

Title (en)

Valve spring in an internal combustion engine

Title (de)

Ventilfeder in einer Brennkraftmaschine

Title (fr)

Ressort de soupape dans un moteur à combustion interne

Publication

**EP 0957238 A1 19991117 (EN)**

Application

**EP 98303772 A 19980513**

Priority

EP 98303772 A 19980513

Abstract (en)

A valve spring (1) is used in a valve operating mechanism for moving a poppet valve (6) up and down in an internal combustion engine of an automobile. The terminal end of the uppermost portion (9) of the valve spring (1) extends in a tangential direction to go away from an axis of the valve spring (1), thereby avoiding contact with a retainer (2) to prevent wear. <IMAGE>

IPC 1-7

**F01L 1/46**

IPC 8 full level

**F01L 1/46** (2006.01)

CPC (source: EP)

**F01L 1/462** (2013.01)

Citation (search report)

- [A] DE 1174576 B 19640723 - FORD WERKE AG
- [A] US 4017062 A 19770412 - ZWIRNER ECKHARD
- [A] PATENT ABSTRACTS OF JAPAN vol. 006, no. 071 (M - 126) 6 May 1982 (1982-05-06)
- [A] PATENT ABSTRACTS OF JAPAN vol. 096, no. 005 31 May 1996 (1996-05-31)

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DE GB

DOCDB simple family (publication)

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