

⑫ **EUROPEAN PATENT APPLICATION**

⑳ Application number: **85114434.5**

⑤① Int. Cl.⁴: **F 02 B 75/04, F 02 B 41/04**

㉔ Date of filing: **13.11.85**

③① Priority: **23.11.84 PL 250559**

⑦① Applicant: **Politechnika Warszawska, Plac Jednosci Robotniczej 1, Warschau (PL)**

④③ Date of publication of application: **11.06.86**
Bulletin 86/24

⑦② Inventor: **Rychter, Tadeusz Jan, ul. Racławicka 112b m 2, Warszawa (PL)**

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

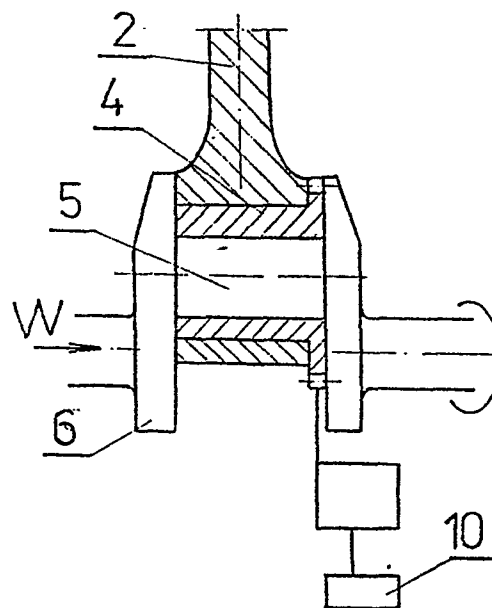
⑦④ Representative: **Finck, Dieter et al, Patentanwälte v. Fünser, Ebbinghaus, Finck Marienhilfplatz 2 & 3, D-8000 München 90 (DE)**

⑤④ **Crank mechanism of the internal combustion piston engine with variable crankthrow.**

⑤⑦ The invention solves the problem of continuous current changing the compression ratio within a wide range with simultaneous changing the engine capacity.

The essence of the invention consists in that the crank mechanism comprises an eccentric sleeve (4) being an intermediate element between the connecting-rod journal (5) of the crankshaft (6) and the big end of the connecting-rod (2). The axis of the internal hole of the sleeve (4) is moved in relation to the axis of the external cylindrical surface of the sleeve (4) by the eccentric size (e) bigger from zero and smaller or equal to 30% of the crankthrow (R) of the crankshaft. The eccentric sleeve (4) is connected with a driving gear ensuring the angular velocity (ω_m) of the sleeve (4) in relation to the connecting-rod journal (5) of the crankshaft (6) within the range of $\pm \frac{1}{2}\omega$ up to $\pm \omega$, where (ω) is the angular velocity of the crankshaft (6).

The crank mechanism is provided also with a control mechanism (10) of the angular position of the sleeve (4) by a definite angle ($\alpha\omega$) in relation to the crankthrow (R) of the crankshaft (6), determined at such a position of the crankthrow (R) in which the piston (1) is most distant from the crankshaft.





European Patent
Office

EUROPEAN SEARCH REPORT

0184042

Application number

EP 85 11 4434

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	DE-C- 329 861 (OBERURSEL) * Page 1, line 50 - page 2, line 2; figures 1-3 *	1-3	F 02 B 75/04 F 02 B 41/04
X	GB-A- 477 016 (SACCO) * Page 2, line 26 - page 3, line 6; figures 1-6 *	1-3	
X	DE-C- 181 913 (WRIGHT) * Page 1, lines 43-62; figures 1-6 *	1,2,4	
Y		6	
Y	FR-A- 986 605 (BREGUET) * Page 1, right-hand column, paragraph 7 - page 2, right-hand column, paragraph 3; figures 1-5 *	6	TECHNICAL FIELDS SEARCHED (Int. Cl.4) F 02 B
X	FR-A-1 014 314 (BERNARD) * Page 1, right-hand column, paragraphs 6-8; figures 1-7 *	1,2,5	
X	DE-C- 164 819 (HARNER) * Page 1, line 1 - page 2, line 18; figures 1-10 *	1,7	
A	DE-C- 583 428 (ZANKL)		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 16-12-1986	Examiner KOOIJMAN F.G.M.
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			