

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

CRYE PRECISION LLC
Petitioner

v.

FIRSTSPEAR LLC
Patent Owner.

Patent No. 9,974,379 to Cole et al.

IPR Case No.: IPR2019-01152

MOTION FOR RECONSIDERATION

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Ex. No.	Description of Document
1001	U.S. Patent No. 9,974,379 (“’379 patent”)
1002	File history of U.S. Patent No. 9,974,379 (“’379 file history”)
1003	Declaration of Dr. Christopher M. Pastore (“Ex. 1003-Pastore”)
1004	U.S. Patent No. 9,173,436 (“Crye-436”)
1005	U.S. Patent App. Pub. No. 2013/0312149 (“Asher-149”)
1006	U.S. Patent No. 5,724,707 (“Kirk-707”)
1007	U.S. Patent Publication No. 2009/0277936
1008	U.S. Patent No. 7,200,871
1009	U.S. Patent No. 5,789,327
1010	Technical Manual - Operator’s Manual for Modular Lightweight Load-Carrying Equipment (MOLLE) II, Department of the Army, November 2, 2009
1011	U.S. Patent Application Publication No. 2008/0318017
1012	Drawing of UBFA (58) of Crye-436 showing an example of slits (80) to total surface area ratio
1013	U.S. Patent No. 3,891,996
1014	Ballistic Resistance of Body Armor, NIJ Standard-0101.06, July 2008, NCJ 223054
1015	U.S. Patent No. 5,692,237 (“Bennett-237”)
1016	U.S. Patent No. 8,132,495

Crye Precision, LLC (“Petitioner”) requests reconsideration (rehearing) of the Decision Denying Institution (the “Decision”) pursuant to § 42.71(d) due to the Board having misapprehended certain facts and arguments. Specifically, the Board was misled by Petitioner’s erroneous “can be” argument, leading it to conclude the ’379 patent discloses an option where laser cutting is used to create slits, but fused edges do not occur. (Decision at 15-19.) It does not. Further, Patentee admitted during prosecution that the ’379 patent’s laser cutting process was a “well-known technique” that produced fused edges. The Board also misunderstood Petitioner’s argument to be one of inherency. (*Id.*) But Petitioner relied on obviousness, so the Board applied the wrong standard in evaluating Crye-436’s laser cutting disclosures, which disclosures match those of the ’379 patent and show that the fused edges limitation is obvious. Accordingly, the Board should grant this request.

I. THE LASER CUTTING PROCESS OF THE ’379 PATENT IS CONVENTIONAL, WELL-KNOWN, AND RESULTS IN HARDENED, LASER FUSED EDGES

A. “Laser cutting” was well-known at the time and is the only way the ’379 patent discloses to achieve “fused edges”

All challenged claims require slits with laser fused edges. The ’379 patent only discloses one way to make slits with fused edges: laser cutting. The first of three references to laser cutting in the ’379 patent is in the “Summary of the Invention:”

“As another preferred aspect, the fabric layers comprising the edges bounding the slits are **fused** together, e.g., using a **laser cutting** process for forming the slits, so as to be hardened but at least semi-flexible to allow insertion of flat straps and tabs through the slits, and such that the edges will not fray or wear significantly under expected use.” (Ex. 1001 at 3:32-37 (emphasis added); *see also* Petition at 25; Ex. 1003-Pastore at ¶76.)

This excerpt generically refers to a “laser cutting process” without reciting any details of that process. In addition to being the only identified process that forms slits having fused edges, the slits are described as having edges that “**are** fused together” when made via this process. In other words, when making slits via laser cutting, the edges “are” – and not simply “could be” – “fused together.”

The other two references to laser cutting are found in the excerpt below:

“The slits 36 **can be** formed in any manner suitable for the anticipated application, as a non-limiting example, by knife or die cutting, using a button hole machine, or more preferably, by **laser cutting**. In regard to laser cutting, an advantage achieved is that the edges 38 and 40 (FIG. 7) of the laminated layers bounding and defining the slits 36 **can be** fused together, to increase stiffness and reduce sagging, reduce or eliminate fraying...” (Ex. 1001 at 7:33-43 (emphasis added).)

Here, when laser cutting is used (as opposed to the other listed methods), the “advantage achieved” is that the laser cutting process fuses the laminated layers

together, creating fused edges. The patent provides no other details regarding its laser cutting process, and provides no other way to create slits with fused edges.¹

The complete lack of detail in the '379 patent regarding how to create laser fused edges shows that the inventors considered it to be well known. Indeed, in a similarly situated case, the Federal Circuit held that such lack of detail indicates the limitation is conventional, or otherwise the patent would be invalid for lack of enablement. *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1371 (1997) (“It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement.”) The '379 patent's lack of detail regarding the laser cutting process is also consistent with the practice of omitting such well known or conventional details. *Spectra-Physics, Inc. v. Coherent Inc.*, 827 F.2d 1524, 1534 (Fed. Cir. 1987) (“A patent need not teach, and preferably omits, what is well known in the art.”); *In re Bode*, 550 F.2d 656, 660 (CCPA 1977) (“Every patent application and reference relies to some extent upon knowledge of persons skilled in the art to complement that [which is] disclosed”) (*quoting In re Wiggins*, 488 F.2d 538, 543 (CCPA 1973)); *In re Jacoby*, 309 F.2d 513, 516 (CCPA 1962) (A POSITA “must be presumed to know something” about

¹ A fourth reference to “laser fusion” is recited in Claim 6. The '379 patent does not differentiate “laser cutting” from “laser fusion” in any way.

the art “apart from what the references disclose.”); MPEP 2163 (“What is conventional or well known to one of ordinary skill in the art need not be disclosed in detail”); *Aver Information Inc. v. Pathway Innovations and Tech., Inc.*, IPR2017-02108, Paper 31 at 44 (PTAB March 6, 2019) (“[T]he ’751 patent provides no circuitry, software, or other disclosure of how to perform the video processing functionality that is claimed. This supports Petitioner’s argument that these techniques were well known, and that one of ordinary skill in the art would have been able to adapt Morichika to accommodate video input.”) (emphasis added) (citing *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1570 (Fed. Cir. 1997) (noting that “the [challenged] patent itself does not disclose the level of detail that [patentee] would have us require of the prior art”)). Accordingly, because laser cutting to produce fused edges is treated as conventional in the ’379 patent, it was treated as such in the Petition.

B. The prosecution history proves the ’379 patent’s laser cutting process was conventional and achieved hardened, fused edges

The POPR does not point to any evidence, such as an expert declaration, demonstrating that the laser cutting process might result in slits without fused edges. Indeed, it would defy credulity for Patentee to have done because Patentee admitted during prosecution that its laser cutting process was a well-known technique that results in fused seams “free of fraying:”

Examiner: “As for laser cutting of Velcro or of fabric, *that technique was a well-known technique* in the clothing industry at the time the invention was made both to get a clean cut and to get a fused seam that was free of fraying.” (Ex. 2001 at 183 (emphasis added).)

Patentee: “Addressing the assertion in the Office Action in the rejection of original claim 5, *that it is known to fuse fabric when cutting it to reduce fraying, while that is true*, there is no indication or suggestion that laminated layers can be fused to form a hardened edge ...” (Ex. 2001 at 204 (emphasis added).)

Thus, the prosecution history confirms that the '379 patent's laser cutting process is “a well-known technique” that results in fused edges. Patentee implicitly admits as much in its POPR, only arguing that laser cutting to create hardened, fused edges was not conventional, as confirmed by the Examiner's comments in the notice of allowance. (POPR at 2, 6-9, 16-17.) Patentee's “hardened” argument is both irrelevant and incorrect. It is irrelevant because claim 1 does not include a hardening requirement. It is incorrect because the Examiner's allowance statement refers to several features of claim 1 as the basis for allowance, not just “slots compris[ing] a hardened fusion.” (Ex. 2001 at 226.) More importantly, the hardening limitation must be conventional or else the '379 patent is invalid for lack of enablement. Regarding “hardening,” the '379 patent states:

“As another preferred aspect, the fabric layers comprising the edges bounding the slits are **fused** together, e.g., using a **laser cutting** process

for forming the slits, so as to be hardened...” (Ex-1001 at 3:32-35 (emphasis added).)

The above disclosure is the only instance in which the word “hardened” occurs in the entire specification. As shown, no details are provided as to how to harden when laser cutting. Patentee cannot have it both ways. Either the above disclosure enables a POSITA to practice the claimed invention (because it is conventional and well-known that laser cutting produces hardened, fused edges, or laser fusion and hardening are inherent), or the patent is invalid for lack of enablement (because it fails to disclose the parameters needed to achieve hardened, fused edges without undue experimentation). The former must be the case here. *Genentech*, 108 F.3d at 1371. Patentee’s mere attorney argument regarding fusion hardening, both during prosecution and in its POPR, cannot satisfy its statutory enablement requirement. *Id.*; *In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) (“[a]ttorney’s argument in a brief cannot take the place of evidence.”) Accordingly, the POPR’s arguments regarding fusion hardening are incorrect and must be rejected.

C. The cited “can be” language of the ’379 patent is not permissive

The POPR argued that the “can be” language of the ’379 patent shows that fused edges do not necessarily result from laser cutting, which the Board accepted. (Decision at 17 (citing POPR at 15-16).) Patentee’s argument is wrong and misleading. First, Patentee argued that the word “must” is not used. (*Id.*) But, the

word “must” is never used in the ’379 patent, so the argument is misleading *per se*. Second, the phrase “can be” is used 41 times in the ’379 patent, and often in the context of something that “must” or “does” occur. For instance, claim 1 recites:

“... the back side and at least one element of the carrier or a backing element bounding a generally flat cavity through which the back side can be accessed.” (Ex-1001 at Claim 1 (emphasis added).)

Clearly, the cavity of claim 1 must be accessible, otherwise the claim language has no meaning. Critically, the patent’s specification also uses the phrase “can be” in the context of options that, when used, achieve a particular result:

“The slits 36 can be formed in any manner suitable for the anticipated application, as a non-limiting example, by knife or die cutting, using a button hole machine, or more preferably, by laser cutting. In regard to laser cutting, an advantage achieved is that the edges 38 and 40 (FIG. 7) of the laminated layers bounding and defining the slits 36 can be fused together, to increase stiffness [.]” (Ex. 1001 at 7:32-40.)

The first use of “can be” in the above excerpt is not permissive. The slits are formed when one of the enumerated cutting techniques is utilized because that is clearly what those techniques do. Moreover, slits are not optional in the ’379 patent as all of the patent’s embodiments require slits.

The second use of “can be” in the excerpt above is even clearer and unequivocal. When laser cutting is used (as opposed to knife/die cutting or a button hole machine), the “advantage achieved” is that the edges of the laminated layers

are fused the together, resulting in the further listed characteristics. The '379 patent does not say this advantage *might* or *could* be achieved, and the use of “can be” does not suggest otherwise. In context, the use of “can be” can only be read as referring to a result that is unique to laser cutting versus other cutting techniques, which explains why laser cutting is identified as “more preferabl[e].” Thus, the cited “can be” language from the specification merely indicates that, when laser fusion is used (as opposed to other methods), the advantage achieved is that the slits have fused edges, as is conventional.

D. Petitioner’s evidence is the only probative evidence of record

Patentee has presented no probative evidence showing that fused edges do not occur, nor can it given its admissions. Instead, Patentee mischaracterizes Dr. Pastore’s testimony as being a verbatim copy of the Petition and conclusory. (*See* POPR at 21-22; Decision at 18-19 (adopting Patentee’s argument)). Dr. Pastore’s testimony is short, but not conclusory. (*See* §II.) Furthermore, Dr. Pastore’s testimony that a POSITA would know that Crye-436’s laser cutting process results in its laminated layers having “fused edges” is (i) the only testimony rendered from the perspective of a POSITA in this proceeding; (ii) based on citations to record evidence; (iii) consistent with the examiner’s characterization of laser cutting to achieve fused edges as “well-known”; and (iv) consistent with the applicant’s admission of the same. Dr. Pastore’s testimony is, therefore, controlling for

purposes of institution. *See RPX Corp. v. Iridescent Networks, Inc.*, IPR2017-01661, Paper 29 at 50 (PTAB Dec. 10, 2018), (“On the one hand, we find Dr. Reddy’s testimony—which is supported by citation to the teachings in the prior art—to be credible. On the other hand, ... Patent Owner relies on attorney argument. However, ‘[a]ttorney’s argument in a brief cannot take the place of evidence.’”) (citing *In re Pearson*, 494 F.2d at 1405 (CCPA 1974), internal citations omitted).

As a final point, Petitioner notes that, had Patentee submitted an expert declaration with its POPR disputing that laser fused edges are formed with the Crye-436 laser cutting process, this genuine issue of material fact would have been resolved in favor of Petitioner for purposes of institution per 37 C.F.R. 41.108(c). It is not surprising that Patentee did not provide such a declaration here, as doing so would effectively admit that the ’379 patent is invalid for lack of enablement (as explained above). It is inequitable for Patentee to exploit this loophole in the IPR scheme, relying solely on mere attorney argument to rebut testimonial evidence from an expert in this field. Petitioner respectfully requests correction of this inequity by instituting this IPR. If Patentee truly contends that Crye-436’s laser cutting fails to result in hardened, fused edges, Patentee can offer something besides mere attorney argument in support thereof and Petitioner can cross-examine any witnesses and provide rebuttal evidence, after which the Board can render a decision on this issue based on the probative evidence of record.

II. CRYE-436'S DISCLOSURE OF LASER CUTTING RENDERS THE "FUSED EDGES" LIMITATION OBVIOUS

The second issue misapprehended by the board is that Petitioner relied on inherency. Specifically, the Board concluded that "Petitioner has not demonstrated a likelihood of showing that [U.S. Patent No. 9,173,436 to] Crye discloses slots 80 that have edges of layers fused together as recited in claim 1." (Decision at 2, 18.) This conclusion incorrectly adopted Patentee's argument that Petitioner relied on inherency for the "fused edges" limitation. (*Id.* at 16.) Because the Board incorrectly concluded that Petitioner was arguing inherency, the Board applied the wrong standard in evaluating whether Crye-436 disclosed the "fused edges" limitation: "Petitioner must demonstrate a likelihood of prevailing in showing that Crye's laser cutting necessarily would have yielded slots 80 'defined and bound by edges of the layers fused together to have increased wear and abrasion resistance.'" (*Id.*) Based upon this misapprehension of Petitioner's argument, the Board further concluded that Petitioner failed to demonstrate that "laser cutting necessarily results in fused edges of the layers." (*Id.* at 17.) The Board's conclusions, however, are not consistent with the evidence.

Rather than arguing inherency, Petitioner explained that Crye-436's disclosure of laser cutting renders the "fused edges" limitation obvious. As shown above, laser cutting to achieve hardened, fused edges was conventional and well-

known. The cited prior art (Crye-436) discloses the same well-known, conventional laser cutting process, wherein laminate layers are laser cut to produce slits, which disclosure renders the limitation obvious. (Petition at 24-25.) As Dr. Pastore, Petitioner's expert, explained in his declaration, "a POSITA would know that, when using laser cutting to make slits (80) in the Crye-436 UBFA (58), those slits would be 'defined and bound by edges of the layers fused together to have increased wear and abrasion resistance.'" (Ex. 1003 at ¶ 76.) Dr. Pastore further testified that the slits disclosed in the Crye-436 platform are made in the same way as taught by the '379 patent, confirming that the Crye-436 slits would have fused edges as a result of the laser cutting. (*Id.* at ¶¶ 75-77.)

A. Patentee misled the Board by arguing Petitioner relied on "inherency"

Rather than attempt to rebut Petitioner's argument that Crye-436's laser cutting process discloses "fused edges" to a POSITA, Patentee argued that Petitioner relied on inherency, and that laser cutting does not inherently result in slits with fused edges. (POPR at §III.) Patentee's argument mischaracterized the evidence, arguing that the '379 patent "indicates that fusing is a possible result of laser cutting, but does not state that fusing of the edges of the layers occurs under all laser cutting conditions." (Decision at 17 (citing POPR at 15-16).) Based on this argument, the

Board criticized Petitioner and its expert for not comparing the laser cutting of the '379 patent with the laser cutting of Crye-436:

“Dr. Pastore does not identify what is considered to be the ‘identical manner [of producing slits],’ and *apparently is referring to laser cutting generally. As Patent Owner asserts, no comparison is made between the materials and processes used in Crye and in the '379 patent.*” (Decision at 18 (citing POPR at 14) (emphasis added).)

Thus, it appears that the Board believed from Patentee’s mischaracterization that the '379 patent discloses “materials and processes” for creating its “fused edge” slits beyond “laser cutting generally.” As explained above, it does not. There is no way to make a comparison between the laser cutting “materials and processes used Crye and in the '379 patent,” because both references generically disclose laser cutting of laminates. In other words, the two references disclose the same process, for performing the same cutting step, and do so in the same amount of detail. Thus, Crye-436 renders the fused edges limitation obvious.

B. Crye-436’s failure to expressly state that laser cutting yields slits with fused edges is irrelevant

Although Crye-436 does not expressly state that laser cutting yields slits with fused edges, the absence of such an express statement “is not controlling; the question under 35 U.S.C. § 103 is not merely what the references expressly teach, but what they would have suggested to one of ordinary skill in the art at the time the

invention was made.” *In re Lamberti*, 545 F.2d 747, 750 (CCPA 1976); *see also Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807-08 (Fed. Cir. 1989); *In re Baxter Travenol Labs.*, 952 F.2d 388, 390-91 (Fed. Cir. 1991) (upholding Board finding that a POSITA “would have known” that Becker’s primary bag was plasticized by DEHP” even though “there is no express reference to DEHP in the Becker document.”) (emphasis added).)

For example, in *Lamberti*, the appellant conceded that “it is possible for the biological toxicants disclosed by the references to include germicidal agents,” but argued that that the “prior art disclosures do not *necessarily* include these agents.” *Id.* (emphasis added). The court explained:

“Appellants are correct in saying that these prior art disclosures do not necessarily include germicides. However, this does not preclude the disclosures from making the claimed compounds obvious. As this court has previously pointed out, obviousness does not require absolute predictability.” *Id.*

The court then affirmed the decision holding that the purported invention was obvious. *Id.* The Board has also followed *Lamberti* in cases analogous to this one. For example, in *Haag-Street AG v. Eidolon Optical, LLC*, a panel stated:

“We agree with Patent Owner that these passages do not expressly disclose “an LED that itself produces blue light energy”—i.e., a blue LED. ... Yet, considering these passages in context and together ... we view these passages as supporting the position, at this stage of the

proceeding, that one of skill in the art would have understood Longobardi to at least implicitly teach or suggest the use of a blue LED ... to generate “blue light energy.”

IPR2018-01311, Paper 9 at 20-21 (PTAB Jan. 11, 2019) (citing *In re Lamberti*, 545 F.2d at 750; *In re Preda*, 401 F.2d 825, 826–27 (CCPA 1968)). Thus, even though the prior art did not expressly disclose an LED that produces blue light, a POSITA would have understood the reference “to at least implicitly teach or suggest the use of a blue LED.”

This case is no different than *Lamberti* or *Haag-Street*. There is no dispute that Crye-436 discloses laser cutting and that laser cutting, at a minimum, may result in the “fused edges” limitations. Patentee obscures this fact by suggesting that mere possibilities are not enough to sustain an inherency argument. But, as explained above, Petitioner’s argument is not based on inherency. Rather, it is based on the fact that the Crye-436’s and the ’379 patent’s laser cutting disclosures are so similar that a POSITA would reasonably have understood Crye-436 as disclosing the same hardened, laser fused edges as that of the ’379 patent, so the limitation is obvious. (Petition at 24-25.) Petitioner’s evidence is sufficient (especially at this stage of the proceeding) to show a likelihood of success on the merits as Patentee has not presented any evidence or testimony beyond mere attorney argument to suggest that a POSITA would not reasonably expect laser cutting to generate the claimed slits.

In re Longi, 759 F.2d 887, 896 (Fed. Cir. 1985) (“[o]nly a reasonable expectation of success, not absolute predictability, is necessary for a conclusion of obviousness.”).

In sum, the Decision misapprehended the conventionality of the laser cutting process and Petitioner’s obviousness argument. The specification and Patentee’s prosecution admission show that the patent’s laser cutting process is conventional and results in hardened, fused edges. The prior art discloses the same conventional laser cutting process, wherein a laminate is laser cut to make slits, which disclosure renders the limitation obvious. (Petition at 24-25.) Given the foregoing, the Board should grant Petitioner’s rehearing request. *PNY Techs., Inc. v. Phison Elecs. Corp.*, IPR2013-00472, Paper 16 at 2 (PTAB Apr. 23, 2014) (Final Decision) (citing *Star Fruits S.N.C. v. United States*, 393 F.3d 1277, 1281 (Fed. Cir. 2005)).

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CERTIFICATE OF SERVICE

I hereby certify that on this 20th day of December, 2019, a copy of this Motion for Reconsideration has been served in its entirety via electronic mail by emailing Patent Owner's lead and backup counsel at:

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