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(54) Title: USE OF REGISTER RENAMING SYSTEM FOR FORWARDING INTERMEDIATE RESULTS BETWEEN CONSTITUENT INSTRUCTIONS OF AN EXPANDED INSTRUCTION

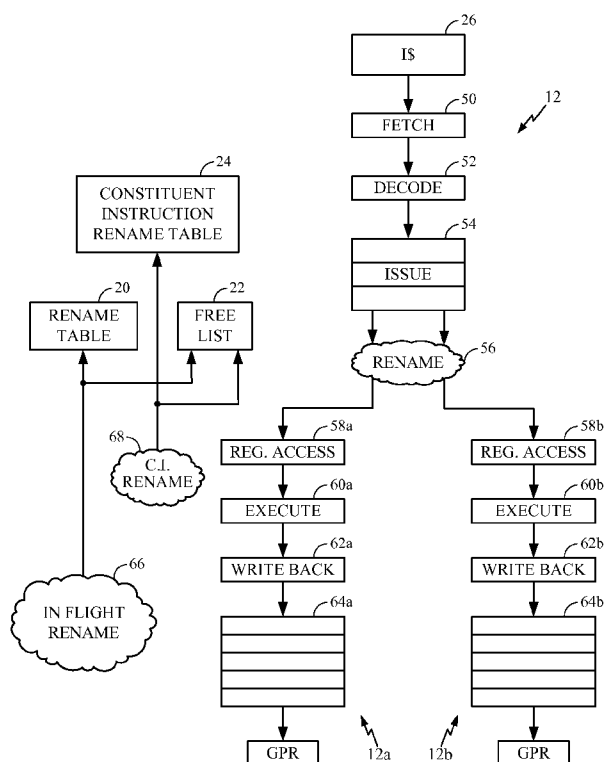


FIG. 2

(57) Abstract: Intermediate results are passed between constituent instructions of an expanded instruction using register renaming resources and control logic. A first constituent instruction generates intermediate results and is assigned a PRN in a constituent instruction rename table, and writes intermediate results to the identified physical register. A second constituent instruction performs a look up in the constituent instruction rename table and reads the intermediate results from the physical register. Constituent instruction rename logic tracks the constituent instructions through the pipeline, and delete the constituent instruction rename table entry and returns the PRN to a free list when the second constituent instruction has read the intermediate results.



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