

Title (en)  
FUEL INJECTOR FOR AN INTERNAL-COMBUSTION ENGINE

Publication  
**EP 0101822 B1 19871028 (DE)**

Application  
**EP 83106278 A 19830628**

Priority  
DE 3229190 A 19820805

Abstract (en)  
[origin: EP0101822A1] 1. Fuel injection nozzle for internal combustion engines, with a nozzle body, in which a valve seat is formed and a valve needle is displaceably mounted, which valve needle opens against the fuel flow, is acted upon by a closing spring and, in the other direction, by the fuel pressure, and which is provided at the front with a throttle pin which enters, with throttling clearance, in a nozzle bore adjoining the valve seat on the downstream side and, along with the wall of the nozzle bore, bounds a fuel discharge hole, characterized in that an attachment (58) with a discharge chamber (60) is arranged downstream of the fuel discharge hole, in that the discharge chamber (60) has a cylindrical section (62) which is concentric to the fuel discharge hole, adjoins the wall having the discharge hole with a diameter which is greater than that of the fuel discharge hole and which has a section (64) which tapers conically in flow direction, adjoins the cylindrical section (62) and extends up to the discharge hole (68) on the combustion chamber side, in that at least one passage (70) opening toward the combustion chamber opens out into the cylindrical section (62) to supply air to the discharge chamber (60), and in that the cross-sections of the discharge chamber (60) and of the passage (70) are matched to each other and with respect to the parameters determining the injection quantity and the injection sequence in such a way that the injected jet completely fills the discharge hole (68) of the discharge chamber (60) at least approximately over the entire opening stroke of the valve needle (14) and at every operating point of the internal combustion engine.

IPC 1-7  
**F02M 61/06**; **F02M 61/16**; **F02M 61/18**

IPC 8 full level  
**F02M 61/06** (2006.01); **F02M 61/16** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP)  
**F02M 61/06** (2013.01); **F02M 61/16** (2013.01); **F02M 61/18** (2013.01)

Citation (examination)  
• EP 0020888 A1 19810107 - BOSCH GMBH ROBERT [DE]  
• EP 0007724 A1 19800206 - NISSAN MOTOR [JP]  
• GB 1330181 A 19730912 - PETROL INJECTION LTD, et al

Cited by  
EP1314864A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 0101822 A1 19840307**; **EP 0101822 B1 19871028**; DE 3229190 A1 19840209; DE 3374210 D1 19871203; JP S5943963 A 19840312

DOCDB simple family (application)  
**EP 83106278 A 19830628**; DE 3229190 A 19820805; DE 3374210 T 19830628; JP 13951683 A 19830801