Related U.S. Application Data

continuation of application No. 15/174,069, filed on Jun. 6, 2016, now Pat. No. 9,963,537, which is a continuation of application No. 13/632,992, filed on Oct. 1, 2012, now Pat. No. 9,394,397, which is a continuation of application No. PCT/JP2011/057984, filed on Mar. 30, 2011.

(51)	Int. Cl.	
	A43B 1/14	(2006.01)
	A43B 13/04	(2006.01)
	C08G 18/66	(2006.01)
	C08G 18/76	(2006.01)
	C07C 59/245	(2006.01)
	C08G 63/16	(2006.01)
	A43B 1/00	(2006.01)
	C08G 101/00	(2006.01)

(56) References Cited

U.S. PATENT DOCUMENTS

7,317,069	B2	1/2008	Aoshima et al.
9,290,614	B2 *	3/2016	Ohara A43B 13/04
9,394,397	B2	7/2016	Ohara et al.
9,963,537	B2 *	5/2018	Ohara C07C 69/675
10,351,658	B2 *	7/2019	Ohara C08G 18/4286
2006/0155100	$\mathbf{A}1$	7/2006	Aoshima et al.
2007/0093636	$\mathbf{A}1$	4/2007	Aoshima et al.
2010/0055467	$\mathbf{A}1$	3/2010	Kulfan et al.
2010/0130633	$\mathbf{A}1$	5/2010	Usaka et al.
2013/0035448	$\mathbf{A}1$	2/2013	Ohara et al.
2013/0338395	$\mathbf{A}1$	12/2013	Ohara et al.
2016/0272751	$\mathbf{A}1$	9/2016	Ohara et al.
2018/0215859	A1*	8/2018	Ohara A43B 13/04

FOREIGN PATENT DOCUMENTS

JP	2005-139287	6/2005
JP	2008-94888	4 * 4/2008
JP	2008-274092	11/2008
JP	2009-096824	5/2009
JP	4301918 I	32 7/2009
JP	5930500	5/2016
WO	2005/030973	4/2005
WO	2005/080307	9/2005
WO	2008/104541	9/2008
WO	2010/035837	4/2010
WO	2011/064151	6/2011

OTHER PUBLICATIONS

Liu Dahua, "A Comprehensive Handbook of Synthetic Rubber Technology", Chemical Industry Press, pp. 923-925 (Dec. 1991) (with English translation).

Zhu Wangzhang, "Water-based paint for Woodenware", Chemistry Industry Press, pp. 301-302 (Dec. 2008) (with English translation). Office Action dated Jan. 23, 2018, European Patent Application No. 15 184 944.5 filed Mar. 30, 2011.

Combined Chinese Office Action and Search Report dated Aug. 29, 2017 in Patent Application No. 201510387265.6 (with English Translation and English Translation of Category of Cited Documents)

European Office Action dated Oct. 9, 2017 in Patent Application No. $11\ 765\ 620.7$.

Katayama, "Introduction to Polymers", Shanghai Sci. & Tech. Literature Press, pp. 251 with cover pages and English translation, 5 pages (Jan. 1983).

Liu Dahua, "A Comprehensive Handbook of Synthetic Rubber Technology", Chemical Industry Press, pp. 924-925 with cover pages and English translation, 6 pages (Dec. 1991).

Office Action dated Jul. 10, 2017 in European Patent Application No. 15 184 944.5.

Decision of Refusal dated Jun. 6, 2017, in Japanese Patent Application No. 2015-252153 filed Dec. 24, 2015 (with English translation).

"Collection of Formulae of Plastic Products in China", Editor-in-Chief: Xiangxing Zhou—China Material Press, Beijing, ISBN: 7-5047-1595-6, 4 pgs. (with English translation) (May 1999).

Office Action dated May 2, 2017 in corresponding Chinese Patent Application No. 201510387263.7 (with English translation).

Office Action dated Mar. 16, 2017, in Chinese Patent Application No. 201510387265.6 filed Mar. 30, 2011 (with English translation). Office Action dated Mar. 22, 2017, in European Patent Application No. 11765620.7 filed Mar. 30, 2011.

Office Action dated Dec. 12, 2016, in European Patent Application No. 15184944.5 filed Mar. 30, 2011.

Notification of Reasons for Refusal dated Oct. 18, 2016, in Japanese Patent Application No. 2015-252153 (with English translation).

Korean Office Action dated Jan. 21, 2016, in corresponding Korean Patent Application No. 2012-7027895 filed Oct. 25, 2012 (with English translation).

Extended European Search Report dated Apr. 2, 2019, in European Patent Application No. 18207984.8.

Extended European Search Report dated Nov. 19, 2015, in corresponding European Patent Application No. 11765620.7 (with English translation).

Notice of Demand for Agreement dated Oct. 7, 2015, in Korean Patent Application No. 2012-7027895 filed Mar. 30, 2011 and Korean Patent Application No. 2015-7019374 filed Mar. 30, 2011 (with English translation).

Notice of Grounds for Rejection dated Oct. 7, 2015, in Korean Patent Application No. 2012-7027895 filed Mar. 30, 2011 (with English translation).

Final Rejection dated Sep. 29, 2015, in Japanese Patent Application No. 2015-005341 filed Jan. 14, 2015 (with English translation). Japanese Office Action dated Aug. 4, 2014 in corresponding Japanese Patent Application No. 2015-005341 (with English transla-

Chinese Office Action dated Apr. 3, 2015 in corresponding Chinese Patent Application No. 201180016195.3 (with English translation). Japanese Office Action dated Aug. 5, 2014 in Patent Application No. 2011-073099.

Chinese Office Action dated Aug. 4, 2014, in Patent Application No. 201180016195.3 (with English translation).

Combined Chinese Office Action and Search Report dated Dec. 16, 2013, in Chinese Patent Application No. 201180016195.3 (with English translation).

Fundamentals and Applications in Polyurethanes, supervised by Matsunaga, Katsuji, published by CMC Publishing Co., Ltd., pp. 96-105 (Nov. 2006).

CRC Handbook of Chemistry and Physics, 75th Ed., CRC Press, pp. 8-43 to 8-56 (1995).

Kagaku-binran (Chemical Handbook) (Basic Ed.), Maruzen Publishing Co. Ltd., pp. 1054-1059 (1966).

JIS-K7105—with English translation (1981).

Sax, et al., Hawley's Condensed Chemical Dictionary, Eleventh Edition, Van Nostrand Reinhold, New York, pp. 1102, 1121 (1987). International Search Report dated Jul. 19, 2011 in PCT/JP2011/057084

Extended European Search Report dated Feb. 23, 2016, in European Patent Application No. 15184944.5.

Combined Brazilian Office Action and Search Report dated Jul. 30, 2019 in Patent Application No. BR112012025093-0 (with English translation).

^{*} cited by examiner