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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEITH E. EIDSCHUN and JOSHUA CLOAKEY

Appeal 2023-003437
Application 17/161,133
Technology Center 1700

Before TERRY J. OWENS, JEFFREY T. SMITH, and KAREN M. HASTINGS, *Administrative Patent Judges.*

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from Examiner's decision to reject claims 1–13. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM and denominate the affirmance as a NEW GROUND OF REJECTION under 37 C.F.R. § 41.50(b).

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[1] "Appellant" refers to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Analytical Specialties, Inc. (Appeal Br. 3).

CLAIMED SUBJECT MATTER

The claims are directed to a method for metal finishing. Claim 1, reproduced below, illustrates the claimed subject matter:

> 1. A method of controlling dimensional growth of an anodizing process for aluminum, magnesium or alloys thereof comprising:
>
> providing an anodizing solution comprising:
>
> an acid solution formed from at least one acid selected from the group consisting of sulfuric acid, nitric acid, phosphoric acid, hydrochloric acid, citric acid, boric acid, carboxylic acid, carbonic acid and combinations thereof diluted with deionized water; and
>
> at least one oxidizing agent selected from the group consisting of potassium permanganate, sodium permanganate, hydrogen permanganate, lithium permanganate, sodium orthovanadate and combinations thereof;
>
> wherein the at least one acid is present in the anodizing solution at a concentration of between about 10% w/v to about 20% w/v;
>
> wherein the at least one oxidizing agent is present in the anodizing solution at a concentration of between about 0.01 % w/v to about 0.05% w/v;
>
> placing a metal substrate into the anodizing solution wherein the metal substrate is aluminum, magnesium or alloys thereof;
>
> anodizing the metal substrate by applying a voltage for a specified amount of time; and
>
> removing the anodized metal substrate from the anodizing solution.

REFERENCES

Examiner relies on the following references to reject the claims:

Name	Reference	Date
Hesse	US 2004/0004003 A1	Jan. 8, 2004
Liao	US 2006/0141751 A1	June 29, 2006
Yang	US 2011/0171600 A1	July 14, 2011
Hubbard	US 2012/0007273 A1	Jan. 12, 2012
Sun	US 2014/0363659 A1	Dec. 11, 2014
Windsor-Bowen	GB 396,743	Aug. 8, 1933
Kasyan (machine translation)	SU-1731879-A1	May 7, 1992
Haga (human translation)	JP-H0774055-A	Mar. 17, 1995
Mettler SA	Mettler Toledo, Sulfuric Acid Concentration vs. Density (20°C)	Nov. 2012
Mettler PP	Mettler Toledo, Potassium Permanganate Density Concentration Table (20°C)	undated

REJECTIONS

Examiner maintains the following rejections:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/ Basis
1, 7, 8, 10, 13	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP
2, 3, 9, 11–13	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP, Hesse
2, 3	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP, Hubbard
6	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP, Kasyan
9, 11–13	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP, Sun
4, 5	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP, Kasyan, Hesse and/or Sun

OPINION

We address the claims argued by Appellant, i.e., claim 1, which is the sole independent claim, and dependent claims 2–6, 9, and 11–13 (Appeal Br. 11–58). Dependent claims 7, 8, and 10 stand or fall with the independent claim. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2020).

Claim 1

Claim 1 requires an anodizing process which uses an anodizing solution comprising about 10% w/v to about 20% w/v of an least one acid selected from a group that includes sulfuric acid and phosphoric acid, and about 0.01% w/v to about 0.05% w/v of at least one oxidizing agent selected from a group that includes potassium permanganate.

Haga discloses an anodizing process which uses an anodizing solution comprising: 1) about 5–35 wt% sulfuric acid (¶ 23) which appears to encompass or overlap Appellant's about 10% w/v to about 20% w/v; and 2) an oxidizing agent that can be potassium permanganate or alkali nitrate (¶ 24). Haga does not disclose the oxidizing agent's concentration.

Windsor-Bowen discloses an anodizing process which uses an anodizing solution containing sulfuric acid and crystallized sodium sulfate (p. 1, ll. 21–25). The solution can contain 1 percent or less of an oxidizing agent that can be sodium nitrate or potassium nitrate (which are alkali nitrates) (p. 2, ll.29–34).

Because, like Windsor-Bowen's anodizing solution, Haga's anodizing solution can contain sulfuric acid and an oxidizing agent, and Haga's oxidizing agent can be alkali nitrate like Windsor-Bowen's oxidizing agent or can be potassium permanganate, one of ordinary skill in the art would have had a reasonable expectation of success in using Windsor-Bowen's

oxidizing agent's 1% or less amount as the potassium permanganate oxidizing agent concentration in Haga's anodizing solution. *See In re O'Farrell*, 853 F.2d 894, 903-04 (Fed. Cir. 1988) ("Obviousness does not require absolute predictability of success …. For obviousness under § 103, all that is required is a reasonable expectation of success").[2]

Thus, Appellant's claimed method using the recited anodizing solution would have been prima facie obvious to one of ordinary skill in the art.

Appellant argues that Table 3 in the Rule 132 Declaration by Keith T. Eidschun and Joshua Cloakey provides a comparison of Appellant's claimed method with the closest prior art (current conventional anodizing), and shows unexpected results (Appeal Br. 32–33).

For the following reasons, the Declaration is ineffective for rebutting the prima facie case of obviousness.

First, Appellant's showing of unexpected results does not provide a comparison of the claimed invention with the closest prior art. *See In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991); *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). Windsor-Bowen is not the closest prior art because it provides no disclosure sufficiently specific for comparison to Appellant's claimed method. *See In re Geiger*, 815 F.2d 686, 690 (Fed. Cir. 1987) ("It is not required that the claimed invention be compared with subject matter that does not exist in the prior art. The applicant is not required to create prior art, nor to prove that his invention would have been obvious if the prior art were different than it actually was."). The

[2] Windsor-Bowen does not indicate that the 1% or less oxidizing agent concentration range would be different in the absence of sulfate.

Declaration's Table 3 does not provide the closest prior art because it does not identify any prior art but, rather, merely provides variable ranges.

Second, it is not enough for Appellant to show that the results for Appellant's invention and the comparative examples differ. The difference must be shown to be an unexpected difference. *See In re Freeman*, 474 F.2d 1318, 1324 (CCPA 1973); *In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972). The declarants refer to the results as "unexpected results" (Decl. 8), but they do not establish that one of ordinary skill in the art would have considered the reported difference in results due to inclusion of oxidizing agent in the anodizing solution to be unexpected.

Third, the evidence is not commensurate in scope with the claims. *See In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983); *In re Clemens*, 622 F.2d 1029, 1035 (CCPA 1980). Appellant's independent claim encompasses eight acids alone or in any combination and five oxidizing agents alone or in any combination, but Table 3 includes only one acid (sulfuric acid) and one oxidizing agent (potassium permanganate). Appellant's independent claim also includes an acid concentration range of about 10% w/v to about 20% w/v and an oxidizing agent concentration range of about 0.01% w/v to about 0.05% w/v. However, Table 3 does not include any specific concentration but, rather, provides only an acid concentration range (10% to 20%) and an oxidizing agent concentration range (0.01% to 0.05%). Thus, no specific composition within the scope of Appellant's claim 1, particularly a composition containing 0.01% w/v oxidizing agent, is compared to prior art.

Dependent claims

Claims 2 and 3: Haga (¶ 20) encompasses any relative amounts of

sulfuric acid and phosphoric acid, including the phosphoric acid concentration in claim 3.

Claims 4, 6, and 9: Haga's disclosure of an approximately 10–50°C solution temperature would have suggested adjusting the acid and oxidizing agent to a temperature within that range such as 60°F.

Claim 5: One of ordinary skill in the art who desired a clean anodized substrate would have cleaned the substrate before being anodized.

Claim 11–13: Sun (¶ 22) indicates that suitable voltages and times for anodization in a sulfuric acid bath are about 10–100 V which includes 15 V, for about 1 minute to about 40 minutes which includes about 20 minutes to about 30 minutes. Also, Haga's treatment time of approximately 10–60 minutes (¶ 25) encompasses about 20 to about 30 minutes.

CONCLUSION

For the above reasons, we conclude that Appellant's claimed invention would have been obvious to one of ordinary skill in the art. Accordingly, we affirm Examiner's rejections. Because our reasoning differs substantially from that of Examiner, we denominate the affirmance as a new ground of rejection under 37 C.F.R. § 41.50(b).

DECISION SUMMARY

The following table summarizes our decision:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed	New Ground
1, 7, 8, 10, 13	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP	1, 7, 8, 10, 13		1, 7, 8, 10, 13
2, 3, 9, 11–13	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA. Mettler PP, Hesse	2, 3, 9, 11–13		2, 3, 9, 11–13
2, 3	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP, Hubbard	2, 3		2, 3
6	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP, Kasyan	6		6
9, 11–13	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP, Sun	9, 11–13		9, 11–13
4, 5	103(a)	Windsor-Bowen, Liao and/or Yang, Haga, Mettler SA, Mettler PP, Kasyan, Hesse and/or Sun	4, 5		4, 5
Overall Outcome			1–13		1–13

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b).

37 C.F.R. § 41.50(b) provides that the appellant, *WITHIN TWO MONTHS FROM THE DATE OF THE DECISION*, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

> (1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. . . .
>
> (2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. . . .

AFFIRMED; 37 C.F.R. § 41.50(b)