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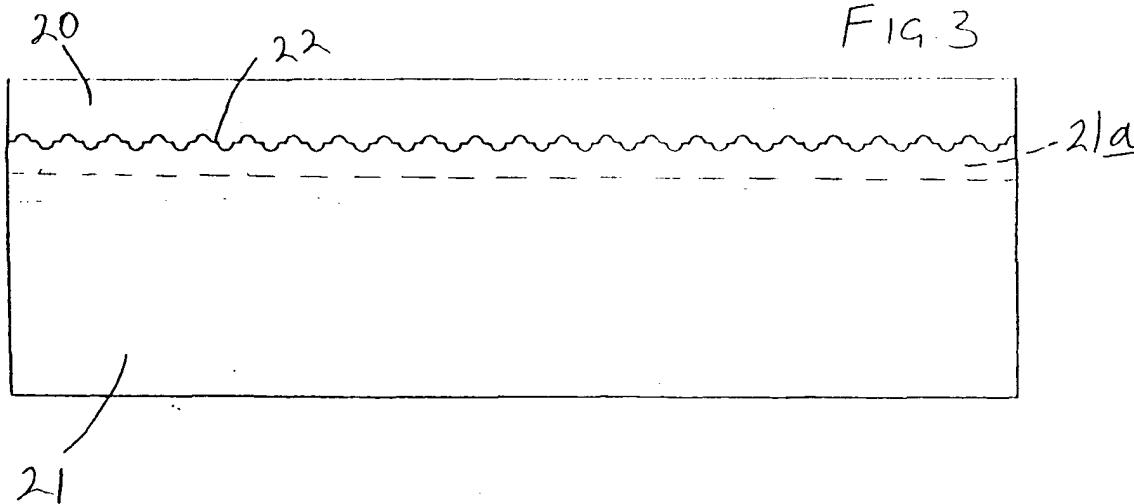
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(54) Cutting elements faced with superhard material

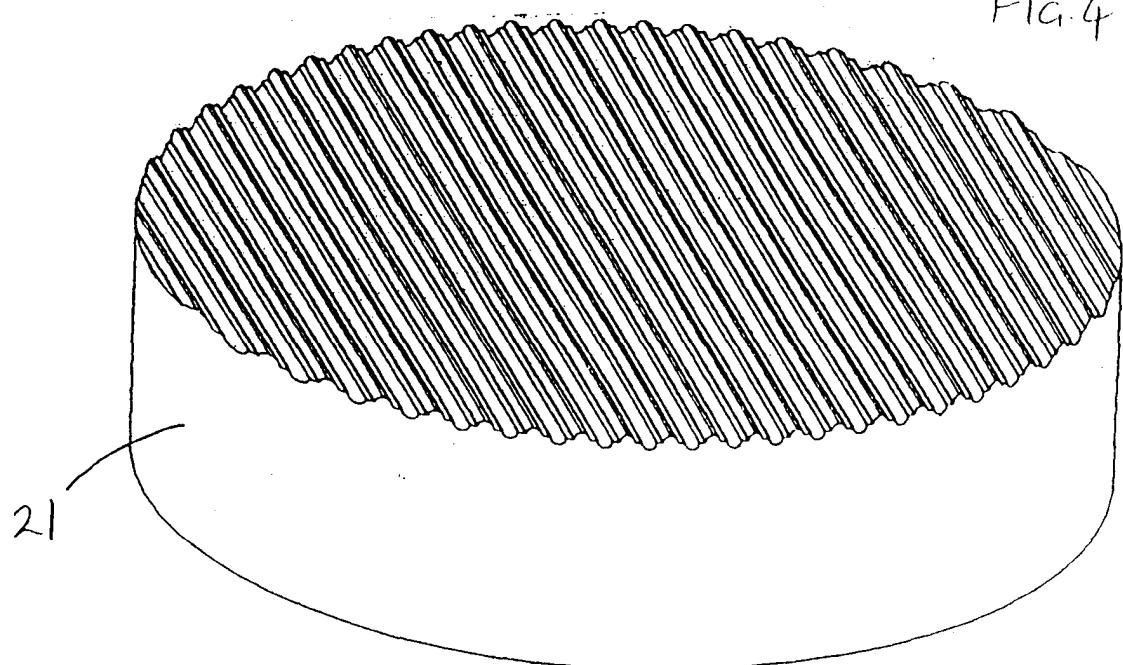
(57) A preform element, such as may be used as a cutting element in a drag-type rotary drill bit, comprises a polycrystalline diamond facing table bonded to a tungsten carbide substrate. The rear face of the facing table is formed with a series of elongate ribs and grooves, and the front face of the substrate is formed with a series of elongate ribs and grooves which interengage the

grooves and ribs respectively in the facing table. The ribs and grooves on each surface include ribs which are spaced from adjacent grooves so that the part of the surface which extends from the bottom of a groove to the apex of the adjacent rib is non-linear and discontinuous. The discontinuity between each rib and groove may be an intervening surface portion which is flat, inclined, curved or otherwise shaped.



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FIG. 4





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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	GB 2 283 772 A (CAMCO DRILLING GROUP LTD) 17 May 1995 * page 10, line 9-11; figure 10 * ---	1,6,26, 28	E21B10/56 B23P5/00
A	EP 0 133 386 A (MEGADIAMOND IND INC) 20 February 1985 * figures 1B,2,6,8A,B,C * ---	1,6,26, 28	
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A	EP 0 733 777 A (CAMCO DRILLING GROUP LTD) 25 September 1996 * figures 5,7 * ---	1,6,26, 28	
A,D	US 5 120 327 A (DENNIS MAHLON D) 9 June 1992 * abstract; figures 1,2 * ---	1,6,26, 28	
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<p>The present search report has been drawn up for all claims</p>			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	1 July 1999	Schouten, A	
CATEGORY OF CITED DOCUMENTS		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	
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			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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