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(21) International Application Number: PCT/US97/06266 ✓ (22) International Filing Date: 7 April 1997 (07.04.97) ✓ (30) Priority Data: 08/641,417 1 May 1996 (01.05.96) ✓ US (71) Applicant: DRESSER INDUSTRIES, INC. [US/US]; Suite 4100, 2001 Ross Avenue, Dallas, TX 75201-2916 (US). ✓ (72) Inventor: WILLIAMS, Mark, E.; 2839 Red Oak Drive, Grand Praire, TX 75052 (US). (74) Agent: FELGER, Thomas, R.; Baker & Botts, L.L.P., 2001 Ross Avenue, Dallas, TX 75201-2916 (US).		(81) Designated States: CN, GB, MX, SG. Published <i>With international search report.</i>

(54) Title: FLOW DIVERTER RING FOR A ROTARY DRILL BIT AND METHOD**(57) Abstract**

A rotary cone drill bit (10) having a bit body (22) with a number of support arms (24) formed to extend from the bit body (22). Each support arm (24) has an inside surface (26) with a spindle (28) connected thereto and an outer surface. A number of cutter cones (12) are rotatably mounted on respective spindles (28) each including an internal cylindrical cavity (42) for receiving the respective spindle (28). A gap with a generally cylindrical portion is formed between the spindle (28) and the cavity (42). A bearing element (44) and a seal element (54) is disposed within the gap. A diverter ring (60) is disposed on the exterior of each spindle (28) approximate to the respective inside surface (26) and located within the opening to the respective gap. The diverter ring (60) comprises a disk (70) having a plurality of ribs (72) extending therefrom to divert abrasive fluids away from the gap.

