

Title (en)
FUEL INJECTION NOZZLE FOR INTERNAL COMBUSTION ENGINES

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Application
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DE 3839637 A 19881124

Abstract (en)
[origin: WO9005843A1] A fuel injection nozzle for internal combustion engines has a nozzle body (10) fastened to a nozzle holder (13) by an intermediate disk (11), a valve needle (14) which slides in the nozzle body (10), an intermediate bushing (24) which slides axially in the intermediate disk (11) and a closing spring arrangement consisting of two helical pressure springs arranged one behind the other in a spring chamber (19) in the nozzle body (10). The total stroke of the valve needle (14) executed against the closing spring arrangement is divided into a clearance stroke and a residual stroke by limit stops (25, 28) and counter limit stops (26, 27) on the intermediate bushing (24), intermediate disk (11) and valve needle (14). To obtain a short closing spring arrangement and hence an injection nozzle of short overall length, the second closing spring (22) acts on the intermediate bushing (24) via a spring plate (31) and a sliding bushing (30) surrounding the first closing spring (21), while the first closing spring (21) abuts on the spring plate (31) and, via a second spring plate (34) and a pressure pin (23), on the valve needle (14). Each closing spring (21, 22) therefore acts only during a partial stroke and can be simply dimensioned.

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