

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

US ENDODONTICS, LLC,
Petitioner

v.

GOLD STANDARD INSTRUMENTS, LLC,
Patent Owner

Case No. PGR2015-00019
U.S. Patent No. 8,876,991 B2

PETITION FOR POST-GRANT REVIEW

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
US Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
Submitted Electronically via the Patent Review Processing System

TABLE OF CONTENTS

	Page
I. Mandatory Notices (37 C.F.R. § 42.8)	1
A. Real Parties-in-Interest	1
B. Related Matters.....	1
C. Counsel and Service Information.....	2
D. Power of Attorney	2
II. Payment of Fees (37 C.F.R. § 42.203)	2
III. Summary of Reasons Why the Challenged Claims Are Unpatentable	2
IV. Background and Summary of the '991 Patent.....	4
V. Prosecution of the '991 Patent.....	6
VI. Requirements for Post-Grant Review (37 C.F.R. § 42.204)	11
A. Grounds for Standing (37 C.F.R. § 42.204(a))	11
B. Identification of Challenged Claims and Specific Statutory Grounds (37 C.F.R. § 42.204(b)(1)-(2))	11
C. Claim Construction (37 C.F.R. § 42.204(b)(3)).....	13
1. “heat-treating the entire shank”	14
2. “wherein the heat treated shank has an angle greater than 10 degrees of permanent deformation after torque at 45 degrees of flexion when tested in accordance with ISO Standard 3630-1”	15
3. “permanent deformation”	21
4. “diameter of 0.5 to 1.6 millimeters”	22
VII. Effective Filing Date of the Challenged Claims and Eligibility for Post-Grant Review.....	22
A. Prior Applications in the '991 Patent Priority Chain Do Not Support Heat-Treating a Shank at the Claimed Temperature Range of 300°C to the Melting Point of the Alloy	23
B. Prior Applications in the '991 Patent Priority Chain Do Not Support Heat-Treating a Shank at the Claimed Temperature Ranges to Produce the Recited Permanent Deformation	24

TABLE OF CONTENTS
(continued)

	Page
C. Applications in the '991 Patent Family Filed Prior to April 25, 2012 Do Not Support Heat Treatment in a Reactive Atmosphere	27
D. Prior Applications in the '991 Patent Priority Chain Do Not Satisfy the Written Description or Enablement Requirements of Section 112 for the Same Reasons as the '991 Patent Itself	31
VIII. How the Claims Are Unpatentable Under 37 C.F.R. § 42.204(b)	32
A. Level of Skill in the Art.....	32
B. Ground 1: Lack of Enablement of Claims 12-16 Under § 112(a)	33
1. Legal Standard for Enablement	33
2. Lack of Enablement of the Challenged Claims	34
C. Ground 2: Lack of Written Description of Claims 12-16 Under § 112(a).....	45
1. Legal Standard for Written Description.....	45
2. Lack of Adequate Written Description for the Challenged Claims	46
D. Ground 3: Anticipation of Claims 12-16 by Luebke 2008	48
E. Ground 4: Obviousness of Claim 15 Over Luebke 2008 Either Alone or in View of Heath or ISO 3630-1	52
F. Ground 5: Anticipation of Claims 12-16 by Matsutani	53
1. Overview of Matsutani	54
2. Anticipation of Claims 12-16 by Matsutani	54
G. Ground 6: Anticipation of Claims 12-14 and 16 by Kuhn.....	59
1. Overview of Kuhn.....	59
2. Anticipation of Claims 12-14, and 16.....	59
H. Ground 7: Obviousness of Claim 15 Over Kuhn Either Alone or in View of Heath or ISO 3630-1	63
I. Ground 8: Obviousness of Claims 12-16 over Kuhn Either Alone or in View of Heath or ISO 3630-1	64

TABLE OF CONTENTS
(continued)

	Page
J. Ground 9: Obviousness of Claims 12-14 and 16 Over McSpadden and Pelton in View of Kuhn.....	65
1. Overview of Pelton	65
2. Overview of McSpadden	66
3. Obviousness of Claims 12-14 and 16	66
K. Ground 10: Obviousness of Claim 15 Over McSpadden and Pelton in View of Kuhn and in Further View of Heath or ISO 3630-1.....	72
L. Ground 11: Obviousness of Claims 12-14 and 16 Over Tripi in View of McSpadden.....	73
1. Overview of Tripi.....	73
2. Obviousness of Claims 12-14 and 16	74
M. Ground 12: Obviousness of Claim 15 Over Tripi in View of McSpadden and in Further View of Heath or ISO 3630-1	77
IX. The Grounds in the Petition are Not Redundant	77
X. Conclusion	80

LISTING OF EXHIBITS

Exhibit #	Exhibit Description
1001	U.S. Patent No. 8,876,991
1002	Declaration of A. Jon Goldberg
1003	Prosecution history of U.S. Patent No. 8,876,991
1004	Fujio Miura et al., <i>The super-elastic property of the Japanese NiTi alloy wire for use in orthodontics</i> , 90 AM. J. ORTHODONTICS & DENTOFACIAL ORTHOPEDICS 1 (1986)
1005	Satish B. Alapati, "An investigation of phase transformation mechanisms for nickel-titanium rotary endodontic instruments," PhD thesis, 2006
1006	Alan R. Pelton et al., <i>Optimisation of Processing and Properties of Medical-Grade Nitinol Wire</i> , MINIMALLY INVASIVE THERAPIES & ALLIED TECHS. 107 (2000)
1007	U.S. Patent No. 5,697,906 to Ariola et al.
1008	Prosecution history of U.S. Patent No. 8,727,773
1009	Prosecution history of U.S. Patent No. 8,083,873
1010	Prosecution history of U.S. Patent No. 8,062,033
1011	U.S. Patent No. 8,727,773
1012	Prosecution history of European Patent Application No. 05756629.1
1013	Transcript of Motion Hearing, Nov. 25, 2014, <i>Dentsply International, Inc. v. US Endodontics, LLC</i> , Docket No. CV-2-14-196 (E.D. Tenn.) (excerpts)
1014	International Standard ISO 3630-1, 2 nd ed. (2008)
1015	Declaration of Walter Zanes

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.