

Title (en)
Fuel injector.

Title (de)
Kraftstoffeinspritzventil.

Title (fr)
Injecteur de combustible.

Publication
EP 0353657 A2 19900207 (EN)

Application
EP 89113992 A 19890728

Priority
JP 19078388 A 19880730

Abstract (en)
An auxiliary sleeve (8) is movable together with a needle valve (9) at a first stage of lift so that a larger pressure receiving area (8a+9b+9c) is subjected to fuel pressure for driving the needle valve (9). At the second stage of lift, the needle valve (9) is movable solely so that a smaller pressure receiving area (9b+9c) is subjected to fuel pressure for driving the needle valve. A single nozzle spring (10) is utilized for urging the needle valve (9) and the auxiliary sleeve (8) in a predetermined direction.

IPC 1-7
F02M 45/08

IPC 8 full level
F02M 45/00 (2006.01); **F02M 45/08** (2006.01); **F02M 61/10** (2006.01); **F02M 61/20** (2006.01)

CPC (source: EP)
F02M 45/08 (2013.01); **F02M 61/20** (2013.01)

Cited by
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Designated contracting state (EPC)
DE GB

DOCDB simple family (publication)
EP 0353657 A2 19900207; **EP 0353657 A3 19900919**; **EP 0353657 B1 19930120**; DE 68904496 D1 19930304; DE 68904496 T2 19930812; JP H0240078 A 19900208

DOCDB simple family (application)
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