Title (en)

PARALLEL CYLINDER INTERNAL COMBUSTION ENGINE.

Title (de)

BRENNKRAFTMOTOR MIT PARALLELEN ZYLINDERN.

Title (fr)

MOTEUR A COMBUSTION INTERNE A CYLINDRES PARALLELES.

Publication

EP 0027820 A4 19810827 (EN)

Application

EP 80901032 A 19801117

Priority

US 3555379 A 19790503

Abstract (en)

[origin: WO8002438A1] The engine comprises a number of pairs of pistons (PA, PA'), the two pistons in each pair acting in unison and the number of pairs being arranged parallel to each other and said pistons also being positioned parallel to and in a circle around the mainshaft (1) which has a cam lobe (3) located at a convenient part of the mainshaft and encircling the mainshaft. In a preferred modification, the cam lobe (3) has opposite surfaces which have rises and dips or, in other words, sinusoidal surfaces and are in contact with pairs of bearings (6) attached to connecting rods, these bearings being on opposite sides of the cam lobe and at one time being driven in one direction by one of the two pistons in each pair and then at another time in the opposite direction by the other piston in that pair, the two pistons of that pair being connected to each other by the same connecting rod (4, 5) carrying the bearings (6) which press against the cam lobe (3). The pressure exerted first by one bearing and then by the opposite bearing, in concert with similar thrusts from other pairs of bearings and pistons, causes a steady, even rotation of the shaft (1) on its linear axis. The action of the pistons and bearings is arranged and timed so that pressure against the surface of the cam lobe exerts vector forces against the curved surface of the cam lobe to effect rotation of the mainshaft. The pistons may be driven by combustion fuels, including gasoline, diesel, etc., and may also be adapted to steam operation. In another modification the sinusoidal surfaces are on the sides of a groove (40) cut into the annular surface (41) of the cam lobe (3). By appropriate changes, this engine may be operated as a compressor.

IPC 1-7

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IPC 8 full level

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