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(54) Burner apparatus and methods

(57) A burner assembly for and method of combust-
ing fuel gas in a furnace is provided. The burner assembly
(10) includes a burner tile (18) having a burner throat (48)
disposed therethrough. Combustion air is conducted
through the burner throat into a combustion zone in the
furnace. A pilot assembly (20) is used to generate a pilot
flame (62) within the burner throat. Fuel gas is injected
into an ignition zone (80) located outside the burner throat

and ignited therein. The pilot flame (62) generated in the
burner throat (48) can be used to ignite the fuel gas in
the ignition zone (80). The ignited fuel gas is admixed
with combustion air in the combustion zone. The burner
assembly can be operated without admixing a significant
amount of fuel gas with combustion air in the burner
throat, which can help control the formation of undesira-
ble nitrogen oxides (NO_x).

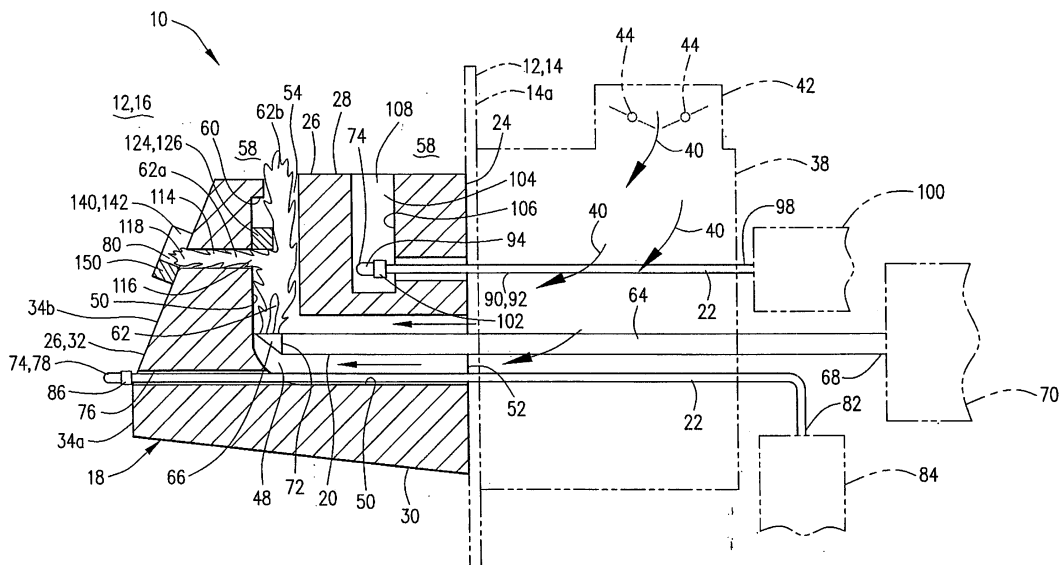


FIG. 1

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ANNEX TO THE EUROPEAN SEARCH REPORT
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