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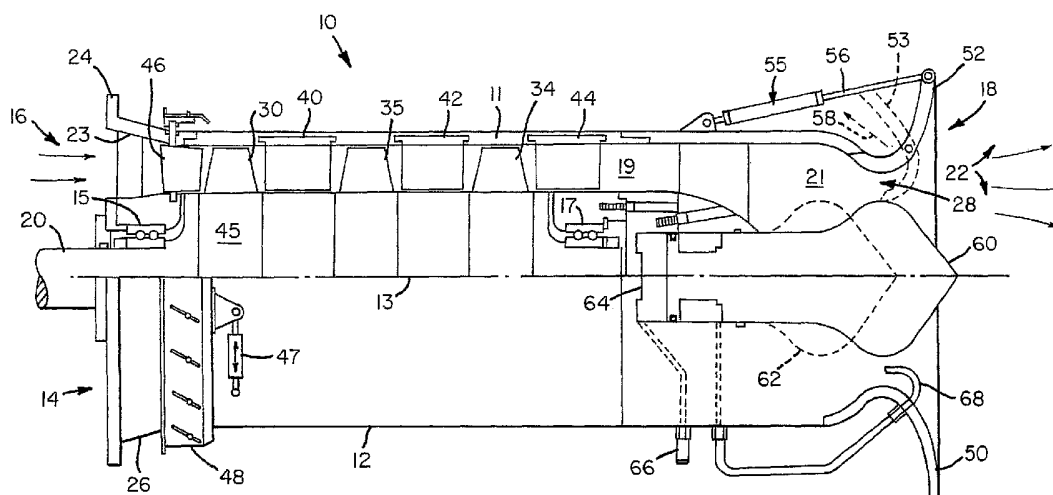
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: AXIAL FLOW PUMP AND MARINE PROPULSION DEVICE



(57) Abstract: A mechanically reconfigurable marine propulsion device (10) that adapts to engine torque and/or vessel speed thereby providing improved propulsive efficiency and performance. The axial flow propulsion device has two or more stages each having an impeller section and a stator section. Stator vanes (40, 42, 44) and/or the pumping chamber (19) provide a flow diffusion that generates increased hydrostatic pressure from ram pressure recovered from high velocity working fluid which, due to reduced fluid velocity and increased hydrostatic pressure, lowers cavitation events and frictional losses within the propulsion device. Optionally, variable-pitch vanes (80, 82) in the stator section control the amount of ram pressure imparted to the working fluid. Also optionally, variable-pitch inlet guide vanes (46) control the whirl angle and/or mass flow rate of incoming fluid independently of rotor or vessel speed. A set of fixed or variable exit guide vanes aft of the pumping chamber provides flow straightening.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC: B63H 11/00(2006.01)

USPC: 440/38

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)

U.S. : 440/1, 38, 47

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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,482,402 A (ANTHONEY, SR.) 09 December 1969 (09.12.1969), entire document.	
A	US 3,405,526 A (ASCHAUER) 15 October 1968 (15.10.1968), entire document.	



Further documents are listed in the continuation of Box C.



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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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