

Title (en)
Improvement to internal combustion engines

Title (de)
Verbesserungen an Brennkraftmaschinen

Title (fr)
Perfectionnement aux moteurs alternatifs à combustion interne ceux-ci comportant des culasses à soupapes concentriques

Publication
EP 0781898 A1 19970702 (FR)

Application
EP 96490045 A 19961120

Priority
FR 9514507 A 19951129

Abstract (en)
The cylinder head includes, for each cylinder, two annular valves concentric between them and the cylinder. The inlet valve ensures sealing of gas by a valve seat in the cylinder, and has a return system which tends to maintain the valve on its seat in the open or closed position under the effect of hydraulic pressure which is applied to the exit valve. The exit valve is located at the interior of the inlet valve and resting on it, and ensures the sealing by use of a valve seat which is located on the inlet valve. It has a return mechanism which tends to lift it from the seat, and is opened and closed by a cam, a piston and a volume of oil. The position of the hydraulic piston which corresponds with the closure of the two valves puts the volume of oil in connection with a source of pressure such that the pressure applied on the exit valve is sufficient to assure the sealing on its seat, but insufficient for opening the inlet valve. A part of the course of the hydraulic piston controls the opening and closing of the exit valve, and the other part of its course controls the displacement of the assembly of two valves and hence the opening and closing of the inlet valves. The displacement of the two valves is controlled by a single cam by cylinder.

Abstract (fr)
Culasse de moteur alternatif à combustion interne fonctionnant selon le cycle à 4 temps et comportant une soupape d'admission et une soupape d'échappement par cylindre. Ces deux soupapes, de forme annulaire, sont concentriques entre elles et avec le cylindre. La soupape d'échappement est située à l'intérieur de la soupape d'admission et s'appuie sur celle-ci. L'ouverture et la fermeture des deux soupapes sont commandées par une seule came par cylindre par l'intermédiaire d'une interface hydraulique alimentée sous pression et assurant le rattrapage automatique de l'usure.
<IMAGE>

IPC 1-7
F01L 1/28; **F01L 9/02**

IPC 8 full level
F01L 1/28 (2006.01); **F01L 9/11** (2021.01)

CPC (source: EP)
F01L 1/285 (2013.01); **F01L 9/11** (2021.01); **F01L 1/08** (2013.01)

Citation (search report)
• [A] WO 9508052 A1 19950323 - MELCHIOR TECHNOLOGIE [FR]
• [A] FR 852101 A 19400124
• [A] GB 416496 A 19340917 - CHARLES EDWARD MACLEA MARCH
• [A] DE 200793 C

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
FR 2741668 A1 19970530; **FR 2741668 B1 19980320**; EP 0781898 A1 19970702

DOCDB simple family (application)
FR 9514507 A 19951129; EP 96490045 A 19961120