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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/982,437	12/29/2015	Thomas Ory Moniz	285038-US-1/GECV-704	3150
122218	7590	03/02/2020	EXAMINER	
Dority & Manning, P.A. and GEC-Aviation Post Office Box 1449 Greenville, SC 29602-1449			SUTHERLAND, STEVEN M	
			ART UNIT	PAPER NUMBER
			3741	
			NOTIFICATION DATE	DELIVERY MODE
			03/02/2020	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS ORY MONIZ, JOSEPH GEORGE ROSE, and
PAUL DANIEL KEMPER

Appeal 2019-004633
Application 14/982,437
Technology Center 3700

Before MICHAEL J. FITZPATRICK, LISA M. GUIJT, and
LEE L. STEPINA, *Administrative Patent Judges*.

GUIJT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ seeks our review under 35 U.S.C. § 134(a) of the rejection of claims 24–43. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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

THE INVENTION

Appellant's invention relates to "gas turbine engines, and, more particularly, to gas turbine engine assembly and methods of assembling same." Spec. ¶ 1. Claims 24, 32, and 39 are the independent claims on appeal. Claim 24, reproduced below, is illustrative of the subject matter on appeal.

24. A method of assembling a turbofan engine, the method comprising:

inserting a core gas turbine engine into a fan case assembly in an axial direction, the inserting taking place with a first outlet guide vane segment of an outlet guide van assembly coupled to the fan case assembly and a second outlet guide vane segment of the outlet guide vane assembly decoupled from the fan case assembly, and the core gas turbine engine having been shifted in a radial direction away from the first outlet guide van segment to clear a radial inner diameter of the first outlet guide van segment; and

coupling the core gas turbine engine to the fan case assembly, comprising coupling the first outlet guide van segment to the core gas turbine and coupling the second outlet guide vane segment to the fan case assembly;

wherein the core gas turbine engine comprises a booster compressor and the first outlet guide van segment and the second outlet guide vane segment have a radially inner diameter that is smaller than the radial outer diameter of the booster compressor.

THE REJECTIONS²

- I. Claims 24–43 are rejected under 35 U.S.C. § 112(a) as failing to comply with the written description requirement.

² The Examiner's objection to the drawings for failing to show every feature of the claimed invention is a petitionable, not appealable, matter. *See* Non-Final Action 2; 37 C.F.R. § 134(a); 37 C.F.R. § 1.181(a)(1).

- II. Claims 24–43 are rejected under 35 U.S.C. § 112(a) as failing to comply with the enablement requirement.
- III. Claims 24–43 are rejected under 35 U.S.C. § 112(b) as indefinite.

OPINION

Rejection I

The Examiner finds that the independent claim 24 fails to comply with the written description requirement because the Specification fails to adequately describe the claim imitation “coupling the core gas turbine engine to the fan case assembly.” Ans. 3. In support, the Examiner determines that paragraph 19 of the Specification discloses that “disk (142) of the fan is part of the fan case assembly (114),” and that Figure 1 of the Specification “shows disk (142) of the fan as an extension of both the booster compressor (122) and the low pressure shaft that extends through the core gas turbine engine (116).” Non-Final Act. 4. The Examiner determines that “[t]he type of connection that allows the core gas turbine engine to be inserted and removed from *the fan* of the fan case assembly, and the location of the connection, is not disclosed by [the Specification], such that it cannot be determined that that [the inventors] possessed the claimed invention at the time of disclosure.” *Id.* at 4–5 (emphasis added); *see also id.* at 5 (rejecting claims 32 and 39 for “the same reasons”); Ans. 3 (“adequate disclosure as to how and where *the fan of* the fan case assembly is coupled and decoupled from the core gas turbine engine needs to be disclosed in order to show [A]ppellant possessed the [disputed] claimed limitation” (emphasis added)); *id.* at 4 (“coupling of *the fan disk* of the fan to the core gas turbine is not disclosed, and is necessary to show that [A]ppellant possessed the claimed

invention at the time of disclosure” (emphasis added)). The Examiner further finds that

[the Specification] is silent [as] to a connection between the fan of the fan case assembly and the core gas turbine engine that allows the fan to be decoupled from the core gas turbine engine, and contradicts that the fan of the fan case assembly is separable from the core gas turbine engine by showing the fan integral with both the low pressure compressor 120 and the low pressure shaft 136 of the core gas turbine engine in [F]igure 1.

Ans. 3.

Appellant argues that “claim 24 does not require coupling the core gas turbine engine to the fan of the fan case assembly,” but rather, “claim 24 recites the feature: ‘coupling the core gas turbine engine to the fan case assembly.’” Appeal Br. 8. Appellant submits that the Specification provides adequate written description support for this limitation because the Specification discloses, for example, with reference to Figures 1 and 2, that “core gas turbine engine (116) is decoupled from the fan case assembly (114) at radially inner fan hub frame flange (153) and radially outer fan case flange (155), such as using bolts (180) and bolt flanges (182).” *Id.* (citing ¶¶ 21, 25). Appellant also submits that it is “conventional or well-known in the art” how to connect a fan, including rotor blades via componentry to a core turbine engine. Appeal Br. 10 (citing US Patent No. 7,841,165, for example, col. 4, ll. 30–40, for disclosing that it is well-known in the art how to couple “a fan (i.e., rotor blades (60)) . . . to a core turbine engine (12),” for example, “fan assembly (50) includes a cone (84), which is connected at a forward end (86) to the rotor disk (66) and at a downstream end (88) to a first output of a gearbox (100),” wherein “a low-pressure shaft (34) [is] coupled to [the]

gearbox (100),” which is “coupled to a frame (13) of a core turbine engine (12)”).

To satisfy the written description requirement, the Specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed subject matter as of the filing date. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562–63 (Fed. Cir. 1991). The issue of whether the written description requirement has been satisfied is a question of fact. *Wang Labs, Inc. v. Toshiba Corp.*, 993 F.2d 858, 865 (Fed. Cir. 1993).

We find that the Specification describes the coupling of a core gas turbine engine to a first outlet guide vane segment of an outlet guide vane assembly, which outlet guide vane assembly is in turn coupled to *components of* a fan case assembly, and therefore, the fan case assembly, in sufficient detail so that one skilled in the art can reasonably conclude the inventors had possession of the subject matter of claim 24 as of the filing date. *See, e.g.*, Spec. ¶ 21. In other words, a description of any further coupling of the core gas turbine engine to *other* components of the fan case assembly, which are admittedly disclosed in the Specification as *a part of* the fan case assembly (i.e., disk 142), is unnecessary given the scope of claim 24. As argued by Appellant, claim 24 does not require the core gas turbine engine to be coupled to the fan of the fan case assembly, notwithstanding Appellant’s evidence that such further coupling is well-known in the art.

Accordingly, we do not sustain the Examiner’s rejection of independent claim 24, and dependent claims 25–31 depending therefrom. The Examiner relies on the same findings relative to the rejection of

independent claims 32 and 39 pursuant to the written description requirement of 35 U.S.C. § 112(a), and therefore, for essentially the same reasons, we do not sustain the Examiner’s rejection of independent claims 32 and 39, and claims 33–38 and 40–43 depending therefrom. Non-Final Act. 5.

Rejection II

The Examiner finds that the Specification “does not enable how to couple and decouple *the fan* of the fan case assembly to the core gas turbine engine, which is required for the gas turbofan engine to function.” Non-Final Act. 5 (emphasis added). The Examiner addresses the *Wands* factors, finding, *inter alia*, “[o]ne of ordinary skill would need to learn where and how *the fan* of the fan case assembly is connected to the core gas turbine engine,” and also finding that the inventors are “silent to both the point of connection and the type of connection used.” *Id.* at 6.

Appellant argues that the Specification contains “sufficient information regarding how to connect the fan case assembly to the core gas turbine engine to enable one skilled in the art to make and use the claimed subject matter without undue experimentation at least for the reasons discussed with respect to [Rejection I].” Appeal Br. 12.

All questions of enablement are evaluated against the claimed subject matter. As concerns the breadth of a claim relevant to enablement, the only relevant concern should be whether the scope of enablement provided to one skilled in the art by the disclosure is commensurate with the scope of protection sought by the claims. MPEP § 2164.08 (citing *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1244 (Fed. Cir. 2003); *In re Moore*, 439 F.2d 1232,

1236 (CCPA 1971)). *See also Plant Genetic Sys., N.V. v. DeKalb Genetics Corp.*, 315 F.3d 1335, 1339 (Fed. Cir. 2003).

We find that the Specification enables one skilled in the art to insert a core turbine gas engine into a fan case assembly in an axial direction, the core gas turbine engine having been shifted in a radial direction, as claimed, and also to couple the core gas turbine engine to the fan case assembly by coupling a first outlet guide vane segment to the core gas turbine engine (which first outlet guide vane segment has already been coupled to the fan case assembly) and also coupling a second outlet guide vane assembly to the fan case assembly, as claimed. *See, e.g.*, Spec. ¶ 21. As discussed *supra* with respect to Rejection I, further coupling the core gas turbine engine, directly or indirectly, to other components of the fan case assembly is not claimed, notwithstanding Appellant’s evidence that such a further coupling is well-known in the art.

Accordingly, we do not sustain the Examiner’s rejection of independent claim 24, and dependent claims 25–31 depending therefrom. The Examiner relies on the same findings relative to the rejection of independent claims 32 and 39 pursuant to the enablement requirement of 35 U.S.C. § 112(a), and therefore, for essentially the same reasons, we do not sustain the Examiner’s rejection of independent claims 32 and 39, and claims 33–38 and 40–43 depending therefrom. Non-Final Act. 5.

Rejection III

The Examiner finds that (i) independent claims 24, 32,³ and 39, and therefore, all claims 24–43, are indefinite because the limitations “the

³ Although the Examiner’s analysis omits independent claim 32, claim 32 recites “the radially outer diameter of the booster compressor” similar to independent claims 24 and 39. Appeal Br. 18 (Claims App.).

radially outer diameter” of the booster compressor lack antecedent basis; (ii) dependent claims 27 and 36 are indefinite for reciting “a fan frame hub,” in addition to the recitation of “a fan frame hub” in claims 26 and 35 from which claims 27 and 36 depend respectively; (iii) claim 32 is indefinite because the limitations “the radially inner diameter,” “the fan case assembly,” and “the radially outer diameter” lack antecedent basis; and (iv) claim 40 is indefinite for reciting “a second outlet guide vane segment,” in addition to the recitation of “a second outlet guide segment” in claim 39 from which claim 40 depends. Non-Final Act. 7–8.

In the Appeal Brief, Appellant does not present arguments in response to the Examiner’s rejections under 35 U.S.C. § 112(b). Appeal Br. 1–15; *see also* 37 C.F.R. § 41.37(c)(1)(iv) (“The [Appeal Brief] arguments shall explain why the examiner erred as to each ground of rejection contested by appellant.”)

The Examiner notes in the Examiner’s Answer that “[t]he 35 USC 112(b) rejections . . . have not been argued by [Appellant].” Ans. 7.

In the Reply Brief, for the first time, Appellant presents new arguments responsive to the Examiner’s rejections pursuant to 35 U.S.C. § 112(b). Although Appellant characterizes Appellant’s arguments in the Reply Brief as “responsive to arguments raised in the Examiner’s [A]nswer,” the Examiner merely notes, in the Examiner’s Answer, the lack of Appellant’s arguments, without adding any substantive analysis—new or otherwise—to the rejections. Appeal Br. 5–7. Thus, Appellant’s arguments are waived as untimely, because Appellant’s arguments are not responsive to any positions newly raised in the Examiner’s Answer, nor does Appellant

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show good cause as to why these new arguments should be considered. *See* 37 C.F.R. § 41.41(b)(2).

Accordingly, we summarily sustain the Examiner's rejection of claims 24-43 under 35 U.S.C. § 112(b) as indefinite.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)	Affirmed	Reversed
24-43	112(a) written description			24-43
24-43	112(a) enablement			24-43
24-43	112(b) indefiniteness		24-43	
Overall Outcome			24-43	

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).

AFFIRMED