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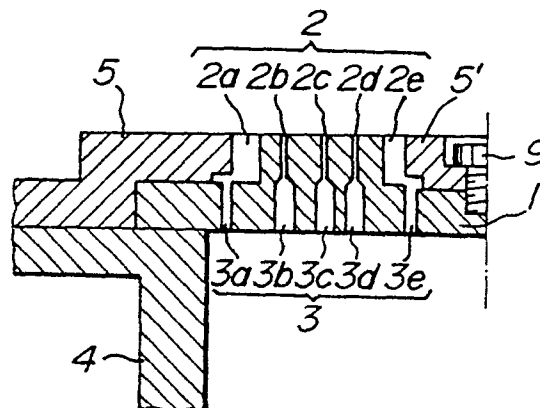
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54 **Extruding dies and method of extruding ceramic honeycomb structural bodies by using such extruding dies.**

57 A die for extruding ceramic honeycomb structural bodies, which each contains at least two through holes with partition walls having a plurality of different thicknesses, comprises shaping channels corresponding to a sectional configuration of the ceramic honeycomb structural bodies, and ceramic body feed holes (3), communicating with the shaping channels (2) at intersecting portions or annular shaping channels portions. The hydraulic diameter of the ceramic body feed holes (3b,3c,3d) communicating with the shaping channels (2b, 2c,2d) producing the thinner partition walls is greater than that of the ceramic body feed holes (3a,3e) communicating with the shaping channels (2a,2c) producing the thicker partition walls. Communicating paths of the ceramic body feed holes (3a,3e) which communicate with the shaping channels (2a,2e) producing the thicker partition walls are bent. This improves the adhesion within the ceramic body.

FIG. 3





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.4)
Y,D	EP-A-0 137 572 (NGK INSULATORS LTD) * Whole document * ---	1-5	B 28 B 3/20 B 28 B 3/26
Y	US-A-3 905 743 (R.D. BAGLEY) * Column 4, lines 24-45; figures 1,2 * ---	1-5	
Y	EP-A-0 040 040 (CORNING GLASS WORKS) * Whole document, in particular page 5, lines 8,9; figure 3 * ---	1-5	
Y	EP-A-0 040 052 (CORNING GLASS WORKS) * Whole document * ---	1-5	
Y	US-A-4 368 025 (J. NAITO) * Whole document * ---	1-5	
A	FR-A-2 287 322 (N.V. PHILIPS' GLOEILAMPENFABRIEKEN) * Whole document * ---	1,2,4,5	
A	PATENT ABSTRACTS OF JAPAN, vol. 9, no. 290 (M-430)[2013], 16th November 1985; & JP-A-60 129 235 (MATSUSHITA DENKI SANGYO K.K.) 10-07-1985 ---	1,2,4,5	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	DE-A-3 521 883 (SAKAI CHEMICAL INDUSTRY CO. LTD) * Whole document * ---	1,2,4,5	B 23 P B 28 B B 29 C B 30 B
A	US-A-4 362 495 (J. NAITO) * Whole document * ---	1-5	
A	US-A-4 349 329 (J. NAITO) * Whole document * ---	1-5	
A	GB-A-2 095 158 (NIPPON SOKEN INC.) * Whole document * ---	1-5	
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 25-07-1989	Examiner GOURIER P.A.
CATEGORY OF CITED DOCUMENTS 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		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	



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.4)
A	GB-A-2 172 840 (HOECHST CERAMTEC AG) * Whole document * -----	1,2,4,5	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
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Place of search THE HAGUE		Date of completion of the search 25-07-1989	Examiner GOURIER P.A.
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