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AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, 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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(54) Title: COMPOSITE CONSTRUCTION PANELS AND APPLICATIONS THEREOF

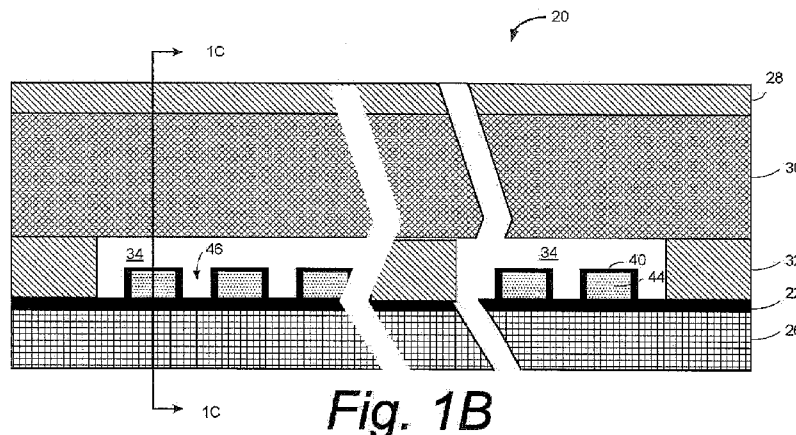


Fig. 1B

(57) Abstract: In one aspect, composite construction materials are described herein. In some embodiments, a composite construction panel comprises a substrate layer, a cover layer separated from the substrate layer by one or more spacers, and at least one mat disposed between the substrate layer and the cover layer, wherein the mat comprises at least one phase change material disposed in at least one phase change region.



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER  
 INV. F28D20/02 A62C2/06 E04B1/76 E04B9/04  
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B. FIELDS SEARCHED  
 Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 EPO-Internal , WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 626 936 A (ALDERMAN ROBERT J [US] ) 6 May 1997 (1997-05-06) column 11, line 42 - line 51; figure 14 claim 2	1-20
X	US 2003/061776 AI (ALDERMAN ROBERT J [US] ) 3 April 2003 (2003-04-03) paragraph [0023]; figure 9 paragraph [0026] paragraph [0032]	1-20
A	US 2008/017352 AI (BROWER KEITH R [US] ET AL) 24 January 2008 (2008-01-24) figure 4	1,4
	-/- .	

Further documents are listed in the continuation of Box C.

See patent family annex.

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Date of the actual completion of the international search  15 April 2013	Date of mailing of the international search report  25/04/2013
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  Bain, David
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International application No  
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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A	DE 100 16 211 A1 (ERHARDT EGGE [DE] ; ERHARDT ROLF [DE]) 4 October 2001 (2001-10-04) claim 5 -----	1-20
A	FR 2 268 130 A1 (SULZER AG [CH] ) 14 November 1975 (1975-11-14) page 3 , line 11 - page 4 , line 10 -----	1-20
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Information on patent family members

International application No <b>PCT/US2012/055500</b>
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