Title (en)
PREMIX TYPE MULTIPORT BURNER

Abstract (en)
[origin: JPH0229507A] PURPOSE: To protect the surface around a port against damage due to heating and to protect a burner against damage due to backfire by making one or more specified port at a multiport burner smaller in area than the remaining ports and providing means for detecting the presence of a flame within a specified port. CONSTITUTION: Outlet wall 1 of a burner is made of a slotted plate of ceramic, or the like wherein each slot 2 forms outlet of fuel and air having identical bore area. An aperture restrictor 4 is set in a recess adjacent to the upstream end 3 of a port 2' and the bore area is smaller than that of the remaining ports 2'. A thermocouple probe 5 extends into the port 2' through the restrictor 4 and the forward end 6 of the probe 5 terminates at a distance about 6 times as long as the bore diameter of the restrictor from the upstream end 3. At the time of normal combustion, no signal is delivered from the probe 5 and a valve 8 is opened by a control box 7. When the ratio of air in a fuel/air mixture decreases and the combustion face begins to be heated, retraction of flame (light back) takes place in the port 2' and the probe 5 is heated by the flame in the port 2' to provide the control box 7 with a signal for closing the fuel valve 8 thus protecting the burner.