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(54) **ELECTRICITY-PRODUCING HEATING APPARATUS UTILIZING A TURBINE GENERATOR IN A SEMI-CLOSED BRAYTON CYCLE**

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(58) **Field of Search** **60/653, 682, 683**

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(57) **ABSTRACT**

The present invention provides apparatus and methods for producing both heat and electrical energy by burning fuels in a stove or boiler using a novel arrangement of a surface heat exchanger and microturbine-powered generator and novel surface heat exchanger. The equipment is particularly suited for use in rural and relatively undeveloped areas, especially in cold regions and highlands.

20 Claims, 5 Drawing Sheets

