principles of Law

"[I]f it is established that an examiner has reason to believe that a functional limitation is taught in the single prior art reference, the burden shifts to the applicant to disprove the examiner's belief. An examiner's belief, however, must be tethered to or grounded in some rationale so as to establish a prima facie case of anticipation." *In re Chudik*, 674 Fed. Appx. 1011, 1015 (Fed. Cir. 2017).

Analysis

Appellant contends

> there is no disclosure in Winslow that supports the Examiner's assertions that the glenosphere component of Winslow is capable of being implanted such that that the longitudinal axis "D" can extend in the anterior/posterior direction. As such, the Examiner fails to establish that Winslow expressly teaches

> having a glenosphere component that has the anterior/inferior width greater than the superior/inferior width.

(App. Br. 7). Appellant contends "the Examiner has not set forth any extrinsic evidence that the glenosphere of Winslow is ***necessarily*** capable of being implanted on the scapula such that 'the anterior/posterior width of the glenosphere component is ***greater*** than the superior/inferior width of the glenosphere component' as required by the claims" (App. Br. 8).

Appellant further contends that a "planar attachment surface 128 of the glenoid component 106 of Winslow is configured to be 'attached to an appropriately resected surface of the scapula 60' such that *the major diameter 'D' is oriented along the superior/inferior axis B* and *the minor diameter 'd' is orientated along the anterior/posterior axis*" (App. Br. 8).

The Examiner responds that

> the dimensions of the combination implant allow implantation in claimed functional language orientation. Note that appellant has not claimed any specific size or dimension or relative size of the patient. It is the examiner's position that the combination implant is sized configured to be fully capable of fulfilling the functional language.

(Ans. 10).

While this is a very close case, on the existing record, we agree with Appellant because the language regarding the anterior/posterior width relative to the superior/inferior width of the glenosphere component is reasonably understood as a structural limitation on the claimed orthopaedic implant. The entire implant as claimed, including the humeral cup and elongated stem that articulate with the glenosphere component, must be structured to enable it to be implanted in the orientation required by claim 1.

As Appellant notes, the Examiner does not provide evidence or specific reasoning that Winslow's glenosphere component, rotated ninety degrees from the orientation required by claim 1, would have been capable of being implanted in the orientation required by claim 1. To the extent that Winslow discusses the implantation orientation, Winslow suggests "the "glenoid component **106** can be attached to the scapula **60** such that the broad end **110** is inferior to the narrow end **110** or conversely" (FF 3). Thus, Winslow neither suggests nor provides any reason to implant the device in the orientation required by claim 1. Nor is there evidence that Winslow's device would have been capable, without some structural reconstruction of the coupling components, of being implanted in the orientation required by claim 1.

Conclusion of Law

The evidence of record does not support the Examiner's conclusion that Winslow and Splieth or Tornier suggest a glenosphere component where "the anterior/posterior width of the glenosphere component is greater than the superior/inferior width of the glenosphere component" as required by claim 1.

SUMMARY

In summary, we reverse the rejection of claims 1–19 under 35 U.S.C. § 103(a) as obvious over Winslow and Splieth.

We reverse the rejection of claims 1–19 under 35 U.S.C. § 103(a) as obvious over Winslow and Tornier.

REVERSED