

Title (en)  
A RETRACTABLE THRUSTER, A SWIMMING VESSEL AND A METHOD FOR RETRACTING AND EJECTING A PROPELLER OF THE RETRACTABLE THRUSTER

Title (de)  
EINZIEHBARES STRAHLRUDER, SCHIFF UND VERFAHREN ZUM EINZIEHEN UND AUSFAHREN EINES PROPELLERS DES EINZIEHBAREN STRAHLRUDERS

Title (fr)  
PROPULSEUR RÉTRACTABLE, CAISSON FLOTTANT ET PROCÉDÉ DESTINÉ À RÉTRACTER ET ÉJECTER UNE HÉLICE DU PROPULSEUR RÉTRACTABLE

Publication  
**EP 3170736 A1 20170524 (EN)**

Application  
**EP 16199089 A 20161116**

Priority  
FI 2015050808 W 20151120

Abstract (en)  
A retractable thruster for a swimming vessel, wherein the retractable thruster comprises a propeller (3) and a lifting and lowering arrangement (4). The lifting and lowering arrangement (4) is configured to vertically move the propeller between a retracted position and an ejected position. In the retracted position the propeller is substantially inside a bottom well (5) of the swimming vessel and in the ejected position the propeller is substantially outside the bottom well. The retractable thruster comprises a water-permeable protective element (7) configured to be located inside the bottom well above the propeller and configured to vertically move with the propeller. In the ejected position the water-permeable protective element is configured to substantially prevent loose ice from drifting inside the bottom well through the water-permeable protective element and when the propeller is moved from the retracted position to the ejected position, the water-permeable protective element is configured to push ice out of the bottom well.

IPC 8 full level  
**B63H 25/42** (2006.01)

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• [X] JP 2000272590 A 20001003 - HITACHI SHIPBUILDING ENG CO  
• [I] US 3483843 A 19691216 - HAWTHORNE JAMES M  
• [X] KR 20140133701 A 20141120 - SAMSUNG HEAVY IND [KR]  
• [A] JP S5241389 A 19770330 - KAWASAKI HEAVY IND LTD

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