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EUROPEAN PATENT APPLICATION

②① Application number: **80304648.1**

⑤① Int. Cl.³: **F 01 K 21/04, F 01 K 21/02,**
F 01 B 29/12

②② Date of filing: **19.12.80**

③① Priority: **16.07.80 AU 4554/80**
12.12.80 US 215867

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④③ Date of publication of application: **20.01.82**
Bulletin 82/3

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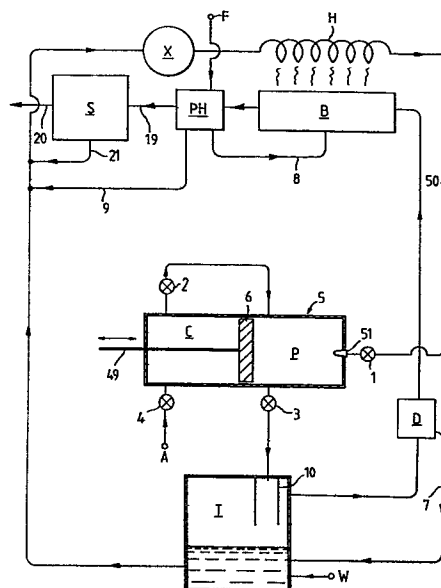
⑧④ Designated Contracting States: **AT BE CH DE FR IT LI**
LU NL SE

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⑧⑧ Date of deferred publication of search
report: **11.08.82 Bulletin 82/32**

⑤④ **Reciprocating external-combustion engine and method of operating the same.**

⑤⑦ A reciprocating external combustion engine wherein energy is transferred to air acting as a working gas by injection into the air of liquid water at a high temperature and pressure. The liquid water is injected either directly into the cylinder or into a preliminary mixing chamber. The water acts as a heat-transfer medium for heating the air. Spontaneous vaporization of the liquid water on injection increases the pressure of the air which drives the piston before being exhausted. The exhaust water is recovered and recycled. The cylinder is scavenged and refilled with a fresh charge of air.





European Patent
Office

EUROPEAN SEARCH REPORT

0043879

Application number

EP 80 30 4648

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. ³)
X	US-A-2 708 827 (LA MARCHE) *Column 1, line 13 to column 3, line 53*	1-5,10 ,11,13 ,14,15 ,16,17 ,18,19 ,20	F 01 K 21/04 F 01 K 21/02 F 01 B 29/12
X	GB-A-1 570 012 (D-CYCLE) *Page 1, line 1 to page 5, line 58*	1-21	
A	GB-A- 146 174 (MAN) *Figure 1; page 2, lines 3-53*	6,23, 22	
A	DE-A-1 601 111 (LICENTIA-PATENT) *Figure; page 3, paragraph 3 to page 4, paragraph 2*	1	TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
A	DE-A-1 551 260 (SIEMENS) *Page 7, paragraph 2*	1,2	F 01 K F 01 B
A	GB-A- 283 940 (FRANCHIMONT) *Page 1, lines 1-39; figure 1, page 4, lines 1-112*	23,22	
A	US-A-3 862 590 (MENGELER) *Column 2, lines 13-61*	1,22, 23	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 07-05-1982	Examiner WASSENAAR G.
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			