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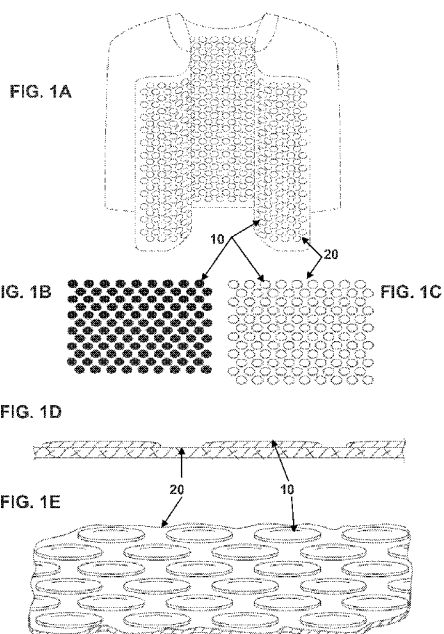
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(54) Title: HOLOGRAPHIC PATTERNED HEAT MANAGEMENT MATERIAL

(57) Abstract: Embodiments of the present disclosure relate generally to body gear having designed performance characteristics, and in particular to methods and apparatuses that utilize an array of holographic heat managing elements coupled to a base material to direct body heat while also maintaining the desired transfer properties of the base material. In some embodiments, the heat managing material elements include heat-directing elements that reflect heat or conduct heat, and may be directed towards the body of a user or away from the body of the user.



A. CLASSIFICATION OF SUBJECT MATTER***D06Q 1/00(2006.01)i, B32B 37/02(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)

D06Q 1/00; A41D 13/005; G03H 1/02; A41D 1/00; A41D 13/002; A41B 00/00; D06M

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:holographic,heat,theramal,manage,directing,transfer,array,fabric

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2010-129923 A2 (BLACKFORD, WOODY) 11 November 2010 See paragraphs [27]-[48]; claims 1-25 and figures 1-3	1-25
Y	JP 2008-089863 A (DAINIPPON PRINTING CO., LTD.) 17 April 2008 See paragraphs [8]-[9]; claim 1 and figure 1	1-25
Y	US 2005-0077618 A1 (McCUTCHEON,JEFFREY W. et al.) 14 April 2005 See paragraph [86] and figure 2	10,17
Y	US 6191056 B1 (VOGT, KIRKLSND W. et al.) 20 February 2001 See column 1 lines 61-65, column 8 lines 17-20 and claim 11	13,24
A	US 04622253 A (LEVY, HARRY) 11 November 1986 See column 2 lines 54-68, column 5 lines 16-62; claim 1 and figures 1, 3	1-25



Further documents are listed in the continuation of Box C.



See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2010-129923 A2	11.11.2010	None	
JP 2008-089863 A	17.04.2008	None	
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US 04622253 A	11.11.1986	None	