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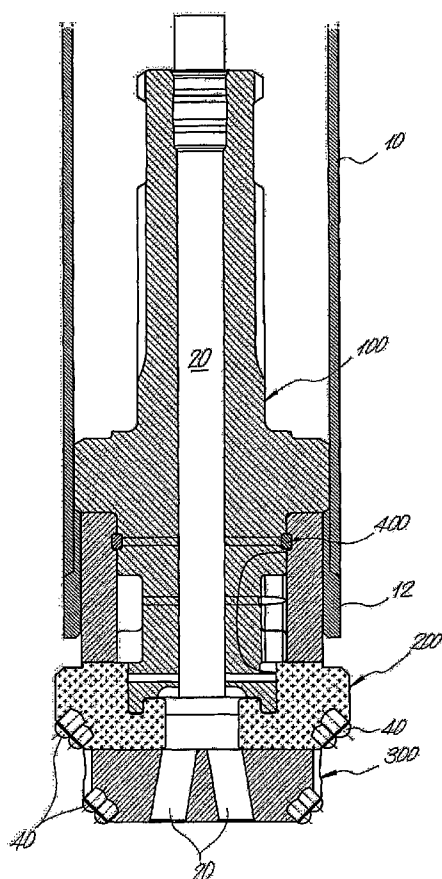
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(54) Title: A DRILLING APPARATUS HAVING IN-LINE EXTENDING WINGS AND DRIVING METHOD THEREOF



(57) Abstract: The present invention relates to a borehole drilling apparatus with in-line extending wings and driving method thereof. The drilling apparatus comprises a guide device rotating while moving upwardly and downwardly in a casing to fit into a borehole, extending wings for extending the diameter of a borehole, a pilot bit installed at a lower portion of the guide device to strike the bottom of the borehole, wherein spiral projections formed at a lower surface of the guide device slidably engage with guide grooves formed at a side of the extending wings to each other, and a window is formed at a side of the pilot bit for advancing and retracting the extending wings so that they can spread and return linearly from the center of the pilot bit.

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