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(54) Title: HYBRID DRILL BITS HAVING INCREASED DRILLING EFFICIENCY

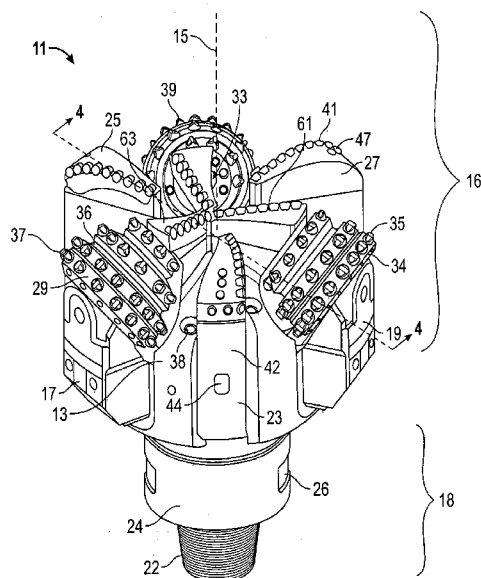


FIG. 1

(57) Abstract: An earth boring drill bit is described, the bit having a bit body having a central longitudinal axis that defines an axial center of the bit body and configured at its upper extent for connection into a drillstring; at least one primary fixed blade extending downwardly from the bit body and inwardly toward, but not proximate to, the central axis of the drill bit; at least one secondary fixed blade extending radially outward from proximate the central axis of the drill bit; a plurality of fixed cutting elements secured to the primary and secondary fixed blades; at least one bit leg secured to the bit body; and a rolling cutter mounted for rotation on the bit leg; wherein the fixed cutting elements on at least one fixed blade extend from the center of the bit outward toward the gage of the bit but do not include a gage cutting region, and wherein at least one roller cone cutter portion extends from substantially the drill bit's gage region inwardly toward the center of the bit, the apex of the roller cone cutter being proximate to the terminal end of the at least one secondary fixed blade, but does not extend to the center of the bit.



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