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(71) Applicant: COMPUTER MOTION, INC. [US/US]; 130 B Cremona Drive, Goleta, CA 93117 (US).

(72) Inventors: WANG, Yulun; 370 Vereda Leyena, Goleta, CA 93117 (US). UECKER, Darrin, R.; 1430 De La Vina #A, Santa Barbara, CA 93101 (US). LABY, Keith, Phillip; 220 Santa Rosa, Santa Barbara, CA 93109 (US). WILSON, Jeff; 1300 Portesuello, Santa Barbara, CA 93105 (US). JORDAN, Steve; 2431 Calle Galicia, Santa Barbara, CA 93109 (US). WRIGHT, James; 319 Santa Cruz Boulevard, Santa Barbara, CA 93109 (US). GHODOUSSI, Modjtaba; 36 Broadmoor Plaza #2, Santa Barbara, CA 93105 (US).

(74) Agents: YORKS, Ben, J. et al.; Blakely, Sokoloff, Taylor & Zafman, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025-1026 (US).

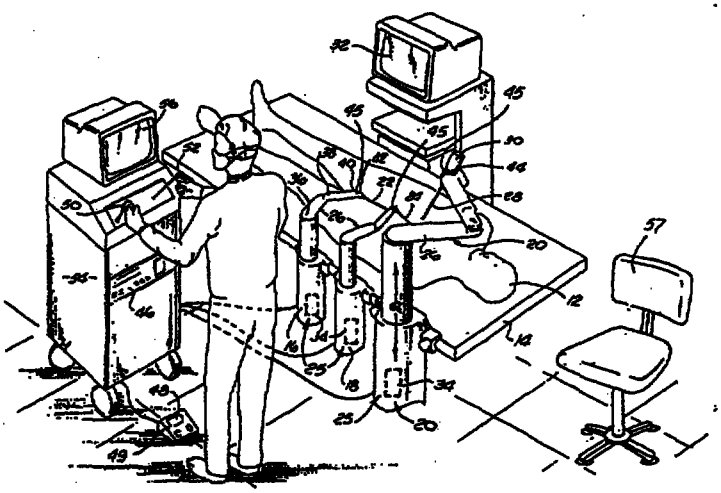
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(54) Title: A METHOD AND APPARATUS FOR PERFORMING MINIMALLY INVASIVE CARDIAC PROCEDURES



(57) Abstract

This invention is a system (10) for performing minimally invasive cardiac procedures. The system includes a pair of surgical instruments that are coupled to a pair of robot arms (16, 18). The instruments (22, 24) have end effectors that can be manipulated to hold and suture tissue. The robotistic arms are coupled to a pair of master handles (50, 52) by a controller. The handles can be moved by the surgeon to produce a corresponding movement of the end effectors. The movement of the handles is scaled so that the end effectors have a corresponding movement that is different, typically smaller, than the movement performed by the hands of the surgeon. The scale factor is adjustable so that the surgeon can control the resolution of the end effector movement. The movement of the end effector can be controlled by an input button, so that the end effector only moves when the button is depressed by the surgeon. The input button allows the surgeon to adjust the position of the handles without moving the end effector, so that the handles can be moved to a more comfortable position.