

Title (en)  
REMOVAL OF TISSUE.

Title (de)  
GEWEBEENFERNUNG.

Title (fr)  
EXTRACTION DE TISSUS.

Publication  
**EP 0642321 A4 19951102 (EN)**

Application  
**EP 94911742 A 19940321**

Priority  
• US 9403446 W 19940321  
• US 3598593 A 19930322

Abstract (en)  
[origin: WO9421183A1] This is a surgical instrument designed to reduce damage to surrounding tissue while fragmenting tissue intended to be removed. The instrument includes a fragmenting tip (14C) connected to a hand piece (10C) by an aspirating tube (18C). The tip (14C) is rotated by a rotational motor (40D) and reciprocated ultrasonically by an ultrasonic vibrator (40C) simultaneously so that tissue is fragmented by the combined motion of a fragmenting surface perpendicular to the surface and at an angle to the surface during rotation. The method can be used for example in cataract removal surgery where the lens is fragmented and removed without damaging the capsular wall or during bypass surgery for freeing the artery or vein to be transplanted without damaging the artery or vein walls.

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

IPC 8 full level  
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CPC (source: EP US)  
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Citation (search report)  
• [XY] US 4504264 A 19850312 - KELMAN CHARLES D [US]  
• [X] US 5176677 A 19930105 - WUCHINICH DAVID G [US]  
• [YD] WO 9201423 A1 19920206 - ANIS AZIZ YEHIA [US]  
• See references of WO 9421183A1

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**US 9403446 W 19940321**; AU 6418394 A 19940321; CA 2136352 A 19940321; EP 94911742 A 19940321; JP 52139894 A 19940321