



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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/154,712	05/28/2008	Mitchell R. Swartz		9642

7590 06/30/2020
Mitchell R. Swartz, ScD, EE, MD
16 Pembroke Road
Weston, MA 02493

EXAMINER

KEITH, JACK W

ART UNIT	PAPER NUMBER
3646	

MAIL DATE	DELIVERY MODE
06/30/2020	PAPER

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MITCHELL R. SWARTZ

Appeal 2014-006093
Application 12/154,712
Technology Center 3600

Before EDWARD A. BROWN, MICHAEL L. HOELTER, and
NINA L. MEDLOCK, *Administrative Patent Judges*.

BROWN, *Administrative Patent Judge*.

DECISION ON REQUEST FOR REHEARING

In reply to the Decision on Appeal (hereinafter “Dec.”), Appellant¹ filed a Request for Rehearing pursuant to 37 C.F.R. § 41.52 (hereinafter “Req.”). The Decision: (1) reversed the rejections of claims 1–13 and 21–27 under 35 U.S.C. § 101 as lacking utility, claims 1–13 and 21–27 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement, and claims 1, 7, and 21 under 35 U.S.C. § 103(a) as unpatentable over Pons² (Dec. 9–10); and (2) entered new grounds of rejection of claims 1–13 and 21–27 under 35 U.S.C. § 112, second

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Mitchell R. Swartz. Appeal Br. 2.

² (WO 90/10935, published Sept. 20, 1990).

paragraph, and claims 2–6, 8–13, and 22–27 under 35 U.S.C. § 112, fourth paragraph (*id.* at 3–9).³

A Request for Rehearing must comply with the following provisions of 37 C.F.R. § 41.52(a)(1):

The request for rehearing must state with particularity the points [of law or fact] believed to have been misapprehended or overlooked by the Board. Arguments not raised, and Evidence not previously relied upon, pursuant to §§ 41.37, 41.41, or 41.47 are not permitted in the request for rehearing except as permitted by paragraphs (a)(2) through (a)(4) of this section.

Appellant contends that the Board misapprehended or overlooked multiple points in entering the new grounds of rejection in the Decision. Req. 1. For the reasons discussed below, the Request fails to establish that the Board misapprehended or overlooked a point of fact or law in the Decision. Consequently, the Request for Rehearing is denied.

ANALYSIS

Rejection Under 35 U.S.C. § 112, Second Paragraph

As discussed below, Appellant contends that the Board misunderstand certain claim limitations in the Decision. Req. 58–64.

“Two-dimensional Angle”

Independent claim 1 recites the limitation “a separation distance between said anode and said cathode *set to create a two [dimensional] angle* in the range of 45 to 130 degrees *as defined by said anode [between] the*

³ As explained in the Decision, the noted rejections were reversed solely based on the indefiniteness of the claimed subject matter, and our decision did not reflect on the adequacy of the rejections. Dec. 9–10.

width spanned by the two sides of said cathode closest to said anode.”

Appeal Br. (Claims App. A) (emphasis added). In the Decision, we determined that the meaning of the separation distance between the anode and cathode is ““set to create”” the claimed two-dimensional angle of the recited range is unclear. Dec. 3. We also determined that the meaning of the recited two-dimensional angle “as defined by said anode” is unclear. *Id.* at 4.

Independent claim 7 recites the similar limitation “a separation distance between said anode and said curved cathode *such that the angle defined by said anode and the greatest width spanned by the two sides of said curved cathode is in the range of 45 to 130 degrees.*” Appeal Br. (Claims App. A) (emphasis added). Independent claim 21 recites the similar limitation “a separation distance between said anode and said curved cathode *such that the two dimensional angle defined by said anode and the two sides of the greatest width spanned by said curved cathode is in the range of 45 to 130 degrees.*” *Id.* (emphasis added).

We noted that Appellant’s Figure 2 shows an angle 100 (drawn inside cathode 12). Dec. 4 (citing Spec. 22). Appellant appears to indicate that the depicted angle 100 corresponds to the claimed two-dimensional angle. Req. 59 (“the Decision’s author was able to affirm that it does measure at circa 100 (degrees) in the example shown in the Specification.”). We also noted that Appellant’s Specification describes “maintaining a distance between the electrodes, adjusted *to create direct loading*, and over each portion of the helical cathode, closest to the anode, over a two dimensional angle of 45 to 130 degrees.” *Id.* (citing Spec. 25; *see also id.* at 11, 18, 23, and 28). We explained that “[t]his description appears to indicate that a distance between

the electrodes is maintained to create *direct loading* of the helical cathode *over an angle of the claimed range*"; that is, "the angular range appears to relate to where in the helical cathode the 'direct loading' takes place."

Dec. 4.

However, the recited "two-dimensional angle" (claims 1 and 21) and "angle" (claim 7) are not a physical structure in, or of, the cathode. Nor are these angles a material or physical property of the cathode. Further, claims 1, 7, and 21 do not recite, for example, that a portion of the cathode that corresponds to the two-dimensional angle or angle has a specific "loaded hydrogen" content or characteristic, an increased flow of loaded hydrogen, or a specific property or structure. As we explained, "claim 1 . . . does not recite that '*direct loading, or anything else, occurs in the cathode corresponding to the claimed angular range*' as a result of the separation distance being set, as recited." Dec. 4 (emphasis added). This same point also applies to the language of claims 7 and 21.

Appellant contends that "[t]here is an *anomalous effect* in those portions of the cathode closest to the anode. In some configurations, this extends over an angle of circa 45°–130° degrees." Req. 64 (emphasis added). However, no "anomalous effect," or other claim limitation that expressly conveys the existence of an "anomalous effect" in "those portions of the cathode closest to the anode," is recited in claims 1, 7, and 21. As we noted in the Decision, "[i]t is [Appellant's] burden to precisely define the invention, not the PTO's[,]" in accordance with 35 U.S.C. § 112, second paragraph. Dec. 4 (citing *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997)). Here, Appellant has not defined any "anomalous effect" in claims 1, 7, and 21.

Further in regard to the recited “two-dimensional angle,” Appellant contends, “there was no problem for the peer-reviewed scientists skilled in the art to have understood and determined it clarity [sic], allowing publication by them, who are skilled-in-the-art.” Req. 60. This contention does not, however, provide persuasive evidence that “the peer-reviewed scientists skilled in the art” would understand the meaning of all limitations of claims 1, 7, and 21, or establish that the Board misapprehended or overlooked any particular point of fact or law in the Decision.

“Direct Loadings”

Appellant also contends, “despite what is purported in the Decision, the goal of the patent application is to teach NOT ‘direct loading’ but rather producing ‘increased flow of said loaded hydrogen within in and through said material[.]’” In fact, Claim 1 states this explicitly in the last line of the claim.” Req. 60.

As discussed above, we addressed the disclosed “direct loading” in trying to understand what “occurs in the cathode corresponding to the claimed angular range as a result of the separation distance being set.” Dec. 4. Even if “direct loading” is not the goal of Appellant’s disclosure, Appellant’s contention does not further clarify whether a portion of the cathode corresponding to the claimed two-dimensional angle (claims 1 and 21) or angle (claim 7) has, for example, some specific physical characteristic, physical property, or electric field that may define or distinguish that portion of the cathode relative to another portion, or the remainder, of the cathode.

“Increased Flow of . . . Loaded Hydrogen Within and Through . . . Material”

The final limitation of claim 1 recites “thereby producing increased flow of said loaded hydrogen within and through said material.” Appeal Br. (Appendix A).⁴ Appellant contends that the Board misunderstood this limitation. Req. 62. Appellant asserts that Figures 1 and 2 of the application “demonstrate exactly what the Applicant meant.” *Id.* Appellant contends that “Figure 1 begins with the conventional, typical wire-wire system[]” and “Figure 2 begins with the unusual wire-coil system (and there is more required) in the present invention.” *Id.* at 63. Appellant asserts that “[t]hese figures demonstrate that the 2-Dimensional vector electric field distributions vary greatly between the wire-wire system (Figure 1) and the wire-Phusor or wire-cylinder system (Figure 2).” *Id.*

Based on these contentions, we understand Appellant’s position is that the final limitation recited in claims 1 and 7 means that the claimed system produces the increased flow of the loaded hydrogen within and through the loaded material relative to, or as compared to, a “conventional, typical wire-wire system,” as depicted in Figure 1. However, claims 1 and 7 do not recite expressly any comparison to a system having the particular construction depicted in Figure 1. Furthermore, importing language from the written description into the claims is generally disfavored. *See SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.”). In fact, claims 1 and 7 do not

⁴ Claim 7 recites the same limitation, but with a minor typographical error. Appeal Br. (Appendix A).

recite any comparison to any other system. Accordingly, Appellant's contentions do not persuade us that the meaning of the final limitation recited in claims 1 and 7 is sufficiently clear.

"The Two Sides"

Claim 1 recites "the two sides of said cathode closest to said anode," claim 7 recites "the two sides of said curved cathode," and claim 21 recites "the two sides of greatest width spanned by said curved cathode." Appeal Br. (Appendix A). In the Decision, we determined that the meaning of each of these recitations is unclear. Dec. 4–5 (paragraph bridging pages 4–5 and first full paragraph of page 5 discussing claim 1), 6–7 (paragraph bridging pages 6–7 discussing claim 7), 7–8 (paragraph bridging pages 7–8 discussing claim 21)).

Appellant contends that the Board misunderstood the meaning of "the two sides." Req. 64. Appellant asserts, "[t]he details and Figure 2 demonstrate exactly what the Applicant meant." *Id.* This assertion does not address persuasively any of the specific points discussed in the Decision. For example, we explained that claim 1 recites "'a cathode . . . in a shape which is a member of the group consisting of circles, spirals, helices, and portions of circles, spirals, helices.'" Dec. 5. We determined that "it is unclear what 'the *two sides* of said cathode closest to said anode" means with respect to *each* of these shapes of the cathode," as encompassed by claim 1. *Id.* Appellant's mere reference to Figure 2 does not persuade us that we misunderstood the meaning of this language in claim 1, or claims 7 and 21.

Appellant also contends that "[a]ttention is also directed to the fact that the peer-reviewers of the publications had no problem understanding

what was meant since they are skilled-in-the-art.” Req. 64. Again, however, this contention does not amount to persuasive evidence that “the peer-reviewed scientists skilled in the art” would understand the meaning of the specific language of claims 1, 7, and 21, or establish that the Board misapprehended or overlooked any particular point of fact or law in the Decision.

For the foregoing reasons, we sustain the rejection of claims 1–13 and 21–27 as failing to comply with the requirements of 35 U.S.C. § 112, second paragraph.

Rejection Under 35 U.S.C. § 112, Fourth Paragraph

In the Decision, we explained that each of claims 1 and 7 is directed to a “system” in which there is a “machine,” and claim 21 is directed to a “system” in which there is an “apparatus.” Dec. 8. Claims 2–6, which depend from claim 1, and claims 8–13, which depend from claim 7, are directed to “a machine,” not to the system, and claims 22–27, which depend from claim 21, are directed to an “apparatus,” not to the system.

Appellant disagrees with our determination that dependent claims 2–6; 8–13; and 22–27 do not incorporate by reference all limitations of independent claims 1, 7, and 21, respectively. Req. 57; Dec. 8. Appellant states that the terms “system” and “machine” are nearly synonymous. Req. 57. Based on this statement, Appellant seems to be contending that the dependent claims do, effectively, also recite a system. However, Appellant also states, “a machine, which obviously operates *in the system* described in claims 7 and 21.” *Id.* (emphasis added). According to this latter statement, Appellant is acknowledging that a machine is not the same as the recited

system, but operates in the system. This statement is consistent with claims 1, 7, and 21 reciting that a machine or apparatus is *in* a system, and not expressly reciting any limitation that precludes the “system” from having additional, non-claimed elements other than the machine or apparatus. We maintain that dependent claims 2–6, 8–13, and 22–27, which recite a machine or apparatus, do not incorporate by reference all limitations of independent claims 1, 7, and 21, respectively, which recite a system.

Thus, we sustain the rejection of claims 2–6, 8–13, and 22–27 as failing to comply with the requirements of 35 U.S.C. § 112, fourth paragraph.

“Other Misunderstandings and Errors of the Decision”

Appellant further contends that the Decision includes other misunderstandings and errors. Req. 64–67. We will address the contentions made by Appellant that appear to be most relevant to the issues raised by Appellant in the Request, as discussed above.

Appellant contends, “[w]ith impropriety, the Decision by the Patent Trial and Appeal Board, does not discuss the previous removal of Evidence, and failure to docket that Evidence, even though it was discussed and detailed in the Appeal Brief and Reply Brief.” Req. 65.

In response, the Board is not aware of any removed evidence in regard to the appeal.

Appellant also contends, “[t]he important peer-reviewed publications which were submitted, and received many times, are not discussed as to its content, because it proves definiteness.” Req. 65.

In response, Appellant does not address any specific peer-reviewed publication in Appellant’s contentions pertaining to the Board’s purported

misunderstandings in relation to the rejection under 35 U.S.C. § 112, second paragraph. Req. 58–64. Consequently, it is not apparent what particular “important peer-reviewed publications” Appellant believes support Appellant’s position, or how, specifically, Appellant believes the publications support Appellant’s lack of indefiniteness position.

Appellant contends that the Board ignored “Appendix B” in the Decision. Req. 65. Appellant also states, “the Appellant filed Amendments which *would have made the claims clearer*” (*id.* (emphasis added)), and “[t]he Board should have entered them for the reasons given by then Applicant (now Appellant) rather than misdescribe the claims” (*id.* at 66).

As noted in the Decision, the claim set listed in Appendix A of the Appeal Brief corresponds to the claims that were rejected in the Final Office Action. Dec. 2 n.4. The claims listed in Appendix B of the Appeal Brief correspond to the amended claim set that Appellant submitted after the Final Rejection, but which was not entered by the Examiner. *Id.* Even if the amended claims “would have made the claims clearer,” as Appellant contends, the Board lacks authority to enter the claim amendments that were not entered by the Examiner. Any corresponding amended claims presented by Appellant that were refused entry are not part of the record in this appeal.

Appellant contends that the Decision ignored both the original Specification and the claims. Req. 66.

In response, the Board has not ignored either the Specification or claims in this appeal.

“Other Errors in the Decision”

Appellant further contends that the Decision included or was based on other errors. Req. 67.

In response, the asserted “errors” (54) and (55) raised by Appellant do not persuade us that the Board misapprehended or overlooked any particular point of fact or law in the Decision.

Lastly, Appellant’s “final arguments” likewise do not persuade us that the Board misapprehended or overlooked any particular point of fact or law in the Decision. Req. 68–69.

DECISION SUMMARY

The Board has granted the Request to the extent the Decision has been reconsidered, but the Request is denied as to making any changes thereto.

Outcome of Decision on Rehearing:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/ Basis	Denied	Granted
1–13, 21–27	112, second paragraph	Indefiniteness	1–13, 21–27	
2–6, 8–13, 22–27	112, fourth paragraph	Improper Dependency	2–6, 8–13, 22–27	
Overall Outcome			1–13, 21–27	

Final Outcome of Appeal after Rehearing:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1–13, 21–27	101	Lack of Utility		1–13, 21–27
1–13, 21–27	112, first paragraph	Non-enablement		1–13, 21–27
1, 7, 21	103(a)	Pons		1, 7, 21
1–13, 21–27	112, second paragraph	Indefiniteness	1–13, 21–27	

Appeal 2014-006093
Application 12/154,712

Claim(s) Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
2-6, 8-13, 22-27	112, fourth paragraph	Improper Dependency	2-6, 8-13, 22-27	
Overall Outcome			1-13, 21- 27	

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

DENIED