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(54) **Gear pump**

(57) The gear hydraulic means (2) includes a housing (12, 20) containing a first and a second cogwheel (4, 6) engaging for interacting with a hydraulic fluid, each wheel (4, 6) being joint to a respective shaft (8, 10) having the ends rotationally supported to said housing (12, 20), and hydraulic sealing means (42, 60) firmly coupled to respective support means (34, 46, 58); a method for

producing gear hydraulic means (2) is furthermore provided, including providing a housing (12, 20) suitable to house a first and a second cogwheel (4, 6) engaging for interacting with a hydraulic fluid, providing furthermore a shaft firmly coupled to each wheel and having the ends rotationally supported to said housing (12, 20), and firmly coupling hydraulic sealing means (42, 60) to respective support means (34, 46, 58).

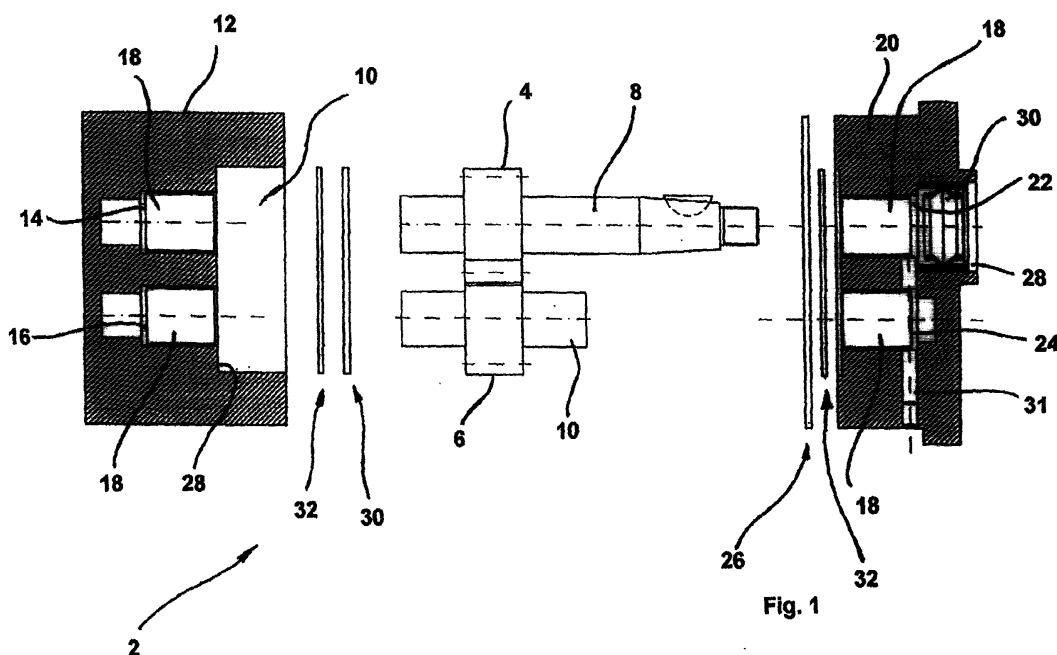


Fig. 1



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EUROPEAN SEARCH REPORT

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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.7)
X	US 3 213 800 A (MCALVAY ET AL) 26 October 1965 (1965-10-26) * claim 15; figures 1-10 * ---	1-3,5-13	F04C2/18 F04C15/00
X	US 3 363 578 A (SISSON RONALD L) 16 January 1968 (1968-01-16) * claim 1; figures 1-5 * ---	1,2,6, 10,11	
X	US 3 413 927 A (SHREVE CARMEN H ET AL) 3 December 1968 (1968-12-03) * claims 1,7; figures 1-4 * ---	1,2,6, 10,11	
X	US 3 174 435 A (SISSON ET AL) 23 March 1965 (1965-03-23) * claim 1; figures 1-3 * ---	1,2,6, 10,11	
X	US 3 213 799 A (TRICK) 26 October 1965 (1965-10-26) * claim 1; figures 1-8 * -----	1,2,6, 10,11	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			F04C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 8 June 2001	Examiner Dimitroulas, P
CATEGORY OF CITED DOCUMENTS 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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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08-06-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3213800 A	26-10-1965	DE 1553276 A GB 1147781 A	29-10-1970 10-04-1969
US 3363578 A	16-01-1968	NONE	
US 3413927 A	03-12-1968	NONE	
US 3174435 A	23-03-1965	NONE	
US 3213799 A	26-10-1965	DE 1553266 A FR 1373373 A GB 1057869 A	30-04-1970 06-01-1965 08-02-1967

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