



(51) International Patent Classification:

A61B 17/94 (2006.01) A61B 18/14 (2006.01)
A61B 18/04 (2006.01)

(21) International Application Number:

PCT/SG2011/000221

(22) International Filing Date:

22 June 2011 (22.06.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/344,283 23 June 2010 (23.06.2010) US

(71) Applicant (for all designated States except US): **NATIONAL UNIVERSITY OF SINGAPORE** [SG/SG];
21 Lower Kent Ridge Road, Singapore 119077 (SG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHANG, Kin Yong, Stephen** [SG/SG]; c/o National University of Sin-

gapore, Yong Loo Lin School of Medicine, Department of Surgery, 21 Lower Kent Ridge Road, Singapore 119077 (SG). **CHUI, Chee Kong** [SG/SG]; c/o National University of Singapore, Faculty of Engineering, Department of Mechanical Engineering, 21 Lower Kent Ridge Road, Singapore 119077 (SG).

(74) Agent: **AMICA LAW LLC**; 30 Raffles Place, #18-03/04 Chevron House, Singapore 048622 (SG).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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(54) Title: AN ARTICULATING ABLATION AND DIVISION DEVICE WITH BLOOD FLOW SENSING CAPABILITY

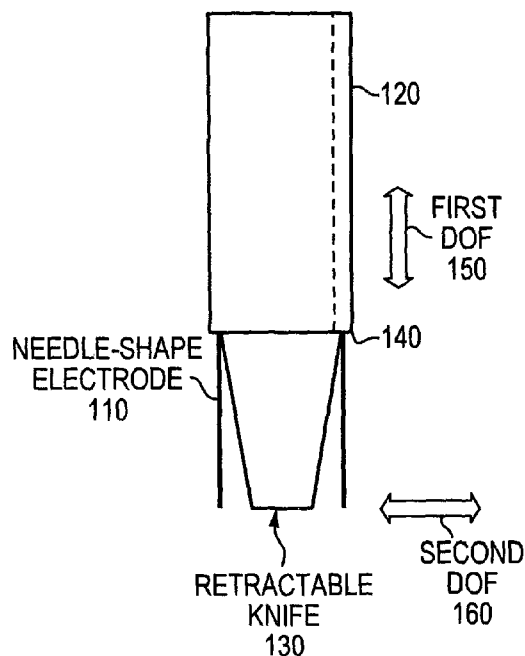


FIG. 1B

(57) Abstract: A laparoscopic liver resection device is described. The device combines the Radiofrequency Ablation (RFA) technology with a cutting mechanism, a blood-flow sensor and a flexible actuation mechanism to simultaneously coagulate and cut the liver tissue and detect the presence of blood flow to confirm avascularity. The present invention eliminates the risk of excess bleeding due to cutting too deep and reduces recovery time and the time spent on re-coagulation of coagulated areas, thereby shortening duration of surgery. Also embodiments prevent excess ablation by stopping ablation activity on the target tissue as soon as insufficient or no blood flow in the target tissue is detected. Thus a closed loop control for a bloodless tissue/organ division method is provided.



(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*