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(54) Title (EN): ELECTROSURGICAL INSTRUMENT, GENERATOR AND APPARATUS

(54) Title (FR): INSTRUMENT ÉLECTROCHIRURGICAL, GÉNÉRATEUR ET APPAREIL

(57) Abstract:

(EN): Various embodiments provide an electrosurgical instrument for delivering electromagnetic (EM) energy and ultrasonic vibrations for treating biological tissue. The electrosurgical instrument comprises: an instrument shaft arranged to convey EM energy and an electrical signal for driving a magnetostrictive ultrasound transducer; a distal end assembly arranged at a distal end of the instrument shaft to receive the EM energy from the instrument shaft and deliver the EM energy from the distal end assembly for tissue treatment; and a magnetostrictive ultrasound transducer arranged to receive the electrical signal from the instrument shaft and generate ultrasonic vibrations around the distal end assembly for tissue treatment. Other embodiments provide an electrosurgical generator, and an electrosurgical apparatus comprising the instrument and generator.

(FR): L'invention, selon divers modes de réalisation, concerne un instrument électrochirurgical permettant d'administrer de l'énergie électromagnétique (EM) et des vibrations ultrasonores pour traiter un tissu biologique. L'instrument électrochirurgical comprend : une tige d'instrument conçue pour transporter de l'énergie EM et un signal électrique de façon à piloter un transducteur ultrasonore magnétostrictif; un ensemble d'extrémité distale disposé au niveau d'une extrémité distale de la tige d'instrument de façon à recevoir l'énergie EM provenant de la tige d'instrument et à administrer l'énergie EM à partir de l'ensemble d'extrémité distale à des fins de traitement tissulaire; et un transducteur ultrasonore magnétostrictif conçu pour recevoir le signal électrique provenant de la tige d'instrument et pour générer des vibrations ultrasonores autour de l'ensemble d'extrémité distale à des fins de traitement tissulaire. D'autres modes de réalisation concernent un générateur électrochirurgical et un appareil électrochirurgical comprenant l'instrument et le générateur.

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