

NOTE: This disposition is nonprecedential.

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

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**GOLD STANDARD INSTRUMENTS, LLC,**  
*Appellant*

v.

**US ENDODONTICS, LLC,**  
*Appellee*

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2016-2597

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. IPR2015-  
00632.

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Decided: August 17, 2017

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STEVEN M. LIEBERMAN, Rothwell, Figg, Ernst &  
Manbeck, P.C., Washington, DC, argued for appellant.  
Also represented by DEREK DAHLGREN, RACHEL ECHOLS,  
CHRISTINA NICHOLE GIFFORD.

JEFFREY S. GINSBERG, Patterson Belknap Webb &  
Tyler LLP, New York, NY, argued for appellee. Also  
represented by ABHISHEK BAPNA.

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Before PROST, *Chief Judge*, BRYSON and STOLL,  
*Circuit Judges*.

PROST, *Chief Judge*.

Gold Standard Instruments, LLC (“GSI”) appeals from an inter partes review (“IPR”) proceeding, No. IPR2015-00632, where the Patent Trial and Appeal Board (“Board”) held all claims obvious under 35 U.S.C. § 103. We affirm.

## I

This appeal involves U.S. Patent No. 8,727,773 (“’773 patent”). Entitled “Dental and Medical Instruments Comprising Titanium,” this patent relates to medical and dental instruments, such as endodontic files used to perform root canal therapy on a tooth. ’773 patent col. 1 ll. 25–29, col. 2 ll. 56–59. In particular, the invention recites methods for manufacturing an endodontic instrument—e.g., a file with an elongated shank comprising a titanium alloy—by heat-treating the shank to reduce or eliminate its superelastic properties. Through this process, the instrument retains high flexibility and resistance to torsion breakage while maintaining its shape, withstanding increased strain, and holding sharp cutting edges. The invention thus purportedly “solves the problems encountered when cleaning and enlarging a curved root canal.” *Id.* at col. 3 ll. 1–2.

After instituting, the Board held all seventeen claims obvious under § 103. GSI treats claim 1 as representative, Appellant’s Opening Br. 16 (“GSI Br.”), and challenges the Board’s adherence to certain procedural requirements as well as its obviousness findings and conclusions. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

## II

We turn first to obviousness. Obviousness is a legal question based on underlying fact findings. *In re DBC*,

545 F.3d 1373, 1377 (Fed. Cir. 2008). We review the Board's legal determinations de novo and its underlying factual determinations for substantial evidence. *Rambus Inc. v. Rea*, 731 F.3d 1248, 1251 (Fed. Cir. 2013).

GSI argues that the Board erred in holding all claims obvious in view of two alternative grounds: (a) claims 1–17 based on a combination of the Matsutani, ISO 3630-1, and Pelton references (“Matsutani Ground”), J.A. 25–31; and (b) claims 1–17 based on a combination of the Kuhn, ISO 3630-1, McSpadden, and Pelton references (“Kuhn Ground”), J.A. 13–24. *See* GSI Br. ix–x (Table of Abbreviations). GSI argues that these references do not disclose two limitations recited in claim 1: (1) heat-treating the entire shank; and (2) the heat-treated shank has an angle greater than ten degrees of permanent deformation. Specifically, it argues that we should reverse the Board because the Matsutani Ground does not meet the first limitation and the Kuhn Ground does not meet either limitation. We disagree.

Regarding the “heat-treating the entire shank” limitation, GSI argues that the Matsutani Ground does not render the claims obvious because the Matsutani reference only discloses heat-treating three-quarters of the entire shank and, thus, discourages making the necessary modification. GSI Br. 48–51. In support, GSI identifies a portion of this reference that it argues teaches away. *See* J.A. 2379 (“Moreover, if the length of the shape memory portion 6 is larger than  $\frac{3}{4}$  of the work portion, . . . a problem may occur in that the position of a rotational axis is not fixed, but is made eccentric to make it difficult to cut the root canal well.” (emphasis added)); GSI Br. 49.

“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27

F.3d 551, 553 (Fed. Cir. 1994). The degree of teaching away, however, depends on the particular facts. *See id.* As the Board correctly observed, Matsutani teaches that the heat treatment of an endodontic shank is known to be variable. J.A. 26–27. While acknowledging the potential problem Matsutani identified, the Board properly credited Dr. Goldberg’s testimony that an ordinarily skilled artisan would have inferred that Matsutani’s heat-treating procedures may be used for the entire shank. J.A. 27–28; *see also* J.A. 28 (providing reasons why a person of ordinary skill would have been motivated to make this modification despite this cautioning statement). Because substantial evidence supports the Board’s findings, we conclude that claims 1–17 are obvious in view of the Matsutani Ground. Having reached this conclusion, we need not address the remaining issues that relate to the Kuhn Ground.

We have considered GSI’s remaining arguments, including those that relate to whether the Board properly adhered to the IPR procedural requirements, but find them unpersuasive as well. We thus conclude that claims 1–17 are invalid as obvious and affirm the Board.

**AFFIRMED**