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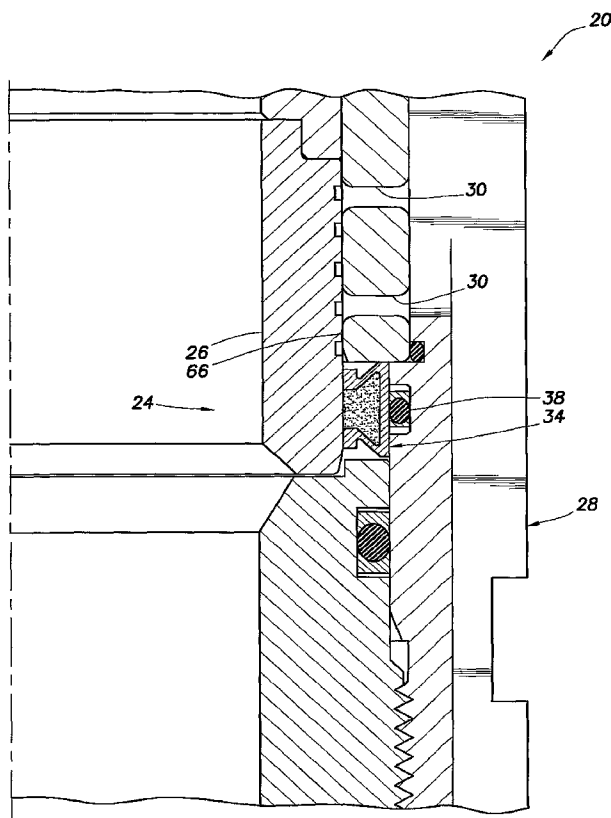
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(54) Title: METAL TO METAL SEAL FOR DOWNHOLE TOOLS



(57) Abstract: A metal to metal seal for downhole tools. A sealing device includes a metal seal. A nonmetal seal may be used to bias the metal seal in a radial direction in response to a pressure differential applied to the sealing device. A well tool includes a housing assembly, a closure member and the sealing device. Both of the metal and nonmetal seals contact a selected one of the housing assembly and closure member when the closure member blocks flow through the housing assembly. A method of sealing between the housing assembly and closure member includes the step of displacing the closure member to relieve the pressure differential, the metal seal continuing to seal against the pressure differential until the nonmetal seal no longer seals between the housing assembly and the closure member.

FIG. 4

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC: E21B 33/10(2006.01)

USPC: 277/322,336;166/387,316
 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)
 U.S. : 277/322,336;166/387,316

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

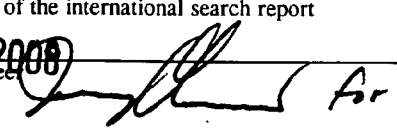
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 5,095,994 (DOLLISON) 17 Mar. 1992 (17.03.1992) Figs. 1 and 5	1 and 4 ----- 2, 3, 5-8 and 15-31
X --- Y	US 4,162,782 (WILKINS) 31 July 1979 (31.07.1979), Figs. 6-9	9-14 ----- 2, 3, 5-8 and 15-31

Further documents are listed in the continuation of Box C. See patent family annex.

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