

[54] BIT BREAKER

[75] Inventors: Gary T. Freitag, Webster; Roger C. Smith, Houston, both of Tex.

[73] Assignee: Reed Rock Bit Company, Houston, Tex.

[21] Appl. No.: 514,389

[22] Filed: Jul. 15, 1983

[51] Int. Cl.³ B25B 13/00

[52] U.S. Cl. 81/54; 81/57.16; 81/57.34; 81/57.21; 269/207; 175/315

[58] Field of Search 81/54, 57, 57.16, 57.24, 81/57.34, 57.35, 57.21, 90 C, 129; 269/207, 234, 217; 175/315

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Primary Examiner—James L. Jones, Jr.
Attorney, Agent, or Firm—Carl A. Rowold

[57] ABSTRACT

A bit breaker adapted to be fitted in the Kelly drive of a drill rig for detachably securing a rotary drill bit to the Kelly drive to enable the latter to rotate the bit relative to a drill string having an internally threaded lower end portion in one direction to effect a threaded connection between the threaded pin of the bit and the string, and in the other direction to disconnect the bit from the string. The bit breaker comprises a bottom engageable by the bottom of a drill bit for supporting the bit, a top having an opening therein through which the bit may be lowered into engagement with the bottom of the bit breaker and may be raised to remove the drill bit from the bit breaker, and a stop member for selectively securing the bit in fixed annular position in the said opening in the bit breaker. The stop member is slidably mounted on the stated top adjacent the opening therein for movement inwardly and outwardly relative to the opening between an extended position in which the stop member engages the side of the drill bit for holding it against rotation relative to the bit breaker, and a retracted position in which the stop member is spaced and a retracted position in which the stop member is spaced from the drill bit to enable it to be raised and lowered through the opening. The bit breaker further has a lock for selectively locking the stop member in its extended position.

10 Claims, 7 Drawing Figures

