

Title (en)
Valve-rotating device.

Title (de)
Vorrichtung zum Drehen von Tellerventilen.

Title (fr)
Dispositif de rotation de soupape.

Publication
EP 0190432 A1 19860813 (DE)

Application
EP 85115500 A 19851206

Priority
DE 3501221 A 19850116

Abstract (en)
1. Device for rotating poppet valves (1), which are loaded by helical springs (5), in internal combustion engines during the movement of the valve (1), in which the spring (5) is arranged between a spring plate (6) and a counter bearing (7) which is arranged so as to be rotatable via a bearing and the rotary movement of which with respect to a base plate (9) is stopped in one direction in accordance with the free wheeling principle in that mountings (10), which are arranged concentrically about the axis of the base plate (9) via roller members (11) as clamping members, are provided so as to form inclined planes, and the roller member (11) is relieved of its load and runs freely as the spring (5) is increasingly loaded and the poppet valve (1) opens, while the roller member (11) is increasingly loaded and locked when the load on the spring (5) is released and the poppet valve (1) closes upon the relative rotation of the base plate (9) with respect to the spring (5), the base plate (9) with mountings (10) for roller members (11) as cylindrical rollers being encompassed in an annular manner by the rotatable counter bearing (7) and the roller member (11) being arranged between an internal wall (12) of the counter bearing (7) and an associated boundary surface (13) of the mounting in the base plate (9) in the manner of an inclined plane with respect to the internal wall (12) of the counter bearing (7), characterised in that at least the area of the boundary surface (13) for the roller member (11) is formed as a pivotable plate element (15) in the fixed position which comprises a plane rolling surface (16) for the roller member (11), while its opposite bearing side (17) is curved in the manner of a circular arc for automatic adjustment and comprises a corresponding mounting surface (18) in the base plate (9) for adjusting the lines of contact between the roller member (11) and the plate element (15) and between the roller member (11) and the counter bearing (7) parallel to the roller member axis.

Abstract (de)
Bei diesen Vorrichtungen mit schraubenförmigen Federn zwischen einem Federteller und einem drehbar angeordneten Widerlager ist vorgesehen, eine Drehung des Widerlagers in einer Drehrichtung nach dem Freilaufprinzip zu ermöglichen. Hierzu sind in dieser Ausbildung Wälzkörper (11) in Aufnahmen (10) einer Grundplatte angeordnet, die von dem Widerlager ringförmig umfaßt wird, wobei der Wälzkörper (11) als Zylinderrolle zwischen der Innenwandung (12) des Widerlagers und einer Begrenzungsfläche (13) der Aufnahme angeordnet ist. Zum Festsetzen der Zylinderrolle ist die Begrenzungsfläche (13) in der Art einer schiefen Ebene zur Innenwandung (12) angeordnet. Der Bereich der Begrenzungsfläche in der Aufnahme für die Zylinderrolle ist als verschwenkbar eingesetztes Plattenelement (15) ausgebildet, das eine plane Lauffläche für die Zylinderrolle aufweist, während seine gegenüberliegende Auflagerseite zur selbsttätigen Einstellung kreisbogenartig gewölbt und eine korrespondierende Aufnahmefläche zur Einstellung parallel zur Wälzkörperachse aufweist.

IPC 1-7
F01L 1/32

IPC 8 full level
F01L 1/32 (2006.01)

CPC (source: EP)
F01L 1/32 (2013.01)

Citation (search report)
• [Y] FR 2075752 A5 19711008 - MAERKISCHES WERK GMBH
• [Y] DE 3304878 A1 19840816 - SCHAEFFLER WÄELZLAGER KG [DE]
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DE FR GB

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