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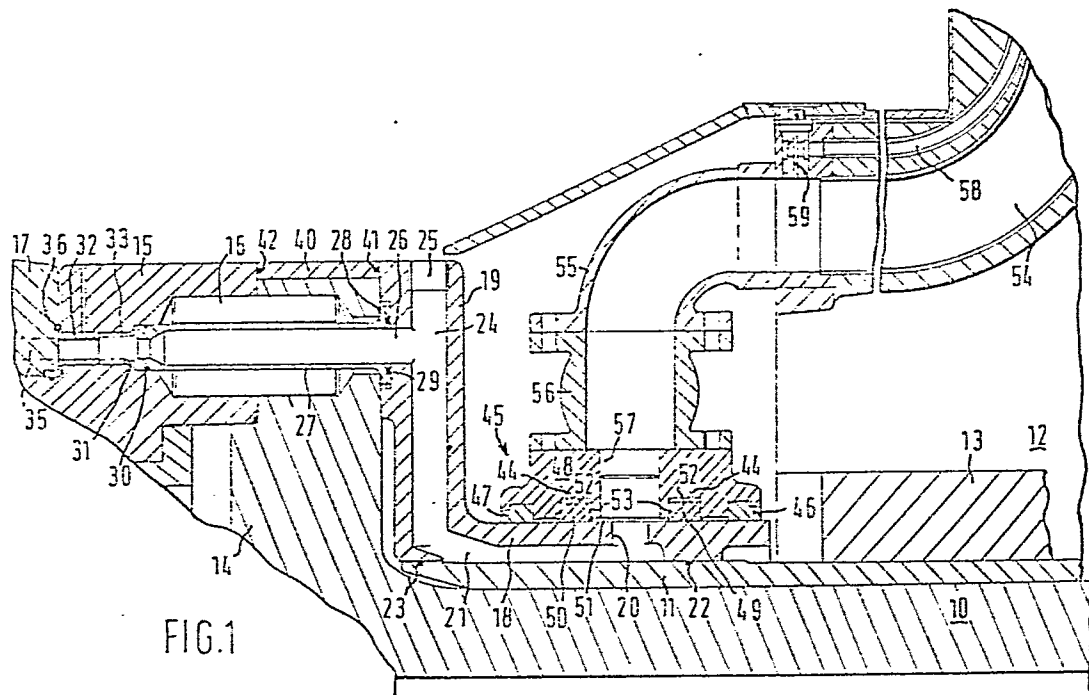
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54 **Multi-bladed propeller and shaft assembly.**

57 A multi-bladed propeller and shaft assembly is provided in which air can be fed to the propeller blades to reduce the effects of cavitation. A shaft (10) leads to a multi-bladed propeller (15) and carries a sleeve (18) formed with inlet passages (20) and axial and radial passages (21, 24) leading to the respective blades (17). A slip ring (45) supported in an anti-rotation device (62) allows the shaft sleeve (18) to rotate within axially spaced bearings (46, 47) of the slip ring (45). Axially spaced air seals (49, 50) together define with the body (48) of the slip ring an annulus (51) within which inlet passages (20) rotate. Each seal (49 or 50) is formed as a multiplicity of arcuate segments (80) resiliently biased towards the sleeve (18) and having movably sealed end face portions (81, 82) to maintain pressure tightness. The body (48) further has a radial flow passage (57) for admission of air under pressure to the annular space (57) and a flexible fluid connector (56) connects the radial flow passage (57) to an air supply line (54) leading from the hull structure. The present shaft delivery slip ring avoids the need to feed air down the whole length of the propeller shaft or to feed air into the hub through a slip ring making wiping contact with the hub, which is structurally more complex.





European Patent  
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# EUROPEAN SEARCH REPORT

0175533

Application number

EP 85 30 6384

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
D, A	GB-A-2 050 278 (CRANE PACKING CO.) * Whole document * ---	1	B 63 H 23/34 B 63 H 1/18
A	MARINE ENGINEERS REVIEW, July 1972, pages 19-24, London, GB; H. MEIER-PETER: "Contra-rotating propulsion systems" ---	1	
A	US-A-4 188 906 (TACHMINDJI) * Column 2, figure 1 * ---	1	
A	FR-A-2 403 478 (ETAT FRANCAIS)  -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			B 63 H
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 02-06-1986	Examiner VOLLERING J.P.G.
<b>CATEGORY OF CITED DOCUMENTS</b>			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	