

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
17 August 2023 (17.08.2023)



(10) International Publication Number
WO 2023/151935 A1

(51) International Patent Classification:
E02F 5/10 (2006.01)

(21) International Application Number:
PCT/EP2023/051608

(22) International Filing Date:
24 January 2023 (24.01.2023)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2030849 08 February 2022 (08.02.2022) NL

(71) Applicant: **ROYAL IHC LIMITED** [GB/GB]; Unit 11,
Stocksfield Hall, Stocksfield Northumberland NE43 7TN
(GB).

(72) Inventor: **MANCHESTER, Jonathan Ralph**; Unit 11,
Stocksfield Hall, Stocksfield Northumberland NE43 7TN
(GB).

(74) Agent: **KREBS, Achim**; HGF BV, Benoordenhoutseweg
46, 2596 BC The Hague (NL).

(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, 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,

(54) Title: UNDERWATER PLOUGH AND METHOD OF OPERATING AN UNDERWATER PLOUGH

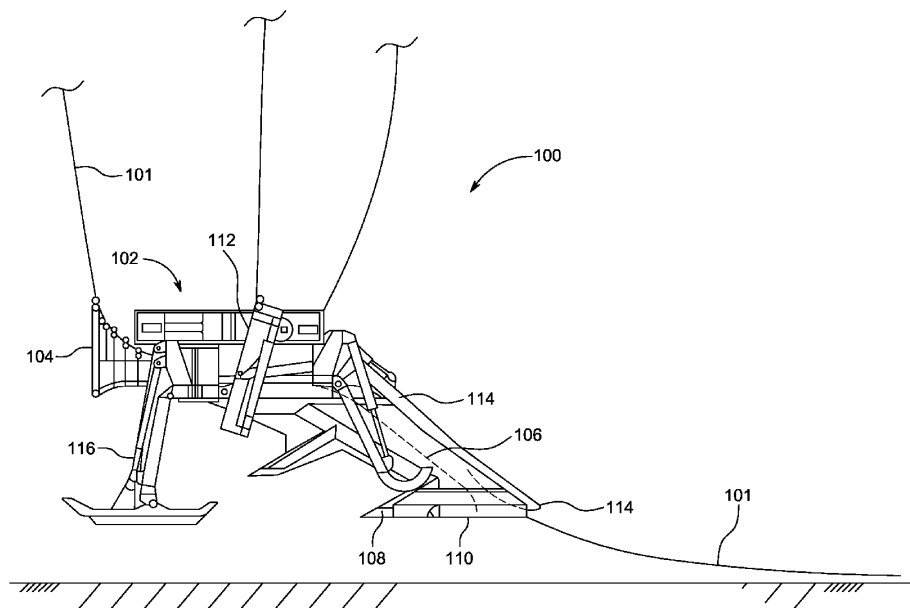


Figure 1

(57) **Abstract:** An underwater plough and a method of operating an underwater plough is disclosed. In particular, an underwater plough for providing an elongated element into a submerged surface and a method of providing an elongated element into a submerged surface is disclosed, the underwater plough comprising a body portion, a plough share extending from an underside of the body portion, the plough share comprising a cutting edge for cutting a bottom of a trench in which the elongated element is to be deposited, support means and actuating means. The underwater plough is configured such that actuation of the actuating means within an operational configuration varies the first direction and the second direction changing the orientation of the longitudinal axis of the body portion with respect to the contact plane and/or the distance between the body portion and the contact plane while the underwater plough is supported by the support means.

[Continued on next page]



WO 2023/151935 A1

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, 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))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE