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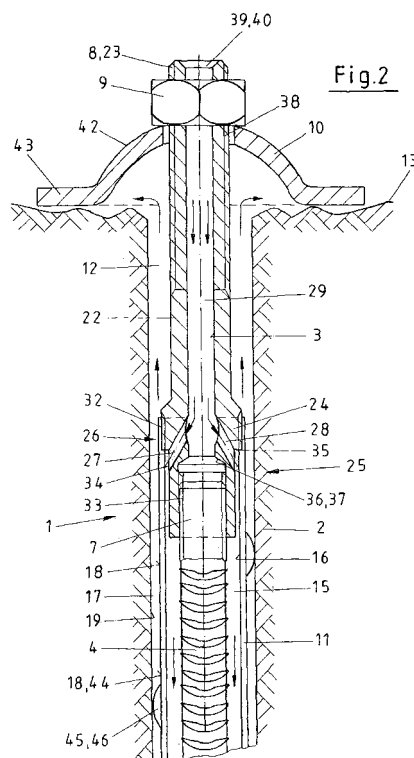
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(54) **Anchor with grout jacket**

(57) An anchor 1 for consolidating non-cohesive rock layers or for connecting them to solid rock 2 primarily has the necessary components for realising a stressed or expansion anchor. Furthermore, when a conventional domed plate 10 is used, which reliably transmits the necessary stress forces, it is possible additionally to bond the anchor bar 4 in the drill hole 3 after stressing. To this end, the anchor bar 4 is either constructed with a connecting tube 22 with distributor head 24 or the sheathing tube 11 comprises a top tube 50, these both fulfilling the task of conveying the grout bonding material 12 reliably from the drill hole mouth end of the anchor bar 4 to the rock end 5A and then diverting it there and returning it to the drill hole mouth, so ensuring complete fixing and sheathing of the anchor bar 4 in the drill hole 3.





EUROPEAN SEARCH REPORT

Application Number
EP 07 25 4935

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2001/046418 A1 (LAY WARREN THOMAS [US]) 29 November 2001 (2001-11-29) * paragraphs [0014] - [0017]; figures 2,3 *	1,9	INV. E21D20/02 E21D21/00 E02D5/80
Y	-----	10	
Y	US 4 360 292 A (KEELER ANDREW L ET AL) 23 November 1982 (1982-11-23) * figures 2-4 *	10	
A	----- FR 2 077 119 A (MOLL LEONHARD KG) 15 October 1971 (1971-10-15) * figure 2 *	11	
A	----- DE 195 12 122 A1 (REBURG PATENTVERWERTUNGS GMBH [DE] ALWAG TUNNELAUSBAU GMBH [AT]) 10 October 1996 (1996-10-10) * figure 1 *	1-20	
A	----- EP 0 317 547 A (MAYREDER KRAUS & CO ING [AT]) 24 May 1989 (1989-05-24) * figure 3 *	1-20	TECHNICAL FIELDS SEARCHED (IPC)
A	----- US 3 302 410 A (CHALMERS MCLEAN DANIEL) 7 February 1967 (1967-02-07) * figure 6 *	1-20	E21D E02D
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A	----- WO 2004/106700 A (DUNEFIRE PTY LTD [AU]; SEEDSMAN ROSS [AU]) 9 December 2004 (2004-12-09) * figure 6a *	1-20	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 11 December 2008	Examiner Georgescu, Mihnea
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			

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EPO FORM 1503 03.82 (P04C01)



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☒ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

EP 07 25 4935

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-10

Anchor with an anchor bar and a sheathing tube and a connecting tube with radial bores, wherein (potential special technical feature of claim 3) the bores are oblique and their openings are placed somewhat below a threaded end of the connection tube.

1.1. claims: 11-20

Anchor with an anchor bar, a domed plate, and a sheathing tube, wherein (potential special technical feature of claim 11) the sheathing tube comprises a top tube extending in the cavity of the domed plate, further comprising a separating head, separating the interior of the domed plate in two subchambers, the upper subchamber being in connection with the grout filling hose and with the interior of the sheathing tube.

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

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

EP 07 25 4935

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.

11-12-2008

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