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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* STEPHANE CHARDON

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Appeal 2011-002357  
Application 11/604,296  
Technology Center 3600

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Before JAMES P. CALVE, RICHARD E. RICE and JILL D. HILL,  
*Administrative Patent Judges.*

RICE, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Stephane Chardon (Appellant) seeks our review under 35 U.S.C. § 134 of the Examiner's rejection of claims 1-9. An oral hearing was held January 14, 2013. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE and ENTER NEW GROUNDS OF REJECTION PURSUANT TO OUR AUTHORITY UNDER 37 C.F.R. § 41.50(b) against: (1) claim 8 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing, in the "wherein" clause of claim 8, to particularly point out and distinctly claim the subject matter which Appellant regards as the invention; and (2) claims 1 and 2 under 35 U.S.C. § 103(a) as unpatentable over Federation of American Scientists, *C-130 Hercules* (found at: <http://www.fas.org/man/dod-101/sys/ac/c-130.htm>) (hereafter "FAS"), Bartoe (US 4,043,523, iss. Aug. 23, 1977), Applicant's Admitted Prior Art<sup>1</sup> and Miller (GB 1,259,393, pub. Jan. 5, 1972).

We do not sustain the rejection of claims 1-9 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing, with regard to use of the term "a predetermined high value" in claims 1-3, to particularly point out and distinctly claim the subject matter which Appellant regards as the invention, for reasons to be discussed *infra*. We do not sustain the rejection of claims 1 and 3-9 under 35 U.S.C. § 103(a) as unpatentable over FAS and Bartoe, for reasons to be discussed *infra*.<sup>2</sup> We also do not sustain the

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<sup>1</sup> We refer to the disclosure in the Specification filed Nov. 27, 2006, at page 1, lines 12-27, as "Applicant's Admitted Prior Art."

<sup>2</sup> Because we reject claim 8 as indefinite under a New Ground of Rejection, we pro forma reverse the rejection of claim 8 under 35 U.S.C. § 103(a) as unpatentable over FAS and Bartoe, because this rejection necessarily is

rejection of claim 2 under 35 U.S.C. § 103(a) as unpatentable over FAS, Bartoe and Miller, for reasons to be discussed *infra*.

*The Claimed Subject Matter*

The claimed subject matter “relates to a method for ensuring the safety of an aircraft flying horizontally at low speed, for example no more than slightly greater than the angle of attack protection speed.” Spec. 1, ll. 1-4.<sup>3</sup> Claims 1 and 8 are independent; and claim 1, reproduced below with italics for emphasis, is representative of the subject matter on appeal:

1. A method to ensure the safety of an aircraft flying horizontally at low speed, the aircraft including a horizontal tail group and an airscrew provided on an engine supported by a wing of the aircraft, the wing having extendable and retractable trailing-edge high-lift flaps, said method comprising:

orienting said high-lift flaps in an extended position during a horizontal flight of the aircraft;

blowing wind generated by said airscrew onto the wing of the aircraft and onto the high-lift flaps oriented in said extended position to generate a nose-down moment;

deflecting the horizontal tail group to generate a nose-up moment and counteract the nose-down moment; and

*retracting the high-lift flaps based on whether a thrust of the engine is equal to or greater than a predetermined high value.*

*The Rejections*

The following Examiner’s rejections are before us for review:

(1) claims 1-9 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing, with regard to use of the term “a

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based upon speculative assumptions as to the meaning of the claim. *See In re Steele*, 305 F.2d 859,862-63 (CCPA 1962).

<sup>3</sup> We cite as “Spec.” the Specification filed Nov. 27, 2006.

predetermined high value” in claims 1-3, to particularly point out and distinctly claim the subject matter which Appellant regards as the invention;

(2) claims 1 and 3-9 stand rejected under 35 U.S.C. § 103(a) as unpatentable over FAS and Bartoe; and

(3) claim 2 stands rejected under 35 U.S.C. § 103(a) as unpatentable over FAS, Bartoe and Miller.

## OPINION

### *Rejection (1) – Indefiniteness – Claims 1-9*

The Examiner concludes that the limitation “a predetermined high value” in claims 1-3 is indefinite “as it is not known or defined as what a ‘high’ value is.” Ans. 4. We disagree. The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether “those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *See Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986) (citations omitted). While we appreciate the Examiner’s position regarding the breadth of the term “a predetermined high value,” we do not agree that claims 1-9 are indefinite as a result of such breadth. A person of ordinary skill in the art would understand the meaning of “a predetermined high value” when claim 1 is read in light of the Specification. The Specification describes a first embodiment in which “said predetermined lift value corresponds to the thrust of the engines needed for take-off. Such a value is generally known by the name TOGA (Take Off - Go Around).” Spec. 2, ll. 30-33. The Specification also describes a second embodiment in which the predetermined high value “corresponds to a first threshold less than the

thrust TOGA of the engines needed for the aircraft to take off” (*id.* at 3, ll. 1-5), wherein “[s]aid first threshold may be at least approximately equal to 60% of the thrust TOGA of the engines needed for take-off” (*id.* at 3, ll. 9-11). *See* App. Br. 12. The fact that a claim is broad does not mean that it is indefinite, that is, undue breadth is not indefiniteness. *In re Johnson*, 558 F.2d 1008, 1016 n.17 (CCPA 1977); *In re Miller*, 441 F.2d 689, 693 (CCPA 1971); *In re Gardner*, 427 F.2d 786, 788 (CCPA 1970).

Accordingly, we do not sustain the rejection of claims 1-9 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing, with regard to use of the term “a predetermined high value” in claims 1-3, to particularly point out and distinctly claim the subject matter which Appellant regards as the invention.<sup>4</sup>

*Rejections (2) – Obviousness – Claims 1 and 3-9*

The Examiner’s obviousness analysis as to claim 1 is divided into parts (a) – (e). Ans. 4-7. In parts (a) – (d), the Examiner finds that (1) FAS discloses a description of the known C-130 Hercules aircraft, which includes a horizontal tail group, an airscrew provided on an engine supported by a wing of the aircraft and extendable/retractable trailing-edge high-lift flaps; (2) Bartoe teaches a rear horizontal stabilizer featuring movable elevators that is tilt-adjustable for providing enhanced pitch trim configurations for aircraft capable of flying at low speeds; (3) the turboprops of the C-130, in blowing wind onto the high-lift flaps when extended, inherently produce at

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<sup>4</sup> Claim 8 is an independent apparatus claim and does not recite the limitation “a predetermined high value.” The Examiner presumably included claim 8 in the rejection because of the reference to claim 1 in the recitation of claim 8 “wherein the aircraft comprises a device to apply the method specified in claim 1.”

least some nose-down moment; and (4) the horizontal tail group of Bartoe is capable of generating a nose-up moment to counteract the nose-down moment. *Id.* at 4-6.<sup>5</sup> In part (e), the Examiner finds that “[t]he apparatus and structure rendered obvious by FAS as modified by [Bartoe] is further inherently capable of having the high-lift flaps retracted based on whether a thrust of the engine is equal to or greater than a predetermined value.” *Id.* at 7. The Examiner reasons that it would have been obvious to one of ordinary skill in the art “to retract the flaps while the engines are operating at a higher flight thrust, because the flaps are at least partially retracted during normal flight operations.” *Id.*

Appellant argues that the Examiner’s reasoning is erroneous for failing to take into account that claim 1 requires the aircraft on which the method is performed to be flying horizontally at a low speed. In particular, Appellant contends that it is illogical for the Examiner to surmise that the high-lift flaps are normally retracted while the aircraft is flying horizontally at a low speed, because under that operating condition the aircraft requires the extra lift provided by extended flaps. App. Br. 7-8; Reply Br. 3-4. Appellant further argues that the Examiner’s rationale fails to establish that retracting the high-lift flaps occurs “based on whether a thrust of the engine is equal to or greater than a predetermined high value” as required by claim 1. App. Br. 7-8; Reply Br. 3-4.

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<sup>5</sup> The Examiner reasons that it would have been obvious to incorporate into the C-130 the tilt-adjustable stabilizing horizontal tail group as taught by Bartoe, in order to provide enhanced pitch trim and control during low-speed flight. *Id.* at 5. The Examiner also reasons that “[i]t would have been obvious to one having ordinary skill in the art at the time of the invention to generate a nose-up moment to counteract the nose-down moment in order to maintain a level flight as is desirable in normal flight operation.” *Id.* at 6.

In response to Appellant’s arguments, the Examiner contends that “while it is true that the aircraft is flying horizontally at a low speed it is still known by those of ordinary skill in the art at the time of the invention that flaps are retracted when the aircraft comes up to speed even if the speed is a low one” and “[a]ny value in which a speed is reached where the flaps are retracted is a high value that is predetermined as those are only broadly defined and claimed.” Ans. 11 (emphasis added). Appellant argues in reply that the Examiner’s analysis fails to properly apply the claim limitation “a predetermined high value.” Reply Br. 4. We agree.

The plain meaning of “a predetermined high value” as used in claim 1 is a value of relatively great degree that is determined beforehand.<sup>6</sup> See *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989) (the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification). This plain meaning is consistent with Appellant’s Specification. The Examiner’s contention that “[a]ny value in which a speed is reached where the flaps are retracted is a high value that is predetermined” (Ans. 11) is unreasonably broad and fails to apply the limitation “a predetermined high value” as properly construed. As argued by Appellant, the Examiner does not adequately establish that the thrust at which the flaps are retracted when the aircraft is flying horizontally at a low speed is either “predetermined” or “high.” Reply Br. 4. Nor has the Examiner cited any support for concluding that “it is still known by those of ordinary skill in the

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<sup>6</sup> WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE UNABRIDGED (1971) at p. 1067 (“high”) and p. 1786 (“predetermine”).

art at the time of the invention that flaps are retracted when the aircraft comes up to speed even if the speed is a low one,” or provided any evidence or technical reasoning to establish that the thrust at such time is a value of relatively great degree that is determined beforehand, i.e., a predetermined high value.

Accordingly, we do not sustain the rejection of claim 1, and claims 3-7 and 9 dependent thereon, under 35 U.S.C. § 103(a) as unpatentable over FAS and Bartoe. We pro forma reverse the rejection of claim 8 based on the New Ground of Rejection of claim 8 as being indefinite as discussed *infra*.

*Rejection (3) – Obviousness – Claim 2*

Claim 2 depends from claim 1 and recites the additional limitation “wherein said predetermined high value corresponds to a thrust of engines of the aircraft needed for take-off.” The Examiner relies on FAS and Bartoe to teach the method of claim 1 and on Miller to teach the additional limitation of claim 2. Ans. 9. Because FAS and Bartoe do not teach the method of claim 1, as discussed *supra*, and because the Examiner does not rely on Miller to cure the deficiency in FAS and Bartoe, we do not sustain the rejection of claim 2 under 35 U.S.C. § 103(a) as unpatentable over FAS, Bartoe and Miller.

*New Ground of Rejection – Indefiniteness – Claim 8*

We enter a New Ground of Rejection of claim 8 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing, in the “wherein” clause of claim 8, to particularly point out and distinctly claim the subject matter which Appellant regards as the invention. Claim 8 recites, with italics for emphasis:

8. An aircraft comprising:
  - a fixed wing supporting engines provided with airscrews, and trailing-edge high-lift flaps, that can be extended and retracted; and
  - a stabilizing horizontal tail group, tilt-adjustable, provided with elevators, *wherein the aircraft comprises a device to apply the method specified in claim 1.*

The italicized “wherein” clause can be plausibly construed as a statement of intended use. “An intended use or purpose usually will not limit the scope of the claim because such statements usually do no more than define a context in which the invention operates.” *See Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345 (Fed. Cir. 2003). Although “[s]uch statements often . . . appear in the claim's preamble,” a statement of intended use or purpose can appear elsewhere in a claim. *In re Stencel*, 828 F.2d 751, 754 (Fed. Cir. 1987). Alternatively, the “wherein” clause can be plausibly construed as calling for a device such as a computer or controller programmed to perform the method of claim 1. For example, the Specification describes an HLCC computer that “controls . . . retraction of the flaps 5, when . . . the gas levers are in the TOGA position.” Spec. 6, ll. 25-33, fig. 3. Because the “wherein” clause is amenable to two plausible claim constructions, it is indefinite. *See Ex parte Miyazaki*, 89 USPQ2d 1207, 1211 (BPAI 2008) (precedential) (“[I]f a claim is amenable to two or more plausible claim constructions, the USPTO is justified in requiring the applicant to more precisely define the metes and bounds of the claimed invention by holding the claim unpatentable under 35 U.S.C. § 112, second paragraph, as indefinite.”).

*New Ground of Rejection – Obviousness – Claims 1 and 2*

We enter a New Ground of Rejection of claims 1 and 2 under 35 U.S.C. § 103(a) as unpatentable over FAS, Bartoe, Applicant's Admitted Prior Art and Miller. As to the limitations of claim 1, except the limitation "retracting the high-lift flaps based on whether a thrust of the engine is equal to or greater than a predetermined high value," we adopt and incorporate by reference the Examiner's findings and reasoning set forth in section 2, parts (a) through (d), of the Answer at pages 4-6. Appellant's Admitted Prior Art provides further support for the Examiner's findings and reasoning:

It is known that, in such a phase of horizontal flight at low speed, the lift imparted on the aircraft by its wings and said flaps, then in the extended position, needs to be high, such that this high lift, reinforced by the blowing on the wings and the extended flaps by the airscrews of the engines and aided by the thrust of said engines, generates a high pitch-down moment relative to the center of gravity of the aircraft.

To balance the aircraft, the pilot deflects said adjustable horizontal tail group to nose up, so that it generates, relative to the center of gravity of the aircraft, a nose-up moment to counteract said high nose-down moment. This balancing nose-up moment must therefore be high, such that the local impact on said adjustable horizontal tail group is strongly negative.

Spec. 1, ll. 12-27.

As to the limitation of claim 1 "retracting the high-lift flaps based on whether a thrust of the engine is equal to or greater than a predetermined high value" and the additional limitation of claim 2 "wherein said predetermined high value corresponds to a thrust of engines of the aircraft needed for take-off," we adopt and incorporate by reference the Examiner's findings and reasoning set forth in section 3 of the Answer at page 9 that

[Miller] teaches an Airspeed Command System in which retractable and extendable flaps are retracted to take-off position when the throttle is set to take-off thrust, for the purpose of beginning safe go-around flight in a situation in which a previously planned landing is deemed inappropriate (page 9, lines [6-21]<sup>7</sup>). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to set the predetermined value of thrust to take-off thrust, as taught by [Miller], for the purpose of beginning a go-around procedure, as taught by Miller.

Ans. 9. We additionally find that Miller discloses initiating the safe go-around maneuver, during which the flaps are retracted and the throttle is set to take-off thrust as found by the Examiner, while the aircraft is flying horizontally at the “minimum decision altitude” (points A-C as illustrated in Miller’s Figure 7) and at a low speed conducive to final approach for landing the aircraft. Miller, p. 9, ll. 6-21, fig. 7.

A person of ordinary skill in the art would have combined the teachings of FAS, Bartoe, Applicant’s Admitted Prior Art and Miller to practice the methods of claims 1 and 2, for the purpose of implementing a safe go-around procedure, as taught by Miller. The teachings of FAS, Bartoe and Applicant’s Admitted Prior Art would have been combined to modify the C-130 to include a tilt-adjustable horizontal tail group as disclosed in Bartoe and Applicant’s Admitted Prior Art, in order to provide enhanced pitch trim configurations for the C-130 when flying at low speeds. At the beginning of a go-around procedure as taught by Miller, the modified C-130 would be flying horizontally at low speed. Further, as expressly or inherently disclosed in Bartoe and Applicant’s Admitted Prior Art, the C-130 would at such time be performing the routine steps of: orienting the

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<sup>7</sup> The Examiner’s citation of lines 6-12 is an obvious typographical error.

high-lift flaps in an extended position in order to increase lift; blowing wind generated by the airscrews onto the wings of the aircraft and onto the high-lift flaps oriented in extended position to generate a nose-down moment; and deflecting the horizontal tail group to generate a nose-up moment and counteract the nose-down moment. As taught by Miller, for the purpose of implementing a safe go-around maneuver, the C-130 would perform the additional step of retracting the high-lift flaps based on whether a thrust of the engine is equal to a predetermined high value, specifically, take-off thrust. Thus, based on the teachings of FAS, Bartoe, Applicant's Admitted Prior Art and Miller, the person of ordinary skill would have practiced all of the steps and limitations of claims 1 and 2.

Accordingly, we enter a New Ground of Rejection of claims 1 and 2 under 37 C.F.R. § 41.50(b). No inference should be drawn from the Board's failure to enter a New Ground of Rejection for other claims.<sup>8</sup> As the Board's function is primarily one of review, we leave to the Examiner the determination of whether claims 3-7 and 9 are patentable over the cited or other prior art. *See* MPEP § 1213.02.

## DECISION

We reverse the Examiner's rejection of claims 1-9 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing, with regard to use of the term "a predetermined high value" in claims 1-3, to particularly point out

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<sup>8</sup> *See* Manual of Patent Examining Procedure (MPEP) § 1213.02 ("Since the exercise of authority under 37 C.F.R. § 41.50(b) is discretionary, no inference should be drawn from a failure to exercise that discretion.").

and distinctly claim the subject matter which Appellant regards as the invention.

We reverse the Examiner's rejection of claims 1 and 3-9 under 35 U.S.C. § 103(a) as unpatentable over FAS and Bartoe.

We reverse the Examiner's rejection of claim 2 under 35 U.S.C. § 103(a) as unpatentable over FAS, Bartoe and Miller.

We enter a NEW GROUND OF REJECTION of claim 8 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing, in the "wherein" clause of claim 8, to particularly point out and distinctly claim the subject matter which Appellant regards as the invention.

We reverse the Examiner's rejection of claim 8 under 35 U.S.C. § 103(a) as unpatentable over FAS and Bartoe, because this rejection necessarily is based upon speculative assumptions as to the meaning of the claim.

We enter a NEW GROUND OF REJECTION of claims 1 and 2 under 35 U.S.C. § 103(a) as unpatentable over FAS, Bartoe, Applicant's Admitted Prior Art and Miller.

37 C.F.R. § 41.50(b) provides that, "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review." Regarding the new ground of rejection, 37 C.F.R. § 41.50(b) also provides that Appellants must, WITHIN TWO MONTHS, exercise one of the following options:

- (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 proceeding will be remanded to the examiner. . . .

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(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)(1)(iv).

REVERSED; 37 C.F.R. § 41.50(b)

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