

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 August 2003 (21.08.2003)

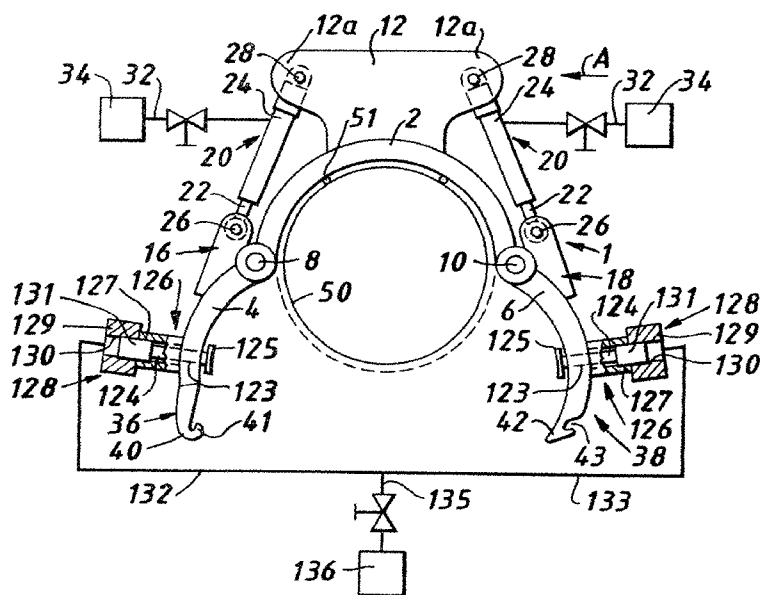
PCT

(10) International Publication Number
WO 03/069212 A1

- (51) International Patent Classification⁷: **F16L 55/17** (74) Agent: **BURRIDGE, John, R., W.**; Lattice Intellectual Property Ltd, 23 Buckingham Gate, London SW1E 6LB (GB).
- (21) International Application Number: PCT/GB03/00690
- (22) International Filing Date: 13 February 2003 (13.02.2003) (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0203639.0 15 February 2002 (15.02.2002) GB
- (71) Applicant (*for all designated States except US*): **LATTICE INTELLECTUAL PROPERTY LTD.** [GB/GB]; 1-3 Strand, London WC2N 5EH (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **VU, Dan, Quoc** [GB/GB]; 73 Hazel Road, Loughborough, Leicestershire LE11 2JQ (GB). **CHANA, Satuinder** [GB/GB]; 49 Severn Road, Oadby, Leicestershire LE2 4FH (GB).
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: SHELL ASSEMBLIES FOR ENCIRCLING TUBULAR MEMBERS



(57) Abstract: A shell assembly (1) for securing to a tubular member (50) comprises a first part (2) for locating on the tubular member, and second and third parts (4, 6) respectively hinged at (8) and (10) opposite sides of the first part. The parts (4) and (6) each have engaging means (40) or (42) complementary to that of the other part. Remotely operable means (20) is used to move the parts (4) and (6) and about hinges (8) and (10) to respective positions whereat the engaging means (40) and (42) interengage so that the parts (4) and (6) are secured together. The shell assembly may be employed in subsea operations to support a damaged region of a pipeline or to enable a branch or tee to be secured to a pipeline.



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.