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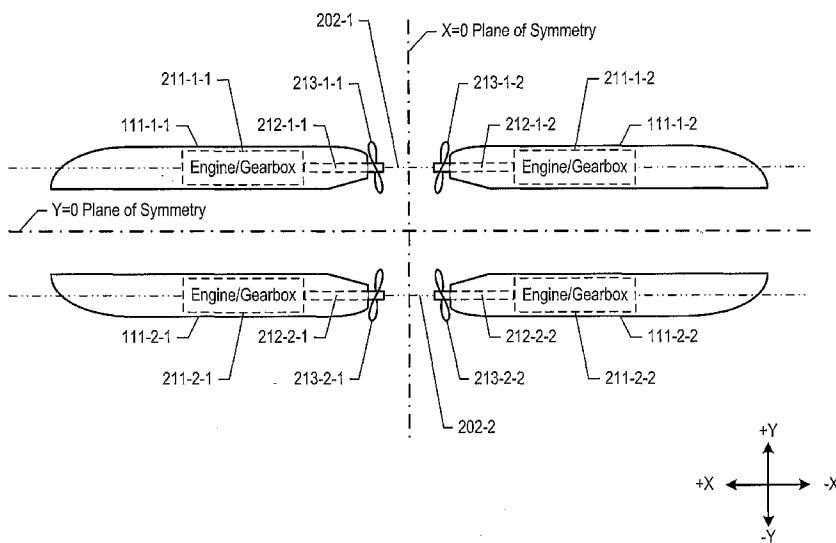
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(54) Title: MULTI-HULL WATERCRAFT WITH AMIDSHIPS-MOUNTED PROPELLERS



(57) Abstract: An efficient double-ended watercraft (100) is disclosed that comprises four low-Froude number hulls (111) : two forward, two aft, two on the port side, and two on the starboard. Each hull (111) comprises an independent engine that drives a propeller shaft (212) and propeller (213) that is located amidships. The propeller shafts (212) on the starboard are collinear, as are the propeller shafts on the port. The propellers on the starboard (213) are near each other and counter rotate, as do the propellers on the port. The propellers are variable-pitch propellers. When the ferry is changes from moving forward to moving in reverse and from reverse to forward, the propellers on the starboard exchange pitch. This enables the ferry to move as efficiently in reverse as it does when forward. The propellers on the port also exchange pitch when changing from moving forward to moving in reverse and from reverse to forward.

WO 2006/124041 A3

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

INV. B63B1/12 B63H5/08 B63B1/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B63H B63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2 393 234 A (BURGESS WILLIAM STARLING) 22 January 1946 (1946-01-22) figures	16-18
A	US 1 757 174 A (DOUGLAS HOMER C) 6 May 1930 (1930-05-06) the whole document	1,9, 16-18
A	US 1 703 722 A (CAROZZI AUGUSTO) 26 February 1929 (1929-02-26) the whole document	1,9,16
A	DE 31 736 C (A. BEHNES) 17 December 1884 (1884-12-17) figures	1,9

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2393234	A	22-01-1946	NONE
US 1757174	A	06-05-1930	NONE
US 1703722	A	26-02-1929	NONE
DE 31736	C		NONE