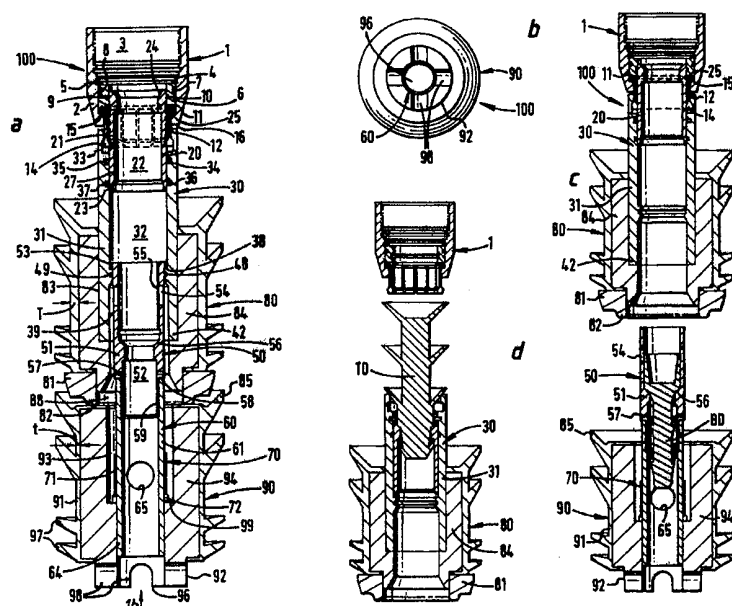


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/GB98/02722 (22) International Filing Date: 14 September 1998 (14.09.98) (30) Priority Data: 08/928,131 12 September 1997 (12.09.97) US (71) Applicants: WEATHERFORD/LAMB, INC. [US/US]; c/o CSC - The United States Corporation Company, 1013 Centre Road, Wilmington, DE 19805 (US). LUCAS, Brian, Ronald [GB/GB]; 135 Westhall Road, Warlingham, Surrey CR6 9HJ (GB). (72) Inventors: BUDDE, Peter; Waterleidingstraat No. 1, NL-3134 KC Vlaardingen (NL). GIROUX, Richard, Lee; 1642 Pebble Chase Drive, Katy, TX 77450 (US). (74) Agent: LUCAS, Brian, Ronald; Lucas & Co., 135 Westhall Road, Warlingham, Surrey CR6 9HJ (GB).		(81) Designated States: AU, CA, CN, JP, NO, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 3 June 1999 (03.06.99)
(54) Title: A PLUG FOR USE IN WELLBORE OPERATIONS, AN APPARATUS FOR RECEIVING SAID PLUG, A PLUG LANDING SYSTEM AND A METHOD FOR CEMENTING TUBULARS IN A WELLBORE 		
(57) Abstract A plug for use in wellbore operations, which plug is deformable such that, in use, upon fluid pressure reaching a predetermined level, said plug deforms allowing fluid to pass between said plug and a tubular in which said plug is located.		

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INTERNATIONAL SEARCH REPORT

International Application No.

PCT/GB 98/02722

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 E21B33/16 E21B33/05

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category ^o	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 075 882 A (BRANTLY) 6 April 1937	1-3,11, 12,14
Y	see figures	7-10,18
X	US 2 330 266 A (BURT) 28 September 1943 see figures	1,2,5,6
X	US 1 816 243 A (WICKERSHAM) 28 July 1931 see page 2, line 7 - line 40; figures	1,2,5,6, 11
X	US 2 662 600 A (BAKER) 15 December 1953	1,2
Y	see column 5, line 71 - column 6, line 29	4
X	GB 532 468 A (DYER) 24 January 1941 see figures	1,2
	-/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.^o Special categories of cited documents :

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Date of the actual completion of the international search

11 December 1998

Date of mailing of the international search report

13. 04. 1999

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WEIAND T.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 98/02722

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 591 603 A (RAGAN) 1 April 1952 see column 4, line 57 - line 73; figures 1-3 ---	11,12, 14,16
Y	US 3 100 534 A (HERNDON) 13 August 1963 see column 2, line 28 - line 38; figure 2 ---	4
Y	EP 0 697 496 A (HALLIBURTON) 21 February 1996 see column 6, line 40 - line 49 see column 8, line 1 - line 9; figures ---	7-9,18
Y	US 5 553 667 A (BUDDE) 10 September 1996 see column 8, line 9 - line 19; figures -----	10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 98/02722

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-18

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: 1-18

Deformable plug and related devices

2. Claims: 19-24

A plug landing system comprising a landing collar

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 98/02722

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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