



[Nike, Inc. v. Adidas AG](#)

United States Court of Appeals for the Federal Circuit

February 11, 2016, Decided

2014-1719

Reporter

812 F.3d 1326 *; 2016 U.S. App. LEXIS 2376 **

NIKE, INC., Appellant v. ADIDAS AG, Appellee

Subsequent History: Decision reached on appeal by, Remanded by [Nike, Inc. v. Adidas AG, 2020 U.S. App. LEXIS 11172 \(Fed. Cir., Apr. 9, 2020\)](#)

Prior History: **[**1]** Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2013-00067.

[adidas AG v. Nike, Inc., 2014 Pat. App. LEXIS 2644 \(Bd. Pat. App. & Interferences, Apr. 28, 2014\)](#)

Disposition: AFFIRMED-IN-PART, VACATED-IN-PART, AND REMANDED.

Core Terms

patent, textile, knit, prior art, flat, upper, Adidas, edges, references, lacing, invention, stitches, motion to amend, secondary, skill, cutting, argues, written description, unpatentable, apertures, flat-knit, manufacturing, recited, regulation, openings, combine, unitary, shoe, limitations, proceedings

Case Summary

Overview

HOLDINGS: [1]-A patent owner was properly required to show that proposed substitute claims in an inter partes review were patentable since the substitute claims, unlike the issued claims, were never subject to examination; [2]-Claims relating to a unitary flat-knitted textile element of footwear were obvious based on prior art references since one reference disclosed a process for producing a shoe-shaped part from a web of material and two other related references disclosed flat knit edges free of surrounding textile structure, and there was a motivation to combine the references which served the same purpose of efficiently creating knitted articles; [3]-The written description adequately supported the substitute claims since the disclosures showed invention of a flat-knit textile with flat-knit edges that were knit to shape rather than being cut from a larger textile web.

Outcome

Decision affirmed in part and vacated in part.

LexisNexis® Headnotes

Patent Law > Jurisdiction & Review > Standards of Review > De Novo Review

Patent Law > Jurisdiction & Review > Standards of Review > Substantial Evidence

[HN1](#)  Standards of Review, De Novo Review

A court reviews the Patent Trial and Appeal Board's conclusions of law de novo and its findings of fact for substantial evidence. [5 U.S.C.S. § 706\(2\)\(E\)](#). Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.

Business & Corporate Compliance > ... > Patent Law > US Patent & Trademark Office Proceedings > Reexamination Proceedings

[HN2](#)  US Patent & Trademark Office Proceedings, Reexamination Proceedings

[35 U.S.C.S. § 316\(a\)\(9\)](#) delegates authority to the United States Patent and Trademark Office to prescribe regulations setting forth standards and procedures for allowing a patent owner to move to amend the patent under [§ 316\(d\)](#) to cancel a challenged claim or propose a reasonable number of substitute claims. [§ 316\(a\)\(9\)](#). [37 C.F.R. § 42.20](#) explains that relief, other than a petition requesting the institution of a trial, must be requested in the form of a motion and that the moving party has the burden of proof to establish that it is entitled to the requested relief. [37 C.F.R. § 42.20\(a\)](#), [\(c\)](#).

Business & Corporate Compliance > ... > Patent Law > US Patent & Trademark Office Proceedings > Reexamination Proceedings

[HN3](#)  US Patent & Trademark Office Proceedings, Reexamination Proceedings

Placing the burden of showing patentability on the patent owner for its newly formulated claims is appropriate given the very nature of inter partes reviews (IPRs) which are distinctly different from a typical United States Patent and Trademark Office (PTO) examination or reexamination where a patent examiner performs a prior art search and independently conducts a patentability analysis of all claims, whether newly proposed or previously existing. During IPRs, once the PTO grants a patentee's motion to amend, the substituted claims are not subject to further examination. Moreover, the petitioner may choose not to challenge the patentability of substitute claims if, for example, the amendments narrowed the claims such that the petitioner no longer faces a risk of infringement.

If the patentee were not required to establish patentability of substitute claims over the prior art of record, an amended patent could issue despite the PTO having before it prior art that undermines patentability. [35 U.S.C.S. § 318\(a\)](#). In this way, placing the burden on the patent owner ensures that proposed substitute claims are critically analyzed before they are entered as claims that are part of the issued patent.

Business & Corporate Compliance > ... > Patent Law > US Patent & Trademark Office Proceedings > Reexamination Proceedings

[HN4](#)  US Patent & Trademark Office Proceedings, Reexamination Proceedings

See [35 U.S.C.S. § 316\(e\)](#).

Business & Corporate Compliance > ... > Patent Law > US Patent & Trademark Office Proceedings > Reexamination Proceedings

[HN5](#)  US Patent & Trademark Office Proceedings, Reexamination Proceedings

On its face, [35 U.S.C.S. § 316\(e\)](#) places the burden of proving unpatentability on the petitioner as it relates to any patent claim included in the Patent Trial and Appeal Board's decision instituting the inter parts review proceedings.

Governments > Legislation > Interpretation

[HN6](#)  Legislation, Interpretation

Statutory language cannot be construed in a vacuum. It is a fundamental canon of statutory construction that the words of a statute must be read in their context with a view to their place in the overall statutory scheme.

Patent Law > Nonobviousness > Elements & Tests

Patent Law > Nonobviousness > Evidence > Fact & Law Issues

[HN7](#)  Nonobviousness, Elements & Tests

[35 U.S.C.S. § 103](#) forbids issuance of a claim when the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. [§ 103](#). The ultimate determination of obviousness under [§ 103](#) is a question of law based on underlying factual findings. These underlying factual considerations consist of: (1) the level of ordinary skill in the pertinent art; (2) the scope and content of the prior art; (3) the differences between the prior art and the claims at issue; and (4) secondary considerations of non-obviousness such as commercial success, long-felt but unsolved needs, failure of others, etc.

Patent Law > Nonobviousness > Evidence > Fact & Law Issues

Patent Law > Nonobviousness > Elements & Tests > Graham Test

Patent Law > Nonobviousness > Elements & Tests > Prior Art

[HN8](#) Evidence, Fact & Law Issues

A claimed invention may be obvious even when the prior art does not teach each patent claim limitation, so long as the record contains some reason why one of skill in the art would modify the prior art to obtain the claimed invention. Whether a person of ordinary skill in the art would have had such a reason to combine the teachings of prior art references is also a question of fact. Although an analysis of the teaching, suggestion, or motivation to combine elements from different prior art references is helpful, a court must always be mindful that an obviousness inquiry requires an expansive and flexible approach. Importantly, an obviousness inquiry requires examination of all four Graham factors and an obviousness determination can be made only after consideration of each factor.

Patent Law > Nonobviousness > Elements & Tests > Prior Art

[HN9](#) Elements & Tests, Prior Art

The mere age of prior art references is not persuasive of the non-obviousness of the combination of their teachings in a patent, absent evidence that,

notwithstanding knowledge of the references, the art tried and failed to solve the problem.

Patent Law > ... > Elements & Tests > Graham Test > Secondary Considerations

[HN10](#) Graham Test, Secondary Considerations

Evidence of secondary considerations plays a critical role in the obviousness analysis because it serves as objective indicia of non-obviousness of a patent and may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not. It is well-established that evidence rising out of the so-called secondary considerations must always when present be considered en route to a determination of obviousness. In fact, when secondary considerations are present it is error not to consider them.

Patent Law > ... > Elements & Tests > Graham Test > Secondary Considerations

[HN11](#) Graham Test, Secondary Considerations

Because long-felt need is indisputably a secondary consideration, the Patent Trial and Appeal Board is bound to fully consider properly presented evidence on the long-felt need for a claimed invention.

Business & Corporate Compliance > ... > Patent Law > US Patent & Trademark Office Proceedings > Reexamination Proceedings

[HN12](#) US Patent & Trademark Office Proceedings, Reexamination Proceedings

[35 U.S.C.S. § 316\(d\)](#) provides that a patent owner's ability to propose substitute claims in inter partes review is limited to proposing a reasonable number of substitute claims. [§ 316\(d\)\(1\)\(B\)](#). [37 C.F.R. § 42.121\(a\)\(3\)](#) explains that the presumption is that only one substitute claim would be needed to replace each challenged claim. The regulation also acknowledges that this presumption may be rebutted by a demonstration of need. When a patent owner seeks to provide more than one substitute claim for a challenged claim, the patent owner needs to show patentable distinction of the additional substitute claim over all

other substitute claims for the same challenged claim. If the patent owner fails to carry this burden, then at the Patent Trial and Appeal Board's discretion, the proposed additional claim may be denied entry, or it may be grouped with, or deemed as standing and falling with, another substitute claim for the same challenged claim, e.g., the first substitute claim, for purposes of considering patentability over prior art.

Civil Procedure > Appeals > Reviewability of Lower Court Decisions > Preservation for Review

[HN13](#) **Reviewability of Lower Court Decisions, Preservation for Review**

An issue is preserved for appeal so long as it can be said that the tribunal was fairly put on notice as to the substance of the issue.

Patent Law > Infringement Actions > Claim Interpretation

Patent Law > Jurisdiction & Review > Standards of Review > De Novo Review

Patent Law > Jurisdiction & Review > Standards of Review > Substantial Evidence

[HN14](#) **Infringement Actions, Claim Interpretation**

A court reviews the Patent Trial and Appeal Board's ultimate claim construction de novo and any underlying factual determinations involving extrinsic evidence for substantial evidence. When the intrinsic record fully determines the proper construction, the court reviews the Board's claim construction de novo.

Patent Law > Claims & Specifications > Specifications > Description Requirement

Patent Law > Jurisdiction & Review > Standards of Review > Substantial Evidence

[HN15](#) **Specifications, Description Requirement**

Whether a patent claim is supported by the patent's written description is a question of fact that an appellate court reviews for substantial evidence. To adequately

support the claims, the written description must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed. Substantial evidence supports a finding that the specification satisfies the written description requirement when the essence of the original disclosure conveys the necessary information—regardless of how it conveys such information, and regardless of whether the disclosure's words are open to different interpretations.

Patent Law > Claims & Specifications > Specifications > Description Requirement

[HN16](#) **Specifications, Description Requirement**

Negative patent limitations are adequately supported when the specification describes a reason to exclude the relevant limitation.

Business & Corporate Compliance > ... > Patent Law > US Patent & Trademark Office Proceedings > Reexamination Proceedings

[HN17](#) **US Patent & Trademark Office Proceedings, Reexamination Proceedings**

Under [37 C.F.R. § 42.20\(c\)](#), a motion to amend in inter partes review will be successful only if the patent owner persuades the Patent Trial and Appeal Board that the proposed substitute claim is patentable over the prior art of record, and over prior art not of record but known to the patent owner.

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Judges: Before CHEN, MAYER, and STOLL, Circuit Judges.

Opinion by: CHEN

Opinion

[*1329] CHEN, *Circuit Judge*

This appeal arises from the inter partes review (IPR) of U.S. Patent No. 7,347,011 (the '011 patent) owned by Nike, Inc. (Nike). The United States Patent and Trademark Office, Patent Trial and Appeal Board (Board) granted the IPR petition filed by adidas AG (Adidas) and instituted inter partes review of claims 1-46 of the '011 patent. Nike then filed a motion to amend in which it requested cancellation of claims 1-46 and proposed substitute claims 47-50. The Board granted Nike's motion to cancel claims 1-46, [*2] but denied the motion as to the substitute claims because Nike failed to meet its burden of establishing patentability of substitute claims 47-50.

Nike now appeals the Board's denial of its motion to amend, and the Director of the United States Patent and Trademark Office (Director) intervened to defend the Board's decision. For the reasons stated below, we affirm-in-part, vacate-in-part, and remand for further proceedings consistent with this opinion.

BACKGROUND

I

Articles of footwear generally consist of two primary components: a sole structure and an "upper." The '011 patent, entitled "Article of footwear having a textile upper," relates to the "upper" component, which has the general shape of a foot and forms a void for receiving

the foot that is accessed using the ankle opening. The [*1330] upper disclosed in the '011 patent is made from a knitted textile using any number of warp knitting or weft knitting processes. '011 patent, 3:30-32. It is undisputed that weft knitting is well known in the art and includes "flat knitting," where the textile is knit as a sheet or flat piece of textile, and "circular knitting," where the textile is produced as cylindrical textile structure. *Id.* at 7:5-8, 29-32.

The knitted textile upper [**3] of the '011 patent specifically consists of "a single material element that is formed to exhibit a unitary (i.e., one-piece) construction" *Id.* at 5:38-39. In another embodiment, this unitary textile element "may be formed as a part of a larger textile element" where the upper is then cut and "removed from the larger textile element." *Id.* at 5:43-45. Once manufactured, the unitary textile element is then "formed or otherwise shaped to extend around the foot." *Id.* at 5:40-41. By manufacturing the upper component in this fashion, the "unitary construction is intended to express a configuration wherein portions of a textile element are not joined together by seams or other connections." *Id.* at 6:43-46.

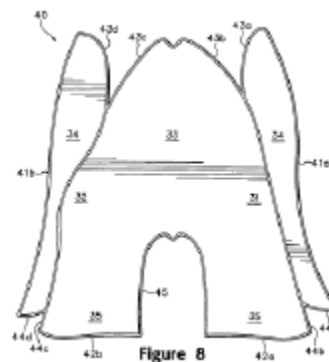
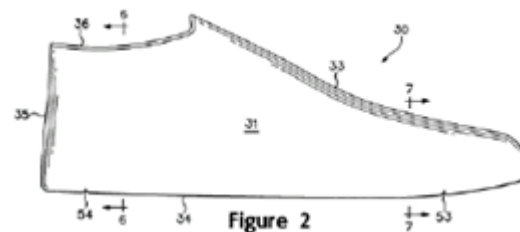


Figure 8 of the '011 patent illustrates the shape of the seamless unitary textile element before the various edges of the element are joined by seams in certain places to form the shape of the upper, as depicted in Figure 2.

[*1331]



Nike's proposed substitute claims generally relate to a unitary flat-knitted textile element: [U.S.C. § 1295\(a\)\(4\)\(A\)](#).

Claim 47. (Substitute for independent claim 16) An article of footwear comprising an upper incorporating a flat knit textile element, the flat knit textile element

(1) having flat knit edges free of **[**4]** surrounding textile structure such that the flat knit edges are not surrounded by textile structure from which the textile element must be removed, some of the flat knit edges joined together to form an ankle opening in the upper for receiving a foot, the ankle opening having an edge comprised of one of the flat knit edges; and

(2) having a first area and a second area with a unitary construction, the first area being formed of a first stitch configuration, and the second area being formed of a second stitch configuration that is different from the first stitch configuration to impart varying properties to the textile element; and a sole structure secured to the upper.

Joint Appendix (J.A.) 1226-27.

II

Adidas petitioned the Board for inter partes review of the '011 patent, asserting that all forty-six claims were unpatentable under either [35 U.S.C. § 102](#) or [§ 103](#) in view of numerous prior art references. The Board granted review of certain of Adidas's challenges to the patentability of all claims. After the Board issued its institution decision, Nike filed a motion to amend the claims in which it sought cancellation of claims 1-46 and proposed four substitute claims. In its final written **[**5]** decision, the Board granted Nike's request to cancel claims 1-46. The Board denied, however, Nike's request to enter substitute claims 47-50 for two alternate reasons. First, the Board acknowledged the requirement announced in the Board's *Idle Free* decision that a patent owner "persuade the Board that the proposed substitute claim is patentable over the prior art of record, and over prior art not of record but known to the patent owner." J.A. 34-36. Because Nike's motion included only a conclusory statement that the proposed claims were patentable over prior art not of record but known to Nike, the Board denied Nike's motion. Alternatively, the Board denied entry of the substitute claims because Nike failed to establish that the substitute claims were patentable over the Nishida and Schuessler references.

Nike filed a timely appeal from the Board's decision, and the Director intervened. We have jurisdiction under [28](#)

[*1332] DISCUSSION

HN1^[↑] We review the Board's conclusions of law de novo and its findings of fact for substantial evidence. [5 U.S.C. § 706\(2\)\(E\)](#); *In re Sullivan*, 498 F.3d 1345, 1350 (Fed. Cir. 2007). "Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support **[**6]** a conclusion." *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 217, 59 S. Ct. 206, 83 L. Ed. 126 (1938).

In this appeal, Nike raises three primary arguments. First, Nike asserts that the Board erroneously shifted to Nike (the patent owner) the burden of proving patentability of its proposed substitute claims 47-50. Second, Nike contests the Board's finding on the merits that the proposed substitute claims are unpatentable as obvious. Finally, Nike objects to the Board's practice of requiring a patent owner to establish patentability of substitute claims over all prior art known to the patent owner, including prior art not of record but known to the patent owner.

I. Burden of Proof

When Congress created IPR proceedings, it also enacted [35 U.S.C. § 316](#), which directs the PTO to "prescribe regulations" governing a considerable number of different aspects of these new proceedings. [35 U.S.C. § 316\(a\)](#). **HN2**^[↑] Particularly relevant to this case is [§ 316\(a\)\(9\)](#), in which Congress delegated authority to the PTO to prescribe regulations "setting forth standards and procedures for allowing the patent owner to move to amend the patent under [\[§ 316\]\(d\)](#) to cancel a challenged claim or propose a reasonable number of substitute claims." *Id.* [§ 316\(a\)\(9\)](#); see also *id.* [§ 316\(d\)\(1\)](#) ("During an inter partes review . . . , the patent owner may file 1 motion to amend the **[**7]** patent in 1 or more of the following ways: (A) Cancel any challenged patent claim. (B) For each challenged claim, propose a reasonable number of substitute claims."). Consistent with [§ 316\(a\)\(9\)](#), the PTO promulgated a regulation relating to motions practice, [37 C.F.R. § 42.20](#), which explains that "[r]elief, other than a petition requesting the institution of a trial, must be requested in the form of a motion" and that "[t]he moving party has the burden of proof to establish that it is entitled to the requested relief." [37 C.F.R. § 42.20\(a\), \(c\)](#).

The Board addressed these regulations in its *Idle Free* "informative" decision in which it interpreted [section 42.20\(c\)](#) and explained that "[t]he burden is not on the petitioner to show unpatentability [of new, substitute claims], but on the patent owner to show patentable distinction over the prior art." [Idle Free Sys., Inc. v. Bergstrom, IPR 2012-00027, 2013 Pat. App. LEXIS 6302, 2013 WL 5947697, at *4 \(PTAB June 11, 2013\)](#); see also Patent Trial and Appeal Board, Standard Operating Procedure 2 (Revision 9), at 3 (¶ IV.A—B) (Standard Operating Procedure 2), available at <http://www.uspto.gov/sites/default/files/documents/sop2-revision-9-dated-9-22-2014.pdf> (explaining that Board decisions labeled "informative" are "not binding authority," but provide "Board norms on recurring issues," "guidance on issues of first impression," and "guidance on Board rules and practices").

In our recent decision in *Microsoft Corp. v. Proxyconn, Inc.* [****8**], we held that the Board's interpretation of [section 42.20\(c\)](#) was permissible in light of the text of [§ 316\(a\)\(9\)](#) and the language of the PTO's regulation. [789 F.3d 1292, 1306-08 \(Fed. Cir. 2015\)](#); see also *id.* at [1307](#) ("Nor can we say that the Board's interpretation of [§ 42.20\(c\)](#) in *Idle Free*—requiring the patentee to show patentable distinction [of the substitute claims] over the prior art of record—is plainly erroneous or inconsistent with the regulation or governing statutes." (alteration in original) (citation omitted)). [***1333**] [HN3](#) [↑] We further explained that placing this burden on the patent owner for its newly formulated claims is appropriate given "the very nature of IPRs," which are distinctly different from a typical PTO examination or reexamination where a patent examiner performs a prior art search and independently conducts a patentability analysis of all claims, whether newly proposed or previously existing. [Id.](#) at [1307](#).

During IPRs, once the PTO grants a patentee's motion to amend, the substituted claims are not subject to further examination. Moreover, the petitioner may choose not to challenge the patentability of substitute claims if, for example, the amendments narrowed the claims such that the petitioner no longer faces a risk of infringement. If the patentee were not required [****9**] to establish patentability of substitute claims over the prior art of record, an amended patent could issue despite the PTO having before it prior art that undermines patentability.

[Id.](#) at [1307-08](#); see also [35 U.S.C. § 318\(a\)](#) (instructing the Board to "issue a final written decision with respect

to the patentability of any patent claim challenged by the petitioner and any new claim added under [section 316\(d\)](#)"). In this way, placing the burden on the patent owner ensures that proposed substitute claims are critically analyzed before they are entered as claims that are part of the issued patent.

Consistent with the language of the regulation and our subsequent conclusion in *Proxyconn*, the Board in the present case stated that Nike's proposed substitute claims could not be "entered automatically," but instead could be entered only "upon [Nike]'s having demonstrated the patentability of the substitute claims." [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *5](#). Ultimately, the Board denied Nike's motion because it failed to carry this burden. Nike now argues that the understanding of the authority delegated in [§ 316\(a\)\(9\)](#) from *Idle Free* and from *Proxyconn* is incorrect in light of [§ 316\(e\)](#):


[HN4](#) [↑] **Evidentiary standards.**—In an inter partes review instituted under this chapter, *the petitioner shall have the burden [****10**] of proving a proposition of unpatentability by a preponderance of the evidence.*

[35 U.S.C. § 316\(e\)](#) (emphasis added). [HN5](#) [↑] On its face, [§ 316\(e\)](#) places the burden of proving unpatentability on the petitioner as it relates to any patent claim included in the Board's decision instituting the IPR proceedings. Nike interprets this provision as also placing on the petitioner the burden of proving unpatentability of any newly proposed substitute claim that the patent owner seeks to introduce during the proceedings. When [§ 316\(e\)](#) is read in isolation, Nike's position is not without some merit. But after considering the entire statute, we disagree that this section has such a broad command. See also [Synopsys Inc. v. Mentor Graphics Corp., No. 14-1516, slip op. at 24-26, 814 F.3d 1309, 2016 U.S. App. LEXIS 2250 \(Fed. Cir. Feb. 10, 2016\)](#).

First, Nike's interpretation is in tension with Congress's direction that the PTO "shall prescribe regulations" "setting forth standards and procedures for allowing the patent owner to move to amend." [§ 316\(a\)\(9\)](#). In other words, Congress delegated to the PTO the *specific* authority to establish the standards and procedures with which a patent owner must comply to amend its patent during an IPR. Furthermore, the specific language in [§ 316\(a\)\(9\)](#) also directs the PTO to set "standards and procedures . . . [****11**] ensuring that any information submitted by the patent owner in support of any


amendment entered under subsection (d) is made available to the public." In this way, [§ 316\(a\)\(9\)](#)'s requirement that the patent owner has some obligation **[*1334]** to provide "information . . . in support of any amendment," indicates that the patent owner carries an affirmative duty to justify why newly drafted claims—which, unlike the issued claims, had never been evaluated by the PTO—should be entered into the proceeding.


This conclusion is further supported by inspection of the language of [§ 316\(e\)](#). Specifically, the evidentiary standard set forth in [§ 316\(e\)](#) applies to "an inter partes review instituted under this chapter," making clear that the burden of proof is on the petitioner to prove unpatentable those issued claims that were actually challenged in the petition for review and for which the Board instituted review. [Synopsis, No. 14-1516, slip op. at 24-26, 2016 U.S. App. LEXIS 2250](#); see also [35 U.S.C. § 314\(a\)](#) (authorizing IPR proceedings only when the information in a petition for review and any response "shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition"). The evidentiary standard of [§ 316\(e\)](#), when read together with [§ 316\(a\)\(9\)](#) **[**12]**, therefore does not necessarily apply to claims that were not in existence at the time a petition is filed, such as newly offered substitute claims proposed by a patent owner in a motion to amend filed as part of an already-instituted IPR proceeding.

For these reasons, Nike's attempt to undo our conclusion in *Proxyconn*—that the PTO may impose the burden of establishing the patentability of proposed substitute claims on the patent owner—is not persuasive. Nike's argument focuses solely on a small portion of the language in [§ 316\(e\)](#) and ignores the context supplied by the entirety of [§ 316](#). See [Davis v. Mich. Dep't of Treasury, 489 U.S. 803, 809, 109 S. Ct. 1500, 103 L. Ed. 2d 891 \(1989\)](#) ([HN6](#) ) "[S]tatutory language cannot be construed in a vacuum. It is a fundamental canon of statutory construction that the words of a statute must be read in their context with a view to their place in the overall statutory scheme."). Our precedent recognizes that [§ 316\(a\)\(9\)](#) instructed the PTO to promulgate a regulation setting forth the standard for motions to amend a patent that might be filed as part of an IPR proceeding. The PTO did just that in [37 C.F.R. § 42.20\(c\)](#) and, as we held in *Proxyconn*, the Board permissibly interpreted this regulation as imposing the burden of proving patentability of a proposed substitute claim on the movant: the patent **[**13]** owner. [Section 316\(e\)](#), on the other hand,

speaks to a different context. [Section 316\(e\)](#) places the burden on the petitioner to prove unpatentability of any issued claim for which the Board has instituted review and requires that the petitioner carry this burden by a preponderance of the evidence. Thus, the Board did not err by placing the burden on Nike to establish patentability over the prior art of Nike's proposed substitute claims.

II. Obviousness

Nike next asserts that the Board nevertheless erred in concluding that Nike failed to carry its burden of establishing that proposed substitute claims 47-50 were patentable under [35 U.S.C. § 103](#). [HN7](#)  [Section 103](#) forbids issuance of a claim when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." [35 U.S.C. § 103](#). The ultimate determination of obviousness under [§ 103](#) is a question of law based on underlying factual findings. [In re Baxter Int'l, Inc., 678 F.3d 1357, 1361 \(Fed. Cir. 2012\)](#) (citing [Graham v. John Deere Co., 383 U.S. 1, 17-18, 86 S. Ct. 684, 15 L. Ed. 2d 545 \(1966\)](#)). These underlying factual considerations consist of: (1) the "level of **[*1335]** ordinary skill in the pertinent art," (2) the "scope and content of the prior art," (3) the "differences between the prior art and the **[**14]** claims at issue," and (4) "secondary considerations" of non-obviousness such as "commercial success, long-felt but unsolved needs, failure of others, etc." [KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406, 127 S. Ct. 1727, 167 L. Ed. 2d 705 \(2007\)](#) (quoting [Graham, 383 U.S. at 17-18](#)).

[HN8](#)  A claimed invention may be obvious even when the prior art does not teach each claim limitation, so long as the record contains some reason why one of skill in the art would modify the prior art to obtain the claimed invention. See [Ormco Corp. v. Align Tech., Inc., 463 F.3d 1299, 1307 \(Fed. Cir. 2006\)](#). Whether a person of ordinary skill in the art would have had such a reason to combine the teachings of prior art references is also a question of fact. [Pregis Corp. v. Kappos, 700 F.3d 1348, 1353 \(Fed. Cir. 2012\)](#). Although an analysis of the teaching, suggestion, or motivation to combine elements from different prior art references is helpful, we must always be mindful that an obviousness inquiry requires an "expansive and flexible approach." [Kinetic Concepts, Inc. v. Smith & Nephew, Inc., 688 F.3d 1342, 1360 \(Fed. Cir. 2012\)](#) (citing [KSR, 550 U.S. at 415, 419](#)). Importantly, we have repeatedly emphasized that

an obviousness inquiry requires examination of all four *Graham* factors and that an obviousness determination can be made only after consideration of each factor. *Id.*

On appeal, Nike objects to three components of the Board's obviousness analysis. First, Nike contests the Board's finding that a person of skill in the art would have a reason to combine **[**15]** the two relevant prior art references to arrive at the unitary upper claimed in the substitute claims. Second, Nike argues that the Board failed to consider Nike's evidence of secondary considerations in violation of this court's precedent. Finally, Nike contends that, at the very least, proposed claim 49 recites a limitation absent from the cited prior art references.

A. Motivation to Combine

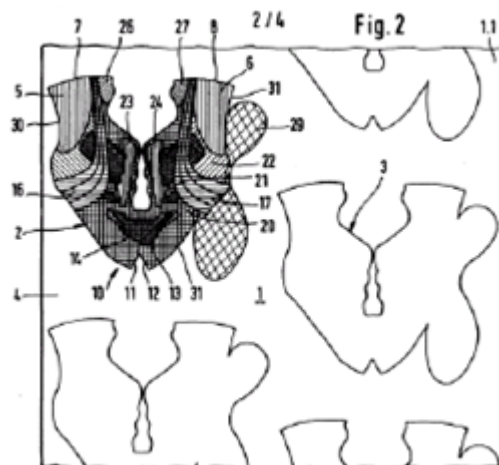
In concluding that substitute claims 47-50 were unpatentable,¹ the Board pointed to three prior art references: (1) U.S. Patent No. 5,345,638 (Nishida), entitled "Process for producing a shoe-shaped part from a web of material and resulting shoe-shaped part"; (2) U.S. Patent No. 2,178,941 (Schuessler I), entitled "Knitted helmet"; and (3) U.S. Patent No. 2,150,730 (Schuessler II), entitled "Knitting machine." In its Final Written Decision, the Board acknowledged that because Nike declined to file a response to the petition, the Board would "accept as unchallenged that Nishida teaches or suggests all of the limitations of [the] original claims." *Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *18*. This left only the added limitation in proposed substitute claims 47-50, namely, the recitation of "flat knit edges free of surrounding textile structure." The Board found this limitation disclosed in Schuessler I and **[**16]** Schuessler II (collectively, the Schuessler References). The Board then concluded that a person of skill in the art would have reason to modify Nishida using the teachings of the Schuessler References to arrive at the unitary, flat-knitted textile upper recited in the proposed substitute claims. Nike argues that this finding is not supported by substantial evidence. We disagree.

[*1336] 1.

As mentioned above, the Board's obviousness conclusion rested on three prior art references: Nishida and the two Schuessler References.

Nishida discloses a process that reduces the amount of waste produced when manufacturing shoe uppers. Nishida accomplishes this goal using a pattern where only just those parts of the web of material are produced in the necessary quality, thickness, multilayers or the like which correspond to the pattern or to an area of a pattern of the shoe upper or the related sole part. The remaining area of the web of material in contrast can consist of a simple lightweight or inexpensive material quality, which holds together only the patterns

'638 patent, 2:11-18. As shown in Figure 2 of Nishida, **[**17]** the textile corresponding to the pattern for the shoe upper is of a different quality or thickness than the remainder of the textile web.



Id. at Figure 2. The process disclosed in Nishida then requires that the portion of the pattern corresponding to the shoe upper be cut from the surrounding textile web. *Id.* at 2:20-22. After the upper is cut out, the "cutting waste" "represents a simple, lightweight and inexpensive material." *Id.* Nishida therefore improves on the prior art, where the cutting waste consisted of the normal, more "expensive tubular material, multilayer material or the like." *Id.* at 2:24-25.

The Schuessler References both issued in 1939 to the same inventor. Schuessler I discloses "a method for forming a . . . knitted helmet while rendering it unnecessary to cut any portion of the knitted swatch while at the same time providing a finished helmet," '941 patent, 1:16-19, rather than the traditional method of "form[ing] a knitted **[*1337]** piece and then cut[ting] out portions and sew[ing] sections together to form the completed article," *id.* at 1:4-6. This manufacturing process allows the creation of the knitted article "in a

¹ Nike does not argue claims 48-50 separately from claim 47 for the purposes of this argument.

continuous manner" "without requiring cutting." *Id.* at 1:24-26. Schuessler I further recognizes **[**18]** that this cutting-free method avoids the need for additional processing "to prevent unraveling" before the parts are sewn together. *Id.* at 1:8. Schuessler I specifically references Schuessler II as an example of a knitting machine that can be used to form the knitted helmet disclosed in Schuessler I. See also [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *19](#) ("The knitted helmet [of Schuessler I] may be formed from a swatch knit on a flat knitting machine, such as that described in Schuessler II."). Schuessler II discloses a flat-knitting machine. '730 patent, 1:1-5. Thus, the flat-knitting machine can be used to manufacture the unitary textile element with flat-knit (not cut) edges that can be stitched in certain places to form a knitted helmet as disclosed in Schuessler I.

2.


The Board found that one of skill in the art would have reason to combine Nishida and the Schuessler References because these references are in similar fields and address the same problem. Nike asserts that the Board's finding lacks substantial evidence because the processes in these references are sufficiently different such that a person of skill in the art would not think to combine them. According to Nike, Nishida discloses a "subtractive" process, which requires the **[**19]** additional step of cutting the textile from a larger textile web. Nike contends that Nishida's subtractive process bears no resemblance to the "additive" process in the Schuessler References, where the textile shape is created by flat knitting to shape in the first instance. Nike's argument is not persuasive.

In *KSR*, the Supreme Court instructed that "any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." [550 U.S. at 420](#). The three references all relate to the creation of three-dimensional, knitted articles created in an efficient and economical way by joining the edges of two-dimensional knit textiles. Nishida recognizes the desire to minimize the amount of wasted textile resulting from cutting the shoe upper pattern from a larger textile web. Schuessler I describes its preferred process, carried out by the flat-knitting machine in Schuessler II, for creating an article knitted to a specific shape "'without requiring cutting.'" [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *19](#) (emphasis in original) (quoting Schuessler I, 1:25-26). We thus agree with the Board that the prior art references "serve the same purpose" of

efficiently **[**20]** creating knitted articles. See *id.* And a skilled artisan interested in Nishida's preference to minimize waste in the production process would have logically consulted the well-known practice of flat-knitting, which eliminates the cutting process altogether. In other words, a person of skill in the art would have been motivated to address the problem identified in Nishida by applying the teachings of the Schuessler References to arrive at the invention in Nike's proposed substitute claims.

Nike next points to our decision in *Leo Pharmaceuticals Products, Ltd. v. Rea*, and argues that the age of these references and the passage of time between their public availability and the inventions recited in the proposed substitute claims should have precluded the Board from finding a reason to combine the references. [726 F.3d 1346, 1356-57 \(Fed. Cir. 2013\)](#). Nike over reads our precedent. The relevant portion of *Leo Pharmaceuticals* stands for **[*1338]** the proposition that the age of a reference can highlight the fact that no one in the art understood the problem to be solved.

True enough, *Leo Pharmaceuticals* discusses the number of years that passed from the time the prior art was invented until the filing of the patent at issue. See *id.* at [1355, 1356-57](#). But, our **[**21]** reversal of the Patent Board's obviousness determination hinged on the fact that nothing in the cited prior art appreciated the problem the invention recognized and then solved. [Id.](#) at [1353](#) ("The '013 patent, however, is not simply a combination of elements found in the prior art. The inventors . . . recognized and solved a problem . . . that the prior art did not recognize."). Because there was no prior recognition of the problem solved by the subject invention, there was no reason in the record why one of skill in the art would attempt to combine the cited prior art to arrive at the claimed invention. [Id.](#) at [1354](#) ("Only after recognizing the existence of the problem would an artisan *then* turn to the prior art and attempt to develop [the claimed invention]."); see also [id.](#) at [1356-57](#) (rejecting an obvious-to-try argument because "[u]ntil the advancement made by the inventors . . . [t]he problem was not known, the possible approaches to solving the problem were not known or finite, and the solution was not predictable").

In this way, our decision in *Leo Pharmaceuticals* is entirely consistent with established precedent that [HN9](#)  "[t]he mere age of the references is not persuasive of the unobviousness of the combination of their teachings, absent evidence **[**22]** that, notwithstanding knowledge of the references, the art tried and failed to

solve the problem." [In re Wright](#), 569 F.2d 1124, 1127 (CCPA 1977); see also [Iron Grip Barbell Co. v. USA Sports, Inc.](#), 392 F.3d 1317, 1325 (Fed. Cir. 2004) ("Absent a showing of long-felt need or the failure of others, the mere passage of time without the claimed invention is not evidence of nonobviousness.").² [Leo Pharmaceuticals](#) recognizes the natural consequence of this idea: Persons of skill in the art cannot have tried and failed to solve the problem if they were never aware of that problem to begin with. Thus, the number of years that passed between the prior art and the claimed invention may be a relevant factor to underscore that skilled artisans had long failed to appreciate the problem solved by that invention. Here, there is no question that skilled artisans knew of the desire to reduce waste when producing wearable, knitted shoe uppers because that problem is expressly recognized in [Nishida](#). Thus, [Leo Pharmaceuticals](#) does not control the present case.

B. Secondary Considerations

In Nike's brief supporting the motion to amend filed at the Board, Nike argued that reducing waste was a long-felt need in the shoe manufacturing industry and that [Nishida](#) did not resolve this need because the process in [Nishida](#) still resulted in some waste. Nike specifically pointed to its expert's declaration, which explained that

Nishida shows that reducing material waste during manufacture of textile footwear uppers was a long-felt need. . . . Nishida's response to this problem was to make the "cutting waste" a simpler, lighter or cheaper material. . . . Unlike Nishida, which simply tried to make "cutting waste" less expensive, the upper of substitute claim 47 solves the [*1339] long-felt need to reduce flat textile footwear upper manufacturing waste by eliminating the need to cut a textile element from a textile structure, thereby eliminating "cutting waste" (and the associated cutting step) instead of simply making the cutting waste cheaper.

J.A. 1647-48. Despite this argument and evidence, the Board's final written decision lacks a discussion, or even an acknowledgement, of secondary considerations.

1.

[HN10](#) [↑] Evidence of secondary considerations [*24]

²As discussed in the next section, we must remand for reconsideration of obviousness in light of Nike's evidence of secondary considerations. As such, it may be appropriate for the Board to consider the passage of time in connection with Nike's secondary considerations [*23] evidence on remand.

plays a critical role in the obviousness analysis because it serves as objective indicia of nonobviousness and "may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not." [Stratoflex, Inc. v. Aeroquip Corp.](#), 713 F.2d 1530, 1538-39 (Fed. Cir. 1983). It is well-established that "evidence rising out of the so-called 'secondary considerations' must always when present be considered en route to a determination of obviousness." [Id. at 1538](#). In fact, we have expressly stated that "when secondary considerations are present . . . it is *error not to consider them*." [In re Kao](#), 639 F.3d 1057, 1067 (Fed. Cir. 2011) (emphasis added).

Nike argues that the Board erred by failing to address secondary considerations. Neither Adidas nor the PTO disputes that the Board's Final Written Decision lacks an acknowledgment of Nike's secondary considerations evidence. Adidas instead argues that this omission is not an automatically reversible error. Similarly, the PTO argues that the Board did not err because it "*implicitly* found that reducing waste was not a long-felt but unresolved need." Intervenor Br. 19 (emphasis added). [HN11](#) [↑] Because long-felt need is indisputably a secondary consideration, see [Graham](#), 383 U.S. at 17-18, our precedent dictates that the [*25] Board is bound to fully consider properly presented evidence on the long-felt need for a claimed invention. Recognizing that the Board operates under stringent time constraints, we do not hold that it is obliged to explicitly address conclusory and unsupported arguments raised by a litigant. Cf. [Fresenius USA, Inc. v. Baxter Int'l, Inc.](#), 582 F.3d 1288, 1296 (Fed. Cir. 2009) (holding that a party cannot preserve an argument if it presents "only a skeletal or undeveloped argument to the trial court"). Under the particular circumstances presented here, however, we conclude that the Board should have explicitly acknowledged and evaluated Nike's secondary considerations evidence.

2.

Adidas attempts to minimize this gap in the Board's decision by relying on our decisions stating that there is no requirement that a decision explicitly enumerate each [Graham](#) factor and include findings specifically in terms of the factors so long as "the required factual determinations were actually made and it is clear that they were considered while applying the proper legal standard of obviousness." [Specialty Composites v. Cabot Corp.](#), 845 F.2d 981, 990 (Fed. Cir. 1988); see also [MySpace, Inc. v. GraphOn Corp.](#), 672 F.3d 1250,

[1263-64 \(Fed. Cir. 2012\)](#) (finding no error for failing to explicitly mention secondary considerations because "the record establishe[d] that the evidence was properly before and considered by the [district] court"). **[**26]**

Both [Specialty Composites](#) and [MySpace](#) are distinguishable from the facts of this case. In these earlier cases, we were able to confirm that the respective district courts had weighed the evidence of secondary considerations and reached a conclusion on that evidence because it was **[*1340]** presented in written briefing and oral arguments and, critically, the courts made fact findings on that evidence. The absence of express recognition of secondary considerations was inconsequential. [Specialty Composites, 845 F.2d at 990](#) (affirming the district court's obviousness determination because the record established that "the required factual determinations were actually made and it [was] clear that they were considered while applying the proper legal standard of obviousness"); [MySpace, 672 F.3d at 1263-64](#) (finding no error for failing to explicitly mention secondary considerations because "the record establishe[d] that the evidence was properly before and considered by the [district] court"). Under these cases, we could perhaps be satisfied with the Board's decision, even without it mentioning the secondary considerations factor, if the decision had contained some findings indicating a basis for why the Board had rejected Nike's evidence of long felt need. However, such findings **[**27]** are absent in this case. See [Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 873 \(Fed. Cir. 1985\)](#) ("[W]e must be convinced from the opinion that the district court actually applied *Graham* and must be presented with enough express and necessarily implied findings to know the basis of the trial court's opinion."), *overruled on other grounds by Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059 (Fed. Cir. 1998)*.

Contrary to the PTO's arguments, the Board's statements describing the teachings of the prior art do not amount to an "implicit" rejection of Nike's long-felt-need evidence and argument. The Board made these statements in its motivation to combine analysis. See [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *19](#). Nothing in that discussion, or in any other part of the Board's decision, suggests that the Board weighed and rejected Nike's evidence of long-felt need to eliminate waste in the manufacture of knit textile uppers en route to concluding that the proposed substitute claims were unpatentable as obvious. We must therefore remand for the Board to examine Nike's evidence and its impact, if any, on the Board's analysis

under the first three [Graham](#) factors.

3.

Adidas finally argues that we can alternatively affirm the obviousness determination, despite the absence of findings on secondary considerations, because there is no nexus between Nike's evidence and the merits **[**28]** of the invention in substitute claims 47-50. See [In re GPAC Inc., 57 F.3d 1573, 1580 \(Fed. Cir. 1995\)](#) ("For objective evidence [of secondary considerations] to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention."). Whether the requisite nexus exists is a question of fact. [Pro-Mold & Tool Co., Inc. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573 \(Fed. Cir. 1996\)](#). As such, we cannot resolve this factual dispute in the first instance. [Comiskey, 554 F.3d at 974](#). We therefore express no opinion on this argument, except to recognize that the Board may certainly consider it on remand.

C. Claim 49

As mentioned above, Nike filed a motion to amend pursuant to [35 U.S.C. § 316\(d\)](#) in which it sought to cancel the challenged patent claims and propose substitute claims. [HN12](#) [Section 316\(d\)](#) provides that a patent owner's ability to propose substitute claims is limited to proposing a "reasonable number of substitute claims." *Id.* [§ 316\(d\)\(1\)\(B\)](#) (emphasis added). The PTO interpreted this limit in [37 C.F.R. § 42.121\(a\)\(3\)](#) by explaining that "[t]he presumption is that only one substitute claim would be needed to replace each challenged claim." The regulation also acknowledges that this presumption "may be rebutted by a demonstration of need." *Id.* **[*1341]** In its *Idle Free* informative decision, the Board further explained that when a patent owner seeks to provide more than one substitute **[**29]** claim for a challenged claim, "the patent owner needs to show patentable distinction of the additional substitute claim over all other substitute claims for the same challenged claim." [2013 Pat. App. LEXIS 6302, 2013 WL 5947697, at *5](#). If the patent owner fails to carry this burden, "then at the Board's discretion, the proposed additional claim may be denied entry, or it may be grouped with, or deemed as standing and falling with, another substitute claim for the same challenged claim, e.g., the first substitute claim, for purposes of considering patentability over prior art." *Id.*

Nike's proposed substitute claims 48 and 49, both of which depend from substitute claim 47, recite:

Claim 48. (Substitute for dependent claim 19) The article of footwear recited in claim [16] 47, wherein at least one of the first stitch configuration and the second stitch configuration forms an aperture in the [weft-knitted] flat knit textile element and the joined edges shape the flat knit textile element to form a lateral region, a medial region, an instep region and a heel region of the upper.

Claim 49. (Second substitute for dependent claim 19) The article of footwear recited in claim [16] 47, wherein at least one of the first stitch configuration and **[**30]** the second stitch configuration forms [an aperture] a plurality of apertures in the [weft-knitted] flat knit textile element, the apertures formed by omitting stitches in the flat knit textile element and positioned in the upper for receiving laces.

J.A. 1227. Claim 48 is directed to the general shape of the flat-knitted textile upper. Claim 49, on the other hand, is directed to a knit textile upper containing "apertures" that can be used to receive laces and that are formed by omitting stitches in the knit textile.

Thus, because Nike proposed substitute claims 48 and 49 to replace challenged claim 19, under *Idle Free*, Nike was required to demonstrate that proposed claims 48 and 49 were patentably distinct from one another. On appeal, Nike argues only that the Board erred in its treatment of claim 49 and asserts that the Board should have ultimately found claim 49 patentable.

1.

The Board explained that, under *Idle Free*, whether both claim 48 and claim 49 could be substituted for original claim 19 depended on whether those claims were patentably distinct from each other.³ Despite recognizing this standard, the Board proceeded to compare the limitations in each of these claims to the prior **[**31]** art. As to claim 48, the Board observed that "Nishida describes joining the edges of the layout to form various portions of the upper."⁴ [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *12](#). With respect to claim 49, the Board stated that "Nishida describes forming lacing areas by knitting." *Id.* The Board then concluded that Nike had not demonstrated

"that claims 48 and 49 are patentably distinct from each other." *Id.* Rather than deny entry of claims 48 and 49 on this basis, the Board decided to follow the alternate option provided in *Idle Free* and "group[ed] claim 49 with claim 48, for patentability purposes." *Id.*


We agree with Nike that, despite correctly reciting the *Idle Free* standard **[**1342]** that multiple substitute claims are permissible if they are patentably distinct from each other, the Board nevertheless did not engage in any such analysis comparing proposed substitute claims 48 and 49. Thus, the Board's decision to group substitute claims 48 and 49 together, meaning that claim 49 would stand and fall with claim 48, is not consistent with the rule set out by the Board in *Idle Free*. The Board has not provided a **[**32]** supported basis for grouping the two claims together in this manner. We must therefore remand for a proper determination of how these claims should be treated per the standard set forth in *Idle Free*, and, if necessary, a full consideration of the patentability of each.

2.

Even though the Board did not engage in the proper analysis to group claims 48 and 49 together, Adidas argues that Nike never separately argued the patentability of claim 49, and for that reason it was appropriate to nevertheless find claim 49 unpatentable. Contrary to Adidas's assertion, Nike did argue to the Board that claim 49 was separately patentable. In its motion to amend, Nike explained that "Nishida also does not disclose the limitation of claim 49 regarding apertures." J.A. 1233. Nike supported this argument with its expert declaration:

Nishida also does not teach the limitation requiring "a plurality of apertures in the flat knit textile element, the apertures formed by omitting stitches in the flat knit textile element and positioned in the upper for receiving laces." While figure 3 of Nishida indicates the upper includes openings for laces, Nishida contains no description or suggestion of forming such openings **[**33]** by omitting stitches in the layout. Thus, it appears such openings were created by an additional manufacturing step, e.g., punching out the openings.

J.A. 1610.

Adidas seems to imply that Nike insufficiently preserved the argument by raising it only in its motion to amend and not in its reply brief. [HN13](#)  An issue is preserved for appeal, however, so long as it can be said that the tribunal was "fairly put on notice as to the substance of

³ Neither party objects to *Idle Free*'s interpretation of [37 C.F.R. § 42.121\(a\)\(3\)](#) or to the PTO's interpretation of [§ 316\(d\)\(1\)\(B\)](#) in [section 42.121\(a\)\(3\)](#).

⁴ Nike does not dispute this conclusion.

the issue." [Consolidation Coal Co. v. United States](#), 351 F.3d 1374, 1378 (Fed. Cir. 2003) (quoting [Nelson v. Adams USA, Inc.](#), 529 U.S. 460, 469, 120 S. Ct. 1579, 146 L. Ed. 2d 530 (2000)). Nike raised this argument in its motion to amend and supported the argument with its expert declaration. This was sufficient to put the Board on notice that Nike was asserting the "apertures formed by omitting stitches . . . and . . . for receiving laces" limitation as a patentable distinction. We therefore cannot agree with Adidas that Nike has waived its arguments relating to the patentability of claim 49.

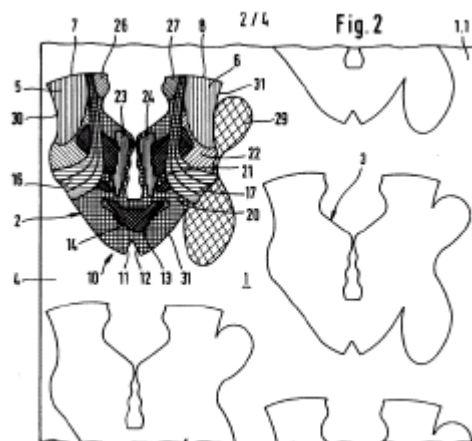
3.

Adidas also argues that we can nevertheless affirm the Board's conclusion that claim 49 is unpatentable in light of Nishida and the Schuessler References. Adidas even asserts that the Board itself engaged in this analysis and found that the additional limitations in claim 49 were disclosed in Nishida. To support this argument, **[**34]** Adidas points to the Board's above-mentioned, less-than-clear analysis purporting to analyze whether claims 48 and 49 were "obvious over each other." [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *12](#).

Claim 49 adds the limitation: "a plurality of apertures . . . formed by omitting stitches in the flat knit textile element and positioned in the upper for receiving laces." J.A. 1227. The Board merely explained that "[w]ith respect to the additional limitations of claim 49, Nishida describes forming lacing areas by knitting. Further, the Specification of the '011 Patent describes the omission of stitches, as **[*1343]** recited in claim 49, to provide air permeability to the upper." [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *12](#) (citations omitted). The Board supported its conclusion that "Nishida describes forming lacing areas by knitting," by first citing to (but not discussing) Nishida's specification, which describes the concept of shoe laces and lacing areas, as seen in Figures 2 and 3 of Nishida:

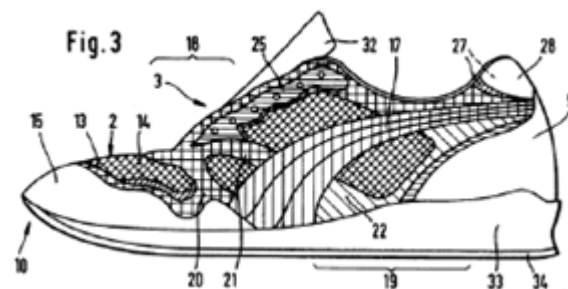
[T]he material can be woven or knitted in two or more layers or can be especially thick or additionally embroidered. Similarly, the lacing areas 23 and 24 can be made dimensionally stable in corresponding manners, especially if, for example, no additional trimmings, such as the lacing strips 25, shown in FIG. 3, are **[**35]** to be applied.

'638 patent, 3:67-4:5.



'638 patent, Figure 2 (illustrating lacing areas 23 and 24 in Nishida's knit textile upper pattern).

[*1344]



'638 patent, Figure 3 (depicting a completed shoe with the optional lacing strips 25 attached to lacing area 23 or 24). In this same discussion, the Board also pointed to Nike's own patent, the '011 patent, because it "describes the omission of stitches . . . to provide air permeability to the upper."⁵ *Id.* (citing '011 patent, 9:57-62). Finally, the Board cited, in a parenthetical, to Nishida's disclosure that the toe area of the upper can have "good air exchange capability . . . by [using] a net-like woven or knitted structure." '638 patent, 3:49-52. The Board did not provide any explanation of the relevance of this passage nor the conclusions that it drew therefrom. Nevertheless, from these passages, the Board concluded that Nike had not demonstrated that

⁵ We are troubled by the Board's citation to the '011 patent's written description **[**36]** and the corresponding appearance of using the '011 patent to find claim 49 unpatentable. Given the confusing analysis of comparing the substitute claims to the prior art to conclude that the substitute claims are not patentably distinct from one another, we are unsure for what purpose the Board was referring to the '011 patent's written description. This confusion can also be resolved on remand.

claims 48 and 49 were patentably distinct from one another and then decided to group the two proposed substitute claims together for patentability purposes. At no point did the Board refer to the *Graham* factors and conclude that Nishida renders proposed substitute claim 49 obvious.

The Board's statements are insufficient to support a conclusion that proposed substitute claim 49 is unpatentable as obvious. As discussed above, obviousness determinations require underlying fact-finders, many of which are missing from the Board's decision as it relates to the specific limitations in claim 49. Adidas contends that no additional fact-finding is needed by pointing to the holes in the lacing area depicted in Nishida's Figure 3. But, the Board did not point to any disclosure in Nishida that explains the manner in which these holes were created, whether through knitting or some other way. In fact, the Board's short discussion did not even address the presence of the holes in either claim 49 or Nishida. Further, Nishida's specification never specifically discusses the lacing holes of its upper; they **[**37]** are only shown in Figure 3. It may well be that the Board intended to convey that claim 49 was obvious in light of Nishida because **[*1345]** skipping stitches to form apertures, even though not expressly disclosed in Nishida, was a well-known technique in the art and that understanding perhaps would be a basis to conclude that one of skill in the art would utilize this technique to create holes for accepting shoe laces.⁶ But, the Board did not articulate these findings. This portion of the Board's analysis on whether Nike's proposal of claim 48 and 49 constituted a reasonable number of substitute claims for originally issued claim 19 lacks critical fact-finders needed for any obviousness determination. We are unable to engage in such fact finding in the first instance and must therefore remand for further proceedings. See [Ariosa, 805 F.3d at 1365](#) ("But we must not ourselves make factual and discretionary determinations that are for the

⁶ Adidas also asserts that the manner in which the lacing holes are created is irrelevant because the "formed by omitting stitches" portion of the limitation is nothing more than a product-by-process limitation. Because this was not raised to the Board during the IPR **[**38]** proceedings, we decline to opine on the issue except to say that, if given the opportunity, Adidas may raise this argument to the Board on remand. See [Ariosa Diagnostics v. Verinata Health, Inc., 805 F.3d 1359, 1367 \(Fed. Cir. 2015\)](#) ("We do not direct the Board to take new evidence or, even, to accept new briefing. The Board may control its own proceedings, consistent with its governing statutes, regulations, and practice.").

agency to make.").

4.

Nike, on the other hand, requests that we reverse and find claim 49 patentable because Nishida does not disclose the formation of apertures by omitting stitches. Nike specifically argues that the Board misunderstood the scope of claim 49 and the disclosure of Nishida. According to Nike, the Board failed to realize that claim 49 requires more than just knit "lacing areas," but requires apertures formed from skipping stitches in the knit pattern in an orientation such that the resulting apertures are capable of accepting shoe laces. See [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *12](#) ("With respect to the additional limitations of claim 49, Nishida describes forming lacing areas by knitting.").

To support this argument, Nike points to its expert, who opined that, "[w]hile figure 3 of Nishida indicates the upper includes openings for laces, Nishida contains no description or suggestion of forming **[**39]** such openings by omitting stitches in the layout. Thus, it appears such openings were created by an additional manufacturing step, e.g., punching out the openings." J.A. 1610. Nike asserts that this interpretation of the lacing holes in Nishida is correct based on Nishida's explanation that the knit upper "can be provided with an embroidery, especially with an English embroidery (i.e., the type of embroidery by which a hole pattern is welded and which is commonly used for the sewing of button holes), of a trademark or another mark or identification on suitable or preferred places." '638 patent, 4:33-38. Nike's expert further opined that there would have been "no motivation or other reason that would have prompted one of ordinary skill in the art at the time of the invention to modify Nishida to include this additional feature." J.A. 1613.

Based on this evidence, Nike urges us to find claim 49 patentable. We are unable to do so on this record because, as already explained, the Board has not made the requisite factual findings. Importantly, there are no findings from the Board about the scope and content of the passages from Nishida's written description on which Nike now relies. Further, there **[**40]** is no discussion about whether Nike's expert's statement was sufficient to demonstrate that there was no motivation to modify Nishida to arrive at lace holes **[*1346]** formed by omitting stitches. Thus, we cannot, as Nike requests, reverse and find claim 49 patentable. Any resolution of this issue requires a factual analysis that must be done by the Board in the first instance.

III. Adidas's Alternative Grounds for Affirmance

Adidas also argues that, even if we cannot affirm the Board's obviousness conclusion, there are numerous alternative grounds on which we could affirm claim 49's unpatentability. First, Adidas argues that the Board's construction of "flat knit edges" is overly narrow and that, under the correct construction, Nishida anticipates all of the proposed substitute claims. Second, Adidas asserts that, even under the Board's construction, Nishida alone renders the proposed substitute claims obvious. Finally, Adidas contends that we should affirm the outcome reached by the Board because, contrary to the Board's decision, Nike's proposed substitute claims are inadequately supported by the '011 patent's written description.

1.

[HN14](#) [↑] We review the Board's ultimate claim construction de novo and any underlying **[**41]** factual determinations involving extrinsic evidence for substantial evidence. [Teva Pharms. USA, Inc. v. Sandoz, Inc.](#), 135 S. Ct. 831, 841-42, 190 L. Ed. 2d 719 (2015). When, as here, the intrinsic record fully determines the proper construction, we review the Board's claim construction de novo. [Id. at 840-42](#); see also [Proxycorr](#), 789 F.3d at 1297.

Each of Nike's proposed substitute claims is directed to a "flat knit textile element . . . having flat knit edges free of surrounding textile structure." Before the Board, Adidas argued that the broadest reasonable interpretation of "flat knit edges" should encompass not only flat-knit edges that are created when a flat knit textile element is knit to shape, but also edges created from cutting a textile element from a larger textile. **[JA 19]** The Board disagreed and determined that the broadest reasonable construction of the term "flat knit edges" is "an edge of a flat knit textile element, which is itself flat knit, e.g., which is not formed by cutting from a flat knit textile element." [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *9](#). The Board arrived at this interpretation because any broader interpretation would be inconsistent with "the context of *this* claim (including surrounding claim language) and in the context of the Specification of *this* patent." *Id.* (emphasis in original).

On appeal, Adidas again argues **[**42]** that the Board erred because "flat knit edge" does not preclude edges formed by cutting. We agree with the Board's construction. The language of proposed substitute claim 47 expressly recites that a "flat knit textile element, the

flat knit textile element having flat knit edges *free of surrounding textile structure from which the textile element must be removed . . .*" J.A. 1226 (emphasis added). This claim language demonstrates that the scope of this claim is limited to a flat-knit textile element where the flat knit edges have not been removed, or cut, from a surrounding textile structure. An interpretation that included a flat-knit textile element that has been cut from a larger textile web would contradict the express claim language.⁷

We therefore affirm the Board's conclusion that the broadest reasonable interpretation of "flat knit edge" is "an edge of a **[*1347]** flat knit textile element, which is itself flat knit, e.g., which is not formed by cutting from a flat **[**43]** knit textile element." Because we affirm the Board's construction of the term "flat knit edges," we need not consider Adidas's argument that Nishida would anticipate under Adidas's proposed construction.

2.

Adidas next argues that, even if we affirm the Board's construction of "flat knit edges," we should nevertheless affirm the Board's conclusion that the proposed substitute claims are unpatentable because Nishida alone, without the Schuessler References, renders the claims obvious. This argument also fails.

A single-reference obviousness conclusion would avoid only the question of whether there existed a motivation to combine the teachings of Nishida and the Schuessler References. We have already found the Board's finding on this question supported by substantial evidence. Adidas's single-reference obviousness argument does not, however, resolve the Board's failure to address Nike's evidence of secondary considerations. We therefore reject this argument as an alternative ground to affirm on the record before us.

3.

Adidas finally asserts that we should affirm the Board's conclusion that the proposed substitute claims are unpatentable because they lack adequate written description support. **[**44]** [HN15](#) [↑] Whether a claim is supported by the patent's written description is a question of fact that we review for substantial evidence. See [Ariad Pharms., Inc. v. Eli Lilly & Co.](#), 598 F.3d

⁷ Because Adidas is requesting an even broader construction than the broadest reasonable instruction, our conclusion that Adidas's construction is incorrect would not change under the standard used in district court proceedings.

[1336, 1355 \(Fed. Cir. 2010\)](#) (en banc); [In re Morsa, 713 F.3d 104, 109 \(Fed. Cir. 2013\)](#) (factual determinations by the Board are reviewed for substantial evidence).

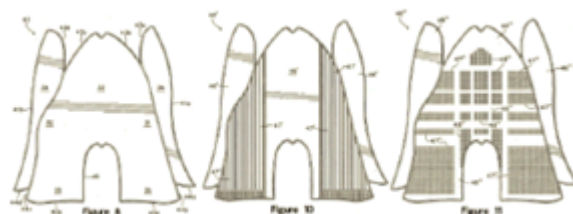
To adequately support the claims, the written description "must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed." [Ariad, 598 F.3d at 1351](#) (internal quotation marks omitted). "Substantial evidence supports a finding that the specification satisfies the written description requirement when the essence of the original disclosure conveys the necessary information—regardless of *how* it conveys such information, and regardless of whether the disclosure's words are open to different interpretations." [Inphi Corp. v. Netlist, Inc., 805 F.3d 1350, 1354 \(Fed. Cir. 2015\)](#) (internal quotation marks omitted); see also [In re Ruschig, 379 F.2d 990, 995, 54 C.C.P.A. 1551 \(CCPA 1967\)](#) (the written description requirement serves the same function as "blaze marks on the trees" to help "find[] one's way through the woods").

Adidas argued that the "flat knit edge" limitation was a negative limitation. Adidas further argued that negative limitations must satisfy a heightened written description requirement under our decision in [Santarus, Inc. v. Par Pharmaceutical, Inc., 694 F.3d 1344 \(Fed. Cir. 2012\)](#). The Board disagreed and concluded that, even if the **[**45]** limitation was a negative limitation, it was "supported by the positive disclosure of the various forms of the textile element" shown in the '011 patent's written description. [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *9](#).

On appeal, Adidas again argues that the term "flat knit edge" is a negative limitation and as such it must satisfy a "heightened requirement" of written description support. Appellant's Br. 51 (citing [Santarus, 694 F.3d at 1351](#)). It is worth noting that we doubt that the present limitation is properly characterized as a negative limitation. Negative limitations generally recite an express exclusion of material. For example, in *Inphi*, we addressed claim language **[*1348]** that expressly excluded the use of certain signal types in a claim relating to computer system memory modules. [Inphi, 805 F.3d at 1352-53](#) ("the chip selects of the first and second number of chip selects are DDR chip selects *that are not CAS, RAS, or bank address signals*" (emphasis added)). Similarly, in *Santarus*, we examined claim language that expressly excluded the use of sucralfate in a claim directed to the treatment of an acid-caused gastrointestinal disorder. [Santarus, 694 F.3d at 1350](#) ("wherein the composition contains no sucralfate").

Even if we assume, as the Board did, that this claim limitation is a negative limitation, Adidas **[**46]** is incorrect that any sort of heightened standard applies. [HN16](#)^(↑) "Negative limitations are adequately supported when the specification describes a reason to exclude the relevant limitation." [Id. at 1351](#). We recently explained in *Inphi* that, contrary to Adidas's argument, *Santarus* did not create a heightened standard for written description support of negative limitations. [Inphi, 805 F.3d at 1356](#). We further explained that "[w]hen viewed in its proper context, *Santarus* simply reflects the fact that the specification need only satisfy the requirements of [§ 112](#), paragraph 1 as described in this court's existing jurisprudence." *Id.* (citing MPEP § 2173.05(i) ("If alternative elements are positively recited in the specification, they may be explicitly excluded in the claims.")). Thus, we need only consider whether the disclosures of the '011 patent, using the customary standard for the written description requirement, allow persons of ordinary skill in the art to recognize that the inventor invented a flat-knit textile with flat-knit edges that are knit to shape rather than being cut from a larger textile web.

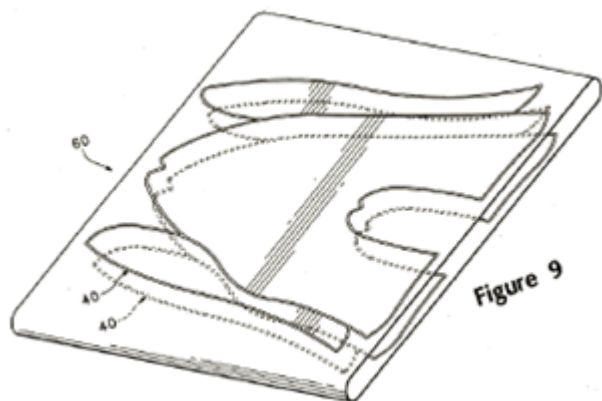
In reaching its conclusion that the proposed substitute claims were supported by the '011 patent's written description, the Board emphasized Figures 8, 10, and 11.



'011 patent, Figures 8, 10, **[**47]** 11. These figures illustrate the shape of textile element 40 before the formation of seams to create the general shape for receiving a foot. Even Adidas's expert agreed that the upper illustrated in Figure 8 "could be made on a flat knitting machine" and "then the edges that are shown in Figure 8 would be flat knitted." J.A. 1483; see also J.A. 1574 (Nike's expert opining that "[t]he disclosure in the '011 patent that the textile elements in Figures 8, 10, and 11 can be made using flat knitting makes it clear that these textile elements can be knit to the shapes shown in these figures (*i.e.*, without surrounding textile structure) using flat knitting.").

These figures are in sharp contrast to Figure 9, which is formed using a "wide-tube **[*1349]** circular knitting

machine," as opposed to a flat-knitting machine. '011 patent, 6:66-7:8, 7:41-43; see also *id.* at 7:29-32 (explaining that a circular knitting machine "forms a generally cylindrical textile structure").



'011 patent, Figure 9. As shown in Figure 9, a circular knit upper, as distinguished from flat knit, must be removed from surrounding textile material by, for example, cutting. In addition, Nike's expert explained that the embodiment illustrated in Figure 9 is made "using a **[**48]** circular knitting process and requires that the textile element [40] be formed as part of a larger textile structure [60]" and "requires additional processing to remove the textile element [40] from the textile structure [60]." J.A. 1571. The Board agreed with Nike that the language describing Figure 9 "does not limit the textile elements depicted in Figures 8, 10, and 11 to those manufactured according to the process of Figure 9." [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1713368, at *15.](#)

In addition, the Board cited Nike's expert's declaration explaining that the textile upper shown in Figures 8, 10, and 11 "illustrates multiple examples in which the textile element is shown in its final shape and is not described as being formed as part of a larger textile structure from which it must be removed." *Id.* (quoting J.A. 1587). The written description and the originally issued claims make a distinction between textile elements that are removed from a larger textile web and those that are not. For example, the patent discusses the textile element 40 as "a single material element that is formed to exhibit a unitary (i.e., one-piece) construction." '011 patent, 5:38-39. The patent then explains that "[t]extile element 40 may be formed as a part of a larger textile **[**49]** element," which would then require that "textile element 40 is . . . removed from the larger textile element." *Id.* at 5:43-45. In fact, only one of the originally issued, now cancelled, independent claims is expressly directed to an upper where "the textile element [is] removed from a

textile structure." *Id.* at 13:47-14:6 (claim 36). Accordingly, based on the Figures in the '011 patent, the disclosures in the written **[*1350]** description, and the expert testimony, we conclude that substantial evidence supports the Board's decision that the proposed substitute claims are adequately supported by the written description of the '011 patent.

IV. Establishing Patentability Over Prior Art Not of Record But Known to the Patent Owner

The Board's *Idle Free* decision explained that, [HN17](#) under [37 C.F.R. § 42.20\(c\)](#), a motion to amend will be successful only if the patent owner "persuade[s] the Board that the proposed substitute claim is patentable over the prior art of record, and over prior art not of record but known to the patent owner." [2013 Pat. App. LEXIS 6302, 2013 WL 5947697, at *4](#) (emphasis added). Nike attempted to carry this burden in its motion to amend by simply stating that its proposed claims were patentable over prior art known to Nike, but not part of the record of the proceedings. See J.A. 1228. **[**50]** The Board denied Nike's request to enter proposed substitute claims 47-50 in part because Nike's motion failed to address any prior art reference that was not discussed in Adidas's petition for review or Adidas's opposition to Nike's motion to amend, i.e., any prior art not of record. [Adidas, 2014 Pat. App. LEXIS 2644, 2014 WL 1913368, at *17](#) (finding Nike's "conclusory statement" to be "facially inadequate" under the Board's understanding of *Idle Free*). As discussed above, as an alternative ground to deny Nike's motion, the Board went on to consider the patentability of Nike's proposed substitute claims on the merits. Because we must vacate and remand the Board's obviousness conclusion, we must now consider whether the Board's denial of Nike's motion to amend for failure to show patentable distinction over "prior art not of record but known to the patent owner" provides an adequate basis for affirmance. For the reasons explained below, we conclude that it is not.

After the Board's decision in this case, the Board issued [MasterImage 3D, Inc. v. RealD Inc., IPR2015-00040, 2015 Pat. App. LEXIS 7152, 2015 WL 4383224 \(PTAB July 15, 2015\)](#), which has been designated by the PTO as a Representative Decision on Motions to Amend. See Standard Operating Procedure 2, at 3 (¶ IV.A—B) (explaining that Board decisions labeled "representative" **[**51]** are "not binding authority," but provide "a representative sample of outcomes on a matter"). In *MasterImage 3D*, the Board "ma[d]e three points of clarification regarding" *Idle Free*'s requirement that the patent owner show that its proposed substitute

claims are patentable over the prior art of record and also other prior art known to the patent owner. Importantly, the Board explained that "[t]he reference to 'prior art known to the patent owner' . . . in *Idle Free*, should be understood as no more than the material prior art that Patent Owner makes of record in the current proceeding pursuant to its duty of candor and good faith to the Office under [37 C.F.R. § 42.11](#), in light of the Motion to Amend." [MasterImage 3D, 2015 Pat. App. LEXIS 7152 at *3](#). At oral argument in the present case, the PTO confirmed this characterization of *MasterImage 3D*. See Oral Argument at 29:13-29:22 available at <http://cafc.uscourts.gov/oral-argument-recordings/20141719/all> ("*MasterImage* is not a change of *Idle Free*, it's more of a clarification of *Idle Free*"). The PTO further explained that, although the Board's denial of Nike's motion to amend was based on a reasonable reading of *Idle Free*, given the clarification in *MasterImage 3D*, the PTO acknowledged that the Board "read *Idle Free* too aggressively in this decision." *Id.* at **[**52]** 29:23-30:01.

We agree with the PTO. At the heart of *Idle Free*, as interpreted by [MasterImage 3D](#), is the question of whether the patent owner has submitted the necessary information to comply with its duty of candor to **[*1351]** the office. In this case, there is not, and there has never been, an allegation that Nike violated its duty of candor. Moreover, the PTO acknowledged that Nike's statement about the substitute claims' patentability over prior art not of record but known to Nike would satisfy the obligation as explained in *MasterImage 3D*. *Id.* at 35:50-36:06. After *MasterImage*'s explanation of *Idle Free*, we cannot see how the statement used by Nike would be inadequate, absent an allegation of conduct violating the duty of candor. We therefore conclude that this was an improper ground on which to deny Nike's motion to amend.

CONCLUSION

For the foregoing reasons, we vacate the Board's obviousness determination and remand for further proceedings consistent with this opinion.

AFFIRMED-IN-PART, VACATED-IN-PART, AND REMANDED

COSTS

No costs.

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