

Title (en)  
Air-fuel mixing device.

Title (de)  
Luft-Brennstoff-Mischvorrichtung.

Title (fr)  
Mélangeur air-combustible.

Publication  
**EP 0093572 A1 19831109 (EN)**

Application  
**EP 83302372 A 19830426**

Priority  
US 37278882 A 19820428

Abstract (en)  
An air-fuel mixing device mixes fuel and primary combustion air in a particular configuration. Thus fuel nozzle 48 sprays the liquid fuel into the primary combustion chamber or zone 36 of a combustor 30 in a hollow conical pattern. A portion of the primary combustion air is injected toward the stream of liquid fuel in a converging annular frustrum pattern and which creates an extremely uniform fuel/air mixture and a stable flame. In a preferred embodiment, the converging annular frustrum through which primary air is injected is formed between the outer surface of the fuel nozzle means 48 and an inner flange or lip 66 of a baffle plate 60 that surrounds the fuel nozzle means 48 and is at an angle of 30 DEG with respect to the main axis of the fuel nozzle means 48.

IPC 1-7  
**F23D 11/40**

IPC 8 full level  
**F23D 11/24** (2006.01); **F17C 9/02** (2006.01); **F23C 6/04** (2006.01); **F23C 7/00** (2006.01); **F23M 5/08** (2006.01)

CPC (source: EP)  
**F17C 9/02** (2013.01); **F23C 6/045** (2013.01); **F23C 7/00** (2013.01); **F23M 5/085** (2013.01); **F17C 2265/025** (2013.01)

Citation (search report)  
• DE 1751653 B2 19730412  
• DD 57168 A1 19670805 - B PROJEKTOW PRZEMYSŁU CEMENTOWEGO [PL]  
• DE 1094909 B 19601215 - ARTHUR KUHLMANN  
• GB 894470 A 19620426 - GEN MOTORS CORP  
• [Y] RECKNAGEL/SPRENGER, "Taschenbuch für Heizung + Klimatechnik", 1981/82, 61. Ausgabe VERLAG OLDENBURG page 1402, lines 21-24

Cited by  
GB2337102A; US6151899A; US2010015562A1; US8622737B2; US9234659B2

Designated contracting state (EPC)  
CH DE FR GB IT LI

DOCDB simple family (publication)  
**EP 0093572 A1 19831109**; AU 1273483 A 19831103; JP S591915 A 19840107; ZA 832157 B 19831228

DOCDB simple family (application)  
**EP 83302372 A 19830426**; AU 1273483 A 19830323; JP 7602783 A 19830428; ZA 832157 A 19830325