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[Continued on next page]

(54) **Title:** METHOD AND APPARATUS FOR REDUCING LUBRICANT PRESSURE PULSATION WITHIN A ROTARY CONE ROCK BIT

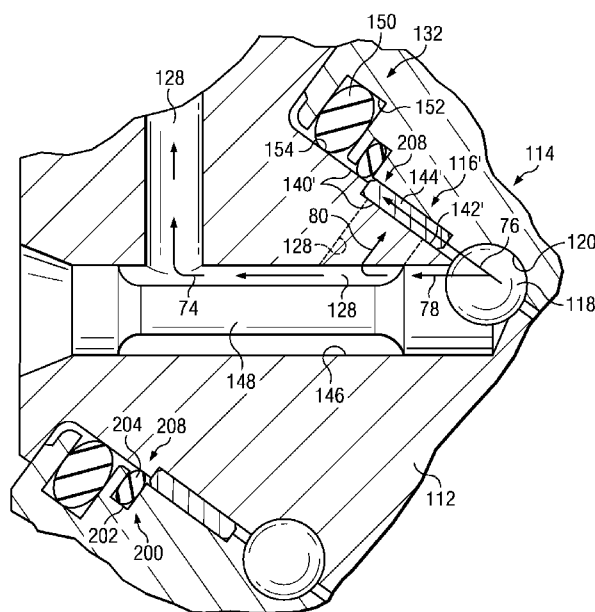


FIG. 7

(57) **Abstract:** A drill tool comprises includes a bit body, at least one bearing shaft extending from the bit body and a cone mounted for rotation on the bearing shaft. The bearing system for the tool includes a radial thrust bearing from which cone pumping pressure pulsation originates. A lubricant sealing system including an annular seal gland and a seal ring retained within the annular seal gland functions to retain lubricant in the bearing system. The tool further includes a lubricant cone pumping pressure restrictor system formed by an annular gland (separate from the annular seal gland) and a pressure restricting ring retained within the annular gland. The lubricant cone pumping pressure restrictor system is positioned between the radial thrust bearing system and the lubricant sealing system and is adapted to attenuate cone pumping lubricant pressure pulsation from acting on the seal ring retained within the annular seal gland.

**Declarations under Rule 4.17:**

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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