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(54) Title: SYSTEM AND METHOD FOR COMPLETION OPTIMIZATION

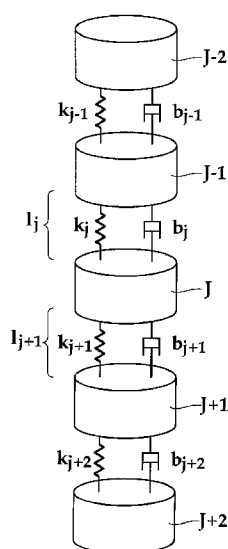


Fig.2

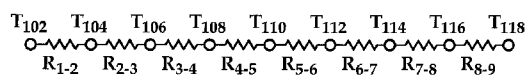


Fig.3B

(57) **Abstract:** A system for completing a wellbore (38) having multiple zones. The system includes a completion (42) having a plurality of landing points defined therein positioned within the wellbore (38). A service tool is axially movable within the completion (42). The service tool is coupled to a pipe string (36) extending from the surface and selectively supported by a movable block (30) above the surface. A subsurface model is defined in a computer operably associated with the wellbore (38). The model is operable to predict the position of the service tool relative to the landing points of the completion (42) based upon a dynamic lumped mass model of the service tool and a dynamic lumped capacitance thermal model of the wellbore environment.