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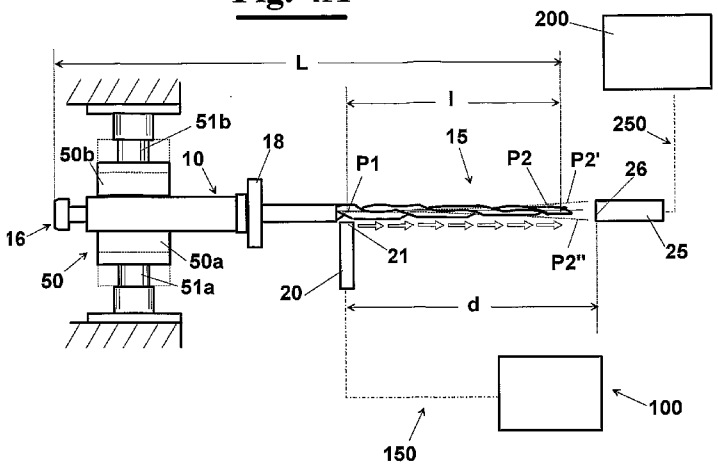
(54) Title: APPARATUS FOR TESTING THE EFFECTIVENESS OF ENDODONTIC TOOLS

Fig. 4A



(57) Abstract: An apparatus for measuring the integrity degree, and therefore the effectiveness, of a dental tool (10), in particular of an endodontic tool that is made of a hyperelastic material such as Ni-Ti alloys, for example an endodontic file, a reamer, or similar endodontic tools, comprises a means (150) for applying vibrations at a predetermined frequency at a point (P1) of the tested tool and a measuring means (250) for measuring the vibrations that reach a point (P2), after propagating along a distance d between the points (P1, P2). The measuring means (250), for measuring the vibrations at the point (P2), may comprise an optical sensor (25) that is adapted to measure the oscillation caused at the free end of the tool, and to send a corresponding signal to a control unit (200) or the ultrasonic receiver. The control unit (200) analyses the received signal and generates a corresponding propagation signal which expresses the integrity degree of the endodontic tool (10).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. G01M7/02 A61C19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G01M A61C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CA 1 336 012 C (DENTSPLY INT INC [US]) 20 June 1995 (1995-06-20) the whole document	1-7, 9-11, 13-18
X	WO 98/01736 A (P B SENSORTECHNOLOGY & CONSULT [NL]; PETERSSON LARS G [SE]; LUINGE MAR) 15 January 1998 (1998-01-15) page 4, line 6 - page 5, line 10 page 7, line 22 - page 12, line 5; figures 3,4,6; table 1	1
X	DE 35 11 140 A1 (SIEMENS AG [DE]) 2 October 1986 (1986-10-02) the whole document	1,4, 6-11, 13-14, 16-18

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
11 March 2010	18/03/2010

Name and mailing address of the ISA/	Authorized officer
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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WO 9801736 A	15-01-1998	AU 3638197 A	02-02-1998
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