US009408784B2

(12) **United States Patent**
Hilliard, Jr. et al.

(10) **Patent No.: US 9,408,784 B2**
(45) **Date of Patent: Aug. 9, 2016**

(54) **VISUALLY PATTERNED AND ORIENTED COMPOSITIONS**

(71) Applicant: **Colgate-Palmolive Company**, New York, NY (US)

(72) Inventors: **Peter R. Hilliard, Jr.**, Far Hills, NJ (US); **Stacey Kaplan**, New Brunswick, NJ (US)

(73) Assignee: **Colgate-Palmolive Company**, New York, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 132 days.

(21) Appl. No.: **14/156,532**

(22) Filed: **Jan. 16, 2014**

(65) **Prior Publication Data**

US 2014/0199354 A1 Jul. 17, 2014

Related U.S. Application Data

(62) Division of application No. 13/518,963, filed as application No. PCT/US2010/061698 on Dec. 22, 2010.

(60) Provisional application No. 61/289,795, filed on Dec. 23, 2009.

(51) **Int. Cl.**

A61K 8/02	(2006.01)
A61K 8/03	(2006.01)
A61K 8/26	(2006.01)
A61Q 19/10	(2006.01)
A61Q 5/02	(2006.01)
A61Q 11/00	(2006.01)

(52) **U.S. Cl.**

CPC ***A61K 8/0241*** (2013.01); ***A61K 8/0237*** (2013.01); ***A61K 8/0245*** (2013.01); ***A61K 8/03*** (2013.01); ***A61K 8/26*** (2013.01); ***A61Q 5/02*** (2013.01); ***A61Q 11/00*** (2013.01); ***A61Q 19/10*** (2013.01); *A61K 2800/26* (2013.01); *A61K 2800/262* (2013.01); *A61K 2800/87* (2013.01); *Y10T 428/268* (2015.01)

(58) **Field of Classification Search**

CPC A61K 2800/26; A61K 8/0237; A61K 8/0241; A61K 8/0245; A61K 8/03; A61Q 11/00; A61Q 19/10; A61Q 5/02

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,438,091	A	3/1948	Lynch
2,528,378	A	10/1950	Mannheimer
2,658,072	A	11/1953	Kosmin
3,859,227	A	1/1975	Dwyer
3,929,678	A	12/1975	Laughlin et al.
4,159,028	A	6/1979	Barker et al.
4,512,908	A	4/1985	Heile
5,059,414	A	10/1991	Dallal et al.
5,277,711	A	1/1994	Schmidt et al.
5,547,602	A	8/1996	Schuler
5,683,683	A	11/1997	Scafidi
5,776,435	A	7/1998	Gaffar et al.
5,862,996	A	1/1999	Crichton
5,906,205	A	5/1999	Hiebert
5,929,019	A	7/1999	Puvvada et al.
5,952,286	A	9/1999	Puvvada et al.
6,045,813	A	4/2000	Ferguson et al.
6,077,816	A	6/2000	Puvvada et al.
6,213,166	B1	4/2001	Thibiant et al.
6,245,344	B1	6/2001	Thibiant et al.
6,294,179	B1	9/2001	Lee et al.
6,330,916	B1	12/2001	Rickards et al.
6,367,519	B2	4/2002	Thibiant et al.
6,426,326	B1	7/2002	Mitra et al.
6,516,838	B2	2/2003	Thibiant et al.
6,740,317	B1 *	5/2004	Cho et al. 424/70.1
6,787,160	B2	9/2004	Shacknai et al.
6,797,683	B2	9/2004	Shana'a et al.
6,849,584	B2	2/2005	Geary et al.
7,132,468	B2	11/2006	Tepe
7,410,649	B2	8/2008	Yoshimi et al.
D608,647	S	1/2010	Toh et al.
2002/0119196	A1	8/2002	Parikh et al.
2003/0003069	A1	1/2003	Carson et al.
2003/0134759	A1	7/2003	Geary et al.
2003/0152540	A1	8/2003	Putman et al.
2003/0171230	A1	9/2003	Shana'a et al.
2003/0190336	A1	10/2003	Adams et al.
2003/0228270	A1	12/2003	Tazberik et al.
2004/0047822	A1	3/2004	Zamudo-Tena et al.

(Continued)

FOREIGN PATENT DOCUMENTS

EP	1690878 B1	9/2007
GB	2046743	11/1980

(Continued)

OTHER PUBLICATIONS

Technical Equipments in Modern Ceramic Industry (editor in chief: Chen Fan, published by China Building Materials Press, 1999), p. 111. CN.

"Carribean Shower with Jojoba Beads Formula," 2007.

Ashby et al., 2000, "Pickering Emulsions Stabilised by Lapointe Clay Particles," Phys. Chem. Chem Phys. 2:5640-5646.

Dewhirst, 1980, "Structure-Activity Relationships for Inhibition of Prostaglandin Cyclooxygenase by Phenolic Compounds," Prostaglandins vol. 20(2):209-222.

Garcia et al., 2012, "Laponite-Stabilised Oil-in-Water Emulsions: Viscoelasticity and Thixotropy," Soft Matter 8:1609-1615.

Gong et al., 2006, "Aculyn™ 38 Rheology Modifier and Synergy with Lapoinite® Clay," Research Disclosure p. 704.

International Search Report and Written Opinion in International Application No. PCT/US08/057814, mailed Jul. 17, 2008.

International Search Report and Written Opinion in International Application No. PCT/US10/061698 mailed Feb. 21, 2012.

(Continued)

Primary Examiner — Sean Basquill
Assistant Examiner — Mark V Stevens

(57) **ABSTRACT**

Structured personal care compositions comprising a particle having an aspect ratio of greater than 1.5 are contemplated, as well as methods for using such compositions. The compositions provide a visually distinguishable, oriented pattern that is aesthetically pleasant to provide consumer appeal and product identification.

21 Claims, 4 Drawing Sheets