

Title (en)  
BIPOLAR ULTRASONIC SURGERY

Title (de)  
BIPOLARE ULTRASCHALLCHIRURGIE

Title (fr)  
CHIRURGIE ULTRASONIQUE BIPOLAIRE

Publication  
**EP 0737045 A1 19961016 (EN)**

Application  
**EP 94929000 A 19941026**

Priority  

- IB 9400332 W 19941026
- US 17582793 A 19931230

Abstract (en)  
[origin: WO9517855A1] An ultrasonic oscillator drives a tool at a set frequency. An amplitude control (47) runs the oscillator to set the vibration level. A frequency regulator (48) joins the amplitude and the oscillator. A handpiece supports a transducer and a vibrating tool. A flue (17) surrounds the tool. Electrodes (42) associated with the flue (17) and/or the tool extend to be at or near the distal tip (18) of the tool and/or the flue (17) and provide bipolar electrosurgery with or without ultrasonic vibration of the tool. A method of performing ultrasonic surgery and bipolar electrosurgery has an ultrasonic handpiece with bipolar electrodes (42) associated with the tool or the flue (17).

IPC 1-7  
**A61B 17/32; A61B 17/39**

IPC 8 full level  
**A61B 17/32** (2006.01); **A61B 18/00** (2006.01); **A61B 18/12** (2006.01); **A61B 18/14** (2006.01); **A61M 1/00** (2006.01)

CPC (source: EP US)  
**A61B 18/14** (2013.01 - EP US); **A61B 18/1402** (2013.01 - EP); **A61B 2017/320069** (2017.07 - EP US); **A61B 2017/32007** (2017.07 - EP US);  
**A61B 2017/320084** (2013.01 - EP); **A61B 2217/005** (2013.01 - EP); **A61B 2217/007** (2013.01 - EP)

Citation (search report)  
See references of WO 9517855A1

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

DOCDB simple family (publication)  
**WO 9517855 A1 19950706**; AU 688384 B2 19980312; AU 7821794 A 19950717; CA 2176754 A1 19950706; DE 9490469 U1 19960829;  
EP 0737045 A1 19961016; FI 946163 A0 19941229; FI 946163 A 19950701; JP H09500812 A 19970128

DOCDB simple family (application)  
**IB 9400332 W 19941026**; AU 7821794 A 19941026; CA 2176754 A 19941026; DE 9490469 U 19941026; EP 94929000 A 19941026;  
FI 946163 A 19941229; JP 51786695 A 19941026