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(54) **Balanced roller vane pump having reduced pressure pulses.**

(57) A balanced rotary pump is disclosed of the type including a pumping element (17) having a rotor member (25) defining a plurality of slots (27). Each of the slots receives a radially displaceable roller vane member (29). The pumping chamber is defined by a pair of inlet arc surfaces and a pair of discharge arc surfaces (65) of progressively decreasing radius. Each of the slots (27) includes a driving surface (73), each of which includes a substantial surface portion (77) or ended at a negative angle relative to a radial line. The engagement of each of the roller vane members (29) and its respective negative surface portion (77) is effective to act to reduce slightly the net radially outward force acting on the roller vane member, to reduce bouncing thereof as the roller vane member passes from the inlet arc surface to the discharge arc surface. The result is improved engagement of the roller vane member and the adjacent cam surface, reduced leakage past the vane member, and a reduction in pressure pulses and noise.

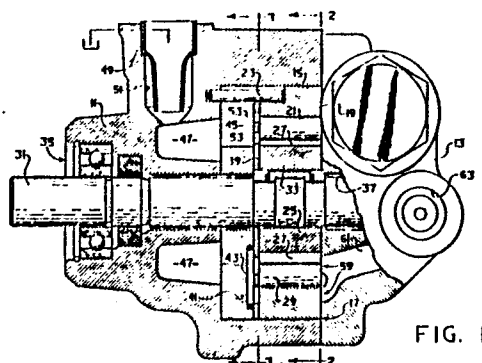


FIG. 1

0200294

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## EUROPEAN SEARCH REPORT

Application number

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 86300936.1
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
Y	GB - A - 2 118 247 (EATON) * Totality *	1,2	F 04 C 2/344
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Y	FR - A - 1 244 019 (MANTINGER) * Totality; especially page 4, column 1, line 50 - page 5, column 1, line 14; fig. 2 *	1,2	
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Y	FR - A - 1 120 012 (BADALINI) * Totality; especially fig. 1 *	1,2	
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			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			F 04 C 2/00 F 04 C 15/00
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 15-04-1987	Examiner WERDECKER
<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			