

**United States Court of Appeals
for the Federal Circuit**

HUNTING TITAN, INC.,
Appellant

v.

DYNAENERGETICS EUROPE GMBH,
Cross-Appellant

**ANDREW HIRSHFELD, PERFORMING THE
FUNCTIONS AND DUTIES OF THE UNDER
SECRETARY OF COMMERCE FOR
INTELLECTUAL PROPERTY AND DIRECTOR OF
THE UNITED STATES PATENT AND TRADEMARK
OFFICE,**
Intervenor

2020-2163, 2020-2191

Appeals from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2018-
00600.

Decided: March 24, 2022

JASON SAUNDERS, Arnold & Saunders, LLP, Houston,
TX, argued for appellant. Also represented by GORDON
ARNOLD, CHRISTOPHER MCKEON.

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BARRY J. HERMAN, Womble Bond Dickinson (US) LLP, Baltimore, MD, argued for cross-appellant. Also represented by WILLIAM R. HUBBARD; CHRISTINE H. DUPRIEST, PRESTON HAMILTON HEARD, Atlanta, GA; LISA MOYLES, JASON ROCKMAN, Moyles IP, LLC, Shelton, CT.

SARAH E. CRAVEN, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA, argued for intervenor. Also represented by THOMAS W. KRAUSE, ROBERT J. MCMANUS, MAUREEN DONOVAN QUELER, FARHEENA YASMEEN RASHEED.

Before PROST, REYNA, and HUGHES, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* HUGHES.

Concurring opinion filed by *Circuit Judge* PROST.

HUGHES, *Circuit Judge*.

Hunting Titan, Inc. petitioned for inter partes review of claims 1–15 of U.S. Patent No. 9,581,422, asserting 16 grounds of unpatentability based on theories of anticipation and obviousness, including allegations that the claims were anticipated by Schacherer, U.S. Patent No. 9,689,223. The Board instituted trial on all grounds and ultimately agreed with Hunting Titan, finding all of the original claims unpatentable.

After the petition was instituted, DynaEnergetics Europe GmbH, the patent owner, moved to amend the '422 patent to add proposed substitute claims 16–22. Hunting Titan opposed the motion to amend, advancing only obviousness grounds. Although Hunting Titan did not assert that Schacherer anticipated the proposed substitute claims, the Board determined that the original and proposed substitute claims alike were unpatentable as anticipated by Schacherer. DynaEnergetics requested rehearing and Precedential Opinion Panel review of the Board's

denial of the motion to amend. The Panel granted DynaEnergetics's request for rehearing, vacated the Board's decision denying DynaEnergetics's motion to amend, and then—after concluding that Hunting Titan had not proven by a preponderance of the evidence that proposed substitute claims 16–22 are unpatentable—granted the motion to amend the '422 patent to add the proposed substitute claims.

Hunting Titan appeals the Precedential Opinion Panel's vacatur of the Board's decision denying the motion to amend, and DynaEnergetics cross-appeals the Board's decision finding the original claims of the '422 patent anticipated by Schacherer. We affirm on both grounds.

I

DynaEnergetics owns the '422 patent, which is directed to a perforating gun used in an oil wellbore to penetrate the well lining and surrounding rock formation in order to provide a flow path for oil into the wellbore from the surrounding rock formation. '422 patent, 1:15–44. The perforating gun's key feature is a “wireless” and “selective” detonator assembly for detonating an explosive projectile charge within the perforating gun “without the need to attach wires to the detonator.” *Id.* 2:24–34. Claim 1 is representative and is reproduced below.

1. A wireless detonator assembly configured for being electrically contactably received within a perforating gun assembly without using a wired electrical connection, comprising:

a shell configured for housing components of the detonator assembly;

more than one electrical contact component, wherein at least one of the electrical contact components extends from the shell and further wherein the electrical contact component comprises an electrically

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contactable line-in portion, an electrically contactable line-out portion and an electrically contactable ground portion, the ground portion in combination with the line-in portion and the line-out portion being configured to replace the wired electrical connection to complete an electrical connection merely by contact;

an insulator positioned between the line-in portion and the line-out portion, wherein the insulator electrically isolates the line-in portion from the line-out portion; and

means for selective detonation housed within the shell, wherein the detonator assembly is configured for electrically contactably forming the electrical connection merely by the contact.

Id. 8:39–61.

A

Hunting Titan petitioned for inter partes review of claims 1–15 of the '422 patent, asserting 16 grounds of unpatentability based on theories of anticipation and obviousness. The Board instituted on the petition. Appx246. DynaEnergetics opposed the petition. It also filed a contingent motion to amend the '422 patent to add new claims 16–22, in the event the Board were to find original claims 5–11 unpatentable.

1

Relevant to this appeal is Hunting Titan's first asserted ground of unpatentability that Schacherer, U.S. Patent No. 9,689,223, anticipates all of the '422 patent's original claims. DynaEnergetics maintained, in its Patent Owner Response, that Schacherer lacks several limitations of the claimed detonator assembly.

DynaEnergetics asserted that Schacherer does not teach or disclose the claimed “*wireless* detonator assembly.” Appx320 (emphasis added). According to DynaEnergetics, Schacherer “incorporate[s] an electrically wired detonator (38) into a tandem sub or connector,” *id.*, while the claimed detonator assembly “replace[s] [the] electrically wired detonator . . . with a wireless detonator 10 and house[s] the components of the detonator, including the means for selective detonation, within a shell (12).” Appx321. DynaEnergetics also argued that “Schacherer does not teach or suggest incorporating the selecting firing module (32) into the wired detonator (38),” but instead “describes a [tandem] sub for housing such components.” Appx322–23. Thus, according to DynaEnergetics, “Schacherer does not teach or suggest a shell configured for housing components of the detonator assembly.” Appx323.

Because these limitations, among others not relevant to this appeal, are allegedly not taught by Schacherer, DynaEnergetics argued that Hunting Titan failed to “show[] that Schacherer anticipates [any] of the challenged claims of the ’422 [p]atent.” Appx333. The Board disagreed with DynaEnergetics, concluding that each original claim is unpatentable as anticipated by Schacherer. Appx24.

Significant to this appeal, the Board first considered claim 1’s uncontested limitations and found these limitations fully supported by the record and “effectively admitted” by DynaEnergetics. Appx9. The Board accordingly concluded that Hunting Titan had met its burden of proving that Schacherer discloses a “detonator assembly” that is:

- (1) “received with a perforating gun,”
- (2) has “more than one electrical contact component, wherein at least one of the electrical contact components . . . comprises an electrically contactable line-in portion, . . . line-out portion[,] and . . . ground portion,” and

(3) has “means for selective detonation,” as recited in representative claim 1.

Appx9–10. The Board then addressed whether Schacherer teaches or suggests the remaining limitations that are purportedly missing from the prior art reference.

Beginning with claim 1’s “wireless detonator assembly” limitation, the Board said that “DynaEnergetics [had] oversimplifie[d] what constitutes Schacherer’s detonator *assembly* and ignore[d] the express language of the [representative] claim” in the ’422 patent. Appx13. The Board explained that, “consistent with the claim language and specification, the ‘wireless’ and ‘merely by the contact’ limitations speak expressly to how one *assembly* forms an electrical connection with the other *assembly*—through bodily contact as opposed to connection of physical wires.” *Id.* But “nowhere does the ’422 patent preclude the use of wired connections *internal to* the detonator assembly.” *Id.*

Still, the Board observed, DynaEnergetics attempted to fall back on a third, related limitation—i.e., “without using a wired connection”—when it “distort[ed] the [clarifying] testimony of Hunting Titan’s expert,” Appx15, and “fault[ed] Schacherer for using a wired connection between *subcomponents* of the detonator assembly,” Appx13–14. “What DynaEnergetics fail[ed] to acknowledge,” however, was “that the claimed ‘wireless,’ ‘without using a wired connection,’ and ‘merely by the contact’ limitations pertain solely to how the detonator *assembly as a whole* forms an electrical connection with the perforating gun *assembly as a whole*, irrespective of how any subcomponents with each assembly are connected.” Appx15. And because “the claims require only the absence of a wired connection between the detonator *assembly* and the perforating gun *assembly*,” the Board “conclude[d] that Schacherer is a ‘wireless’ detonator assembly in the manner recited by claim 1” since its “detonator assembly achieves an electrical connection with

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the perforating gun assembly merely by contact of one with the other.” Appx16.

The Board also determined that Schacherer discloses claim 1’s “shell configured for housing components of the detonator assembly.” In reaching this determination, the Board construed “shell” to mean “a shell, housing, or casing for housing any component of the detonator assembly, including but not limited to a detonator head plug, a fuse head, an electronic circuit board, or explosive components.” Appx17. It then found that this construction “matches exactly the structure and function” of Schacherer’s connector 30. Appx19. The Board thus dismissed DynaEnergetics’s arguments “as nothing more than semantics.” *Id.*

Having determined “that a skilled artisan would have understood Schacherer as disclosing each and every limitation of claim 1,” the Board then determined the same with respect to each limitation of independent claims 5 and 12 as well as the claims depending therefrom. Appx24–25.

2

Contingent on the Board finding original claims 5–11 unpatentable, DynaEnergetics also moved the Board to amend the ’422 patent to add proposed substitute claims 16–22. The substitute claims would retain all the limitations of the original claims and further add the following new limitations:

- 1) “a perforating gun housing” having “a detonator assembly contained entirely within the perforating gun housing,”
- 2) “a carrying device positioned within the perforating gun housing to hold at least one shaped charge,” and

3) “a detonator assembly contained entirely within the perforating gun housing.”

Appx419, 429. DynaEnergetics asserted that these “contingent amendments further clarify that the detonator assembly includes a means for selective detonation within the shell, in addition to at least one electrically contactable component extending from the shell, all designed in a way that replaces wires and instead completes an electrical connection within the perforating gun housing merely by contact.” Appx419; *see also* Appx429. These proposed substitute claims are therefore patentable and not anticipated by Schacherer, according to DynaEnergetics, because Schacherer’s detonator assembly is not wireless and its “selective detonator assembly . . . is clearly not contained within its perforating gun housing.” Appx430–31. So DynaEnergetics argued that Schacherer “does not teach or disclose a ‘wirelessly connectable selective detonator assembly’ that is ‘contained entirely within the perforating gun housing without using a wired electrical connection’ as recited in” its proposed substitute claims. Appx431.

Hunting Titan opposed the motion to amend, asserting that the proposed substitute claims “d[id] not overcome the previously cited prior art in the Petition.” Appx524. Hunting Titan identified two publications—U.S. Patent No. 10,077,641 (Rogman) and U.S. Patent Application No. 14/888,882 (Harrigan)—that, it contended, “disclose all of the additional claim limitations in proposed amended claims 16–22 and would have been obvious to combine with the previously cited prior art.” Appx524. It also identified as pertinent several previously cited prior art references—including Schacherer—and asserted that each of these references discloses or teaches every claim limitation of the proposed substitute claims. Appx524–44. Based on these assertions, Hunting Titan maintained that the proposed substitute claims are obvious and therefore unpatentable. Hunting Titan “presented only obviousness arguments,

without alleging that the proposed substitute claims were anticipated by the prior art of record.” Appx33.

“In [the Board’s] view, none of [DynaEnergetics’s] additional limitations render[ed] the proposed substitute claims novel or non-obvious over the prior art of record. Instead,” the Board held, “each of [the additional] limitations is taught by the prior art, either as admitted in the ’422 patent itself or as disclosed by Schacherer.” Appx26. The Board thus decided that “Hunting Titan ha[d] carried its burden in showing that DynaEnergetics’s] proposed amendments d[id] not overcome the anticipatory nature of Schacherer’s disclosure,” and it denied DynaEnergetics’s motion to amend. Appx29. In reaching this decision, the Board “addresse[d] only Hunting Titan’s anticipation challenge based on Schacherer . . . [It] render[ed] no findings or conclusions as to Hunting Titan’s numerous obviousness challenges.”¹ Appx34.

B

DynaEnergetics requested rehearing and Precedential Opinion Panel review of the Board’s denial of the motion to amend. The Panel granted DynaEnergetics’s request for review to address “[u]nder what circumstances and at what time during an inter partes review . . . the Board [may] raise a ground of unpatentability that a petitioner did not advance or insufficiently developed against substitute proposed claims in a motion to amend[.]” Appx34.

The Panel acknowledged that our decision in *Nike, Inc. v. Adidas AG*, 955 F.3d 45 (Fed. Cir. 2020), had “resolve[d]

¹ In a footnote and without further explanation, the Board found “persuasive” Hunting Titan’s argument that a particular modification to Schacherer would have been obvious as “within the purview of Schacherer and the general knowledge of a skilled artisan.” Appx29 n.5; *see also* Appx34 n.2.

the question of whether the Board may advance a ground of unpatentability that a petitioner does not advance, or insufficiently develop[s], against substitute claims proposed in a motion to amend,” and it agreed that *Nike* had answered this question in the affirmative. Appx39. But the Panel said, *Nike* “d[id] not address the circumstances in which the Board *should* advance such a ground of unpatentability in relation to substitute claims proposed in a motion to amend.” Appx40. And the Panel “conclude[d] that only under rare circumstances should the need arise for the Board to advance grounds of unpatentability to address proposed substitute claims that the petitioner did not advance, or insufficiently developed, in its opposition to the motion.” Appx40.

The Panel believed that “the better approach, in most instances, is to rely on the incentives the adversarial system creates, and expect that the petitioner will usually have an incentive to set forth the reasons why the proposed substitute claims are unpatentable.” Appx43. Still, the Panel left open the possibility for the Board to sua sponte raise a ground of unpatentability, but “only . . . under rare circumstances,” such as when a petitioner “cease[s] to participate in the proceeding altogether” or “chooses not to oppose the motion to amend.” Appx43–44. The Panel further accepted that “there may be circumstances where certain evidence of unpatentability has not been raised by the petitioner, but is readily identifiable and persuasive such that the Board should take it up in the interest of supporting the integrity of the patent system, notwithstanding the adversarial nature of the proceedings.” Appx44. Although the Panel chose not “to delineate [every situation] with particularity,” it did put forth one exemplary situation: “where the record readily and persuasively establishes that substitute claims are unpatentable for the same reasons that corresponding original claims are unpatentable.” Appx44. In addition, it noted that “[s]uch situations are usually fact-

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specific” and gave the Board discretion to “address them as they arise.” Appx44.

The Panel then observed that Hunting Titan had “never mentioned anticipation as a ground” of unpatentability against the proposed substitute claims. Appx48. It further rejected Hunting Titan’s assertion that its anticipation arguments against the original claims, found in its petition, were “sufficient to also raise arguments regarding anticipation of the proposed substitute claims by Schacherer.” Appx48. And because “raising a ground of unpatentability in a petition against original claims in a patent does not provide a patent owner with sufficient notice that new arguments would be asserted using that same reference against new substitute claims proposed in a motion to amend,” the Panel concluded that “the anticipation ground based on Schacherer . . . was not advanced, much less sufficiently developed, by [Hunting Titan] against proposed substitute claims 16–22.” Appx49.

Although anticipation based on Schacherer was not raised by Hunting Titan, the Panel asked “whether the Board should [still] have raised that ground against the proposed substitute claims in the Final Written Decision.” Appx49–50. It decided that the circumstances of this case did not “qualify as one of the rare circumstances necessitating the Board to advance a ground of unpatentability that Petitioner did not advance or sufficiently develop.” Appx50. In doing so, the Panel faulted Hunting Titan for its strategic choice “to oppose the motion to amend on different grounds,” holding that “an unsuccessful strategy alone does not reflect a failure of the adversarial process here that might otherwise support the Board’s decision to exercise its discretion to sua sponte raise a new ground of unpatentability.” Appx50–51.

The Panel further rejected Hunting Titan’s and supporting amici’s arguments that “the public interest w[ould] be harmed by the issuance of substitute claims that the

“PTO knows to be unpatentable” “if the Board cannot raise the Schacherer anticipation ground” here. Appx51. “The public interest is preserved,” the Panel claimed, “by a well-functioning adversarial system, which, in contrast to reexamination, is the basic set-up Congress envisioned for inter partes reviews.” *Id.* So in a case like this one, where Hunting Titan “vigorously prosecuted its case but made a tactical decision not to raise anticipation arguments,” the Panel explained, “the adversarial system has not failed” and “[t]he public interest [wa]s not well-served by the [PTO] filling in gaps intentionally left void by” the petitioner. *Id.* The Panel therefore “conclude[d] that, as a policy matter, the Board should not have raised the Schacherer anticipation ground.” Appx50. Moreover, the Panel stated, this case was not one that “present[ed] the potential for issuing substitute claims the [PTO] ‘knows to be unpatentable’” because the PTO “d[id] not have sufficient information on the record of this case . . . to make requisite findings on anticipation.” Appx52. According to the Panel, this case did not contain “the sort of readily identifiable and persuasive evidence of anticipation in the record that would justify the Board raising its own grounds of unpatentability.” *Id.*

Having determined that the Board should not have itself advanced the ground of anticipation based on Schacherer when Hunting Titan raised this ground of unpatentability only against the original claims and not the proposed substitute claims, the Panel proceeded to consider in the first instance Hunting Titan’s obviousness “arguments and cited evidence” raised in its opposition to DynaEnergetics’s motion to amend. Appx54. The Panel “conclude[d] that [Hunting Titan] ha[d] not set forth an adequate case of obviousness.” *Id.* Rather, the Panel observed, Hunting Titan had “merely present[ed] how one or more of the various asserted prior art references separately teaches the various limitations of proposed substitute claims 16–22.” Appx56. It had “provide[d] no discussion of a reason to combine or modify the prior art,” and the Panel

“decline[d] to piece together [its] arguments” and “develop a persuasive theory of unpatentability” on Hunting Titan’s behalf. *Id.* Thus, following its holding that “the obviousness grounds that [Hunting Titan] purport[ed] to have raised [we]re facially insufficient to support a finding of unpatentability,” the Panel granted the motion to amend. Appx56–57.

Hunting Titan timely appealed the Panel’s decision vacating the Board’s denial of DynaEnergetics’s motion to amend. DynaEnergetics timely cross-appealed the Board’s decision invalidating its original claims. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II

We review the Board’s decisions in accordance with the Administrative Procedure Act, 5 U.S.C. § 706. *HTC Corp. v. Cellular Commc’ns Equip., LLC*, 877 F.3d 1361, 1367 (Fed. Cir. 2017). We therefore “review the Board’s legal conclusions de novo and its factual findings for substantial evidence.” *Id.* Because “[a]nticipation is a question of fact,” we consider whether substantial evidence supports the Board’s determination holding the original claims unpatentable as anticipated by Schacherer. *SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1373 (Fed. Cir. 2013). “Substantial evidence review asks ‘whether a reasonable fact finder could have arrived at the agency’s decision’ and requires examination of the ‘record as a whole, taking into account evidence that both justifies and detracts from an agency’s decision.’” *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1366 (Fed. Cir. 2016) (citation omitted). “Where two different conclusions may be warranted based on the evidence of the record, the Board’s decision to favor one conclusion over the other is the type of decision that must be sustained by this court as supported by substantial evidence.” *In re Chudik*, 851 F.3d 1365, 1371 (Fed. Cir. 2017) (citation omitted).

A

We first address DynaEnergetics’s cross-appeal, challenging the Board’s decision holding the original claims of the ’422 patent unpatentable as anticipated by Schacherer.

DynaEnergetics primarily takes issue with the Board’s finding that Schacherer teaches a detonator assembly that is received within a perforating gun assembly. Specifically, DynaEnergetics faults the Board for identifying this limitation as uncontested, fully supported by the record, or effectively admitted, and contends that the Board’s conduct erroneously shifted the burden of persuasion from Petitioner to Patent Owner. But the Board identified where in the petition Hunting Titan had shown how Schacherer discloses the uncontested limitations. Appx9. And “[t]he Board, having found the only disputed limitations together in one reference, was not required to address undisputed matters.” *In re NuVasive, Inc.*, 841 F.3d 966, 974 (Fed. Cir. 2016).

For the same reason, we are not persuaded by DynaEnergetics’s argument that the Board’s purported “failure to analyze the ‘received within’ feature infected its construction of the ‘shell’ limitation” and its determination that “Schacherer disclosed a shell,” such that “neither is supported by substantial evidence.” Cross-Appellant’s Opening Br. 25. Moreover, DynaEnergetics’s arguments addressing the wireless detonator assembly’s “shell” component—which fault Schacherer’s sub for its size and assert that this sub “cannot reasonably be said to be configured for being received within the perforating gun assembly” since it is “a large structural element or heavy steel tool that [instead] provides a connection between guns,” *id.* at 27—overlook the fact that the Board construed “shell” to include “casing for housing any component of the detonator assembly,” Appx16–17. So, since the shell houses at least part of the detonator assembly and since the detonator assembly is received within the perforating gun

assembly, substantial evidence supports the Board's finding that the shell is configured to be received within the perforating gun assembly. *See* Appx15–19.

Lastly, DynaEnergetics contends that substantial evidence does not support the Board's findings that Schacherer discloses the claimed “wireless detonator assembly” because the Board did not satisfactorily explain why it dismissed DynaEnergetics's evidence in favor of Hunting Titan's evidence. But the Board's explanation was more than satisfactory. It expressly disagreed with DynaEnergetics's narrow construction of “detonator assembly,” specifically noting that “[w]hat DynaEnergetics fails to acknowledge is that the claimed ‘wireless,’ ‘without using a wired connection,’ and ‘merely by the contact’ limitations pertain solely to how the detonator *assembly as a whole* forms an electrical connection with the perforating gun *assembly as a whole*, irrespective of how any subcomponents within each assembly are connected.” Appx15. And, in light of its construction, the Board explicitly pointed to DynaEnergetics's failure to provide evidentiary support or an explanation for why its position—that “a wired connection residing entirely within, and internal to, Schacherer's detonator assembly precludes the assembly from being ‘wireless’”—was the correct and necessary one for the Board to adopt. Appx16. Substantial evidence supports the Board's determination that the detonator assembly's electrical connection with the perforating gun assembly does not use a wired electrical connection in Schacherer. Appx16.

For the foregoing reasons, substantial evidence supports the Board's determination that Schacherer anticipates all of the '422 patent's original claims.

B

Because we affirm the Board's decision holding the original claims unpatentable, we address Hunting Titan's appeal challenging the Panel's decision to vacate the

Board’s denial of the motion to amend. Hunting Titan contends that, under *Aqua Products, Inc. v. Matal*, 872 F.3d 1290, 1325–26 (Fed. Cir. 2017) (en banc) and *Nike, Inc. v. Adidas AG*, 955 F.3d 45, 51–52 (Fed. Cir. 2020), the Board has a duty to determine the patentability of the proposed substitute claims based on the entirety of the record. Hunting Titan asserts that the Panel therefore erred in reversing the Board’s decision finding the proposed claims anticipated by Schacherer and further erred in determining the patentability of the proposed substitute claims based only on its review of Hunting Titan’s opposition to the motion to amend. In other words, Hunting Titan argues that the Board had an obligation to sua sponte identify patentability issues for a proposed substitute claim based on the prior art of record, and that the Panel committed legal error by vacating the Board’s decision to do so in this case. We disagree.

Neither *Aqua Products* nor *Nike* established that the Board maintains an affirmative duty, without limitation or exception, to sua sponte raise patentability challenges to a proposed substitute claim. *Nike*, 955 F.3d at 51 (“We addressed the universe of prior art that the Board should consider when reviewing a motion to amend in *Aqua Products*. . . . We expressly declined to address, however, whether the Board ‘may sua sponte raise patentability challenges of amended claims.’” (citation omitted)); *id.* (“We hold today that the Board *may* sua sponte identify a patentability issue for a proposed substitute claim based on the prior art of record.” (emphasis added)). Indeed, as the Panel correctly pointed out, “*Nike* resolve[d] the question of whether the Board may advance a ground of unpatentability that a petitioner does not advance, or insufficiently develop[s], against substitute claims proposed in a motion to amend.” Appx39. But *Nike* left unanswered “the circumstances in which the Board *should* advance such a ground of unpatentability in relation to substitute claims proposed in a motion to amend.” Appx40. It was this question that

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the Panel answered here, and confining the circumstances in which the Board should sua sponte raise patentability issues was not itself erroneous.

Notably, we do find problematic the Panel's reasoning behind its decision to confine the Board's discretion to sua sponte raise patentability issues to only rare circumstances. For example, while the adversarial system proves useful in IPR proceedings to bring forth evidence the agency might not have otherwise discovered, the Panel's substantial reliance on the adversarial system as the basis for confining its patentability determination for new claims overlooks the basic purpose of IPR proceedings: to reexamine an earlier agency decision and ensure "that patent monopolies are kept within their legitimate scope." *Oil States Energy Servs., LLC v. Greene's Energy Grp., LLC*, 138 S. Ct. 1365, 1374 (2018) (cleaned up). And "[t]he fact that Congress has enlisted the assistance of private parties does not change their essential character." *Regents of Univ. of Minn. v. LSI Corp.*, 926 F.3d 1327, 1338 (Fed. Cir. 2019); see also *id.* ("[A]lthough these modifications to inter partes reexamination make IPR [proceedings] 'look[] a good deal more like civil litigation,' fundamentally these proceedings continue to be a 'second look at an earlier administrative grant of a patent.'" (third alteration in original) (citations omitted)).

Nevertheless, the Panel's conclusion, at least to the extent at issue here, is not inconsistent with *Nike* and *Aqua Products*. The Panel identified circumstances in which the Board should advance "a ground of unpatentability that a petitioner did not advance, or insufficiently developed, against substitute claims in a motion to amend." Appx44. And it acknowledged that "even where both a petitioner and patent owner participate in the motion to amend process, there may be situations where certain evidence of unpatentability has not been raised by the petitioner, but is readily identifiable and persuasive such that the Board should take it up in the interest of supporting the integrity

of the patent system” (the readily identifiable evidence exception). *Id.*

Notably, however, the Panel highlighted one example in which the readily identifiable evidence exception could apply: “where the record readily and persuasively establishes that substitute claims are unpatentable for the same reasons that corresponding original claims are unpatentable.” *Id.* It was on this basis that the Panel concluded that the Board should not have considered whether the proposed substitute claims were anticipated by Schacherer, and the Panel therefore confined its own consideration to the grounds of unpatentability advanced by Hunting Titan in its opposition to DynaEnergetics’s motion to amend. In other words, the Panel did not preclude the Board from considering the entirety of the record, but instead determined that certain evidence of anticipation—evidence that Hunting Titan contends on appeal should have been considered when determining patentability—was not readily identifiable and persuasive. Yet, on appeal, Hunting Titan did not challenge the Panel’s decision as an abuse of discretion. That is, Hunting Titan failed to argue that the Panel misapplied the readily identifiable evidence exception. Because Hunting Titan raised no such argument, it is forfeited.²

² It does strike us as odd, however, that the Panel determined that the Schacherer anticipation ground was not readily identifiable and persuasive such that the Board should have sua sponte raised this ground of unpatentability against DynaEnergetics’s proposed substitute claims. Indeed, the Board specifically found the proposed substitute claims unpatentable for the same reasons it found the corresponding original claims unpatentable. Moreover, when the Board finds an original claim unpatentable as anticipated by a prior art reference, it would seem to follow

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We must therefore affirm the Panel's decision granting the motion to amend. We emphasize, however, that this affirmation is based only on this narrow ground. We are not determining the patentability of the proposed substitute claims, nor are we deciding whether the Panel abused its discretion in determining that the Schacherer anticipation ground was not readily identifiable and persuasive such that the Board should have sua sponte raised this ground of unpatentability. Likewise, we are not opining on the other limitations that the Panel placed on the Board's ability to advance patentability issues not raised by a petitioner, and whether those limitations are consistent with 35 U.S.C. § 318. *Cf. Samsung Elecs. Am., Inc. v. Prisma Eng'g Corp.*, 948 F.3d 1342, 1352 (Fed. Cir. 2020). Finally, we do not decide whether the Board has an independent obligation to determine patentability of proposed substitute claims. These questions need not be answered to resolve the appeal before us.

CONCLUSION

We affirm the Board's decision holding claims 1–15 unpatentable, and we also affirm the Panel's decision granting DynaEnergetics's motion to amend the '422 patent to add new claims 16–22.

AFFIRMED

COSTS

No costs.

that the Board should begin by first asking if the corresponding proposed substitute claim overcomes the ground on which it found the original claim unpatentable.

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Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2018-00600.

PROST, *Circuit Judge*, concurring.

I join the majority’s opinion, agreeing that Hunting Titan didn’t preserve a challenge to the Precedential Opinion Panel’s (“POP”) application of its standard for when it is (and isn’t) appropriate for the Board to sua sponte raise

patentability issues as to new claims.¹ I write separately to explain why, had that challenge been preserved, it likely would have succeeded—and why I’m troubled by how the PTO is handling this issue, including with a recently enacted regulation.

I

In evaluating new (i.e., proposed substitute or amended) claims, “the Board *should not be constrained* to arguments and theories raised by the petitioner in its petition or opposition to the motion to amend.” *Nike, Inc. v. Adidas AG*, 955 F.3d 45, 51 (Fed. Cir. 2020) (emphasis added). We’ve reasoned:

It makes little sense to limit the Board, in its role within the agency responsible for issuing patents, to the petitioner’s arguments in this context. Rather, based on consideration of the entire record, the Board *must determine* whether the patent owner’s newly-presented, narrower claims are . . . “unpatentable in the face of the prior art cited in the IPR.”

Id. at 51–52 (emphasis added) (quoting *Aqua Prods., Inc. v. Matal*, 872 F.3d 1290, 1314 (Fed. Cir. 2017) (en banc) (plurality opinion)). Although we haven’t delineated the outer bounds of any independent Board duty to ensure that new patent claims are, in fact, patentable before they issue, we have observed that “the text, structure, and history of the IPR [s]tatutes . . . indicate Congress’s unambiguous

¹ This preservation failure was discussed extensively at oral argument, during which Hunting Titan’s counsel could not—despite repeated opportunities—identify where its opening brief made this challenge. *See* Oral Arg. at 2:31–4:49, 5:59–7:28, 11:58–15:04, 1:03:27–1:07:37, No. 20-2163, https://oralarguments.cafc.uscourts.gov/default.aspx?fl=20-2163_11012021.mp3.

intent to permit the [Board] to review [new] claims more broadly than” original claims. *Uniloc 2017 LLC v. Hulu, LLC*, 966 F.3d 1295, 1304 (Fed. Cir. 2020); *id.* at 1306 (noting the absence of “any other context under Title 35—e.g., original applications, reexaminations, reissue, etc.—in which the [PTO] is required or authorized to newly issue a patent claim without ever having determined that the particular claim meets the statutory requirements for patentability”).

The POP nevertheless constrained the Board’s ability to raise its own patentability issues as to new claims. It identified just three situations in which the Board could do so: (1) where the petitioner has ceased participating in the proceeding altogether; (2) where the petitioner chooses not to oppose the patent owner’s motion to amend; and (3) where, although the petitioner has opposed, it has failed to raise unpatentability evidence that is nonetheless “readily identifiable and persuasive.” *Hunting Titan, Inc. v. DynaEnergetics Eur. GmbH*, IPR2018-00600, 2020 WL 3669653, at *6 (P.T.A.B. July 6, 2020). The third situation—“readily identifiable and persuasive” evidence—is at issue here, given that Hunting Titan opposed DynaEnergetics’s motion to amend.

Whatever the “readily identifiable and persuasive” standard means, it should have let the Board do what it did here: evaluate whether the prior-art reference that anticipated the original claims also anticipated the new claims. Such an evaluation can hardly be deemed overly zealous or creative on the Board’s part. Indeed, among potential unpatentability bases to raise sua sponte, this would seem to be square one. But the POP disagreed. It forbade the Board from making that basic evaluation. The POP thus denied three administrative patent judges—who had devoted extensive resources to analyzing this prior-art reference—the ability to use that acquired expertise in making their own patentability determinations before letting new claims out the door. I don’t see how the POP’s decision in

this regard is reasonable. It also appears inconsistent with *Nike*, where we approved the Board’s sua sponte unpatentability finding based on a prior-art reference not even *mentioned* in the petitioner’s opposition.² See *Nike*, 955 F.3d at 48–53.

But, because Hunting Titan forfeited a challenge to the POP’s application of its new standard here, review of that standard’s application must await another day.

II

The POP stressed the adversarial aspect of IPRs when justifying its “readily identifiable and persuasive” constraint on the Board. *Hunting Titan*, 2020 WL 3669653, at *5–6, *9. But it acknowledged that motions to amend don’t always have an adversary. For example, the petitioner might have dropped out or declined to oppose. Accordingly, the POP framed the “readily identifiable and persuasive” constraint as applying *only* to situations where the petitioner opposes a motion to amend:

To be sure, there may be circumstances where the adversarial system fails to provide the Board with potential arguments for the unpatentability of the proposed substitute claims. As noted above, the Supreme Court in *Cuozzo* specifically addressed one such situation, in which the petitioner has ceased to participate in the proceeding altogether. A similar situation may exist where a petitioner chooses not to oppose the motion to amend. *And*

² Here, Hunting Titan cited and discussed the Schacherer reference throughout its opposition to DynaEnergetics’s motion to amend. J.A. 518–47. But it argued obviousness (not anticipation), and as to one of the newly added claim elements, the Board found a disclosure in Schacherer that Hunting Titan’s opposition did not specifically identify.

even where both a petitioner and patent owner participate in the motion to amend process, there may be situations where certain evidence of unpatentability has not been raised by the petitioner, but is readily identifiable and persuasive such that the Board should take it up in the interest of supporting the integrity of the patent system, notwithstanding the adversarial nature of the proceedings.

Id. at *6 (emphasis added) (citation omitted).³ The clear implication was that the Board would not be so constrained when a motion to amend is unopposed. *Id.*; see *Nike*, 955 F.3d at 51 (expressing concern over limiting the PTO’s “ability to examine the new claims” in cases where the petitioner has not opposed).

The PTO, however, has since enacted a regulation that seemingly applies the “readily identifiable and persuasive” constraint to *all* motions to amend—opposed or not. The following provision now applies⁴:

(d) *Burden of Persuasion.* On a motion to amend:

- (1) A patent owner bears the burden of persuasion to show, by a preponderance of the evidence, that the motion to amend complies with the requirements of paragraphs (1) and (3) of 35 U.S.C. § 316(d), as well as

³ The PTO’s brief in this appeal adopted this same framing. *E.g.*, Intervenor’s Br. 17 (“These circumstances include where the petitioner ceases to participate in the proceeding altogether or does not oppose the motion to amend; *and, even when the petitioner opposes, where the evidence of unpatentability is readily identifiable and persuasive . . .*” (emphasis added)).

⁴ This provision applies to all motions to amend filed on or after January 20, 2021, so it doesn’t apply in this case.

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paragraphs (a)(2), (a)(3), (b)(1), and (b)(2) of this section;

(2) A petitioner bears the burden of persuasion to show, by a preponderance of the evidence, that any proposed substitute claims are unpatentable; and

(3) Irrespective of paragraphs (d)(1) and (2) of this section, the Board may, in the interests of justice, exercise its discretion to grant or deny a motion to amend *only for reasons supported by readily identifiable and persuasive evidence of record*. In doing so, the Board may make of record only readily identifiable and persuasive evidence in a related proceeding before the [PTO] or evidence that a district court can judicially notice. Where the Board exercises its discretion under this paragraph, the parties will have an opportunity to respond.

37 C.F.R. § 42.121(d) (emphasis added); *see* Rules of Practice to Allocate the Burden of Persuasion on Motions to Amend in Trial Proceedings Before the Patent Trial and Appeal Board, 85 Fed. Reg. 82,923, 82,924 (Dec. 21, 2020) (setting forth the effective date).

The PTO's remarks accompanying this regulation's enactment note some situations where the "readily identifiable and persuasive" constraint would apply. For example, if the patent owner's briefing fails to expressly address or establish every statutory and regulatory requirement for a motion to amend (as 37 C.F.R. § 42.121(d)(1) mandates), the Board may nonetheless determine that such requirements are met—but "only when there is readily identifiable and persuasive evidence" showing as much. 85 Fed. Reg. at 82,927. Likewise, where a petitioner opposes a motion to amend "but fails to raise certain evidence of

unpatentability that is [nonetheless] readily identifiable and persuasive,” the Board may take up that evidence, “notwithstanding the adversarial nature of the proceedings.” *Id.*

The prospect of applying the “readily identifiable and persuasive” constraint to *unopposed* motions to amend, however, is what particularly troubles me. Although the POP indicated that the constraint wouldn’t apply in such circumstances, *see Hunting Titan*, 2020 WL 3669653, at *6, and although the PTO maintains that this regulation “codifie[s]” or “embod[ies] the policy determination articulated by the POP here,” Intervenor’s Br. 17–18, 29–30, the regulation appears to apply the constraint to *all* motions to amend—opposed or not. Indeed, the PTO’s counsel at oral argument adopted that view, maintaining that the regulation imposes the “readily identifiable and persuasive” constraint even in unopposed situations. Oral Arg. at 21:03–13; *see id.* at 19:39–59. According to counsel, the reason for doing so is “to encourage the parties to remain in and oppose the motion [to amend].” Oral Arg. at 19:48–57. But an adverse petitioner needs no extra encouragement to oppose a motion. And if the petitioner is no longer adverse—e.g., having settled or satisfied itself that an amendment removes the threat of infringement—it’s unclear how the PTO’s policy would affect the petitioner’s incentive to oppose.

Because the regulation makes no caveat for unopposed motions, the Board may find its hands tied (or its head forced into the sand) even when no one is around to oppose a new patent monopoly grant.

* * *

The “basic purpose[]” of IPRs is “to reexamine an earlier agency decision,” thus “help[ing] protect the public’s paramount interest in seeing that patent monopolies are kept within their legitimate scope.” *Cuozzo Speed Techs.*,

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LLC v. Lee, 579 U.S. 261, 279–80 (2016) (cleaned up). That purpose is particularly salient here, given that the Board usually evaluates the patentability of new claims only *after* it has recognized the PTO’s original error in issuing unpatentable claims. I don’t see the reasonableness of a policy that seriously hinders the Board’s basic efforts to avoid making the same error twice.