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 IPR2015-00632 Patent 8,727,773 B2

DECLARATION OF NEILL H. LUEBKE, D.D.S., M.S.

GOLD STANDARD EXHIBIT 2027 US ENDODONTICS V. GOLD STANDARD



I, Neill H. Luebke, D.D.S., M.S., affirm and declare as follows:

A. Education and Experience

- 1. I recently retired as an endodontist with Advanced Dental Specialists in Waukesha, Wisconsin. I have been practicing dentistry since graduating from dental school in 1969 and practicing endodontics since 1980. I became a board certified endodontist on April 17, 1991. During the course of my career, I have performed approximately 40,000 endodontic procedures.
- 2. I attended the University of Iowa College of Dentistry, where I obtained my Doctor of Dental Surgery ("DDS") on June 6, 1969. I also completed an internship at Denver General Hospital before continuing my education at the University of Iowa Graduate College, where I also earned a Master of Science degree on December 22, 1972. I served on the faculty at the University of Iowa for eight years, where I taught classes in operative dentistry and pharmacology. I then attended the University of Nebraska Medical Center, Lincoln, College of Dentistry, where I earned my certificate in Endodontics on May 10, 1980. While continuing in private practice, I also served as Chairman of endodontics at Marquette University for four years from 1987 to 1991.
- 3. I am active in professional organizations, including the American Dental Association ("ADA") and the American Association of Endodontics ("AAE"). I have served on several committees, including as a consultant to the



Council on Scientific Affairs for the ADA and as the sole representative to the American Dental Association Subcommittee on Dental Products for the AAE. I served as the U.S. expert to the International Organization for Standardization ("ISO") for Endodontic Materials and Endodontic Instruments, and I am now convener for ISO TC106 SC4 WG9 for Endodontic Instruments and ISO TC106 SC1 WG2 Endodontic Materials. I also have Diplomate status with the American Board of Endodontics.

- 4. I have published articles related to the field of dentistry and endodontics in several highly respected peer-reviewed journals, including the Journal of Endodontics, the American Journal of Roentgenography, the Journal of Prosthetic Dentistry, the Journal of Dental Education, the Journal of the American Dental Association, and the Journal of Public Health Dentistry. I also serve on the Scientific Advisory Board for the Journal of Endodontics.
 - 5. I am the inventor of five issued U.S. patents:
- (1) United States Patent No. 8,062,033, entitled "Dental and Medical Instruments Comprising Titanium," which was filed as PCT application on June 7, 2005 and was filed as a national stage application in United States on December 7, 2006, and issued on November 22, 2011;
- (2) United States Patent No. 8,083,873, entitled "Dental and Medical Instruments Comprising Titanium," which was filed on December 23, 2010 and



issued on December 27, 2011;

- (3) United States Patent No. 8,562,341, entitled "Dental and Medical Instruments Comprising Titanium," which was filed on December 23, 2011 and issued on October 22, 2013;
- (4) United States Patent No. 8,727,773 (the "'773 Patent"), entitled "Dental and Medical Instruments Comprising Titanium," which was filed on April 25, 2012 and issued on May 20, 2014; and
- (5) United States Patent No. 8,876,991 (the "'991 patent"), entitled "Dental and Medical Instruments Comprising Titanium," which was filed on January 29, 2014 and issued on November 4, 2014.

All five of my patents are related, and they each claim priority to the provisional patent application No. 60/578,091 that I filed with the United States Patent and Trademark Office on June 8, 2004.

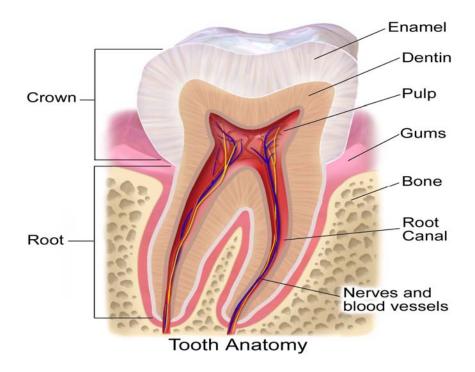
6. I am the President of Gold Standard Instruments, LLC ("Gold Standard"), the assignee of the '773 patent and the Patent Owner in this proceeding. I submit this declaration in support of the Patent Owner's Response to the petition for *inter partes* review of the '773 patent.

B. Background of the '773 Patent

7. Endodontics is a branch of dentistry concerned with the diagnosis and treatment of diseases of the pulp—the soft, inner tissue of the tooth containing



nerve and blood vessels within the center of a tooth. *See* Exhibit 1001 at col. 1, ll. 31-35. The graphic below depicts the general anatomy of a tooth.



8. During a root canal procedure, which is a form of endodontic therapy, the root canal of the tooth is cleaned and cleared of all diseased or decayed material. The canal is then shaped and is filled with an inert material such as gutta percha. The filled canal is then sealed in order to preserve the tooth. The graphic below generally depicts the steps of a root canal procedure.

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