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(54) **APPARATUS AND METHOD FOR MICROWAVE PROCESSING OF MATERIALS USING FIELD-PERTURBING TOOL**

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(57) **ABSTRACT**

A variable frequency microwave heating apparatus designed to allow modulation of the frequency of the microwaves introduced into a multi-mode microwave cavity for heating or other selected applications. A field-perturbing tool is disposed within the cavity to perturb the microwave power distribution in order to apply a desired level of microwave power to the workpiece.

30 Claims, 17 Drawing Sheets