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03021139.5 / 1 371 811  
99945376.4 / 1 117 894

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(54) Method of designing a roller cone bit

(57) Disclosed herein is a method of designing a roller cone bit, comprising the steps of:

calculating the curved trajectory of a non-axisymmetric tooth through formation material at the cutting face, as the bit and cones rotate;  
calculating a straight line approximation to said curved trajectory; and  
orienting said tooth with respect to said approximation, and not with respect to said curved trajectory.

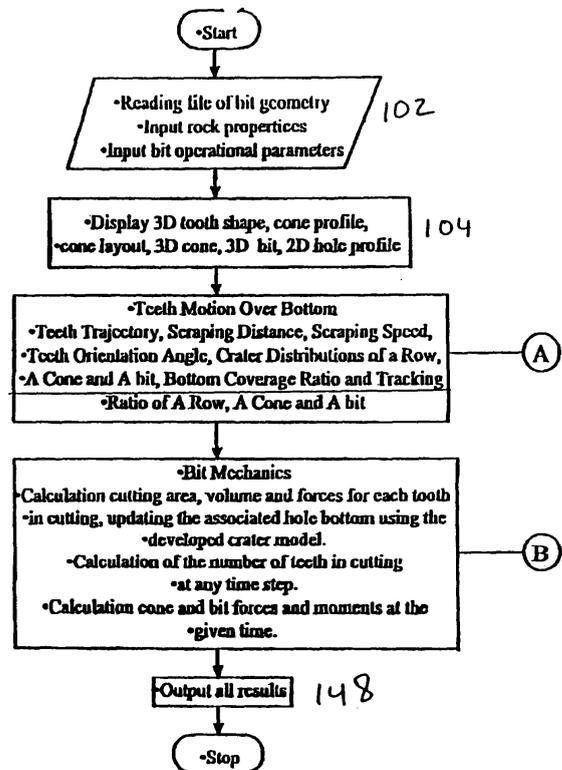


FIGURE 1A



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The present search report has been drawn up for all claims			
Place of search <b>The Hague</b>		Date of completion of the search <b>14 February 2006</b>	Examiner <b>Schouten, A</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document	

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EPO FORM 1503 03 82 (P04C01)



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ANNEX TO THE EUROPEAN SEARCH REPORT  
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