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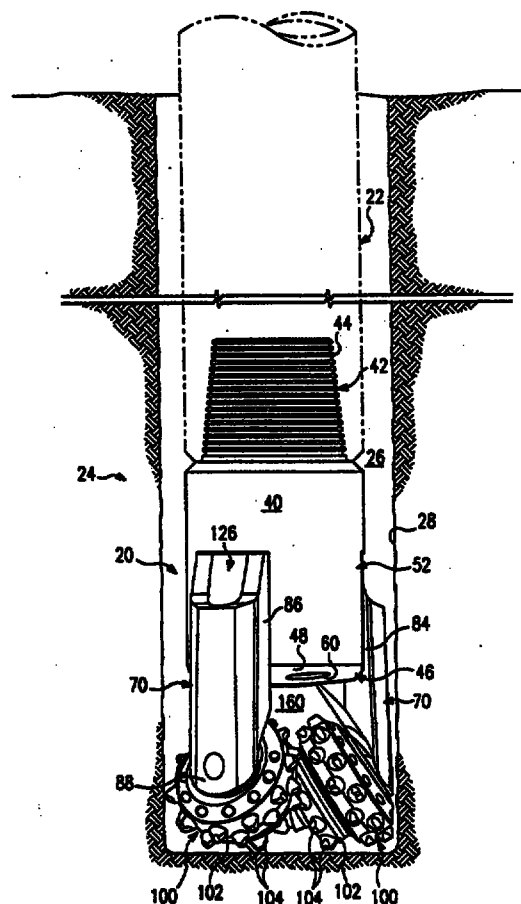
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : E21B 10/20, B21K 5/04, B23K 37/053		A1	(11) International Publication Number: WO 96/05406
			(43) International Publication Date: 22 February 1996 (22.02.96)
(21) International Application Number: PCT/US95/10015		(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).	
(22) International Filing Date: 8 August 1995 (08.08.95)			
(30) Priority Data: 08/287,390 8 August 1994 (08.08.94) US			
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		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>	

(54) Title: ROTARY DRILL BIT AND METHOD FOR MANUFACTURE AND REBUILD

(57) Abstract

A rotary cone drill bit (20) having a one-piece bit body (40) with a lower portion (46) having a convex exterior surface (48) and an upper portion (42) for connection to a drill string (22). A number of support arms (70) are attached to pockets (54) formed in the bit body (40) and depend therefrom. Each support arm (70) has an inside surface (76) with a spindle (82) connected thereto and an outer shirttail surface (88). Each spindle (82) projects downwardly and inwardly with respect to the longitudinal axis of the associated support arm. A cone cutter assembly (100) is mounted on each of the spindles (82). The radial spacing of the support arms on the perimeter of the bit body along with their length and width dimensions are selected to enhance fluid flow between the cone assemblies mounted on the respective support arms and the lower portion of the bit body.



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