



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
14/675,379 03/31/2015 Dongsuh LEE 17682USAD01 3126

44257 7590 02/01/2019
PATTERSON & SHERIDAN, LLP - - Applied Materials
24 Greenway Plaza, Suite 1600
HOUSTON, TX 77046

Table with 1 column: EXAMINER

NGUYEN, GEORGE BINH MINH

Table with 2 columns: ART UNIT, PAPER NUMBER

3723

Table with 2 columns: NOTIFICATION DATE, DELIVERY MODE

02/01/2019

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Pair_Eofficeaction@pattersonsheridan.com
psdocketing@pattersonsheridan.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DONGSUH LEE, WILLIAM N. STERLING,
BEOM SOO PARK, and SOO YOUNG CHOI

Appeal 2017-011439
Application 14/675,379
Technology Center 3700

Before BRETT C. MARTIN, JEFFREY A. STEPHENS, and
NATHAN A. ENGELS, *Administrative Patent Judges*.

STEPHENS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ seeks our review under 35 U.S.C. § 134(a) from the Examiner's Final Office Action ("Final Act.") rejecting claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b). An oral hearing was held on January 23, 2019.

¹ Appellant is the Applicant, Applied Materials, Inc., identified by the Appeal Brief as the real party in interest. Appeal Br. 3.

For the reasons explained below, we do not find error in the rejections of claims 9, 11–15, and 17–20, but we do not sustain the rejections of claims 1–8, 10, and 16. Accordingly, we AFFIRM-IN-PART.

Claimed Subject Matter

Claims 1 and 9 are independent, and are reproduced below to illustrate the claimed subject matter.

1. A substrate support, comprising:
 - a substrate support body having a surface roughness of between about 707 micro-inches and about 834 micro-inches;
 - and
 - an anodized coating on the substrate support, wherein the surface roughness of the substrate support body translates to the anodized coating.

9. A substrate support comprising a roughened substrate support body, the roughened substrate support body formed by a bead blasting process, the bead blasting process comprising:
 - bead blasting a surface of the substrate support in a first process where the beads have a first grit size;
 - bead blasting the surface of the substrate support in a second process where the beads have a second grit size that is smaller than the first grit size, wherein the second process further comprises:
 - scanning a nozzle across the surface of the substrate support in a first direction;
 - shifting the nozzle along the surface of the substrate support in a second direction;
 - scanning the nozzle across the surface of the substrate support in a third direction;
 - rotating the substrate support about 90 degrees;
 - scanning the nozzle across the surface of the substrate support in the first direction;
 - shifting the nozzle along the surface of the substrate support in the second direction; and

scanning the nozzle across the surface of the substrate support in the third direction; and
anodizing the substrate support body to form an anodized coating, wherein the bead blasted surface of the roughened substrate support body translates to the anodized coating.

Rejections

I. Claims 1, 2, 4–12, and 14–20 stand rejected under pre-AIA 35 U.S.C. § 102(b) as anticipated by Won (US 2008/0289686 A1, published Nov. 27, 2008). Final Act. 2–6.

II. Claims 3 and 13 stand rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over Won. Final Act. 7.

DISCUSSION

Rejection I— 35 U.S.C. § 102(b)

Claims 1, 2, 4–12, 14–20

Appellant argues Won is silent regarding the roughened surface 210 of the substrate support 112 translating to the anodized layer 206. Appeal Br. 7. The Examiner finds that the anodized layer described and claimed by Appellant is thicker than the anodized layer disclosed in Won, and reasons that “if the thicker layer covering the same roughness material allows for the ‘translation’ of the surface roughness of the support to the top of the coating layer then inherently so would the much thinner anodized layer 206 in [Won].” Ans. 8. We credit the Examiner’s reasoning, which stands uncontroverted.

Appellant also argues Won teaches a broad range of roughness from 100 to 3000 micro-inches, whereas the range recited in claim 1 is narrower,

between about 707 and about 834 micro-inches. Appeal Br. 9. Appellant contends that the particular roughness range claimed exhibits unexpected results, including benefits such as less arcing between the substrate and the substrate support, less scratching of the substrate, and more uniform deposition. *Id.* (citing Spec. ¶ 41).

“It is well established that the disclosure of a genus in the prior art is not necessarily a disclosure of every species that is a member of that genus.” *Atofina v. Great Lakes Chem. Corp.*, 441 F.3d 991, 999 (Fed. Cir. 2006). “On the other hand, a very small genus can be a disclosure of each species within the genus.” *Id.* Here, the Examiner has not provided sufficient fact-finding to show that Won’s range of 100 to 3000 micro-inches is small enough in the context of this art to disclose the claimed range with sufficient specificity. Thus, we agree with Appellant that the Examiner has not shown anticipation of claim 1 by Won.²

Accordingly, we do not sustain the rejection of claim 1 or dependent claims 2 and 4–8.

Independent claim 9 and dependent claims 10–12 and 14–20 are argued as a group with claim 1. *See* Appeal Br. 9. Only claims 10 and 16, however, recite a range of roughness as in claim 1. Accordingly, the basis on which we reverse the rejection of claim 1 applies only to claims 10 and 16, and we are not informed of error in the rejection of claims 9, 11, 12, 14,

² The Examiner states in the Answer that “[t]he benefits disclosed in [paragraph 41 of the Specification] would have been expected due to routine experimentation since Won et al. discloses a broad range.” Ans. 10. The Examiner did not, however, reject claim 1 as unpatentable under 35 U.S.C. § 103(a). Although the Board is authorized to reject claims under 37 C.F.R. § 41.50(b), no inference should be drawn when the Board elects not to do so. *See* Manual of Patent Examining Procedure (MPEP) § 1213.02.

15, and 17–20. Accordingly, we reverse the rejection of claims 10 and 16 as anticipated by Won, and we sustain the rejection of claims 9, 11, 12, 14, 15, and 17–20 as anticipated by Won.

Rejection II – 35 U.S.C. § 103(a)

Claims 3, 13

The rejection of dependent claim 3 is based on the same deficiency discussed above for claim 1. Accordingly, we reverse the rejection of claim 3 under 35 U.S.C. § 103(a).

Claim 13 depends from claim 9, and, for the same reasons as claim 9, we are not informed of error in the rejection of claim 13. Accordingly, we sustain the rejection of claim 13 under 35 U.S.C. § 103(a).

DECISION

We affirm the Examiner’s decision to reject claims 9, 11–15, and 17–20. We reverse the Examiner’s decision to reject claims 1–8, 10, and 16.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART