



- (51) International Patent Classification:  
*C09K 21/02* (2006.01) *E04B 1/94* (2006.01)
- (21) International Application Number:  
PCT/EP2017/061093
- (22) International Filing Date:  
09 May 2017 (09.05.2017)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
10 2016 108 538.3  
09 May 2016 (09.05.2016) DE

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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): 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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,

(54) Title: FIRE-STOPPING PRODUCT

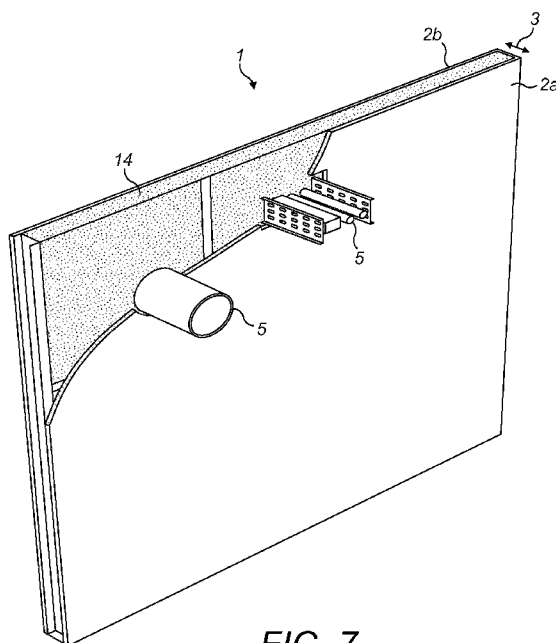


FIG. 7

(57) Abstract: A fire-stopping material for use in sandwich panels is provided, wherein the fire-stopping material comprises a resilient, porous material at least partially impregnated with an intumescent agent. A panel for an internal wall and an internal wall are also provided, comprising the fire-stopping material disposed between two substantially parallel boards, such as plaster boards. A method of providing a service penetration through an internal wall is also provided.



HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, SA, 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.

**(84) Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

**Published:**

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

**(88) Date of publication of the international search report:**

18 January 2018 (18.01.2018)

INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2017/061093

A. CLASSIFICATION OF SUBJECT MATTER  
INV. C09K21/02 E04B1/94  
ADD.  
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)  
E04B C09K

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	EP 0 706 979 A1 (CARBORUNDUM CO [US]) 17 April 1996 (1996-04-17)	1-11, 14-19, 21-24
A	figure 4; example 1 -----	12,13,20
X	US 2012/022176 A1 (STAHL JOHN A [US] ET AL) 26 January 2012 (2012-01-26) paragraphs [0037], [0094]; tables 1,2 -----	1-24
X	EP 1 842 957 A1 (NAGOYA OILCHEMICAL [JP]) 10 October 2007 (2007-10-10) example 18 -----	1-24
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Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"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

Date of the actual completion of the international search  8 December 2017	Date of mailing of the international search report  18/12/2017
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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  Pöttsch, Robert
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## INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2017/061093

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Hilti Deutschland Ag: "Technisches Handbuch Brandschutzsysteme", 1 October 2013 (2013-10-01), XP055433540, Retrieved from the Internet: URL:https://www.hilti.de/medias/sys_master/documents/h41/9108117815326/ASSET_DOC_LOC_2584387_APC_RAW.pdf [retrieved on 2017-12-08]	25
A	page 31 -----	1-24
X	US 6 182 407 B1 (TURPIN KENNETH A [CA] ET AL) 6 February 2001 (2001-02-06)	1-11, 14-19, 21-24
A	column 1, lines 5-25; claims 1-24	12,13, 20,25
X	EP 0 332 928 A2 (BAYER AG [DE]) 20 September 1989 (1989-09-20) example 4 -----	1-24

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2017/061093

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-24

Fire-stopping material

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2. claim: 25

A method of providing a service penetration

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/EP2017/061093
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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