

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 November 2005 (17.11.2005)

PCT

(10) International Publication Number
WO 2005/107622 A1

(51) International Patent Classification⁷: **A61B 18/18**,
19/00, 1/00, A61N 7/00, B25J 9/06

(74) Agent: **ALBAN TAY MAHTANI & DE SILVA**; 39
Robinson Road, #07-01 Robinson Point, Singapore
069811 (SG).

(21) International Application Number:
PCT/SG2005/000143

(22) International Filing Date: 6 May 2005 (06.05.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/568,252 6 May 2004 (06.05.2004) US

(71) Applicant (for all designated States except US):
NANYANG TECHNOLOGICAL UNIVERSITY
[SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG).

(72) Inventor; and

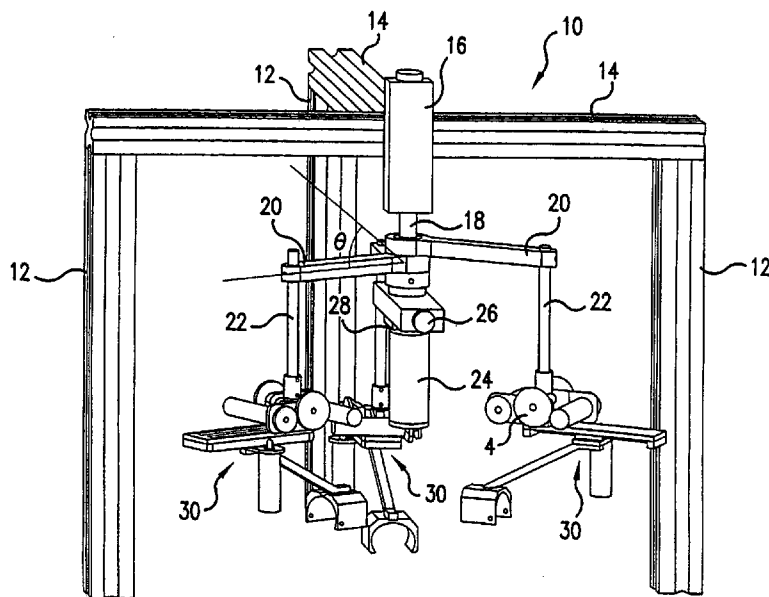
(75) Inventor/Applicant (for US only): **CHAUHAN, Sunita**
[IN/SG]; Block 27 #02-518, Hall of Residence-IV, 10
Nanyang Drive, Nanyang Technological University, Sin-
gapore 637720 (SG).

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

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: MECHANICAL MANIPULATOR FOR HIFU TRANSDUCERS



(57) Abstract: A mechanical manipulator (10) for controlling the movement of high intensity focused ultrasound (HIFU) transducers, especially for medical use, such as in the treatment of cancers. A base harness having two or three legs (12) is mounted on the treatment table. A central shaft mounted on the base harness carries a diagnostic probe as well as a plurality of treatment probes. The treatment probes may be moved through three degrees of freedom using computer controlled motors. The treatment probes may be moved linearly, in jaw motion and in a pitch motion.

WO 2005/107622 A1



Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.