

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SZ DJI TECHNOLOGY CO., LTD.,
Petitioner,

v.

AUTEL ROBOTICS USA LLC,
Patent Owner.

IPR2019-00846
Patent 9,260,184 B2

Before ERICA A. FRANKLIN, JENNIFER MEYER CHAGNON, and
AVELYN M. ROSS, *Administrative Patent Judges*.

ROSS, *Administrative Patent Judge*.

PRELIMINARY GUIDANCE
PATENT OWNER'S MOTION TO AMEND

I. INTRODUCTION

On September 23, 2019, we instituted trial as to claims 3 and 4 of U.S. Patent No. 9,260,184 B2. Paper 6 (“Decision”). After institution, Patent Owner filed a Motion to Amend. Paper 10 (“Motion”). Patent Owner moves to cancel claims 3 and 4 and substitute proposed claims 12 and 13 on a non-contingent basis. Motion 1–2. Patent Owner requests that we provide Preliminary Guidance on that Motion, in accordance with the Board’s pilot program concerning motion to amend practice and procedures. *Id.* at 2; *see also* Notice Regarding a New Pilot Program Concerning Motion to Amend Practice and Procedures in Trial Proceedings Under the America Invents Act Before the Patent Trial and Appeal Board, 84 Fed. Reg. 9,497 (Mar. 15, 2019) (providing a patent owner with the option to receive preliminary guidance from the Board on its motion to amend) (“Notice”). Petitioner filed an Opposition to the Motion. Paper 15 (“Opposition”).

We have considered Patent Owner’s Motion and Petitioner’s Opposition to the Motion. In this Preliminary Guidance, we provide information indicating the panel’s initial preliminary, non-binding views on whether Patent Owner has shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend in an *inter partes* review, and whether Petitioner (or the record) establishes a reasonable likelihood that the proposed substitute claims are unpatentable. *See* 35 U.S.C. § 316(d); 37 CFR § 42.121; *Lectrosonics, Inc. v Zaxcom, Inc.*, IPR2018-01129, Paper 15 (PTAB Feb. 25, 2019) (precedential); *see also* Notice, 84 Fed. Reg. at 9,497 (“The preliminary guidance . . . provides preliminary, non-binding guidance from the Board to the parties about the [motion to amend].”).

For purposes of this Preliminary Guidance, we focus on the proposed substitute claims. *See* Notice, 84 Fed. Reg. at 9,497. Thus, we focus on the limitations added in Patent Owner’s Motion to Amend, and do not address the patentability of the originally challenged claims, or original claim 1 from which the proposed substitute claims depend.¹ *Id.* We emphasize that the views expressed herein are subject to change upon consideration of the complete record, including, if applicable, any revision to the Motion filed by Patent Owner. Thus, this Preliminary Guidance will not be binding on the Board, for example, when rendering a final written decision. *See id.* at 9,500.

II. PRELIMINARY GUIDANCE

A. Statutory and Regulatory Requirements

For the reasons discussed below, at this stage of the proceeding, and based on the current record, it appears that Patent Owner has shown a reasonable likelihood it has satisfied the statutory and regulatory requirements associated with filing a motion to amend.

1. Reasonable Number of Substitute Claims

Does Patent Owner propose a reasonable number of substitute claims? (35 U.S.C. § 316(d)(1)(B))
Yes. Patent Owner proposes claims 12 and 13 as substitutes to challenged claims 3 and 4, which is no more than 1 substitute claim for each challenged claim. Motion 1–2. Petitioner does not argue otherwise. <i>See generally</i> Opposition.

¹ Independent claim 1 was not challenged in this proceeding.

2. Respond to Ground of Unpatentability

Does the Motion respond to a ground of unpatentability involved in the trial? (37 C.F.R. § 42.121(a)(2)(i))

Yes. Patent Owner responds to the grounds of unpatentability at pages 9–19 of the Motion, arguing that the proposed substitute claims include new claim limitations (i.e., clockwise and counterclockwise UAV blade lock mechanisms that are configured to engage by partial rotation) that are not present in the prior art. Motion 10. Petitioner argues Patent Owner’s “Motion is merely a pretext to fix the fatal indefiniteness issues which doomed enforcement of claims 3 and 4 in the ITC” and thus, does not respond to a ground of unpatentability. Opposition 3.

For purposes of this preliminary guidance and based on the current record, we are not persuaded by Petitioner’s argument. As Petitioner itself acknowledges, “PO . . . contends that ‘neither of the prior art references—Sasaki and Sokn—disclose clockwise and counterclockwise UAV blade lock mechanisms that are configured to engage by partial rotation of a blade lock portion with respect to a shaft lock portion.’” *Id.* at 4 (citing Motion 10–12). Thus, Patent Owner’s Motion responds to the grounds of unpatentability.

3. Scope of Amended Claims

Does the amendment seek to enlarge the scope of the claims? (35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii))

No. Each of the proposed substitute claims includes all limitations of the original claims, plus narrowing limitations. Motion 2–4. Petitioner argues that “claims 12 and 13 no longer require that the blade lock portion ‘is rotated,’ and therefore, improperly enlarge[s] the scope of claims 3 and 4.” Opposition 2. Petitioner further argues that, contrary to Patent Owner’s argument that the added language “configured to engage” adds “structural requirements to the claimed lock mechanism” (Motion 3), there is no structure recited in the substitute claims in connection to this limitation. *Id.*

For purposes of this preliminary guidance and based on the current record, we are not persuaded by Petitioner’s arguments. As Petitioner acknowledges, Patent Owner “removes th[e] requirement [that the blade

lock portion ‘is rotated’]” and then “replaces it with a [] requirement that the blade lock portion be ‘*configured to engage by partial [] rotation.*’” *Id.* (citing Motion 2). The claim scope appears to be narrowed by the additional requirement of “partial” rotation and the *added* structural requirements for the claimed lock mechanism to comply with the “configured to” language, even if the substitute claims do not specifically recite what the added structure is. Therefore, we preliminarily determine that the scope of the claims is not enlarged because the proposed substitute claims contain substantially similar limitations as the challenged claims with respect to the recited rotation and also include a narrowing limitation (i.e., *partial* rotation).

4. New Matter

Does the amendment seek to add new subject matter? (35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii))

No. On the current record, Patent Owner appears to have set forth adequate written description support for the proposed amendments.² Motion 4–9. Petitioner does not identify any particular limitations for which support is lacking or otherwise contest Patent Owner’s arguments on this point. *See generally* Opposition 1–5.

B. Patentability

For the reasons discussed below, at this stage of the proceeding and based on the current record, it appears that Petitioner (or the record) has shown a reasonable likelihood that proposed substitute claims 12 and 13 are unpatentable.

² Patent Owner cites to the published patent application with parallel citations to the priority application, as opposed to the application as originally filed. *See generally* Motion 5–9 (citing Exs. 2002, 2003). We have compared the published application to the application as originally filed and discern no material differences. Patent Owner should correct the record in its Reply to Petitioner’s Opposition or in a Revised Motion to Amend.

Does the record establish a reasonable likelihood that the proposed substitute claims are unpatentable?

1. Obviousness

Yes. On this record, it appears that Petitioner (or the record) has shown a reasonable likelihood that proposed substitute claims 12 and 13 are unpatentable as obvious over Sasaki and Sokn.

In the Petition, Petitioner relied upon Sasaki as teaching a rotary wing aircraft apparatus and Sokn as teaching a locking mechanism having coupling threads to meet the limitations of dependent claims 3 and 4, and independent claim 1, from which claims 3 and 4 depend. Pet. 25–51. In our Decision on Institution, we provided reasons for our determination that, based on the current record, Petitioner had “established a reasonable likelihood of showing that [original] claims 3 and 4 would have been obvious in view of Sasaki and Sokn.” *See* Decision 16–24.

In its Motion to Amend, Patent Owner argues that independent claim 1 requires an “‘Engagement Limitation’, [which] means that the claimed lock mechanisms prevent a rotor blade from being attached to the wrong drive” but “Petitioner’s assertions of unpatentability are based on the false premise that Sasaki discloses this limitation.” Motion 13.

As noted above, for purposes of this Preliminary Guidance, we focus on the limitations added in Patent Owner’s Motion to Amend. We, therefore, do not address the parties’ arguments regarding the “Engagement Limitation” of claim 1 at this time.

Regarding the limitations added to proposed substitute claims 12 and 13, Patent Owner argues that “Sasaki does not disclose clockwise and counterclockwise UAV blade lock mechanisms that are configured to engage by partial rotation of a blade lock portion with respect to a shaft lock portion.” Motion 12.

Petitioner explains, however, that Sokn discloses “partial rotation” because of “its multi-thread and stop member design” in which “Sokn’s ring assembly design preferably has ‘four segments 37 . . . equally spaced at 90° from each other around surface 33,’ and “only require[s] a 90° rotation” for installation. Opposition 9–10. Patent Owner does not argue that Sokn is lacking a teaching of “partial rotation.” *See generally* Motion. At this stage of the proceeding, we determine that Sokn appears to teach the recited partial rotation. Further, we agree with Petitioner that here,

“PO attacks each reference individually” because the Petitioner relies on “Sokn’s segmented threaded coupling mechanism which results in partial rotation.” Opposition 13 (citing Pet. 50–51).

Patent Owner also argues that Petitioner is incorrect by “impl[ying] that Sokn teaches clockwise and counterclockwise engagement mechanisms.” Motion 16. In our Decision on Institution, we preliminarily determined that Petitioner had sufficiently shown that Sokn suggests clockwise and counterclockwise engagement mechanisms. Decision 20–21. This argument was previously considered at the institution stage and we decline to consider it further for purposes of preliminary guidance. *See* Notice, 84 Fed. Reg. at 9,497.

Patent Owner’s remaining arguments broadly relate to its position that the skilled artisan would not have had a reason to combine the teachings of Sasaki and Sokn. *See* Motion 12 (teaching away), 14–15 (nonanalogous art), 15 (no reason to include features), and 19 (time disparity between prior art and invention indicates nonobviousness). We address each argument below.

First Patent Owner argues that Sasaki “teaches away from directionally specific rotational lock mechanisms.” Motion 12. Specifically, Patent Owner argues that, because Sasaki is concerned with the “overtightening problem” that exists in prior art designs that are dependent on the direction in which the rotor blade rotates, Sasaki “describe[s] a propeller blade connection mechanism that is (1) independent of the direction of the blade rotation and (2) does not require any rotation (much less partial rotation) of a blade lock portion with respect to a shaft lock portion.” *Id.*

“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (quoting *Ricoh Co., Ltd. v. Quanta Comput. Inc.*, 550 F.3d 1325, 1332 (Fed. Cir. 2008)). However, a “teaching away” requires more than the mere expression of a general preference. *Galderma Labs., L.P., v. Tolmar, Inc.*, 737 F.3d 731, 738 (Fed. Cir. 2013). And a reference can distinguish prior art in order to show the novelty of an invention without teaching away from combining the prior art with the invention disclosed in the reference. *See Ricoh*, 550 F.3d at 1332. As Petitioner argues, “Sasaki never disparages directionally-specific lock mechanisms per se; rather, its design improves several

perceived issues with previous designs.” Opposition 17. On the current record and at this stage of the proceeding, we preliminarily determine that Sasaki does not teach away from directionally specific rotational lock mechanisms.

Patent Owner further contends that “Sokn is directed to a motor mount assembly for a domestic clothes dryer” and therefore, “relates to a different field than UAVs.” Motion 14–15.

We understand Patent Owner to contend that Sokn is non-analogous art. To provide a basis for an obviousness rejection, a reference must be analogous, i.e., the reference must either (1) be in the field of the inventor’s endeavor or (2) be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Clay*, 966 F.2d 656, 658–659 (Fed. Cir. 1992). We agree with Petitioner that Patent Owner “never alleges that Sokn is not reasonably pertinent to the coupling mechanism addressed by the ’184 patent” as asserted in the Petition. Opposition 18; *see* Pet. 28 (explaining that the ’184 patent, like Sokn, is concerned with a mechanism for precise and secure connection of two components). Thus, for purposes of this preliminary guidance and based on the current record, we are unpersuaded that Sokn is non-analogous art.

Next, Patent Owner argues that there is no motivation to combine the teachings of Sasaki and Sokn because there is no desire in Sasaki to utilize a lock mechanism for a propeller blade and a driveshaft that depends on the rotational direction of the propeller blade or that is configured to engage with partial rotation. Motion 15. In particular, Patent Owner argues that “the problem identified in Sasaki – overtightening – was resolved with a design that (1) did not depend on the direction of rotation and (2) did not require rotation of a blade lock portion with respect to a shaft lock portion in order to attach the blade.” *Id.*

Petitioner responds that “the Petition explained that the combination maintains the ‘mistake-proof’ design of the prior art (i.e., by having directionally-threaded screw fasteners) without suffering from the overtightening problem of the continuously threaded coupling mechanism disclosed in Sasaki.” Opposition 15 (citing Pet. 36). Further, Petitioner asserts that Sokn’s mechanism provides “increased design flexibility by allowing for use with a wider range of aircraft” and “improved mechanical alignments.” *Id.* (citing Pet. 26–38). At this stage of the proceeding, we agree with Petitioner that Patent Owner’s different theories against the

motivation to combine the teachings of Sasaki and Sokn are unpersuasive. *See id.* at 16–20.

Lastly, Patent Owner argues “that the vast time differences between Petitioner’s alleged prior art and the ’184 patent supports the conclusion that a POSA would not combine Sasaki and Sokn.” Motion 19. Patent Owner explains that Sasaki and Sokn were filed over twenty years before the invention of the ’184 patent. *Id.*

Petitioner argues that “[t]his argument has no basis in obviousness law and is irrelevant to the analysis” because “[o]bviousness is judged from the standpoint of a POSITA as of the effective filing date.” Opposition 19–20. While “[t]he length of the intervening time between the publication dates of the prior art and the claimed invention *can* also qualify as an objective indicator of *nonobviousness*” (*see Leo Pharm. Prods. Ltd. v. Rea*, 726 F.3d 1346, 1359 (Fed. Cir. 2013) (emphasis added)), without more—i.e., evidence of nexus—such time disparity evinces little. For purposes of this preliminary guidance and based on the current record, we are unpersuaded by Patent Owner’s contentions.

We also note Petitioner’s discussion of additional prior art references, e.g., U.S. Patent No. 6,929,226 B2 to Philistine among others, to demonstrate that partial rotation mechanisms with lugs and notches were well-known in the art. *See id.* at 20–25 (citing Exhibits 1026, 1017, 1018). On this record, the additional references appear to support Petitioner’s contention that it was known to use “partial rotation with lugs and notches to install one component onto another.” *Id.* We acknowledge that Patent Owner has not yet had the opportunity to address these references, which Petitioner made of record for the first time in this proceeding when they were filed in support of its Opposition. *See id.* Patent Owner will have the opportunity to do so in its Reply to Petitioner’s Opposition (or in a Revised Motion to Amend) in this proceeding.

At this stage of the proceeding, it appears that Petitioner has shown that Sokn describes the newly added limitations and Petitioner has adequately shown a person of ordinary skill in the art would have had a reason to combine Sasaki and Sokn. Accordingly, at this stage of the proceeding and based on the current record, we determine Petitioner has shown a reasonable likelihood that proposed substitute claims 12 and 13 are unpatentable as obvious over Sasaki and Sokn.

2. Indefiniteness

No. At this stage of the proceeding, it appears that Petitioner has not shown a reasonable likelihood that proposed substitute claims 12 and 13 are indefinite.

Petitioner argues that the term “engage” requires two components to mate together, but the claims do not recite the second component. Opposition 25. Petitioner further argues that it is unclear from the claims what constitutes sufficient “partial rotation” to achieve “engagement.” *Id.*

The terms “engage” and “partial [] rotation” are broad in scope, but breadth is not indefiniteness. The claims recite how a component engages another component, i.e., by “partial” rotation and there is no ambiguity in this respect. Further, claim 1 recites that the “shaft lock portion defin[es] notches configured to engage corresponding lugs on the blade lock portion.” The added limitation of claims 12 and 13 recites “the blade lock portion of the . . . lock mechanism is configured to engage by partial . . . rotation with respect to the shaft lock portion thereof,” which appears to refer back to the engagement of the shaft lock portion and the blade lock portion as recited in claim 1. In other words, when read in view of claim 1, the proposed claims appear to inform a person of ordinary skill in the art which component the blade lock portion of the lock mechanism is configured to engage, contrary to Petitioner’s argument.

Accordingly, on this record, it appears that Petitioner has not shown a reasonable likelihood that proposed substitute claims 12 and 13 are unpatentable as indefinite.

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PETITIONER:

Lori A. Gordon
Steve W. Peters
KING & SPALDING LLP
lgordon@kslaw.com
speters@kslaw.com
DJI-PTAB@kslaw.com

PATENT OWNER:

John L. Abramic
Timothy Bickham
Matthew Bathon
Harold H. Fox
Gretchen P. Miller
STEPTOE & JOHNSON LLP
tbickham@steptoe.com
jabramic@steptoe.com
mbathon@steptoe.com
hfox@steptoe.com
gmiller@steptoe.com