

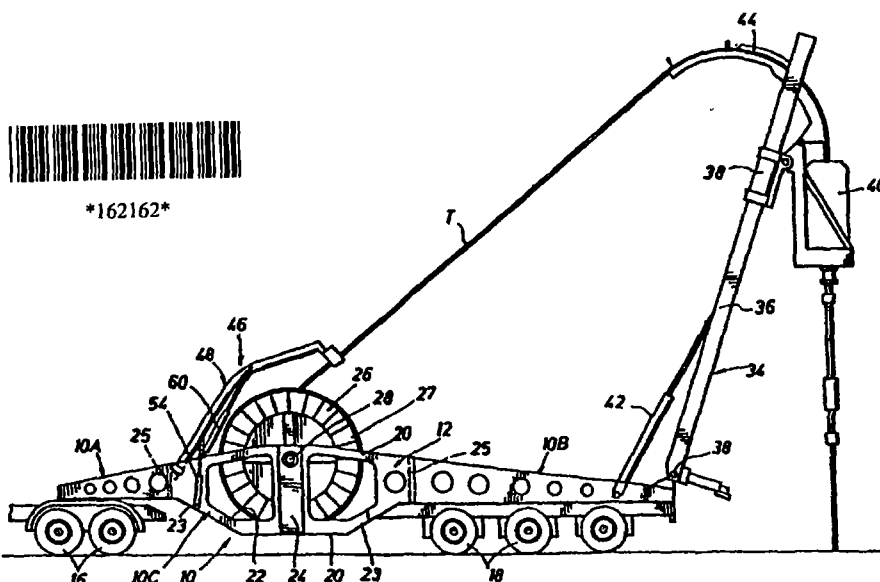
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (43) International Publication Date:<br>22 June 2000 (22.06.00) |
| (21) International Application Number: PCT/US99/29010<br>(22) International Filing Date: 8 December 1999 (08.12.99)<br>(30) Priority Data:<br>60/112,167      14 December 1998 (14.12.98)      US<br>09/409,113      30 September 1999 (30.09.99)      US<br>(71) Applicant: SCHLUMBERGER TECHNOLOGY CORPORATION [US/US]; 110 Schlumberger Drive, MD-1, Sugar Land, TX 77478 (US).<br>(72) Inventors: SHAMPINE, Rod, W.; 625 E. 14th Street, Houston, TX 77008 (US). MCKEE, L., Michael; 608 W. Lang, Alvin, TX 77511 (US). FLOWERS, Joseph, K.; 3632 Overbrook, Houston, TX 77027 (US). WELCH, Larry, D.; 1923 Timber Creek Drive, Missouri City, TX 77459 (US). MCCAFFERTY, Terry, L.; 135 Wilkins Crossing, Sugar Land, TX 77479 (US).<br>(74) Agents: Y' BARBO, Douglas et al.; 110 Schlumberger Drive, MD-1, Sugar Land, TX 77478 (US). |  | (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).<br><br>Published<br>Without international search report and to be republished upon receipt of that report. |                                                                 |



\*G00002\*

(54) Title: LEVELWIND SYSTEM FOR COILED TUBING REEL



\*162162\*

## (57) Abstract

A levelwind system for a coiled tubing reel (26) including an arcuate guide arm (48) extending over the upper surface of the reel (26). A universal joint (50) mounts the lower end of the arm (48) for pivotal movement both vertically and horizontally. A guide member (52) is supported on the free end of the guide arm (48) for guiding the coiled tubing T on and off reel (26). A lift cylinder (54) is effective to raise and lower guide arm (48). A balancing cylinder (60) is effective for moving guide arm (48) laterally. A hydraulic fluid circuit responsive to a position sensor (111) and a microprocessor (112) as shown in Figure 12 is effective for controlling the movement of the coiled tubing guide arm (48).

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