The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PANAYOTIS C. ANDRICACOS,
ROY A. CARRUTHERS, STEPHAN A. COHEN,
JOHN M. COTTE, LYNNE M. GIGNAC,
KENNETH J. STEIN, KEITH T. KWIETNIAK,
SESHADRI SUBBANNA,
HORATIO S. WILDMAN, DAVID E. SEEGER,
and ANDREW H. SIMON

Appeal 2006-2603
Application 10/270,486
Technology Center 1700

Decided: August 31, 2006

Before KIMLIN, TIMM, and GAUDETTE, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-19, 31, 32, and 60-67. Claim 65 is illustrative:

65. A single-step anodization process for forming a uniformly thick anodized film on a substrate, comprising applying an anodizing voltage that has been compensated to account for an ohmic voltage loss resulting from a flow of current through an electrolyte.

In addition to the admitted prior art found in Appellants' specification, the Examiner relies upon the following references as evidence of obviousness:

Galwey	US 4,500,840	Feb. 19, 1985
Konuma	US 5,595,638	Jan. 21, 1997
Chan	US 6,096,590	Aug. 1, 2000
Yamagata	US 6,200,878 B1	Mar. 13, 2001
Keigler	US 6,540,899 B2	Apr. 1, 2003
Matsumura	US 6,547,938 B1	Apr. 15, 2003
Higashi	US 6,678,144 B2	Jan. 13, 2004

Bockris, "*Modern Electrochemistry*," 1, Sec. 4.3, 347-367 (Apr. 1973)

Lowenheim, "*Electroplating*," Ch. 2, 8-11 (Jan. 1979)

Duenas, "Use of anodic tantalum pentoxide for high-density capacitor fabrication," *Journal of Materials Science: Materials in Electronics*, 10, 379-384 (1999)

Electrochemistry Dictionary – I, http://www.corrosion-doctors.org/dictionary/Dictionary-I.htmrl

Appellants' claimed invention is directed to a process for forming an anodized film on a substrate that is exposed to an electrolyte which comprises applying an anodizing voltage that has been compensated to account for the voltage lost resulting from the flow of current through the electrolyte.

The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

(a) claim 65 over the admitted prior art in view of *Electroplating*,

(b) claims 64, 66, and 67 over Konuma in view of *Electroplating*,

(c) claims 1, 3-7, 9-14, 16-19, 22-24, 31, 32, and 60 over Konuma in view of Keigler and Electroplating,

(d) claim 2 over Konuma in view of Keigler, *Electroplating* and Matsumura,

(e) claim 8 over Konuma in view of Keigler, *Electroplating* and Duenas,

(f) claim 15 over Konuma in view of Keigler, *Electroplating* and Yamagata,

(g) claims 19-21, and 63 over Konuma in view of Keigler, *Electroplating*, and the admitted prior art,

(h) claims 25-27, and 61 over Konuma in view of *Electroplating* and Higashi,

(i) claims 28-29, and 62 over Konuma in view of Keigler and Chan,

(j) claim 65 over the admitted prior art in view of Galwey and *Electrochemistry Dictionary-I*,

(k) claims 64, 66, and 67 over Konuma in view of Galwey and *Electrochemistry Dictionary-I*,

(l) claims 1, 3-7, 9-14, 16-19, 22-24, 31, 32, and 60 over Konuma in view of Keigler, Galwey, and *Electrochemistry Dictionary-I*,

(m) claim 2 over Konuma in view of Keigler, Galwey, *Electrochemistry Dictionary-I*, and Matsumura,

(n) claim 8 over Konuma in view of Keigler, Galwey, *Electrochemistry Dictionary-I*, and Duenas,

(o) claim 15 over Konuma in view of Keigler, Galwey, *Electrochemistry Dictionary-I,* and Yamagata,

(p) claims 19-21, and 63 over Konuma in view of Keigler, Galwey, *Electrochemistry Dictionary-I* and the admitted prior art,

(q) claims 25-27, and 61 over Konuma in view of Keigler, Galwey, *Electrochemistry Dictionary-I* and Higashi, and

(r) claims 28, 29, and 62 over Konuma in view of Keigler, Galwey, *Electrochemistry Dictionary-I*, and Chan.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we agree with the Examiner that the claimed submitted matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejections to the extent they are based on Galwey and the *Electrochemistry Dictionary-I*.[1]

Appellants do not set forth arguments that are reasonably specific to any particular claim on appeal. Rather, Appellants lodge the same substantive arguments against all the various rejections. Accordingly, all the appealed claims stand or fall together.

As evidenced by the admitted prior art found in the Appellants' specification and Konuma, it was known in the art to employ a single-step process for forming an anodized film on a substrate by flowing current

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[1] The § 103 rejections not including Galwey and the *Electrochemistry Dictionary-I* are subsumed by the rejections that do include these references, as stated in the new grounds of rejection in the Examiner's Answer.

through an electrolyte that has been applied to the substrate. The admitted prior art and Konuma do not teach compensating for the ohmic voltage drop that results from the flow of current through the electrolyte. However, the *Electrochemistry Dictionary-I* and Galwey evidence that it was known in the art to employ IR compensation, or compensation for voltage drop, that occurs across the solution of an electrochemical cell. Galwey expressly teaches that the distortion caused by the voltage drop across the solution can be appreciable and preclude any meaningful interpretation of the data to the extent that the actual driving potential would be masked by the unknown voltage drop(col. 3, ll. 38-44). Accordingly, we are confident that one of ordinary skill in the art, armed with this knowledge, would have found it obvious to compensate for the voltage drop across the electrolyte of electrochemical cells, in general, including those of the type claimed and disclosed by Konuma for forming an anodized film on a substrate. Appellants have advanced no argument why one of ordinary skill in the art would not have applied the known knowledge regarding compensating for voltage drop across an electrolyte solution to the known process for forming an anodized film.

Also, while appellants emphasize that the Examiner has cited no references teaching the compensation of a voltage drop in a process for anodizing a substrate, which is an old process, we are satisfied that any non-uniformity of the anodized coating attributed to the voltage drop across the electrolyte would have been readily apparent to one of ordinary skill in the art, particularly since voltage drop across an electrolyte was known in the art. *In re Ludwig*, 353 F.2d 241, 244, 147 USPQ 420, 421 (CCPA 1965).

Indeed, not only was the problem known in the art, but Galwey is evidence that its solution was known as well.

As a final point, we note that Appellants base no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the prima facie case of obviousness established by the Examiner.

In conclusion, based on the foregoing, the Examiner's decision rejecting the appealed claims 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)(iv)(effective Sept. 13, 2004).

AFFIRMED

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