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[Continued on next page]

(54) Title: DOWNHOLE TOOL WITH SLIP RELEASING MECHANISM

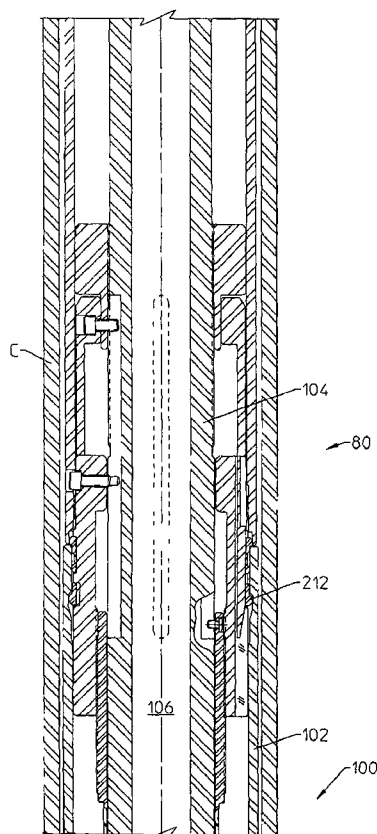


FIGURE 1A

(57) Abstract: A downhole tool includes a lock for maintaining a slip in a reduced diameter position when running the tool in the well, and selectively releases the slip to move radially outward to a set position to suspend an anchored portion of the tool within a downhole tubular. The tool includes a mandrel having a through passage, with a hydraulic port within the mandrel that is closed to mandrel internal pressure as the tool is run in the wellbore. A ball seat covers hydraulic ports in the mandrel. A ball may be dropped to seat and increase pressure to open the ports. A piston moves in response to mandrel internal pressure applied through the hydraulic port to unlock the locking device, such that further movement of the piston releases the slip from the reduced diameter position to the set position.



PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - E21B 23/00 (2008.04)

**USPC - 166/208**

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No.    |
|-----------|------------------------------------------------------------------------------------|--------------------------|
| X         | US 6,681,860 B1 (YOKLEY et al) 27 January 2004 (27.01.2004)                        | 1-3, 6, 7, 13, 18, 19    |
| --        |                                                                                    |                          |
| Y         |                                                                                    | 4, 5, 8-12, 14-17, 20-24 |
| Y         | US 6,739,398 B1 (YOKLEY et al) 25 May 2004 (25.05.2004)                            | 4, 8-11, 14-17, 20-24    |
| Y         | US 5,244,044 A (HENDERSON) 14 September 1993 (14.09.1993)                          | 5, 12, 17                |

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