

Title (en)  
GASOLINE DIRECT-INJECTION RAIL

Title (de)  
BENZINDIREKTEINSPRITZUNGSVERTEILERROHR

Title (fr)  
RAMPE D'INJECTION DIRECTE D'ESSENCE

Publication  
**EP 4102049 A1 20221214 (EN)**

Application  
**EP 21770565 A 20210222**

Priority  
• JP 2020047812 A 20200318  
• JP 2021006555 W 20210222

Abstract (en)  
Obtaining a fuel rail capable of forming a fuel rail body by hot forging and having high flexibility of the layout with a simple structure while reducing the cost even when the distance from the fuel rail body to the combustion chamber is long. A fuel rail body 1 and an injector cup adapter 6 independently formed from the fuel rail body 1 are included, the fuel rail body 1 is formed by hot forging, the injector cup adapter 6 is formed by cutting, and the injector cup adapter 6 and the fuel rail body 1 are connected and fixed to each other in a state that a connection portion 16 is sealed by an O-ring 15.

IPC 8 full level  
**F02M 55/02** (2006.01)

CPC (source: EP)  
**F02M 55/02** (2013.01); **F02M 55/025** (2013.01); **F02M 61/14** (2013.01); **F02M 69/465** (2013.01); **F02M 2200/857** (2013.01)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4102049 A1 20221214**; **EP 4102049 A4 20240228**; CN 115280011 A 20221101; JP 2021148047 A 20210927; WO 2021187015 A1 20210923

DOCDB simple family (application)  
**EP 21770565 A 20210222**; CN 202180021326 A 20210222; JP 2020047812 A 20200318; JP 2021006555 W 20210222