

12

EUROPEAN PATENT APPLICATION

21 Application number: **87307225.0**

51 Int. Cl.4: **E21B 29/00 , E21B 21/00 ,
E21B 10/60**

22 Date of filing: **14.08.87**

30 Priority: **21.08.86 GB 8620362**

43 Date of publication of application:
02.03.88 Bulletin 88/09

84 Designated Contracting States:
AT BE DE FR GB IT NL

88 Date of deferred publication of the search report:
24.05.89 Bulletin 89/21

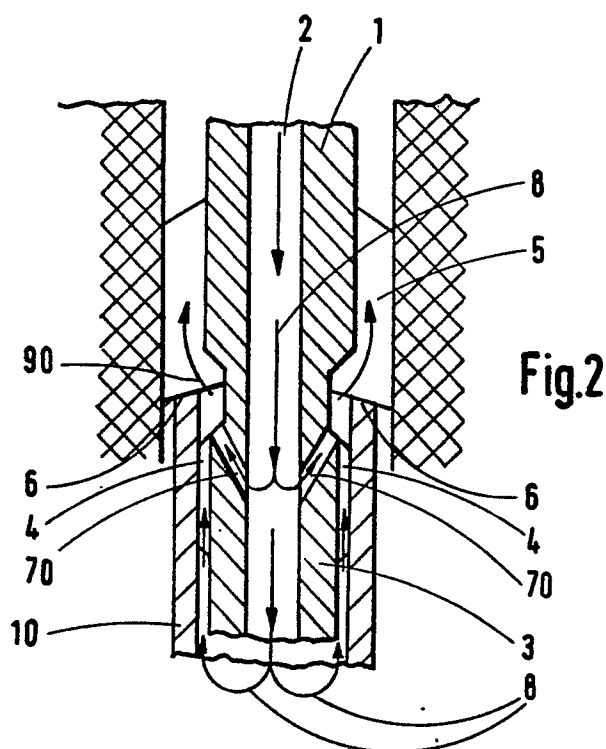
71 Applicant: **SMITH INTERNATIONAL (NORTH
SEA) LIMITED**
Woodside Road Bridge of Don
Aberdeen AB2 8EF Scotland(GB)

72 Inventor: **Springer, Johann**
Plathnerstrasse 56
D-3000 Hannover 1(DE)

74 Representative: **Molyneaux, Martyn William et
al**
c/o Ladas & Parry Isartorplatz 5
D-8000 Munich 2(DE)

54 **Milling tool.**

57 A milling tool for use in oil and gas extraction wells has a tubular member (1) with a longitudinal bore (2) for the passage of fluid and radially extending cutting blades. Upwardly directed ports (70) extend from the bore to a location below the cutting edge (6) of the blades for positive removal of cuttings.





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	US-A-3 147 536 (LAMPHERE) * Column 2, lines 26-33; figure 1 * ---	1,2	E 21 B 29/00 E 21 B 21/00 E 21 B 10/60
A	EP-A-0 176 180 (DIAMANT BOART) * Abstract; figure 2 * ---	1,2	
A	US-A-3 116 800 (KAMMERER) * Column 2, lines 54-61; figures 1,4 * ---	1,2	
A	US-A-4 445 580 (SAHLEY) * Figure 3 * ---	1,2	
A	EP-A-0 106 702 (DRUMCO) * Figures 1,2 * ---	1,2	
A	US-A-4 515 227 (CERKOVNIK) * Figures 1,3 * ---	1,2	
A	GB-A-2 014 218 (INSTITUT FRANCAIS DE PETROLE) * Figures 1,2 * ---	1,2	
A	US-A-4 479 558 (GILL et al.) * Abstract; figures * ---	1,2	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	GB-A-2 170 529 (2M DOWNHOLE LTD) * Abstract; figure 2 * ---	1,2	E 21 B
A	US-A-3 454 119 (McCLINTON) * Figures * ---	1	
P,X	US-A-4 618 010 (FALGOUT, Sr. et al.) * Whole document * -----	1,2	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 01-03-1989	Examiner RAMPELMANN J.
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			