

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

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**LIQWD, INC.,**  
*Appellant*

v.

**L'OREAL USA, INC.,**  
*Appellee*

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2018-2152

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Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. PGR2017-00012.

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SEALED OPINION ISSUED: OCTOBER 17, 2019

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\* This opinion was originally filed under seal and has been unsealed in full.

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

REYNA, *Circuit Judge*.

Liqwd, Inc., appeals from a decision by the Patent Trial and Appeal Board that certain claims in its patent on formulations and methods of keratin treatment are unpatentable as obvious. In its obviousness analysis, based on evidence presented by Liqwd, the Board found that L'Oreal USA, Inc., used Liqwd's confidential information and copied Liqwd's patented method. But the Board disregarded its factual finding when concluding that the copying involved was legally irrelevant. Because that conclusion was error, we vacate the Board's obviousness determination and remand. We agree with the other appealed aspects of the Board's final written decision.

## BACKGROUND

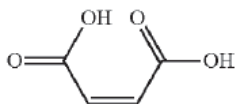
### I.

Liqwd, Inc. owns U.S. Patent No. 9,498,419 (“the '419 patent”), titled “Keratin Treatment Formulations and Methods.” The '419 patent relates to formulations and methods of treating hair, skin, or nails by mixing compounds with a coloring or bleaching formulation to achieve a repairing or strengthening effect. The described formulations contain polyfunctional compounds referred to as “active agents” that may be maleic acid, salts thereof, or other compounds. *See* '419 patent col. 7 l. 15–col. 11 l. 18, col. 21 l. 12–col. 25 l. 40.

Claim 1 is the only independent claim subject to dispute in this case:

1. A method for bleaching hair comprising:

- (a) mixing a formulation comprising an active agent with a bleaching formulation, wherein the active agent has the formula:



or salts thereof;

and

- (b) applying the mixture to the hair;

wherein the active agent in the mixture is at a concentration ranging from about 0.1% by weight to about 50% by weight; and

wherein the mixture does not contain a hair coloring agent.

'419 patent col. 25 l. 42–col. 26 l. 5.

Relevant to this appeal, the application that led to the '419 patent was a continuation of U.S. Patent Application No. 14/713,885 (“the '885 application”). The '885 application was filed on May 15, 2015.

## II.

On January 31, 2017, L'Oreal USA, Inc., filed a petition with the Patent Trial and Appeal Board (“Board”) for post-grant review. L'Oreal asserted that claims 1–6, 8, and 10 of the '419 patent were anticipated under 35 U.S.C. § 102 by U.S. Patent No. 7,044,986 (“Ogawa”). L'Oreal also asserted that claims 1–8 and 10 were obvious under 35 U.S.C. § 103 in light of Ogawa or U.S. Patent Publication No. 2002/0189034 (“Kitabata”) in combination with German Patent Publication DE 1,220,969 (“Berkemer”) and Korean

Patent Publication KR2006-0059564 (“KR ’564”). J.A. 18–19. The Board instituted review on July 19, 2017.

In its final written decision, the Board found that Ogawa did not anticipate the challenged claims of the ’419 patent. According to the Board, Ogawa disclosed all the limitations of the challenged claims of the ’419 patent but not as arranged in the claims as required for anticipation. J.A. 25–26. The Board’s finding of no anticipation is not at issue on appeal.

As to obviousness, the Board found claims 1–8 and 10 invalid as obvious in view of the prior art. The Board determined that Ogawa, Berkemer, and KR ’564 provided a person of ordinary skill a reason to choose maleic acid as the “chelating agent” over Ogawa’s other options in its bleaching treatment. J.A. 33–39. The Board also found that the combination of Kitabata, Berkemer, and KR ’564 taught or suggested all of the limitations of claims 1–8 and 10 and that a person of ordinary skill would have had a reason to combine the teachings of the references by choosing maleic acid over other compounds disclosed in Kitabata. J.A. 47–55.

The Board also considered arguments and evidence related to objective indicia of non-obviousness—in particular, long-felt need and copying. The Board found “insufficient evidence that the ’419 patent satisfied a long-felt and unmet need for a way to protect hair from damage during bleaching treatments.” J.A. 43. As to copying, the Board weighed the evidence presented and found that L’Oreal would not have developed products using maleic acid without having access to Liqwd’s confidential information. Despite that factual finding, the Board determined the evidence of copying was irrelevant as a matter of law because Liqwd had not shown that L’Oreal copied a specific product. J.A. 45–46 (citing *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004)).

The Board concluded that L'Oreal had shown by a preponderance of the evidence that claims 1–8 and 10 are unpatentable as obvious in view of the combination of either Ogawa, Berkemer, and KR '564 or in view of the combination of Kitabata, Berkemer, and KR '564. J.A. 63–64.

Liqwd appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

## DISCUSSION

We review the Board's factual determinations for substantial evidence and its legal determinations de novo. *No-vartis AG v. Noven Pharms. Inc.*, 853 F.3d 1289, 1291 (Fed. Cir. 2017). Obviousness is a question of law that we review de novo, but the Board's underlying findings of fact are reviewed for substantial evidence. *Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 833 (Fed. Cir. 2015). Substantial evidence “means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938).

### I.

Liqwd argues that the Board erred by ruling that L'Oreal's copying of Liqwd's unpublished '885 patent application “did not qualify as an objective indicium of nonobviousness” despite the Board's factual finding that “[L'Oreal] used maleic acid because of [L'Oreal's] access to [Liqwd's] non-public information, rather than because of [L'Oreal's] . . . independent development.” Appellant Br. 27 (quoting J.A. 45). L'Oreal responds and relies on *Iron Grip Barbell* in arguing that Liqwd did not show replication of any specific product embodying the claimed invention, so there is no evidence of copying by L'Oreal. Appellee Br. 37–40. We therefore review whether the Board erred in determining that L'Oreal's “development of its products due to access to non-public information about [Liqwd's] patent application” was not “copying of the type that is relevant to the question of obviousness of the

challenged claims of the '419 patent” on the basis that the evidence did not show L'Oreal copied a specific product. J.A. 45–46. We conclude this was error.

This court has consistently held that objective indicia “may often be the most probative and cogent evidence’ of nonobviousness.” *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1285 (Fed. Cir. 2000) (quoting *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983)). Objective indicia are essential safeguards that protect against hindsight bias. *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1079 (Fed. Cir. 2012). The objective indicia analysis is, therefore, a fundamental part of the overall § 103 obviousness inquiry. *See W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983). As a result, the Board must consider all such evidence of objective indicia and determine the weight to give it “en route to a determination of obviousness.” *Stratoflex, Inc.* 713 F.2d at 1538.

It is well established that copying by a competitor is a relevant consideration in the objective indicia analysis. *Iron Grip Barbell*, 392 F.3d at 1325. Such copying may be evidence that the patented invention is nonobvious. *Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984). “Copying requires duplication of features of the patentee’s work based on access to that work, lest all infringement be mistakenly treated as copying.” *Institut Pasteur & Universite Pierre Et Marie Curie v. Focarino*, 738 F.3d 1337, 1347–48 (Fed. Cir. 2013). Evidence of copying may include internal documents, direct evidence such as photos of patented features or disassembly of products, or access and similarity to a patented product. *Iron Grip Barbell*, 392 F.3d at 1325.

In *Iron Grip Barbell*, we stated that “copying requires the replication of a *specific product*.” *Id.* (emphasis added). In that case, however, we emphasized that a “competing

product that arguably falls within the scope of a patent” is not necessarily evidence of copying. *Id.* This is to avoid collapsing the separate infringement and copying inquiries into a single analysis. *See id.* (“Otherwise every infringement suit would automatically confirm the nonobviousness of the patent.”). As such, we held that if the only evidence of copying was a competitor’s abandonment of one product design and subsequent adoption of a design similar to that of a patented product after issuance of the patent, that did “not establish that [the competitor] engaged in copying.” *Id.* In other words, more is needed than merely showing that similarity exists between the patent and the competitor’s accused product.

Other cases following *Iron Grip Barbell* have also emphasized that similarities between an issued patent and an accused product do not, on their own, establish copying. In *Wyers v. Master Lock Co.*, we held that the patent owner failed to establish copying despite its argument that “competitors’ copying and marketing of convertible shank hitch pin locks shortly after the invention’s existence became known supports a finding of nonobviousness.” 616 F.3d 1231, 1245–46 (Fed. Cir. 2010) (citing *Iron Grip Barbell*, 392 F.3d at 1325). We again distinguished between infringement and copying, reasoning that “[n]ot every competing product that arguably falls within the scope of a patent is evidence of copying; otherwise, ‘every infringement suit would automatically confirm the nonobviousness of the patent.’” *Id.* at 1246 (quoting *Iron Grip Barbell*, 392 F.3d at 1325). In *Tokai Corp. v. Easton Enterprises, Inc.*, although we restated that “[c]opying requires evidence of efforts to replicate a specific product,” we emphasized the vital difference between infringement and copying. 632 F.3d 1358, 1370 (Fed. Cir. 2011) (quoting *Wyers*, 616 F.3d at 1246). The *Tokai* court firmly rejected the patent owner’s argument that a stipulation of infringement was

by itself probative of copying.<sup>1</sup> *Id.* In each case, the question of legal relevancy was determined by whether there was actual evidence of copying efforts as opposed to mere allegations regarding similarities between the accused product and a patent; the focus was not whether the copying efforts involved a “specific product.”

Indeed, we have held that even in cases involving claims directed to a product, access to an *issued patent* coupled with circumstantial evidence regarding changes to a competitor’s design is sufficient to support copying. *See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1328–29 (Fed. Cir. 2009). In *DePuy Spine*, the defendant’s engineering design team had settled on one design and “suddenly changed direction” to adopt a feature disclosed in the patent as soon as it issued. *Id.* at 1328. We held that the defendant’s initial attempts at one design together with the “prompt adoption of the claimed feature soon after the patent issued, are relevant indicia of nonobviousness.” *Id.* at 1329 (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966) (recognizing that objective indicia may “give light to the circumstances surrounding the origin of the subject matter sought to be patented”)).

We have also recognized that access to *published articles* about a patented method are relevant to the analysis of objective indicia and copying. *See Institut Pasteur*, 738 F.3d at 1347–48. In *Institut Pasteur*, the patent owner published an article describing the patented method and,

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<sup>1</sup> *But see id.* at 1379 (Newman, J., dissenting) (“Despite the district court’s recognition that Tokai had demonstrated copying, my colleagues find Tokai’s evidence of copying ‘unpersuasive,’ stating that copying ‘requires evidence of efforts to replicate a specific product.’ Defendants’ internal documentation of its unsuccessful attempts to design around the Saito invention is such evidence.”).



during reexamination, presented to the Board more than twenty later-published articles demonstrating that other scientists had adopted the patented method. *Id.* There was no dispute that the publications' authors did not copy a "specific product." *See id.* We nevertheless faulted the Board for stopping its analysis of copying "prematurely." *Id.* The Board discounted the patent owner's copying evidence without analyzing whether the patent owner's showing of similarities between its method and the later-published articles indicated that the publications' authors accessed and borrowed from the patent owner's sources. *Id.* We recognized that "copying requires duplication of features of the patentee's work based on access to that work, lest all infringement be mistakenly treated as copying" and that the relevant inquiry was whether there was evidence of copying efforts. *Id.* (citing *Iron Grip Barbell*, 392 F.3d at 1325).

Our primary concern in each of these cases has been to avoid treating mere infringement as copying simply because the claims of a patent arguably read on a competitor product. *E.g. Wyers*, 616 F.3d at 1246; *Institut Pasteur*, 738 F.3d at 1347–48. Of course, the proponent of objective evidence offered to show nonobviousness, such as copying, must show that a nexus exists between the evidence and the claimed features of the invention. *See Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1082 (Fed. Cir. 2016). But where there is evidence of actual copying efforts, that evidence is always relevant.

## II.

Here, Liqwd presented evidence of L'Oreal's copying efforts. The Board weighed the evidence and made a factual finding that "the preponderance of the evidence suggests that [L'Oreal] used maleic acid because of [L'Oreal's] access to [Liqwd's] non-public information, rather than because of [L'Oreal's] independent development," i.e., that L'Oreal copied the method disclosed in the confidential

'885 application. J.A. 44–45. We agree based on our determination that substantial evidence supports the Board's finding that L'Oreal copied Liqwd's patented method of using maleic acid.

The evidence presented by Liqwd and cited by the Board included a L'Oreal email referring to a non-disclosure agreement and a planned May 2015 meeting with Liqwd's founder Dean Christal and others involved with the project, including the '419 patent's co-inventor, Dr. Eric Pressley. *Id.* (citing J.A. 2895). The Board also cited to declarations from Dr. Pressley and Mr. Cristal that discussed details of the May 2015 meeting, providing L'Oreal with a copy of the then-confidential '885 application that disclosed the patented method of using maleic acid in keratin treatment, L'Oreal's receipt and review of the '885 application, and L'Oreal's subsequent loss of interest in purchasing Liqwd's technology. *Id.* (citing J.A. 3001–13). The Board also considered a lab notebook, which L'Oreal contended showed that L'Oreal independently developed its own products. *Id.* (citing J.A. 2397–573). The Board rejected L'Oreal's contention. *Id.* Accordingly, we affirm the Board's factual finding that L'Oreal used maleic acid because of L'Oreal's access to Liqwd's confidential information.

The Board, however, disregarded its finding that L'Oreal copied Liqwd's patented method, determining that the evidence of L'Oreal's copying efforts was irrelevant because Liqwd had not shown that L'Oreal “copied a patented product.” *Id.* The evidence presented by Liqwd shows more than merely a “competing product that arguably falls within the scope of a patent.” *Wyers*, 616 F.3d at 1245–46. Determining that this evidence is relevant does not implicate our concern with avoiding every infringement suit turning into a confirmation of the nonobviousness of a patent. *See Iron Grip Barbell*, 392 F.3d at 1325. Because this evidence of actual copying efforts is relevant, the Board erred by disregarding its finding.

We therefore vacate the Board's obviousness determination and remand the case for the Board to consider this evidence in its obviousness analysis. *See Knoll Pharm. Co. v. Teva Pharms. USA, Inc.*, 367 F.3d 1381, 1385 (Fed. Cir. 2004) ("The so-called 'objective' criteria must always be considered and given whatever weight is warranted by the evidence presented." (internal citation omitted)); *Stratoflex, Inc.* 713 F.2d 1530, 1539 (Fed. Cir. 1983) (the obviousness analysis requires that "all pieces of evidence on that issue have been fully considered and each has been given its appropriate weight").

#### CONCLUSION

We have considered Liqwd's other arguments and find them unpersuasive. Although we agree with the other appealed aspects of the Board's final written decision, because the Board erred by disregarding its finding that L'Oreal copied Liqwd's patented method, the Board's obviousness determination is vacated, and this matter is remanded to the Board for further analysis. We instruct that, on remand, the Board should consider this finding and weigh it appropriately in its obviousness analysis.

#### VACATED AND REMANDED

#### COSTS

Each party shall bear its own costs.