

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

OUTDRY TECHNOLOGIES CORPORATION,
Appellant

v.

GEOX S.P.A.,
Appellee

2016-1769

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2014-01244.

Decided: June 16, 2017

NICHOLAS (NIKA) FREMONT ALDRICH, JR., Schwabe, Williamson & Wyatt, Portland, OR, argued for appellant. Also represented by STEVEN J. PREWITT, SARA KOBAK.

STEVEN PAUL WEIHROUCH, Rothwell, Figg, Ernst & Manbeck, P.C., Washington, DC, argued for appellee. Also represented by JENNIFER NOCK, SOUMYA PANDA.

Before DYK, MOORE, and REYNA, *Circuit Judges*.
MOORE, *Circuit Judge*.

Outdry Technologies Corp. (“Outdry”) appeals from the Patent Trial and Appeal Board’s (“Board”) inter partes review decision holding that claims 1–15 of U.S. Patent No. 6,855,171 (“the ’171 patent”) would have been obvious over a combination of prior art. For the reasons discussed below, we affirm.

BACKGROUND

The ’171 patent claims methods of waterproofing leather, particularly for the manufacture of shoes, clothes, or leather accessories. ’171 patent at 1:12–14. The specification discloses prior art methods of waterproofing leather shoes, including sewing a fabric lining and a semi-permeable film to the interior surface of the leather or gluing a semi-permeable membrane inside the leather around the membrane’s perimeter. *Id.* at 1:20–26, 36–38. It states these prior art methods allowed a water cushion to form in which water penetrates the leather and becomes trapped between the membrane and interior surface of the leather. *Id.* at 1:27–31, 39–42. The ’171 patent sought to overcome this issue by “directly pressing” a semi-permeable membrane onto the leather via a dotted glue pattern:

1. A process for waterproofing leather (1), comprising *directly pressing* on an internal surface of the leather (1) at least one semi-permeable membrane (2) whose surface contacting the leather (1) is provided with a discontinuous glue pattern to adhere the leather to the semi-permeable membrane, wherein the glue pattern is formed of a multiplicity of dots having a density included between 50 dots/cm² and 200 dots/cm².

’171 patent at claim 1 (emphasis added). Claim 9, the only other independent claim, is identical to claim 1 but for reciting the size of the dots instead of the density: “a multiplicity of dots having a diameter included between 0.1 mm and 0.8 mm.”

The Board found U.S. Patent No. 5,244,716 (“Thornton”) discloses all elements of claims 1 and 9 except the density of the dots (claim 1) and the sizes of the dots (claim 9). Thornton is directed to “waterproof but breathable articles of clothing” including stockings, gloves, and hats. J.A. 250 at 1:5–10, 20–23. It discloses a waterproof and breathable glove consisting of three layers: an inner knitted lining, a middle layer of film 105, and an outer water permeable layer, such as leather. J.A. 260 at 21:1–14. It discloses placing adhesive dots on the “outer surface of film 105 in spaced apart locations” to “secure the barrier component of the glove” by heatwelding. *Id.* at 21:31–44. The Board construed “directly pressing” to mean “applying pressure without any intervening materials or layers other than the recited adhesive” and determined “Thornton explicitly describes drawing the membrane barrier component over a former, applying adhesive to the outer surface of the film, drawing the outer glove layer onto the former, and bonding the layers by pressing.” J.A. 10, 16 (citing J.A. 260 at 21:64–22:8).

For disclosure of the density and sizes of the dots, the Board relied on “Coated and Laminated Fabrics” in Chemistry of the Textiles Industry (“Scott”) and U.S. Patent No. 6,139,929 (“Hayton”). Scott discloses adhering a waterproof, vapor permeable membrane to fabric for rainwear in which there is “sufficient adhesive to bond the hydrophobic ‘non-stick’ film to a textile fabric, but the adhesive dot coverage has to be kept low to minimize the area of blocked micropores.” J.A. 517. Hayton discloses socks having an inner knitted sock, a water impermeable and vapor permeable barrier component 100, and an outer knitted sock. J.A. 302 at 12:34–39. It discloses “the barrier component 100 is attached to the inner surface 201 of the outer sock 200 . . . by spaced apart dots of adhesive.” *Id.* at 12:43–46. It teaches that the adhesive is “preferably applied as dots 0.2 to 1 mm e.g. 0.5 to

0.8 mm preferably 0.55 to 0.65 mm in diameter and a density of 10 to 100 dots, preferably 15 to 75, more preferably 20 to 60 dots per square cm.” J.A. 299 at 6:24–27.

The Board found that a person of ordinary skill in the art would have been motivated to combine Thornton with Scott and Hayton. It found the petitioner, Geox S.p.A. (“Geox”), “provided a rational underpinning for combining the disclosures of Scott and Hayton, which provide guidance for the density and size of adhesive dots to adhere a semi-permeable membrane to a porous layer.” J.A. 15. It held that claims 1, 2, 5–11, 14, and 15 would have been obvious over Thornton, Scott, and Hayton and that the remaining claims would have been obvious over a combination of Thornton, Scott, Hayton, plus additional references that are not the subject of Outdry’s appeal.

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

DISCUSSION

We review the Board’s legal determination of obviousness *de novo* and its factual findings for substantial evidence. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). In IPR proceedings, the Board gives claims their broadest reasonable interpretation (“BRI”) consistent with the specification. *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1279 (Fed. Cir. 2015). We review claim construction *de novo* except for subsidiary fact findings, which we review for substantial evidence. *Id.* at 1280.

A. Claim Construction & Disclosure in Thornton

Outdry argues the Board erred in construing “directly pressing” and finding Thornton discloses “directly pressing” and “a process for waterproofing leather.” It argues “directly pressing” means applying uniform pressure to create a “uniform, sealed sheet of waterproof leather so that a water cushion cannot develop.” Outdry Br. 29, 31.

Under this construction, Outdry argues Thornton does not disclose “directly pressing”—or “a process for waterproofing leather”—because a water cushion could form between Thornton’s ruched waterproof lining and the leather. We do not agree.

The Board correctly construed “directly pressing” under the BRI standard. The specification uses the term “directly” only once, in which it distinguishes the claimed invention from the prior art. Unlike the prior art methods of sewing or gluing the perimeter of a fabric lining or semi-permeable membrane to leather, the specification explains:

Thanks to the use of a semi-permeable membrane having one surface provided with an [sic] glue pattern, the process according to *the present invention allows said membrane to be applied directly to the leather* which has to be waterproofed, so as to avoid the use of a semipermeable lining and the water penetration between leather and lining.

’171 patent at 1:21–61 (emphasis added). The Board properly relied on this disclosure to interpret “directly pressing” to mean “applying pressure without any intervening materials or layers other than the recited adhesive.” J.A. 10. We agree with the Board’s construction under the BRI and agree that Outdry’s proposed construction lacks support in the specification. The specification does not suggest that the process must form a uniform, sealed sheet of waterproof leather because it “does not disclose a required degree of contact between the membrane and the leather in the regions that are between the dots of adhesive.” J.A. 9. Outdry’s proposed requirement that the sealed sheet avoid formation of a water cushion

fails for the same reason.¹ To require “directly pressing” to result in “constant contact between the membrane and leather such that no water permeates the leather” would improperly narrow the claims under the BRI standard. *See id.* We thus affirm the Board’s construction of “directly pressing” and do not reach whether Thornton satisfies this limitation under Outdry’s proposed construction.

Outdry also argues that the “process for waterproofing leather” limitation is not disclosed in Thornton. This language is in the preamble of the claim. And like most preambles is simply a statement of intended use, not a separate claim limitation. *See Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345 (Fed. Cir. 2003) (“[A] preamble simply stating the intended use or purpose of the invention will usually not limit the scope of the claim, unless the preamble provides antecedents for ensuing claim terms and limits the claim accordingly.”). Satisfaction of the claimed steps necessarily results in satisfying a “process for waterproofing leather.” This is not a separate limitation that must be disclosed in Thornton in order to uphold the Board’s obviousness determination.

B. Motivation to Combine

Outdry argues the Board failed to adequately articulate why a person of ordinary skill in the art would have been motivated to combine Thornton’s process with Scott and Hayton’s disclosure of the density and size of the glue dots. First, Outdry argues the Board relied solely on Geox’s petition to find a motivation to combine without making any explicit findings of its own. Second, it argues the Board failed to identify a reason why one of skill in the art would have been motivated to combine Thornton,

¹ Outdry did not advance this construction below. *See Oral Arg.* at 5:26–49.

Scott, and Hayton to solve the problem identified by the '171 patent—the development of water cushions in leather shoes. It argues our post-*KSR* precedent requires the Board to find that a person of ordinary skill in the art would have been motivated to solve the problem addressed by the '171 patent. Outdry Reply Br. 13–14 (citing *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034 (Fed. Cir. 2016) (en banc)). Neither argument has merit.

The Board's motivation to combine finding is reviewed for substantial evidence. *Belden*, 805 F.3d at 1073. The Board must support its finding that there would have been a motivation to combine with a reasoned explanation to enable our review for substantial evidence. *In re NuVasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016). This necessitates that the Board “not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion.” *In re Lee*, 277 F.3d 1338, 1344 (Fed. Cir. 2002). Under this framework “we will uphold a decision of less than ideal clarity if the agency's path may reasonably be discerned,” but “we may not supply a reasoned basis for the agency's action that the agency itself has not given.” *Bowman Transp., Inc. v. Ark.-Best Freight Sys., Inc.*, 419 U.S. 281, 285–86 (1974).

We have criticized the Board for failing to adequately explain its findings. Missing from those Board decisions were citations to evidence, reasoned explanations, or explicit findings necessary for us to review for substantial evidence. For example, in *Rovalma*, we vacated the Board's obviousness decision where “the Board did not cite any evidence, either in the asserted prior-art references or elsewhere in the record, with sufficient specificity for us to determine whether a person of ordinary skill in the art would have been so motivated.” *Rovalma, S.A. v. Böhler-Edelstahl GmbH & Co. KG*, 856 F.3d 1019, 1025–26 (Fed. Cir. 2017). In *Van Os*, we held the Board's

finding that it would have been intuitive to combine prior art lacked the requisite reasoning because “[a]bsent some articulated rationale, a finding that a combination of prior art would have been ‘common sense’ or ‘intuitive’ is no different than merely stating the combination ‘would have been obvious.’” *In re Van Os*, 844 F.3d 1359, 1361 (Fed. Cir. 2017); *see also Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1362 (Fed. Cir. 2016) (“[R]eferences to ‘common sense’—whether to supply a motivation to combine or a missing limitation—cannot be used as a wholesale substitute for reasoned analysis and evidentiary support”); *Cutsforth, Inc. v. MotivePower, Inc.*, 636 F. App’x 575, 578 (Fed. Cir. 2016) (vacating the Board’s decision where the Board summarized the parties’ arguments and rejected the arguments of one party but did “not explain why it accept[ed] the remaining arguments as its own analysis”). In *NuVasive*, we vacated the Board’s decision because the Board “never actually made an explanation-supported finding” that a person of ordinary skill in the art would have been motivated to combine the prior art. 842 F.3d at 1384. In *Icon Health*, we held that the Board failed to make requisite fact findings and provide an adequate explanation to support its obviousness determination where it merely agreed with arguments made in the petitioner’s brief for which no evidence was cited. *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1042–48 (Fed. Cir. 2017) (holding that attorney argument is not evidence and the Board’s adoption of petitioner’s brief did not “transform [the petitioner’s] attorney argument into factual findings or supply the requisite explanation that must accompany such findings”).

The Board’s decision here does not suffer from similar deficiencies. The Board clearly articulated Geox’s arguments for why a person of ordinary skill in the art would have been motivated to modify Thornton’s process of adhering dots to create waterproof and breathable leather with Hayton and Scott’s disclosed glue patterns. *See*

J.A. 11–12. The Board recited Geox’s argument that “the discontinuous glue pattern is a matter of optimization as taught by Scott, which teaches optimizing the amount of glue necessary to provide sufficient adhesion to bond the two layers while minimizing the area of blocked micropores.” J.A. 12 (citing J.A. 50 (citing J.A. 517)). It explained Geox’s position that Scott and Hayton are from the same field of endeavor and that both disclose fabrics that are water impermeable and vapor permeable. *Id.* (citing J.A. 517; J.A. 297 at 1:44–51). It recited Geox’s argument for a motivation to combine based on this evidence: “Scott provides a reason for optimizing the amount of adhesive that Thornton and Hayton teach to apply to a semi-permeable membrane, *which is to provide good adhesion while maintaining vapor permeability.*” J.A. 12 (citing J.A. 51) (emphasis added). It then expressly adopted Geox’s rationale and found that this provided a motivation to combine Thornton with Scott and Hayton. The Board found that Geox “provided a rational underpinning for combining the disclosures of Scott and Hayton, which provide guidance for the density and size of adhesive dots to adhere a semi-permeable membrane to a porous layer.” J.A. 15; *see also* J.A. 12, 15 (finding Hayton discloses adhesive dots overlapping with the ranges recited in the claims). It found a person of ordinary skill in the art would have looked to Scott and Hayton’s teachings “in view of Thornton’s disclosure that both leather and fabric material are amenable to its process for waterproofing breathable articles of clothing.” J.A. 15 (citing J.A. 253 at 7:58–62). The Board thus identified a precise and specific reason why a person of ordinary skill in the art would have been motivated to modify Thornton with Scott and Hayton, explained why one of skill would have been so motivated, and cited evidence in the references to support its reasoning. The Board engaged in reasoned decisionmaking and sufficiently articulated its analysis in its opinion to permit our review. It contains a clear and thorough analysis.

The Board's reliance on Geox's arguments does not undermine its otherwise adequate explanation for finding a motivation to combine. The Board did not reject Outdry's positions without clarity as to why it found Geox's arguments persuasive. It did not incorporate Geox's petition by reference, leaving uncertainty as to which positions the Board was adopting as its own. Nor is this a situation where "a particular fact might be found somewhere amidst the evidence submitted by the parties, without attention being called to it," such that it is unclear what evidence the Board may or may not have relied on to find a motivation to combine. *See Rovalma*, 856 F.3d at 1029. The Board is "permitted to credit a party's argument as part of its reasoned explanation of its factual findings"; it simply must "explain why it accepts the prevailing argument." *Icon*, 849 F.3d at 1047 (alteration omitted). In this case, the Board articulated Geox's arguments with evidentiary support and expressly adopted them to find there would have been a motivation to combine. The Board sufficiently explained why it found that Geox's arguments supported finding a motivation to combine.

The Board did not err, as Outdry contends, in identifying the motivation to combine. The Board found a person of ordinary skill in the art would have been motivated to combine the references to provide vapor permeability without sacrificing good adhesion. J.A. 12, 15. The Board was not required to limit its motivation to combine inquiry to the problem faced by the inventor of the '171 patent. The Supreme Court expressly rejected this argument in *KSR*: "the problem motivating the patentee may be only one of many addressed by the patent's subject matter." *KSR Int'l Co v. Teleflex Inc.*, 550 U.S. 398, 420 (2007). Outdry appears to interpret *KSR*'s use of the phrase "addressed by the patent" to suggest the problem must be identified within the patent. Neither *KSR* nor our post-*KSR* precedent limits the motivation to combine

inquiry in this manner. *See, e.g., Par Pharm., Inc. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1197 (Fed. Cir. 2014) (“Par’s argument, however, ignores that we are not limited to the same motivation that may have motivated the inventors.”); *Alcon Research, Ltd. v. Apotex Inc.*, 687 F.3d 1362, 1368 (Fed. Cir. 2012) (“We have repeatedly held that the motivation to modify a prior art reference to arrive at the claimed invention need not be the same motivation that the patentee had.”). “The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.” *KSR*, 550 U.S. at 419. Any motivation to combine references, whether articulated in the references themselves or supported by evidence of the knowledge of a skilled artisan, is sufficient to combine those references to arrive at the claimed process. The motivation supported by the record and found by the Board need not be the same motivation articulated in the patent for making the claimed combination. The Board’s fact finding regarding motivation to combine is supported by substantial evidence. We see no error in the Board’s conclusion that the claims would have been obvious to a skilled artisan based on the facts presented.

CONCLUSION

We have considered Outdry’s remaining arguments and find they are without merit. For the foregoing reasons, we affirm the decision of the Board.

AFFIRMED

COSTS

Costs to Geox.