

Title (en)
FUEL INJECTION NOZZLE.

Title (de)
KRAFTSTOFFEINSPRITZDÜSE.

Title (fr)
INJECTEUR DE CARBURANT.

Publication
EP 0404917 A1 19910102 (DE)

Application
EP 90901720 A 19900112

Priority
• DE 3900762 A 19890112
• DE 3900763 A 19890112

Abstract (en)
[origin: WO9008257A1] A fuel injection nozzle, in particular a pump nozzle, has a nozzle needle (3) which is spring loaded in the closing direction. The pressure chamber in front of the seat of the nozzle needle communicates with a storage chamber (34) delimited by a spring-loaded alternate piston (6). The end of the alternate piston (6) remote from the storage chamber (34) is acted on by the pressure in a damping chamber (16) which can be filled with fuel, and has a pintle (17) which penetrates an opening in a disk (19) that delimits the damping chamber (16). The cylindrical guide part (7) of the alternate piston (6) has a diameter to height ratio of 1:0.1 to 0.4. A pintle (17) of variable cross-section is arranged on the face of the alternate piston (6) remote from the storage chamber (34) and penetrates the delimiting disk (19). A guide projection (10) with grooves (11) is arranged on the face of the alternate piston (6) nearer the storage chamber (34). This results in a faster response and improved dynamic behaviour.

Abstract (fr)
Un injecteur de carburant, notamment un gicleur de pompe, comprend un pointeau (3) sollicité par un ressort dans le sens de fermeture, dont l'extrémité opposée aux orifices d'injection plonge dans une cavité d'amortissement (28) remplie de carburant, et un tourillon de pression (23) entouré d'un talon (26) fixe qui forme une butée pour un épaulement (22) du pointeau (3). La paroi fixe de la cavité d'amortissement (28) délimite un orifice d'étranglement avec le tourillon de pression (23) pendant la course du pointeau (3), l'orifice d'étranglement s'ouvrant sur un orifice d'écoulement (11) et/ou une autre cavité (12). La section transversale de l'orifice d'étranglement est au maximum au début de la course, ce qui permet d'obtenir une injection optimale et reproductible avec précision.

IPC 1-7
F02M 45/08; **F02M 61/20**

IPC 8 full level
F02M 45/08 (2006.01); **F02M 57/02** (2006.01); **F02M 61/20** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)
F02M 45/08 (2013.01 - EP US); **F02M 57/02** (2013.01 - EP US); **F02M 61/20** (2013.01 - EP US); **F02M 61/205** (2013.01 - EP US); **F02M 2200/505** (2013.01 - EP US)

Citation (search report)
See references of WO 9008256A1

Designated contracting state (EPC)
AT CH DE FR GB IT LI NL SE

DOCDB simple family (publication)
WO 9008257 A1 19900726; AT E119238 T1 19950315; DE 59008568 D1 19950406; EP 0404916 A1 19910102; EP 0404916 B1 19950301; EP 0404917 A1 19910102; JP H03504034 A 19910905; JP H03504035 A 19910905; US 5125580 A 19920630; US 5125581 A 19920630; WO 9008256 A1 19900726

DOCDB simple family (application)
AT 9000006 W 19900112; AT 9000005 W 19900112; AT 90901717 T 19900112; DE 59008568 T 19900112; EP 90901717 A 19900112; EP 90901720 A 19900112; JP 50193390 A 19900112; JP 50198190 A 19900112; US 57302090 A 19901107; US 61365190 A 19901107