

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number

WO 2024/186813 A9

(43) International Publication Date
12 September 2024 (12.09.2024)

WIPO | PCT

- (51) International Patent Classification:
B63B 27/34 (2006.01) *C25B 1/04* (2021.01)
B63B 35/44 (2006.01) *F03B 13/14* (2006.01)
B67D 9/00 (2010.01) *F16L 11/20* (2006.01)
B63B 22/24 (2006.01) *F16L 11/22* (2006.01)
B67D 7/04 (2010.01)
- (21) International Application Number:
PCT/US2024/018515
- (22) International Filing Date:
05 March 2024 (05.03.2024)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
- (71) Applicant: **LONE GULL HOLDINGS, LTD.** [US/US];
5331 S. Macadam Ave., Suite 258, PMB 332, Portland, OR
97239 (US).
- (72) Inventors: **SHELDON-COULSON, Garth Alexander**;
5331 S. Macadam Ave., Suite 258, PMB 332, Portland,
OR 97239 (US). **MOFFAT, Brian, Lee**; 5331 S. Macadam
Ave., Suite 258, PMB 332, Portland, OR 97239 (US).
- (74) Agent: **BLANK, Eric S.** et al.; Schwabe, Williamson &
Wyatt, P.C., 1211 SW 5th Avenue, Suite 1900, Portland, OR
97204 (US).

(54) Title: METHODS AND SYSTEMS FOR REVERSIBLE COUPLING OF CONDUITS

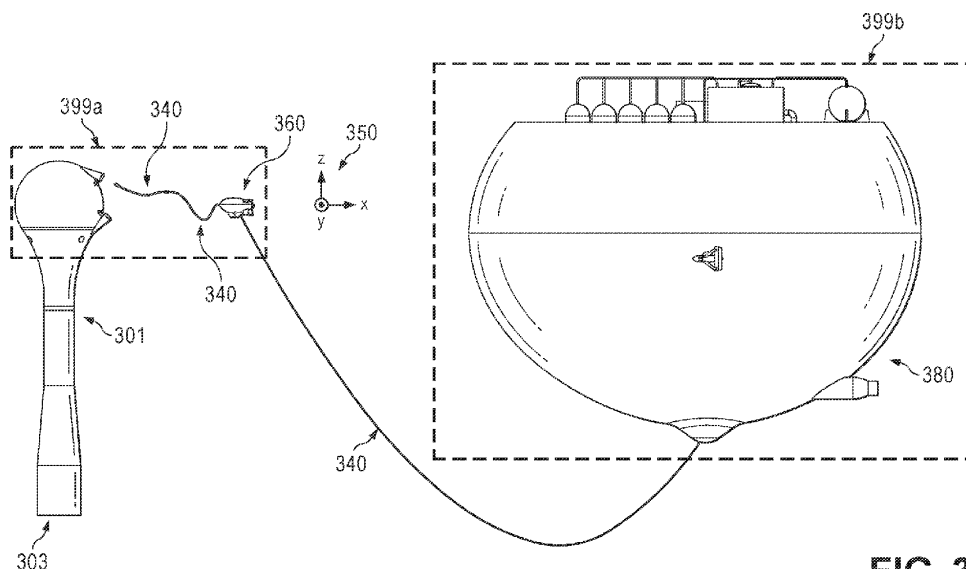


FIG. 3

(57) **Abstract:** Methods and systems are provided for transient fluidic coupling via reversibly couplable conduits. In one example, a method includes directing a conduit assembly to a receiving port by releasing one or more fluid streams from the conduit assembly. The method may further include fluidly coupling an internal passage of the conduit assembly to the receiving port. The internal passage may extend from the conduit assembly and along a conduit between a pair of free-floating bodies, such as between a wave engine and a tanker ship, so as to exchange one or more fluids, such as an electrolysis reactant and an electrolysis product. The fluidic coupling may be reversible, in that the conduit assembly may be detached from the receiving port to sever the fluidic coupling. In certain examples, the detaching may be actuated by releasing one or more additional fluid streams from the conduit assembly.

[Continued on next page]

(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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

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

(88) Date of publication of the revised international search report:

27 March 2025 (27.03.2025)

(15) Information about Correction:

see Notice of 27 March 2025 (27.03.2025)