

Title (en)

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

Title (de)

Kurbelmechanismus für eine Brennkraftmaschine mit variablem Hub.

Title (fr)

Mécanisme vilebrequin-manivelle d'un moteur à combustion interne à course variable.

Publication

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Application

EP 85114434 A 19851113

Priority

PL 25055984 A 19841123

Abstract (en)

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 $\pm 1/2 \omega$ 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 (α_0) 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.

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IPC 8 full level

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