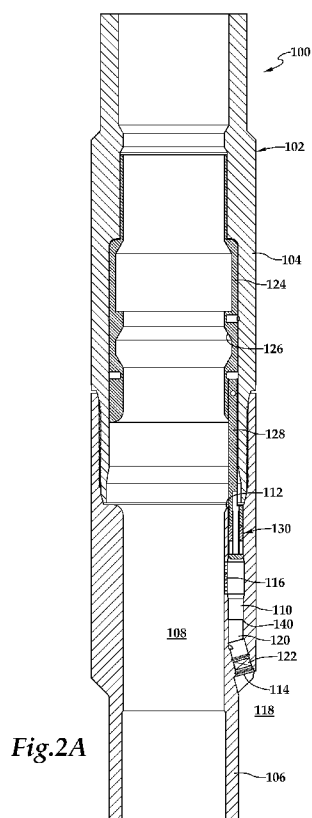




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[Continued on next page]

(54) Title: DOWNHOLE CIRCULATING VALVE HAVING A SEAL PLUG AND METHOD FOR OPERATING SAME



(57) Abstract: A downhole circulating valve includes a generally tubular outer housing having a generally axially extending internal passageway. At least one generally longitudinally extending circulating passageway is formed through at least a portion of the housing. At least one exterior port and at least one interior port are in fluid communication with the circulating passageway. At least one seal plug is disposed within the circulating passageway. The seal plug has a first position relative to the housing wherein the seal plug is remote from the exterior port and the interior port, thereby allowing fluid flow between the exterior port and the interior port through the circulating passageway. The seal plug has a second position relative to the housing wherein the seal plug is between the exterior port and the interior port and wherein the seal plug forms at least one metal-to-metal seal with the circulating passageway, thereby preventing fluid flow between the exterior port and the interior port.



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