

Title (en)  
Injector for fuel-injection system.

Title (de)  
Einspritzventil für Kraftstoffeinspritzsystem.

Title (fr)  
Injecteur pour système d'injection de combustible.

Publication  
**EP 0404342 A1 19901227 (EN)**

Application  
**EP 90305384 A 19900518**

Priority  
US 36950589 A 19890621

Abstract (en)  
An injector (10) has a single tapered valve (22) controlling fuel flow to a plurality of outlet passages (20). The entrance to each outlet passage has an orifice (42a,42b,42c,42d,42e,42f) surrounded by a raised valve seat (28a,28b,28c,28d,28e,28f). Each valve seat (28a,28b,28c,28d,28e,28f) is separated from the other valve seats by a recessed space (38). The valve (22) pivots about one end thereof as it is displaced from the valve seats to allow fuel flow through the outlet passages, and is constrained against other motion within the injector. The valve seats (28a,28b,28c,28d,28e,28f) are clustered beneath the opposite, free end of the valve (22). The orifices are sized to compensate for the unequal lift of the tapered valve (22) from the valve seats (28a,28b,28c,28d,28e,28f).

IPC 1-7  
**F02M 51/02**; **F02M 69/50**; **F16K 31/10**

IPC 8 full level  
**F02M 51/06** (2006.01); **F02M 51/02** (2006.01); **F02M 51/08** (2006.01); **F02M 69/50** (2006.01)

CPC (source: EP)  
**F02M 51/02** (2013.01); **F02M 69/50** (2013.01)

Citation (search report)  
• [A] US 4572436 A 19860225 - STETTNER ERNEST R [US], et al  
• [A] US 4787418 A 19881129 - CHUTE RICHARD [US]

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**EP 0404342 A1 19901227**; **EP 0404342 B1 19930120**; BR 9002929 A 19910820; CA 2018608 A1 19901221; CA 2018608 C 19941018; DE 69000794 D1 19930304; DE 69000794 T2 19930513; JP H0333471 A 19910213; MX 172612 B 19940103

DOCDB simple family (application)  
**EP 90305384 A 19900518**; BR 9002929 A 19900621; CA 2018608 A 19900608; DE 69000794 T 19900518; JP 16399990 A 19900621; MX 2677190 A 19900613