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(54) **FLAVOR RELEASING CORES AND THEIR USE IN CHEWING GUM**

(75) Inventors: **Joo H. Song**, Chicago, IL (US); **Holly A. Knutsen**, Palos Park, IL (US); **Kevin B. Broderick**, Berwyn, IL (US); **Donald A. Seielstad**, Frankfort, IL (US)

(73) Assignee: **WM, Wrigley Jr. Company**, Chicago, IL (US)

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(58) **Field of Classification Search**
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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,713,243	A	*	12/1987	Schiraldi et al.	424/676
4,978,537	A	*	12/1990	Song	426/5
5,128,155	A		7/1992	Song et al.	
5,431,950	A		7/1995	Fuisz	
5,433,960	A	*	7/1995	Meyers	426/5
5,470,581	A		11/1995	Grillo et al.	
5,601,865	A		2/1997	Fulger et al.	
5,792,505	A		8/1998	Fulger et al.	
5,958,502	A		9/1999	Fulger et al.	
6,428,827	B1		8/2002	Song et al.	
6,479,082	B1		11/2002	Johnson	
2006/0193946	A1		8/2006	Gebreselassic et al.	

FOREIGN PATENT DOCUMENTS

EP	1 457 522	A	9/2004
WO	WO 94/14330	A	7/1994
WO	WO 96/09773	A	4/1996
WO	WO 98/27826	A	7/1998
WO	WO 00/59314	A	10/2000

* cited by examiner

Primary Examiner — Humera Sheikh
Assistant Examiner — Tynesha McClain-Coleman
(74) *Attorney, Agent, or Firm* — Brinks Gilson & Lione; Steven P. Shurtz

(57) **ABSTRACT**

Flavor releasing structures for chewing gum have about 30% to about 60% thermoplastic cellulose material, about 5% to about 50% non-cellulosic thermoplastic polymer, and about 10% to about 40% porous flavor reservoir material. Optionally the flavor releasing structure may comprise about 5% to about 25% plasticizer. The cores may be coated with a flavor barrier coating.

31 Claims, No Drawings