



US006869439B2

(12) **United States Patent**
White et al.

(10) **Patent No.:** **US 6,869,439 B2**
(45) **Date of Patent:** **Mar. 22, 2005**

- (54) **ULTRASONIC DISSECTOR**
- (75) Inventors: **Jeffrey S. White**, Ridgefield, CT (US);
Howard Alliger, Melville, NY (US);
Ronald R. Manna, Valley Stream, NY (US);
Daniel Voic, Clifton, NJ (US)
- (73) Assignees: **United States Surgical Corporation**,
Norwalk, CT (US); **Misonix, Inc.**,
Farmingdale, NY (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

EP	0 394 583 A2	10/1990
EP	0 456 470 A1	11/1991
JP	61-181630 A2	8/1986
JP	1-167802 A2	7/1989
JP	1-232948 A2	9/1989
JP	1-232949 A2	9/1989
JP	8-275948	10/1996
JP	8-275949	10/1996
JP	8-275951	10/1996
JP	9-98980	4/1997
SU	1155256 A1	5/1985
WO	WO 86/02257 A1	4/1986
WO	WO 94/20025 A1	9/1994
WO	WO 98/06446	2/1998

OTHER PUBLICATIONS

- (21) Appl. No.: **10/223,150**
- (22) Filed: **Aug. 19, 2002**
- (65) **Prior Publication Data**

US 2002/0198555 A1 Dec. 26, 2002

Related U.S. Application Data

- (63) Continuation of application No. 09/457,951, filed on Dec. 9, 1999, now abandoned, which is a continuation of application No. 08/925,184, filed on Sep. 8, 1997, now abandoned.
- (60) Provisional application No. 60/026,336, filed on Sep. 19, 1996.
- (51) **Int. Cl.⁷** **A61B 17/32**
- (52) **U.S. Cl.** **606/169; 606/170; 606/171**
- (58) **Field of Search** **606/167, 168, 606/169, 170, 171**

UltraCision Incorporated, Harmonic Scalpel Operating Manual, Ref. N Mar. 1995, 53 pages.
 UltraCision Incorporated, Harmonic Scalpel Price List, Jul. 1995, 7 pages.
 UltraCision Incorporated, The Harmonic Scalpel for Gynecological Surgery, 1993, 4 pages.
 Ultracision CS/LS Layout, Jul. 24, 1995, 2 pages.
 Snowden-Spencer, Inc., Endoscopic Plastic Surgery, 1993, 10 pages.

Primary Examiner—Michael J. Milano
Assistant Examiner—Charles H. Sam

(57) **ABSTRACT**

An ultrasonic surgical instrument for dissection and coagulation of tissue is provided. The surgical instrument includes a vibration coupler supported within a housing and operably connected to an ultrasonic generator. An angled blade member is connected to the distal end of the vibration coupler to conduct high frequency vibration from the ultrasonic generator to the blade member. A clamp member is positioned adjacent to the blade member and is movable from a first position to a second approximated position. The clamp member and angled blade member combine to enhance contact between the tissue and the blade member during operation of the instrument to improve the performance of the instrument.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,002,594 A	5/1935	Wappler et al.
2,011,169 A	8/1935	Wappler
2,714,890 A	8/1955	Vang

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

DE 2 032 501 A 1/1972

23 Claims, 6 Drawing Sheets

