

PCT

56 9700475-8
WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



DOR 2 11/02/97

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ :

E21B 10/18, 10/20

A1

(11) International Publication Number:

WO 96/05405

(43) International Publication Date:

22 February 1996 (22.02.96)

(21) International Application Number:

PCT/US95/10051

(22) International Filing Date:

8 August 1995 (08.08.95)

(30) Priority Data:

08/287,457

8 August 1994 (08.08.94)

US

(71) Applicant: DRESSER INDUSTRIES, INC. [US/US]; Suite 4100, 2001 Ross Avenue, Dallas, TX 75201-2916 (US)

(72) Inventor: HUFFSPUTLER, Alan, Dee; 2760 Water Oak, Grand Prairie, TX 75052 (US).

(74) Agent: FELGER, Thomas, R.; Baker & Botts, L.L.P., 2001 Ross Avenue, Dallas, TX 75201-2980 (US).

(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).

Published

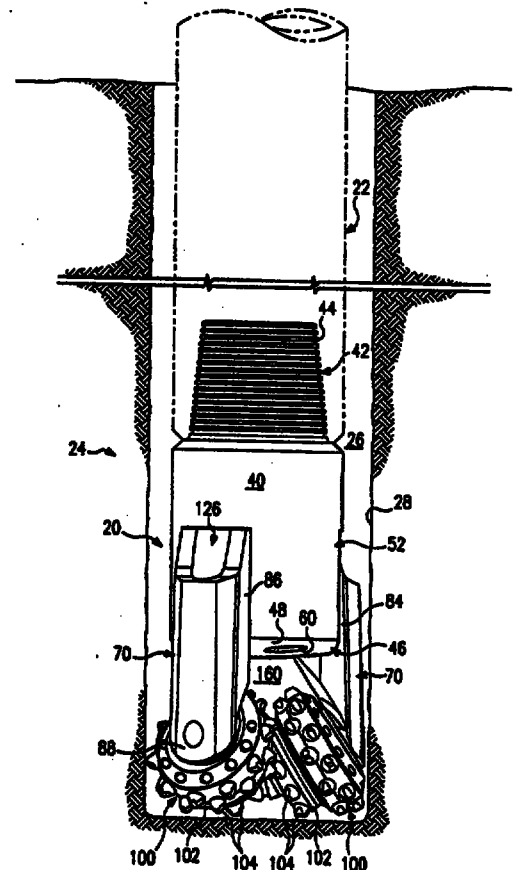
With international search report.

Atmp

(54) Title: ROCK BIT WITH ENHANCED FLUID RETURN AREA

(57) Abstract

A rotary cone drill bit (20) for forming a borehole (24) having a one-piece bit body (40) with a lower portion (46) having a convex exterior surface and an upper portion (42) adapted for connection to a drill string (22). A number of support arms (70) are preferably attached to the bit body (40) and depend therefrom. Each support arm (70) has an inside surface (76) with a spindle (82) connected to the associated support arm (70). A number of cone cutter assemblies (100) equal to the number of support arms (70) are mounted on each of the spindles (82). The support arms (70) are spaced on the exterior of the bit body (40) to provide enhanced fluid flow between the lower portion (46) of the bit body and the support arms (70). Also, the length of the support arms (70) is selected to provide fluid flow between the associated cutter cone assembly (100) and the lower portion (46) of the bit body. The same bit body may be used with various rotary cone drill bits having different gauge diameters.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgyzstan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LU	Luxembourg	TD	Chad
CS	Czechoslovakia	LV	Latvia	TG	Togo
CZ	Czech Republic	MC	Monaco	TJ	Tajikistan
DE	Germany	MD	Republic of Moldova	TT	Trinidad and Tobago
DK	Denmark	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	US	United States of America
FI	Finland	MN	Mongolia	UZ	Uzbekistan
FR	France			VN	Viet Nam
GA	Gabon				

9700475-8