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(71) Applicant: NABORS LUX 2 SARL [LU/LU]; 8-10 Avenue de la Gare, 1610 LUXEMBOURG (LU).

(72) Inventors: FRIESTAD, Jan; Verdalsveien 41, 4352 KLEPPE (NO). MIKALSEN, Kenneth; Alexander Kiel-

landsgate 16A, 4319 SANDNES (NO). LARSEN, Ørjan H.; Postveien 4A, 4319 SANDNES (NO). LINGJERDE, Bjørnar; Eikelia 30, 4325 SANDNES (NO).

(74) Agent: SAVOCA, Agatino et al.; c/o JACOBACCI & PARTNERS S.p.A., corso Emilia 8, 10152 TORINO (IT).

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(54) Title: ELEVATOR FOR LIFTING TUBULARS OF VARIOUS SIZES, THE ELEVATOR HAVING A LOCKING MECHANISM

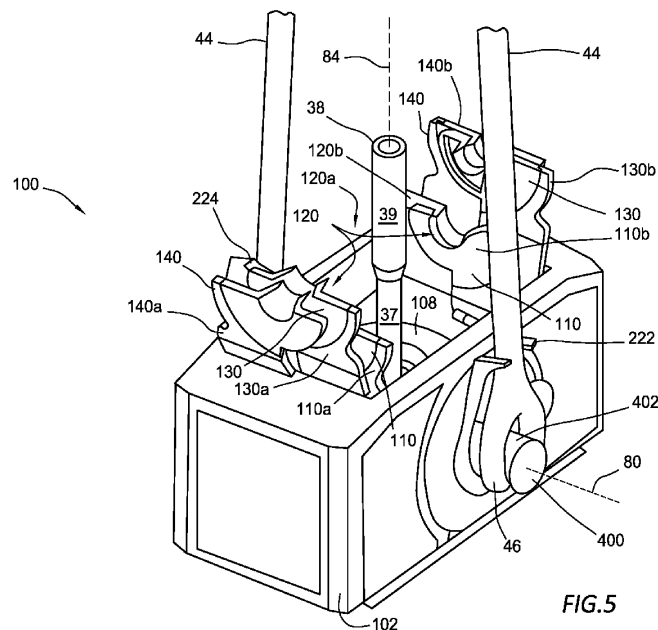


FIG.5

(57) Abstract: A system including an elevator (100) to move a tubular (38), the elevator (100) including two or more remotely operable latches (104) that can configure the elevator (100) to handle various tubular diameters. Each jaw (140a, 140b) can include a locking (328a-b, 324a-b) mechanism that engages a portion of the housing (102) adjacent a spacer ring (108) in the elevator when the first jaw (140) is in the engaged position and configured to transfer a closing force to the housing. A portion of the latches can be laterally offset from each other and another portion can overlap adjacent latches. The elevator can be EX Zone 1 certified with an electronics enclosure contained within a sealed chamber. The elevator can use rotary actuators (214, 216, 218) to operate the latches and rotate the housing of the elevator. The elevator can use a circular pressure sensor (510) to determine weight of a tubular.

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