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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ALEXANDER ANTOON FRANS M. SMETS

Appeal 2018-006427
Application 14/185,436
Technology Center 3700

Before MICHAEL C. ASTORINO, PHILIP J. HOFFMANN, and TARA L. HUTCHINGS, *Administrative Patent Judges*.

ASTORINO, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–16. We have jurisdiction under 35 U.S.C. § 6(b). An oral hearing was held on February 6, 2020.

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

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. The Appellant identifies the real party in interest as Atlas Copco Airpower N.V. Appeal Br. 2.

STATEMENT OF THE CASE

Claimed Subject Matter

Claims 1, 9, and 10 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter.

1. A gas compressor comprising:

a gas compressor element;

a variable speed motor powering the gas compressor element;

a motor control unit configured to control the variable speed motor, said motor control unit having a setting to set a maximum number of revolutions (Nmax) for the compressor element;

an air blower arranged to suck environmental air via an inlet and to blow it back to the environment through a housing via an exhaust;

a cooling circuit arranged to cool gas which has been compressed by the compressor element;

a first temperature sensor arranged to sense an environmental temperature; and

said housing containing said gas compressor element, variable speed motor, motor control unit, air blower, and cooling circuit,

wherein the motor control unit includes an algorithm that reduces the maximum allowed set number of revolutions (Nmax) from an initial level when the sensed environmental temperature rises above a maximum set environmental temperature level (Tmax) and increases the maximum allowed set number of revolutions (Nmax) to the initial level when the sensed environmental temperature falls below said maximum set environmental temperature level (Tmax), and

wherein a regulation of the maximum number of revolutions does not occur with a control of the number of revolutions by the variable speed motor.

Rejections

Claims 1–9 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written-description requirement.

Claims 10–16 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

Claims 1–5 and 8–14 are rejected under 35 U.S.C. § 103(a) as unpatentable over Grimm et al. (US 2006/0090490 A1, pub. May 4, 2006) (hereinafter "Grimm") and Moens (US 2005/0214128 A1, pub. Sept. 29, 2005).

Claims 6, 7, 15, and 16 are rejected under 35 U.S.C. § 103(a) as unpatentable over Grimm, Moens, and Hutchinson (US 5,718,563, iss. Feb. 17, 1998).

ANALYSIS

Written Description

Independent claims 1 and 9 recite "wherein a regulation of the maximum number of revolutions does not occur with a control of the number of revolutions by the variable speed motor." Appeal Br. 24, 26.

The Examiner rejects claims 1–9 under 35 U.S.C. § 112, first paragraph, because the foregoing recitation fails to comply with the written description requirement. Final Act. 5–6. In view of our determination that claims 1–9 are indefinite, *infra*, in this case, it follows that the rejection of these claims under 35 U.S.C. § 112, first paragraph, must fall because it is necessarily based on a speculative assumption as to the meaning of the claims. *See also In re Steele*, 305 F.2d 859, 862–63 (CCPA 1962). Therefore, we do not sustain the Examiner's rejection of claims 1–9 under

this ground of rejection. It should be understood, however, that our decision in this regard is *pro forma* and based solely on the indefiniteness of the claimed subject matter set forth below.

Indefiniteness

Claim 10 recites "wherein the algorithm is carried out continuously or regularly intermittently." Appeal Br. 27.

The Examiner determines that claim 10's phrase "regularly intermittently" is indefinite because its meaning is unclear. *See* Final Act. 7–8. The Examiner turns to a dictionary definition to construe the meaning of the term "intermittently," i.e., "coming and going at intervals; not continuous." *Id.* at 7 (emphasis omitted) (citing Merriam-Webster's Online Dictionary).[2] As for the term "regularly," the Examiner determines that "it is not clear 'how regular' the intermittence must be to meet the claim." Final Act. 8; Ans. 20.

The Appellant argues that one of ordinary skill in the art "would have appreciated that the term 'intermittently' is used, in conjunction with the term 'continuously,' to describe when the monitoring of the environmental temperature occurs." Appeal Br. 12–13 (citing Spec. ¶¶ 10, 27). Further, the "Appellant submits that a skilled person would have understood that the term 'regularly intermittently' clearly refers to regular intervals, e.g., every hour, every twelve hours, etc., in which the environmental temperature can

[2] The definition of the term "intermittently" —as proposed by the Examiner — is not disputed by the Appellant. *See, e.g.*, Appeal Br. 13.

be monitored for use in the algorithm." *Id.* at 13. The Appellant's argument is persuasive.

In the context of claim 10 and the Specification, particularly paragraph 27, we determine that one of ordinary skill in the art would understand the meaning of the term "regularly" as the Appellant argues. Further, a dictionary definition of the term "regularly" is "[a]t uniform intervals of time[;] 'the reunion has taken place regularly every two years'." *Regularly def. 2*, LEXICO DICTIONARY, https://www.lexico.com/definition/regularly (last visited Feb. 27, 2020). Therefore, the phrase "regularly intermittently" may be understood as coming and going at uniform intervals of time. Therefore, the term "regularly" modifies the way in which the algorithm is carried out intermittently, e.g., uniformly.

Thus, we do not sustain the Examiner's rejection of independent claim 10, and claims 11–16 that depend therefrom.

Grimm in view of Moens, and Grimm in view of Moens and Hutchinson

The Examiner rejects, under 35 U.S.C. § 103(a), claims 1–5 and 8–14 as unpatentable over Grimm and Moens, and claims 6, 7, 15, and 16 as unpatentable over Grimm, Moens, and Hutchinson. Final Act. 8–17. In view of our determination that claims 1–16 are indefinite, *infra*, in this case, it follows that the rejections of these claims under 35 U.S.C. § 103(a) must fall because they are necessarily based on a speculative assumption as to the meaning of the claims. *See also In re Steele*, 305 F.2d 859, 862–63 (CCPA 1962). Therefore, we do not sustain the Examiner's rejection of claims 1–16 under this ground of rejection. It should be understood, however, that our

decision in this regard is *pro forma* and based solely on the indefiniteness of the claimed subject matter set forth below.

New Ground of Rejection

For the following reasons, we reject claims 1–16 under 35 U.S.C. § 112, second paragraph, as indefinite.

Independent claims 1 and 9 recite, with added emphasis, "wherein a regulation of the maximum number of revolutions [(Nmax)] *does not occur with* a control of the number of revolutions by the variable speed motor," hereinafter, "the regulation clause." Appeal Br. 24, 26. The regulation clause of claims 1 and 9 shares language that is similar to paragraph 32 of the Specification, which states, with added emphasis, "[t]his regulation *does not normally occur* between the normal control of the motor's number of revolutions but it works with dynamic limited number of revolutions."

The Examiner construes the regulation clause in a manner that is different from the Appellant. *See, e.g.*, Final Act. 6 ("The Examiner must respectfully assert that Applicant appears to have misconstrued paragraph 32 (as well as the newly-added claim limitation), and has actually interpreted them in a manner that is opposite from what they actually state.").

The Examiner understands paragraph 32 of the Specification as implying that the regulation "of Nmax occurs along with (i.e. simultaneous with) motor speed adjustments." *Id.* This leads us to the understanding that the Examiner construes the phrase "does not occur," in the regulation clause, as not simultaneous (i.e., not at the same time). In other words, the Examiner construes the regulation clause as "wherein a regulation of the maximum number of revolutions [(Nmax) is not simultaneous] with a

control of the number of revolutions by the variable speed motor." Here, the Examiner construes the regulation clause grammatically. *See also* Final Act. 5–6 (The Examiner rejects independent claims 1 and 9 as failing to comply with the written description requirement under 35 U.S.C. § 112, first paragraph, because paragraph 32 differs from the regulation clause of claims 1 and 9.). Although the Examiner's construction grammatically appears reasonable, it does not appear to be consistent with gist of the remainder of the subject matter of claims 1 and 9 — or the Specification — i.e., contextually.

The Appellant asserts that "the skilled person would have understood that claim 1 is at least directed to regulating the maximum number of revolutions (Nmax) separately, e.g., does not occur, with controlling the number of revolutions by the variable speed motor." Appeal Br. 11. Here, the Appellant submits that the phrase "does not occur with" is an example of the phrase "separately with." In other words, the Appellant construes the regulation clause as "wherein a regulation of the maximum number of revolutions [(Nmax) is separately] with a control of the number of revolutions by the variable speed motor." The gist of the Appellant's construction of the regulation clause is generally consistent with subject matter of claims 1 and 9 — and the Specification. However, claiming that a regulation of Nmax is *separate with* a control of the number of revolutions by the variable speed motor, is oddly worded and fails grammatically.

Further, we have reviewed the regulation clause of claims 1 and 9 independent from the apparent constructions of the Examiner and the Appellant, and we cannot ascertain a meaning of the clause that is clear both contextually and grammatically. Therefore, we determine that claim 1 and

claim 9, as well as claims 2–8 that depend from claim 1, are indefinite. *See In re Packard,* 751 F.3d 1307, 1311 (Fed. Cir. 2014) (during prosecution a claim is indefinite when it contains words or phrases whose meaning is unclear); *Ex parte McAward,* 2017 WL 3669566, at *5 (PTAB Aug. 25, 2017) (precedential) (explaining that the USPTO considers a claim indefinite when it "contains words or phrases whose meaning is unclear").

Independent claim 10 recites, "wherein a regulation of the maximum number of revolutions does not normally occur between a normal control of the motor's number of revolutions but works with a dynamic limited number of revolutions." Appeal Br. 27. The language of claim 10 is slightly different than the wording of the regulation clause of claims 1 and 9. However, similar to the reasons discussed with regard to the regulation clause of claims 1 and 9, we cannot ascertain a meaning of the foregoing recitation of claim 10 that is clear. Therefore, we determine that claim 10, as well as claims 11–16 that depend from claim 10, are indefinite.

CONCLUSION

We REVERSE *pro forma* the Examiner's rejection of: claims 1–9 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement; claims 1–5 and 8–14 under 35 U.S.C. § 103(a) as unpatentable over Grimm and Moens; and claims 6, 7, 15, and 16 under 35 U.S.C. § 103(a) as unpatentable over Grimm, Moens, and Hutchinson.

We REVERSE the Examiner's rejections of claims 10–16 under 35 U.S.C. § 112, second paragraph, as indefinite.

We enter a NEW GROUND OF REJECTION of claims 1–16 under 35 U.S.C. § 112, second paragraph, as indefinite pursuant to our authority under 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 that the Appellants, 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.

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).

In summary:

Claims Rejected	35 U.S.C. §	References/ Basis	Affirmed	Reversed	New Ground
1–9	112, first paragraph	Written Description		1–9	
10–16	112, second paragraph	Indefinite		10–16	
1–5, 8–14	103(a)	Grimm, Moens		1–5, 8–14	
6, 7, 15, 16	103(a)	Grimm, Moens, Hutchinson		6, 7, 15, 16	
1–16	112, second paragraph	Indefinite			1–16
Overall Outcome				1–16	1–16

REVERSED; 37 C.F.R. § 41.50(b)