

Title (en)
IMPROVED DEVICE AND METHOD FOR THE ULTRASONIC DETECTION OF SMOOTH SURFACE LESIONS ON TOOTH CROWN SURFACES

Title (de)
VERBESSERTE VORRICHTUNG UND VERFAHREN ZUM FESTSTELLEN VON GLATTEN OBERFLÄCHENBESCHÄDIGUNGEN AN ZAHNKRONOBERFLÄCHEN MITTELS ULTRASCHALL

Title (fr)
DISPOSITIF ET PROCEDE AMELIORES DE DETECTION ULTRASONIQUE DE LESIONS SUR LES SURFACES LISSES DE COURONNES DENTAIRES

Publication
EP 1082066 A1 20010314 (EN)

Application
EP 99923845 A 19990602

Priority
• IL 9900294 W 19990602
• US 8992098 A 19980603

Abstract (en)
[origin: WO9962423A1] A device and method for the detection of smooth surface lesions such as caries and tooth crown surface cracks on a tooth crown surface, the device having an ultrasonic surface wave transmitter/receiver comprising a focused ultrasonic transducer capable of transmitting at least partially focused ultrasonic surface waves along a tooth crown surface. Surface lesions encountered by the ultrasonic surface waves produce ultrasonic surface wave reflections which are receivable at the generator/receiver, thus enabling the presence of the lesion, and particularly small lesions, to be detected. The ultrasonic surface wave generator/receiver includes a focused transducer, having a focusing element integral therewith or separate therefrom, operatively connected to a wedge-like coupler. Longitudinal ultrasonic waves generated by the transducer are at least partially focused by the focusing element and then imparted onto the tooth surface by the coupler which has a contact surface in contact with the tooth surface being tested. The coupler also enables ultrasonic surface wave reflections to be received by the transducer.

IPC 1-7
A61C 19/04; **A61B 8/08**

IPC 8 full level
A61B 8/08 (2006.01); **A61C 19/04** (2006.01)

CPC (source: EP)
A61B 8/0875 (2013.01); **A61C 19/04** (2013.01)

Citation (search report)
See references of WO 9962423A1

Cited by
US9393314B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 9962423 A1 19991209; AU 4057299 A 19991220; CA 2334391 A1 19991209; EP 1082066 A1 20010314

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IL 9900294 W 19990602; AU 4057299 A 19990602; CA 2334391 A 19990602; EP 99923845 A 19990602