

(12) **United States Patent**
Piatnik et al.

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(54) **MULTI-FLAVOR VALVE**

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See application file for complete search history.

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(57) **ABSTRACT**

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A multi-flavor valve capable of dispensing at least three flavors of beverages is provided. The valve includes a single-piece injection-molded valve body having at least three syrup flow paths and a water flow path. The valve also includes at least three syrup flow path solenoids for respectively opening and closing the at least three syrup flow paths, and one water flow path solenoid for opening and closing the water flow path. The three syrup flow path solenoids are positioned in the corresponding syrup flow paths, and the water flow path solenoid is positioned in the water flow path, within the valve body. The valve also has at least three beverage flavor switches for selecting any one of the three beverage flavors for dispensation. The valve further includes an electronics module electrically connected to the solenoids and to the beverage flavor switches, the electronics module causing one of the syrup flow path solenoids to open the corresponding syrup flow path of the syrup corresponding to a selected flavor switch, and causing the water flow path solenoid to open the water flow path, thereby causing the multi-flavor valve to dispense the selected beverage flavor.

(65) **Prior Publication Data**

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Related U.S. Application Data

(62) Division of application No. 12/397,226, filed on Mar. 3, 2009, now Pat. No. 8,631,974, which is a division of application No. 10/846,331, filed on May 14, 2004, now abandoned.

18 Claims, 23 Drawing Sheets

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