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[Continued on next page]

- (54) **Title:** DECORATIVE FILM ARTICLES UTILIZING FRESNEL LENS FILMS

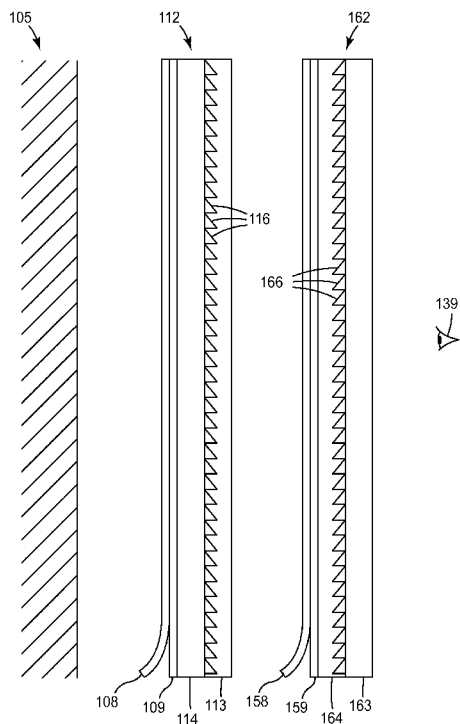


FIG. 1

(57) **Abstract:** First and second optical films in a stack each have a structured surface defining extended Fresnel lenses. First and second Fresnel lenses of the respective first and second films extend generally parallel to different first and second in-plane axes respectively. The films may be attached together such that light transmitted by one film is intercepted by the other. The film stack may also include a diffuser disposed to scatter light transmitted by the optical film(s). Other disclosed decorative articles include an individual optical film having a structured surface with transmissive facets arranged in a cyclic slope sequence from substantially zero to a maximum positive slope to substantially zero to a maximum negative slope and back to substantially zero, the sequence repeating over some or all of the structured surface. The slope sequence may define alternating focusing and defocusing Fresnel lenses, and the Fresnel lenses may be extended and linear.



SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/045539**A. CLASSIFICATION OF SUBJECT MATTER****G02B 3/08(2006.01)i, G02B 5/00(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G02B 3/08; G03B 21/62; G02B 3/06; C03B 19/02; B32B 31/00; B29C 65/48; H01L 31/0232; G02B 5/32; G02B 5/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: fresnel lens, decorative film, stack, laminate, array

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	P 2008-304586 A (TOHOKU UNIV.) 18 December 2008	1-7, 12, 13
Y	See abstract; paragraphs 35-39, 49-51, 64 and figures 3, 6.	8-11
A		14-25
X	US 7298533 B2 (PETERSEN et al.) 20 November 2007	14-16, 18-25
Y	See abstract; column 3, lines 10-46; column 7, line 15-column 8, line 5	8-11
A	and figures 2, 5.	1-7, 12, 13, 17
A	US 2012-0060920 A1 (FORNARI et al.) 15 March 2012	1-25
	See abstract; paragraphs 27-29 and figure 5.	
A	JP 08-224785 A (DAINIPPON PRINTING CO., LTD.) 03 September 1996	1-25
	See abstract; paragraphs 8-10 and figure 1.	
A	JP 2002-139800 A (HITACHI LTD.) 17 May 2002	1-25
	See abstract; paragraphs 5, 6 and figure 1.	



Further documents are listed in the continuation of Box C.



See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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PCT/US2013/045539

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2008-304586 A	18/12/2008	None	
US 7298533 B2	20/11/2007	US 2004-196516 A1	07/10/2004
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JP 2002-139800 A	17/05/2002	None	