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Luebke

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(54) **DENTAL AND MEDICAL INSTRUMENTS
COMPRISING TITANIUM**

(56) **References Cited**

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(73) Assignee: **Gold Standard Instruments, LLC**, Brookfield, WI (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(51) **Int. Cl.**
A61C 5/02 (2006.01)

(52) **U.S. Cl.**
USPC **433/102**

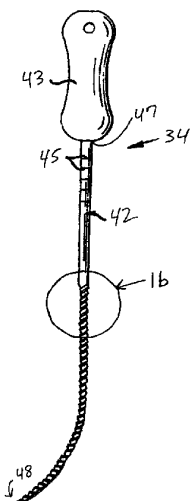
(58) **Field of Classification Search**
USPC 29/896.1, 896.11; 148/402, 421, 426; 433/102, 224

See application file for complete search history.

(57) **ABSTRACT**

Endodontic instruments for use in performing root canal therapy on a tooth are disclosed. In one form, the instruments include an elongate shank having a cutting edge extending from a distal end of the shank along an axial length of the shank. The shank comprises a titanium alloy, and the shank is prepared by heat-treating the shank at a temperature above 25° C. in an atmosphere consisting essentially of a gas unreactive with the shank. In another form, the endodontic instruments have an elongate shank having a cutting edge extending from a distal end of the shank along an axial length of the shank. The shank consists essentially of a titanium alloy selected from alpha-titanium alloys, beta-titanium alloys, and alpha-beta-titanium alloys. The instruments solve the problems encountered when cleaning and enlarging a curved root canal.

17 Claims, 7 Drawing Sheets



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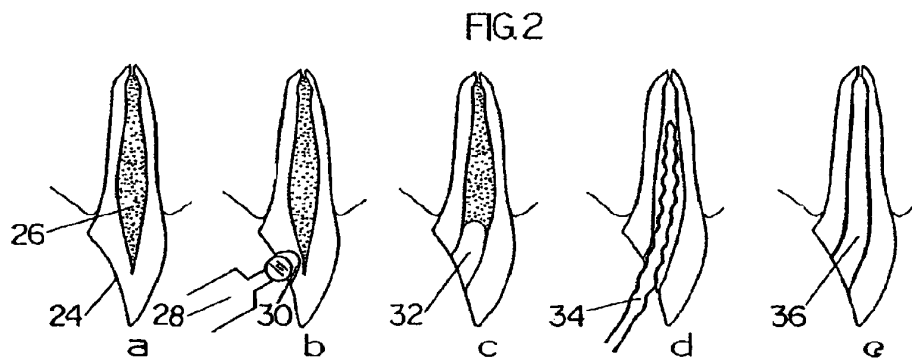
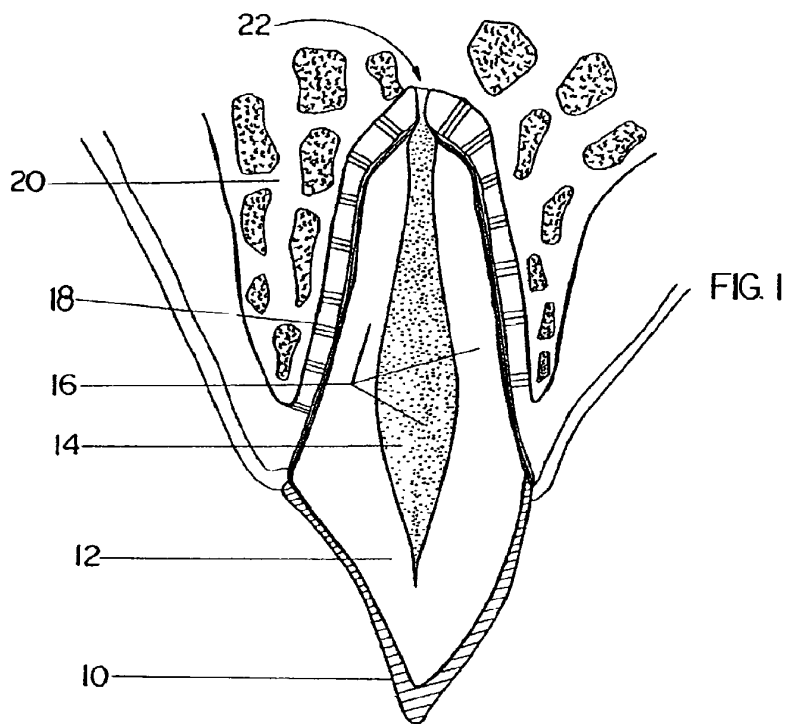
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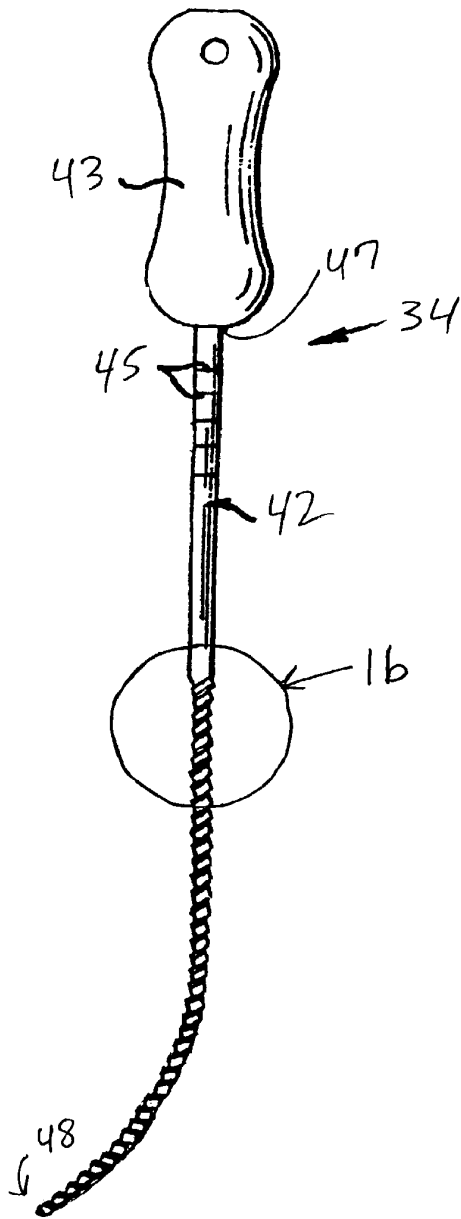


Fig. 1a

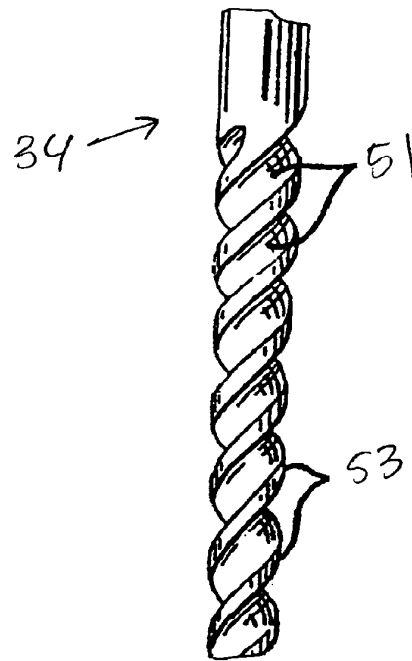
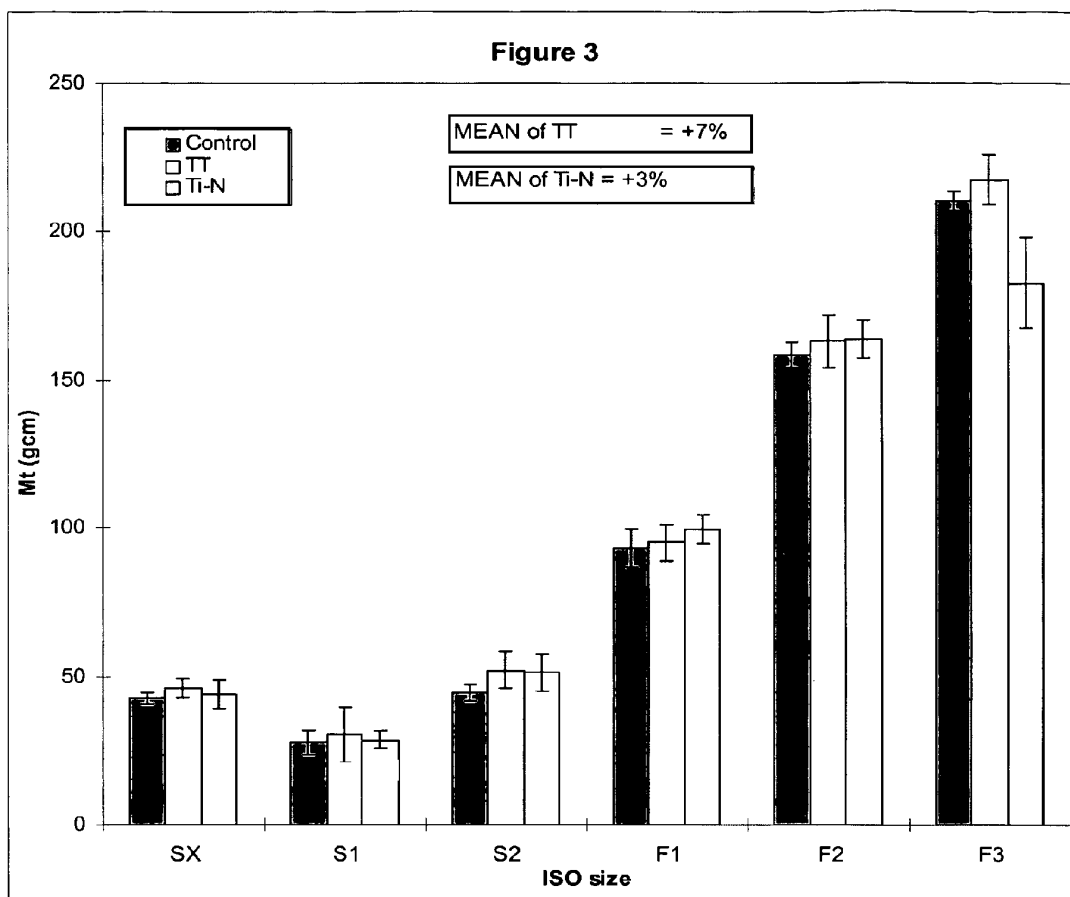


Fig. 1b



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