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Howard et al.

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- (54) **AIRFLOW PATTERN FOR SPIRAL OVENS**
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F24C 15/32 (2006.01)
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CPC ... **A21B 1/40** (2013.01); **A21B 1/26** (2013.01);
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(58) **Field of Classification Search**
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See application file for complete search history.

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(57) **ABSTRACT**

An improved spiral oven and method for its use includes the step of using a forward/reversing fan to produce a first airflow and a second inverted airflow in the cooking chamber. The proportion of time each airflow occurs may be unbalanced within an oven residence time or cook cycle, and either airflow may begin the cycle. In addition, the fan velocity may vary so that the speed of the first airflow is different from the speed of the second airflow. A braking resistor allows the fan to quickly changeover between full-forward and full-reverse directions, while a programmable delay limits adjustments to the heat output control method until temperature variations caused by alternating between the first direction of rotation and the second direction of rotation have stabilized. Because of the reversing airflow pattern, the product cooks more evenly across the cook belt.

11 Claims, 8 Drawing Sheets

