

(12) UK Patent Application (19) GB (11) 2 326 934 (13) A

(43) Date of A Publication 06.01.1999

(21) Application No 9713995.0

(22) Date of Filing 01.07.1997

(71) Applicant(s)
Drax Torches Ltd
(Incorporated in the United Kingdom)
190 Clarence Gate Gardens, LONDON, NW1 6AD,
United Kingdom

(72) Inventor(s)
Gavin John Conibeer
Graham John Ball
John Martin Thirtle
Neil Alexander Downie

(74) Agent and/or Address for Service
Beresford & Co
2-5 Warwick Court, High Holborn, LONDON,
WC1R 5DJ, United Kingdom

(51) INT CL⁶
F23D 14/68

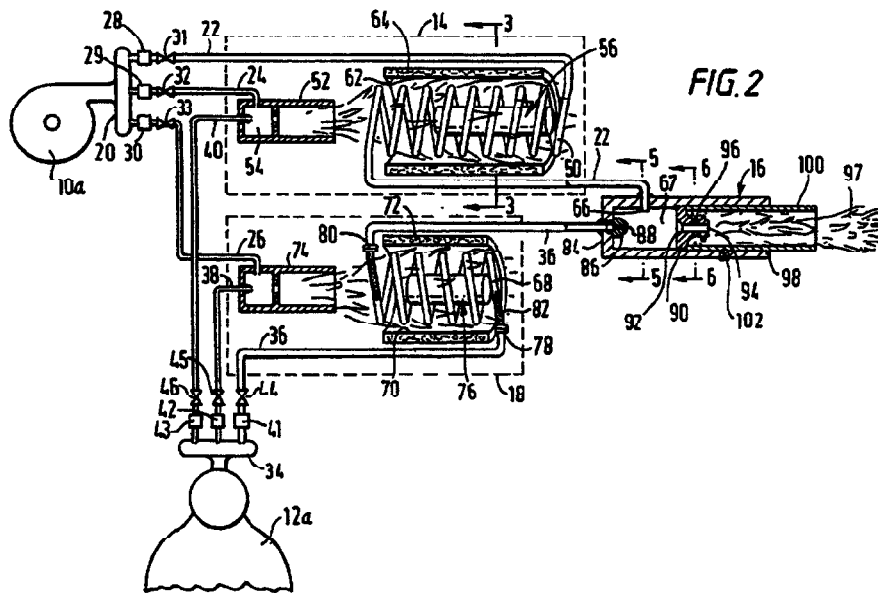
(52) UK CL (Edition Q)
F4T TGBX T174
U1S S1673

(56) Documents Cited
GB 1207993 A US 5472341 A US 5246252 A
US 4725222 A

(59) Field of Search
UK CL (Edition O) F4T TBX TDX TEJ TGBX
INT CL⁶ F23D 14/66 14/68
Online: w.p.i.

(54) Abstract Title
Burners

(57) A gas burner which can use a hydrocarbon fuel other than acetylene or methylacetylene as the fuel gas and air as the oxidant has means 18 for preheating the oxidant gas and means 14 for preheating the fuel gas which becomes cracked. These gases are delivered into a chamber 67 where they become mixed under highly turbulent conditions, and then pass through nozzle 94 and shroud 100 and form a flame 97 of high intensity and high turbulence. The flame typically produces more than 150 MW/metre³, e.g. 300-500 MW/metre³ for lower temperature operations and at least 500 MW/metre³ for welding or cutting steel. Its turbulence, indicated by its acoustic/thermal ratio, is typically about 6×10^{-6} and enables air of the boundary layer which insulates the workpiece to be stripped off. In an alternative arrangement configured as a gas cutting torch, preheated air or other cutting gas is supplied to a jet adjacent the main flame. A gas torch or gas cutting torch according to the invention can be fuelled with propane or propylene which are inexpensive to store and use, but can achieve a performance comparable to that of an oxyacetylene torch.



GB 2 326 934 A