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(54) Title: CONTROL SYSTEM FOR DOWNHOLE CASING MILLING SYSTEM

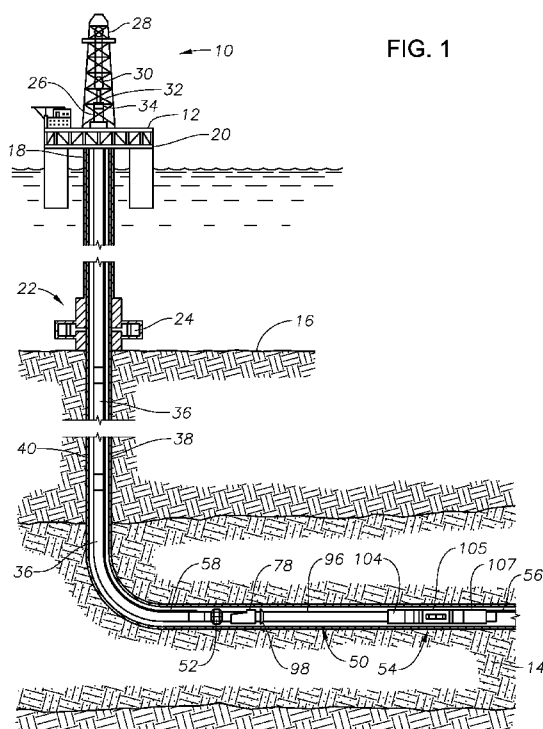


FIG. 1

(57) Abstract: A system and method for milling a casing in a wellbore wherein an upper milling portion of a milling system engages a track of a lower guide system of the milling system in order to orient the upper milling portion. The upper milling portion moves along a track from a first position to a second position, where the the upper milling portion is securely affixed to the lower guide portion. A traveling guide arm is used to move the milling portion along a travel path. A piston on the traveling guide arm is disposed between first and second fluid chambers, with a throughbore in the piston forming a fluid path between the two chambers. An adjustable valve in the throughbore is controlled by a proximity sensor to alter the flow of fluid between the chambers. The sensor monitors the distance between a fixed and moving point of the milling system.



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