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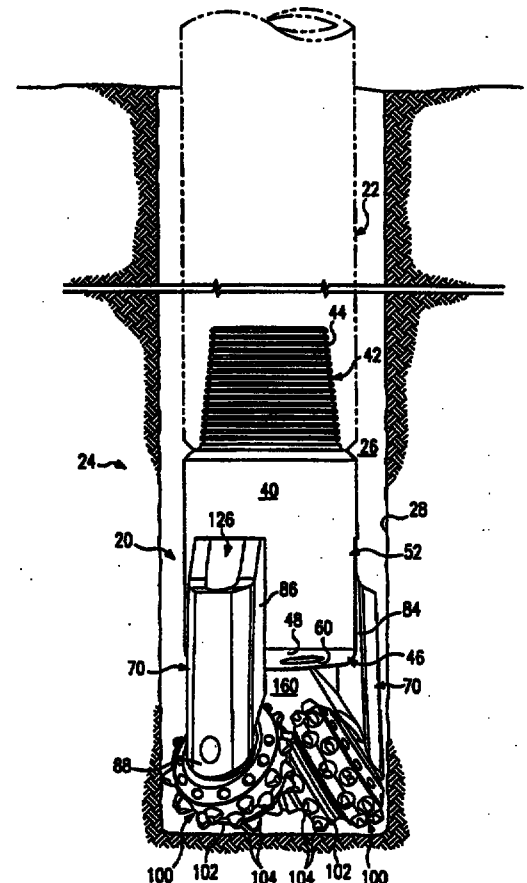
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(54) Title: ROTARY CONE DRILL BIT WITH IMPROVED SUPPORT ARMS

(57) Abstract

A rotary cone drill bit (20) having a bit body (40) with an upper end portion (42) adapted for connection to a drill string (22). A number of support arms (70) are preferably extended from the bit body (40). The support arms (70) may either be formed as an integral part of the bit body (40) or attached to the exterior of the bit body in pockets (54). Each support arm (70) has a lower portion with an inside surface (76) and a spindle (82) connected thereto and an outer shirrtail surface (88). Each spindle (82) projects generally downwardly and inwardly with respect to the associated support arm (70). A number of cutter cone assemblies (100) equal to the number of support arms (70) are mounted respectively on the spindles (82). A throat relief area (87) is provided on the lower portion of each support arm (70) adjacent to the associated spindle (82) to increase fluid flow between the support arm (70) and the respective cutter cone assembly (100).



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