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## EUROPEAN PATENT APPLICATION

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(84) Designated Contracting States:  
**CH DE FR GB IT LI**

**(54) A centrifugal pump.**

**(57)** A centrifugal pump comprises a pump body (24) defining a pump chamber (3), an electric motor (4) having a housing and a drive shaft (5), an impeller (6) which is mounted on the shaft (5) inside the chamber (3), a first plate (14) which is joined to the pump body (24) and the motor housing, and a second plate (15) which separates the chamber (3) from the motor (4).

To prevent the radially inner periphery of the second plate (15) being displaced by pressure inside the chamber (3), the first plate (14) has a portion (20) supporting the second plate (15).

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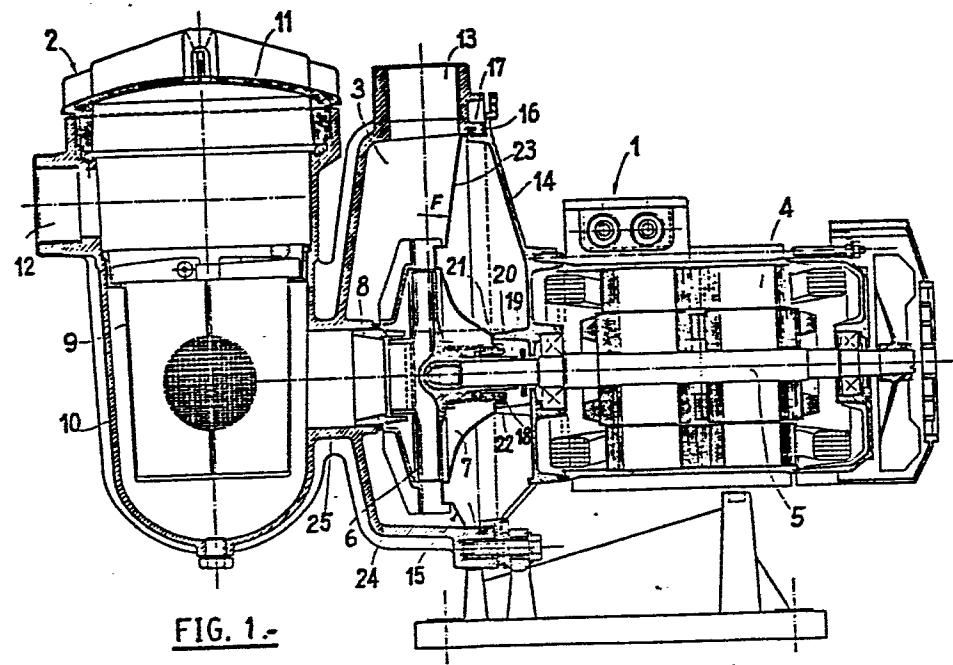


FIG. 1.



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)
X	CH-A- 321 841 (USINES GALLAY) * Page 1, lines 1-23,38-51; figure 1 *	1	F 04 D 29/42 F 04 D 29/58 F 04 D 29/08
Y	---	2,3	
Y	FR-A-2 227 447 (SPECK) * Claim 1; figure 1 *	2	
Y	---		
Y	DE-A-2 125 040 (SPECK) * Page 3, lines 10-29; figures 1, 2 *	3	
A	---	4	
A	DE-A-2 541 422 (SCHMALENBERGER) * Claim 1; page 11, lines 3-16; figures 1-3 *	1	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	---		F 04 D
A	US-A-3 819 297 (GENERAL GAS LIGHT) * Column 1, lines 4-10; column 4, lines 30-35; figure 1 *	1	
A	---		
A	DE-A-2 011 536 (LOWARA) * Claim 1; figure 1 *	1	
A	---		
A	FR-A-2 242 580 (DANSKE MEJERIERS) * Figure 1*	4	
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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			
Place of search	Date of completion of the search	Examiner	
The Hague	03-03-1987	WALVOORT	
CATEGORY OF CITED DOCUMENTS		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	
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			



### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid,  
namely claims:
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions,

namely:

- 1) Claims 1-4: "Second plate" arrangement
- 2) Claim 5: Seal

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid,  
namely claims:
- None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims,  
namely claims: 1-4