



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.
13/057,767	02/07/2011	Daniel Farb	4647/21	5369
	7590	02/22/2018	EXAMINER	
M. Daniel Farb 240 Central Ave., 1J Lawrence, NY 11559			ADJAGBE, MAXIME M	
			ART UNIT	PAPER NUMBER
			3745	
			MAIL DATE	DELIVERY MODE
			02/22/2018	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 DANIEL FARB

Appeal 2017-005594
Application 13/057,767
Technology Center 3700

Before JENNIFER D. BAHR, MICHELLE R. OSINSKI, and
BRANDON J. WARNER, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Daniel Farb (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 37, 39, and 40. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM and enter a NEW GROUND OF REJECTION pursuant to our authority under 37 C.F.R. § 41.50(b).

THE CLAIMED SUBJECT MATTER

Claim 37, reproduced below, is illustrative of the claimed subject matter.

37. A blade for a vertical axis turbine, comprising:
at least two regions of different shapes, each region arranged in a vertical distribution along the blade, at least one region is defined by a drag shape including a continuously extending curvature, and at least one region is defined by a lift shape, and the regions transition directly into each other; and [said] drag shaped region includes at least one fully concave shaped member and the anterior portion of the concavity is oriented in the direction of the rotation of the turbine.

REJECTIONS

- I. Claims 37, 39, and 40 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.
- II. Claims 37, 39, and 40 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.
- III. Claims 37 and 40 stand rejected under 35 U.S.C. § 102(b) as anticipated by Yokoi (US 2007/0224029 A1, pub. Sept. 27, 2007).
- IV. Claim 39 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Yokoi and Cohen (US 4,079,264, iss. Mar. 14, 1978).

DISCUSSION

Rejection I – Enablement

Insofar as the enablement requirement is concerned, the dispositive issue is whether an applicant’s disclosure, considering the level of ordinary skill in the art as of the date of the applicant’s application, would have enabled a person of such skill to make and use an appellant’s invention without undue experimentation. *In re Strahilevitz*, 668 F.2d 1229, 1232 (CCPA 1982). When rejecting a claim for lack of enablement, the PTO bears the initial burden of setting forth a reasonable explanation as to why the scope of the claim is not adequately enabled by the description provided in the specification, without resort to undue experimentation. *In re Wright*, 999 F.2d 1557, 1561–62 (Fed. Cir. 1993).

Factors to be considered in determining whether a disclosure would require undue experimentation include (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

In rejecting claims 37, 39, and 40 as failing to comply with the enablement requirement, the Examiner determines that “one of ordinary skill in the art could not make or use[] the invention coupled with information known in the art without undue experimentation.” Final Act 3. In particular, the Examiner states that “[t]he disclosure coupled with the drawings fails to provide details of the ‘two regions of different shape’ and does not explain how they are formed.” *Id.* The Examiner also states that

“it is not known from the [S]pecification and drawings how ‘the regions transition directly into each other’ or how the transition relates to the different regions.” *Id.* at 4. According to the Examiner, “[i]t is unclear how one would arrive at the claimed blade due to the lack of disclosure provided by [Appellant] in the [S]pecification.” *Id.*

Here, the Examiner fails to make the requisite findings and analysis to set forth a reasonable explanation as to why a person of ordinary skill in the art would have been unable to make or use the claimed invention without undue experimentation. The Examiner alludes to an absence of a working example. *See id.* However, the presence or absence of working examples is not, in and of itself, dispositive with respect to enablement—it is merely one factor to be considered in conjunction with other available evidence. *See Wands*, 858 F.2d at 737.

According to the Examiner, “is not clear from the disclosure how one region is drag shape[d] and another is lift shape[d].” Final Act. 3–4. However, the Examiner also states that “[t]he art of wind turbine[s] is a very crowded field of invention and *there are many ways for designing a blade having lift and drag portions.*” *Id.* at 4 (emphasis added). In this regard, the Examiner appears to acknowledge that one of ordinary skill in the art would be able to make a wind turbine blade having lift and drag portions, as claimed. Moreover, with respect to the limitation that “the regions transition directly into each other,” as recited in claim 37, the Examiner does not specifically assert, much less provide any findings or technical analysis to establish, that one of ordinary skill in the art would have been unable to devise the structure necessary to *transition directly* from a drag region into a lift region of the turbine blade without undue experimentation.

For the above reasons, the Examiner has not met the initial burden to establish a reasonable basis to question the enablement for the claim limitations in question. Accordingly, we do not sustain the rejection of claims 37, 39, and 40 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

Rejection II – Written Description

The fundamental factual inquiry for ascertaining compliance with the written description requirement is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date. *See Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). “This inquiry . . . is a question of fact,” and “the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Id.* “[T]he specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed.” *Id.*

First Basis: “the regions transition directly into each other”

The Examiner first finds that Appellant’s Specification fails to provide written description support for “the regions transition directly into each other,” as recited in independent claim 37. *See* Final Act. 4–5. The Examiner explains that “[n]owhere in the [S]pecification as originally filed is this limitation found, nor was it in the initial claims as filed[, and] the drawings do not suggest the claimed subject matter.” *Id.* at 4. According to the Examiner, the “disclosure does not reasonably convey to one of ordinary

skill in the art that applicant was in possession of the invention as now presented/claimed at the time of filing of the instant application.” *Id.* at 5.

We disagree with the Examiner’s finding that the limitation in question lacks adequate written description support. In particular, Appellant’s Specification describes that “[t]he blade itself may *change shape* along the vertical distribution by being a regular drag blade in one location and a lift blade in another location as shown.” Spec. 2, ll. 17–18 (emphasis added). The Specification also describes that “[t]he regions of two different shapes as described here include the possibility that there may be an area of gradual *transition from one shape to another.*” *Id.* at 4, ll. 6–7 (emphasis added). Given this disclosure, a person having ordinary skill in the art would understand that the blade *changes* shape along the vertical distribution (i.e., transitions from a drag shape to a lift shape). In other words, the present application conveys with reasonable clarity that, as of the filing date of the present application, Appellant was in possession of a vertical axis turbine blade that transitions directly from a drag region to a lift region, as claimed.

Accordingly, we do not sustain the Examiner’s first basis for rejecting claims 37, 39, and 40 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Second Basis: “the anterior portion of the concavity is oriented in the direction of the rotation of the turbine”

The Examiner provides a second basis for rejecting claims 37, 39, and 40 as failing to comply with the written description requirement. Namely, the Examiner determines that Appellant’s Specification fails to provide adequate written description support for the “drag shaped region includ[ing] at least one fully concave shaped member and the anterior portion of the

concavity is oriented in the direction of the rotation of the turbine,” as recited in independent claim 37. *See* Final Act. 4–5; Appeal Br. 15 (Claims App.).

For the reasons discussed below in our new ground of rejection of claims 37, 39, and 40, these claims are indefinite because the meaning of “anterior portion of the concavity” is unclear. Given that the meaning of this language is required to assess whether the above limitation is adequately supported by the original disclosure of the Specification, we cannot reach a determination as to the correctness of the Examiner’s finding that the limitation lacks written description support sufficient to comply with 35 U.S.C. § 112, first paragraph. *Cf. In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971) (One is not in a position to determine whether a claim is enabled under the first paragraph of 35 U.S.C. § 112 until the metes and bounds of that claim are determined under the second paragraph of this section of the statute.).

Accordingly, we do not reach the merits of the Examiner’s second basis for rejecting claims 37, 39, and 40 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Rejections III and IV – Anticipation and Obviousness

We recognize a potential inconsistency implicit in our rejection of claims 37, 39, and 40 under 35 U.S.C. § 112, second paragraph, as indefinite with a determination as to patentability of these claims under 35 U.S.C. § 102(b) or 103(a). Normally, when substantial confusion exists as to the interpretation of a claim, and no reasonably definite meaning can be ascribed to the terms in a claim, a determination as to patentability under 35 U.S.C.

§ 102 or 103 is not made. *See In re Aoyama*, 656 F.3d 1293, 1300 (Fed. Cir. 2011) (holding that the Board erred in affirming an anticipation rejection of indefinite claims); *In re Steele*, 305 F.2d 859, 862–63 (CCPA 1962) (holding that the Board erred in affirming a rejection of indefinite claims under 35 U.S.C. § 103(a) because the rejection was based on speculative assumptions as to the meaning of the claims). However, in this instance, we consider it to be desirable to address the rejections under 35 U.S.C. §§ 102 and 103 to avoid the inefficiency of piecemeal appellate review. *See Ex parte Ionescu*, 222 USPQ 537, 540 (Bd. App. 1984) (expressing the view that where a claim is subject to more than one interpretation, one of which would render the claims unpatentable over the prior art, the USPTO should enter simultaneous rejections under 35 U.S.C. § 112, second paragraph, and under 35 U.S.C. § 102 or 103, to avoid piecemeal appellate review). Here, the Examiner makes a finding that the anterior portion of the concavity of Yokoi’s drag shape is oriented in the direction of the rotation of the turbine (Final Act. 5), and Appellant does not contest this finding. *See Appeal Br.* 10–13. Rather, Appellant’s arguments are directed to other aspects of the claim, and, thus, we need not speculate about the meaning of the indefinite language to consider the merits of the disputed aspects of the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) in view of these arguments.

In rejecting independent claim 37 under 35 U.S.C. § 102(b), the Examiner finds:

Yokoi teaches (figures 1–15) a blade for [a] vertical axis wind turbine, comprising at least two regions of different shape (fig. 14 and para 126), each region arranged in vertical distribution along the blade, at least one region (19) is defined by a drag shape

including a continuously extending curvature (fig.12 shows the drag portion 19 being curved) and at least one region is defined by a lift shape (portion of the blade not having the cut out 19); and the regions transition directly into each other and includes at least one concave shape member and the anterior portion of the concavity is oriented in the direction of the rotation of the turbine (cut out 19 which is the drag shape is proved on back or ventral surface of the blade, see paragraph 18).

Final Act. 5.

Appellant argues that the Examiner's findings as to the disclosure of Yokoi are in error because Yokoi does not disclose distinct regions of lift and drag. *See* Appeal Br. 10. In particular, Appellant asserts that claim 37 requires "two *separate* regions of drag and lift, arrayed in a distinct vertical region, that is, one on top of the other, connected in the same long piece of blade." *Id.* (emphasis added). According to Appellant, "Yokoi includes an element of drag, which is in Yokoi's words, simply a 'cutout', but the current application teaches that the drag and lift sections of the blade are *separate.*" *Id.* (emphasis added); *see also id.* at 11 (asserting that Yokoi discloses "a hybrid region of lift and drag, whereas . . . claim 37 clearly teaches separate non-hybrid regions of drag and lift").

We are not persuaded by Appellant's argument because it is not commensurate with the scope of claim 37. As stated by our reviewing court in *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998), "the name of the game is the claim." It is well established that limitations not appearing in the claim cannot be relied upon for patentability. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982). Here, claim 37 recites "two *regions* of different shapes, each *region* arranged in a vertical distribution along the blade, at least one *region* is defined by a drag shape including a continuously extending curvature, and at least one *region* is defined by a lift shape, and

the *regions* transition directly into each other.” Appeal Br. 15 (Claims App.) (emphasis added). However, claim 37 does not recite that the first and second regions are “sections” (e.g., cross-sections), nor that the first and second regions are “separate” or “non-hybrid.” The claim also does not specify that a region includes *only one of* a drag and lift shape. In other words, the claim does not recite any limitations excluding the blade from having both drag and lift shapes in a given region.

In response to Appellant’s argument, the Examiner takes the position that Figure 14 of Yokoi shows a drag-shaped region and a lift-shaped region. *See* Ans. 3–4 (including annotated reproduction of Figure 14 of Yokoi). According to the Examiner, “[t]he portion of the blade with the cutout is the drag region since the cutout generates drag on the blade.” *Id.* at 4 (citing Yokoi, Fig. 14). The Examiner also explains that, “[n]ext to the drag region which comprises the cutout, there is another portion of the blade which does not present[] a cutout, this portion constitutes a full airfoil blade to produce lift and therefore is a lift region.” *Id.* In this regard, Appellant does not persuasively refute the Examiner’s position. Appellant argues that “Figure 14 of Yokoi is a horizontal section.” Reply Br. 2. However, this section view of Figure 14 illustrates the relative positions of the Examiner’s identified drag and lift regions arranged in a vertical distribution along the blade (*see* Yokoi ¶ 126 (disclosing that “FIG. 14 is the sectional view of the blade 18 taken in its central span direction”)). Yokoi also discloses that “cutout 19 having a length L_a in this embodiment is *disposed above* the blade 18 at the position of L from the lower edge.” *Id.* (emphasis added). In other words, Appellant does not identify error in the Examiner’s finding that Yokoi discloses a blade having a first region defined by a drag shape (i.e.,

cutout 19) and arranged in a vertical distribution along the blade relative to a second region defined by a lift shape (*see* Final Act. 5; Ans. 4), which is supported by a preponderance of the evidence.

Appellant also argues that Yokoi’s cutout 19 “is an insignificant inclusion of a drag component into a lift region.” Appeal Br. 11 (citing Yokoi, Fig. 14). In particular, Appellant asserts that “Yokoi’s drag region is miniscule and insignificant in effect and size next to the size of his lift blade.” *Id.* at 12–13. In support of this contention, Appellant presents values and calculations allegedly illustrating the size and drag effect of Yokoi’s cutout 19 relative to the lift portions of the blade. *See id.* at 11–12; *see also* Reply Br. 2–3 (asserting that “[t]he point of the calculation is to show that what the [E]xaminer adduces as a drag blade is a functionally insignificant part of a lift area of the blade”). Appellant concludes that “the overwhelming majority of forces are lift.” Appeal Br. 12.

We are not persuaded by Appellant’s assertions, which are based upon speculative assumptions regarding the size and proportions of the blade elements depicted in Yokoi’s figures, which are not indicated as being drawn to scale. “[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.” *Hockerson-Halbertstadt, Inc. v. Avia Group Int’l*, 222 F.3d 951, 956 (Fed. Cir. 2000). In other words, Appellant’s assertions amount to nothing more than attorney argument unsupported by evidence, and, thus, are entitled to little, if any, weight. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *see also In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) (An attorney’s arguments in a brief cannot take the place of evidence.). Moreover,

Appellant's assertions are not persuasive because they are not commensurate with the scope of claim 37, which does not recite any limitations regarding the "significance," "size," or "effect" of the drag-shaped region relative to the lift-shaped region. *See In re Self*, 671 F.2d at 1348.

For the above reasons, Appellant fails to apprise us of error in the rejection of independent claim 37. Accordingly, we sustain the rejection of claim 37, and of its dependent claim 40, for which Appellant relies on the same arguments (*see* Appeal Br. 13), under 35 U.S.C. § 102(b) as anticipated by Yokoi.

In contesting the rejection of dependent claim 39, Appellant relies on the arguments presented for patentability of base claim 37. *See* Appeal Br. 13; Reply Br. 3. For the reasons discussed above, Appellant's arguments do not apprise us of error in the rejection of claim 37, and likewise do not apprise us of error with respect to the rejection of claim 39. Accordingly, we sustain the rejection of claim 39 under 35 U.S.C. § 103(a) as unpatentable over Yokoi and Cohen.

New Ground of Rejection

Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection of claims 37, 39, and 40 under 35 U.S.C. § 112, second paragraph, as being indefinite.

In determining whether a claim is definite under 35 U.S.C. § 112, second paragraph, "[t]he USPTO, in examining an application, is obliged to test the claims for reasonable precision." *In re Packard*, 751 F.3d 1307, 1313 (Fed. Cir. 2014). "[A] claim is indefinite when it contains words or phrases whose meaning is unclear." *Id.* at 1322 (citing MPEP § 2173.05(e)).

Independent claim 37 recites, in relevant part, that the “drag shaped region includes at least one fully concave shaped member and the *anterior portion of the concavity* is oriented in the direction of the rotation of the turbine.” Appeal Br. 15 (Claims App.) (emphasis added). This language renders the claim indefinite because the meaning of “anterior portion of the concavity” is unclear.

An ordinary and customary meaning for the term “anterior” is “situated toward or before the front.” *Merriam-Webster’s Collegiate Dictionary* (11th ed. 2003). An ordinary and customary meaning for the term “concavity” is “a concave line, surface, or space.” *Id.* Given these ordinary meanings, it is unclear what is meant by a portion of the concavity (i.e., concave surface) that is situated *toward or before the front* of the concavity. In other words, it is unclear what portion of the concave surface is considered to be situated toward or before the front of the concave surface. Appellant’s Specification does not provide any clarifying disclosure in this regard. Namely, Appellant’s Specification does not recite, much less provide a definition or reference of orientation/direction for, the term “anterior portion of the concavity.” Although Figure 1a of the Drawings depicts a concavity in the cross-section of drag region 4, the figure does not identify what constitutes the “anterior” portion of the concavity. As such, one of ordinary skill in the art would not be able to ascertain the metes and bounds of “an anterior portion of the concavity” without speculating.

In light of the above, claim 37 is “ambiguous, vague, incoherent, opaque, or otherwise unclear in describing and defining the claimed invention.” *Packard*, 751 F.3d at 1311. Dependent claims 39 and 40 inherit this problematic ambiguity. Accordingly, we conclude that claims 37, 39,

and 40 are indefinite under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which Appellant regards as the invention.

DECISION

The Examiner's decision rejecting claims 37, 39, and 40 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement is reversed.

The Examiner's decision rejecting claims 37, 39, and 40 under 35 U.S.C. § 112, first paragraph, on the first basis, as failing to comply with the written description requirement is reversed.

We do not reach a decision on the merits of the Examiner's decision rejecting claims 37, 39, and 40 under 35 U.S.C. § 112, first paragraph, on the second basis, as failing to comply with the written description requirement.

The Examiner's decision rejecting claims 37 and 40 under 35 U.S.C. § 102(b) as anticipated by Yokoi is affirmed.

The Examiner's decision rejecting claim 39 under 35 U.S.C. § 103(a) as unpatentable over Yokoi and Cohen is affirmed.

We enter a new ground of rejection of claims 37, 39, and 40 under 35 U.S.C. § 112, second paragraph, as being indefinite.

FINALITY OF DECISION

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 "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review." 37 C.F.R. § 41.50(b) also provides:

When the Board enters such a non-final decision, 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. . . .

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

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; 37 C.F.R. § 41.50(b)