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(54) **A mineral fiber-insulated plate**

(57) A method of producing a mineral fiber-insulating web comprises the steps of firstly producing a first non-woven mineral fiber web. The first mineral fiber web contains mineral fibers arranged generally in the longitudinal direction of the mineral fiber web. Secondly, the first mineral fiber web is moved in the longitudinal direction of the web and folded parallel with the longitudinal direction and perpendicular to the transversal direction of the first mineral fiber web, so as to produce a second mineral fiber web comprising a central body and opposite surface layers sandwiching the central body, which central body contains mineral fibers arranged generally perpendicular to the longitudinal and transversal directions of the second mineral fiber web and which surface layers contain mineral fibers arranged generally in the transversal direction of the second mineral fiber web. Thirdly, a third non-woven mineral fiber web being a mineral fiber web of a higher compactness as compared to the second mineral fiber web is produced and adjoin in facial contact with the second mineral fiber web for producing a fourth composite mineral fiber web which is thereupon cured. The method also optionally includes longitudinally compressing and/or transversally compressing the second mineral fiber web. The composite mineral fiber web may additionally be combined with additional mineral fiber webs or coverings for producing a composite mineral fiber web product which is cured in a single curing process.

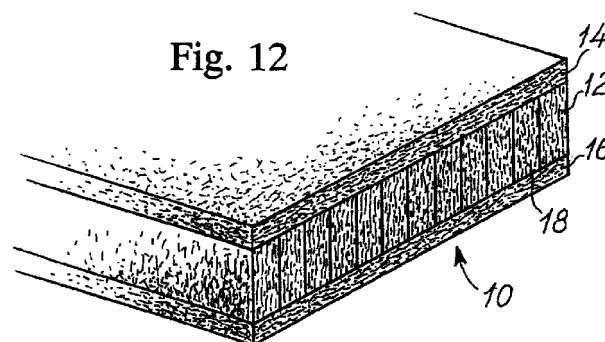


Fig. 12

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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.6)
Y	US 2546230 A1 (P. MODIGLIANI), 27 March 1951 (27.03.51) * column 3, line 1 - line 33, figures 1-4 *	1,2	E04B 1/78
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Y	US 4950355 A (G.R. KLOSE), 21 August 1990 (21.08.90) * column 10, line 64 - column 11, line 14, figure 6, details 30,31 *	1,2	

			TECHNICAL FIELDS SEARCHED (Int. Cl.6)
			E04B E04C D04H
The present search report has been drawn up for all claims			
Place of search STOCKHOLM		Date of completion of the search 28 May 1999	Examiner JUVONEN VILHO / MR
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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ON EUROPEAN PATENT APPLICATION NO. EP 99 10 6353.8**

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Patent document cited in search report			Publication date	Patent family member(s)	Publication date
US	2546230	A1	27/03/51	NONE	

US	4950355	A	21/08/90	AT 107370 T	15/07/94
				DE 3701592 A,C	04/08/88
				DE 3850130 D	00/00/00
				DK 22088 A	22/07/88
				EP 0277500 A,B	10/08/88
				FI 89282 B	31/05/93
				FI 880240 A	22/07/88
				US 4917750 A	17/04/90

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