

Search history

Search 1: FT=((engine or motor) and shaft and arm and cylinder and collar) (Results 27977)

Search 2: TAC=((engine or motor) and shaft and arm* and cylinder and collar) and PD<20151015 (Results 1420)

Search 3: TAC=((engine or motor) and shaft and arm* and cylinder and collar) and PD<20151015 (Results 1420)

Search 4: TAC=((engine or motor) and shaft and arm* and cylinder and collar) and FT=(camshaft and rocker) and PD<20151015 (Results 47)

Search 5: TAC=((engine or motor) and shaft and arm* and cylinder and collar) and FT=(camshaft and rocker) and SP=(collar and shaft) and PD<20151015 (Results 31)

Title: MIXED GAS **ENGINE**

Abstract: The mixed gas **engine** in accordance with the invention is used to obtain a power that is transmitted to a **shaft** to turn it, and it is made up of an oilbath body subassembly A containing a crankshaft-connecting rods-piston subassembly B, and over which is a **cylinder** unit subassembly C, a recuperator distributor body subassembly D containing a **rocker shaft** subassembly E, a **camshaft** subassembly F1 and another recuperator distributor subassembly G that also contains a **rocker shaft** subassembly H and a **camshaft** subassembly I, all connected to a pressurized circuit consisting of pressure pipes 164, a valve 165, a manometer 166, a bottle 167, and a compressor 168, known and not marked.

Classifications:

International (IPC 8-9): F01B F01B17/02 F01B23/00 F01B29/10 F01B29/12 F01B9/02 F02B75/00 (Advanced/Invention);

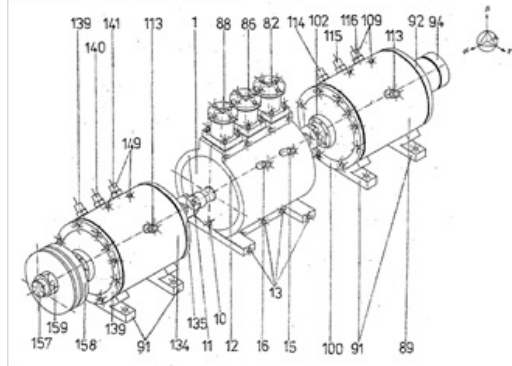
F01B (Subclass/Invention)

CPC: F01B17/02

European: F01B17/02

US: 91/508 91/508P

PatBase - US2012103180_AA



Family:

Publication number	Publication date	Application number	Application date
AU2009347258 AA	20101209	AU20090347258	20090720
BRPI0924647 A2	20160308	BR2009PI24647	20090720
CA2764858 AA	20101209	CA20092764858	20090720
CN102459813 A	20120516	CN200980160495	20090720
EA201171498 A1	20120530	EA20110071498	20090720
EP2438271 A1	20120411	EP20090788444	20090720
IL216889 A0	20120229	IL20090216889	20090720
IN00174CN2012 A	20130315	IN2012CN00174	20120104
JP2012528983 T2	20121115	JP20120513898T	20090720
KR20120035180 A	20120413	KR20127000378	20090720
MX2011013054 A1	20120228	MX20110013054	20090720
RO127031 A2	20120130	RO20090000421	20090605
RO127031 B1	20161028	RO20090000421	20090605
US2012103180 AA	20120503	US20090376200	20090720
WO10140910 A1	20101209	WO2009RO00008	20090720

Priority:

RO20090000421 20090605 WO2009RO00008 20090720

Probable Assignee: FOLEA GABRIEL

Assignee(s): (std): FOLEA GABRIEL ; GABRIEL FOLEA ; GOSTIN MARIN ; MARIN GOSTIN

Inventor(s): (std): FOLEA GABRIEL ; GABRIEL FOLEA ; GOSTIN MARIN ; MARIN GOSTIN

Agent(s): CHURCHILL ATTORNEYS; ROBIC; CIUDA BERIVOE ANCA; ONO SHINJIRO; KOBAYASHI YASUSHI; TOMITA HIROYUKI; CHIBA AKIO

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Agent(s): LEDERER AND KELLER PATENTANWAELTE PARTNERSCHAFT MBB; BRAND THOMAS LOUIS;
GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER; GRUENECKER KINKELDEY
STOCKMAIR AND SCHWANHAEUSSER; KELLEY DRYE AND WARREN LLP; VEDDER PRICE PC; YOHANNAN
DAVID R

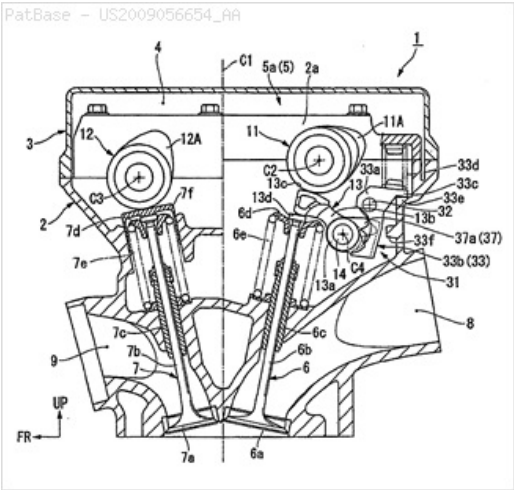
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IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT
MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST
SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: VALVE ACTUATING MECHANISM FOR AN INTERNAL COMBUSTION **ENGINE**, AND **CYLINDER** HEAD INCORPORATING SAME

Abstract: A valve actuating mechanism includes a first **rocker arm** moving mechanism including a first spring for urging left and right **rocker arms** from a first operation position side towards a second operation position side. The valve actuating mechanism also includes a second **rocker arm** moving mechanism including a second spring for urging the left and right **rocker arms** from the second operation position side towards the first operation position side. When a predetermined force is applied to the left and right **rocker arms** by one of the respective springs, the **rocker arms** are configured to be moved to operation positions corresponding to the applied force.

Classifications:

International (IPC 8-9): F01L1/12 F01L1/18 F01L1/34 F01L13/00 (Advanced/Invention); F01L1/12 F01L1/18 F01L1/34 F01L13/00 (Core/Invention)
CPC: Y10T74/2107 F01L1/185 F01L1/143 F01L13/0005 F01L13/0042 F01L2001/0537 F01L2105/00 F01L2820/032
European: F01L1/18D F01L13/00B F01L13/00D6B R01L1/053D R01L1/14B R01L105/00 R01L820/032
US: 123/90.16 123/90.17 123/90.170P 123/90.39 123/90.44 123/90.440S 74/569



Family:

Publication number	Publication date	Application number	Application date
DE102008015218 A1	20081009	DE200810015218	20080320
DE102008015218 B4	20151022	DE200810015218	20080320
ITTO20080229 A1	20080930	IT2008TO00229	20080326
JP2008248871 A2	20081016	JP20070095091	20070330
JP4920476 B2	20120418	JP20070095091	20070330
US2009056654 AA	20090305	US20080079664	20080327
US7938089 BB	20110510	US20080079664	20080327

Priority:

JP20070095091 20070330

Probable Assignee: HONDA MOTOR CO LTD

Assignee(s): (std): HONDA MOTOR CO LTD

Assignee(s): HONDA MOTOR CO

Inventor(s): (std): YAMAMOTO TOSHIKI ; YAMAMOTO TOSHIO

Agent(s): CARRIER BLACKMAN AND ASSOCIATES; CARRIER BLACKMAN AND ASSOCIATES PC; WILLIAM D; JOSEPH P

Title: VALVE GEAR FOR INTERNAL COMBUSTION **ENGINES**

Abstract: A valve gear for an internal combustion **engine** having a sub-**rocker arm** return spring that is shortened in a longitudinal length of a **cylinder**. The valve gear for the internal combustion **engine** is provided with a **camshaft**, an intake cam turning integrally with the **camshaft**, a valve cam for opening and closing an **engine** valve, a link mechanism for transmitting a valve driving force to the valve cam, a holder for supporting a sub-**rocker arm** support and a driving mechanism for varying a fulcrum position of the link mechanism. A valve operating characteristic can be varied with an oscillating position of the sub-**rocker arm** support. A sub-**rocker arm** is provided with a roller, an eccentrically disposed step and a link section. The step is provided with a spring socket, and a return spring is arranged intervening between the spring socket and the holder.

Classifications:

International (IPC 8-9): F01L1/02 F01L1/12 F01L1/18 F01L1/34

F01L13/00 (Advanced/Invention);

F01L1/02 F01L1/34 (Core/Invention)

CPC: Y10T74/20882 Y10T74/2107 F01L1/267 F01L13/0063

F01L2001/0537 F01L2013/0073

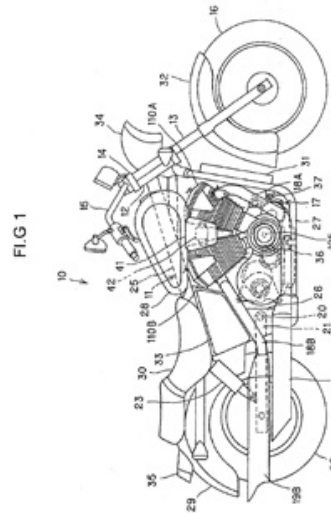
European: F01L1/26D F01L13/00D10 R01L1/053D R01L13/00D10B

US: 123/90.15 123/90.150P 123/90.16 123/90.31 123/90.310S

123/90.39 123/90.44 123/90.65 74/559 74/569

PatBase - US2010242875_AA

Patent Application Publication Sep. 30, 2010 Sheet 1 of 14 US 2010/0242875 A1



Family:

Publication number	Publication date	Application number	Application date
DE102010002971 A1	20101202	DE201010002971	20100317
JP2010229939 A2	20101014	JP20090080310	20090327
JP2010229940 A2	20101014	JP20090080311	20090327
JP2010229941 A2	20101014	JP20090080312	20090327
JP5212652 B2	20130619	JP20090080311	20090327
JP5340781 B2	20131113	JP20090080310	20090327
JP5346644 B2	20131120	JP20090080312	20090327
US2010242875 AA	20100930	US20100723485	20100312
US8225761 BB	20120724	US20100723485	20100312

Priority:

JP20090080310 20090327 JP20090080311 20090327 JP20090080312 20090327

Probable Assignee: HONDA MOTOR CO LTD

Assignee(s): (std): HONDA MOTOR CO LTD ; IMAFUKU TAKAHIRO ; SATO TOSHIYUKI ; CHO MASAKI

Assignee(s): HONDA MOTOR CO

Inventor(s): (std): SATO TOSHIYUKI ; IMAFUKU TAKAHIRO ; CHO MASAKI

Agent(s): BIRCH STEWART KOLASCH AND BIRCH; BIRCH STEWART KOLASCH AND BIRCH LLP

Title: VALVE ACTUATING SYSTEM FOR RECIPROCATING MACHINE

Abstract: A number of **cylinder** head arrangements that provide low cost and easy assembly of their various components with minimum labor and reduced necessity for line boring to reduce both manufacturing and assembly operation without adversely affecting performance.

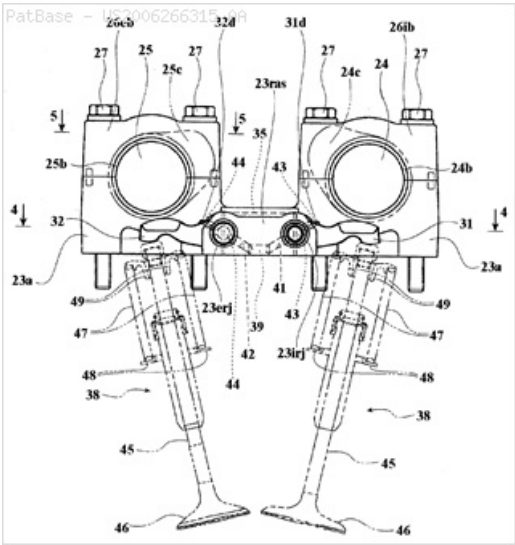
Classifications:

International (IPC 8-9): F01L1/02 F01L1/04 F01L1/053 F01L1/18 F01L1/34 F01M1/06 F01M9/10 F02F1/24 (Advanced/Invention); F01L1/02 F01L1/04 F01L1/18 F01L1/34 F01M1/06 F01M9/00 F02F1/24 (Core/Invention)

CPC: F01L1/185 F01L1/053 F01L2001/0537

European: F01L1/053 R01L1/053D

US: 123/90.16 123/90.160P 123/90.27 123/90.270S 123/90.44 123/90.440S



Family:

Publication number	Publication date	Application number	Application date
DE602006038429 D1	20131107	DE200660038429T	20060531
EP1728976 A1	20061206	EP20060011297	20060531
EP1728976 B1	20130918	EP20060011297	20060531
JP2007009904 A2	20070118	JP20060150549	20060530
JP4651579 B2	20110316	JP20060150549	20060530
US2006266315 AA	20061130	US20060308965	20060530

Priority:

JP20050159297 20050531 JP20060150549 20060530 EP20060011297 20060531

Probable Assignee: YAMAHA HATSUDOKI KK

Assignee(s): (std): YAMAHA MOTOR CO LTD

Assignee(s): YAMAHA HATSUDOKI IWATA KK ; YAMAHA HATSUDOKI KABUSHIKI KAISHA ; YAMAHA HATSUDOKI KK

Inventor(s): (std): HAMADA TSUNERO ; OKAMATO YASUO ; OKAMOTO YASUO

Agent(s): GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER; ERNEST A BEUTLER ATTORNEY AT LAW

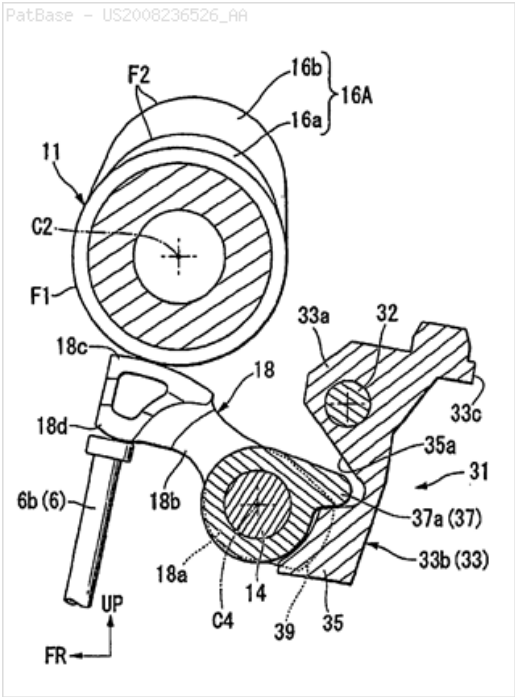
Designated states: AL BA DE FR GB HR IT MK YU

Title: VALVE ACTUATING MECHANISM FOR AN INTERNAL COMBUSTION **ENGINE**, AND **CYLINDER** HEAD INCORPORATING SAME

Abstract: A valve actuating mechanism for an internal combustion **engine** includes a first **rocker arm** moving mechanism, a second **rocker arm** moving mechanism, and a trigger **arm**. The first **rocker arm** moving mechanism moves left and right **rocker arms** from a first operation position side to a second operation position side. The second **rocker arm** moving mechanism moves the left and right **rocker arms** from the second operation position side to the first operation position side, and the trigger **arm** selectively restricts the movement of the left and right **rocker arms**. During **engine** operation, left and right **rocker**-side key portions of the left and right **rocker arms**, respectively, and left and right trigger-side key portions of the trigger **arm** selectively maintain or remove a restriction on the movement of the left and right **rocker arms**, in response to a rocking state of the left and right **rocker arms**.

Classifications:

International (IPC 8-9): F01L1/12 F01L1/18 F01L1/34 F01L13/00 (Advanced/Invention); F01L1/12 F01L1/18 F01L1/34 F01L13/00 (Core/Invention)
CPC: F01L1/185 F01L13/0036 F01L13/0063 F01L2013/0052 F01L2820/032
European: F01L1/18D F01L13/00D10 F01L13/00D6 R01L13/00D6G R01L820/032
US: 123/90.15 123/90.16 123/90.160P 123/90.39 123/90.390S



Family:

Publication number	Publication date	Application number	Application date
DE102008015197 A1	20081009	DE200810015197	20080320
DE102008015197 B4	20130228	DE200810015197	20080320
ITTO20080216 A1	20080930	IT2008TO00216	20080320
JP2008248870 A2	20081016	JP20070095090	20070330
JP4741541 B2	20110803	JP20070095090	20070330
US2008236526 AA	20081002	US20080079740	20080327
US7913658 BB	20110329	US20080079740	20080327

Priority:

JP20070095090 20070330

Probable Assignee: HONDA MOTOR CO LTD

Assignee(s): (std): HONDA MOTOR CO LTD

Assignee(s): HONDA MOTOR CO

Inventor(s): (std): YAMAMOTO TOSHIO ; SHIMIZU MASAHIRO ; YAMAMOTO TOSHIAKI

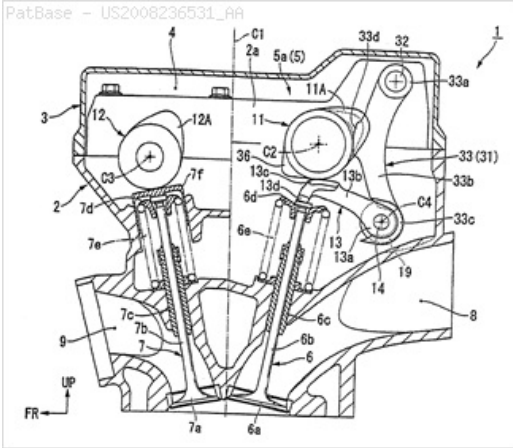
Agent(s): CARRIER BLACKMAN AND ASSOCIATES; CARRIER BLACKMAN AND ASSOCIATES PC; JOSEPH P; WILLIAM D

Title: VALVE ACTUATING MECHANISM FOR AN INTERNAL COMBUSTION **ENGINE**, AND **ENGINE** INCORPORATING SAME

Abstract: A valve actuating mechanism for an **engine** having a **rocker arm** movement restraining device which controls opening and closing an **engine** valve. The **rocker arm** movement restraining device includes a timing **arm** which engages left and right **rocker arms** for constraining the axial movement thereof, and a timing cam disposed on an intake-side **camshaft**. The **rocker arm** movement restraining device releases the engagement of the timing **arm** with the left and right **rocker arms** by activating the timing **arm** when the intake-side **camshaft** is rotated, and when the timing **arm** releases the engagement with the left and right **rocker arms**, the left and right **rocker arms** move to a predetermined operating position.

Classifications:

International (IPC 8-9): F01L1/12 F01L1/18
F01L13/00 (Advanced/Invention);
F01L1/12 F01L1/18 F01L13/00 (Core/Invention)
CPC: Y10T74/2107 F01L13/0021 F01L1/185 F01L13/0036
European: F01L1/18D F01L13/00D2 F01L13/00D6
US: 123/90.16 123/90.39 123/90.390P 74/569



Family:

Publication number	Publication date	Application number	Application date
DE102008015216 A1	20081002	DE200810015216	20080320
JP2008248872 A2	20081016	JP20070095092	20070330
JP4741542 B2	20110803	JP20070095092	20070330
US2008236531 AA	20081002	US20080079674	20080327
US7845325 BB	20101207	US20080079674	20080327

Priority:

JP20070095092 20070330 US20080079674 20080327

Probable Assignee: HONDA MOTOR CO LTD

Assignee(s): (std): HONDA MOTOR CO LTD

Assignee(s): HONDA MOTOR CO

Inventor(s): (std): KUROKI MASAHIRO ; YAMAMOTO TOSHIKI ; YAMAMOTO TOSHIO

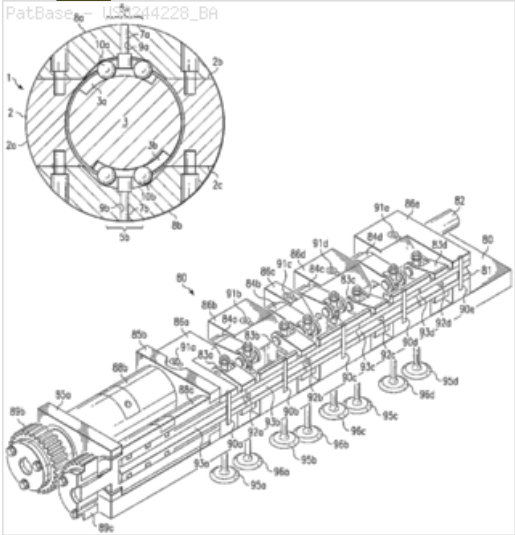
Agent(s): CARRIER BLACKMAN AND ASSOCIATES; CARRIER BLACKMAN AND ASSOCIATES PC; JOSEPH P; WILLIAM D

Title: ROTARY-TO-LINEAR MOTION CONVERTER AND USE THEREOF

Abstract: A rotary-to-linear converter for use with a valve actuation device having a linear reciprocating cam **shaft** having longitudinally extending cam grooves that are engaged by captive cam followers which oscillate up and down in response to sideways reciprocation of the **camshaft** for actuating intake or exhaust valves of internal combustion **engines** or other devices employing reciprocating pistons and valves. The **camshaft** is caused to reciprocate by a rotary linear converter of the "yankee" type composed of double helix channel at the extreme end of the **camshaft** and a rotary drive **collar** having two sets of diametrically opposed guide members. The guide members comprise dogs which are rotatably engaged with the drive **collar** and slidably engaged with the double helix channel of the cam **shaft**.

Classifications:

International (IPC 8-9): F01L1/00 F01L1/12 F01L1/14 F01L1/18 F01L1/46 (Advanced/Invention);
F01L1/00 F01L1/12 F01L1/14 F01L1/18 (Core/Invention)
International (IPC 1-7): F01L1/00 F16K31/44
CPC: F01L1/14 F01L1/00 F01L1/12 F01L1/18 F01L1/46 Y10T74/18312 Y10T74/1896 Y10T74/20882 Y10T137/86405
European: F01L1/00 F01L1/12 F01L1/14 F01L1/18 F01L1/46
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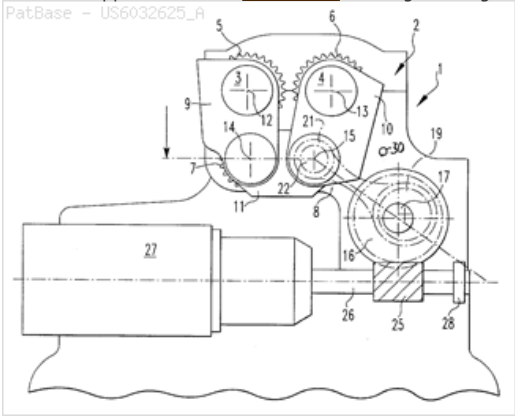


Title: Variable valve control for internal combustion engines

Abstract: In a variable valve control for an internal combustion engine with a cylinder head having a first camshaft controlling the opening of the engines intake valves and a second camshaft for controlling the closing of the engines intake valve, a control drive for driving the second camshaft at a variable angular position relative to the first camshaft so as to permit controlling the intake valve opening duration, a control wheel with an eccentric collar for actuating the control drive and a control motor for operating the control wheel, all mounted on a bearing housing supporting the camshafts, the control wheel is mounted on the bearing housing sidewardly displaced from the control drive and the control motor has a drive shaft which extends transversely to the axis of the control wheel and is supported on the camshaft bearing housing.

Classifications:

International (IPC 8-9): F01L1/352 F01L13/00 (Advanced/Invention); F01L1/344 F01L13/00 (Core/Invention)
International (IPC 1-7): F01L1/04 F01L1/34 F01L1/344 F01L13/00
CPC: F01L1/352 F01L13/0047 F01L2820/032
European: F01L1/352 F01L13/00D6E R01L820/032
US: 123/90.17 123/90.27 123/90.31



Family:

Publication number	Publication date	Application number	Application date
DE19747031 A1	19990429	DE19971047031	19971024
DE29724392 U1	20010104	DE19972024392U	19971024
EP0911494 A2	19990428	EP19980117309	19980912
EP0911494 A3	19990609	EP19980117309	19980912
US6032625 A	20000307	US19980173391	19981015

Priority:

DE19971047031 19971024 DE19972024392U 19971024

Probable Assignee: DAIMLER BENZ AG

Assignee(s): (std): DAIMLER CHRYSLER AG ; DALMERCHRYSLERAG

Assignee(s): DAIMLER BENZ AG ; DAIMLERCHRYSLER AG ; DAIMLERCHRYSLER AG 70567 STUTTGART DE

Inventor(s): (std): SCHWEGLER ROLAND ; SCHWEGLER ROLAND DIPL ING

Inventor(s): SCHWEGLER ROLAND DIPL ING 71384 WEINSTADT DE

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Title: ATTAIN'S NEW SPRING ASSEMBLY (ANSA)

Abstract: Attains' New Spring Assemblies, called "ANSA" for short, are designed to function in all Internal Combustion (I.C.) **engines** using poppet valves. The said **engines** may be of the gasoline, or Diesel-type, of the 4-stroke, or 2-stroke variety with valves. ANSA Valve Trains are intended for OHV **motors** (with pushrods and **rockers**), or SOHC **engines** (with **rockers** only), or DOHC **engines** with, or without **rockers**. The number of **cylinders**, their disposition within an **engine**, as well as the end-use of all said **motors** are transparent to their application. The older SV (Side Valve) **motors**, with so-called 'flat-heads', are no longer produced for automotive lines, and are not covered by Attains innovations. Nearly 100 percent of the above enumerated categories of **engines** use compression coil springs in their valve mechanisms. Noted exceptions are: 1. desmodromic valve trains (operating without main springs are found currently only in motorcycle **engines** produced by the Italian Ducati, and 2. **engines** using torsion springs in the past (e. g.. the French automobile Dyna-Panhard in the 1950's, and in the Honda motorcycles in the 1970' s.) The said embodiments of ANSA Valve Trains modifies only the **cylinder** head of an **engine** only components found between the **camshafts** and the valves are affected. These are: the pushrods (in OHV **motors** only), the **rockers**, valve-lash adjusters, springs and the valves' stems. All other major **engine** assemblies and components remain the same, including the **engine's** short-block, i.e. the **motor**, without its **cylinder** head (s). -II- Equally unaffected are the **engine's** key operating systems, also referred to as **engine** management systems, namely: ss the **camshaft** systems, their timing, lift, valve overlap, concentric opening and closing of the valves and "variable indexing", if any ss the ignition systems, i.e. the timing and firing of the spark plugs, usually under the control of a micro-processor ss the fuel (injection) system, i.e. its timing delivery and the quantity of fuel needed, also governed by discrete computer functions. As to the **engine's cylinder** head, two key design elements also remain unaffected they are: ss the combustion chamber - its shape, volume (measured normally in cubic centimeters), the location of the spark plug(s) in the chamber, and the placement of the valves (expressed in terms of IVA~, i.e. included valve angle), the lift of the valves (often called the 'valve curtain') the sizes of the valves' heads and their seating angles in the **cylinder** head itself ss the **engine** ports both the intake and exhaust ports. Hence, the conclusion, that the combustion process of any **engine** to which the ANSA Valve Trains have been applied, will retain its combustion process at a status quo level, with all its implications of compliance to environmental conditions and to the EPA bodies (Environmental Protection Agency) that test and certify all new **engines** annually. -III- However, the application of ANSA's Valve Train componentry to the **cylinder** head of the said **engines** claims a substantial reduction in its height, in a range of 45 percent to 50 percent, when measured vertically up from the 'deck-line' (the interface between the **engine's** short-block and the **cylinder** head) and also a 40 percent to 45 percent + reduction in the height of the main **cylinder** head casting, measured in the same way. Also claimed is a 25 percent to 45 percent reduction of the valve trains' reciprocating weight, through a substantial reduction in the physical size of related valve train components. Also the said attributes and claims of ANSA's Valve Trains lead to an overall **cylinder** head weight reduction in the range of 25 percent to 35 percent, translating into significant reduction of materials usage, production costs and realization of manufacturing economies. An average-size V-8 **motor**, if made out of steel, is claimed to be 50 to 100 lbs, lighter, saving between \$65 to \$100 per **engine** in production. Being substantially lighter, ANSA Valve Train components will operate with reduced spring pressures, leading to a reduction of the internal friction in all **engines** that take advantage of the said valve trains. Also, reduction of the internal friction is known to increase the mechanical efficiency of the **engine**. Operating with reduced valve-stem sizes and reduced diameter valve guides, Attains Valve Trains also claim to enhance the volumetric efficiency of a given **engine**, since the said valve train components will now offer a reduced resistance to the incoming fuel/air mixture, as well as to the gases leaving the **engine's** exhaust port.

Classifications:

International (IPC 8-9): F01L1/00 F01L1/20 F01L1/30

F01L3/00 (Advanced/Invention);

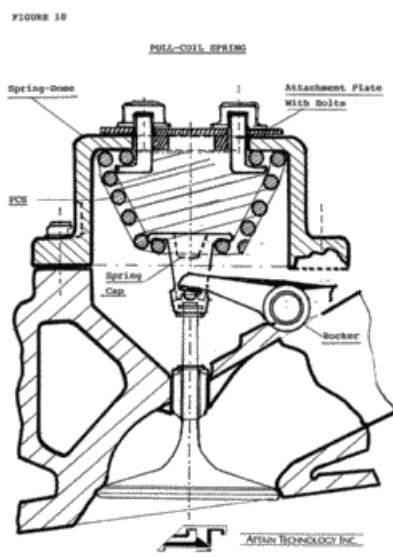
F01L1/00 F01L1/20 (Core/Invention)

International (IPC 1-7): F01L1/00 F01L3/00

CPC: F01L1/20 F01L1/30

European: F01L1/20 F01L1/30

PatBase - CA2221622_A 0321622 1998-01-29



Family:

Publication number	Publication date	Application number	Application date
CA2221622 AA	19990729	CA19982221622	19980129

Priority:

CA19982221622 19980129

Probable Assignee:

OTTLIK NICHOLAS M

Assignee(s): (std):

OTTLIK NICHOLAS M

Inventor(s): (std):

OTTLIK NICHOLAS M

Title: Injection unit associated with each **cylinder** of a multicylinder diesel **engine**

Abstract: An injection unit which is associated with a **cylinder** of a multicylinder diesel **engine** and comprises an injection nozzle and an injection piston pump which is disposed in a common housing and is driveable by a cam **shaft**. Said pump comprises a rotatable pump piston which is displaceable in a pump **cylinder** and has two control edges disposed axially spaced from each other for at least one fuel passage of the pump **cylinder**. To obtain the desired injection accuracy by accurately observing only a few dimensions during the production and without further tests, measuring and adjusting operations, the pump piston (3) and the pump **cylinder** (14) each comprise at least one stop face (24, 25) extending transversely preferably normal to the pump longitudinal axis. Said faces cooperate in the basic position of the pump piston (3) assumed in the installation of the unit in the **engine** directly or indirectly with simultaneous rotational position fixing of the pump piston (3).

Classifications:

International (IPC 8-9): F02M57/02 F02M59/44

F02M59/48 (Advanced/Invention);

F02B3/06 (Advanced/Non-invention);

F02M57/00 F02M59/00 (Core/Invention);

F02B3/00 (Core/Non-invention)

International (IPC 1-7): F02M47/02 F02M57/02 F02M59/44

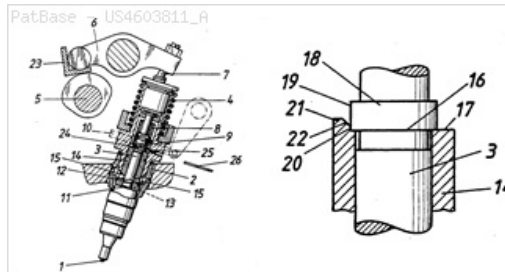
F02M59/48 F02M65/00

CPC: F02M59/48 F02B3/06 F02M57/02 F02M57/023 F02M59/44

European: F02M57/02 F02M57/02C1 F02M59/44 F02M59/48

R02B3/06

US: 239/90 417/499



Family:

Publication number	Publication date	Application number	Application date
AT205583 A	19871215	AT19830002055	19830606
AT386255 B	19880725	AT19830002055	19830606
DE3420775 A1	19841206	DE19843420775	19840604
DE3420775 C2	19900531	DE19843420775	19840604
FR2553833 A1	19850426	FR19840008774	19840605
FR2553833 B1	19890303	FR19840008774	19840605
GB2144183 A1	19850227	GB19840013242	19840523
GB2144183 B2	19870423	GB19840013242	19840523
GB8413242 A0	19840627	GB19840013242	19840523
JP2506186 Y2	19960807	JP19920009995U	19840604
JP2506186 Y2	19960807	JP19920009995U	19920117
JP60006067 A2	19850112	JP19840113248	19840604
JP6083955 U1	19941202	JP19920009995U	19920117
US4603811 A	19860805	US19840608977	19840510

Priority:

AT19830002055 19830606 JP19840113248 19840604

Probable Assignee: STEYR DAIMLER PUCH AG

Assignee(s): (std): STEYR DAIMLER PUCH AG

Assignee(s): STEYR DAIMLER PUCH AG WIEN AT ; STEYR DAIMLER PUCH AKTIENGESELLSCHAFT ; SHIYUTAIRU DAIMURAA PUUFU AG

Inventor(s): (std): FREUDENSCHUSS OTTO DIPL ING ; ROLLENITZ LEOPOLD ING ; SCHMIDT HARALD ING ; YOOZEFU MORERU ; REEPORUTO RORENNITSUTSU ; OTSUTO FUROIDENSHIYUSU ; HAARARUTO SHIYUMITSUTO ; SCHMIDT HARALD ; ROLLENITZ LEOPOLD ; MORELL JOSEF ; FREUDENSCHUSS OTTO

Inventor(s): OTTO FREUDENSCHUSS LEOPOLD ROLLENITZ ET HARALD ; MORELL JOSEF WIEN AT ; OTTO FREUDENSCHUSS LEOPOLD ROLLENITZ ET HARALD SCH ; SCHMIDT HARALD ING WIEN AT ; ROLLENITZ LEOPOLD ING KIRCHSTETTEN AT ; HARALD SCHMIDT ; JOSEF MORELL ; LEOPOLD ROLLENITZ ; OTTO FREUDENSCHUSS

Title: Disconnecting valve **rocker** mechanism

Abstract: The invention concerns a **rocker** mechanism designed to put out of use at least one **cylinder**, or a group or row of **cylinders**, of an internal combustion **engine** by acting on the inlet valve. The mechanism includes at least one **rocker** comprised of two components meshed with one another, one of those components controlling the inlet valve of the **cylinder** while the other is controlled by the cam **shaft** of the **engine**, and associated with control means allowing for the disconnection of the **rocker** components from one another. Application is to energy savings.

Classifications:

International (IPC 8-9): A01B15/14 A01B3/42 F01L13/00

F02D13/06 (Advanced/Invention);

A01B15/00 A01B3/00 F01L13/00 F02D13/06 (Core/Invention)

International (IPC 1-7): A01B15/14 A01B3/30 A01B3/42 A01B3/426

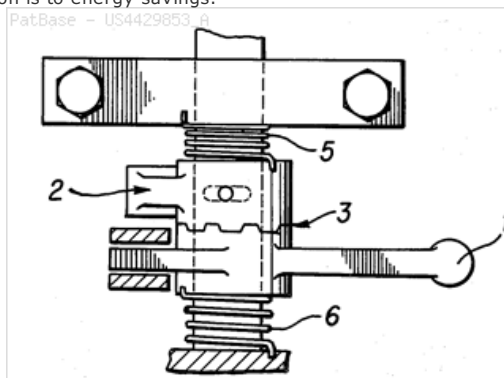
A01B3/46 A01B59/048 A01B73/06 F01L1/02 F01L1/18 F01L1/46

F01L13/00 F02D13/06 F02D17/02

CPC: A01B3/42 A01B15/14 Y02T10/18 F02D13/06 F01L13/0005

European: A01B15/14 A01B3/42 F01L13/00B F02D13/06

US: 123/198.00F 123/198F 123/90.16



Family:

Publication number	Publication date	Application number	Application date
AT354780 A	19841015	AT19800003547	19800708
AT377891 B	19850510	AT19800003547	19800708
BE884281 A	19801103	BE19800201381	19800711
CH636243 A	19830531	CH19800005284	19800710
DE3019348 A1	19810219	DE19803019348	19800521
DE3019348 C2	19900830	DE19803019348	19800521
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DE8013672 U1	19820916	DE19800013672U	19800521
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DK159361 C	19910318	DK19800003031	19800714
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EP0040121 B1	19831005	EP19810400629	19810421
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ES8103907 A1	19810416	ES19800493755	19800728
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FI73861 B	19870831	FI19800002207	19800709
FI73861 C	19871210	FI19800002207	19800709
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FR2462084 A1	19810213	FR19790019663	19790731
FR2462084 B1	19820702	FR19790019663	19790731
FR2481871 A2	19811113	FR19800010287	19800508
FR2481871 B2	19840413	FR19800010287	19800508
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FR2482193 B1	19841026	FR19800010284	19800508
FR2492458 A2	19820423	FR19800022235	19801017
FR2492458 B2	19851227	FR19800022235	19801017
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PT71575 A	19800801	PT19800071575	19800718
US4429853 A	19840207	US19810258315	19810428

Priority:

FR19790019663 19790731
FR19800022235 19801017

FR19800010284 19800508

FR19800010287 19800508

Probable Assignee: NAUD EXPL CHARRUES

Assignee(s): (std): SOC D EXPLOITATION DES CHARRUES NAUD SA ; RENAULT REGIE NALE USINES ; REGIE NATIONALE DES USINES RENAULT ; DES CHARRUES NAUD SA SOC D EXP ; D EXPLOITATION DES CHARRUES NAUD TE BEAUPR SOC ; DES CHARRUES NAUD S A SOC D EX ; RENAULT ; NAUD EXPL CHARRUES ; D EXPLOITATION DES CHARRUES NAUD S A SOC ; D EXPLOITATION DES CHARRUES NAUD SA SOC

Assignee(s): D EXPLOITATION DES CHARRUES NAUD SOC ; D EXPLOITATION DES CHARRUES NAUD BEAUPREA SOC ; DES CHARRUES NAUD SOC D EXP SA ; EXPLOITATION DES CHARRUES NAUD S A SOC D ; SOCIETE D EXPLOITATION DES CHARRUES NAUD ; SOC D EXPLOITATION DES CHARRUES NAUD ; EXPLOITATION DES CHARRUES NAUD S A SOCIETE D ; SOCIETE D EXPLOITATION DES CHARRUES NAUD SA ; SOCIETE D EXPLOITATION DES CHARRUES NAUD S A ; SOCIETE D EXPLOITATION DES CHARRUES NAUD BEAUPREAU FR ; SOCIETE D EXPLOITATION DES CHARRUES NAUD TE BEAUPREAU FRANKRIJK

Inventor(s): (std): SAINDON ALAIN ; HUBERT DEFRANCQ ; GUICHERD CHRISTIAN ; DEFRANCQ HUBERT ; DEFRANCQ H ; DEFRANCO HUBERT ; DEFRANCO H ; CHRISTIAN GUICHERD ET ALAIN SAINDON ; CHAFFIOTTE PIERRE

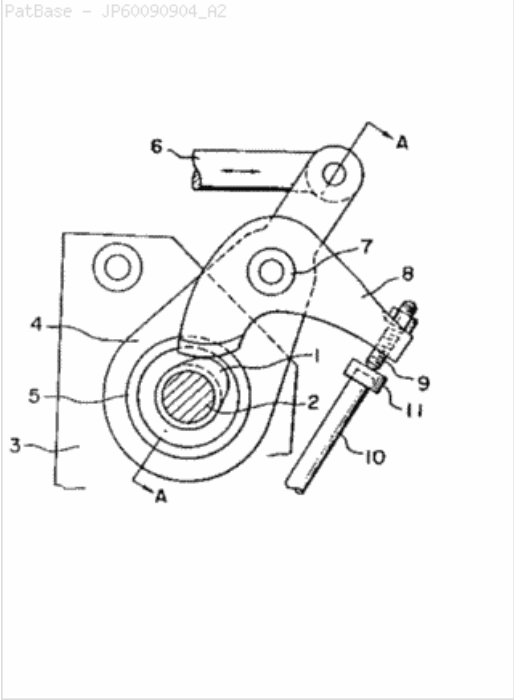
Inventor(s): DEFRANCQ HUBERT JANVILLE FR ; H DEFRANCQ
Designated states: BE DE GB IT NL SE

Title: VALVE TIMING VARIABLE DEVICE OF 4-CYCLE ENGINE

Abstract: PURPOSE:To change valve timing during the operation of an engine to improve the performance of the engine by changing the relational position of a rocker arm and a cam by swinging of a rocker arm and a cam by swinging a rocker arm provided around the periphery of a cam shaft and also changing the time of opening or closing a bevel valve. CONSTITUTION:A cam shaft 2 provided with a cam 1 is axially supported on a cylinder head 3 in a freely rotatable manner, and is rotated in linkage with a crankshaft. Further, a rocker arm 4 is axially supported on the cylinder head 3 through a collar 5 so that the rocker arm 4 can swing around the periphery of the camshaft 2, and a rocking rod 6 in connected to the tip end of the rocker arm 4. A rocker shaft 7 is secured to the rocker arm 4. One end of a rocker arm 8 axially supported on the shaft 7 in a swingable manner, abuts against the cam 1 and another end of the rocker arm 8 abuts against a cap 11 on the upper end of a bevel valve 10 through a clearance adjustor 9. By this procedure, it is possible to change the opening or closing time of the bevel valve 10 by the swinging of the rocker arm 4.

Classifications:

International (IPC 8-9): F01L1/18 F01L1/34
F01L13/00 (Advanced/Invention);
F02B75/02 (Advanced/Non-invention);
F01L1/18 F01L1/34 F01L13/00 (Core/Invention);
F02B75/02 (Core/Non-invention)
International (IPC 1-7): F01L1/18 F01L1/34
CPC: F01L1/34 F02B2075/027
European: F01L1/34 R02B75/02S4



Family:

Publication number	Publication date	Application number	Application date
JP60090904 A2	19850522	JP19830198068	19831022

Priority:

JP19830198068 19831022

Probable Assignee: SUZUKI MOTOR CO
Assignee(s): (std): SUZUKI MOTOR CO
Assignee(s): SUZUKI JIDOSHA KOGYO KK
Inventor(s): (std): KURATA KOUSHIROU