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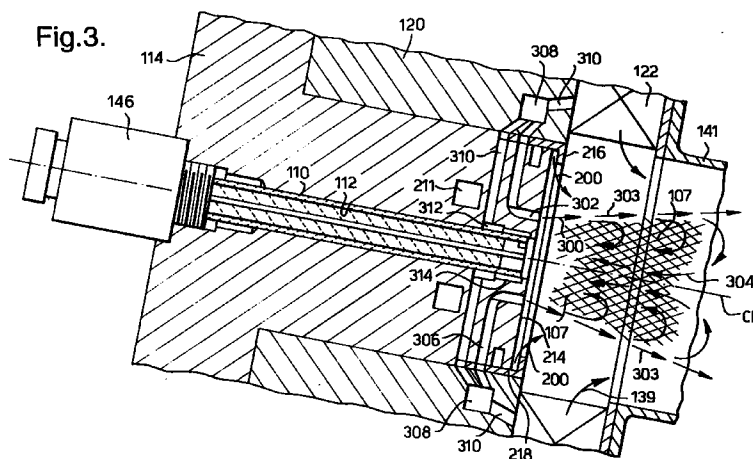
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(54) **Gas turbine engine combustor**

(57) A lean burn combustor for a gas turbine engine has a pilot burner (114) which injects fuel and air separately, the air being injected as a swirling column from a circular slot (302) in the burner head (214) to establish a divergent columnar shear layer (303) in the combustor, and the fuel being injected from a peripheral annular gap in the burner head towards the column of air (300) for mixing with it in the shear layer (303). A main burner (120,122) surrounds the pilot burner and by means of swirler passages (122) injects a fuel-lean main fuel/air

mixture into the combustor towards the shear layer (303) for mixing with the pilot fuel and air. The shear layer establishes a sheltered combustion region (107) near the pilot burner and some fuel/air mixture (304) capable of stable combustion in the sheltered region is recirculated from the shear layer into the sheltered region to increase the stability of lean burn combustion in the combustor over a wide range of engine load conditions.





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EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24 June 1997	Examiner Coli, E
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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