

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
04 October 2018 (04.10.2018)



(10) International Publication Number
WO 2018/183184 A3

(51) International Patent Classification:

E21B 19/14 (2006.01) *B66C 23/04* (2006.01)
E21B 19/20 (2006.01) *B66F 11/04* (2006.01)

(21) International Application Number:

PCT/US2018/024322

(22) International Filing Date:

26 March 2018 (26.03.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

15/470,156 27 March 2017 (27.03.2017) US

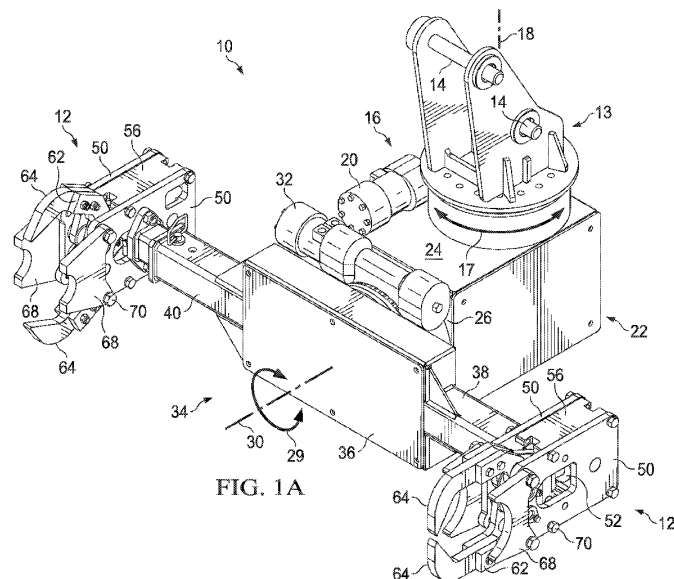
(71) Applicant: **TEI ROCK DRILLS, INC.** [US/US]; P.O.
Box 1309, Montrose, CO 81402 (US).

(72) Inventor: **PATTERSON, William, N.**; P.O. Box 1309,
Montrose, CO 81402 (US).

(74) Agent: **MAY, John J.** et al.; Foley & Lardner LLP, 3000
K Street, N.W., Suite 600, Washington, D.C. 20007-5109
(US).

(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, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
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, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(54) Title: ROD AND CASING HANDLER



(57) Abstract: A rod and casing handler according to embodiments of the present disclosure includes a boom mount that is configured to be coupled to a boom. A clamp mounting structure is coupled to the boom mount and has a central portion, a first arm, and a second arm, where each arm extends from the central portion. A first clamp is coupled to the first arm and includes a first set of actuatable tongs and a first removable saddle plate. A second clamp is coupled to the second arm, and it includes a second set of actuatable tongs and a second removable saddle plate. The first removable saddle plate has a first arcuate surface sized and shaped to correspond to a cylindrical body having a first diameter, and the second saddle plate has a second arcuate surface sized and shaped to correspond to a cylindrical body having a second diameter.

[Continued on next page]

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, 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, 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 international search report:

02 April 2020 (02.04.2020)