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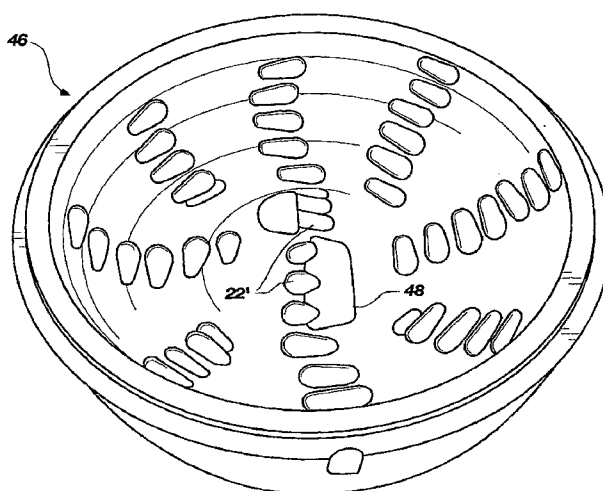
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(54) Title: DRILL BITS WITH BEARING ELEMENTS FOR REDUCING EXPOSURE OF CUTTERS



(57) Abstract: A bearing element (42) for a rotary, earth boring drag bit (10) effectively reduces an exposure of at least one adjacent cutting (24) element by a readily predictable amount, as well as a depth of cut (DOC) of the cutter. The bearing element has a substantially uniform thickness across substantially an entire area thereof. The bearing element also limits the amount of unit force applied to formation so that the formation does not fail. The bearing element may prevent damage to cutters associated therewith, as well as possibly limit problems associated with bit balling, motor stalling and related drilling difficulties. The design and drilling methods include selecting a formation to be drilled, calculating a desired DOC and the strength of the formation, and calculating a height or thickness of a bearing element that may limit the DOC and the unit force applied to the formation.

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