

Title (en)

PISTON WITH FLAT MOVABLE UPPER SURFACE

Title (de)

KOLBEN MIT FLACHER BEWEGLICHER OBERSEITE

Title (fr)

PISTON AVEC SURFACE SUPÉRIEURE MOBILE ET PLATE

Publication

EP 3290670 A1 20180307 (EN)

Application

EP 17001454 A 20170829

Priority

GB 201615056 A 20160905

Abstract (en)

The present invention comprises the use of a flat member (1.4, 2.4) which connects to a flexible member (1.3, 2.3) which attaches both said flat member (1.4, 2.4) and the top surface (1.10, 2.10) of the surface of the piston head (1.12, 2.12) which is positioned lower than the edge surfaces (1.1, 2.1) of said piston head (1.12, 2.12), such that said flat member (1.4, 2.4) is mounted on the lower surface (1.10, 2.10) of the piston head (1.12, 2.12). The aim of this design is to eliminate the exhaust fumes remaining inside the clearance volume by eliminating said clearance volume when the piston head (1.12, 2.12) reaches the top dead centre in the exhaust stroke, while keeping the clearance volume cleared when the piston head (1.12, 2.12) reaches top dead centre at the compression stroke. This design therefore removes more than 90 % of the clearance volume when it is required at top dead centre at the end of the exhaust stroke, while leaving the clearance volume clear at the compression and ignition strokes in order for the compressed gases to be housed inside the cylinder as required, hence maximising the combustion efficiency of the internal combustion engine. Said design can be applied to both two-stroke and four-stroke internal combustion engine designs.

IPC 8 full level

F02B 41/00 (2006.01); **F02B 75/04** (2006.01)

CPC (source: EP)

F02B 41/00 (2013.01); **F02B 75/044** (2013.01)

Citation (search report)

- [A] JP 2002371912 A 20021226 - MITSUBISHI HEAVY IND LTD
- [A] US 2376214 A 19450515 - WEBSTER PHILIP S
- [A] US 2012227705 A1 20120913 - ASHIZAWA TAKESHI [JP]
- [A] GB 2526336 A 20151125 - LEEUW JON OTEGUI VAN [DE]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3290670 A1 20180307; **EP 3290670 B1 20220608**; ES 2924042 T3 20221004; GB 201615056 D0 20161019

DOCDB simple family (application)

EP 17001454 A 20170829; ES 17001454 T 20170829; GB 201615056 A 20160905