

Title (en)
ELEVATION-TYPE THRUSTER APPARATUS

Title (de)
HEBETRIEBWERKVORRICHTUNG

Title (fr)
PROPULSEUR DU TYPE RELEVABLE

Publication
EP 2692630 A1 20140205 (EN)

Application
EP 12764722 A 20120327

Priority
• JP 2011072206 A 20110329
• JP 2012002101 W 20120327

Abstract (en)
A vertically movable thruster apparatus includes: a pair of racks (31) of required length which are disposed, respectively, on outer surfaces of a canister (21) and each of which has tooth sections (32) of constant pitch in the vertical direction; guide members (40) which are disposed along the racks (31), respectively; and a pair of elevation devices (30) for vertical movement of the canister (21) in a vertical passageway (2). Each of the pair of the elevation devices (30) includes: a pair of upper and lower catches (36), (38) which are respectively independently brought into fitting engagement and disengagement with tooth sections (32) at positions vertically spaced apart; a pair of upper and lower frames (34), (35) equipped with the catch (36) and the catch (38), respectively; and an elevation cylinder (33) arranged between the frames (34), (35). The elevation cylinder (33) is configured such that, with respect to one of the frames (34) firmly fastened to the vertical passageway, the elevation cylinder moves the other frame (35) vertically using the guide member (40) as a guide. According to this construction, the thruster can be raised to a position above a waterline.

IPC 8 full level
B63H 5/125 (2006.01); **B63H 5/20** (2006.01); **B63H 25/42** (2006.01)

CPC (source: EP KR)
B63H 5/125 (2013.01 - EP KR); **B63H 25/42** (2013.01 - KR); **B63H 2025/425** (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 2692630 A1 20140205; **EP 2692630 A4 20150121**; BR 112013024864 A2 20161220; CN 103429491 A 20131204; CN 103429491 B 20160316; JP 2012206556 A 20121025; JP 5119346 B2 20130116; KR 101531780 B1 20150625; KR 20130130052 A 20131129; WO 2012132400 A1 20121004

DOCDB simple family (application)
EP 12764722 A 20120327; BR 112013024864 A 20120327; CN 201280013189 A 20120327; JP 2011072206 A 20110329; JP 2012002101 W 20120327; KR 20137024815 A 20120327