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# **EUROPEAN PATENT APPLICATION**

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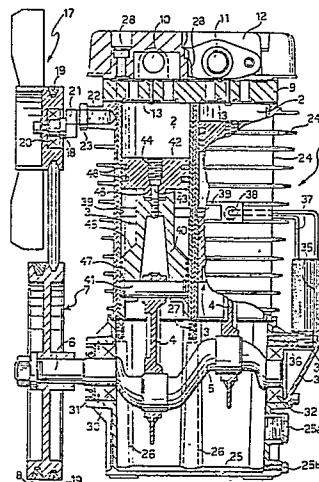
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## 54 **Improvements in air compressors.**

57 The improvements concern essentially:

- the presence of a valve-plate (9) through which ventilation channels (16) pass,
- the use of a cooling fan (17) which is driven by the shaft (5) of the compressor and can induce a forced flow of air through the channels (16),
- the provision of a lubricating-oil filler duct (36) separate from the oil-vapour discharge duct (32 to 35) which passes through one of the bearings (32) of the shaft,
- the use of a generally tank-shaped lower portion of the casing (25),
- the use of pistons (3) with sealing rings (48) mounted on a head portion (42) which can easily be separated from the rest of the piston (40) so that the rings (48) can be replaced without the need completely to dismantle the piston (3) and the members (4, 5) associated therewith, and
- the provision of annular cavities (39) in the walls of the cylinders (3) which act as sumps for the collection and recovery of the lubricating oil.

FIG. 1







EP 89 83 0054

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)
	23-51; figures 1,2 *		
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A	CH-A- 334 057 (SULZER)		
	* Page 3, lines 4-24; figure 1 *	1,7,16	
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A	FR-A- 789 561 (MEAF)		
	* Page 1, line 48 - page 2, line 18; figure 1 *	1,7,16	
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			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
<del>The present European search report does not contain any mention of</del>			
Place of search		Date of completion of the search	Examiner
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone		T : theory or principle underlying the invention	
Y : particularly relevant if combined with another document of the same category		E : earlier patent document, but published on, or after the filing date	
A : technological background		D : document cited in the application	
O : non-written disclosure		L : document cited for other reasons	
P : intermediate document		& : member of the same patent family, corresponding 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 1,6: Air compressor with through-apertures in the support
2. Claims 2-5: Kinematic coupling between driveshaft and pumping element
3. Claims 7,8,16: Tank-shaped casing
4. Claims 9,10: Ducts for filling the casing with lubricant and discharging the lubricant fumes
5. Claims 11-15: Piston in two portions releasably inter-connected

- ☐ 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: 1,6-8,16 (see points 1 and 3)
- ☐ 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: